7TH EM

Quality Assurance

Corporate Board Meeting

June 9, 2010
Chicago, Illinois

Environmental Management
Safety ▪ Performance ▪ Cleanup ▪ Closure

7th EM Quality Assurance Corporate Board Meeting

June 9, 2010
Chicago, Illinois

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7th EM QUALITY ASSURANCE CORPORATE BOARD MEETING

Meeting Location: *Marriott Chicago O'Hare* *8535 West Higgins Road* *Chicago, IL 60631* Main Number: *866.614.8407*		
Room: *TBD*		
Draft Agenda for June 9, 2010		
8:00am	**Coffee**	--
8:15 am	Overview of Current Corporate Quality Assurance Issues, Challenges, and Priorities	Steve Krahn, EM-20 Bob Murray, EM-23
8:55 am	Industry Perspective	Joe Yanek
9:15 am	Technical Approach to Implement NQA-1 Suppliers Focus Area: Work Scope, Milestones, Team Makeup	Christian Palay,EM-23 Paul Bills
9:40	Board Discussion of NQA-1 Suppliers Focus Area and Vote on Path Forward	ALL (led by Brian Anderson)
10:05 am	**Break**	
10:20 am	Technical Approach to Implement CGD Focus Area: Work Scope, Milestones, Team Makeup	Pat Carier, ORP David Faulkner, EM-23 (RL)
10:45 am	Board Discussion of CGD Focus Area and Vote on Path Forward	ALL (led by Bud Danielson representing C. Lagdon – Office of the Chief of Nuclear Safety)
11:10 am	Technical Approach to Implement Design Quality Assurance Focus Area: Work Scope, Milestones, Team Makeup	W. Butch Huxford, EM-23 (SRS)
11:35 am	Board Discussion of Design Quality Focus Area and Vote on Path Forward	ALL (led by Chris Marden)
12:00 noon	**Lunch**	
1:00 pm	Proposed Technical Approach for Grading QA for Deactivation & Decommissioning (D&D) Projects	Robert Brown, ORO Brenda Hawks, ORO
1:25 pm	Board Discussion of the grading for D&D and Path Forward	ALL (led by Dave Brockman)
1:50 pm	Corporate Need and Strategy to Strengthen Interface between EM & EFCOG QA/ Work Planning Initiative	Norm Barker Bob Murray, EM-23 Steve Krahn, EM-20
2:20 pm	Highlights of DOE O 414.1X Revision/Development and Guidance	Colette Broussard, HS-23
2:50 pm	**Break**	
3:05	Status of Efforts to Enhance Corporate Operational Awareness of Corrective Action Plan Commitments, Milestones, and Implementation Effectiveness	Larry Perkins, EM-23
3:35	Case Study: Technical Approaches to Improve Suspect Counterfeit Item Detection	Rick Warriner Al Hawkins, RL
4:05	Potential Implications of Recent RW Developments on EM QA Oversight of HLW/SNF Activities	Christian Palay, EM-23
4:35	Board Members Dialogue and Discussions	ALL
5:00 pm	**Adjourn: End Full Board Session**	

May 2010

By-Laws
Office of Environmental Management
Quality Assurance Corporate Board

Article 1 Name

The name shall be the Environmental Management (EM) Quality Assurance (QA) Corporate Board (hereafter referred to as the Board).

Article 2 Mission

The Board will serve a leadership role within EM for facilitating, championing, and overseeing effective implementation of the corporate QA program to ensure safe, high quality, and efficient execution of the EM Mission and projects. The Board will serve as a corporate clearinghouse to support a consistent and graded approach to the implementation of QA corporate policies or requirements, and dissemination of lessons learned and best practices. The Board will strive to ensure that a consistent and effective approach to quality is obtained through independently managed federal and contractor QA Programs across the EM complex. The Board will serve as a consensus-building body to facilitate streamlined and efficient institutionalization of a QA Management System across the EM-Complex.

Article 3 Goals and Objectives

The Board will ensure that major QA programmatic decisions and recommendations are designed and targeted to promote effective execution and performance of EM projects. This goal also includes promoting the use of the best practices and commonly accepted standards in nuclear industry, as applicable, including:

- Standardization and consistency in establishment and implementation of graded 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 Federal Waste Custodians of High Level Waste/Spent Nuclear Fuel QA programs consistent with DOE/RW-0333P;

- Assurance that adequate levels of competent QA expertise and resources are available to support effective implementation of EM projects;

- Ensuring effective collection, communication, dissemination, and application of project QA lessons learned throughout the EM complex; and

- Supporting continuous improvement of the overall EM performance of capital and major construction projects, accelerated cleanup, and execution of American Recovery and Reinvestment Act (ARRA) funded projects.

Article 4 Membership

Membership in the Board shall consist of senior EM and contractor representatives. Board membership will consist of a Chair and voting and non-voting members as follows:

Chair:

- Deputy Assistant Secretary for the Office of Safety and Security Program, EM-20 (voting member).

Voting Members:

- Board Chair
- Director, Office of Standards and Quality Assurance (Headquarters QA Manager & Deputy Chair).
- Site Managers (or designated deputy): Savannah River; Oak Ridge; Portsmouth and Paducah; Idaho; Carlsbad; River Protection; Richland; Consolidated Business Center.
- Chief Nuclear Safety (CNS) (or designated deputy), Office of the Under Secretary of Energy

Advisors (Non Voting Members):

- Site QA Managers/Enviornmental Safety & Health Managers.
- Senior Site Contractor Representatives.
- Board Secretary, appointed by the Board and approved by the Chair.
- CNS Staff Representatives

Article 5 Process for Membership Selection

Chair may add or remove non voting members on the Board as program activities warrant. Voting members can only be removed by the Chair through consensus recommendation of the voting Board members. Article 4 will be changed to reflect such changes.

1. Resignation:
   No Board member or Officer shall resign without providing written notice to the Board Secretary of their resignation. The resignation of a Board

member shall take effect upon receipt, by the members, of a resignation notice or at such later time as shall be specified in the notice.

2. Filling Vacancies:
   Voting members will recommend a replacement member of the Board to the Chair. Upon agreement, the new member of the Board will be seated.

Article 6 Duties

1. Chair
   a. Establishes, implements, and maintains the EM QA Program vision, expectations, goals, and objectives.
   b. Has the final approval authority on all actions the Board undertakes.
   c. Monitors the work of the Board to ensure that operations of the Board are consistent with the needs and priorities established by senior EM leadership.
   d. Serves as Board spokesperson.
   e. Notifies participants of Board meetings.

2. Deputy Chair (HQ QA Manager)
   a. Monitors performance of Board actions in order to make appropriate recommendations to the Board.
   b. Serves as the initial point of contact for recommending and obtaining a status of Board actions.
   c. Ensures that actions of the Board, upon approval of the Chair, are implemented.
   d. Serves as Chairperson of the Board in the absence of the Chair.

3. Board Secretary
   a. Prepares/Distributes Board meeting agendas for approval by the Chair.
   b. Tracks issues and work commitments of Board and Board Committees.
   c. Provides facilitation and logistic support for the Board.
   d. Serves as liaison to all standing committees of the Board.
   e. Manages and facilitates the Board's meetings.
   f. Prepares and issues Board Meeting minutes.
   g. Maintains Board records.

Article 7 Voting and Non-Voting Board Member Roles/Responsibilities

1. Provides solutions, ideas, and suggestions to meet and remove challenges or barriers, respectively, that affect the vision, expectations, mission and performance goals of the EM Corporate QA Program, EM-QA-001.

2. Actively participates in Board activities and facilitates proactive identification of emerging site-specific or crosscutting QA related issues that impact effective execution of EM mission and projects.

3. Regularly attends Board meetings and deliberation of issues.

4. Provides recommendations and prioritization for Board business initiatives.

5. Brings knowledge of and is prepared to discuss perspectives and plans to manage and implement QA programs.

6. Monitors, reviews, and recommends appropriate performance metrics that arise from implementation of Board recommendations.

7. Champions, facilitates, and communicates Board recommendations, and shares lessons learned and best practices at their individual sites and across the DOE-Complex.

8. Ensures adequate capacity of trained DOE QA staff and contractors trained in QA principles and procedures to promote effective execution of EM mission and projects. Ensures that responsible DOE staff and contractors are qualified, as appropriate, to Departmental QA and Software Quality Assurance (SQA) guidelines.

Article 8 Advisors

Technical Advisors to the Board may be nominated by voting members from time to time to provide assistance to the Board in the resolution of specific issues. Technical advisors will only be approved by the Board Chair. These individuals may include: DOE and contractor QA managers at the various sites as well as individuals whose specific areas of expertise will assist the Board.

a. Technical advisors will:
    i. Serve a temporary assignment on the Board.
    ii. Not have voting rights to Board recommendations.

iii. Obtain support for their assignment from their duty station of record.
iv. Provide technical advice to the Chair and other voting members.
v. Attend meetings at the request of the Chair or other voting members.

Article 9 Interfaces

The Board will interface with other DOE and contractor QA committees, groups, and organizations as appropriate. The Chair or his/her designee(s) will be the liaison with the interface groups. Interface groups will include at a minimum:

- Energy Facilities Contractors Group (EFCOG)
- EM/Nuclear Energy/Science SQA Support Group
- DOE/Health, Safety, and Security (HSS) QA Council
- Other Departmental or external entities, as appropriate.

Article 10 Committees

The Board Chair will approve or disapprove committees when recommended by the Board. Committees will be established by the Board for a well defined duration (temporary basis) to address specific issues of interest by the Board. Committees will:

1. Collect information from all sources within DOE-Complex, or outside of DOE as needed, related to QA issues of concern and corporate priority.
2. Assign individual investigative teams and actively intervene across all EM sites for orderly and informed disposition of issues.
3. Assess and determine status and effectiveness of performance relative to Board recommendations.
4. Assist sites with implementation and monitoring of recommendations.
5. Leverage resources from their sites of record to support implementation of Board actions.
6. Interact with the EM QA Manager to discuss issues and formulate recommendations.
7. Provide their recommendations to the Board for review and approval prior to submittal to the Chair.

