**11th EM QUALITY ASSURANCE CORPORATE BOARD MEETING**

| | | |
|---|---|---|
| **Meeting Location: Las Vegas, NV– DOE Office at Lossee Road**<br>***With Limited Conference Call Capabilities*** | | |
| **Room: 6404** | | |
| **Agenda for May 1, 2012** | | |
| 1:00-1:15 pm | Agenda, Introductions, Status of Action Items from Last Board Meeting | Bob Murray (EM-43) |
| 1:15-1:35 pm | Discussion and Summary of the Site ISM/QA Declarations | Steven Ross (EM-43) |
| 1:35-2:05 pm | Status of Phase II Follow-up Reviews for Field Offices including Use and Status of the Standard Review Plan | Bob Toro (EM-43) |
| 2:05-2:35 pm | Overview of EM QA Program (as provided to DNFSB) | Matthew Moury (EM-40)<br>Bob Murray (EM-43) |
| 2:35-3:05 pm<br>(BOARD VOTE) | Close-out of Focus Area #1 – (NQA-1 Suppliers) – Joint Supplier Evaluation Program Status and Focus Area #4 – EM-QA-001 Revision Status | Larry Perkins (EM-43)<br>Mike Mason (EFCOG) |
| 3:05-3:25 pm | Focus Area #2 – Evaluation of QA/QC Resources | Jim Davis (EM-43)<br>Bob Carter (EFCOG) |
| 3:25-3:35 pm | **BREAK** | --- |
| 3:35-3:55 pm | Focus Area #3 – Strategy for EM QA/QC Training | Ken Armstrong (EMCBC)<br>Bob Carter (EFCOG) |
| 3:55-4:15 pm | Discussion of NQA-1 Interpretation Letter Regarding the Use of only the 100 Paragraph of Requirements | Matthew Moury (EM-40)<br>Bob Murray (EM-43) |
| 4:15-4:45 pm | Discussion of the DOE Lessons Learned Process | Ashley Ruocco (HSS) |
| 4:45-5:15 pm | Discussion of Best Practices, Attention to Detail, and other Cross-Cutting Issues | EFCOG Representative |
| 5:15-5:30 pm<br>(BOARD VOTE) | General Discussion and Selection of New Focus Areas | ALL |
| | **Meeting Adjourn** | **---** |

# 11TH EM QUALITY ASSURANCE CORPORATE BOARD MEETING

U.S. DEPARTMENT OF ENERGY

# 11th EM QA Corporate Board Meeting

# Las Vegas, NV

## Introductions, Announcements, and Status of Actions

**Bob Murray, Office Director**
**Office of Standards and Quality Assurance (EM-43)**

**May 01, 2012**

EM Environmental Management
safety ❖ performance ❖ cleanup ❖ closure

FCOG
*Energy Facility Contractors Group*

# Agenda

| Topics | Speaker |
|---|---|
| Agenda, Introductions, and Status of Action Items | Bob Murray (EM-43) |
| Summary of the Site ISM/QA Declarations | Steven Ross (EM-43) |
| Status of Phase II Follow-up Reviews | Bob Toro (EM-43) |
| Overview of EM QA Program (as provided to DNFSB) | Matt Moury (EM-40) |
| Close-out of Focus Area #1 and 4 | Larry Perkins (EM-43)<br>Mike Mason (EFCOG) |
| Evaluation of QA/QC Resources Status | Jim Davis (EM-43) |
| Strategy for EM QA/QC Training Status | Ken Armstrong (EMCBC) |
| NQA-1 Interpretation Letter Discussion | Matt Moury (EM-40) |
| Discussion of the DOE Lessons Learned Process | Ashley Ruocco (HSS) |
| Best Practices, Attention to Detail, and other Cross-Cutting Issues | EFCOG Representative |
| General Discussion | ALL |

# Announcements

- Presentations, referenced meeting materials, and meeting minutes will all be available online at the following website: http://www.em.doe.gov/Pages/QACorporateBoard.aspx
- Reorganization is in place at DOE Headquarters with no changes to the QA Program or responsibilities for EM-40
- Matthew Moury has been named the Deputy Assistant Secretary for the Safety, Security, and Quality Programs (EM-40) at Headquarters
- Large turnover among Federal Site QA Managers – Introductions
- Initiating a periodic federal QA Managers call (e.g., quarterly) to discuss issues and lesson learned

# Status of Action Items

| Action | Person | Status |
|---|---|---|
| Notify the EFCOG chair when the JSEP is ready to populate and the EFCOG chair will send a letter to member encouraging its use. | Palay | Complete |
| Initiate a conference call with the site QA managers to discuss the Journey to Excellence Goal #5 Performance Metric | Perkins | Complete |
| Update the Project Plan based on this meeting | Perkins | Complete |
| Develop logistics for the next meeting (face-to-face vs. VTC) | Perkins | Complete |
| Evaluate the current efforts on the FAR revision and determine if a revision is needed for the standard QA contract language | Murray | Complete |

# Status of Action Items (continued)

| Action | Person | Status |
|---|---|---|
| Share the final CGD guidance document title with HSS | Perkins | Complete |
| Distribute the CGD guidance document comment resolution matrix | Carier | Complete |
| Vote on approval of the CGD guidance document | Voting Members | Complete |
| Vote on approval of the QA in Design guidance document | Voting Members | Complete |

U.S. DEPARTMENT OF ENERGY

# 11th EM QA Corporate Board Meeting

## Annual Quality Assurance Declarations
## (submitted as part of the annual ISM declarations)

**Steven Ross**
**Office of Standards and Quality Assurance, EM-43**

**May 01, 2012**

EM Environmental Management
safety ❖ performance ❖ cleanup ❖ closure

FCOG *Energy Facility Contractors Group*

# Outline

- 2011 ISM/QA Declaration - *Criterion 2: Quality Assurance Plan Implementation*
- List of Common Issues
- Discussion of Issues
- Use of the information provided
- Future plans for the ISM/QA Declarations

*Will be discussing Quality Assurance aspects only*

# ISM/QA Declarations

WHY DO WE DO IT?

- Foundation of Safety Management
- Safety & Quality are inseparable
- Take the QA pulse of the EM Complex annually
- Do work safely and correctly
- Opportunity to share solutions
- Periodic Declaration is Required by EM-QA-001

# Criterion 2 (2011 declaration guidance)

- Quality Assurance Plan (QAP) Implementation
  - An evaluation of the effectiveness of QA program implementation.
  - A status of actions to address issues identified in Phase II reviews
  - A discussion on how DOE EM field elements ensure that all work performed by the subcontractors/vendors is consistent with the applicable requirements of prime contractor's QAP/QIP (including flow-down and S/CI).
  - A completed EM Corporate QA Performance Metrics table.

# Sites That Responded

| | | |
|---|---|---|
| **ETEC** | **ORP** | **SPRU** |
| **Idaho** | **PPPO** | **SRS** |
| **MOAB** | **Richland** | **CBFO/WIPP** |
| **Oak Ridge** | **SLAC** | **WVDP** |

# Areas Identified as Needing Improvement (both federal and contractor offices)

| Item | Frequency |
|---|---|
| Quality Improvement | 6 |
| Work Processes | 5 |
| Personnel Training & Qualification | 4 |
| Documents & Records | 4 |
| Management Assessment | 4 |
| Independent Assessment | 4 |
| Procurement | 3 |
| Design | 2 |
| Software Quality Assurance | 2 |
| Program | 1 |
| Inspection & Acceptance Testing | 1 |
| Corrective Action Management | 1 |
| Commercial Grade Dedication | 1 |

# Specific Topics within the General Areas Needing Improvement

- Quality Improvement
  - Phase I / phase II reviews not performed
  - Use only paragraph 100 of NQA-1
  - QAP not sufficient for full scope of activities
  - Identified & corrected weakness but actions not specified (several)
  - QAP needs review
  - Reduced staffing impacts QA efforts (several)

- Work Processes
  - Hazard identification and analysis
  - Unspecified opportunities for improvement

# Specific Topics within the General Areas Needing Improvement (continued)

- Personnel Training and Qualification
  - Training material not up-to-date
- Documents and Records
  - Unspecified opportunities for improvement
- Management Assessments
  - Term “assessment” used in broadest possible sense by some
- Independent Assessments
  - Unspecified opportunities for improvement

# Specific Topics within the General Areas Needing Improvement (continued)

- Procurement
  - Requirements flow-down
  - Need improvement to Vendor and Supplier Oversight Program
- Design
  - Inadequate specification
- Software Quality Assurance
  - Documentation issues

# Summary

- Single most important issue → insufficient QA Staff
- Most frequent comment identified by the declaration reviewer → identified issue, corrected issue, but no discussion of what the issue entailed
  - Positive: quality issues are getting fixed or situations improving
  - Improvement Opportunity:
    - More detail would result in better sharing of Lessons Learned
    - More detail on issues such as good practices could result in enhancements that are more widely disseminated

# Questions/Discussion

U.S. DEPARTMENT OF ENERGY

# 11th EM QA Corporate Board Meeting

## Follow-Up Reviews following the Phase 2 Self-Assessments for Implementation of EM-QA-001

**Bob Toro**
**Office of Standards and Quality Assurance, EM-43**

**May 01, 2012**

EM Environmental Management
safety ❖ performance ❖ cleanup ❖ closure

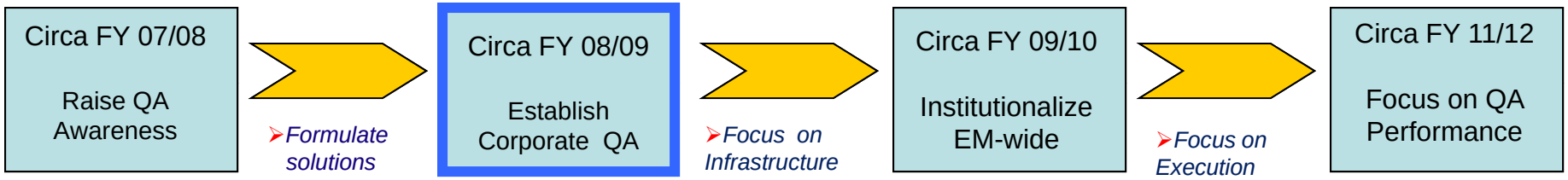
FCOG *Energy Facility Contractors Group*

# Outline

- **EM Corporate QA Oversight Strategy and Approach**
  - **EM Corporate QA Program: Focus and Priorities**
  - **Methodology for Planning, Prioritizing, and Scheduling EM HQ QA Assessments**
  - **Use of Standard Review Plan**
- **FY2012 QA Assessment Priorities**
- **Status of Phase II Follow-Up QA Reviews**
  - **Trends and observations**

# EM Oversight Strategy and Approach

## Evolution of EM Corporate QA Program: Focus and Priorities




### Reinvigorate QA
### Get the QA message out!

- Frequent Audit/Assist visits
- Compliance focused
- Ensure prime contracts include QA Order

### Create EM corporate QA identity

- Define DOE/EM requirements & expectations
- Nuclear industry codes/standards
- EM QA Corporate Board
- Lessons learned
- Best practices
- Integrated System

### Build QA capacity and capability

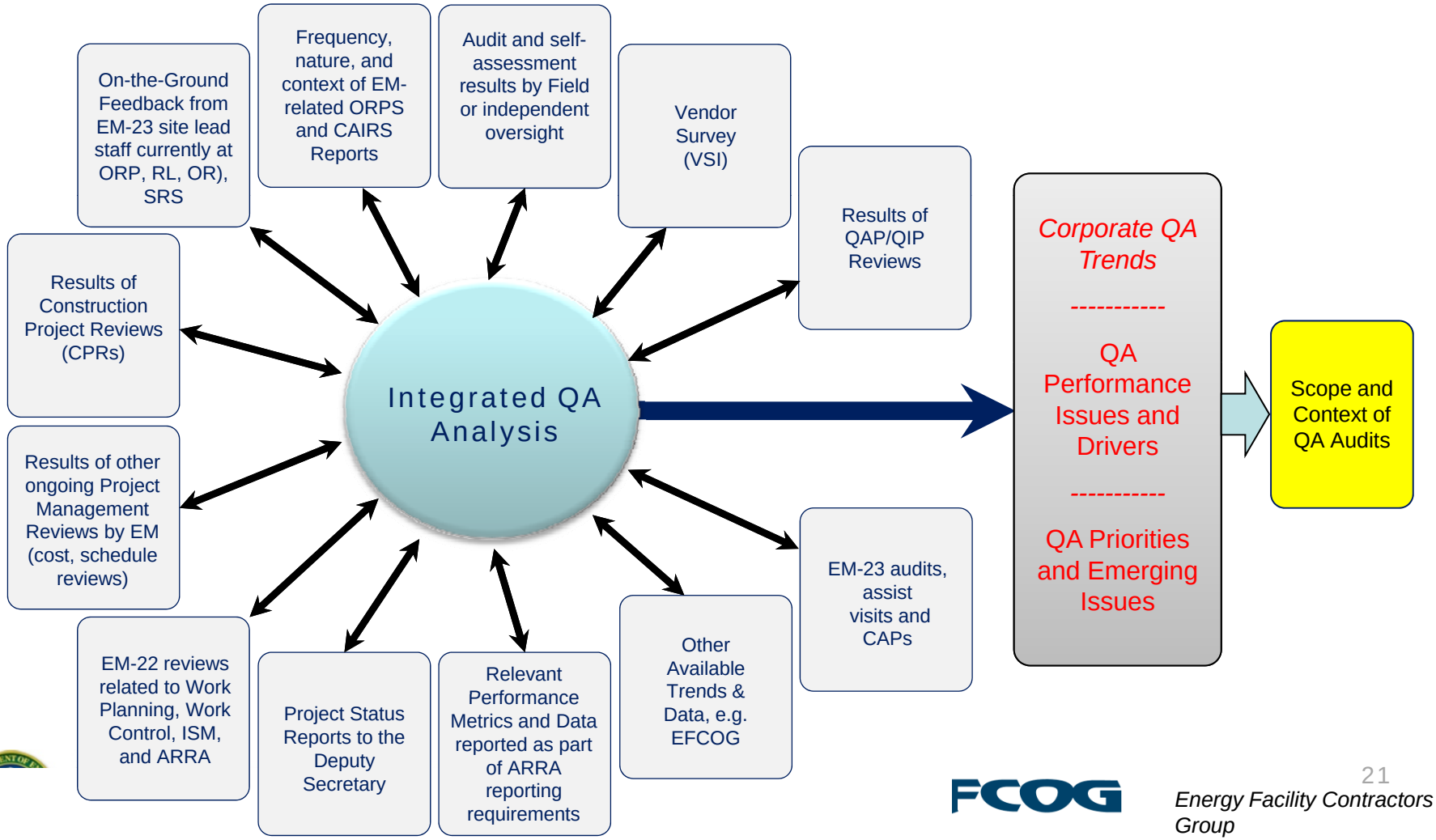
- Tools, resources
- Operational awareness
- Training/qualifications
- New hires
- Audits/assessments
- Technical assists

### Enhance project specific QA execution and performance

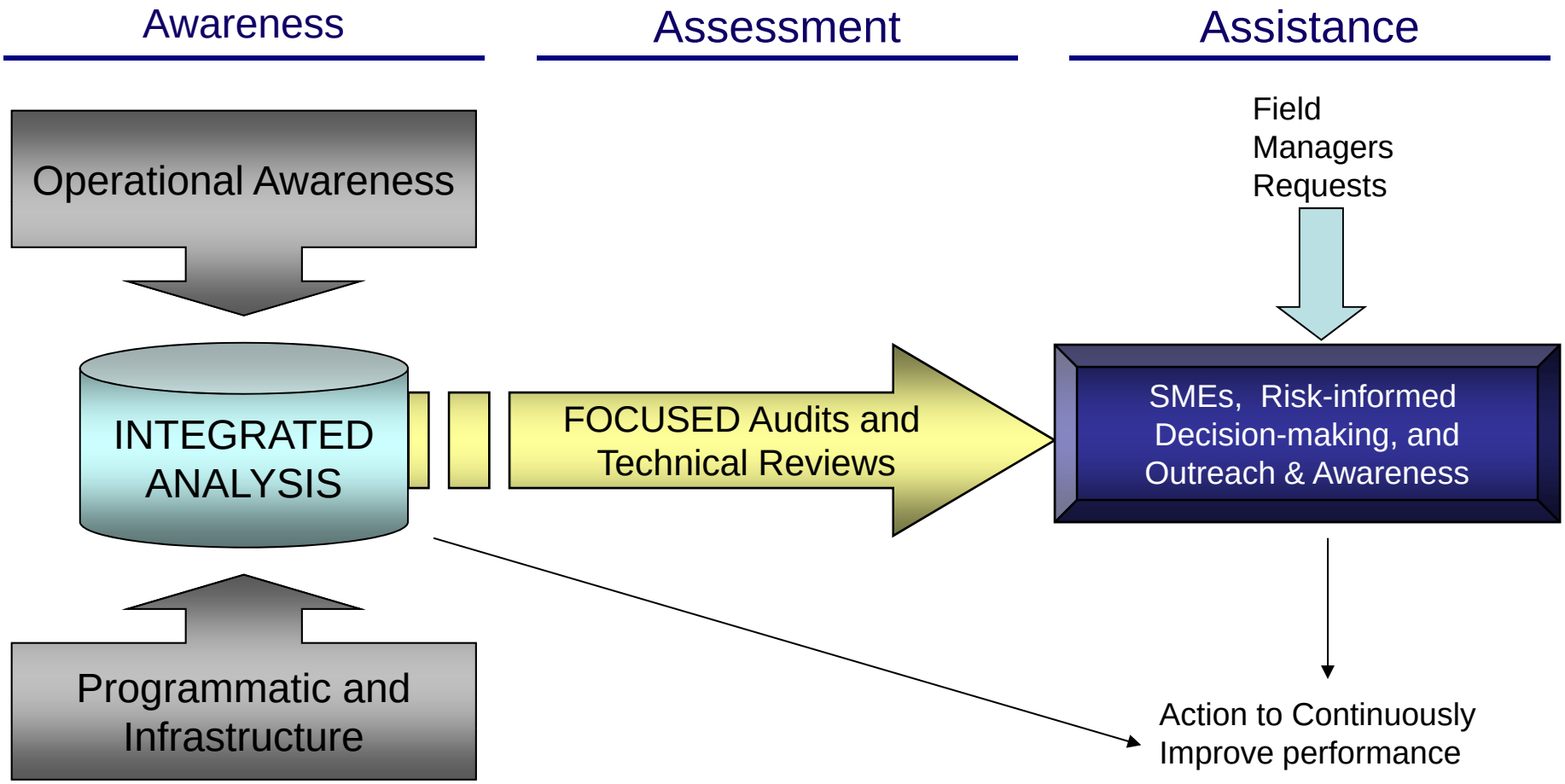
- EM-QA-001 Revision
- Tech assistance
- Engineering, design, construction projects
- Risk-based and targeted assessments
- Responsive to project-specific QA needs and issues

# Basis for Planning, Prioritizing, and Scheduling QA Audits

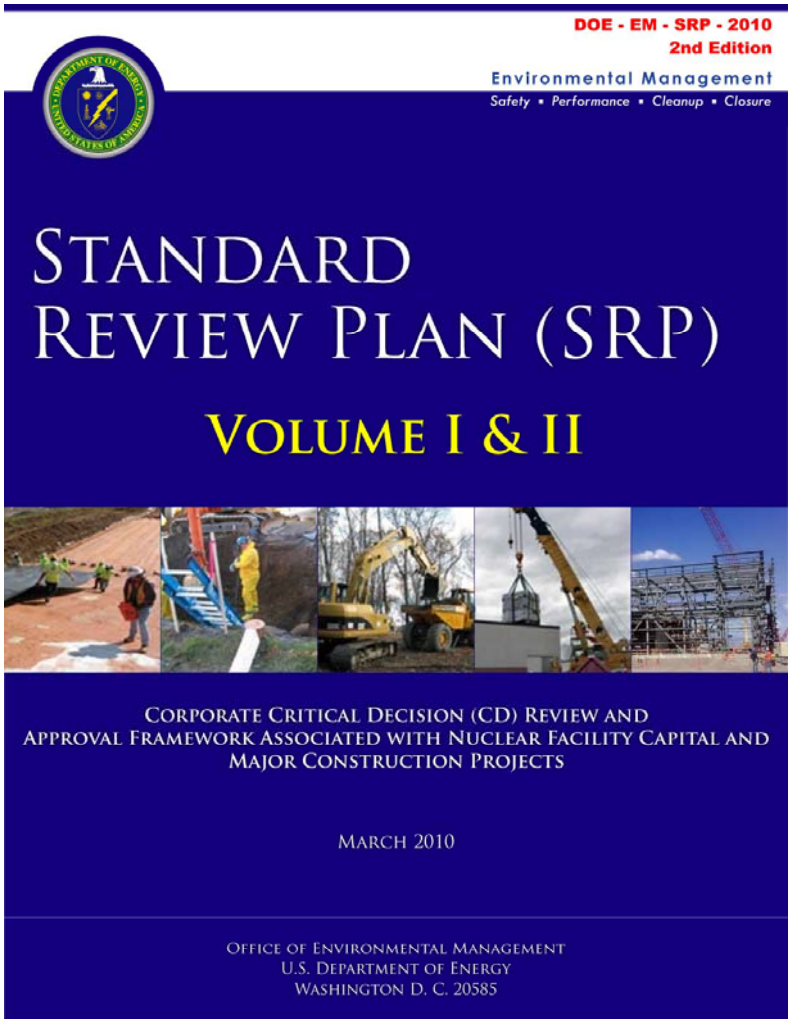
*(Examples of Potentially Useful/Relevant Data Sources)*



# QA Oversight Implementation Strategy



# QA Oversight




Review Modules are Available Online at:

http://www.em.doe.gov/Pages/StandardReviewPlanModules.aspx

# FY2012 QA Assessment Priorities

- Independent Assessments/Follow-Up Review of EM Corporate QA Program Implementation Phase II Field Self-Assessments
  - Principal Deputy Assistant Secretary Memorandum dated March 15, 2012
- Support to Construction Project Reviews, Project Peer Reviews, and Operational Readiness Reviews
- High-Level Waste/Used Nuclear Fuel Program Implementation
- Special Activities (SASSI, SCI-Electronics, Software QA)
- Quality Assurance Support and Assistance to Site Activities

# Status of Phase II Follow-Up QA Reviews

- **EM-43 Independent Assessments of QAP Implementation**
  - SR (Completed October 2011)
  - RL (Completed April 2012)
  - EMCBC (Completed April 2012)
  - Moab (Scheduled May 2012)
  - ORP (Scheduled June 2012)
  - WVDP (Scheduled July 2012)
  - PPPO (Rescheduled to July 2012)
  - ID (Scheduled August 2012)
  - OR (Scheduled September 2012)
  - SPRU (Scheduled October 2012)
  - CBFO (Scheduled January 2013)

# Status of Phase II Follow-Up QA Reviews (cont'd)

- **Trends and Observations**
  - **Preliminary Results**

- **Summary Report**

U.S. DEPARTMENT OF ENERGY

# 11th EM QA Corporate Board Meeting

## Status of the EM QA Program as Presented to the DNFSB in the DOE-EM Annual Brief


**Matthew Moury, Deputy Assistant Secretary**
**Safety and Security Program, EM-40**

**and**

**Bob Murray, Director**
**Office of Standards and Quality Assurance, EM-43**


**May 01, 2012**

EM Environmental Management
safety ❖ performance ❖ cleanup ❖ closure

FCOG *Energy Facility Contractors Group*

# Outline

- Update on state of QA and recent accomplishments within the EM Complex
- Focus on critical QA issues of interest to the DNFSB
  - DOE O 414.1D Implementation
  - Staffing and Qualification
  - Flow-Down of Quality Requirements
  - Suspect and Counterfeit Items
  - Safety Software
  - Commercial Grade Dedication

# State of QA

- Phase 2 Self-Assessments of QAP implementation
  - EM Field Offices have all determined that implementation is “satisfactory” as defined in the SRP with areas for improvement
  - EM-HQ has determined that implementation “needs improvement” at HQ as defined in the SRP and is currently working to develop corrective actions for the issues identified
  - EM-43 is conducting follow-up visits to assess the Phase 2 reviews and closure of issues at the field sites (SRS completed)
- Annual QA declarations identified some areas for additional focus in oversight this FY
- EM continues to enhance/standardize the QA program across the complex with increased budget constraints

# General Results of Annual QA Declarations

- The consolidated list identified the primary issues that were discussed within the annual site quality declarations.
- Items identified within each area may not be the same issue from site to site.
- Some specific issues within each area may have been resolved but were still reported in the declaration.
- Additional analysis of data continues.
- Issue categories are target for EM-43 Phase II follow-up reviews.

| ITEM |
| --- |
| Quality Improvement |
| Work Processes |
| Personnel Training & Qualification |
| Documents & Records |
| Management Assessment |
| Independent Assessment |
| Procurement |

# Continuing Challenges

- As noted in 2010, these areas continue to be challenges
  - Variation in maturity/effectiveness of site QA practices
  - Robust integration of QA in early stages of design, engineering, construction, and operations
  - Implementation of commercial grade dedication (CGD) programs, processes, and practices
  - Comprehensive and consistent application of QA requirements/expectations in the procurement process
  - Varying degrees of adequate QA resources
  - Configuration Management, Software Quality Assurance, and Suspect/Counterfeit Items (S/CI)
- EM acknowledges the continued need to emphasize these areas - noting the recent progress on the following slides

# Accomplishments

- Issuance of two EM guidance documents
  - Commercial Grade Dedication
  - Integrating QA in Design
- Hosted a QA Summit for Lessons Learned that included participation by EM, NNSA, HSS, SC, Naval Reactors, and DNFSB staff
- Continued DOE and EFCOG participation in the EM QA Corporate Board including four current focus areas
  - NQA-1 Suppliers (Joint Supplier Evaluation Program)
  - QA/QC Evaluation of QA Resources
  - Strategy for EM QA/QC Training
  - Development of a Revision to EM-QA-001

# Accomplishments *(continued)*

- EM senior management re-emphasis that EM-QA-001 applies to EM-HQ as well as field elements
- Completed the Phase 2 Self-Assessments in the field
- Completed the Phase 2 Self-Assessment at HQ
- Initiated the Phase 2 Follow-up Reviews by EM-43
- Streamlined the Annual QA Declaration to be more useful, emphasizing the use of standard metrics
- Development and implementation of a HLW/UNF program in coordination with the EMCBC (http://www.emcbc.doe.gov/dept/logistics/HLW_UNF/index.php)
- EM-40 selection of a single corrective action tracking system for all EM-40 offices

# DOE O 414.1D *(approved April 2011)*

- EM-2 memo on implementation in August 2011
  - Does not modify existing contracts
  - No changes to existing quality programs until EM-QA-001 is revised to incorporate DOE O 414.1D
- EM-QA-001 Revision
  - Initial draft planned for January 2012
  - Incorporates DOE O 414.1D, Lessons Learned, and consolidation of EM memos on QA
  - DNFSB staff have been contacted and have participated
  - Field has provided ~160 recommendations for the revision
- Gap Analysis will be used to evaluate existing programs against new QAP revision

# Staffing & Qualification

- Follow-up assessments from the Phase 2 QAP Implementation Reviews are addressing resources
  - SRS review is complete - indicates need for additional QA staff
  - *EMCBC, Richland, and Moab have been completed since the DNFSB briefing*
- Use of DOE-STD-1150 and DOE-STD-1172
  - EM sites are not consistent in qualifying QA staff
  - EM-QA-001 revision is currently being drafted to require federal staff to be qualified under 1150 and/or 1172 as appropriate
  - EM-43 - (5 of 8 staff are qualified to 1150)
  - EM-43 – Phase 2 review identified the lack of qualified staff on software (1172) – we currently utilize CNS for 1172 support and are working to get existing staff qualified on software

# Staffing & Qualification *(continued)*

- EM-43 is being innovative in support and oversight of field offices (e.g., using field representatives)
- EM-43 is working with the field to ensure projects are provided sufficient qualified oversight (e.g., ORRs, RAs, CPRs, etc.)
- EM-43 has identified specific HQ POCs
  - High Priority Areas (e.g., CGD, S/CI, Flow-down)
  - Specific Field Sites (e.g., SRS, PPPO)
- EM QA Corporate Board focus areas
  - QA/QC Evaluation of QA Resources
  - Strategy for EM QA/QC Training

# Requirements Flow-Down

- Standard Contract Language (DOE to Prime)
- Contractor Requirements Document (Prime to Subs)
  - Prime responsible for ensuring all requirements are met
  - Primes evaluate QA program of subs, vendors, suppliers
  - Issues have been identified where this process could improve
- DOE Efforts to Strengthen Flow-Down
  - Specifically address flow-down in Phase 2 reviews and evaluate progress in Phase 2 follow-up reviews (ongoing)
  - QA Summit with Lessons Learned including participation by EM, NNSA, SC, HSS, and Naval Reactors (February 2011)
  - Issuance of EM QA in Design Guidance (October 2011)
  - Additional DOE participation in subcontractor reviews

# Suspect / Counterfeit Items

- EM has conducted a series of reviews on electronics S/CI
- Recommendations made to the field based on reviews
  - Control of supply chain (short as possible)
  - Additional procurement clauses regarding electronic equipment
  - Use of enhanced checklists on surveys and audits
  - Use of suppliers with strong S/CI controls
  - Component testing on receipt
- EM is working to address the recommendations in the Standard QA Contract Language *(note: SRS has been successful at incorporating the recommendations in contract efforts)*
- CNS and HSS are monitoring the White House initiative with respect to S/CI

# Safety Software

- Safety Software continues to be a priority for EM and is included as a specific area of emphasis during the Phase 2 follow-up reviews at the site offices
- EM has revised our CGD training to specifically address dedication of safety software
- Based on recent concerns from the DNFSB, EM has partnered with NNSA, CNS, and HSS to evaluate the use of SASSI at our sites
- The Revision to EM-QA-001 will include specific information on qualifying safety software oversight staff to DOE-STD-1172
- EM and HSS jointly addressing GAO 11-143, Computer Modeling

# Commercial Grade Dedication

- Original concern was resolved through CGD training across the EM Complex
- CGD training course has been revised to include software and has been provided at two EM sites
- EM QA Corporate Board is exploring options for ongoing training such as CGD in current budget environment
- Issued EM Guidance Document (October 2011) which was developed by the EM QA Corporate Board
  - Resolved over 300 comments
  - Approved unanimously by Site Managers
  - Interest has been expressed from other departments, but currently is only an EM guidance document
  - Distributed by EM-2 and available online at the EM QA website

# Questions

U.S. DEPARTMENT OF ENERGY

# 11th EM QA Corporate Board Meeting

## Revision to the EM Corporate QA Program (EM-QA-001)

**Larry W. Perkins**
**Office of Standards and Quality Assurance, EM-43**

**May 01, 2012**

EM Environmental Management
safety ❖ performance ❖ cleanup ❖ closure

FCOG *Energy Facility Contractors Group*

# Writing Team

| Team Member | Organization |
|---|---|
| Larry Perkins | DOE – Headquarters |
| Walter Scott | DOE – Office of River Protection |
| Bill Rowland | DOE – Savannah River |
| Ali Tabatabai | Link Tech. (EM-43 Support) |
| Bob Carter | EFCOG |
| Mike Hassell | EFCOG |
| David Shugars | EFCOG |

# Primary Changes to EM-QA-001

- Update to incorporate changes to DOE Order 414.1D
- Update to adopt NQA-1-2008 with addenda through 2009 as the recommended consensus standard for EM
- Emphasized previous approved variances as well as the use of NQA-1-2004 with addenda through 2007 remains acceptable
- Focus on enhancing and updating the management expectations as well as clarifying the intent of the expectations
- Enhanced discussion with regards to federal records
- Added discussion of expectations with respect to validation and verification of computer models
- Added Transportation Quality Assurance (DOE O 460.1C)

# Next Steps

- EM QA Corporate Board endorsement of the revised Corporate QAP (EM-QA-001 Rev. 1)
- Revised EM-QA-001 will be formally distributed to the field offices by EM-1/2
- Gap Analysis between the existing documents and the revised QAP
- Any requests for variance from the revised QAP should be submitted for review and approval to the approval authority
- Request for EM QA Corporate Board to vote to close this focus area

# Questions

U.S. DEPARTMENT OF ENERGY

# 11th EM QA Corporate Board Meeting

## NQA-1 Suppliers
## Joint Supplier Evaluation Program


**Mike Mason**
**Energy Facility Contractors Group**

**and**

**Christian Palay**
**Office of Standards and Quality Assurance, EM-43**


**May 01, 2012**

EM Environmental Management
safety ❖ performance ❖ cleanup ❖ closure

FCOG

*Energy Facility Contractors Group*

# FOCUS AREA #1
# INADEQUATE NQA-1 SUPPLIERS

- **The initial impetus for starting this task evolved from guidance provided in the EM & EFCOG Quality Assurance Improvement Project Plan, Revision 2 which was developed in late 2008 via the 2nd Corporate Board meeting:**
  - **"The EM-Complex should leverage resources by developing and maintaining a list of approved/qualified suppliers of commodities common to DOE contractors (need to address liability issues); developing a procedure to address the performance of joint supplier audits; and developing checklists using the requirements matrices developed for identifying common commodities which could subsequently be used for evaluating suppliers to provide consistency across the complex for sharing supplier evaluation information. "**
- **Scope: Perform research and evaluate to identify methods for expanding the number of willing and qualified suppliers for nuclear grade items and services within EM. Provide recommendations for promoting information sharing, resource sharing and standardization of efforts within EM to improve quality, safety and cost associated with identifying, qualifying and maintaining suppliers.**
- **DOE Lead: Bill Rowland, EM**
- **SR EFCOG Lead: Rich Campbell, EnergySolutions**

# FOCUS AREA #1:
# INADEQUATE NQA-1SUPPLIERS

- 11/28/2008 - Determine the feasibility of issuing a consolidated nuclear grade approved/qualified supplier list for EM. Evaluation should include legal and liability issues as well as any restrictions that would be needed on use of list by EM contractors.

# FOCUS AREA #1:
# INADEQUATE NQA-1SUPPLIERS

- **2009 – The EFCOG Supply Chain was given the responsibility for the development of a complex wide EM Evaluated Suppliers List (ESL).**
- **2009 – Program procedure approved**
- **2010 – EM provided funds for a database to house the ESL information**
- **2010 – The database was to be managed by the Supply Chain Task Team Lead located at the Idaho National Laboratory**
- **2010 – Joint Supplier Evaluation Program (JSEP) name adopted**
- **2011 – Procedure and database approved**
- **2011 – List of participating sites and points of contact identified**
- **2011 – Pilot Program implemented and declared a success**
- **2011- Contacted NNSA regarding a similar effort being pursued by the NNSA sponsored BMAC group**
- **2011 – First NNSA & EM joint meeting conducted**

# FOCUS AREA #1:
# INADEQUATE NQA-1 SUPPLIERS

- **Recommendation:**
  - **Based upon the information provided we recommend to the Board that this Focus Area be closed.**

# ACCOLADES

- Original Team :
  - **Rich Campbell – Energy Solutions**
  - **Bill Rowland – DOE-EM**
  - **Lynne Drake – SRNS**
  - **Steven Stein – BNL**
  - **Robert Thompson – ICP**
  - **Paula Richards – Isotek Systems**
- Supply Chain Team Lead
  - **Paul Bills – INL**
  - **Vince Grosso – WRP**
- Others:
  - **Christian Palay – DOE-EM**
  - ****** Many I have neglected to acknowledge ******

# EFCOG Supply Chain Status Update

Vince Grosso
EFCOG Supply Chain Quality, Chair

# Overview

1. EFCOG Supply Chain Objectives
2. Logistics & Participants
3. Supply Chain Quality - Successes
4. JSEP Refresher
5. JSEP Successes
6. Supplier Information
7. JSEP + MASL Benefits

# EFCOG Supply Chain Objectives

- Eliminate Duplicate Effort
- Keep Federal & Contractor Supply Chain Personnel informed
- Provide Feedback
- Share Knowledge
- Create Value
- Prepare for the Future
- Get Everyone Involved

# EFCOG Supply Chain Objectives

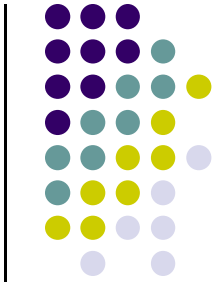
- Good List of Sites / Projects / Contractors / Contacts
- Organizational Position Contacts - Project Managers, Procurement Managers, QA Managers, Engineering Managers
- Expand knowledge on and about Suppliers
- Integrate information between EM & NNSA

# EFCOG Supply Chain Objectives

TRUST


TEAMWORK

# Logistics



- EM Sites
- National Laboratories
- NNSA Sites
- Headquarters
- Service Centers

- Supply Chain
- Supplier Evaluations
  - JSEP
  - MASL
- Trust Building

Federal & Contractor Participation Continues to Grow!

# Federal HQ Participants

- EM Office of Nuclear Safety
- HS-24 Office of Analysis
- HS-33 Office of Quality Assurance
- EM-43 Standards & Quality Assurance
- EM Consolidated Business Center
- NA-2 Principal Deputy Administrator Central Technical Authority
- NA-10 Deputy Administrator for Defense Programs
- NA-SH Associate Administrator for Safety & Health

**Recommendation to Add to Distribution:**

- EM-50 Acquisition and Project Management
- EM-51 Procurement Planning
- Others?

# EM Site Participants

- Hanford Site
- Savannah River Site
- Idaho Site
- Portsmouth / Paducah Sites
- Carlsbad Site
- Oak Ridge
- West Valley
- Others?

# National Laboratory Participants

- Lawrence Livermore National Laboratory
- Pacific Northwest National Laboratory
- Savannah River National Laboratory
- Brookhaven National Laboratory
- Los Alamos National Laboratory
- Oak Ridge National Laboratory
- Argonne National Laboratory
- Idaho National Laboratory
- Sandia National Laboratory
- Stanford Linear Accelerator Center National Laboratory

# NNSA Sites

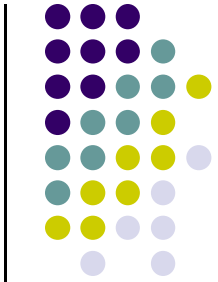
- Kansas City Plant
- Lawrence Livermore National Laboratory
- Los Alamos National Laboratory
- Nevada National Security Site
- Pantex
- Sandia National Laboratory
- Savannah River Site (Tritium)
- Y-12 National Security Complex

National Nuclear Security Administration

# Supply Chain Quality - Successes

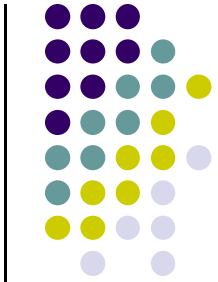
- Joint Supplier Evaluation Program (JSEP)
- Filter issues worked proactively with SMEs
- Working with EPWOG, MASL, BMAC
- Communications and information sharing
- Monthly conference calls
- Use of Webex for meetings
- Web site posted

# JSEP Refresher



- Joint Supplier Evaluation Program (JSEP)
- Supply Chain Quality Tool
- Standardized evaluation by multiple Contractors of Supplier's capability to provide item(s) or service(s)
- Cost reduction associated with supplier evaluations
- Opportunity for shared data on a Supplier's capability
- Database hosted by INL

# JSEP - Successes



- JSEP database loaded with audits
- Available for use
- POCs trained
- Supplier Evaluation Audits being conducted
- Working toward integrating information with NNSA and MASL database
- JSEP / MASL differences resolvable
- NNSA Portal access concept approved

# Communication Sample

**April, 2012**

- Operation Technology (ETAP), 17 Goodyear Ste 100, Irvine, CA 92618
  Lead – Davis (SRNS) / Team Volunteers – Lewis (Y-12); Sparkman (EM-CNS); Gravois (LBL)

**May, 2012**

- American Crane, Douglassville, Pa., 19518
  Lead – TBD (BNI) / Team Volunteers – TBD
- ARES Corporation, 1100 Jadwin Ave, Richland, WA 99352
  Lead – TBD (BNI) / Team Volunteers – Maciuca (WRPS)
- GE-Hitachi Nuclear Energy Americas LLC, 30 Curry Ave, Canonsburg, Pa 15317
  Lead – TBD (BNI) / Team Volunteers – Barnette (HS-33); Germann (Portsmouth/Paducah DUF6)
- Major Tool & Machine, 1458 East 19th Street, Indianapolis, IN 46218-4289
  Lead – Lewis (Y-12) / Team Volunteers – TBD
- Nova Machine, Middleburg, OH
  Lead – Davis (SRNS) / Team Volunteers – TBD

**June, 2012**

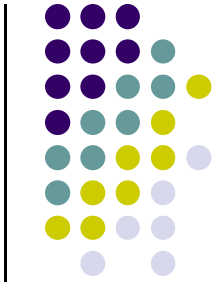
- Consolidated Power Supply, 3556 Mary Taylor Road, Birmingham, AL 35235
  Lead – TBD (BNI) / Team Volunteers – Lewis (Y-12)
- Nuclear Logistics Inc., 7410 Pebble Drive, Fort Worth, TX 76118
  Lead – TBD (BNI) / Team Volunteers – Frazier (SRNS)
- Wright Industries, 1520 Elm Hill Pike, Nashville, TN 37210
  Lead – TBD (BNI) / Team Volunteers – Barnette (HS-33); Zweifel (NNSA)

**August, 2012**

- Canberra Inc., 800 Research Parkway, Meriden, CT 06450
  Lead – Nesser (Carlsbad) / Team Volunteers – Barnette (HS-33); Zweifel (NNSA); Davis (SRNS); Stein (BNL)

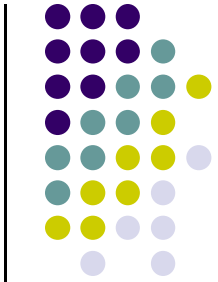
# Supplier Information

# JSEP Supplier Logistics



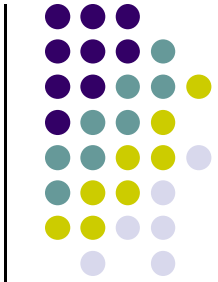
- Supplier's in JSEP Database
  - 110 Suppliers, Located in 28 States:
    - 14 Suppliers in Washington
    - 12 Suppliers in Tennessee
    - 8 Suppliers in North Carolina
    - 7 Suppliers in States of: Georgia / Ohio / Pennsylvania
    - 6 Suppliers in California
    - 5 in New Jersey / Colorado
    - 4 in Illinois / Texas
    - 3 in Alabama / Florida / Idaho / New Mexico / New York / South Carolina
    - 2 in Connecticut / Oregon
    - 1 in Delaware / Indiana / Kentucky / Louisiana / Maryland / Minnesota / Missouri / Oklahoma / Utah

# JSEP – MASL Integration



- Agreement in concept for EFCOG access to NNSA Portal
- Identified organizations requiring access and pilot operation
- Developed next steps and initiated project plan
- Added EFCOG representation on NNSA Quality Supplier Working Group
- Obtain funding for any MASL database changes
- Review EM Portal project for synergy with JSEP/MASL integration

# JSEP – MASL Next Steps



- Finalize changes required to jointly utilize MASL data base  (short range)
- Determine / obtain funding for changes (short range)
- Generate comprehensive project schedule (short range)
- Coordinate pilot for data upload, input, and access (short range)
- Develop joint process and MOU (long range)

# JSEP + MASL Benefits

- Common Suppliers:
  - 66
- Combined information leading to:
  - >1000 Suppliers
  - Not counting unknown common suppliers
- Supplier reliability

- $aving$

# Questions

U.S. DEPARTMENT OF ENERGY

# 11th EM QA Corporate Board Meeting

## Evaluation of Quality Assurance and Quality Control Resources for the EM Complex


**Jim Davis**
**Office of Standards and Quality Assurance, EM-43**

**and**

**Bob Carter**
**Energy Facility Contractors Group**


**May 01, 2012**

EM Environmental Management
safety ❖ performance ❖ cleanup ❖ closure

EFCOG *Energy Facility Contractors Group*

# FOCUS AREA #2
# QA/QC EVALUATION OF QA RESOURCES

## Purpose

- The purpose of Focus Area #2 is to evaluate QA resources for both contractor and federal offices by identifying the current and anticipated level of QA resources available and evaluating expected needs now and in the future.

## Team Members

Jim Davis, DOE-EM
Robert Toro, DOE-EM
Robert Carter, EFCOG
Robert Thompson, EFCOG
Robert Davis, EFCOG

# THE EVALUATION PROCESS

Task #1

Develop a survey for use in evaluating federal and contractor QA resources.

Task #2

Distribute the survey to the field elements.

Task #3

Collect results of the survey and develop final report on QA resource needs

# SURVEY DEVELOPMENT

- Focus Area team developed survey to query the field sites on resources available now and anticipated in 3 years

- Resources fall into 3 main categories
  - Quality Assurance
  - Quality Engineering
  - Quality Control and Inspection

- Main categories are further broken down into specific functions such as auditing, corrective action management, procurement reviews, surveillance oversight, mechanical inspection, etc.

# SURVEY DEVELOPMENT

- Respondents are requested to provide qualitative judgment on adequacy of the number of QA resources available and to address
  - Current vacancies and time to fill positions
  - Potential impediments in acquiring/maintaining adequate numbers of qualified resources
  - Qualification and/or Certification to national consensus standards
  - Independence from work evolutions being inspected and
  - Extent of application of the graded approach

# SCHEDULE

- May 2012 - Distribute survey to the Field elements
- August 2012 - Collect results and develop final report on QA resources

U.S. DEPARTMENT OF ENERGY

# 11th EM QA Corporate Board Meeting

## Strategy for EM Quality Assurance and Quality Control Training

**Ken Armstrong**
**EM Consolidate Business Center**

**and**

**Bob Carter**
**Energy Facility Contractors Group**

**May 01, 2012**

EM Environmental Management
safety ❖ performance ❖ cleanup ❖ closure

EFCOG *Energy Facility Contractors Group*

# FOCUS GROUP #3
# STRATEGY FOR EM QA/QC/QE TRAINING

Purpose

The purpose of this Focus Area is to re-evaluate this approach and to assess the current needs and strategy for training of EM and Contractor and provide a report documenting a recommended path forward.

# THE EVALUATION PROCESS

**STEP #1**

Review the tasks that DOE and Contractor QA Personnel perform:

- DOE STD 1150-2002 Quality Assurance Functional Area Standard
- QA Engineer Position Descriptions
- Senior Nuclear Quality Assurance Engineer Job Postings
- EFCOG White Paper on Quality Engineer Roles and Responsibilities
- DRAFT EFCOG White Paper On Inspection and Testing Personnel Qualifications and Implementing Processes

# THE EVALUATION PROCESS Cont.

**STEP #2**

Determine training needs based on:

- Importance
- Frequency
- Difficulty

# THE EVALUATION PROCESS Cont.

**Step #3**

Review Recent Changes And Performance Issues:

- DNFSB 4/8/11 Letter (Software Quality Assurance Issues)
- GAO Report to Congress 4/04 (Quality Assurance issues in data, models, and software and continuing management weaknesses.
- DOE to DNFSB 5/2/11 letter (Suspect /Counterfeit Items and Requirements Flow-down to Subcontractors)
- ORPS reports associated with Suspect/Counterfeit Items
- Changes to EM-QA-001 and 414.1D

# NEEDS IDENTIFIED

- DOE Needs Based on Job analysis:
  - Basic EM-QA-001 Training and NQA-1 Lead Auditor
  - Quality Assurance Functional Area Standard - EM-QA-002
- DOE Needs Based on Performance Issues:
  - QA Specialists Trained for SQA, CGD, S/CI, and procurement oversight
- DOE Contractor Needs based on Job analysis:
  - Basic EM-QA-001 Training
  - Availability of Qualified/Certified QA/QE personnel
- DOE Contractor Needs Based on Performance Issues:
  - QA Specialists Trained for SQA, CGD, S/CI, and procurement oversight

# PATH FORWARD

#1 Basic EM-QA-001 Training - DOE EM-43 and EMCBC personnel work together to develop training in concert with the EM-QA-001 revision release that covers the following specific objectives:

- Changes to the new revision
- NQA-1 as a consensus standard
- Implementation issues across the complex
- Benchmarks of excellence across the complex

| Action Description / Deliverable | Responsible Party | Due Date |
|---|---|---|
| Publish EM Corporate QAP (EM-QA-001) revision | EM-43 | 4/28/2012 |
| Develop EM Corporate QAP (EM-QA-001) revision training | EMCBC/EM-43 | 7/30/2012 |
| Present EM Corporate QAP (EM-QA-001) revision training to EFCOG and QA Corporate Board Members | EMCBC/EM-43 | 8/30/2012 |
| EFCOG and QA Corporate Board Members Present EM Corporate QAP (EM-QA-001) revision training to site personnel | EFCOG and QA Corporate Board | 9/30/2012 |

# PATH FORWARD

#2 QA Specialists Trained for SQA, CGD, S/CI, and procurement oversight

- Phase I - Establish commercially available courses at selected DOE Area Offices across the complex based on geographic location.
- Phase II - Work with the National Training Center to solidify the need for the development of these courses in an on-line learning format.

| Action Description / Deliverable | Responsible Party | Due Date |
|---|---|---|
| Phase I - Contact DOE Sites to determine course needs, number of personnel and timing | EMCBC/EM-43 | 5/30/2012 |
| Phase I - Choose DOE Offices and schedule training | EMCBC/EM-43 | 6/30/2012 |
| Phase I – Procure Vendor for training and set up training schedule | EMCBC/EM-43 | 6/30/2012 |
| Phase II – Work with the National Training Center to solidify course development | EMCBC and EM-23 | 9/28/2012 |

# PATH FORWARD

#3 DOE STD 1150-2002 Quality Assurance Functional Area Standard.

Recommended that the development of any DOE STD 1150-2002 training be placed on hold at this time and then developed in conjunction with the next revision of the standard.

# COURSE CATALOG DEVELOPED

## Suspect Counterfeit Items

**Title : Suspect/Counterfeit & Fraud Detection**
**Vendor : Energy Solutions**
**Contact: Roger D. Moerman [rdmoerman@energysolutions.com]**
**Website:**
**Est Cost: Between $7,225-7,600 about 20 people**

**Title : Suspect/Counterfeit & Fraudulent Parts Awareness**
**Vendor : J-E-T-S**
**Contact: john@jetsquality.com**
**Website: www.jetsquality.com/SC%20parts%20aware.htm**
**Est Cost: $3750 (plus travel/expns) about 20 people**

**Title : Suspect/Counterfeit Items Awareness Training**
**Vendor : Brookhaven National Labs**
**Website: http://operatingexperience.doe-hss.wikispaces.net/file/view/BNL+Suspect-Counterfeit+Items+Awareness+Training.ppt**
**Est Cost: Free**

**Title : Suspect/Counterfeit Items Awareness Training**
**Vendor : Stanford Linear Accelerator National Labs**
**Contact: mcdunn@slac.stanford.edu 650-926-2014**
**Website: http://www-group.slac.stanford.edu/oa/sci/SCITraining.ppt&t=Suspect/Counterfeit Item (S/CI) Awareness Training**
**Est Cost: Free**

**Title : Suspect/Counterfeit Items Awareness Training (booklet)**
**Vendor : DOE HSS**
**Contact: charles.lewis@hq.doe.gov**
**301-903-8008 (office),**
**Website: http://www.hss.energy.gov/sesa/corporatesafety/sci/SCIAwarenessTrainingManual062007.pdf**
**Est Cost: Free**

**Title : An Overview of Suspect/Counterfeit Items Discovered at Department of Energy Sites 2006 - 2009, June 2010**
**Vendor : DOE HSS**
**Website: http://www.hss.doe.gov/sesa/corporatesafety/sci/annualreports.html**
**Est Cost: Free**

**Title : Suspect/Counterfeit Items Information Guide for Subcontractors/Suppliers**
**Vendor : Los Alamos National Laboratory**
**Contact: Kenneth A. Brandt**
**Website: http://www-group.slac.stanford.edu/oa/sci/LANL-SCI_Guide_for_Suppliers.pdf**
**Est Cost: Free**

**Title : Suspect/Counterfeit Items Training (EH0805 on-line training)**
**Vendor : Lawrence Berkeley National Laboratory**
**Contact: EH&S Training Program Assistant at (510) 495-2228.**
**Website: http://www.lbl.gov/ehs/training/courses.shtml**
**Est Cost: Free**

U.S. DEPARTMENT OF ENERGY

# 11th EM QA Corporate Board Meeting

## NQA-1 Interpretation Letter Regarding the Use of Only the 100 Paragraphs for Flow-down


**Matthew Moury, Deputy Assistant Secretary**
**Safety and Security Program, EM-40**

**and**

**Bob Murray, Director**
**Office of Standards and Quality Assurance, EM-43**


**May 01, 2012**

EM Environmental Management
safety ❖ performance ❖ cleanup ❖ closure

FCOG *Energy Facility Contractors Group*

# NQA Technical Interpretation Record #10-1365

- Question
  - For an implementer, is choosing to apply only paragraph 100 of applicable requirements of Parts I and II of the standard an appropriate and sufficient method to implement a NQA-1 based Quality Assurance Program
- Response
  - No. With the exception of the Part I requirement areas: 5, Instructions, Procedures and Drawings; 14; Inspection, Test and operating Status; and 16 Corrective Action, paragraph 100 is a summary and introductory paragraph for additional mandatory criteria contained in the requirement area.
  - The application of only section 100 by an implementation organization is insufficient to claim credit for implementation Part I or Part II of an NQA-1 based Quality Assurance program. It is also insufficient for an invoking organization to invoke only section 100 of Part I or Part II and expect results equivalent to specifying all of Parts I or II.
  - This response is applicable to NQA-1-2000, NQA-1-2004, NQA-1-2008 and the NQA-1b-2011 Addenda.

# Effecting Continuous Improvement to Safety while Achieving Line Program Mission Success: The Department of Energy's Corporate Lessons Learned Program and Database

## 11th EM Quality Assurance Corporate Board Meeting
## May 1, 2012

**Ashley Ruocco**

**Office of Analysis**

**Office of Health, Safety and Security**

HSS
Office of Health, Safety and Security

## Goals of this Presentation

- To review DOE O 210.2A, *Corporate Operating Experience Program*
- To discuss the Lessons Learned Program
- To review the Lessons Learned Database and Lessons Learned Reports details
- To review current Lessons Learned improvements, collaboration, and analysis

**DOE O 210.2A, *DOE Corporate Operating Experience Program***

- PURPOSE-
  - To institute a Department of Energy (DOE) wide program for the management of operating experience complex-wide to prevent adverse operating incidents and facilitate the sharing of good work practices among DOE sites, while enabling tailored local operating experience programs based on the nature of work, hazards, and organizational complexities. Operating experiences can be found in all disciplines.
  - To provide the systematic review, identification, collection, screening, evaluation, and dissemination of operating experience from U.S. and foreign government agencies and industry, professional societies, trade associations, national academies, universities, and DOE and its contractors.
  - To define the DOE Corporate Operating Experience Program so that it can be integrated into major management programs—reinforcing the core functions and guiding principles of DOE's Integrated Safety Management System (ISMS) —and enhance mission accomplishment, quality assurance, safety and reliability.

## DOE O 210.2A, *DOE Corporate Operating Experience Program*

- KEY REQUIREMENTS-
- In order to prevent adverse operating incidents, DOE managers and employees are expected to share and use good practices and lessons learned from operating experience.

  o Departmental Elements must develop and implement an Operating Experience (OE) Program and designate an OE Program Coordinator.

  o Each organization must submit Lessons Learned (LL) from operating experience to the DOE Corporate LL Database when both:

    1. The operating experience has relevance to other DOE sites
    2. The information has the potential to help avoid adverse incidents, for performance improvements, or for cost saving.

**DOE O 210.2A, *DOE Corporate Operating Experience Program***

- CONTRACTOR REQUIREMENTS DOCUMENT, REQUIREMENTS:
  - *Share contractor-specific lessons learned from operating experience with the DOE complex, through the DOE Corporate Lessons Learned Database, when both (1) the operating experience has relevance to other DOE facilities, sites, or programs; and (2) the information has the potential to help avoid adverse operating incidents, for performance improvements, or for cost savings.*

**DOE-STD-7501-99, *The DOE Corporate Lessons Learned Program***

- Establishes the framework for the Lessons Learned program, and provides a description of its elements and the method by which lessons learned are developed, entered and shared.
- Currently under review since the last update to the STD was in 1999.

## Main Components:

- Operating Experience Documents
  - Levels 1-3
  - Summaries
- Corporate Lessons Learned Program and Database
- Operating Experience Wiki
  - Operating Experience Committee
  - Recent Operating Experience Documents
  - Safety Videos of the Week
  - ORPS Final Reports
  - Accident Investigations
  - Electrical Safety
  - Suspect /Counterfeit Items
- Operating Experience Summary Blog

# DOE Corporate Operating Experience Program Documents

| Operating Experience Document | Purpose | Developed By | Distrib. Vehicle | Issued By | Issued To | Who Takes Action | Actions | Follow-up Reports |
|---|---|---|---|---|---|---|---|---|
| **Operating Experience Level 1 (OE-1)** | To inform DOE complex of most significant events or trends of concern to DOE management, including assessments and required actions with close-out verification in a formal response. | Operating Experience (OPEX) Lead Office and working group of subject matter experts (SMEs) from across DOE. | Formal Correspondence<br><br>Lessons Learned(LL) Webpage | Deputy Secretary (Dep Sec) | National Nuclear Security Administration (NNSA) and DOE Under Secretaries (Under Sec)<br>For Action<br>Registered persons are notified when posted on Internet. | As directed | Assessments; decision of applicability; actions taken or planned with dates; verification of close-out. | Formal response required through Under Secs to Dep Sec (copy to OPEX Lead Office) with consolidated report of actions taken and affirmation that expectations are met or will be met by required date. |
| **Operating Experience Level 2 (OE-2)** | To inform DOE complex (or affected sites) of potentially significant safety issues (e.g., Conduct of Operations (CONOPS); Suspect/Counterfeit or Defective items (S/CI-D). Must include a statement of actions required (or recommended for NNSA) and formal method of feedback. | OPEX Lead Office and working group of SMEs from across DOE | Formal Correspondence<br><br>LL Webpage | Chief, Health, Safety and Security Office | NNSA Principal Deputy Administrator and Program Secretarial Offices (PSOs)<br>For Action<br>Registered persons are notified when posted on Internet. | DOE, including Government Owned/ Government Operated (GOGO), Elements and Contractors, as applicable | Review issue (e.g., CONOPS or Purchasing for S/CI-D) and take appropriate action. | Formal response required from NNSA Principal Deputy Administrator and PSOs to DOE Office of Health, Safety and Security with consolidated report of actions taken or non-applicability. |

# DOE Corporate Operating Experience Program Documents

| Operating Experience Document | Purpose | Developed By | Distrib. Vehicle | Issued By | Issued To | Who Takes Action | Actions | Follow-up Reports |
|---|---|---|---|---|---|---|---|---|
| **Operating Experience Level 3 (OE-3)** | To inform Senior HQ and Field Management when an event(s) or a trend(s) warrants attention by Senior HQ or Field Management, but the issue does not warrant an OE-1 or OE-2 report. Highlights important environment, safety, and health issues for senior management's attention and potential action. | OPEX Lead Office | LL Webpage | Office of Health, Safety and Security | NNSA Principle Deputy Administrator and PSOs. Registered persons are notified when posted on the internet. | DOE, including (GOGO), Elements and Contractors, as applicable | As appropriate | None |
| **Operating Experience Summary (OES)** | To inform DOE complex of DOE or external operating experience from which sites could benefit. Consists of a compilation of informative operating experience-based articles. | OPEX Lead Office | Operating Experience Summary webpage and blog | OPEX Lead Office | Internet distribution only. Registered users are notified when posted on the internet. | DOE, including (GOGO), Elements and Contractors, as applicable | As appropriate | None |

# DOE Corporate Operating Experience Program Documents

| Operating Experience Document | Purpose | Developed By | Distrib. Vehicle | Issued By | Issued To | Who Takes Action | Actions | Follow-up Reports |
|---|---|---|---|---|---|---|---|---|
| **Suspect/ Counterfeit or Defective Items (S/CI-D) Data Collection Sheet (DCS)** | To provide information on S/CI-Ds with potential impact to DOE operations. Developed from review of occurrence reports, the Government/ Industry Data Exchange Program (GIDEP), the Institute of Nuclear Power (INPO), and other sources. | OPEX Lead Office | S/CI-D web pages A limited number sent by push mail to a registered users list. | OPEX Lead Office | Internet distribution only. Registered users are notified when posted on the internet. | DOE, including (GOGO), Elements and Contractors, as applicable | As appropriate | None |
| **DOE Lessons Learned (LL) Report** | To provide feedback communications on identified program/mission-specific lessons learned across the DOE complex. | DOE Complex-wide | DOE Corporate LL Database | OPEX Lead Office | Internet distribution only. Registered users are notified when posted on the internet. | DOE, including (GOGO), Elements and Contractors, as applicable | As appropriate | None |

# Overview of the Lessons Learned Database

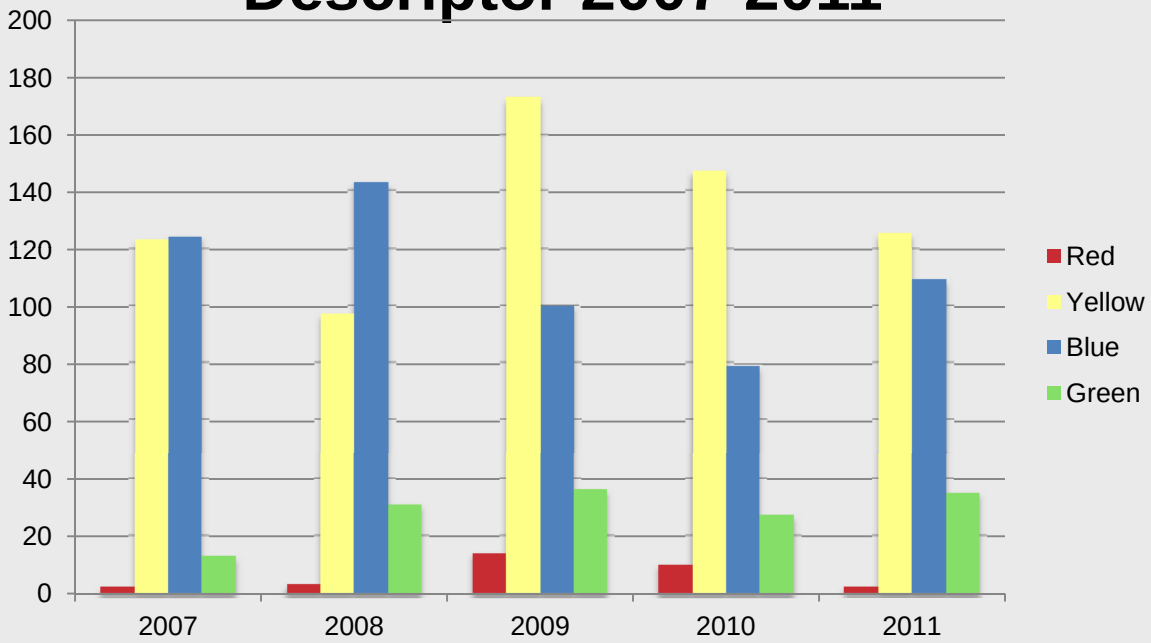
- The Lessons Learned Database is a web-based tool designed to facilitate information sharing in the form of Lessons Learned Reports.
- Potential subjects for the database are identified by reporting organizations throughout the complex and from HQ, and entered into a Lessons Learned Report form.
- Registration is required to access the Lessons Learned Database.

# Lessons Learned Reports

Basic elements in Lessons Learned Reports, include:

1. A clear statement of the lesson.
2. A background summary of how the lesson was learned.
3. Benefits of using the lesson and suggestion on how the lesson may be used in the future.
4. Contact information for additional detail.
5. Key data fields to aid in searching.
6. Priority descriptor that assigns a level of significance to the lesson.
   - Red/Urgent: A lesson from an actual event with adverse consequences.
   - Yellow/Caution: A lesson from a potential event or condition.
   - Blue/Information: A fact or discovery of benefit to others.
   - Green/Good Work Practice: A practice promoting or resulting in a positive outcome; a success story.

# Number of Lessons Learned Reports by Priority Descriptor 2007-2011




**Lessons Learned Reports by Priority Descriptor 2007-2011**

| | 2007 | 2008 | 2009 | 2010 | 2011 | Total 1995-2011 |
|---|---|---|---|---|---|---|
| **Red** | 2 | 3 | 14 | 10 | 2 | 98 |
| **Yellow** | 123 | 97 | 173 | 147 | 125 | 1544 |
| **Blue** | 124 | 143 | 100 | 79 | 109 | 1884 |
| **Green** | 13 | 31 | 36 | 27 | 35 | 352 |
| **Total** | 262 | 274 | 323 | 263 | 271 | 3878 |

## Creating Lessons Learned Reports

- New Lessons Learned are entered into a blank form on the LL Database.
- There are required fillable fields that submitters complete.
- After submission, the Lessons Learned Report is reviewed by Headquarters (HQ).

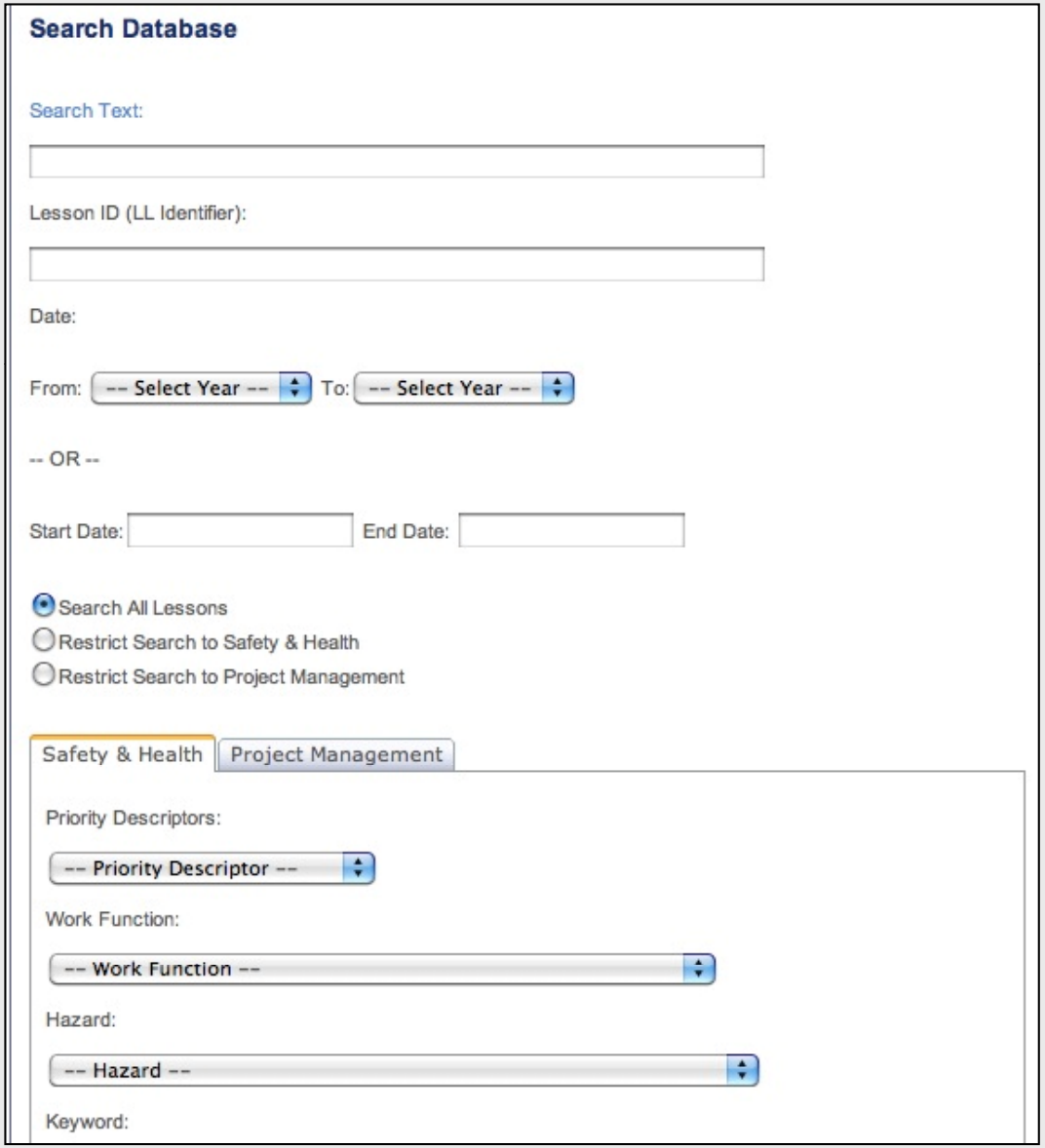
## Headquarters Review for Lessons Learned Reports

- Reports are reviewed by the Office of Analysis (HS-24) for content prior to approval.
- HQ reviews that required data fields are appropriately filled out, and correct any grammar and spelling as needed.
- Occasionally, HQ contacts report submitters to discuss language that may require clarification.

# Lessons Learned Reports

- Once the reports are reviewed and approved, they are:
  - Searchable in the database.
  - Disseminated to registered users via e-mail.

- LL Database log-in: http://www.hss.energy.gov/sesa/Analysis/DOEll/index.asp



# Lessons Learned Improvements

- HSS, EM, and NNSA meet on a regular basis to discuss the Lessons Learned Program and Database.
- Lessons Learned Improvements are the main topic of the meetings. Potential co-funding is under discussion.
- HS-24 is working with the Office of Information Management (HS-82) to incorporate many of the suggested improvements.
- Current Improvements include:
  - Adding a 'Save' button for LL submitters to save prior to submitting.
  - Allow users to search more than one item in the dropdown menus.
  - When Forwarding LL reports, the forward will include all attachments to the email.

# Lessons Learned Improvements

**Future Improvements include:**

- Adding a ‘How to Submit a Lessons Learned Report’ document to the site.
- Adding a ‘How to Search the Lessons Learned Database’ document to the site.
- Adding ‘Guidelines on How to Write a Lessons Learned Report’ document to the site.
- Add a ‘Point of Contacts Lessons Learned List’ to the site.
- Improve search features to easily analyze data.
- Add trending features, possibly have a Lessons Learned Dashboard.
- Further research on how to improve the search feature of the database to easily analyze and trend data.

## Lessons Learned initiatives include:

- More in-depth analysis and trending of Lessons Learned Reports:
  - Highlighting key best practices and near miss information.
  - Identifying need for OE Documents in targeted areas.
  - More discussion within the Operating Experience Committee.

- Corporate Operating Experience Program Self-Assessment
  - Review on the effectiveness of the OE Program to guide ongoing program improvement.
  - Receiving site feedback on what is going well and where to improve.

# Questions/Comments

Ashley Ruocco
General Engineer
Office of Analysis (HS-24)
301-903-7010
ashley.ruocco@hq.doe.gov

Sharon Brown
Program Analyst
Office of Analysis (HS-24)
202-586-6377
sharon.brown@hq.doe.gov

U.S. DEPARTMENT OF ENERGY

# 11th EM QA Corporate Board Meeting

## EFCOG Best Practices, Attention to Detail, and Other Cross-Cutting Issues

**Mike Mason**
**Energy Facility Contractors Group**

**and**

**Norm Barker**
**Energy Facility Contractors Group**

**May 01, 2012**

EM Environmental Management
safety ❖ performance ❖ cleanup ❖ closure

EFCOG

*Energy Facility Contractors Group*

# *Best Practices, Attention to Detail, and other Cross-Cutting Issues*

General thoughts:

- As a rule of thumb the DOE contractors have stable QA programs

- Typically the problems are associated with implementation not programmatic

# *Best Practices, Attention to Detail, and other Cross-Cutting Issues*

- Issue:
  - Inattention to detail
  - Poor workmanship
  - Lack of training
  - Supervisory priorities and schedule demands
  - Worker discipline

# *Best Practices, Attention to Detail, and other Cross-Cutting Issues*

- Cause:
  - Inadequate use of human performance tools
  - Poor understanding of management expectations
    - Stop work/work pause processes
  - Inadequate planning which results in errors in implementation of procedures and processes

# Best Practices, Attention to Detail, and other Cross-Cutting Issues

- Recommendations:
  - Line leadership in reinforcing QA requirements & the Quality Culture:
    - Pre-job briefs should focus on human performance factors at both the craft and non-manual personnel level
    - Sufficient time to complete the planning process
    - Work packages are accurate, complete and limited in size
  - Supervisor training & QA expectations for the job:
    - Supervisors need to be cognizant of the experience level of individuals performing the work
    - Frequent and reiterative discussions of management expectations at staff meetings, line management meetings and PODs
    - Ensure experienced resources are available to act as mentors and role models to those of less experience

# *Best Practices, Attention to Detail, and other Cross-Cutting Issues*

- Moving Forward:
  - How do we focus our collective efforts on addressing these issues?
  - Are these the correct/right fixes?
  - Do we have other options?

U.S. DEPARTMENT OF ENERGY

# 11th EM QA Corporate Board Meeting

## General Discussion – New Focus Areas

**Matthew Moury, Deputy Assistant Secretary**
**Safety and Security Program, EM-40**

**and**

**Bob Murray, Director**
**Office of Standards and Quality Assurance, EM-43**

**May 01, 2012**

EM Environmental Management
safety ❖ performance ❖ cleanup ❖ closure

FCOG *Energy Facility Contractors Group*

# Proposed Focus Areas Based on February 2010 Board Meeting

**EFCOG and/or EM Site Offices**

- Procedural compliance/ execution/conduct of operations
- Effectiveness of corrective actions regarding human performance
- Vendor issues
- Supplier Quality Assurance
- Consistent application of regulations/requirements, and consistent interpretations
- Inspector training/mentoring and understanding inspector expectations.
- Improve understanding of expectations for safety software and software QA
- Path forward for small contractors without rigorous NQA-1 programs

**EFCOG and/or EM Site Offices (cont.)**

- Addressing overseas suppliers
- Applying graded corrective action to DOE
- QC & Inspection criteria integration combined with the content in work plans for effectiveness

**EM-43 will address**

- Identifying HQ requirements from memos and other correspondence beyond orders
- QAP/QIP Implementation/Clear roles and responsibilities
- ORPS reporting of S/CI Program
- Balancing inspection/field work control with HQ program audits and oversight

**Department of Energy**
Washington, DC 20585

August 26, 2011

MEMORANDUM FOR DISTRIBUTION

FROM: DAE Y. CHUNG
PRINCIPAL DEPUTY ASSISTANT SECRETARY
FOR ENVIRONMENTAL MANAGEMENT

SUBJECT: Environmental Management Implementation of DOE Order 414.1D

On October 20, 2008, the Department of Energy (DOE) Office of Environmental Management (EM) established its quality program through the implementation of the EM Corporate Quality Assurance (QA) Program (EM-QA-001). The program is based on Title 10 Code of Federal Regulations Part 830, Subpart A "*Quality Assurance Requirements*" and DOE Order (O) 414.1C, and adopts the American Society of Mechanical Engineers NQA-1-2004, *Quality Assurance Requirements for Nuclear Facility Applications*, and addenda through 2007. It provides the basis to achieve quality and consistency across the EM complex and also promotes a graded approach, which enables EM elements to tailor their QA program to ensure QA requirements and expectations are met effectively and efficiently.

In April 2011, DOE O 414.1D, "*Quality Assurance*" was issued by the Secretary of Energy. This memorandum serves to provide clarification and management expectations with respect to the implementation of DOE O 414.1D within the EM complex. For EM contractors, the issuance of this order and cancellation of the previous revision to the order do not modify or otherwise affect an approved contractual or regulatory obligation. For EM Headquarters (HQ) and field offices, the expectation is that no changes to the existing quality programs will be required until EM-QA-001 has been revised to incorporate DOE O 414.1D. Once any substantive changes have been identified and updated within EM-QA-001, implementation of these changes to EM HQ and field office quality programs should take place as soon as reasonably possible.

The Office of Standards and Quality Assurance has initiated a review of EM-QA-001 to identify potential gaps and integrate DOE O 414.1D enhancements. The Office of Standards and Quality Assurance will also be responsible for verification of EM's compliance with DOE O 414.1D. Additional guidance will be provided once EM-QA-001 has been revised.

The key changes in DOE O 414.1D were summarized by the Office of Quality Assurance within the Office of Health, Safety, and Security and are attached to this memorandum for informational purposes.

If you have any questions, please contact Mr. James A. Hutton, Acting Deputy Assistant Secretary for the Office of Safety and Security Program, at (202) 586-5151.

Attachment

Distribution:

Matthew S. McCormick, Manager, Richland Operations Office (RL)
Scott L. Samuelson, Manager, Office of River Protection (ORP)
David C. Moody, Manager, Savannah River Operations Office (SR)
Edward J. Ziemianski, Acting Manager, Carlsbad Field Office (CBFO)
William E. Murphie, Manager, Portsmouth/Paducah Project Office ( PPPO)
Jack R. Craig, Director, Consolidated Business Center Ohio (CBC)
James R. Cooper, Deputy Manager for Idaho Cleanup Project (ID)
John R. Eschenberg, Assistant Manager for Environmental Management, Oak Ridge Office (OR)

cc: R. Unger, CBFO
T.J. Jackson, EMCBC
R. Provencher
P. Golan, OR (Acting)
P. Carier, ORP
R. McCallister, PPPO
A. Hawkins, RL
C. Harris, SR
C. Lagdon, S-5
C. Broussard, HS-33
D. Huizenga, EM-1(Acting)
C. Anderson, EM-3
R. Murray, EM-23
J. Surash, EM-80

# SOURCE: THE OFFICE OF QUALITY ASSURANCE, HS-33

## Changes from DOE O 414.1C to DOE O 414.1D

1. Clarified and streamlined requirements and responsibilities.

2. Added an exemption (to both the Order and the CRD) – In the Order, Paragraph 3.c.(3) and in the first paragraph of the CRD, which states

> Activities and facilities subject to regulation by the Nuclear Regulatory Commission (NRC) are exempt from the requirements of this Order. Requirements in this Order that overlap or duplicate the requirements of the NRC do not apply to facilities or activities (including design, construction, operation, deactivation and decommissioning) that are subject to a NRC license (including construction authorization) and related NRC regulatory authority. Other requirements in this Order may be applied to the extent determined appropriate by the responsible Program Office.

3. Paragraph 4.a.(2) Note was added (to both the Order and the CRD) to clarify that all software must meet applicable QA criteria using a graded approach.

4. Paragraph 4.c. Federal Technical Capability and Qualifications clarified the requirement that federal personnel responsible for QA and SQA oversight of defense nuclear facilities must be qualified in accordance with DOE-STD-1150-2002 (QA) and DOE-STD-1172-2011 (SQA), respectively.

5. Added specificity to the CRD for the use of a particular consensus standard for hazard category 1, 2, and 3 nuclear facilities. CRD, Paragraph 1.c. (1) states:

   (1) For Hazard Category 1, 2 and 3 nuclear facilities:

   > (a) Existing facilities, or new facilities and major modifications to existing facilities achieving Critical Decision 1 (CD-1) prior to the issuance of the Order containing this CRD, continue to use the consensus standard cited in the DOE-approved QAP consistent with Secretarial Officer direction.
   >
   > (b) New facilities and major modifications to existing facilities achieving Critical Decision 1 (CD-1) after the Order containing this CRD has been issued, use ASME NQA-1-2008 with the NQA-1a-2009 addenda (or a later edition), *Quality Assurance Requirements for Nuclear Facility Applications*, Part I and applicable requirements of Part II.

Note: Where NQA-1, Part II language uses the terms "nuclear power plant" or "nuclear reactor", these terms are considered equivalent to the term "nuclear facility" used in this CRD.

(c) Consensus standard(s) that provide an equivalent level of quality requirements as required in paragraphs 1.c.(1).(b) may be used in lieu of those specified to implement the requirements of this CRD. The QAP must document how this consensus standard is (or a set of consensus standards are) used, as well as how they are equivalent to the consensus standard listed in 1.c.(1).(b).

6. CRD, Paragraph 2.e. clarified the requirement for the contractor to evaluate the program of a subcontractor, vendor, and supplier whose activities are not governed by the contractor's DOE-approved QAP. It states:

   2.e. For subcontractor, vendor, and supplier activities that are not governed by the contractor's DOE-approved QAP, evaluate their program to ensure they meet applicable QA requirements.

7. Corrective Action Management Program (CAMP) requirements were removed and were to be captured in DOE O 226.1B.

8. Attachment 4, Paragraph 2.a. clarified the requirement for safety software to be acquired, developed and implemented using NQA-1-2008 with the NQA-1a-2009 addenda (or a later edition) Part I and Subpart 2.7 or other national or international consensus standards that provide an equivalent level of QA requirements as NQA-1-2008. DOE-approved QAPs based on 414.1C requirements are acceptable. It states:

   2.a. Safety software must be acquired, developed and implemented using ASME NQA-1-2008 with the NQA-1a-2009 addenda (or a later edition), Quality Assurance Requirements for Nuclear Facility Applications, Part I and Subpart 2.7, or other national or international consensus standards that provide an equivalent level of quality assurance requirements as NQA-1-2008. DOE-approved QAPs applicable to safety software based on requirements from DOE O 414.1C are acceptable. The standards used must be specified by the user and approved by the designated DOE approval authority.

9. Attachment 4, Paragraph 2.a. (2) clarified the information to be maintained for the safety software inventory entries. It states:

   Identify, document, control and maintain safety software inventory. The inventory entries must include at a minimum the following: software description; software name; version identifier; safety software designation (e.g., safety system software, safety and hazard analysis software and design software, safety

management and administrative controls software); grade level designation; specific nuclear facility application used; and, the responsible individual.

Three Park Avenue
New York, NY
10016-5990 U.S.A.

tel 1.212.591.8500
fax 1.212.591.8501
www.asme.org

CODES & STANDARDS

March 22, 2012

Dr. W. San Horton
Defense Nuclear Facilities Safety Board
625 Indiana Ave, Suite 700
Washington, DC 20004-2901

Subject: NQA Technical Interpretation Record # 10-1365

Applicability: NQA-1-2000 and more recent editions through NQA-1b-2011

Dear Dr. Horton,

Our understanding of your questions in your Inquiry and our responses are as follows:

Question: For an implementer, is choosing to apply only paragraph 100 of applicable requirements of Parts I and II of the standard an appropriate and sufficient method to implement a NQA-1 based Quality Assurance program?

Response: No. With the exception of the Part I requirement areas: 5, Instructions, Procedures and Drawings; 14; Inspection, Test and Operating Status; and 16 Corrective Action, paragraph 100 is a summary and introductory paragraph for additional mandatory criteria contained in the requirement area.

The application of only section 100 by an implementing organization is insufficient to claim credit for implementing Part I or Part II of an NQA-1 based Quality Assurance program. It is also insufficient for an invoking organization to invoke only section 100 of Part I or Part II and expect results equivalent to specifying all of Parts I or II.

This response is applicable to NQA-1-2000, NQA-1-2004, NQA-1-2008 and the NQA-1b-2011 Addenda.

Regards,

Oliver Martinez
ASME
Committee on Nuclear Quality Assurance
Three Park Avenue
New York, NY 10016-5990
212-591-7005

**Department of Energy**
Washington, DC 20585

APR 24 2012

MEMORANDUM FOR DISTRIBUTION

FROM: MATTHEW B. MOURY
DEPUTY ASSISTANT SECRETARY FOR
SAFETY, SECURITY, AND QUALITY PROGRAMS
ENVIRONMENTAL MANAGEMENT

SUBJECT: Quality Assurance Personnel Resources

One of the primary Goals and Objectives of the Environmental Management (EM) Quality Assurance (QA) Corporate Board is to "Validate that an adequate level of competent and qualified QA personnel and resources are available to support effective implementation of EM projects." Significant effort has been expended over the past 4 years to enhance and strengthen the QA resources at Headquarters (HQ) and at the field sites.

To better understand current and anticipated QA and Quality Control (QC) resource conditions across the EM complex, we as the EM QA Corporate Board members voted at the February 2011 meeting to assign a new focus area to develop a task team to determine if there is a shortage of QA/QC resources. This is documented as "Project Focus Area #2 – QA/QC Evaluation of QA/QC Resources" in the "2012 Quality Assurance Improvement Project Plan" which can be found at: http://www.em.doe.gov/Pages/QACorporateBoard.aspx. For the initial task, the focus area team has developed a survey, which is shown in the attachment. The next step in this effort is to request each of you, the field sites and associated prime contractors, to provide a response to the questions.

For purposes of this survey, QA resources are considered to fall within one of three categories: QA, Quality Engineering (QE), or QC. These terms are further defined in the attachment. Other personnel may perform functions that may be considered "quality affecting activities" such as facility representatives performing work performance oversight, engineering or maintenance personnel performing equipment or pre-start acceptance testing, hold point sign off and/or oversight, personnel maintaining records storage, personnel performing trend analysis, etc., and if counted as inspection or test personnel or QA resources, should be uniquely identified in the notes section of the three categories.

Due to the variation of different work activities across the complex from new construction, to decontaminate and decommission the nuclear facility operation, a specific number of minimum QA resources, as compared to the total workforce are not intended to be specified. Flexibility must be maintained with the respective management teams at the individual sites in determining needed resources.

Field site offices should coordinate the survey data from their respective contractors and submit the requested information to Jim Davis, at jim.davis@rl.doe.gov by May 25, 2012.

If you have any questions, please feel free to contact me or Mr. Robert Murray, Director, Office of Standards and Quality Assurance, at (202) 586-7267.

Attachment

cc: S. Chalk, RL
J. May, ORP
R. Kay, ID
J. Armstrong, ORO
C. Harris, SRS
R. McCallister, PPPO
R. Unger, CBFO
J. Rampe, EMCBC
R. Lagdon, S-5
D. Huizenga, EM-1
C. Trummell, EM-1
M. Neu, EM-1
T. Mustin, EM-2
A. Williams, EM-2.1
M. Gilbertson, EM-10
K. Picha Jr., EM-20 (Acting)
F. Marcinowski, EM-30
J. Hutton, EM-40
T. Lapointe, EM-41(Acting)
R. Goldsmith, EM-42
R. Murray, EM-43
K. Goodwin, EM-44
J. Surash, EM-50
T. Tyborowski, EM-60 (Acting)
S. Waisley, EM-70

Distribution

Matthew S. McCormick, Manager, Richland Operations Office (RL)
Scott L. Samuelson, Manager, Office of River Protection (ORP)
David C. Moody, Manager, Savannah River Operations Office (SR)
Jose Franco, Manager, Carlsbad Field Office (CBFO)
William E. Murphie, Manager, Portsmouth/Paducah Project Office (PPPO)
Jack R. Craig, Director, Consolidated Business Center Ohio (CBC)
John Sattler, Federal Project Director, Brookhaven Federal Project Office (BNL)
Steven Feinberg, Manager, Separations Process Research Unit (SPRU)
Bryan Bower, Director, West Valley Demonstration Project Office (WVDP)
Donald Metzler, Director, Moab Federal Project Office (MOAB)
James Cooper, Deputy Manager for Idaho Cleanup Project (ID)
Susan M. Cange, Acting Assistant Manager for Environmental Management, Oak Ridge Office (OR)
Kevin Bazzell, Federal Project Director, Stanford Linear Accelerator Center (SLAC)
John Jones, Federal Project Director, Energy Technology Engineering Center (ETEC)

Site or Project Office: _____ Date_____

Contact Person: _____ Phone Number_____

Complete the following Quality Related Resources Distribution Table for the Federal office and for each prime contractor at the sites to identify:

- Number of full time equivalent QA or Inspection and Test resources for each of the categories QA, QE, QC and others that are currently on board. For Federal staff please note the number qualified to DOE-STD-1150-2002.
- Number of full time equivalent QA or Inspection and Test resources anticipated being on board in 3 years (or at the end of the contract)? Please enter a note stating contract duration if less than 3 years.
- What is the total Federal and prime contractor FTE headcount currently?

| Quality Related Activities | Assigned FTEs (current (x) /anticipated (y)) | | | | Notes |
|---|---|---|---|---|---|
| | Federal | Prime Contractor | | | |
| | | A | B | C | |
| QUALITY ASSURANCE* | x/y | | | | |
| -Program/procedure maintenance/Reviews | | | | | |
| -Auditing, internal and external | | | | | |
| -Corrective action management | | | | | |
| -Metrics (including CAS) | | | | | |
| -Administrative/ Office Support | | | | | |
| -Management | | | | | |
| QUALITY ENGINEERING** | x/y | | | | |
| -Procurement Reviews | | | | | |
| -QE Review of Design Products | | | | | |
| -Inspection Planning | | | | | |
| -Surveillance/oversight | | | | | |
| -Procedure Reviews | | | | | |
| -NCR Dispositions | | | | | |
| -Project Support/ Problem Resolution | | | | | |
| QUALITY CONTROL INSPECTION*** | x/y | | | | |
| -Civil | | | | | |
| -Electrical | | | | | |
| -Mechanical | | | | | |
| -Nondestructive Examination | | | | | |
| -System Testing | | | | | |
| -Source Inspection | | | | | |
| -Receipt Inspection | | | | | |
| -NCR Verification/Closeout | | | | | |

Site or Project Office:_____ Date_____
Contact Person: _____ Phone Number_____

| TOTAL FTE HEADCOUNT | x/y | | | | |
|---|---|---|---|---|---|
| Please provide responses to the following questions: | | | | | |
| Are the number of QA/QC/QE resources currently onboard considered adequate for each discipline? Please provide a qualitative evaluation as to why or why not. | | | | | |
| Feds:<br>Prime Contractor A:<br>Prime Contractor B:<br>Prime Contractor C: | | | | | |
| Are there impediments in acquiring/maintaining adequate numbers of qualified/certified resources? Please identify issues encountered/anticipated, e.g. attrition, availability of qualified personnel, difficulties filling vacancies, high turnover, etc. | | | | | |
| Feds:<br>A:<br>B:<br>C: | | | | | |
| How many vacancies are currently available? What is the average time needed to fill an opening? Are there difficulties in filling those vacancies? | | | | | |
| Feds:<br>A:<br>B:<br>C: | | | | | |
| Are QA/QC/QE or inspection and test personnel qualified and/or certified in accordance with a national or internationally recognized consensus standard? (QA would include Lead Auditors, Auditors, audit team members, and assessors) If yes identify which standard and applicable version or revision. | | | | | |
| Feds:<br>A:<br>B:<br>C: | | | | | |
| Are QA/QC/QE or inspection and test personnel required to be independent from the items, activities, or services they are inspecting, testing, assessing, evaluating or overseeing? If no please explain. | | | | | |
| Feds:<br>A:<br>B:<br>C: | | | | | |

Site or Project Office:_____ Date_____
Contact Person: _____ Phone Number_____

| |
|---|
| To what extent is the Graded Approach applied to determine if QA/QC/QE or inspection and test personnel are to be qualified or certified to perform activities affecting quality? |
| Feds:<br>A:<br>B:<br>C: |
| Are QA/QC/QE or inspection and test personnel qualification/certification documented, readily retrievable, and re-evaluated at specified intervals? |
| Feds:<br>A:<br>B:<br>C: |

***Quality Assurance (QA)** - ISM Integrated QA Systems Management, QA Program Development, DOE QA Rule and QA Order Interpretation, Graded Approach Application, Inspection and Test Personnel and Lead Auditor Qualification/Certification Approval and Re-evaluation, Verification that QA Program Flow Down into Implementing, Work, Design, Procurement, and Corrective Action documents/procedures provide a level of confidence that SSC's will perform satisfactory in service, etc. Federal personnel qualified under DOE-STD-1150-2002 are considered to be in this category.

****Quality Engineering (QE)** - QA Systems Design, Design Control, Configuration Management Oversight, QA Program Implementing Procedures Development and Approval, Approval of adequate QA requirements, Witness And Hold Point flow down in Procurement and Implementing Documents, Pre and Post Award Supplier Evaluation including CGID, Software Quality Assurance, Suspect/Counterfeit Items Process, Auditing, Root Cause Analysis, Corrective Action Management and Non-Conformance Control Analysis and Disposition Concurrence, Construction and Subcontractor Assessment/Oversight, Regulatory Interaction, Data Analysis, Inspection Plans Approval, Inspection Sample Plan approval, Mentoring and Training of Inspection, Test and QC Personnel, etc.

*****Quality Control Inspection (QC)** - Electrical, Civil, Structural, Mechanical, I&C, Welding, Fabrication, Non-destructive Examination, Receipt, In Process, Source, First Article, CGID Hardware, Inspection, NCR Generation and Hold Tag Application, Inspection Documentation and Control, Verification of M&TE due and recall dates, Certificate of Conformance verification, Inspection documentation, etc.

For questions or clarifications regarding input to the survey please contact:
Jim Davis, EM-43 representative, at jim.davis@rl.doe.gov or on (509) 376-0436 or
Robert Carter, EFCOG representative, at racarter@wch-rcc.com or on (509) 377-3220.