**EFCOG Safety Working Group FY 2020 Annual Work Plan**

**(October 1, 2019 – September 30, 2020)**

**Purpose**

This document contains the Energy Facility Contractors Group (EFCOG) Safety Working Group (SWG) FY 2020 Annual Work Plan (AWP). The approved AWP provides authorization for EFCOG members within the various subgroups to work on activities identified in the AWP. It is intended that all deliverables identified in this AWP be completed during the fiscal year, however some activities may push into 2021 due to changing priorities or other unforeseen circumstances. As a result, dates are generally not provided for deliverables. Some subgroups have identified group meetings and teleconference meetings in the work plan; other groups did not. While not consistently identified in the plan, all groups meet periodically throughout the year, which are generally determined to be authorized work activities, and exempt from DOE conference approval requirements.

**Working Group Mission and Scope:**

The Energy Facility Contractors Group (EFCOG) Safety Working Group (SWG) is chartered to assist member companies attain and maintain the highest levels safety and regulatory performance in the operation of Department of Energy (DOE)/National Nuclear Security Administration (NNSA) facilities/projects. The SWG will achieve this by:

* Advocating for strong, effective implementation of Integrated Safety Management across departmental activities;
* Seeking out, developing, and promoting best management and operating practices;
* Facilitating the exchange of operating experiences and information on safety/regulatory programs and their effectiveness, and designing studies and developing position and technical papers to inform DOE/NNSA regulations and directives processes where appropriate;
* Providing DOE/NNSA and member companies with access to a network of subject matter experts;
* Identifying opportunities to save and/or avoid costs in the implementation of safety and regulatory programs while assisting member companies implement effective safety and regulatory programs through peer reviews and consultations; and
* Arranging for training and awareness workshops to enhance the competency of safety professionals.

To accomplish its mission, the SWG is subdivided into 7 subgroups and associated task groups, which are listed below. The AWP is organized by subgroup:

* Engineering Practices
* Integrated Safety Management (ISM)
* Nuclear & Facility Safety
* Quality Assurance
* Regulatory & Enforcement
* Sustainability and Environment
* Worker Safety & Health

“Safety,” as it relates to the scope of the working group, is inclusive to the Department’s implementation of Integrated Safety Management Systems (ISMS). Safety includes a number of related functions such as contractor assurance, work planning and control, engineering processes, radiological protection, nuclear and facility safety, criticality safety, fire protection, worker safety and health, industrial hygiene, environmental protection, quality assurance, and related regulatory programs.

Strategic focus areas identified by the EFCOG Board that are addressed in the Plan are:

* Supply Chain Delivery\*: Identification of common suppliers used by different (NNSA) sites.
* Project Delivery: No initiatives
* Human Capital\*\*: Development of future workforce within DOE.
* Data Quality/Performance Assurance\*\*\*: Concerns on data quality and recent shipment issues. Identify how contractors can increase the probability that we catch these types of issues before they happen.

Approved by: Signature on file Date: 9/16/2019

John McDonald,

Safety Working Group Chair

Approved by: Signature on file Date: 9/23/2019

Patricia Worthington,

Director, (AU-10)