Article 11 Quorum

The attendance or participation of the Voting Board Members shall constitute a quorum of the Board. Notwithstanding the foregoing, if a member fails to attend a meeting for which proper notice has been given and the absence is not reasonably excused due to emergency or other critical situations, then any five voting Board members and the Chair or Deputy Chair shall constitute a quorum.

Article 12 Meetings

1. The Board shall meet at least two times per year. The meetings may be conducted in a variety of forums deemed appropriate by the Board Chair including use of Video Conferencing, teleconference, and other electronic/web-based capabilities. At least one meeting per year shall be in person. Supplemental meetings may be scheduled as needed to fulfill the Board's responsibilities as determined by the Board Chair

2. Written notice of Regular meetings, listing those invited to attend and stating the place, day, and hour of the meeting and the purpose(s) for which the meeting is called, shall be delivered by the Board Secretary no fewer than 30 days before the date of the meeting by electronic or regular mail. The Board Secretary shall issue the agenda for regular meetings no later than 15 days prior to the meeting. Agendas for supplemental meetings shall be issued prior to the meeting, as early as possible.

3. The Board Members may designate a senior member of their organization (e.g., assistant manager or deputy manager) to represent them at specific meetings. The Board Members assigning a designee to a specific meeting shall provide a written notification to the Board Chair for approval. The Board Chair will designate a minimum of one meeting yearly that must be attended by the Board Members in lieu of a designee.

Article 13 Issue Resolution and Change Process

1. Issues are primarily brought before the Board by the Deputy Chair. However, an issue may be brought before the Board by any voting or nonvoting member as a representative for any DOE or DOE contractor employee.

2. A request for the Board to consider an issue is submitted to the Board Deputy Chair who will coordinate the request with the Board voting members and the Board Chair. Upon approval of the Board Chair, issues are placed on the Board agenda.

3. As required, the Board will prioritize all issues under its consideration and submit any changes to the Deputy Chair.

4. The Board will review an issue and may recommend to the Deputy Chair:
   a. Further evaluation and study,
   b. Ask for more information,
   c. To form a focus area to prepare advice for the Board,
   d. To establish a point of contact from the Board for the formation of a committee, and/or

e. Deletion from the Board issues.

5. Upon Chair approval of the change, the Deputy Chair changes priorities and schedules.

6. Board members are responsible for ensuring implementation of the change in their individual organizations.

Article 14 Board Consensus Recommendations and Dispute Resolution Process

The Board will make consensus recommendations to the Chair. Consensus is defined as general agreement or accord and includes agreement to implement the decision for DOE operations within their control. Simply, this means that each Board member is comfortable with the recommendation even if it may not be his or her first choice. For Board purposes, consensus will mean substantive agreement among Board voting members on recommendations. However, from time to time, the Board may not be able to reach consensus. On those rare occasions, the Board will direct the Deputy Chair to prepare a majority and minority report summarizing the Boards concerns and issues for submittal to the Board Chair. The Board Chair will then make a determination on the resolution of the issue.

Article 15 Amendments to the By-laws

Amendments to the By-laws may be submitted annually or as necessary to the Board for consideration. The Board will make a consensus recommendation to the Chair for changes to the By-laws, which upon approval the changes will be incorporated.

Focus Area Distribution for EM QA Corporate Board Vote

Propose to EFCOG and/or EM Site Offices

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. (Note: There was discussion on contractor assurance and inconsistency in how this is applied at different EM sites.)
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. Grading QA programs for D&D
12. QC & Inspection criteria integration combined with the content in work plans for effectiveness

EM-23 will address

13. Resources (Federal) – benchmark industry
14. Identifying HQ requirements from memos and other correspondence beyond orders
15. QAP/QIP Implementation/Clear roles and responsibilities
16. ORPS reporting of S/CI Program
17. Balancing inspection/field work control with HQ program audits and oversight

Propose to remove from the list

18. FY10 budget impacts
19. Science is moving to ISO 9000: creates inconsistency between NQA-1 for feds and ISO-9000 for contractors *(addressed in subpart 4.2)*
20. Regulatory and oversight reviews come in waves (stacked reviews) – there is a need for coordination *(currently being addressed by EM1/2)*
21. Scope creep – function of new or revised standards, codes, requirements, etc. *(addressed by code of record)*
22. GFSI communications/interface agreements/MOA *(difficult for QA Corporate Board to address)*
23. Production pressures *(difficult for QA Corporate Board to address)*

Department of Energy
Office of Environmental Management and
Energy Facility Contractors Group

2010 Quality Assurance Improvement Project Plan
Rev. 1 DRAFT A

Approved by:

Steve Krahn, DOE/EM _____
Deputy Assistant Secretary
Office of Safety and Security Program, EM-20

Joe Yanek, Fluor _____
EFCOG Board of Directors

Norm Barker, Energy*Solutions* _____
Chair, EFCOG ISM/QA Working Group

Office of Environmental Management and Energy Facility Contractors Group 2010 Quality Assurance Improvement Project Plan

Introduction:

This Project Plan is jointly developed by the Department of Energy (DOE) Office of Environmental Management (EM) and the Energy Facility Contractors Group (EFCOG), to provide execution support to the EM Quality Assurance (QA) Corporate Board. The Board serves a vital and critical role in ensuring that the EM mission is completed safely, correctly, and efficiently.

The joint EM-EFCOG approach to enhancing QA signifies the inherent commitment to partnership and collaboration that is required between the contractor community and DOE to proactively improve performance of the EM mission and projects. This mandate is more important today than it has ever been as EM has the added responsibility to diligently leverage and apply American Recovery and Reinvestment (ARRA) funds to accelerate completion of its mission and create thousands of new jobs to revitalize the economy.

The Project Plan documents a formal approach for managing the scope of the EM/EFCOG Quality Assurance Improvement Project. It builds on and leverages the success and operating experience gained from implementation of QA programs already in place at various EM Sites. The Project Plan will be updated as needed to reflect ongoing progress.

Scope:

The scope of this Project Plan is to address the priority QA focus areas identified by the EM QA Corporate Board. The Project Plan's scope includes the three (3) project focus areas for 2010 identified during the EM QA Corporate Board meeting conducted on February 22, 2010 as well as one additional focus area that was identified during the meeting and added based on the current priorities of the field offices. The Project Plan provides a description of the initial project focus areas and agreed upon actions and milestones. Additional project focus areas or related initiatives may be added to the scope of this Project Plan upon approval by the EM QA Corporate Board.

The key expectations for each project focus area lead are as follows: 1) provide actionable recommendations with specific path forward to the Board for its consideration, and 2) provide the Board with an analysis/assessment of the degree to which impacts and implications of the proposed actions on EM complex have been considered.

Project Organization:

The overall Project Managers for the joint EFCOG-EM Quality Improvement Initiatives are:

1. Mr. Bob Murray, Acting Director, EM Office of Standards and Quality Assurance , EM-23, and
2. Representing EFCOG, Mr. Chris Marden, Corporate Director QA, Energy*Solutions*.

The project's Executive Committee includes:

- Dr. Steve Krahn, Deputy Assistant Secretary, Office of Safety and Security Program, EM-20 (EM/HQ);
- Mr. Joe Yanek, Executive Director Environmental Safety, Health, & Quality, Fluor, representing the EFCOG Board of Directors; and
- Mr. Norm Barker, Vice President, ISM/QA, Energy*Solutions*, Chairperson, EFCOG Integrated Safety Management (ISM)/QA Working Group.

Additional leadership may be added to the Project Executive Committee, as needed, to further facilitate and support execution of the Project Plan.

Each project area will have designated EM and/or EFCOG Leads. These individuals are expected to interface and coordinate completion of the project area milestones. A critical aspect of the interface and coordination responsibility includes reaching out to appropriate stakeholders within the EM federal and contractor community. This is to ensure that any resultant strategy and recommendation has been fully considered so the Board can make informed decisions regarding any potential programmatic implications, resource requirements, and expected corporate benefits. To this end, the designated EM and EFCOG leads should ensure representatives from each EM site are included in the completion of the focus area deliverables.

Figure 1 presents the project organization and identifies the EM and EFCOG leads for each of the Project focus areas. Additional line participants from both EM operations and contractors will be added to the project teams as needed to ensure accomplishment of the specific objectives.

Key Project Personnel Roles and Responsibilities:

The Project Executive Committee is responsible to:

- Provide advice and counsel to the Project Managers as needed. Ensure barriers to project implementation, issues, and concerns identified by the Project Managers are effectively addressed and resolved. Provide quarterly progress review of agreed upon project focus area milestones. Provide technical expertise and feedback to the project leads, as needed, and to ensure its successful completion.
- Provide periodic status updates to EM senior management, EM Vice President's Forum, and the EFCOG Board of Directors.

The Project Managers are responsible to:

- Lead the overall project coordination effort consistent with the Project Plan, associated schedules, and agreed upon deliverables.
- Work with EM staff and EFCOG's Integrated Safety Management/QA Working Group Chair to identify Project Focus Area Leads and participants.
- Regularly monitor project area milestone completion progress and provide guidance and direction to Project Area Focus Leads as needed.
- On a quarterly basis, report Project Plan progress to the Project Executive Committee and the EM QA Corporate Board.

