

12TH EM QUALITY ASSURANCE CORPORATE BOARD MEETING

Meeting Location: Richland, WA – Office of River Protection		
Room: 2440 Stevens Center – Room 2311		
Agenda for November 27, 2012		
12:30-12:40	Introductions/Status of Actions from the Last Meeting	Larry Perkins (EM-43)
12:40-1:10	Status/Closure of Current Focus Areas <ul style="list-style-type: none"> • Focus Area 2 (Resources) • Focus Area 3 (Training) 	Jim Davis (EM-43) Ken Armstrong (EMCBC)
1:10-2:10	EM QA Corporate Board Approach and Focus	Matt Moury (EM-40) Bob Murray (EM-43)
2:10-2:20	Break	-----
2:20-2:50	EFCOG Current Efforts in QA	Mike Hassell (EFCOG)
2:50-3:20	NQA-1 Committee Update	Bud Danielson (CNS)
3:20-3:50	Transportation and Packaging Issue with Recent ASME NQA-1 Interpretation	Steve O'Connor (EM-33)
3:50-4:00	Break	-----
4:00-4:30	EM-QA-001 Revision 1 Site Implementation Status	Larry Perkins (EM-43) Site Representatives
4:30-5:00	General Focus Area Discussion and Other Topics of Interest from the Sites	Site Representatives

Video Conference Call Locations:

- Hanford - Office of River Protection at 2440 Stevens Center – Room 2311
- Idaho WCB-8
- Carlsbad T134
- EMCBC CR-503
- Oak Ridge Bldg 2714G Room C2
- Savannah River 228
- Lexington VTC Room (can also connect from the VTC rooms at Paducah & Portsmouth if needed)
- Forrestal 1F-077
- Call-in number for telephone only will be 202-287-6477 (Reservation Number 401458 for 15 lines)



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12th EM QA Corporate Board Meeting

Hanford, WA

Introductions, Announcements, and Status of Actions

Larry W. Perkins
Office of Standards and Quality Assurance (EM-43)

November 27, 2012



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Agenda

<u>Topics</u>	<u>Speaker</u>
Agenda, Introductions, and Status of Action Items	Larry W. Perkins (EM-43)
Status/Closure of Current Focus Areas <ul style="list-style-type: none"> • Focus Area 2 (Resources) • Focus Area 3 (Training) 	Jim Davis (EM-43) Ken Armstrong (EMCBC)
EM QA Corporate Board Approach and Focus	Matt Moury (EM-40) Bob Murray (EM-43)
EFCOG Current Efforts in QA	Mike Hassell (EFCOG)
NQA-1 Committee Update	Bud Danielson (CNS)
Transportation and Packaging Issue with Respect to Recent ASME NQA-1 Interpretation	Steve O'Connor (EM-33)
EM-QA-001 Revision 1 Implementation Status	Larry Perkins (EM-43) Site Representatives
General Focus Area Discussion and Other Topics of Interest from the Sites	Bob Murray (EM-43) Site Representatives

Announcements

- Safety Topic/Evacuation Routes/Assembly Areas
- Presentations, referenced meeting materials, and meeting minutes will all be available online at the following website:
<http://www.em.doe.gov/Pages/QACorporateBoard.aspx>
- Introductions of voting Corporate Board members
- Actions from the last Corporate Board Meeting in Las Vegas
 - DNFSB annual briefing input
 - Selection of Corporate Board Focus Areas



Time Permitting

Potential Discussion Topics

- Implementation of EM-QA-001 rev 1 due at the end of CY. What is the status of your sites? (On agenda).
- Scheduling assessment plan for this year - audits versus the assist visits we just completed.
- Current position on the funding to support the site assessments.
- Need for the sites to provide us some input for the annual DNFSB brief.
- Current site representatives and our responsibilities and support to the sites.
- Guidance on use of use of suppliers that were once considered “NQA-1 Suppliers” but are no longer due to impact of *NQA Technical Interpretation Record #10-1365* (Paragraph 100 issue).



Time Permitting

Potential Discussion Topics

- Revision 3 of the WM Waste Acceptance Product Specification for HLW Vitrified Waste Forms (WAPS) is in effect.
- Formalization of the Graded Approach/Flowdown guidance developed by EM Corporate Board deliverable in March 2010. It should be clear that we do not grade requirements but develop procedures to implement the requirements in a graded approach commensurate with the work.
- Discussion of perception that:
 - EM interprets all parts of NQA-1 being applicable as opposed to Parts I and II.
 - EM expects application of a rigorous QA program based on NQA-1 is to be applied across the board for all activities as opposed to just those that are important to the safety basis envelop.
- Are vendors opting out of procurements for the department because of the JSP process?





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12th EM QA Corporate Board Meeting

Status of the DOE-EM/EFCOG Project Focus Area #2 QA/QC Evaluation of QA Resources

Jim Davis, EM-43

**November 27, 2012
Richland, WA**



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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



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SURVEY

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



SURVEY

- 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.