Office of Health and Safety

Department of Energy, Safety Working Group Liaison

**EFCOG Safety Working Group Planned Activities for FY 2020**

**(October 1, 2019 – September 30, 2020)**

**EFCOG Working Group Planned Activities for FY 2020**

**(October 1, 2019 – September 30, 2020)**

| Activity(s) | Benefit(s) | Deliverable/Key Milestone(s) |
| --- | --- | --- |
| 1.0 Engineering Practices | | |
| Develop Code of Record (COR) Best Practice | Establishes a consistent structure for projects, major modifications, and tasks for documenting and maintaining the COR. Also provided guidance on reconstitution of the COR on older legacy facilities. | Publish COR Best Practice  Work with DOE to determine if a COR Handbook will be beneficial |
| Publish Conduct of Engineering (COE) Training as a Best Practice, which will include a cross-walk with DOE requirements \*\* | This COE training package gives sites a common starting point for development of a site-specific COE training program. The intent is for each site to take this base set of training materials and tailor to their specific organization, mission, etc. This training package will also provide a clear understanding of “why we do things the way we do” with regard to the COE base processes and the various DOE requirements. | Publish COE Training Best Practice \*\* |
| Develop weld symbol training Best Practice \*\* | Establishes a training mechanism for the application and interpretation of weld symbols for technical staff. | Publish Weld Symbols Best Practice \*\* |
| Develop automatic welding operator qualifications prerequisite Best Practice \*\* | The various welding codes lack clear definition of the prerequisites to qualifying for automatic welding operations. As more and more of these techniques are used around the complex, this will provide a consistent set of minimum welder prerequisite requirements. | Publish Automatic Welding Operator Qualifications Prerequisites \*\* |
| Fire Security Task Team | | |
| Develop Combustible Loading White Paper | Combustible loading programs vary significantly across the complex. This White Paper will help identify base program requirements and implementation with the intent of becoming a Best Practice | Publish Combustible Loading White Paper |
| Publish NFPA Code Review White Papers | With many NFPA codes published every year, the Task Team will assign these codes to the various team members to review and publish. White Papers describing the changes to the codes and likely impacts to the sites eliminate the need for each site to perform this activity on its own. | Establish an NFPA code review master schedule for FY20  Publish NFPA code review White Papers per the NPFA code review master schedule |
| 2.0 Integrated Safety Management | | |
| Contractor Assurance | | |
| Incorporating governance (Parent Company/DOE Peer Review), business, NNSA review process, and lessons learned in to the assessment plan/tool | Provides a plan that encompasses all of the types of CAS reviews currently being utilizing across the DOE/NNSA complex. | Review the CAS assessment plan/guide. |
| Evaluate methods for making decisions based on risk and how the CAS is providing the framework. | Provide a robust tool for assessing CAS processes | Issue Best Practice |
| Incorporate Issue Investigations tools in assessments | Provide a robust tool for assessing CAS processes | Add to assessment paper |
| Evaluate concerns on recent data quality and shipment issues and identify a Best Practice that has a high probability of identifying and correcting potentially consequential data quality issues. \*\*\* | The Best Practice can increase the probability that these types of issues are identified and addressed before a consequential event occurs. | Issue a Best Practice that has a high probability of identifying and correcting potentially consequential data quality issues before an event occurs. \*\*\* |
| Human Performance | | |
| Participate in HPI Lead Practitioner Training Pilot \*\* | Provides SME’s for HPI training across the DOE Complex. This effort will provide consistent training for practitioners and eliminate the need for each Site/Laboratory to develop this training. | Participate in the pilot HPI Lead Practitioner Training in October 8-10, 2019 at NNSS \*\* |
| Publish guidelines for HPI Metrics | Provide a set of consistent HPI metrics for a Facility/Laboratory. | Publish the guidelines by December 2019 |
| Develop a “White Paper” describing “Use of technologies for error reduction” | This activity will provide facilities/laboratories options for technologies that can be utilized to reduce errors. | Publish a White Paper on “Use of technologies for error reduction.” |
| Develop a “Questions to use during work planning and pre-job briefs to discover the presence of error precursors” \*\* | To support HPI error reduction, develop questions that can be utilized for work planning and pre-job briefs. | Publish the list on the EFCOG website. \*\* |