The Project Focus Area Leads are responsible to:

- Identify and obtain EM and EFCOG participants to support completion of project focus area milestones.
- Define and implement the strategy for accomplishing the project focus area milestones.
- Lead efforts to successfully complete assigned milestones and deliverable commitments.
- Coordinate project focus area activities with his/her designated co-lead (contractor or federal).
- Define project focus area completion approach, strategy, and coordinate activities of project area teams.
- Ensure outreach to a broad spectrum of the EM community to identify any programmatic implications resulting from recommendations and products.
- Participate in project status meetings and teleconferences.
- On a quarterly basis, report progress to the designated EM and EFCOG Project Managers. Included in the briefing is an assessment of any programmatic impacts, resource requirements, and characterization of expected corporate benefits.

Project Execution and Performance Management:

This project will be executed consistent with EM project management processes and practices. All key decisions will be coordinated with the Project Managers and, as appropriate, with the respective Project Focus Area Leads. Formal project status reviews of the Project Focus Areas will be held with the Project Executive Committee on a quarterly basis during the duration of the project.

Day-to-day management of specific project milestones, task activity scheduling, and task completions is the direct responsibility of the Project Focus Area Leads. In order to declare a milestone complete, the Project Focus Area Leads must issue the necessary supporting documentation to the Project Managers for acceptance. Any changes to a designated project area scope, milestones, or overall target completion dates must be

approved by the Project Managers. The Project Managers will review and coordinate all proposed changes with the Project Executive Committee.

Review and Comment Process for Project Focus Areas:

The Project Focus Area Leads will follow a progressive three-tier review process for all deliverables or products. The focus of each level of reviews is to assess adequacy of the technical approach, soundness of the underlying assumptions, and progression to the project is on a path to successful completion consistent with the agreed upon schedule. Specifically; the reviews consist of:

- First Level of Review (2 weeks review/2 weeks comment resolution): Project Managers (Bob Murray and Chris Marden)
- Second Level of Review (1 week review/1 week comment resolution): Executive Committee (Steve Krahn, Al Konetzni, Joe Yanek, and Norm Barker)
- Third Level of Review: EM QA Corporate Board Members (voting and non-voting Full Members)

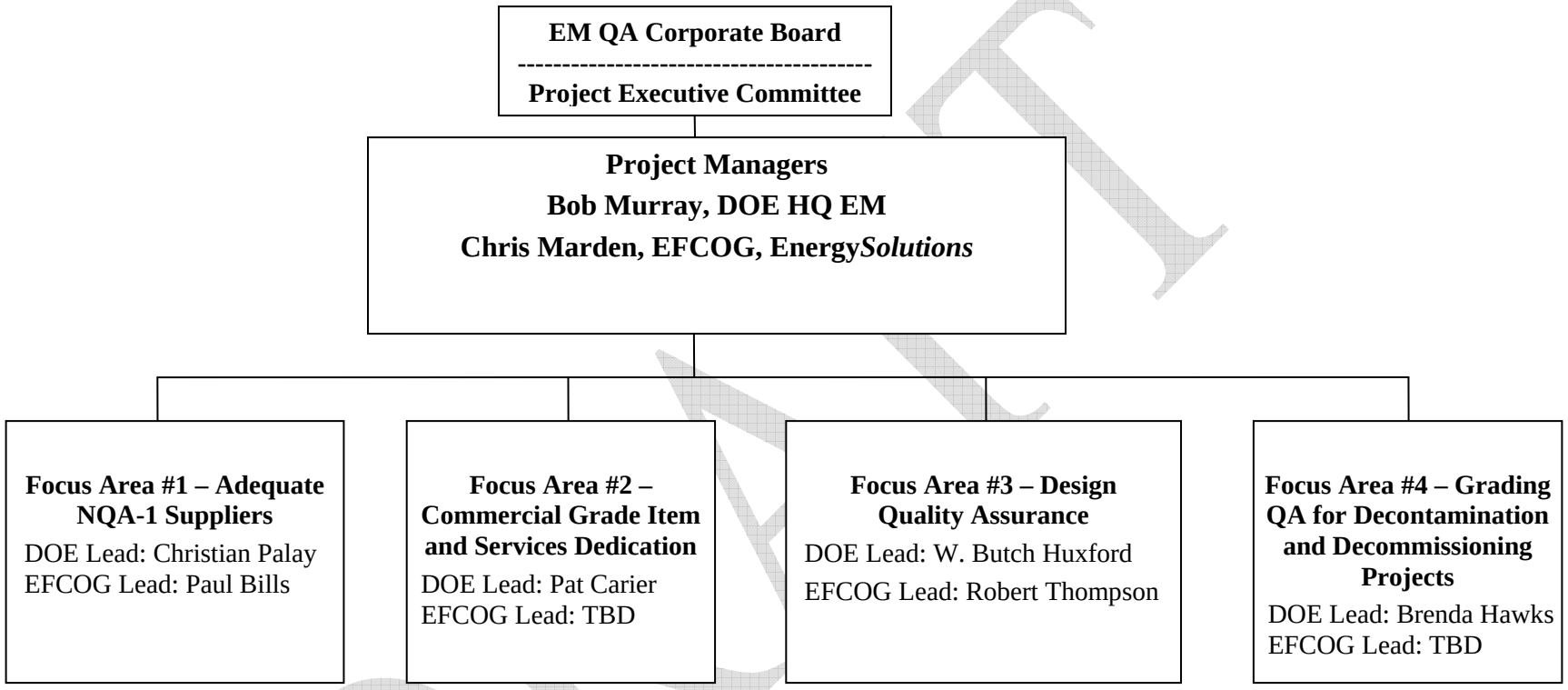
Communications:

The Project Managers will conduct quarterly teleconferences to discuss status of specific project area progress with the Project Focus Area Leads. Additional conference calls or meetings will be scheduled as needed. To facilitate timely and cost-effective communication, to the extent practical email and video-conferencing will be used, Individual Project Focus Area teams will determine the communication needs and methods best suited for their specific teams.

Project Termination:

The Quality Assurance Improvement Project Plan will be maintained in an active state until all actions are completed, or, the EM QA Corporate Board (by vote) terminates the Project.

Figure 1 - Quality Assurance Program Improvement Project Organization



Quality Assurance Project Focus Areas

Project Focus Area #1 –NQA-1 Suppliers

Target Completion Date: December 20, 2010

Background:

A previous Project Focus area team was assigned the tasks of increasing nuclear grade suppliers, developing a common Supplier Evaluation Program and developing a Supplier Alert System. During 2009, these tasks were completed and approved by the EM Corporate QA Board; however, it is recognized that expanding availability of NQA-1 qualified suppliers is an on-going corporate need and challenge. Due to this priority, the NQA-1 Suppliers will continue as a focus area in 2010.

The implementation of the Joint Supplier Evaluation Program (JSEP) that was approved by the EM Corporate QA Board needs to be monitored and managed to ensure effective implementation across the EM complex. Financial and human resources approved by the Board, but not yet transferred to the proper organization and put into force, need to be a primary focus of this team. In order for the JSEP to be fully effective and efficient, there needs to be a high level of participation by EM contractor organizations. This focus area team needs to evaluate levels of participation across the EM complex and develop necessary actions to ensure that adequate participation is obtained and maintained.

Scope:

- Monitor implementation of the JSEP as approved by the Board in 2009.
- Obtain funds and resources approved by the Board and implement the Supplier Information Database.
- Develop actions for increasing and maintaining a high level of participation by EM Contractor organizations in the Joint Supplier Evaluation Program

Status:

- EM-23 has transferred funds for the Supplier Information Database to the DOE-ID office.
- EM-23 along with DOE-ID has approved the statement for work and the release of funding is imminent transfer along with the statement of work

DOE Lead: Christian Palay

EFCOG Lead: Paul Bills

Support Team: Michael Mason and Brian Anderson

Focus Area #1 Project Milestones:

Task #	Estimated Due Date	Task Description	Deliverable	Deliverable To Be Submitted to Project Managers
1.1	9/30/10	JSE Electronic System Information Up Load	Functional database	Yes. Demo of the functional database
1.2	01/07/11	Develop Common Commodity List to include EM Commodities	EM Commodities List	Yes. A JSEP program description document that reflects actual work practices associated with the JSEP
1.2.1		Further defined roles and responsibilities	A description of the roles and responsibilities for each participant in the JSEP	
1.2.2.		Establish primary POCs at each site	A list of the POCs from each site that aligns with the established roles and responsibilities for the JSEP	
1.2.3		Further define audit reporting minimum requirements	A description of how to consistently develop supplier audit reports that meets a standard for the majority of sites to be able to use	
1.2.4		Define review and approval process	A description of supplier audit reports are reviewed and approved	
1.2.5		Develop formal Lead Auditor review and approval validation	A description of the process to review and approve of Lead Auditor credentials	
1.2.6		Obtain auditor disclosure statements	A form that establishes auditors participating in JSEP will not disclose results outside of JSEP	
1.2.7		Develop new NQA-1 matrix documents for EM commodities (materials and services).	A matrix that establishes the baseline NQA-1 Requirements used to evaluate suppliers.	
1.2.8		Conduct gap analysis on existing NQA-1 matrix documents specific to each commodity.	A description of the gasps between the established NQA-1 matrix documents and suppliers that may require special evaluations	
1.3	12/20/11	Operations and Maintenance Assessment of JSEP	Fully Functional JSEP	Yes. An annual status report
1.3.1	TBD	Annual JSEP strategy and scheduling meeting with participants	Annual JSEP schedule	Yes. An annual schedule for resource planning
1.3.2	TBD	Periodic conference calls with participants	Schedule updates	Yes. An annual schedule for resource planning

Project Focus Area #2 – Commercial Grade Item and Services Dedication Implementation

Target Completion Date: December 31, 2010 (except for oversight of CGD classes)

Background:

The challenge of building, operating, and maintaining nuclear facilities is increasing in today's marketplace. Many suppliers that previously supported the construction of commercial nuclear power plants have discontinued maintenance of their nuclear grade quality programs. As a result, the Office of Environmental Management (EM) construction and operational projects have had to rely more on the procurement of components either through alternative suppliers or by purchasing commercial grade items and dedicating them for safety-related use.

In October 2006, the Principal Deputy Assistant Secretary for EM requested that every project within EM assess its own vendors and suppliers for how CGD is currently being defined and implemented. A summary of the results of the evaluations were expected by November 30, 2009. To date, not all EM sites and contractors have provided in-depth results of their evaluations or a report that an evaluation was performed.
To provide corporate assistance, the Office of Standards and Quality Assurance, EM-23, developed, organized, and delivered a series of CGD training courses across the EM complex for EM Federal and contractor personnel. Included was a CGD Train-the-Trainer to facilitate access to a pool of qualified CGD trainers to expand site sponsored CGD training capacity.

Scope:

- Develop formal EM guidance on commercial grade dedication
- Monitor implementation of actions approved by the Board in 2009
- Develop actions to continue to increase the number of qualified trainers.
- Development of a “common” CGD procedure for use across the EM complex
- Develop actions to improve the self-assessments of CGD activities

Status:
Training has been provided to approximately 250 people at all the major EM Sites (Savannah River, Hanford, Oak Ridge) with a current cadre of 30 trainers being available to teach additional classes. Future classes will be considered for oversight by EM-23 and this team’s subject matter experts to ensure that the rigor of the training is maintained.

Proposed EM guidance on commercial grade dedication has been drafted by EM-23 and will be turned over to this Project Team for socialization amongst the various groups in the EM Complex and finalization.

EFCOG has begun work to develop a standardized process for performing commercial grade dedication. EM-23 has been providing oversight of this effort and the work will continue with participation/oversight as part of this focus area.

DOE Lead: Pat Carier – DOE

EFCOG Lead: TBD

Support Team:

Proposed project team composition includes contractor and/or federal representatives from each DOE-EM Site

- Richland
- River Protection
- Savannah River
- Idaho
- Oak Ridge
- Portsmouth/Paducah
- Consolidated Business Center Representatives
- Carlsbad

Focus Area #2 Project Milestones:

Task #	Estimated Due Date	Task Description	Deliverable	Deliverable To Be Submitted to Project Managers
1	**08/06/10**	**Develop EM Guidance on Commercial Grade Dedication**	**Recommended guidance**	**N/A**
1-1	06/11/10	EM-23 to transition draft guidance to Project Team Lead	Draft guidance	No
1-2	06/25/10	Project Team to review and revise guidance and send to field elements for comment	Draft guidance	No
1-3	07/23/10	Comment period ends	N/A	N/A
1-4	08/06/10	Resolve field element comments and finalize guidance.	Recommended Guidance	Yes
1-5	08/06/10	Draft endorsement and transmittal memo for Recommended Guidance from EM-1 to all Field Elements	Transmittal Memo	Yes
2	**12/31/10**	**Develop, with EFCOG, a common process to perform commercial grade dedication.**	**Recommended procedure with endorsement from EM**	**N/A**
2-1	07/30/10	Draft procedure for DOE/Contractor review and comment	Draft procedure	No

Task #	Estimated Due Date	Task Description	Deliverable	Deliverable To Be Submitted to Project Managers
2-2	08/27/10	Comment period ends	N/A	N/A
2-3	09/15/10	Resolve comments and forward through EFCOG the recommended procedure to all DOE contractors.	Recommended procedure	Yes
2-4	09/30/10	Draft endorsement and transmittal memo for Recommended Procedure from EM-1 to all Field Elements	Transmittal Memo	Yes
2-5	12/31/10	EM Sites to complete implementation of the Recommended Procedure	N/A	N/A
2-6	12/31/10	Develop a checklist to be used during audit/assessment of CGD program and implementation	Checklist	Yes
2-7	04/01/11	Assist EM-23 in assessing Recommended Procedure implementation at major EM Sites	Assessment Report	N/A
3	**08/20/10**	**Determine need for and conduct one additional Train-the-Trainer CGD Course**	**Course completed**	**N/A**
3-1	06/25/10	Determine need for additional Train-the-Trainer Course	Report to Project Team Lead and to Director, EM-23	Yes
3-2	07/16/10	Publish notice of class if needed	E-mail to EM QA Managers	No
3-3	08/20/10	Hold class	Training Roster	No
4	**09/30/11**	**Perform oversight of future CGD classes**	**Oversight Reports**	**N/A**
4-1	Case Basis	Upon notification of CGD training class the Project Team Lead will assist EM-23 in identifying available Subject Matter Experts to assist in oversight of the class	N/A	N/A

Project Focus Area #3 – Design Quality Assurance for Construction Projects

Target Completion Date: November 01, 2010

Background:

In 2009, EM issued an Interim Policy establishing the Code of Record (COR) concept for EM nuclear facilities. A COR serves as a management tool and source for the set of requirements that are used to design, construct, operate, and decommission a nuclear facility over its lifespan. Early establishment and lifecycle maintenance of applicable facility requirements are essential to provide for the protection of our workers, the public, and the environment. Consequently, the COR includes those requirements invoked during the design phase, and later used to initiate operations, to ensure they are available to all responsible parties during each lifecycle, organizational, and mission change.

Additionally; EM finalized the preparation and of the 2nd Edition of the DOE Standard Review Plan (SRP) for capital and major construction projects. SRP review modules are developed consistent with project expectations and requirements defined in DOE O 413.3A, Change 1, *Program and Project Management for the Acquisition of Capital Asset*, DOE-STD-1189-2008, *Integration of Safety into the Design Process*, and EM's internal business management practices. The 2nd Edition was completed and the official release memo was issued by EM in March 2010. The 2nd Edition consists of 29 stand-alone SRP review modules that provide EM's core expectations and technical framework associated with Critical Decision (CD) review and approval process. The disciplines addressed include Engineering and Design, Safety, Project Management, Quality Assurance, Environment, and Security. The Review modules are on the DOE EM website at http://www.em.doe.gov/Pages/StandardReviewPlanModules.aspx

Scope:

- Determine existing processes within the EM complex for ensuring quality in design control functions
- Develop best practices for consideration across the EM complex
- Specifically evaluate:
  - Records required to adequately meet NQA-1 requirements
  - Flow down of engineering requirements
  - Inspection and test requirements and acceptance criteria
  - Design definition, communication and verification
  - Quality Assurance groups' role in design control
  - Configuration management

Status:

Planning Phase. Requesting Board vote on appoving the work scope, team make-up, and miletones.

DOE Lead: W. Butch Huxford

EFCOG Lead: TBD

Support Team:

Representatives from the following projects:

- Waste Treatment Plant
- Salt Waste Processing Facility
- Sodium Bearing Waste
- U233 Project
- DUF6
- Tank 48

Focus Area #3 Project Milestones:

Task #	Estimated Due Date	Task Description	Deliverable	Deliverable To Be Submitted to Project Managers
Start Date June 9, 2010 – following Board approval				
1	18JUN10	Identify FA3 team and initiate planning activities	Roster	Yes
2	19JUL10	Develop final scope of the effort including deliverables, such as: • Questionnaire to major projects describing existing practices	Scope outline	Yes
3	02AUG10	Deliver questionnaire to major projects	Questionnaire	No
4	01SEP10	Receive results from major projects	Completed Questionnaire	No
5	01OCT10	Provide analysis for PM review/calibration	Tables/charts/ text documents describing FA3's recommended path forward for ultimate deliverable	Yes
6	01NOV10	White Paper for EM consideration communicating Design Quality Assurance expectations/recommendations/etc.	White Paper	Yes

Project Focus Area #4 – Grading QA for Decontamination and Decommissioning Projects

Target Completion Date: N/A

Background:

Deactivation and Decommissioning (D&D) Projects present a challenge in the application of NQA-1. The focus of NQA-1 is on the development and maintenance of nuclear power quality assurance. The standard clearly states in the introduction that "This Standard focuses on the achievement of results, emphasizes the role of the individual and line management in the achievement of quality, and fosters the application of these requirements in a manner consistent with the relative importance of the item or activity." The relative importance of the facility and equipment is very low when the ultimate end state is to demolish and permanently dispose of the material. While it is very important that any items that are desireable to another project be preserved and the proper techniques are employed to prevent insult to the workers and/or environment during the D&D the end state must be remembered when establishing the quality requirements for the various stages of activities. Work must be accomplished in a quality manner and within contractual requirement; however, the establishment of the contractual requirements must consider the end state and hazards of the activity to be performed. Too many times, the end state is not kept in focus and the quality requirements for an operating or construction activity are employed on a D&D project resulting in higher costs that provide little to no addition to EM mission accomplishment or safety.

Scope:

- Enhance awareness of the need to properly grade activities.
- Take advantage of the allowance for grading.
- Provide some examples of things to consider when executing the grading and ways to grade.

Status:

1. Ensure EM Corporate Quality Policy allows and encourages grading – Complete
   - EM Corporate Quality Policy allows grading – "It is EM Policy that all EM projects will have a consistent quality assurance approach while allowing for grading based on importance to the EM mission and safety, and for site-specific requirements."

2. Ensure EM Quality Assurance Program Document, EM-QA-001, allows and encourages appropriate grading – Complete
   - EM Quality Assurance Program Scope states: "The requirements of the QAP are applied in a graded fashion commensurate with the type of work being performed and the importance of the work contributing to safe completion of the EM mission."

3. Evaluate NQA-1 to determine if it clearly allows for grading as needed in the DOE complex due to the significant variations in types of activities and contracts. - Complete
   - NQA-1 Introduction states: "This Standard focuses on the achievement of results, emphasizes the role of the individual and line management in the achievement of quality, and fosters the application of these requirements in a manner consistent with the relative importance of the item or activity."