RESULTS

General Consensus

- Current QA Resources
 - Federal – FTE numbers are low or are marginally adequate
 - Contractors – FTE numbers are adequate, but future work scope increases may tax them
- Impediments
 - Budget limitations
 - Availability of qualified personnel
 - Attrition
- Vacancies/Difficulty Filling
 - Federal – 0-1 positions available/laborious process (6 months)
 - Contractor – 0-2 positions/ no significant difficulties



RESULTS

General Consensus

- QA/QC/QE Personnel Qualification Requirements
 - Federal – DOE QA FAQ, NQA-1 Lead Auditor/Auditor
 - Contractor – NQA-1 Lead Auditor/Auditor, Inspection and Test Personnel to NQA-1/ASME, NDE to SNT-TC-1a
- QA/QC/QE Qualification Documenting/Re-Evaluation
 - Federal/Contractor – Appropriate periodicity identified. No issues identified at any reporting site
- Independence
 - Federal/Contractor – No issues identified at any reporting site



RESULTS

QA/QC/QE Resource Changes Over Past 3 Years (May '12 Survey Compared to April '09 Survey)

Federal and Contractor

		ORP	RL	ID	SRS	OR	CB	PPP	Total
Large Sites	09'	146	133	69	150	36	84	52	670
	12'	161	98	88	118	42	88	54	649

Variables

- Work scope
- ARRA
- Contracts
- Survey questions



Conclusion

- Overall QA/QC/QE Resources Appear to be Sufficient to Meet the Needs of the EM Complex
- Uncertainties Continue to Challenge As the Mission Evolves
 - Budget/Funding
 - Cleanup Completion
 - Scope Changes
- QA/QC/QE Organizations Have Adapted and are Providing the Necessary Resources to Support the Mission





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Status/Closure of Current Focus Areas
Focus Area 3 (Training)

Ken Armstrong
Bob Thompson
Bob Carter

November 27, 2012



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Original Needs Identified By the Team:

- DOE Needs Based on Job analysis:
 - Basic EM-QA-001 Training and NQA-1 Lead Auditor
- 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
- DOE Contractor Needs Based on Performance Issues:
 - QA Specialists Trained for SQA, CGD, S/CI, and procurement oversight



Need for 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

What's been done for EM-QA-001:

- EM-QA-001 was released July 27, 2012.

What's planned for EM-QA-001:

- Gap analysis are in process.
- Effective Implementation scheduled for December 30, 2012.



Need for SQA, CGD, and S/CI Training

- Phase I - Establish commercially available courses at selected DOE Area Offices across the complex based on geographic location.

What's been done for SC/I:

- Evaluation of S/CI Webinar by Energy Solutions (March 2012).
- S/CI Course by Energy Solutions at Idaho Falls (July 2012).
- S/CI Handbook re-write complete and at DOE-HSS for review.

What's planned for SC/I:

- S/CI Course by Energy Solutions Scheduled Portsmouth (Dec 11-12).
- S/CI Course by Energy Solutions Scheduled Paducah (Dec 13).
- Additional courses scheduled at Commercial Sites:
 - Exelon in Baltimore (Dec)
 - Exelon in Philadelphia (Dec)
 - Electric Power Research Institute (EPRI) in Charlotte (Dec 2012)



Need for SQA, CGD, and S/CI Training

- Phase I - Establish commercially available courses at selected DOE Area Offices across the complex based on geographic location.

What's been done for CGD:

- EFCOG - Engineering Practices Working Group - Commercial Grade Dedication Subgroup formed.
- May 2012 EFCOG Commercial Grade Dedication Workshop
 - Use of Commercial Surveys to Support the CGD Process
 - Use of Commercial Surveys to Support the CGD Process, Case Study: Ruskin Dampers
 - Counterfeit Part Risk Mitigation and the Nuclear Industry
 - Dedication of Commercial Grade Software
 - Emergency Gas Turbine Quality Execution Plan
 - Workshop On How To Maintain Qualification In The Dedication Process Lessons Learned
 - Good Practices, Nuclear Procurement Do's & Don'ts
 - Pressure Regulator Procurement Strategy
- Completed example procedure *Evaluation and Acceptance of Commercial Grade Items and Services* and example procedure *Performance of Commercial Grade Surveys*.



NQA-1 and other training

What's been done for NQA-1:

- Aiken Technical College, Nuclear program is on line at: www.atc.edu
 - Associate of Applied Science- Major in Nuclear Quality Systems
 - Certificate of Applied Science- Major in Nuclear Quality Engineering Principles
 - Certificate of Applied Science- Major in Electrical & I/C Nuclear Quality Control Inspection
 - Certificate of Applied Science- Major in Mechanical Nuclear Quality Control Inspection
 - Certificate of Applied Science- Major in Nuclear Quality Assurance Auditing
 - Associate in Applied Science: Major in Radiation Protection Technology
 - Radiological Control Technology Certificate



Recommended Path Forward

Need for EM-QA-001 Training

- Establish a team to develop implementation training for EM-QA-001 and the NQA-1 standard.