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| Safety Culture | | | | |
| Identify potential gaps (from the Safety Culture Workshop in Idaho) that need to be added to the Strategic Plan during FY20, including developing an assessment tool that could be added to a consolidated ISM tool. | | The development of a holistic plan for safety culture implementation. | Develop Strategic Plan during FY20. | |
| Develop a list of metrics to monitor safety culture. Identify labs/projects to pilot the metrics to evaluate effectiveness. | | This activity will provide a recommend set of metrics to measure safety culture for a laboratory or project. Metrics will be discussed at part of the upcoming Fall Safety Culture Workshop 2019. | Develop metrics and identify pilots by 9/30/20. | |
| 3.0 Nuclear & Facility Safety | | | | |
| Accident Analysis | | | | | |
| Write a White Paper to document new methods for calculating aircraft crash frequencies to support eventual updating of DOE-STD-3014, *Accident Analysis for Aircraft Crash into Hazardous Facilities*. | | Provide new calculation methods to replace outdated method provided in DOE-STD-3014. Consistently applied method across the contractor community in the DOE complex. | | | White Paper - Aircraft Crash Frequency Calculation Methods. |
| Write a White Paper that describes the benchmark new pressurized spray leak methods within the DOE complex to enable the methodology to be accepted during the RevCom review of DOE-HDBK-3010, *Airborne Release Fractions / Rates and Respirable Fractions Handbook* | | Benchmark results will allow adoption of the new spray leak methods more quickly and consistently across the contractor community in the DOE complex. | | | White Paper – New Pressurized Spray Leak Methodology Benchmarking Results. Concurrent with or prior to the release of DOE-HDBK-3010. |
| Continue SME support of NTC training development for DOE-HDBK-1224, *Hazard and Accident Analysis Handbook* and attend pilot course presentations. \*\* | | Ensure training that is consistent with the intent of the hazard and accident analysis methods that the SMEs developed. Consistently applied methods across the contractor community in the DOE complex. | | | NTC Training Course on DOE-HDBK-1224 vetted through pilot course. \*\* |
| Support biennial revision of DOE-HDBK-1224, *Hazard and Accident Analysis Handbook*. Complete White Papers to document other action items for revision. | | Provide hazard and accident analysis methods to enhance the methods provided in DOE-STD-3014. Consistently applied methods across the contractor community in the DOE complex. | | | White Paper on the treatment of the Composite Lower Explosive Limit (CLEL) describing the basis for determining the CLEL.  White Paper to provide the basis for purge calculations related to the control of flammable mixtures during steady-state operations and during recovery after an upset condition.  Produced prior to revision of DOE-HDBK-1224. |
| Provide SME support to the Software Quality Assurance task group on input to DOE headquarters regarding the software most desired by the complex for inclusion in the toolbox. | | Ensure that DOE is informed on the software that the contractor community needs added or updated first to reduce cost of individually deploying at each site. | | | Email list of software most desired by contractor community and publish on EFCOG website. |
| Provide SME support for enhancing the Safety Software Central Registry Evaluation Criteria to allow DOE “Toolbox” codes to be added or versions updated in a more timely manner. | | Provide new evaluation criteria to replace overly burdensome methods used today. Potential for cost avoidance with consistent, known methods that can be applied consistently by each software developer. | | | Best Practice documenting how to apply the new evaluation criteria. |
| Criticality Safety | | | | | |
| Develop a Best Practice on criticality safety calculations using Monte Carlo codes. This will include guidance on number of neutrons per generation, number of generations to run, and source convergence. \*\* | | Provide Monte Carlo methods to enhance the methods currently used at individual sites. Consistently applied methods across the contractor community in the DOE complex. Knowledge Transfer. | | | Best Practice - Criticality safety calculation methods using Monte Carlo codes. \*\* |
| Develop a White Paper on fissile gram equivalent or plutonium gram equivalent, advantages and disadvantages | | Provide gram equivalent methods discuss to ensure proper consideration and use. Consistently applied methods across the contractor community in the DOE complex. Knowledge Transfer. | | | White paper - Fissile gram equivalent or plutonium gram equivalent advantages and disadvantages. |
| 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. | | Improved sharing of lessons learned to contractors across the DOE complex. Knowledge Transfer. | | | Guide – Effective sharing of lessons learned. |
| Develop a Best Practice for correct level of treatment of criticality safety and controls in DSA and TSRs versus implementing as programmatic controls based on NNSA CTA position memo (15Jul19) on Considering D/EBE in CSEs per DOE O 420.1C, Chg. 2, *Facility Safety*, and EM CTA comment to EFCOG N&FS Chair. \* | | Consistency across DOE complex in how criticality safety requirements are handled in the DSA, and in how the latest DOE guidance on the subject is implemented. | | | Best Practice – Treatment of Criticality Safety and Controls in DSAs and TSRs versus Implementing as criticality program controls. \*\* |