4. Provide examples of things to consider when evaluation of grading. Complete

See Attachments. (Things to consider when evaluating grading of Quality Assurance Criteria; Examples of Ways to Grade NQA-1 Requirements for Deactivation and Demolition Projects; and ASME NQA-1, Part II Applicability)

DOE Lead: Brenda Hawks

EFCOG Lead: TBD

Support Team and Milestones:

The activities and milestones required to complete the recommendations f or this focus area have already been completed and are in place. The remaining effort is for the EM QA Corporate Board to endorse the approach and flow the approach down through their individual organizations. This endorsement includes all EM federal sites and associated contracts.

Attachment A for Focus Area #4
Things to Consider when Evaluations Grading of Quality Assurance Criteria

Things to consider when evaluating grading of Quality Assurance Criteria:

- Scope of contract
- Length of contract
- Importance to EM Mission
- Size of contractor staff/employees
- Hazard level of activities (nuclear, security, chemical, industrial, electrical, etc.)
- Method of performance – direct, subcontract to qualified vendor, memorandum of agreement with other DOE Prime Contractors
- Complexity of work activities
- What is the end state for the facility/activity

Attachment B for Focus Area #4
Examples of Ways to Grade NQA-1 Requirements for Deactivation and Demolition Projects

NQA-1 Requirement		Grading
Part I Introduction	300 – States – "The organization invoking this Part shall be responsible for specifying which requirements, or portions thereof, apply, and appropriately relating them to specific items and services. The organization implementing this Part, or portions thereof, shall be responsible for complying with the specific requirements to achieve quality results."	As stated in this introduction, it is the responsibility of the contractor to specify which requirements and/or portions thereof are applicable. All of this should be included as it only establishes the allowance for grading and definitions.
1. Organization	300 – "When more than one organization is involved in the execution of activities,"	This requirement establishes basic organizational expectations. It should be noted that the Interface Control section does have the stipulation that "Where more than one organization is involved…" – this is typically done through Memorandums of Agreement (or whatever term specific contractors utilize) between various contractors for site activities. This is an acceptable means to achieve compliance as the agreement should clearly the appropriate interface authorities. Internal interfaces can be handled through a section in the QAP with very small simple contractors to eliminate the need for a formal document as the internal interfaces would not require a separate document.
2. Quality Assurance Program	200 – Indoctrination and Training - "Indoctrination and training shall be commensurate with scope, complexity, importance of the activity, and the education, experience, and proficiency of the person." 202 – Training -- "The need for a formal training program…. Shall be determined. Training shall be provided, if needed…	Section 200 – provides the basis for grading in this area. Scope of the contract, complexity of the contract, the importance of the activity to DOE/regulators/etc., and the people assigned. This section clearly allows for small contractors especially when have short term contracts to rely on the education/experience/proficiency of their staff in lieu of elaborate procedures. While this would most likely not be allowed for a large contactor or one with extensive operating time frame, when the contractor is very small and short term the development of some procedures might not be warranted and the QAP can clearly state the reason specify the qualification of personnel performing the activity versus development of elaborate procedures. (Procedures for field operations would still be expected.) Section 202 – Training requirements can be very limited based on the scope of work. Compliance with OSHA requirements and basic training for others might be all that is needed. The QAP can clearly specify this. When in a nuclear hazard

Attachment B for Focus Area #4
Examples of Ways to Grade NQA-1 Requirements for Deactivation and Demolition Projects

NQA-1 Requirement		Grading
		category 1, 2, or 3, the training requirements are typically in accordance with DOE O 426.2 (the old 5480.20) for those individuals who can impact the safety basis through their involvement in the operation, maintenance, and technical support. Section 300 – This section states shall specify the required qualification. One way to grade this is to state the contractor will not qualify any individual for activities like Nondestructive examination and tests to verify quality. All such activities will be performed by a procured source that has the required qualification program. 303/304/305 - Qualifications of the "auditing" individuals, warrants evaluation for befit of formal program when the contractor is small, the scope is very limited, and/or the period of performance is short. Allowance for a trained, educated, experience cadre can be frequently justified in Deactivation and Decommissioning activities. 400 – The records of those individuals performing NDE need to be maintained even if it is in the procurement documentation. The records of the Lead Auditor personnel can be handled in a graded manner.
3. Design Control		Typically Deactivation and Decommissioning contractors do not do a lot of "design" activities. Therefore, this requirement is typically not applicable. Even if some very simple Design activities are required for say a simple radiological containment, the application of Requirement 3 might not be warranted. Contractors doing formal "design" activities are clearly known and are expected to fully implement this requirement.
4. Procurement Document Control	100 – "… The extent necessary, procurement documentations shall require Suppliers to have a quality assurance program consistent with the applicable requirements of this Standard."	The procurement process for Deactivation and Decommissioning contractors needs to be graded based on the end state for the facility/item. The period of performance needs to be taken into consideration for procured items. When the time period is extremely short, justification on the level of procurement can potentially be downgraded as the increased level does not enhance safety or EM mission accomplishment. Procurement process can also be utilized for procurement of specialty personnel to prevent the need to establish extensive programs like Nondestructive Examination, Inspection and Test, and even Lead Auditor. This is a good way to grade systems and utilize another section/requirement to meet the needs of the unique contacting

Attachment B for Focus Area #4
Examples of Ways to Grade NQA-1 Requirements for Deactivation and Demolition Projects

NQA-1 Requirement		Grading
		arrangements.
5. Instructions, Procedures, and Drawings	100 – "… The activity shall be described to a level of detail commensurate with the complexity of the activity and the need to assure consistent and acceptable results. The need for, and level of detail in, written procedures or instructions shall be determined based upon complexity of the task, the significance of the item or activity, work environment, and worker proficiency and capability (education, training, experience)."	This is a very simple requirement and no grading of the actual requirement is needed. The requirement itself requires grading of the implementation as stated in the requirement.
6. Document Control		This requirement is very basic in concept and the requirements can be met with simple processes based on the contract scope. The main requirement is that documents be controlled to ensure that correct documents are being employed. The contractor can utilize very simple systems to meet this requirement when the complexity of operations is simple. The more complex the activities and organizations involved the more complex the document control process will need to be.
7. Control of Purchased Items and Service		This requirement provides requirements that are based to ensure the Supplier provides the items or service in accordance with the requirements of the procurement documents. The real grading in this requirement is more in the establishment of the "requirements" for the procurement. When establishing the requirements for the procurement the contractor needs to take into consideration the D&D activity and the length of time the item or service will be needed as well as safety and other quality requirements.
8. Identification and Control of Items		This requirement ensures that only correct and accepted items are used or installed. The grading in this area is not as much in the application of the control but rather in the requirement established for the items acceptable for service. With D&D activities, there can be greater allowance for use of items.
9. Control of Special Processes	100- "Special processes that control or verify quality, such as those used in welding, heat treating, and nondestructive examination, shall be	When "special processes" are required, this requirement needs to be met fully. However, in D&D activities, one way to meet this requirement is through procurement of qualified individuals that have qualified procedures. This prevents the prime

Attachment B for Focus Area #4
Examples of Ways to Grade NQA-1 Requirements for Deactivation and Demolition Projects

NQA-1 Requirement		Grading
	performed by qualified personnel using qualified procedures in accordance with specified requirements.	contractor from having to have the programs and qualification processes in place.
10. Inspection		This requirement is graded in the determination of characteristics subject to inspection and inspection methods. For example, in lieu of inspecting gages, they can be sent out to a qualified supplier who does the inspection and calibration. Another example is receipt inspection, this process can be limited if the supplier has a robust quality program or the prime contractor could hire an independent third party to do the inspections required.
11. Test Control		This requirement can be graded as most D&D contractors do not execute computer program testing; therefore, they would not have to have a program to execute this function. Testing should be limited in D&D activities for the most part and the contractors programs can be graded based on the characteristics to be tested and the test methods to be employed. As this is highly contractor dependent, each contractor would have to evaluate the types of testing required and grade their program based on that evaluation.
12. Control of Measuring and Test Equipment	100 – "Tools, gages, instruments, and other measuring and test equipment used for activities affecting quality shall be controlled, calibrated at specific periods, adjusted, and maintained to required accuracy limits."	The grading of this requirement is very dependent on the size and type of work the contractor will be executing. Some D&D activities require extensive control of measuring and test equipment while others require very little. In either case, the contractor needs to evaluate the level of in-house program they need to maintain and what part is better to procure through a supplier. This evaluation and final determination is the basis for grading the contractors program in this area.
13. Handling, Storage, and Shipping		For many D&D activities there is little on site storage of materials and shipping is executed in accordance with Department of Transportation requirements. This requirement can be graded based on application of the DOE Orders, OSHA compliance, and other contractual requirements that govern handling, storage, cleaning, packaging, shipping, and preservation of items. Basically, this requirement should be met if the contractor complies with the requirements in most D&D contracts.
14. Inspection, Test, and Operating Status	100 – "The status of inspection and test activities shall be identified on the items or in documents traceable to the items where it is necessary to ensure that required inspections and test are performed and to ensure that	This requirement is very basic and can be ensured in many ways. The grading of this requirement is in the methods utilized to document and identify the inspection, test, and operating status.

Attachment B for Focus Area #4
Examples of Ways to Grade NQA-1 Requirements for Deactivation and Demolition Projects

NQA-1 Requirement		Grading
	items have not passed the required inspections and tests are not inadvertently installed, used, or operated.	
15. Control of Nonconforming Items		This requirement is very basic and can be ensured in many ways. The grading of this requirement is in the methods utilized to document and identify the inspection, test, and operating status. One way grading is different for D&D is that there is a greater potential for acceptance of an item in a D&D type activity as the justification for usage is more flexible.
16. Corrective Actions		The requirement can be graded in the manner in which the identification, cause and corrective actions are generated and documented. The system used to track the condition reports and actions can be another manner in which this requirement can be graded. The grading can be applied based on the type/scope of the activity like D&D as well as on the size of the contractor and period of performance.
17. Quality Assurance Records		The grading in this requirement for D&D is in the designation of what is a quality assurance record. As the facility is to be demolished, this allows for greater flexibility in the determination of the length of time the records need to be maintained for some items. Also, grading can be evaluated as to whom will hold the records, through contract negotiations, the records could be turned over to DOE earlier in the process thereby reducing the storage burden on the contractor. One costly area is the storage of records and the requirements for those facilities. Again, through contract negotiations, this can be graded providing the records are maintained and final disposition is appropriately achieved.
18. Audits		The number of formal Audits for D&D work should be tailored and graded based on the type of activities being performed. One way of grading is in the determination of the experience and training required to lead and participate in the audits.

Attachment C for Focus Area #4 - ASME NQA-1, Part II Applicability

The applicability of each Subpart II requirement is discussed and potential contract requirements that govern the requirement are identified that can be used in lieu of ASME NQA-1 as the applicable standard.

ASME NQA-1 2004, Part II, Subparts:	Applicability
2.1 Quality Assurance Requirements for Cleaning of Fluid Systems and Associated Components for Nuclear Power Plants	**Not applicable** to the majority of D&D contracts/Scope of Work.
2.2 Quality Assurance Requirements for Packing , Shipping, Receiving, Storage, and Handling of Items for Nuclear Power Plants	**Not applicable** to the majority of D&D contracts/Scope of Work. Contractors normally implement the following contract requirements for these work elements: DOE O 460.1B, Packaging and Transportation Safety DOE O 460.2A, Departmental Materials Transportation and Packaging Management DOE M 460.2-1A, Radioactive Material Transportation Practices
2.3 Quality Assurance Requirements for Housekeeping for Nuclear Power Plants	**Not applicable** – this Subpart applies to Housekeeping during construction of facilities. For D&D activities normally implement applicable OSHA requirements and DOE O 5480.19, Conduct of Operations.
2.4 Installation, Inspection, and Testing Requirements for Power, Instrumentation, and Control Equipment at Nuclear Power Plants	**Not applicable** to the majority of D&D contracts/ Scope of Work. One way contractors meet this is by implementing NFPA 70 – 2008 National Electric Code and NFPA 70E - 2009 Standard for Electrical Safety in the Workplace
2.5 Quality Assurance Requirements for Installation, Inspection, and Testing of Structural Concrete, Structural Steel, Soils, and Foundations for Nuclear Power Plants	**Not applicable** – this does not apply to operations and is not part of the majority of D&D contracts/
2.7 Quality Assurance Requirements for Computer Software for Nuclear Facility Applications	**Applicable** to the current scope of operations. DOE contractors implement ASME NQA-1 2004, Part II, Subpart 2.7 as applicable to the scope of work.
2.8 Quality Assurance Requirements for installation, Inspection, and Testing of Mechanical Equipment and Systems for Nuclear Power Plants	**Not applicable** to the majority of D&D contracts/Scope of Work.
2.15 Quality Assurance Requirements for Hoisting, Rigging, and Transporting of Items for Nuclear Power Plants	**Not Applicable** to the majority of D&D contracts/Scope of Work. The requirement is written for hoisting, rigging, and transporting during construction. Most DOE contractors implement DOE-STD-1090-2007, Hoisting and Rigging.
2.16 Requirements for the Calibration and Control of Measuring and Test Equipment Used in Nuclear Facilities	**CANCELLED**

Attachment C for Focus Area #4 - ASME NQA-1, Part II Applicability

ASME NQA-1 2004, Part II, Subparts:	Applicability
2.18 Quality Assurance Requirements for Maintenance of Nuclear Facilities	**Not Applicable** to the majority of D&D contracts/Scope of Work. Most DOE contractors implement the requirements in accordance with DOE Order DOE O 433.1A, Maintenance Management Program for DOE Nuclear Facilities and DOE O 433.1A Implementation Matrix.
2.20 Quality Assurance Requirements for Subsurface Investigations for Nuclear Power Plants	**Not applicable** to the majority of D&D contracts/Scope of Work.

EM Environmental Management

safety ❖ performance ❖ cleanup ❖ closure

www.em.doe.gov

Energy Facility Contractors Group

Corporate Quality Assurance Issues, Challenges, and Priorities

Dr. Steven L. Krahn
Deputy Assistant Secretary
Office of Safety and Security Program, EM-20

Robert Murray, Acting Director
Office of Standards and Quality Assurance, EM-23

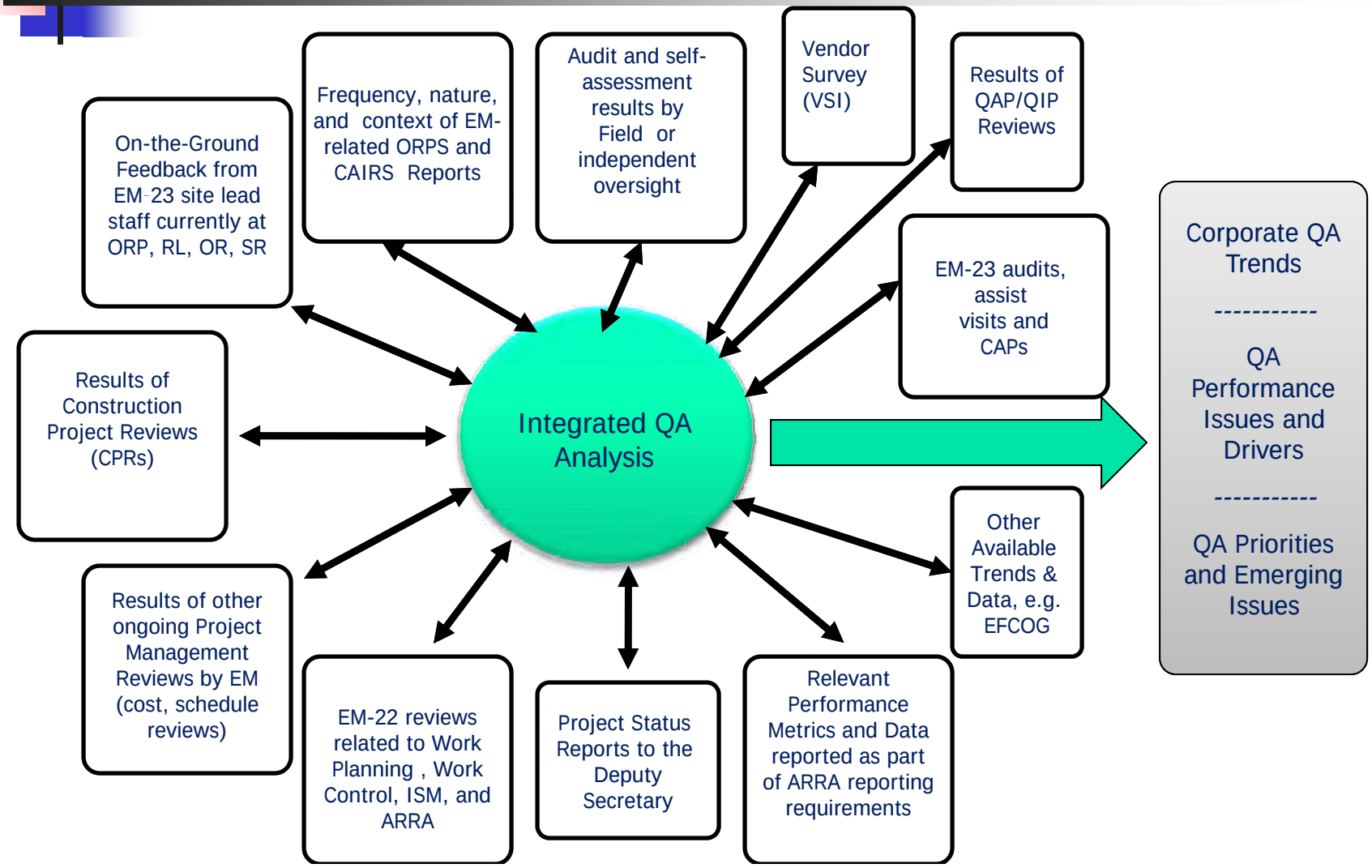
EM Corporate QA Board
Chicago, IL
June 9, 2010

Outline

- General update on state of QA across the EM complex
- Issues and observations
- Focus on critical QA issues that require Board's feedback
  - FY 2010 Focus Areas
  - Path forward and strategies

EM-20 Corporate Approach to Quality Assurance Operational Awareness

Challenges: 1) ensuring reliable and timely information sources, and 2) balancing/integrating insights



High Priority Corporate Issues

- Construction/Capital Projects
- American Recovery and Reinvestment Act (ARRA) funded projects – (D&D Graded Approach)
- EM-wide quality assurance issues, e.g.,
  - QAP/QIPs
  - Commercial grade dedication (CGD)
  - Suspect/Counterfeit Items (S/CI)
  - Application of graded approach
  - Procurement/Work performance consistent with contract requirements
  - HLW/SNF
  - Enhanced Operational Awareness
  - Monitoring of vendor and subcontractors performance
  - Capacity and adequacy of available NQA-1 qualified staff and vendors
- Safe execution: Work planning and control

Observed (Generic/Common) Quality Assurance Issues and Challenges

- Variation in maturity and effectiveness of site-specific QA practices
- Continued lack of robust and proactive integration of QA in early stages of design, engineering, construction, and operations
- Continued issues associated with commercial grade dedication (CGD) program, processes, and practices
- Continued lack of comprehensive and consistent application of QA requirements/expectations in the procurement process
- Lack of real-time operational awareness/performance monitoring of vendors and subcontractors activities to ensure conformance with prime contract's requirements
- Varying degrees of adequate QA resources in terms of quantity, capacity, and capability
- Continued issues associated with configuration management, software quality assurance, and suspect/counterfeit items

State of Quality Assurance
Capital/Construction Projects

- Defense Nuclear Facilities Safety Board Reporting Requirements
- Focus on EM capital projects
  - DUF_6, SRS Pit Disassembly and Conversion Facility and the Plutonium Preparation Project, WTP, SWPF, ORNL U-233 Disposition (Building 3019), K-Basin, IWTU
- EM-23 leads QA aspects of the Construction Project Reviews (CPRs)
  - Continued QA issues associated with:
    - CGD, vendors
    - Adequacy of QA expertise and staffing – applicable to Integrated Project Teams (IPTs) as well as at the work planning and execution level
    - Effective integration of QA in design, fabrication, and construction activities

State of Quality Assurance
Commercial Grade Dedication

- EM-2 memorandum dated October 6, 2009
  - An evaluation of CGD practices and actions should be conducted across the entire scope of construction and operational projects at EM sites, from prime contractors to vendors, to suppliers and their sub-tier suppliers, with first a focus on construction projects that are procuring items and materials for nuclear grade applications
  - Not all EM sites have provided a response (3 of 8 responses missing)
  - Need the QA Board support to ensure all sites adequately follow-up
- Key corporate concerns:
  - EM-wide extent of the issue not fully characterized or understood
    - Self-assessments are not completed or not in-depth enough
  - Extrapolation of available data across the EM sites presents a low confidence scenario

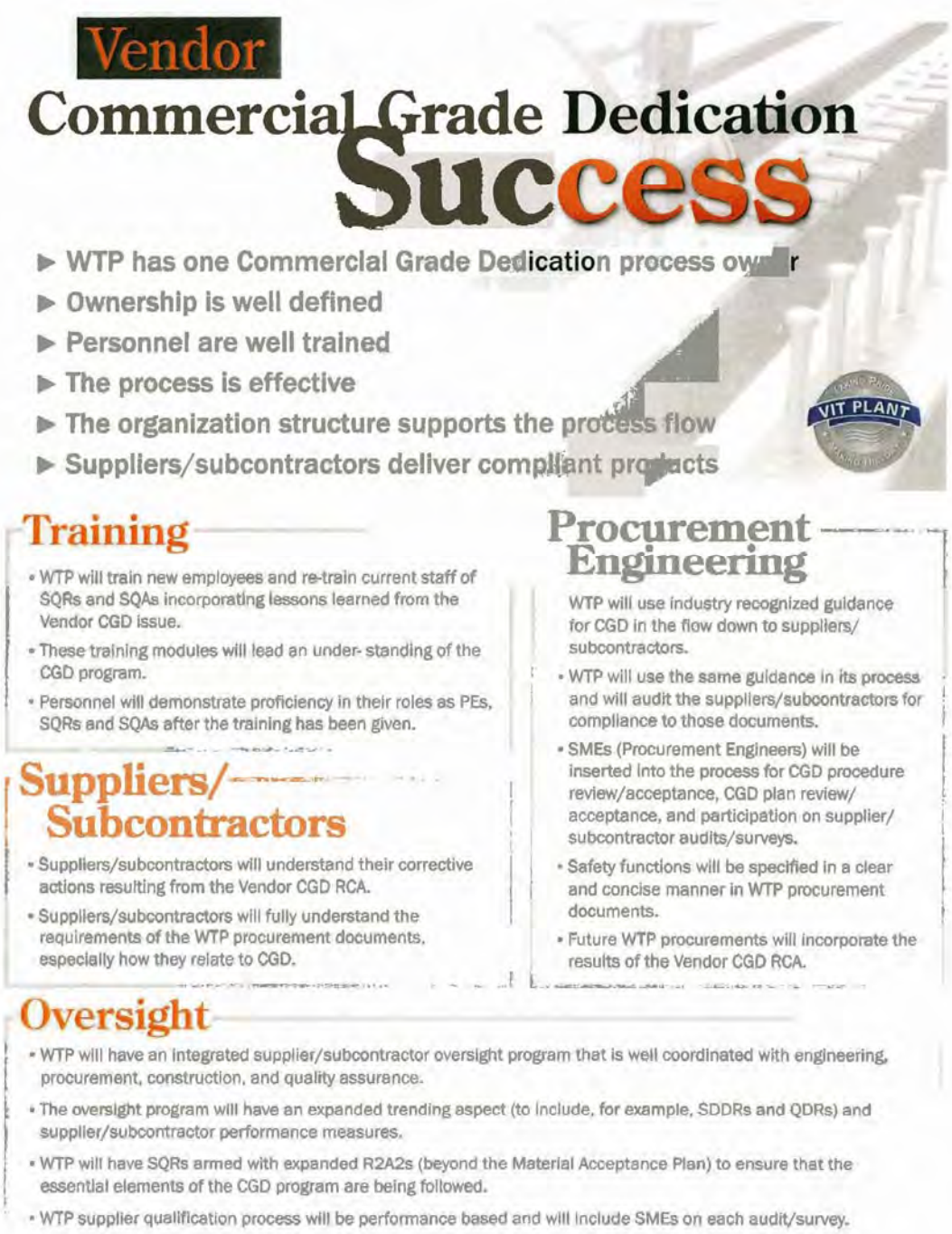
State of Quality Assurance

CGD (cont.)

WTP Lessons Learned

24590-WTP-LL-MGT-09-0470 (09/09)

"Acquisition of safety related items takes a concerted effort in the areas of communication of requirements and expectations, robust evaluation of supplier technical and quality capabilities, and continuous monitoring to ensure effective execution."



State of Quality Assurance
QA Assessments and Audits

- Revamped the audit/assessment priority setting process
  - Emphasis on risk-significant critical path activities and processes
  - Focus on observed generic issues and weaknesses
- Targeted-priority issues
  - Responsive to EM senior leadership priorities
- Shift to encourage Field self-assessments
  - Focused on removing obstacles rather than finding problems
- FY-2010 QA assessment schedule and priorities have been published

State of Quality Assurance
High Level Waste/Spent Nuclear Fuel

- Potential implications of RW organizational issues on EM's HLW/SNF responsibility for QA program requirements and expectations
  - The MOA between EM and OCRWM requires joint teams from EM and OCRWM to conduct periodic audits of EM sites in accordance with OCRWM procedures

- EM senior leadership is considering options/alternatives that will provide continued programmatic stability and preservation of capital investment already made by EM until further policy and programmatic directions are provided by the Secretary
  - Detailed briefing to the Board during afternoon session.
  - Will keep you posted with any further developments.

State of Quality Assurance
Corporate QA Capability

- Site-specific QA resources, capacity, and expertise
  - Varies from site-to-site
  - Overall trend is positive—capacity and expertise are increasing
  - No current data available on QA resource (FTEs, $s)
    - Last EM-wide data call (Federal, contractor, and subcontractor) is about 2 years old
    - Data needs to be updated – what is the best method?
- EM-20 has developed, sponsored, and delivered a series of QA training (Feds and contractors), including train-the-trainer courses
  - NQA-1, Lead Auditor, CGD, Federal Project Directors, EM QAP
- Expectation is for Field elements and prime contractors to leverage developed content to expand QA training capacity and delivery

State of Quality Assurance
Site-Specific QAP/QIP

- Implementation of site-specific QAPs/QIPs
  - All sites have developed and submitted a QAP/QIP for Phase 1 review
    - Phase 1 review completed by EM-23
  - Phase 2 Verification & Validation will be completed in FY 2010
    - Using consistent review protocol
    - Self-Assessments to be led by Field—EM-23 staff member on each team
    - EM-23 interfacing with Field/Sites to schedule self-assessments

Need QA Board support to ensure timely conduct of self-assessments!

Status of Phase 1 Review of Site-Specific QAP/QIPs

- SRS
  - Conditional Approval
- RL
  - Conditional Approval
- PPPO
  - Conditional Approval
- EM CBC
  - Conditional Approval
- ORO
  - Approved
- ID
  - Revision 1 Approved
- CBFO
  - Conditional Approval
- ORP
  - Conditional Approval
- EM-HQ
  - Conditional Approval (recommended)

State of Quality Assurance
Corrective Action Plans

- Follow thru on agreed upon QA corrective action commitments
  - Lack of real-time status data
  - Weak root cause analysis in formulation of CAPs
  - Poor history of effectiveness review
  - Leverage web-based tools and information management systems to enhance operational awareness
- Prototype *EM-Hub* placed on EM server (CBC) and functional.
  - Live demo of system functionalities to be presented during the afternoon session.

Actions to Enhance QA Regulatory Stability and Informed Decision-making

EM Standard Review Plan

EM Standard Review Plan (SRP) Review Modules

- Ensure that DOE project performance expectations are clearly reflected through project life-cycle activities as defined in DOE O 413.3A, DOE-STD-1189, and other EM-specific corporate requirements (e.g. TRA)

- Provide a framework for comprehensive, integrated, and standardized project reviews that support day-to-day efforts as well as project applicable Critical Decision (CD) points, for both federal and contractor personnel

- 2nd Edition published in February 2010
  http://www.em.doe.gov/Pages/StandardReviewPlanModules.aspx

Actions to Enhance QA Regulatory Stability and Informed Decision-making

EM Standard Review Plan (cont.)

EM SRP Review Modules Added in 2nd Edition

- Project Execution Plan
- Integrated Project Team
- Earned Value Management System
- Acquisition Strategy
- Decommissioning Plan
- Site Transition Guidance
- Preliminary Design
- Readiness Review
- Seismic Design Expectations
- Safety Design Strategy
- Facility Disposition Safety Strategy
- Construction Project Safety and Health Plan
- National Environmental Policy Act
- High Performance Sustainable Building Design
- Safeguards and Security and Cyber Security
- Quality Assurance for Critical Decision Reviews
- Protocol for EM Review/Field Self-Assessment of Site-Specific QAPs/QIPs
- Facility Software Quality Assurance for Capital Project Critical Decisions

Actions to Enhance Regulatory Stability and Technical Basis

Formalized and Clear QA Expectations

- EM Corporate Quality Assurance Program, dated November 2008, EM-QA-001
  - Provides clarity and consistency of EM QA requirements and expectations
    - DOE O 414.1C
    - 10 CFR 830
    - ASME NQA-1-2004 with addenda through 2007
  - Supplements regulatory requirements with *EM Management Expectations*— Strengthens project management
- Consistency and stability: *EM Review Protocol/Field Self Assessment of Site-Specific QAP/QIP, dated February 2010*

  http://www.em.doe.gov/pdfs/Volume_II/K_SRP.pdf
- Continued commitment to QARD on an interim basis

QA Corporate Board Actions

- FY 2010 focus/priority areas
  - Activities and expected deliverables must be aligned with EM's mission priority needs and issues
  - Detailed presentation on technical approach and expected deliverables by focus area leads
- Strategy/path forward to continue to strengthen integration of QA in execution of EM projects
  - Increased technical engagement and operational awareness by Federal and contractor QA staff
  - Clarity of QA expectations and *requirements—ensuring conformance of activities, services, and products to established requirements*
  - Expanded QA capacity and capability---early integration in lifecycle phases
  - Collection and dissemination of relevant lessons learned and best practices – (Targeted and focused)

Nuclear Quality Assurance Industry Perspectives – One View

EM Corporate QA Board
Chicago, IL
June 9, 2010

Joe Yanek
Executive Director, HSEQ
Fluor Government Group

Industry Area Overview

- Application of NQA Code
- Commercial Grade Items in SC/SS SSC's
- QA/QC Resources – Critical Future Skill-set
- Suspect/Counterfeit Items
- Integration of QA in the Procurement Cycle

Application of NQA Code

- Format Different in ’94 and later Code Editions
  - Pre-’94 Code NRC Endorsed, Aligned with Appendix B, Clear Definition of QA Requirements
    - NQA-1 (Base, Mandatory and Non-Mandatory Sections)
      - NQA-2/NQA-3 as Applicable
  - ‘94 and Later Code Editions
    - Only NQA-1 (Merged and Recombined Standards NQA-1/2/3)
      - Part 1/Part 2 Requirements, Part 3 Non-mandatory, Part 4 Application Guidance
- Nuclear Power continues upgrading QA Program Basis
- NRC has endorsed NQA-1-2008 with ’09a (RG1.28, R4)
  - Two Regulatory Positions (QA Records & Auditing)

Application of NQA Code continued

- Application of NQA Requirements
  - No Issues with NRC License Holders
  - Recent DOE Issues with NQA-1, Part 1 Applicability
- '94 Editions of Code Merged all Previous NQA-1 Requirements into New NQA-1 Part 1/Part 2 as the new Requirement Set
  - Continues to evolve as NRC Endorsement Process Progressed
  - Never Intended for Part-1 Requirement Set to be Implemented on a Paragraph 100 Basis
- If in question, submit Formal Code Case to ASME NQA-1 Committee

Commercial Grade Items in SC/SS SSC's

- Not a Significant Issue in Commercial Nuclear Power
  - Long history of Code & CGD Process Application
- Inconsistencies in DOE's Application
  - Lack of Central QA Authority, Local Site Approval of QA Approaches, plus .....
- Consider implementing new NQA-1-2008 (9a) Sub-part 2.14 regardless of your Current QA Regulatory Basis
  - S/P 2.14 achieved Industry Consensus (ASME, EPRI, Nuc. Utilities, Other Code Users)

QA/QC Resources – Critical Future Skill-sets

- Historically not an issue
- Nuclear “New Build” is a Reality (Vogtle, STP, Calvert Cliffs, TVA, plus.....) and Impact Needs to be Addressed
  - Competition for Scare Resources already seen at DOE Sites (and among companies at DOE sites)
- Recommend DOE EM consider forming a QA/QC Human Capital task group with both Fed, Contractor and Industry Participants
  - QA/QC Personnel Pipeline, Partnering with Industry & Local Tech schools, Processes to share resources across DOE Sites

Suspect/Counterfeit Items

- Continuing but Not a Significant Issue (Macro Sense)
- As a point of reference, Nuclear Power addresses Suspect, Counterfeit and Substandard Items
- ASME NQA-1 Code Committee is looking at the issue to see if a Standards action is Warranted to provide an industry-wide consensus approach
  - Process Just started, probably a 18 month to 2 Year effort if it's determined Code guidance is Warranted

Integration of QA & Procurement Cycle

- Biggest Issue facing DOE Large & Small Cap Project Execution & Base-load Activities
  - Currently LTA within DOE
- Contributing factors include:
  - Engineering Understanding of QA Program Elements
  - QA Authority to Reject SC/SS Procurements
  - Integration of QA into Procurement Specification Process
  - Inadequate Eval. of Suppliers to NQA-1, Part 1
    - Consider Single EM Evaluation Process that Rates all Part 1 Requirements with "*Acceptable, Acceptable with Restrictions, Unacceptable or Not Applicable"* Outcomes

Other Thoughts

- Consider making QA/QC a Proj. Line Item for Funding
  - Incude All Projects & Baseline Activities
- Focus towards EM Enterprise Solutions
- Address Lack of Up-front QA Planning
- Avoid Approving Less than Nuclear Industry Acceptable Approaches at the Local Level
  - Consider establishing EM QA Interpretative Authority
- Not a lot of variance between Post-'94 NQA-1 Editions
  - Focus on Implementation of Upgrades to Code

Questions/ Answers ?

Environmental Management
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Energy Facility Contractors Group

Project Focus Area #1

NQA-1 Suppliers

EM QA Corporate Board Meeting
Chicago, IL
June 9, 2010

Team Members

- **DOE Lead: Christian Palay, DOE EM-23**
- **EFCOG Lead: Paul Bills, INL**
- Michael Mason, Bechtel National Inc.
- Brian Anderson, DOE EM-Idaho

NQA-1 Suppliers

- Joint Supplier Evaluation Program (JSEP)
  - Implementation plan was approved by the EM Corporate QA Board
  - Financial and human resources has been approved by the Board
    - Funding has been released from EM-23 to DOE-ID
    - Statement of work had been approved between DOE-ID and BEA
  - In order for the JSEP to be fully effective and efficient, there needs to be a high level of participation by EM contractor organizations

JSEP Path Forward

- For the remainder of 2010, this effort will
  - focus on developing the infrastructure of the program
  - Evaluate the levels of participation across the EM complex
  - develop the necessary actions to ensure that adequate participation is obtained and maintained

Deliverable Schedule

- By 9/30/2010
  - Supplier Information Database will be online
  - The relevant information will be uploaded for program start
- By 01/07/2011
  - The JSEP Program Description will be ready for dissemination across the EM Complex
- By 12/20/2011
  - The first annual progress report of JSEP implementation will be ready for the EM QA Corporate Board

Short Term Needs (3 months)

- Each EM site office (Federal or Contractor) that manages an Approved Supplier List needs to establish a local JSEP Coordinator
  - JSEP Coordinator Initial Responsibility
    - Represent their organization during the development phase of the task deliverables
    - Support and facilitate during the review phase of the task deliverables

Long Term Needs (3-6 months)

- EM QA Corporate Board review and approval of the deliverables in the Project Plan

- The JSEP Program Description Document shall be comprised from these deliverables
  - The final JSEP Program Description Document shall be presented to the EM Corporate Board for vote of approval

Really Long Term Needs

- After the JSEP Program Description Document is effective Across the EM Complex
  - Active participation from every member organization includes:
    - Audit Scheduling
    - Audit Team Participation
    - Conference Calls
    - Document Non-disclosure Agreements
    - Contractual Commitments
    - Personnel Support
    - JSEP Self-Assessments

Questions & Answers

- Christian Palay
  - 202-586-7877
  - christian.palay@em.doe.gov
- Paul Bills
  - 208-526-5726
  - paul.bills@inl.gov

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Project Focus Area #2

Commercial Grade Items and Services Dedication Implementation

EM QA Corporate Board Meeting
Chicago, IL
June 9, 2010

Team Members

- **DOE Lead: Patrick Carier, DOE-ORP**
- **EFCOG Lead: TBD**
- DOE Support: David Faulkner, DOE EM-23
- EFCOG Support: TBD

Status

- All Major EM Sites have received training on commercial grade dedication (CGD)
- EM has certified 30+ instructors to teach the EM developed CGD course
- EFCOG has begun work to standardize the CGD process
- Draft EM Guidance on CGD has been developed by EM-23

Current Need

- EM Complex needs additional trainers certified to teach CGD course
- EM Complex needs additional guidance on the performance of CGD to ensure uniformity
- EM Complex needs to develop additional Subject Matter Experts (SMEs)
- EM Complex needs to be assessed regarding performance of CGD

Focus Area #2 Project Plan

- The proposed Project Plan will address most of the EM Complex needs
- Plan will:
  - Finalize EM Guidance on CGD to the field
  - Certify additional CGD course instructors (develop SMEs)
  - Standardize the CGD process
  - Assist EM-23 with oversight (identifying SMEs)

Focus Area #2 Project Plan

- Proposed Project Team Composition Includes Contractor and/or Federal Representatives from Each DOE-EM Site
  - Richland
  - River Protection
  - Savannah River
  - Idaho
  - Oak Ridge
  - Portsmouth/Paducah
  - Consolidated Business Center Representatives
  - