



2021

ANNUAL
REPORT



EFCOG'S MISSION

Maximize DOE/NNSA mission success by achieving management and operational excellence.

VALUE PROPOSITION

- A comprehensive network of leading companies partnering with DOE to:
 - promote safe, secure, and effective operations
 - develop, share, and advance innovative practices
 - deliver cost-effective solutions to challenges and issues
 - strengthen performance measurement and accountability
- Access to unmatched leadership and experience across member sites and companies
- A collective voice for DOE/NNSA contractors across missions, functions, and sites

NOTE FROM THE CHAIR



The Energy Facility Contractors Group (EFCOG) is now in its fourth decade of working to improve operations and share lessons learned across the Department of Energy (DOE) complex. Now more than ever, EFCOG is focused on enabling the most important DOE/NNSA missions by mitigating its highest risks. During another challenging year EFCOG effectively worked with our DOE and NNSA partners to deliver the mission safely and securely amidst the ongoing pandemic and used the opportunity to apply lessons learned during to achieve more efficient operations. EFCOG worked hand-in-hand with DOE and NNSA to maintain momentum on existing priorities as well as take on new priorities as a new Administration transitioned into the White House.

Formed by contractor executives with the goal of working together to address common issues and problems within DOE/NNSA complex, EFCOG strives to protect worker health and safety while improving operations, increasing efficiency and reducing costs. From unique nuclear operations to safeguarding our nation's strategic nuclear materials for weapons, EFCOG initiatives improve the efficiencies and safety of the DOE/NNSA operations.

EFCOG had an extraordinary year in 2021 as we delivered on our **top Strategic Priorities**:

- Safe, Secure and Effective Operations
- Ensuring Long-Term Availability of Critical Equipment, Supplies and Infrastructure
- Assuring that Projects Are Completed on Cost and Schedule
- Evolving Enterprise Recruiting and Retention Approaches to Fully Realize DEI Priorities and Ensure Mission Needs are Met
- Utilizing Operating Approaches that Deliver on Sustainability, Clean Energy and Reuse Goals

In addition to our strong network of subject matter experts in our Working Groups, the Board specifically took on some of these initiatives to assure access to senior leaders in our contractor community. These initiatives included:

- Continued improvement in the areas of Safety, Security and Quality

- Assuring Diversity, Equity and Inclusion in the Management and Workforce
- Sharing of COVID-19 Lessons Learned
- Improvements in Human Capital to assure a pipeline of the future workforce
- Supply Chain issues including glovebox procurements
- Conduct of Operations
- Performance Assurance and Quality
- Continued improvements in Project Management
- Back to Work/Return to Full Operations Protocols Cybersecurity and Ransomware Policy

We continued to provide constructive and cost-efficient results to DOE/NNSA as well as providing a forum for a strong network of subject matter experts on various technical areas.

EFCOG continues to operate utilizing six specific working groups:

Project Delivery	Safeguards and Security	Safety
Waste Management	Cybersecurity	Training

The working groups, tightly aligned with the DOE sponsors, represent the best and brightest of the subject matter experts throughout the DOE/NNSA programs, laboratories and sites. Our groups this year have worked on several technical focus areas and have provided numerous best practices. This includes areas such as Earned Value Management and development of the EVMS Maturity Scorecard, accelerated deployment on online training to accommodate the shift to remote training capability, Cybersecurity and Physical Security Integration Guide, Best Practice on Code of Record, Best Practice on Packaging and Shipping Radioactive Material, and guidance on addressing workplace stress caused by Covid-19 and how to address it in order to reduce errors by employing HPI principles.

We continue to work with sister organizations such as the National Laboratories Directors Council, the Energy Communities Alliance (ECA), and the Institute of Nuclear Power Operations. We co-sponsored the National Cleanup Workshop with ECA and DOE which allowed for continued technical exchange between the contractor community and the Federal government even in a remote environment.

This report summarizes the accomplishments of the working groups over the past Fiscal Year 2021 and lays out initiatives and deliverables for the upcoming Fiscal Year 2022. The full accomplishments as well as the full work plans are available on the EFCOG website.

I would like to recognize the hard work of our working groups and to say thank you for the full support of our Board of Directors. I look forward to everything we will achieve together in 2022.

Sincerely,
 Michael Lempke
 Chair, Energy Facility Contractors Group

The EFCOG organization arose from an initiative by contractor executives to work together to improve operations across the DOE complex and a challenge from the then Secretary of Energy to tackle common problems facing DOE sites and laboratories. That remains the core of our mission today – to maximize DOE/NNSA mission success by achieving management and operational excellence. EFCOG has grown to an organization that has over 110 member companies representing the prime contractor community as well as the small business community that support the DOE/NNSA operations.

During decades of service, EFCOG has continued to demonstrate the value of partnership across the DOE complex by working collaboratively with DOE/NNSA at the Headquarters and the field level. Fiscal Year 2021 continued to be challenging with continued spikes of Covid during the year. EFCOG kept close contact with the DOE/NNSA both thru Board and Working Group interactions to assure that EFCOG was working on the highest risks and most important issues that the complex was facing. Thru these interactions, mission milestones were still accomplished while maintaining the safety of our most important resource: our workforce.

BOARD OF DIRECTORS

The Board of Directors, comprised of senior executives from member companies, is elected by the Executive Council from the membership and serves as the governing entity for EFCOG's



day-to-day operations. We continued to work with DOE on several major efforts. First, we continued a multi-pronged effort to reconnect EFCOG with the DOE Office of Environmental Management (EM) Field Office Managers, including participation by field managers in EFCOG Board meetings, and discussion of key issues such as contractor assurance, revision of the DOE Project Management Order, and acquisition planning.

We worked to establish the EFCOG Strategic Priorities which are identified in Figure 1. This focus prompted some Board initiatives that were headed personally by our Board members with support from our SMEs in the Working Groups and senior DOE priorities. This focus allowed for EFCOG/NNSA/DOE dialogue on significant issues facing the complex and has been invaluable throughout the pandemic in maintaining an open and trusting dialogue on how to address evolving issues.

The Board also worked closely with the Office on Enterprise Assessments in the collection of Lessons Learned from the COVID-19 response. In addition, EFCOG held a series of Lessons Learned WebEx sessions which included DOE and EFCOG presentations, presentations from our Corporate members on their global response, and a dialogue with the commercial nuclear network, U.K. and Canada on COVID-19 impacts and lessons learned.

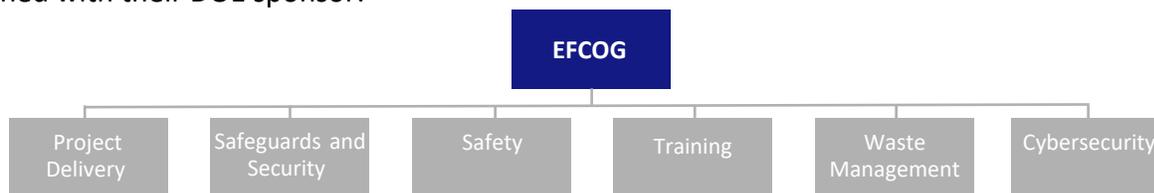
In December, we co-sponsored, with ECA and DOE-EM, the seventh annual National Cleanup Workshop in-person allowing for a continuing dialogue on the top issues facing the cleanup program.

FISCAL YEAR 2021 BOARD OF DIRECTORS

Chair	Michael K. Lempke	Huntington Ingalls Industries
Vice-Chair	Sandra Fairchild	Savannah River Remediation LLC
Vice-Chair Elect	Kelly Beierschmitt	Los Alamos National Laboratory
Directors	Julie Baker	Alliance for Sustainable Energy, LLC (NREL)
	Bob Cochran	Westinghouse Government Services, Inc.
	Jack Craig	SNC Lavalin-Atkins
	Tom Gioconda	Lawrence Livermore National Laboratory
	David (DJ) Johnson	Honeywell Federal Solutions
	Greg Meyer	Fluor Federal Services
	Robert Miklos	Idaho National Laboratory
	William (Billy) Morrison	Veolia
	Mark Peters	Brookhaven National Laboratory
	Frank Sheppard, Jr.	N3B Los Alamos
	Jeffrey L. Stevens	BWXT Technical Services Group
	Mark Whitney	Amentum
	Karen Wiemelt	Jacobs Engineering Group
	Robert Wilkinson	Hanford Mission Integration Solutions
Directors Emeritus	Lincoln E. Hall	L&L Associates, Inc.
	Donald W. Pearman	Bechtel National, Inc.

WORKING GROUPS

EFCOG continues to function under a streamlined organization of six working groups each tightly aligned with their DOE sponsor:



These Working Groups include subject matter experts, leaders, and managers from across DOE’s programs, laboratories, and sites. This year the Working Groups produced focused best practices developed from across the enterprise, issued numerous white papers and recommendations, and supported DOE in the review, updating, and improvement of a broad range of DOE Orders, standards,

and guides. In all these efforts, we maintained a focus on achieving excellence in a manner that is practical, implementable, cost-effective, and sustainable. The key FY2021 accomplishments of these groups as well as a summary of the planned FY2022 activities are summarized below. More detailed description of both FY2021 and FY2022 activities, as well as membership of the groups, can be found on the EFCOG website.

During the past year, the EFCOG Working Groups focused on numerous critical initiatives. The Working Groups utilized teleconferences and meetings to exchange information and lessons learned. Each Working Group performs its activities consistent with a charter approved by the Board of Directors.

A Chairperson oversees the direction of each Working Group. Working Group membership includes individual subject matter experts supporting particular focus areas. The FY 2021 Working Group Chairs (and their member company affiliations) are shown below as of January 2021. DOE and NNSA Headquarters and Field Sponsors provide advice, information, and support.



2021 WORKING GROUP LEADERSHIP		
WORKING GROUP	EFCOG CHAIR	DOE LIAISON and DOE & NNSA POCS
Project Delivery	Amy Basche, Chair (MSA)	Paul Bosco, OAPM; Bob Raines, NNSA
Safeguards and Security	H. Ray Hubbs, Jr., Chair (Y-12)	Mark Hojnacke, AU
Safety	Jan Preston, Chair (Fluor Federal Services))	Pat Worthington, AU; Brian DiNunno, EA; Jim Goss, (NA- NPO) NNSA; Mike Hicks, ID; John Marra, EM; Jose Munoz, NNSA; Bob Nelson, EM; Ashley Ruocco, AU; Rizwan Shah, AU; Josh Silverman, AU; Garrett Smith, AU; Kevin Dressen, EA-10; Jim Dillard, AU-11; Jeffery Williams; Robin Keeler, AU-11; Steve Singal, AU-11; Moriah Ferullo, AU-11; Rob Vrooman; Wes Mouser, NTC; Chris Chaves, AU; Christian Palay; Scott Whiteford; Cate Berard ; Colette Broussard; Julie Goeckner
Training	Shayne Eyre, Chair (Battelle Energy Alliance)	Gabe Pugh, EA

Waste Management	Renee Echols, Chair (Firewater)	Mark Senderling, EM; Ahmad Al- Daouk, NNSA; Rob Boehlecke, NNSA; Ray Corey, RL; Kurt Gerdes, EM; Ben Harp, ORP; Chris Kemp, ORP; Julia Shenk, EM; Dave Michlewicz, SC; Rob Seifert, EM; Dan Sullivan, WV; Doug Tonkay, EM
Cybersecurity	Bridgitte Mase, Chair (BGS)	Jeanne Beard, DOE EM; Emery Csulak, DOE HQ; Fred West, DOE EA; Wayne Jones, NNSA

2021 ACCOMPLISHMENTS AND FY2022 PLANNED ACTIVITIES

PROJECT DELIVERY WORKING GROUP

The EFCOG Project Delivery Working Group (PDWG) charter is to leverage the expertise and experience of DOE contractors to address challenges and achieve improvements in project delivery across the DOE complex. The PDWG’s purpose is to seek out, promote and share the best practices and processes for successful project delivery at DOE facilities. This is achieved through contractor subject matter experts and professionals from across the DOE complex working together, and in partnership with DOE, to implement DOE initiatives which strengthen and advance the development, management and delivery of projects (and project-like activities) in support of DOE missions. The PDWG portfolio includes broad-based, interrelated elements across the project lifecycle critical to successful project delivery. Areas of focus and collaboration include:

- Data Quality
- Project Management
- Cost Estimating
- Scheduling
- Risk Management
- Acquisition Management
- Contract Management
- Project Peer Review Support
- Start-up, Testing and Commissioning
- Guide revisions

The Working Group focuses on practical and effective solutions to complex-wide challenges; promoting open communication and sharing of lessons learned and best practices, and leverage of inter-site and inter-contractor solutions to achieve enterprise-wide improvement while supporting cost-effective and efficient solutions. This is achieved in a manner that maintains a priority on safety, compliance and cost-effectiveness.

The Project Management focus areas are construction management, risk management, cost estimating, scheduling and project peer review support. The Project Controls Subgroup focus is primarily on earned value compliance in support of the DOE Office of Project Management (PM)-30 and EM-5.22. These efforts will be integrated and supported by task teams and other working groups as necessary to provide solutions to improving project delivery across the complex. The work plan activities will be

accomplished through the collaboration of complex-wide subject matter experts. All PDWG activities will emphasize data quality in all aspects, outcomes, and products.

FY2021 Accomplishments

- Supported broader EFCOG lessons learned briefings on COVID impacts
- Provided collaborative earned value compliance support to the PM Oversight and Assessments (PM)/ (PM-30) and EM-5.22, as requested for:
 - Washington River Protection Solutions
 - Strategic Petroleum Reserve
 - Pantex, NTS
- Provided ongoing support to PM-30 in development of an EVMS Maturity scorecard through the Arizona State University (ASU) Study
- Published monthly “Practitioner” Newsletter
- Provided input to the Scheduling Guide pre-rev-con and during rev-con process and the EVMS Guide (prior to rev-con process)
- Provided candidates as requested for Project Peer Reviews
- Completed the “12 Step Estimating Tool” – available on the EFCOG webpage
- Completed a pilot Bias Awareness Training Package which includes biases and other human behavioral factors awareness training in project management planning, forecasting, and risk
- Completed an investigative white paper on how systemic and sometimes potentially catastrophic risk are being managed by Programs, Sites or DOE-HQ, and provided recommendations
- Completed an investigative white paper how weather data can be utilized within the various software analytical tools, how it is presently being used (or not used), and provided recommendations for when this feature could be used to assist projects in achieving a better assessment of potential weather impacts

FY2022 Goals

- Continue to assimilate salient COVID-19 Lessons Learned
- Continue to ensure Long-Term Availability of Critical Equipment, Supplies, and Infrastructure
- Review, identify, and recommend incorporation of value-added Construction Industry Institute (CII) Front-end Planning Process/"Pre-Conceptual Planning" “Best Practice’s”
- Assuring that Projects are Completed on Cost and Schedule
- Continue to Emphasize Resource Loaded Integrated Master Schedules
- Continue to Demand Data Quality – Improve Data Creditability
- Continue to provide qualified resources to support PM-30 and EM-5.22 requests, as needed (Peer Reviews, EVMS Surveillance, Document Reviews)

- Continue to support the PM-30 ASU EVMS Maturity Study and Environmental Factor Implementation into the Compliance Assessment Guide and the review process
- Conduct Integrated Master Schedule (IMS) – Peer Reviews and provide Recommendations for IMS solutions to include:
 - Rolling Wave Planning
 - IMS Reasonableness
 - IMS Quality
- Review and Recommend Solutions for areas of decline with respect to the Government Accountability Office (GAO) High-Risk Report (Department of Energy) DOE Contract and Project Management (March 2021 Biennial High-Risk Report)
- Support DOE efforts in the development of DOE guides and revisions. Provide review comments, support comment disposition/resolution, and implementation
- Issue a guide to specific bias reduction techniques that can be applied to improve judgement effectiveness through Program of process enhancements
- Pilot bias reduction techniques at selected sites
- Develop a best practice which outlines the role of Risk Management in pre-CD-2/3A activities and provides consistent guidance
- Develop a paper on a Joint Confidence Level (JCL) and Provide recommendations for updating DOE G 413.3B-7B (in comparison to the existing methods reflected in the literature outside of the Department)
- Continue to work with the Acquisition and Contract Management Subgroup and DOE prior to and after the initial End State Contracting Model (ESCM) awards to develop and deploy methodologies for Management Reserve and risk transparency on Federal Acquisition Regulation-based contracts that can be utilized by both contractor and DOE during Indefinite Delivery/Indefinite Quantity (IDIQ) task negotiation, authorization and definitization
- Continue to identify best practices in partnering processes that support efficient contract administration
- Continue to conduct an industry information share on subcontract oversight and compliance and areas of high perceived risk; share strategies for mitigating or eliminating risk
- To the extent practicable and supported by contract awards, gather contractor industry input on the rollout of the End-State Contracting Model (ESCM) Step 2
- Continue to identify practices in contract closeouts that may reduce the time, complexity, and cost of prime contract closeout

SAFEGUARDS AND SECURITY WORKING GROUP

The Safeguards and Security Working Group (SSWG) is chartered to continuously improve Safeguards and Security (SAS) performance across DOE by focusing on the protection of Nuclear Material and Special Nuclear Material (SNM), sensitive information, classified matter, assets, and personnel. The SSWG adds value by bringing together the best and brightest DOE and industry SAS professionals to analyze issues and develop cost-effective solutions that bring clarity and continuous improvement to the DOE missions.

The primary objectives are to 1) enable the successful execution of DOE missions and programs by promoting security practices that deliver cost effective, safe and secure outcomes; and 2) provide a forum for the active exchange of ideas, approaches and lessons learned among contractors and industry that enhances collaboration through the sharing of innovative technologies and methods and encourages interaction between DOE management and contractors on complex wide objectives, issues and projects.

The Working Group serves as a consensus board for emerging security directives proposed by DOE and for the interpretation and consistent application of existing DOE directives. The Working Group assures the goals of EFCOG and DOE are met through effective planning and execution and promotes continuous improvement and professional development by sharing information among contractors through vehicles such as websites, workshops, and subgroups.

FY2021 Accomplishments

In FY2021, the Working Group focused on key areas to address current or emerging challenges and to deliver efficiency and effectiveness in the development of SAS Programs. New chairs and co-chairs were appointed for the SSWG and subgroups. Each subgroup conducted multiple conference call meetings to move forward with identified initiatives.

Once again, due to the COVID-19 pandemic, and related restrictions, the SSWG continues to face the challenges that teleworking and competing priorities present. All meetings have been via phone or Webex. Although the contacts have maintained, members have had to focus on their respective site recovery efforts, therefore limiting the time available to consistently accomplish the FY2021 goals. If nothing else, the SSWG has identified Best Practices that can be utilized during this continued situation or, in worst case, future situations like another pandemic. In FY2021, the SSWG addressed the following issues:

- TSCM Standardization of Job Requirements
- TSCM Standardization of Facility Assessments
- Destruction of Media
- Marking in the Electronic Environment

- New Controlled Unclassified Information Requirements
- MC&A Measurement Equipment
- MC&A Performance Assurance
- MC&A Shipping Authorization
- Civil Disobedience Response
- Active Shooter/Assailant Response
- EFCOG Integration with Local Insider Threat Working Groups

FY2022 Goals

- Information Security
- Continue Work on Technical Surveillance Counter-Measures Job Qualification Document
- Continue Work on the Standardized Facility Threat Assessment Process
- Continue work on and publish Destruction of Media Best Practice
- Marking in the Electronic Environment
- Controlled Unclassified Information Requirements
- On-going Development of the Measurement Equipment Matrix
- Develop MC&A Performance Assurance Best Practices Guide
- Continue work on and develop an Inventory Best Practice Document
- Finalize Authorization to Ship Template
- Develop MC&A Accounting Brochure
- Develop Physical Inventory Brochure
- Develop Catalog Barcode Readers Matrix
- Finalize Civil Disobedience Best Practices Guide
- Continue work on and Develop Active Shooter Best Practices Guide
- Develop Suspicious Packages and Explosives Response Best Practice
- Standardization of IOSC Programs (Assist with revision of Standard)
- Update IOSC Best Practices Guide
- Establish Advisory Panel Team / Working Group for Local Insider Threat Working Group (LITWG)
- Develop Best Practices Guide on establishing the LITWG core members
- SSWG Joint Sub-Group Activities
- Update member database and subject matter expertise contact list
- Conduct Annual SSWG Meeting

WASTE MANAGEMENT WORKING GROUP

The Waste Management Working Group (WMWG) is chartered to leverage the expertise and experience of contractors to the DOE. The purpose of the WMWG is to seek out and promote the best management and operating practices, cost effective technologies and disposal options for all waste streams generated at DOE facilities whether destined for DOE or commercial facilities.

The WMWG will be focused on complex wide integration and technology transfer while supporting cost effective and efficient waste options. This will be achieved in a way that enhances complex wide communication and maintains a priority on safety, environmental stewardship and security. The scope of the working group includes cradle to grave waste management considerations including waste generation, especially from all DOE activities including facility deactivation & decommissioning (D&D) programs.

The WMWG will also continue to provide DOE with technical support concerning Waste Classification issues across the Complex. The WMWG membership has the technical expertise to provide recommendations on waste classification to the lowest disposition level that is acceptable for compliance with DOE Order 435.1 and other applicable regulation. Identifying alternative disposition pathways for the safe and cost-effective management of lower activity radioactive wastes that have historically been managed as High-Level Waste (HLW) or Transuranic (TRU) supports DOE's risk-based waste management strategy.

FY2021 Accomplishments

- Established a Transuranic Waste Subgroup whose mission is to provide support to EM and NNSA Transuranic (TRU) Waste Generator Sites. This Subgroup focuses on application of complex-wide lessons learned and best practices related to TRU Waste Generation programs across DOE Generator Sites and has provided a forum for waste generators to access waste management information.
- Provided a platform for DOE, site prime contractors, and commercial treatment and disposal companies (TSDFs) to collaborate on managing challenging waste streams across the complex. Examples include reactive sodium wastes (the first challenging waste to be the subject of Subgroup focus), mercury, and most recently per- and polyfluoroalkyl substances (PFAS), which is an emerging contaminant of concern. Improved communication facilitates the Department and its contractors to stay abreast of the latest requirements, available technologies, and disposition pathways for these and other challenging waste streams.

FY2022 Goals

- Provide technical support on Waste Classification issues.
- Provide support to the EM radioactive waste program including technical support for waste management corporate board or user groups (e.g., LLW Federal Review Group [LFRG], TRU Waste and Tank Waste Corporate Boards).
- Provide technical support to the DOE Order 435.1 revision, implementation, and training.
- Through the Packaging and Transportation (P&T) Subgroup, continue to provide support to the DOE packaging and transportation organizations including assisting with updated requirements from the implementation of DOE Order 460.2. Efforts will also include providing technical comments on waste packages, radiation clearance surveys on commercial transport equipment and vehicles, support to the Contractors Transportation Management Association (CTMA) and will incorporate a P&T Lessons Learned Program.
- The P&T Subgroup will also share information with commercial transportation providers, collaborate with DOE and its prime contractors to ensure that varying COVID vaccination and/or testing requirements at DOE sites are understood.
- Continue provide support to sites managing reactive sodium wastes in evaluation of treatment technologies and management/disposition Options and pathways.
- Focus on EPA's emerging contaminants list in support of DOE's efforts to understand potential sources of PFAS and 1-4 Dioxane across the Complex, and share information to assist with filling data gaps for these contaminants. The Challenging Waste Subgroup is providing the platform to convey the message to the Prime Contractors and offer technical expertise as needed to move this initiative forward.
- The D&D Subgroup will provide input and information sharing for technologies that support mercury removal, vapor control, and waste disposition for mercury bearing waste. Improved collaboration between D&D organizations and waste management organizations helps ensure that wastes are minimized that have little to no disposition pathways.
- Establish the TRU Waste Communications Hub and begin to document and categorize lessons learned and best practices for TRU wastes generated around the Complex. Establish and maintain an information repository for this information that will be available to all generations at any time. Focus on application of complex-wide lessons learned from events at Idaho, Los Alamos, and Y-12. Expand on EA-31 Enterprise Assessment best practices dealing with point of generation characterization.

TRAINING WORKING GROUP

The Training Working Group (TWG) was established to drive efficiency and effectiveness in training conducted for the DOE. The TWG takes a leadership role in leveraging collaborative initiatives that support training. It also assists in identifying areas of improvement around proposed policy or regulatory changes, new or changed processes, and providing subject matter expertise for training initiatives across the complex.

With the ongoing impacts of the COVID pandemic, the TWG continued to facilitate the sharing of information and approaches used to continue training and qualifications. Training departments across the complex expended significant effort shifting to hybrid, virtual and modified in-person teaching modalities. Cementing these shifts has brought broader acceptance to tools and methods that have increased delivery of materials to more and smaller groups.

Several national labs worked together to put on a national Training Professionals Days. This was a two-day virtual conference for all training positions at the DOE national labs. TWG connections and personnel were leveraged, and the nationwide DOE training community network was significantly impacted, adding to TWG membership and engagement. There were over 375 participants participating as 40 speakers (including 3 training industry authors) discussed and taught timely skills. It also provided a proof-of-concept and gained the group significant experience for new capabilities: virtual instructor-led training (VILT), the producer role for VILT, and newly acquired delivery technology.

2021 also brought some bittersweet news with the announcement of Karen Boardman's retirement. As the head of NTC and the TWG federal sponsor, Karen has provided generous support, encouragement, and guidance for over 10 years. Gabe Pugh will be taking over as the Training EFCOG federal sponsor.

FY2021 Accomplishments

Held the TWG Annual Workshop for the first time using a new virtual format which opened the door to some benefits previously unattainable. Primary among these benefits was the ability to include significantly more people across the contractor sites that hadn't been able to participate in sessions before: learning coordinators, instructional designers, training specialists and business analysts. Lack of travel costs and time freed up over 200 attendees. This enabled us to identify lessons learned and share them across a wider audience.

The TWG continued pandemic support through best practice sharing and skillset development. We initiated frequent learning sessions to broaden the reach and impact of best practices, build and strengthen DOE trainer network, and build skillsets broadly.

- March 22, 2021: On-the-job Instructor Training in the Time of COVID-19
- April 20, 2021: Virtual Facilitator Panel

- May 24, 2021: Virtual Producer Best Practices session with panel
- July 19, 2021: Virtual Design Principles with Michelle Roach with panel

Continued work on developing standard courses for use across the complex:

- Hazard Communications (HAZCOM) course is being placed on the CARDS sharing database for broad use. The HAZCOM reciprocity checklist will be updated in 2022 and be available to the DOE community. Based on recommendations from the TWG, the National Training Center (NTC) may be requested to establish this course as a DOE standardized course and distribute it via the DOE learning management system.
- Fundamental Radiation Worker course has had its first draft and will continue in the new year. The development slowed due to HQ work on DOE Handbook 1130, Radiological Worker Training Guide that should also go into REVCOM in the early new year.
- Laser Safety course update has started. The Laser safety sub-group has submitted desired changes to the NTC. It has been almost ten years since the last major update to improve visuals and technology in the course.

Progress on the revision to DOE-STD-1070-94 was put on hold by DOE HQ mid-effort due to other priorities. The Training community is also still waiting for release of DOE O 426.2A and stands ready to assist in its rollout.

FY2022 Goals

- Build tools and processes to enable better collaboration in course development, conduct of assessments, and best practice sharing.
- Continue to deliver best practices through frequent learning sessions highlighting topics training organizations are currently challenged with.
- Continue to provide technical expertise in promoting efforts to realize efficiencies in course creation and delivery.
- Develop processes to promote shared course delivery to realize efficiencies through subject matter expertise sharing.
- On hold pending DOE headquarters engagement: Continue to provide leadership in regulatory reform initiatives, including aiding in the revision to DOE O 426.2 and revising training standards and guides.

SAFETY WORKING GROUP

The EFCOG Safety Working Group (SWG) helps member companies attain and maintain the highest levels of Integrated Safety Management (ISM) performance in the operation of DOE/NNSA facilities and projects. "Safety," as it relates to the scope of the Working Group, includes a number of related functions such as nuclear and facility safety, engineering practices, radiological protection, criticality safety, fire protection, work planning and control, worker safety and health, industrial hygiene, environmental protection, human performance, quality assurance, contractor assurance, and related regulatory programs.

The SWG is composed of the following Subgroups, and twenty focused Task Teams:

- | | |
|-------------------------------------|----------------------------------|
| 1. Engineering Practices | 5. Regulatory & Enforcement |
| 2. Integrated Safety Management | 6. Sustainability & Environment |
| 3. Quality Assurance (QA) | 7. Worker Safety & Health (WS&H) |
| 4. Nuclear & Facility Safety (N&FS) | |

Accomplishments for FY2021

- The Engineering Practices Subgroup completed a Best Practice on management of the Code of Record and a White Paper on Benchmarking Procurement Effectiveness Elements.
- The Work Planning and Control Task Team was revitalized under the ISM Subgroup, with an active membership that collaborated to produce multiple Best Practices.
- The ISM and QA Subgroups orchestrated Spring and Fall Joint Workshops, which each drew around 300 remote participants to share operational experiences and lessons learned.
- The ISM Subgroup's Contractor Assurance System (CAS) Task Team developed and published guidance for the conduct of joint DOE/Corporate CAS reviews.
- The Human Performance Improvement (HPI) Task Team within the ISM Subgroup shared COVID-19-focused Lessons Learned on relieving stress/anxiety in the workplace to reduce errors.
- The N&FS Subgroup presented two Best Practices on implementing the revised 10CFR830 regulation and the draft Unreviewed Safety Question (USQ) Guide at the EFCOG N&FS Annual Safety Basis Workshop.
- N&FS Subgroup members participated as Subject Matter Experts in the National Training Center's (NTC's) development and pilot of SBA-250, USQ Process Implementation Review.
- The N&FS Subgroup also supported revision of three DOE Handbooks: Integration of Hazard Analysis, Hazard and Accident Analysis, and Airborne Release Fractions/Rates and Respirable Fractions for Nonreactor Nuclear Facilities.
- The QA Subgroup's Policies & Procedures Task Team developed and issued guidance on a Graded Approach for applying the ASME NQA-1-2017 and DOE STD-1027-92 standards.

- The Sustainability & Environment Subgroup developed a Sustainable Buildings Toolkit to support DOE sites in complying with the Federal requirement for sustainable buildings.
- The Sustainability & Environment Subgroup also piloted the Federal Energy Management Program Technical Resilience Navigator tool and shared Best Practices from the pilot.
- The WS&H Subgroup’s Radiation Protection Task Team assisted the DOE NTC in their efforts to build consistent radiological worker training programs for use complex wide.
- A new Committee was established within WS&H Subgroup’s Occupational Medicine Task Team focused on facilitating collaborations between Human Reliability Program (HRP) Designated Psychologists across the complex.
- WS&H’s Occupational Medicine Task Team benchmarked 32 clinical topics related to COVID-19 and increased virtual meetings to twice a month due to the need for frequent medical consultations related to the pandemic to support mission execution.
- The Electrical Safety Task Team within the WS&H Subgroup produced a number of “Post Pandemic Electrical Safe Work Practices” for Electrical Safety Month, including: risk assessment and the psychology of decision making, managing your lab through PDCA (Plan-Do-Check-Adjust), suspect/counterfeit electrical equipment, and a preview of the 2024 update to the NFPA 70E Workplace Electrical Safety Standard.

In total, during a year again challenged by the COVID-19 pandemic, over 35 Best Practices, White Papers, Lessons Learned, and Implementation Guidance documents were developed and issued in FY2021 because of SWG efforts. These are located on the EFCOG website.

FY2022 Goals

The SWG FY2022 Annual Work Plan located on the EFCOG website contains the full list of current initiatives. Below is a summary of the key goals to be addressed within the SWG Annual Work Plan:

- Benchmark and identify Best Practices in safety culture management and oversight process efficiencies.
- Improve integration of human performance improvement and worker feedback into work planning and control.
- Determine effective QA metrics and data collection methods applicable across the DOE nuclear facilities complex.
- Support DOE’s efforts to enhance and update various nuclear facility design standards.
- Provide subject matter expert reviewers for revision and update of DOE Orders, Standards, Handbooks, and Guides.
- Continue support (multiple subgroups and task teams) to the DOE National Training Center.
- Begin development of a new ANS standard on aircraft crash risk to nuclear facilities (multi-year effort).
- Develop a Best Practice on criticality safety calculations using Monte Carlo codes.

- Facilitate improved compliance across the DOE Complex with the Guiding Principles for Sustainable Buildings.
- Develop a DOE Laser Near Miss & Accidents Database.
- Implement a formal mentoring program for early career nuclear safety professionals.
- Develop and disseminate lessons learned from COVID-19 response across the DOE and NNSA complex.
- Identify and develop a Best Practice for HPI communications to support integrating HPI into general business practices and educate the workforce on HPI principles.

CYBERSECURITY WORKING GROUP

The Energy Facility Contractors Group (EFCOG) Cybersecurity Working Group (CSWG) assists member companies attain and maintain excellence in all aspects of Cybersecurity operations and management of DOE facilities through the consistent exchange of information, best practices, and corresponding improvement activities. The CSWG achieves this by:

- Leveraging the expertise and experience of DOE Contractors to address challenges and achieve improvements in cybersecurity;
- Advocating for strong, effective implementation of Integrated Cybersecurity Management across departmental activities;
- Developing, and promoting best management and operating practices;
- Improving the effectiveness of boundary authorization packages for achieving and maintaining the Authority to Operate (ATO) and achievement of Cybersecurity readiness processes across contracts by working together, exchanging information, and sharing best practices and lessons learned;
- Improving the effectiveness of risk management and cyber resilience, and associated processes by developing tools, practices, guidance, and recommendations for compliance and directive changes – where appropriate and as supported by Contractor and DOE line management;
- Providing real-time support for cyber related emergent issues in the form of ideas, tools, resources, etc.;
- Interfacing with various intelligence associated organizations and industry providers to promote cooperation, information exchange, and as appropriate, minimization of duplication of effort;
- Interfacing with key DOE managers (both headquarters and field) on varying concepts, practices, and concerns associated with Cybersecurity needs and processes to enable better understanding of customer needs and concerns;
- Interfacing with other external organizations on varying concepts, practices, and concerns associated with Cybersecurity processes and risk management;
- Promoting transparent communications across group members and DOE;
- Facilitating the exchange of operating experiences and information on Cybersecurity programs and their effectiveness, and designing studies and developing position and technical papers to inform DOE where appropriate;
- Providing DOE and member companies with access to a network of subject matter experts;
- Identifying opportunities to save and/or avoid costs in the implementation of Cybersecurity and regulatory programs while assisting member companies implement effective Cybersecurity and regulatory programs through peer reviews and consultations; and

- Arranging training and awareness workshops to enhance the competency of Cybersecurity professionals and collaborative workshops.

The working group is focused around the following key areas of Cybersecurity: Industrial Control Systems/Distributed Control Systems/SCADA; IoT & Smart Technologies; Risk Management & Governance; Addressing Remote Work Challenges; Technology and Tools; and Cloud Security.

FY2021 Accomplishments

- Established cybersecurity best practices associated with remote work
- Facilitated collaboration using a secure platform in a FedRAMP tenant of Azure Government with an online discussion forum
- Initiated awareness activities for key topics such as the Cybersecurity Maturity Model Certification (CMMC) requirements; National Institute for Standards and Technology (NIST) 800-53 revision 4 to revision 5; Industrial Control System Awareness; New Technologies in Industrial Control System Security; Cloud Security Best Practices; and Cyber Resilience Best Practices
- Conducted the CSWG Workshop for October in alignment with Cybersecurity Awareness Month
- Arranged and scheduled key speakers for a CSWG Workshop to be held in October during Cybersecurity Awareness Month
- Reviewed abstracts for key topics for a CSWG Workshop
- Established subgroups for key topic areas
- Facilitate workshop participation across DOE, the EFCOG contractor community, and key industry providers
- Drafted Charter for the Cybersecurity Center of Excellence
- Drafted outline to align the Cybersecurity framework with the ISMS
- Provided Cybersecurity threat updates
- Provided quarterly COVID Cybersecurity lessons learned
- Created best practice for reducing risk of ransomware
- Began development of a series of top 10 cybersecurity challenges and recommendations in key areas

FY2022 Goals

- Finalize Charter for the Cybersecurity Center of Excellence and launch program
- Initiate the first phase to align Cybersecurity with ISMS
- Conduct the Annual CSWG Workshop
- Arrange and schedule key speakers for the Annual CSWG Workshop
- Review abstracts for key topics for Annual CSWG Workshop
- Continue to provide regular Cybersecurity threat updates

- Continue to provide quarterly COVID Cybersecurity lessons learned
- Continue to develop growth and membership of subgroups
- Create best practice for Cloud Security topics
- Create best practice for Cybersecurity procurement language to address Supply Chain issues
- Create best practice for Cybersecurity Supply Chain Risk Reduction
- Continue development of Cybersecurity Top 10 topic areas
- Continue development of Industrial Control Security top 10 topic areas
- Continue development of Smart Technologies Security top 10 topic areas

WORKING GROUP INFORMATION

Please see the links below for detailed FY2022 plans, deliverables, Best Practices, Lessons Learned and other relevant document for each of the Working Groups.

Project Delivery WG: <https://efcog.org/project-delivery/>

Safety WG: https://efcog.org/safety/?drawer=Safety%20Working%20Group*Documents

Training WG: <https://efcog.org/training/>

Safeguards & Security WG: <https://efcog.org/safeguards-security/>

Waste Management WG: <https://efcog.org/waste-management/>

Cybersecurity WG: <https://efcog.org/cybersecurity-working-group/>

EFCOG FISCAL YEAR 2021 FUND ACCOUNT SUMMARY

October 1, 2020 – September 30, 2021

Beginning Balance as of 10-01-19		\$ 579,376.62
<u>Receipts</u>		
FY-2020 Memberships & Renewals	\$ 23,142.86	
FY-2021 Memberships & Renewals	\$ 259,030.00	
FY-2022 Memberships & Renewals	\$ 129,000.00	
Interest	\$ 3.68	
Total Receipts	\$ 411,176.54	
<u>Disbursements</u>		
Support Service Contractor		
 Longenecker & Associates, Inc.	\$ 289,875.98	
Total Disbursements	\$289,875.98	
Net income as of 09-30-21	\$121,300.56	
Ending Balance/Management Reserve as of 09-30-20		\$700,677.18

RENEWED MEMBERSHIP FOR FY2021

Accelerant Solutions	GEM Technology International, Corp.	NAC International
Advanced Technologies and Laboratories Int'l	General Dynamics Information Technology	Navarro Research and Engineering
Alliance for Sustainable Energy, LLC (NREL)	Hanford Mission Integration Solutions	Neptune and Company, Inc.
Amentum	HBE Consulting Solutions, LLC	*NFT
American DND, Inc.	*HDR, Inc.	North Wind Group
AMS Corporation	HealthWorks Medical, LLC	Nuclear Waste Partnership LLC
APTIM	HGL	Oak Ridge Associated Universities
Argonne National Laboratory	*Holtec Government Service	*Oak Ridge Technologies
Atkins	Honeywell Federal Solutions	Orano Federal Services LLC
AVANTech LLC	Honeywell FM&T (f/k/a Honeywell)	Pacific Northwest National Laboratory
AzTech International, Inc.	HPM Corporation	PAE Inc.
Babcock Services, Inc	HukariAscendent	Parsons Government Services
Banda Group International, LLC	Humphreys & Associates, Inc.	Parvati Consulting LLC
Bechtel National, Inc.	Huntington Ingalls Industries	Project Enhancement Corporation
Booz Allen Hamilton	I.C.E. Service Group, Inc.	Samos Advisors LLC
Boston Government Services, LLC	Idaho National Laboratory	Sandia National Laboratory
Brookhaven National Laboratory	Innovative Technology Partnerships, LLC	Sargent & Lundy
BWXT Technical Services Group, Inc.	INTERA Incorporated	Savannah River Nuclear Solutions
Caliburn International, LLC	*IONEX Research Corporation	Savannah River Remediation LLC
CDM Smith	Jacobs Engineering Group	Skookum Contract Services
CH2MHILL BWXT West Valley, LLC	JGMS Government Services, LLC	SLAC National Accelerator Laboratory
ClearPlan LLC	Juno Management Professionals	SOC LLC
Cogent Security Consulting LLC	Kiewit Power Constructors	Spectra Tech, Inc.
Consolidated Nuclear Security, LLC	Lawrence Berkeley National Laboratory	Strata-G, LLC
Constellis	Lawrence Livermore National Laboratory	Strategic Management Solutions, LLC
Curtiss-Wright Nuclear/Qualtech NP	Leidos	Studsvik, Inc.
DevonWay, Inc.	Lemma Technical Services	Swift & Staley
DLE Technical Services, LLC	Los Alamos National Laboratory/Triad	TechSource-inc.com
elecTrain	Los Alamos Technical Associates, Inc.	TerranearPMC, LLC
Fermi National Accelerator Laboratory	Management Solutions, LLC	UCOR
Fire & Pump Service Group	MarCom LLC	University of California
Firewater Associates LLC	Merrick & Co.	UT-Battelle
Fluor Federal Services	Mirion Technologies Inc.	Veolia Nuclear Solutions
Fluor Idaho	Mission Support and Test Services	Washington River Protection Solutions
Fluor-BWXT Portsmouth LLC	MPR Associates, Inc.	Waste Control Specialists LLC
Four Rivers Nuclear Partnership	MS Technology Inc.	Westinghouse Government Services
GEM Technologies Inc.	N3B	

*New EFCOG Member Companies

EFCOG MEMBER COMPANIES

By the end of FY 2021, EFCOG membership included 110 DOE contractors. EFCOG welcomes the following new companies:

HDR, Inc.

Holtec Government Service

NFT

Oak Ridge Technologies

IONEX Research Corporation