| Develop a Best Practice for consistent implementation following the cancellation of the standard DOE-STD-1158, *Self-Assessment Standard for DOE Contractor Criticality Safety Program*, using ANSI/ANS-8.19 as a guide. | | Provide criticality safety program assessment methods specific to the DOE complex. Consistently applied methods across the contractor community in the DOE complex. | | | Best Practice – Methods for Assessing DOE Contractor Criticality Safety Programs. |
| Early Career | | | | | |
| Develop a guide for formal mentoring programs. \*\* | | Allow early career nuclear safety professional access to senior nuclear safety professionals. | | | Guide – N&FS Early Career Mentoring Program. \*\* |
| Complete fundamentals papers (Regulations, Hazard and Accident Analysis, Consequence Analysis, Control Selection, TSRs, USQs) \*\* | | Improvements to initial training for early career professionals across the DOE complex. Knowledge Transfer | | | Complete 5 fundamental papers (topics in activity).\*\* |
| Complete a Best Practice on early career rotation programs based on programs at various DOE sites and facilities \*\* | | Provide a path and method for Early Career Nuclear Safety professionals with opportunities to experience and have exposure to different positions within the site or facility structure. | | | Best Practice – Job Rotation Programs at various contractors and DOE across the DOE complex.\*\* |
| Hazard Analysis | | | | | |
| Produce a Best Practice on the correct level of treatment of chemical hazards in the DSA and TSRs versus 10 CFR 851 programs (partnered with other Safety Working Group subgroups and task teams). | | Consistent handling of chemical hazards in the facility safety basis across the DOE complex. | | | Best Practice - Correct level of treatment of chemical hazards in the DSA and TSRs versus 10 CFR 851 programs. |
| White Paper on various terms used by criticality safety and others (e.g., RadCon, EP, NS, IH, Transportation) | | Better clarity in terminology across disciplines, particularly in identifying where the same terms are used with different intended meanings. | | | White Paper – Explanation of Terminology used by criticality safety and differently by others. |
| Best Practice for management and control of less than HC-3 Nuclear Facilities | | Analysis, Documentation, and Controls Methods to avoid having less than HC-3 Nuclear Facilities become HC-3 unexpectedly. | | | Best Practice - Management and control of less than HC-3 Nuclear Facilities. |
| Safety Basis | | | | | |
| Write Guide on revised DSA annual update frequency implementation following the 10 CFR 830 rule change to DSA annual update requirements. | | Consistency across DOE complex for the implementation of changes to DSA annual update requirements with upcoming changes to 10 CFR 830. | | | Guide – Implementation of revised DSA annual update frequency. During 10 CFR 830 rule change implementation period. |
| Write Guide on when facilities should upgrade to the new revisions of DOE-STD-1027, *Hazard Categorization of DOE Nuclear Facilities.* | | Provide Guidance and consistency across DOE complex for the adoption of updated hazard categorization standards. | | | Guide – Considerations and guidance on when to implement the upgraded DOE-STD-1027. During 10 CFR 830 rule change implementation period. |
| Produce a White Paper on the Safety Basis portion of DOE-HDBK-1230-2019, *Commercial Grade Dedication Application Handbook*, which will support EFCOG Engineering Practices and QA on revisions to the handbook. | | Improved communication between EFCOG working groups, leading to revisions that meet the needs of all disciplines. | | | White Paper – Developing Safety Functions, Functional Requirements, and Performance Criteria with Commercial Grade Dedication in mind. |
| Complete the following Best Practices:   * DSA Review Guidance * Process Safety Review Board * Moisture/Humidity Levels for Fires * Qualification Cards for Safety Analysts | | Consistency in safety basis analysis and program implementation across the DOE complex. | | | Best Practices on the following topics   * DSA Review Guidance * Process Safety Review Board * Moisture/Humidity Levels for Fires * Qualification Cards for Safety Analysts |
| Unreviewed Safety Questions | | | | | |
| Complete Best Practice on implementation of the revised rule and DOE G 424.1-1C, *Implementation Guide for Use in Addressing Unreviewed Safety Question Requirements*,in the site or facility USQ procedure following release of the revised 10 CFR 830. | | Consistent implementation of the changes to DOE requirements relating to the USQ process resulting from changes to 10 CFR 830 and DOE G 424.1-1. | | | Best Practice – USQ Process implementation with new rule and guidance. During 10 CFR 830 rule change implementation period. |
| Provide SME support for revision of the current DOE NTC USQ Training consistent with the revised rule and guide. \*\* | | Ensure training that is consistent with the intent of the rule and guide. Consistently applied methods across the contractor community in the DOE complex. | | | NTC USQ Training Course vetted through pilot course. \*\* |
| Complete Best Practice on USQ applicability to safety software and SQA documentation. | | Consistent implementation of the USQ process for safety software and SQA documentation across the DOE complex. | | | Best Practice – USQ Process Applicability to Safety Software and SQA Documentation. |
| Complete Best Practice on PDSA change control (USQ-like) procedure based on questions in DOE-STD-1189, *Integration of Safety in Design Process*. | | Consistent implementation of a PDSA change control process across the DOE complex. | | | Best Practice – PDSA Change Control Process Procedure based on Questions from DOE-STD-1189. |

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| 4.0 Quality Assurance | | | |
| Policy and Procedures | | | |
| Best Practices for QA Metrics and Methods | | Determine set of effective QA metrics and methods (e.g. data collection) applicable to the various facilities across the DOE complex, e.g. laboratory vs. nuclear. Focus will be on developing metrics and providing guidance on their collection, use/trending, and applicability (specific to facility type). Will additionally attempt to determine leading indicators, which are particularly lacking at most sites. | Publish Best Practice |
| Guide for EFCOG White Paper Development and Release | | Create a guide for the various EFCOG groups for the development, approval, and release/posting process for White Papers. Currently no guidance exists on the topic and neither the process nor expectations are described, including points of contact, etc. | Publish Guide |
| Software QA | | | |
| Central Registry Toolbox Code Qualification Process Streamlining \*\* | | Help speed up and make more efficient the code qualification process for the DOE Central Registry’s Toolbox. These tools can then be used by site around the DOE Complex with lightened site-specific qualification. | Recommendations, with implementation details, for streamlining the qualification process and groups that can help with the qualification audits and training.\*\* |
| Supplier Audit Software-specific Checklists | | Increases the usefulness of the MASL evaluated suppliers list if the companies offer software. Sites desiring to use a MASL supplier will need to do less evaluation if most or all of information they need to make an informed decision about the quality of the supplier and software is available in the MASL. This checklist could also be used by individual sites for doing their own software supplier evaluations. | A checklist (or checklists) of questions to be added to supplier audit checklists to help ensure software-specific information is gathered and evaluated. |
| Redesign EFCOG SQA Web Site | | Will made information, documents, meeting information, contacts, and other types of software related links easier to find on the EFCOG SQA pages. | Redesign and refresh of the EFCOG SQA pages. |
| Review EFCOG Zip File | | Files and documents from the older EFCOG site were bundled into a single zip file containing information from multiple task groups. Reviewing this file and determining which documents should be extracted and placed on the EFCOG SQA pages for future reference will make these documents available across the DOE Complex. | List of files to be extracted from the larger zip file and placed on the EFCOG SQA pages. |
| Mapping SCRUM Events to Safety Software Work Activities | | As more development teams move to using an Agile and/or SCRUM methodology, there is confusion on the parts of both team members and federal oversight on what and when records and documents matching the requirements of the DOE O 414.1D work activities are produced. This mapping will begin answering those types of questions. | Mapping of the ten DOE O 414.1D Work Activities with phases and activities of the Agile/SCRUM processes, identifying types of documents and records produced by each. |
| Cloud-hosted Software Recommendations | | Many commercial software tools are moving to a cloud-hosted platform in which the vendor serves up the application on a server they control that is accessible via the internet. This task will address security concerns, configuration control, testing, and the qualification process for software that is nuclear/radiological safety related. | A position paper containing recommendations and considerations addressing security concerns, configuration control, testing, and the qualification process for software that is nuclear/radiological safety related, cloud-hosted software. |
| Supply Chain Quality | | | |
| Suspect/Counterfeit Prevention Improvement | | Provide recommended Best Practices regarding criteria in DOE O 232.2A addressing legacy suspect counterfeit items. Through this task, a suspect counterfeit Items clearing house has been set-up at <https://opexshare.doe.gov/>, This site now provides valuable information regarding suspect counterfeit items. | Provide recommended Best Practices on suspect counterfeit items that can aid in the revision of DOE O 232.2A  Provide recommended Best Practices on suspect counterfeit items that can aid in the revision of DOE O 414.1D |
| Commercial Grade Dedication Training utilizing the new DOE CGD Handbook \*\* | | Commercial Grade Dedication Training utilizing the new DOE CGD Handbook. | Develop new or revise existing Commercial Grade Dedication Training based on Commercial Grade Dedication handbook and industry Best Practices. \*\*  Evaluate use of or incorporation into a web-based course from the DOE National Training site. |
| MASL Cost Avoidance – How do we get additional Cost Avoidances identified | | Develop method to increase use of and input of data that more closely provides the cost savings obtained by use of the MASL tool. | Develop method to increase use of MASL cost savings tool. |
| DOE EM Single Approved Supplier List \* | | Provide recommendations to develop and maintain a single list of approved NQA-1 and Commercial Grade suppliers for use at DOE EM facilities. As a minimum, the list should support EM facilities, but may include all of DOE. Provide recommendations on how to proceed with use of a complex wide EM approved supplier list. The recommendation should address the actions needed to allow contractors to use and maintain the list, contractual considerations, DOE endorsement, procedures, lead auditor certification, and conduct of supplier audits. | Evaluate and develop implementation strategy to implement MASL improvements identified in the EFCOG Safety Working Group Chair report from the August 2017 meeting. Implement recommendations as they apply to the QA Subgroup.  Add an additional task to identify common suppliers for NNSA sites.\* |
| Foreign National / Sensitive Information Supplemental Checklist | | Identify additional Lines of Inquiry (LOIs) that should be added particularly for weapons suppliers, to protect the integrity of the NSE Weapons Complex sensitive information. | Develop checklist questions to ask suppliers and a guidance document for how to address dissemination of information. |
| NRC vs. DOE Safety Classification and the Resultant NQA-1 Acceptance Requirements | | Benchmark NRC/Nuclear Utility safety classification vs DOE safety classification and where CGD applies to the respective NRC/Nuclear Utility and DOE classification. White Paper with recommendations based on the outcome of the study | White Paper |
| NQA-1 Requirements 3, 4 and 7 crosswalks to NQA-1 Subpart 2.14 and NAP 24-A | | This task will perform a cross walk in engineering, procurement acceptance requirements between the primary method of acceptance documented in NQA-1 Requirement 3, 4, and 7 and the alternative method of procurement documented in NQA-1 Sub-part 2.14. Additionally, NAP 24-A will be compared against previous 2 sets of engineering / procurement acceptance requirements. | White Paper |
| Develop CGD Templates that consider a variety of site conditions, safety function and installed condition, to show how  differing safety requirements effect selection of critical characteristics. | | The scope of this task will be to develop a CGD sample template to enable sites to demonstrate selection of critical characteristics based on the safety function and installed condition. The purpose of this task is to show that critical characteristics can vary dependent on safety function and installed condition. The long-term vision for this task is to form a library of such examples on the EFCOG website as a resource to the complex to improve efficiency and effectiveness in the implementation of their overall acceptance programs including CGD | Sample form |
| 5.0 Regulatory & Enforcement | | | |
| 5.1 Build consensus within the contractor community on technical issues with impact to nuclear safety, worker safety & health, and security enforcement impact | | Standard approach and implementation strategy to address key enforcement issues complex-wide | 5.1.1 Participate in a joint task team, with Office of Enforcement staff, to evaluate the path forward for the utilization of the Enforcement Guidance Supplements.  5.1.2 Develop a Best Practice to provide guidance for the effective integration of the Enforcement Program and the Classified Information Security programs. |
| 5.2 Improve Enforcement Coordinator knowledge and familiarity with nuclear safety, worker safety & health, and security regulations | | Enhanced understanding of regulatory requirements and the applicability of regulatory citations to issues being evaluated as part of the enforcement process | 5.2.1. Work collaboratively with members of the SWG to develop regulatory summaries or enforcement aids for 10CFR 835. Regulatory summary will be posted and available on the EFCOG website. \*\* |
| 5.3 Improve Enforcement Coordinator knowledge of the Enforcement process and expectation | | Enhanced understanding of Enforcement requirements and expectations enabling the development of stringer Contractor Programs. | 5.3.1 Work collaboratively with members of the DOE National Training Center (NTC) and the DOE Office of Enforcement to convert the existing Enforcement Coordination classroom training to Computer Based Training. \*\* |
| 6.0 Sustainability & Environment | | | |
| Sustainability Score Card Improvement across DOE Complex | | Guiding Principle training and Best Practice documentation. Provide tools and training to improve in areas including metering and commissioning where the complex is struggling with goal achievement. | | HPSB and Guiding Principles webinar training; provide training materials and attendee list to DOE sponsors. \*\*  Virtual metering webinar and document Best Practices. |
| Better Buildings coordination | | Identify how SESG can serve to support the DOE facility advancement of Smart labs and HPC practices and link it up to the IH needs and drivers in the Worker Health and Safety Group. | | ANL Smart Labs Workshop in November 2019. Share lessons learned and document Best Practices.  Attend one of the annual Worker, Health, and Safety Sub-Group meetings to discuss Smart Lab elements. Document Best Practices. |
| Support AU-21’s Sustainable Campus Initiative | | Identify areas for SESG support in this initiative. | | Pilot program description document. |
| Maintenance Coordination | | Increase energy and water efficiency by working with Maintenance Managers across the complex. | | Document Best Practices when leveraging energy analytics software to enhance predictive maintenance in facilities. |
| Resilience | | Visual representation of status and needed improvements in the area of resilience. | | Identify Labs that can pilot the Reliance Metric Scorecard Tool to provide visual representation of current status and needed improvement. Document Best Practices. |
| 7.0 Worker Safety & Health Subgroup | | | | |
| Radiation Protection Task Group | | | | |
| 7.1 Provide recommendations to AU-11 on adoption of ICRP Lens of the Eye dose limits | | This issue has the possibility of greatly affecting the current external dose monitoring schemes, work planning requirements and protective equipment use.  The costs possibly incurred by a change would be significant to the complex and must be carefully considered before adoption. | | 7.1.1 Provide a recommendation paper to AU-11 on adoption of the ICRP eye dose limits. |
| 7.2 Assist the DOE National Training Center (NTC) in their effort to build consistent radiological worker training programs to be used complex-wide. \*\* | | NTC is working with the AU-11 SME to develop recommended changes to support DOE policy and guides addressing DOE radiological training expectations.  By providing inputs from practitioners, EFCOG RP can help NTC build training programs/materials and DOE to formulate expectations that are practicable, meet operational needs, facilitate reciprocity recognition, and that are more likely adopted by sites, thereby saving them from having to develop on their own. | | 7.2.1 Continue to provide personnel to participate in NTC training development efforts. Regularly report progress at EFCOG meetings.\*\* |
| 7.3 Provide formal directions and continued support for the ‘Health Physics Instrumentation Committee’ (HPIC) to benefit all sites in the complex. | | The HPIC existed for many years. It is composed of mostly DOE personnel from various sites who are experts in the field of HP instrumentation. Their work generates useful information about instrument selection, application, reliability, etc.  By formally providing directions to this committee, EFCOG RP can leverage their expertise to help solve common instrumentation problems and gain invaluable shared collected knowledge, efficiency, and cost savings. | | 7.3.1 Report HPIC progress at EFCOG meetings. |
| 7.4 Present lessons learned presentations at EFCOG RP meetings as webinars for entire DOE complex. | | The EFCOG RP TTG has, for many years, shared lessons learned among its members at EFCOG meetings. Presenting such information as a webinar format will allow accessibility of those in complex that do not or cannot attend meeting. | | Present at least two webinars per year. |
| Electrical Safety Task Group | | | | |
| Develop & publish materials for May 2020 Electrical Safety Month \*\* | | Provide training materials to ensure that workers for DOE contractors are aware of changes from the 2017 to the 2020 National Electrical Code (NEC) | | Training to familiarize electricians and electrical SME with changes from the 2017 to the 2020 NEC developed in partnership with non-profit Electrical Safety Foundation, International.\*\*  Interactive training module on requirements and use of Ground Fault Circuit Interrupters (GFCIs) for a non-SME audience, reflecting changes in the 2020 NEC \*\* |
| Review and revise BP 194, DC Arc-flash Calculator for consistency with IEEE 1584-2018, Guide for Performing Arc Flash Calculations and with the latest information on photovoltaic system faults | | Improve the ability of DOE Contractor electricians and electrical SMEs to evaluate, understand, and mitigate the electrical arc-flash hazards present in photovoltaic power systems. | | Because photovoltaic power systems have unusual characteristics when compared to other direct-current power sources, a new section of the BP 194 Arc-flash Calculator will be published to help accurately evaluate and mitigate these hazards. |
| Develop and Publish Best Practice for Commercial Electric Vehicle Charging Safety | | Electric vehicles are present at most DOE laboratories and sites, whether as government-owned, privately owned, or as part of research and development efforts. Correctly identifying and mitigating the hazards these vehicles pose will reduce risks at DOE sites. | | Best Practice for Commercial Electric Vehicle Charging Safety |
| Develop and Publish Best Practice for Lithium-Ion Battery Storage Systems Safety | | Lithium-ion technology is one of the more promising areas for further research and development in energy storage systems in scales ranging from facility backup power to power grid-interactive, including research taking place at DOE laboratories. Correctly identifying and mitigating the hazards these battery systems pose will reduce risks at DOE sites. | | Best Practice for Lithium-Ion Battery Storage Systems Safety |
| Develop and Publish Best Practice for Capacitive System Grounding Sticks | | Grounding sticks have been used for decades at DOE laboratories and sites to remove stored hazardous energy from capacitors. Most labs and sites have developed this technology and procedures for using these sticks in-house. Capturing the most effective designs and procedures complex-wide will reduce risks at all DOE laboratories and sites | | Best Practice for Capacitive System Grounding Sticks |
| Expand & Revise Best Practice #211 for Multiwire Branch Circuit Safety to other types of Shared Neutral Circuits | | Best Practice #211 addresses hazards that can be encountered when neutral conductors are separated in multiwire branch circuits, or MBC, (a specific type of shared-neutral circuit), which are permitted by the National Electrical Code (NEC). There are other types of shared-neutral circuits, some of which were formerly permitted by the NEC, some of which are installation errors, that can present the same severity of hazard as MBCs. This revision will expand the safe work practices in BP #211 to these other types of shared-neutral circuits. | | Expanded Best Practice #211 for Multiwire Branch Circuit and Other Shared Neutral Circuit Safety |
| Laser Safety Task Group | |  | |  |
| Develop and Publish a Benchmarking Report on High-Power Laser Operations | | High power laser operations are spreading across the complex and there are no real guidelines on their use | | Present findings at the 2020 DOE LSO Workshop and publish completed report to the EFCOG-LSTG web page |
| Develop a DOE Laser Near Miss & Accidents Database | | Though DOE does track these items, they are hard to find easily. Creating a database helps to easily navigate the items | | Publish to the EFCOG-LSTG web page |
| Develop & Publish LSTG Performance Metrics | | This helps to ensure workshops and meetings that are beneficial to all | | Publish to the EFCOG-LSTG web page |
| Benchmark additional control requirements from ANSI Z136.1-2014 and Revise “Guidance on Laser Safety Requirements” documents to include these benchmarking efforts | | Have collected all previous ones and put together into a DOE Laser Safety Best Practices document. Continuing to build on this helps to ensure a uniform interpretation of the standards. | | Publish report to the EFCOG-LSTG web page |
| Document benchmarking efforts for Class 1 laser enclosure requirements | | Though a class 1 laser product is defined in the Federal Laser Product Performance Standards and the ANSI Z136.1, there are many interpretations of this rule. This study helps to ensure uniform interpretation by DOE sites. | | Present findings at the 2020 DOE LSO Workshop and publish completed report to the EFCOG-LSTG web page |
| Benchmark laser protective eyewear (LPE) use across the DOE complex. Areas of concentration should include:  The use of multiwavelength protection in a single filter (When does VLT become a hazard?)  The use of multiple filters in a single lab (How are multiple types of LPE filters, including alignment eyewear, in a single lab/facility controlled?)  Identification of proper LPE where specific wavelength/OD coverage is not printed on LPE by vendor | | One of the largest issues with the use of administrative controls is laser protective eyewear. This will ensure that the Best Practices are shared across the complex and more uniform safe practices are implemented. | | Present findings at the 2020 DOE LSO Workshop and publish completed report to the EFCOG-LSTG web page |
| Publish presentations that are made at the 2020 DOE LSO Workshop at UT-Austin, that is coordinated by the LSTG | | The workshop has become the place for an LSO to obtain practical laser safety information. Attendees include DOE, DOD, NASA, Academia, Industry, and other government agencies | | Publish Workshop presentations to the EFCOG-LSTG web page |
| Perform 3rd Laser Worker Survey | | These surveys are completed every 2 years and give the overall attitude towards laser safety from across the DOE complex | | Present findings of report at the 2020 DOE LSO workshop and publish completed report to the EFCOG-LSTG web page. |
| Industrial Hygiene and Safety TG | |  | |  |
| Issue White Paper documenting results of Benchmarking of implementation of the new OSAH Silica Standards (continuation of FY19, #7.24) | | OSHA has promulgated two new standards related to silica – 29 CFR 1910.1053 and 29 CFR 1926.1153; one for general industry and one for construction. How these standards are implemented across the complex is important for consistency and ease of implementation. | | White Paper on implementation of the new standards. |
| Issue White Paper on lead contamination criteria: challenges; application to work planning & execution; sampling & monitoring approaches; and, use of tiered levels | | Provides consistency on interpretation and implementation of lead standards | | White Paper on lead contamination surfaces. |
| Develop Physical Agents TLV Guidance for Heat Stress (continuation of FY19, # 7.6) | | Heat Stress TLVs: Provide guidance on the application and implementation of a portion (i.e., heat stress) of the ACGIH Thermal Stress TLV. The guidance document will include requirements and changes in the TLV, identification of low and high-risk activities, information for workers, how to perform a detailed heat stress analysis for work activities, and information on physiological monitoring techniques. | | ACGIH Heat Stress TLV: Employee Friendly Presentation and Guidance for Professional Judgement |
| Develop Best Practices for Improved IH/Occ Med Coordination (continuation of FY19, # 7.7) | | Provide Whitepaper on Best Practices to ensure excellence in communication between Occupational Medicine SOMD/providers and Industrial Hygiene program/field | | Best Practices posted on the EFCOG website. |
| Benchmark chemical storage and chemical storage training programs. | | Develop guidance for the storage of chemicals and the training of workers to help ensure a safe work environment, regulatory compliance and consistency across the complex. The guidance will address any changes from the updated appropriate regulations and guidance documents, e.g., National Fire Protection Association (NFPA) 400 “Hazardous Materials Code”, the Occupational Safety and Health Administration (OSHA) Hazard Communication standard 29 CFR 1910.1200, and other applicable reference documents. | | Issue EFCOG Guide on chemical storage and chemical storage training. \*\* |
| Provide input to DOE to update DOE-HDBK-1139 Chemical Management Volume 1 | | Develop updated content based on current, appropriate regulations and guidance documents, e.g., National Fire Protection Association (NFPA) 400 “Hazardous Materials Code”, the Occupational Safety and Health Administration (OSHA) Hazard Communication standard 29 CFR 1910.1200, and other applicable reference documents. | | Updated draft to DOE-HDBK-1139 |
| Review and Provide Comments to Update DOE-HDBK-1163 | | Provides consistency on hazard integration evaluations, interpretation and implementation. | | Update draft to DOE-HDBK-1163 |
| Occupational Medicine TG | |  | |  |
| Issue White Paper with guidelines on the use of medical and recreational marijuana/CBD products at DOE sites | | This will provide a standardized approach to the use, reporting, medical review of drug test results, and required follow up in workers using medical/recreational marijuana or cannabidiol (CBD) products | | White Paper |
| Develop a process for Site-to-Site Peer Review | | Will provide a formal process for requesting an outside peer consultation with regard to medical issues | | Best Practice |
| Develop and issue a Best Practice on recommendations for key medical self-assessments | | This will provide a standardized approach to medical self-assessments for onsite clinics to evaluate medical services provided to DOE and contract workers. | | Best Practice |
| Work with the IH&S Technical Task Group to determine follow-on activities on new Silica Standards and benchmarking efforts (follow on to FY19 7.29 on implementation of silica Standards) | | Standardize approach to the implementation and medical evaluation of silica workers across the DOE complex under the new OSHA standards for crystalline silica workers. | | Whitepaper |