Need for SQA, CGD, and S/CI Training

- Continue to let the Contractors and EFCOG lead the way in hosting and developing reference material for S/CI and CGD.
- Establish a mechanism to publicize training and reference materials.
- Establish a process for training materials to be assessed by the PSOs and then approved for use.
- Look for other needs such as NRTL training.

Need for SQA, CGD, and S/CI Training

- Continue to support Aiken Technical College program.



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12th EM QA Corporate Board Meeting

EM QA Corporate Board Approach and Focus

Matt Moury
Deputy Assistant Secretary, EM-40
Safety, Security, and Quality Programs

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



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Do you remember what was in the news during March 2008?

- John McCain secures the 2008 U.S. Republican Party presidential nomination after winning primary elections in Texas, Vermont, Ohio, and Rhode Island.
- During the early hours of the morning, a small bomb explodes at an unoccupied military recruiting station in Times Square New York City No one is injured.
- New York Governor Eliot Spitzer announces his resignation (effective March 17) days after being linked to a high-priced prostitution ring. Lieutenant Governor David Paterson succeeds the governorship of New York.
- A construction crane falls on a residential building in Manhattan, killing four people and injuring at least 17.
- The Federal Reserve System cuts the federal funds rate by 75 basis points to 2.25%.
- Relatives of victims of the Virginia Tech massacre report that the government of Virginia will offer victims compensation of \$100,000 to forestall lawsuits.
- Former First Lady of the United States Nancy Reagan endorses John McCain for the presidency.
- ***EM 1st QA Corporate Board meets in Las Vegas Nevada.***



QA Corporate Board

Brief History: How were we formed?

- Board was **established** by the former DAS for Safety Management and Operations to:
 - Implement EM's policy and guidance specific to QA.
 - Promote QA lessons learned and best practices across the sites.
 - Provide the management structure to integrate the independently managed federal and contractor QA Programs into a single corporate entity.
 - Serve as a consensus-building body to facilitate institutionalization of a QA Management System across the EM-Complex.
- **By-Laws voted on and approved at the Las Vegas meeting.**



QA Corporate Board

Brief History: By-Laws Mission

The EM Corporate Board **mission**, as described in our By-Laws, is consistent with why the Board was established and states:

- The Board will serve a **leadership role** within EM for facilitating, championing, and overseeing the effectiveness of a consistent and graded approach **to implementing the corporate QA program**, policies and requirements, and **disseminating lessons learned and best practices** such that a consistent and effective approach to quality is obtained through independently managed federal and contractor QA Programs. The Board will serve as a consensus-building body to **facilitate institutionalization of a streamlined and efficient QA Management System across the EM-Complex.**



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QA Corporate Board

Brief History: By-Laws Goals and Objectives

- The Board will ensure programmatic decisions and recommendations ***promote effective execution and performance of EM projects*** through the use of the ***best practices and commonly accepted standards in nuclear industry***, as applicable, including:
 - Standardization and consistency in the graded establishment and implementation of nuclear QA programs in the EM complex;
 - Institutionalization of a QA implementation verification process and proper integration of QA and Integrated Safety Management Systems;
 - Validation of site and contractor QA programs consistent with the EM Corporate QA Program, EM-QA-001;
 - Validation of High Level Waste/Spent Nuclear Fuel QA programs consistent with DOE/RW-0333P;



QA Corporate Board

Brief History: By-Laws Goals and Objectives

- By-Laws Goals and Objectives continued:
 - Validation that adequate levels of competent and qualified QA personnel and resources are available to support effective implementation of EM projects;
 - Implementation of effective collection, communication, dissemination, and application of project QA lessons learned throughout the EM complex; and
 - Support continuous improvement of the overall EM mission performance (e.g., capital and major construction projects, accelerated cleanup, and execution of American Recovery and Reinvestment Act (ARRA) funded projects).



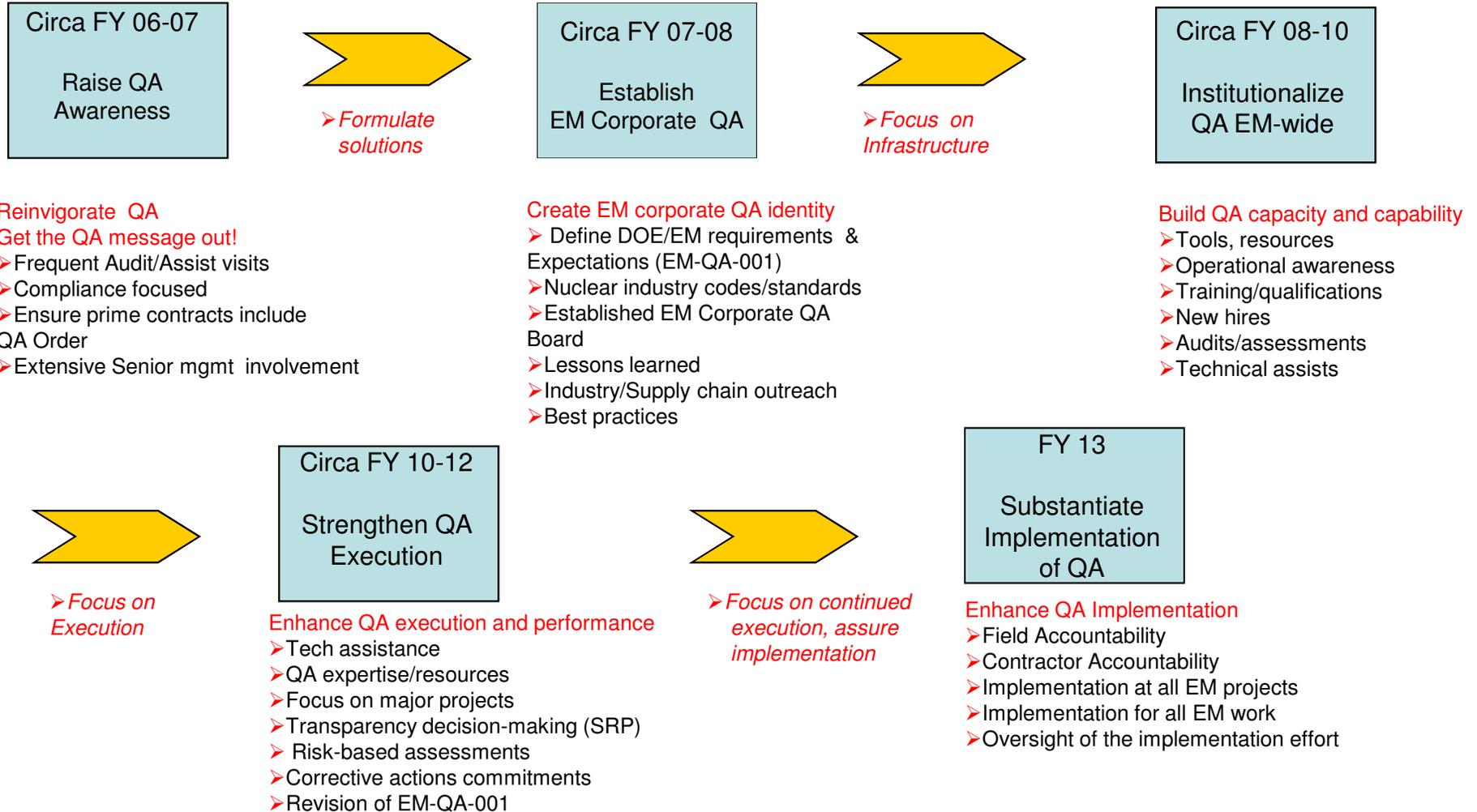
QA Corporate Board

Relationship to the Office of Standards and Quality Assurance

- EM-43 Mission Highlight:
 - Responsible for ensuring that the necessary technical, and quality requirements and standards are properly identified and adequately implemented for all line-item, EM capital projects and major operating projects and facilities in a timely and technically defensible manner.
- EM-43 Objectives Highlights:
 - Promote an organizational culture that embraces quality in day-to-day execution of all work related to EM Mission
 - Ensure early and effective integration of QA throughout project lifecycle— Procurement, Design, D&D, etc.
- Consistent mission and objectives designed to directly support the QA Corporate Board over the last 4.5 years.
- EM Corporate Quality Program substantiated through EM-QA-001.



Highlights of the EM Corporate QA Program



Examples of EM-43 Actions & Activities

- Lead/support/observe numerous Field/Site QA reviews
 - Federal implementation of QAP/QIP
 - Prime contractor implementation of QAP/QIP
 - Prime assessment of vendors and subcontractors
 - Construction Project Reviews
- Facilitate resolution of and address cross cutting QA issues
 - Commercial grade dedication (CGD) practices
 - Suspect/counterfeit items (S/CI) issues
 - Flow down of requirements
 - QA resources and adequate NQA-1 Suppliers
 - Supplier Quality Programs
 - Lessons Learned



Examples of EM-43 Actions & Activities (cont)

- Provide hands-on QA technical SMEs and support
 - DUF6 -- WTP
 - IWTU -- SWPF
- Sponsor QA training and industry outreach events
 - CGD Train-the-trainer
 - 10 CFR 830/DOE Order 414.1C
 - Introduction to DOE-EM Quality Assurance
 - College level training at ATC
- Formalize EM's QA requirements and expectations
 - EM-QA-001 (FY 2010)
 - EM-QA-001, Revision 1 (FY 2012)



Examples of EM-43 Actions & Activities (cont)

- Focus on institutionalizing QA consistency, technical soundness and transparency
 - Standard Review Plan
 - QA Integration in Project Lifecycle
 - Field Review/Approval of site-specific QAP/QIPs
 - Software QA
 - Developed QA Contract Clause
 - Established risk-informed approach to QA exemption/variance requests
 - Implemented CA-HUB to track and follow-up on QA corrective action plan commitments

All actions have focused on meeting the overarching QA Objective to perform all mission work correctly.



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Summary of Positive Results To Date

- Raised complex-wide awareness of and understanding of QA requirements and expectations.
- Every site has a HQ & Field reviewed/approved QAP/QIP.
- Initiated QA training.
- Supported site participation in the development of the EM Corporate QA program.
- Promoted sharing of QA lessons learned with cross cutting implications.



QA Challenges Remain within EM

- Continued QA-related project cost-schedule setbacks
- Continued lack of effective application of QA requirements in procurement process/flow down
- Apparent lack of adequacy of existing federal “and” contractor QA resources
- Continued issues associated with configuration design management, SQA, and S/CI



QA Challenges Remain within EM (cont)

- Some deliverables from the EM QA Corporate Board Focus Areas are well distributed and utilized
 - EM-QA-001 Revision 1
 - EM Commercial Grade Dedication Guidance Document
- Some deliverables from the EM QA Corporate Board Focus Areas are NOT well distributed and utilized
 - Requirements Flow-down
 - Graded Approach to QA



12th QA Corporate Board Meeting

We need to be thinking about our path forward.

- How does the EM QA Corporate Board avoid duplicating efforts with EFCOG and the HSS Quality Council?
- What should be the future focus of the EM QA Corporate Board?
 - Shift focus from “programmatic” to greater engagement and facilitation of site-specific QA “implementation”
 - Provide a more aggressive role in facilitating timely operational awareness
- Should we reexamine Corporate Board’s 5 year old charter?

Discussion Questions

What are your thoughts and Ideas?

- Why does EM continue to face quality challenges and failures?
- Do you think the EM QA Corporate Board's founding principles and organizational structure are still aligned to meet EM's current challenges?
- Or, do you believe the Board is at a point where it should reevaluate its path forward and how it operates?
- Should the Board be more a strategic thinking group and reduce the role of creating focus areas that duplicates how EFCOG and HSS does their work?
 - This might address things like creating a consolidated approach to budget requests, generating proposed policies for adoption of new standards, examining cross-cutting savings potentials for the Department, etc.
- What do you think our path forward should be for the 13th, 14th, and beyond EM QA Corporate Board meetings?





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EFCOG QUALITY ASSURANCE TASK TEAM

Mike Hassell
CHPRC QA Director
Chair, EFCOG QA Task Team

November 27, 2012



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EFCOG QA Task Team Organization

- Task Group Chair: Mike Hassell/Mike Mason
 - Supply Chain Quality Task Lead: Vince Grosso
 - Software Quality Task Lead: Deb Williams
 - Quality Programs Task Lead: Bob Thompson
 - Quality Control Task Lead: Bob Carter
 - Secretary: Alice Lewis
 - Sponsoring Director: Bob Milazzo
 - DOE Sponsor: Bob Murray

Supply Chain Quality Task Team

- Improve supply chain quality (cost effectiveness & number)
- Continue to integrate DOE & NNSA supplier information sharing into a single database used across the complex
- Work with Packaging Management Council to foster quality improvements for radioactive packaging
- Work with EPWOG to develop standard criteria for commercial dedication of non-NQA-1 suppliers



Supply Chain Quality Task Team

- Identify from a complex wide perspective the topical SMEs to support supply chain activities
- Use communication to drive supply chain improvements
 - Monthly teleconferences & Newsletter
 - Ad Hoc meetings for issues in the supply chain
 - Web technology for additional information presentation
- Interface with Procurement Engineering – interface of QA with procurement and Commercial Grade Dedication



Quality Control Task Team

- Working jointly with DOE and contractor S/CI SME's to function as the writing team to revise the DOE Suspect/Counterfeit Resource Handbook (i.e., formerly know as the S/CI Training Awareness Manual).
- Developing a white paper titled "Inspection and Test Personnel Interfaces to obtain Inspection Acceptance Criteria including Application of the Graded Approach"
- Developed a white paper that identified the methods used by contractors for certifying Inspection personnel who support DOE sites. (Completed Spring 2012)



Quality Programs Task Team

- QAE Role and Responsibilities – Reviewed previous document and found that no update was needed.
- Developing a white paper on graded approach for each of the 18 criteria of NQA-1.
 - Draft for several of the NQA-1 criteria have been developed and will be discussed during the working session
- Establishing an interface between Quality Assurance WG and Engineering WG on Commercial Grade Dedication

Software Quality Task Team

- Graded Approach – development of guidance on how to apply DOE O 414.1D to software using a graded approach.
- Application of Commercial Grade Dedication to COTS software used for safety applications – pursuit of an effective Commercial Dedication program for software.
- Developing a common set of terminology and definitions to be employed by EFCOG SQA while supporting DOE SQA initiatives.
- Developing guidance on the effective attributes for validating computer models.



Forward Look

- Continue the maturation and integration of the Supply Chain process
- Engage with the EM Quality Council and continue support to the modifications of the Suspect/Counterfeit control
- Engage with the EM Quality Council and the Engineering Working group on Commercial Grade Dedication
- Continue to explore right size application of software controls



EFCOG QA Working Group

Questions?



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*NQA Committee Activities and NQA-1-2012 Changes
In Support Of DOE, Industry and Nuclear Facility Safety*

**Gustave Danielson, Vice Chair of NQA
Chief of Nuclear Safety Staff, Office of the Under Secretary U.S. DOE**

November 27, 2012



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Outline

- New Edition of NQA-1
- Requirements & guidance benefitting DOE Applications
- Engaging the user community to and increased international participation
- Looking forward to the next edition - 2014



2012 Edition Benefits DOE Applications

- Part I Introduction- clarified requirements vs guidance expectations
- New Part II for Management Assessment & Quality Improvement will allow for common implementation requirements
- Part II updates resolves questions on “NPP”
- Part III Software CGD Guide provides clear methods and bridges gaps
- Part III Corrective Action Guide better aligns with DOE requirements and guide
- Part III & IV renumbering simplifies, ties to Part I



An Implementing Standard for 10 CFR 830, Nuclear Safety Management

DOE nuclear facilities regulated under 10 CFR 830 will now have national standard requirements in NQA-1-2012 that close the former gaps with DOE Quality Criteria for:

- *Quality Improvement* and,
- *Management Assessment.*



New Part II Requirements for Quality Improvement & Management Assessment

- Consensus implementing methods
- Builds on Part I requirements (gap closure)
- Improves compliance and flow-down
- Transparent to all suppliers using NQA-1
- Flexible and Graded
- Not applicable to NRC-regulated activities

- *Bonus* – also close gaps w/IAEA GS-R-3 Assessment & Improvement requirements



Updated R&D Guidance Supporting DOE

Subpart 4.2, Application of NQA-1 in an R&D environment, was updated:

- Relationship to other evolutionary development processes (e.g., Technology Readiness Levels)
- Enhanced description of software in an R&D environment (i.e., how does software efforts “fit” into the R&D evolution process).



Engaging the U.S & International User Community

Committee is engaging the user community to enhance the immediacy of the Standard & increase international participation

- International Working Groups
- Use in a R&D environment
- Relationship to other requirements (e.g., NEI, EPRI, DOE, EPA, IAEA)

Looking Forward to the 2014 Edition

- Comparison of research reactor guidance (e.g., ANS 15.8)
- Enhanced considerations on Peer Review
- New Suspect/Counterfeit Items controls in collaboration with NEI and U.S. Government Anti-Counterfeiting Inter-Agency Working Group Report to the President of the United States
- Consolidation of SQA requirements??
- Additional Part II updates
- Part III Comprehensive review and updates??



BACKGROUND



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Expected Changes for 2012

- Part I Introduction- clarified requirements vs guidance
- Records, Part I – minor changes
- Packing, Shipping, Receipt, Storing, ..., P II, 2.2 update
- Housekeeping , P II, 2.3 update
- Subsurface Investigations, P II, 2.20 - update
- Management Assessment & Quality Improvement, P II, 2.xx - new
- SQA Commercial Grade Dedication Guide, P III
- Corrective Action Guide, P III, 16A1 – update
- Reorganized Parts III & IV to align with Part I & II
- R&D application guide P IV, 4.2 expanded & clarified



Part II Update Progress!

2.1 Cleaning Fluid Sys –
Pending update 2014

2.2 Pkg, Ship - 2012

2.3 Housekeeping 2012

2.4 Power/Instr/Control –
pending removal

2.5 Concrete/Steel -
Published

2.7 SQA - Published

2.8 Mechanical - 2012??

2.14 CGD - Published

2.15 Hoist/Rig - Pending xfr
to CNF

2.16 M&TE – Removed 2010

2.18 Maintenance -Pending
update 2014

2.20 Subsurface 2012





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Need for Appropriate Quality Assurance Requirements for Commonly Used DOT Containers

Stephen O' Connor, Director
Office of Packaging and Transportation

November 27, 2012



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Overview

- Background
 - Commonly used DOT packaging types and volumes
 - DOT and DOE packaging QA requirements
- Issues
 - ASME technical interpretation and its impact
 - Opportunities for improvement
- Path forward
 - Design Requirements
 - QA Options
 - Working Group



Radioactive Material Packaging Types

- **Excepted packagings** – for materials with low levels of radioactivity
- **Industrial packagings** – for materials with limited hazard to the public and the environment
- **Type A packagings** – for materials with higher concentrations or amounts of radioactivity than excepted or industrial packagings
- **Type B packagings** – for materials with high radioactivity levels (e.g., spent nuclear fuel and high-level radioactive waste) or fissile contents



Typical DOE Packaging Types

- **Bags and Wraps**
- **Drums**
- **Boxes**
- **Cargo Containers**
- **Intermodals**
- **Gondolas**
- **Tankers**
- **TRUPACT-II and III**
- **Type B Casks**



Packaging Usage Volumes

(Source: EFCOG and PMC Surveys - FY10-12)

Industrial Packaging and Type A

Type B and Fissile



DOE Contractors Implementation of Packaging Requirements

Contractors must flow down DOE packaging QA requirements to subcontractors and must ensure compliance for:

- **Type B and Fissile packages:** DOE O 460.1C / 10 CFR Part 71, Subpart H / ASME NQA-1; and DOE O 414.1
- **Type A and Industrial Packages:** DOE O 414.1D / ASME NQA-1, 2004; and 49 CFR 173.474, 173.475



NQA-1 Interpretation and Its Impact

- Recent interpretation from ASME states that choosing to apply only Paragraph 100 (Basic Requirements) of Parts I and II of NQA-1 is not appropriate nor sufficient to implement an NQA-1 program
- Components (such as Type A packagings) that were procured under NQA-1 with Paragraph 100 specified as the QA Requirements are not in full NQA-1 compliance
- Currently, there is only one drum manufacturer available to DOE sites and it is not in full compliance with NQA-1 (based on a recent JSEP audit conducted in August 2012)
- Full NQA-1 Program will increase drum cost by 300%



Opportunities for Improvement

- Consider a standardized procurement specification for similar if not identical DOT containers used in transport of radioactive material
- Consider establishment of a centralized procurement program for commonly used items at DOE sites (such as DOT containers) to take advantage of economies of scale
- Consider more effective use of JSEP or other program to eliminate costs associated with redundant and duplicative vendor audits



Path forward

Develop appropriate QA requirements for DOT packaging based on identification of essential packaging design elements and document in container specifications

- Specify design features or performance requirements that must be met, and required QA records to demonstrate compliance

Identify available QA options and develop guidance:

- Graded approach with focus on component quality categorization level
- Commercial Grade Dedication
- Others?



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Status

Oct 2012 – EM-33 and 43 established a Working Group in coordination with DOE Program Offices, Site Offices, EFCOG and the Contractors Packaging Management Council (consisting of federal and contractor SMEs) to address these issues

Joint EFCOG/PMC QA Working Group is evaluating appropriate QA measures to meet 414.1D requirements

- Chair: V. Grosso, WRPS ; Co-Chairs: M. Bowers, SRNS and R. Natali, ORNL
- Members: 25 federal and contractor SMEs (*SRNS, WIPP, WRPS, LANL, CHPRC, Y-12, ORNL, LASO, ANL, LLNL, NA-0040, NRF-ID, Hanford, EM-43*)
- DOE Coordinator: A. Kapoor, EM-33

Working group has conducted two conference calls and will meet this Thursday at Hanford to review SRNS CGD program for Type A drums and develop a work plan and schedule



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Board Recommendation

- Endorse EFCOG/PMC Joint Working Group
- Review and approval of Working Group reports



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Thank you

Any Questions?



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12th EM QA Corporate Board Meeting

EM-QA-001 Revision 1 Implementation Status

Larry W. Perkins
Office of Standards and Quality Assurance (EM-43)



EM Environmental Management

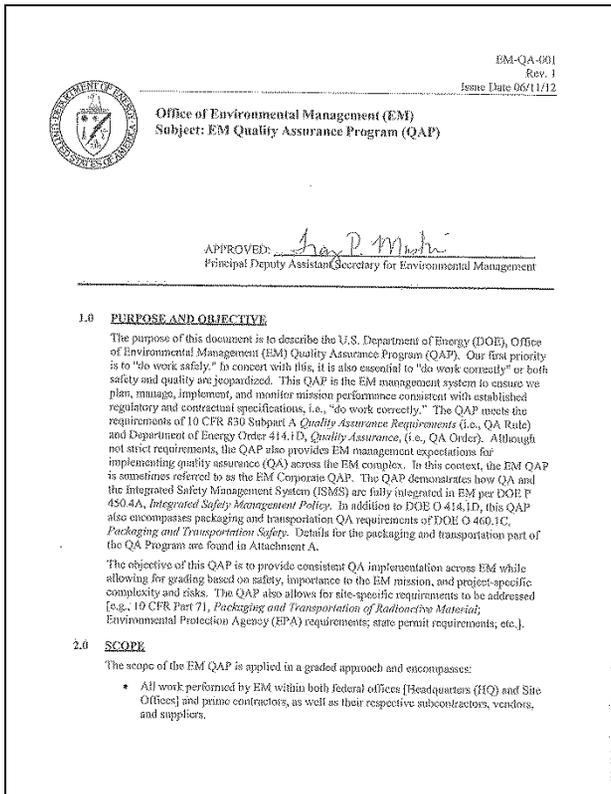
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November 27, 2012



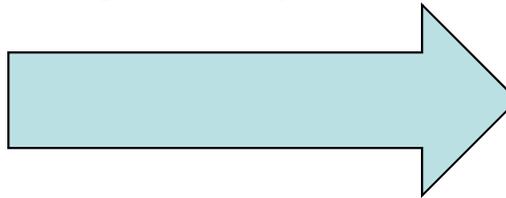
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Background

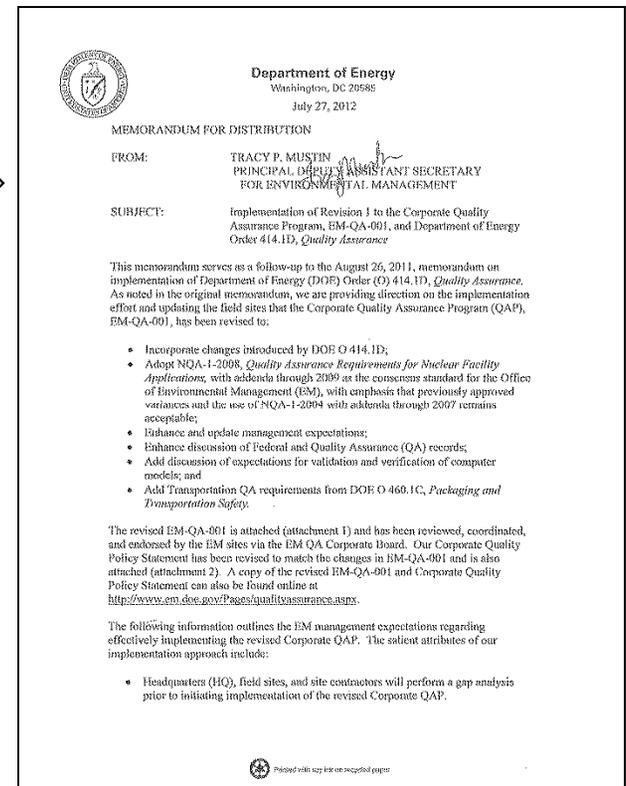


- EM-QA-001 Revision 1
- Deliverable from the Corp. Board

- Signed by EM-2



- July 2012



- Updated Consensus Standards
- Updated Management Expectations



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Background

- Implementation of EM-QA-001 Revision 1 has been added as a performance indicator for SES performance plans at the site offices
- Gap analysis is needed for evaluating changes to the existing QAPs
- Due date for implementation of December 30, 2012
- QA Managers Call discussed implementation



Recent Questions

- Are contractors required to go back into existing models in use and retrofit to the standards listed in EM-QA-001 Rev. 1?
- What is the DOE intent with the management expectations?
- Please explain the new requirements that were included in the records section of EM-QA-001 Rev. 1.
- Does the December 30, 2012 date for implementation include a management assessment of that implementation or is that at a later date?



Current Status and Emerging Issues

- River Protection
- Richland
- Idaho
- Carlsbad
- Oak Ridge
- Portsmouth/Paducah
- Savannah River
- EMCBC/Small Sites





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12th EM QA Corporate Board Meeting

Discussion of New Focus Areas

November 27, 2012



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Proposed Focus Areas Based on Previous Board Meetings

1. Procedural compliance/ execution/conduct of operations
2. Effectiveness of corrective actions regarding human performance
3. Vendor issues
4. Supplier Quality Assurance
5. Consistent application of regulations/requirements, and consistent interpretations
6. Inspector training/mentoring and understanding inspector expectations.
7. Improve understanding of expectations for safety software and software QA
8. Path forward for small contractors without rigorous NQA-1 programs
9. Addressing overseas suppliers
10. Applying graded corrective action to DOE
11. QC & Inspection criteria integration combined with the content in work plans for effectiveness
12. Identifying HQ requirements from memos and other correspondence beyond orders
13. QAP/QIP Implementation/Clear roles and responsibilities
14. ORPS reporting of S/CI Program
15. Balancing inspection/field work control with HQ program audits and oversight
16. Identifying HQ requirements from memos and other correspondence. Better management and control of memos directing requirements for ongoing, continuing or recurring actions by the Field Element and/or the DOE contractors
17. Consistent execution/application for the Verification of Readiness Start Up or Restart of Nuclear Facilities (DOE O 425.1D)
18. Flow-down of Corporate Quality Assurance Requirements
19. Transportation and Packaging Path Forward with ASME NQA-1 Interpretation

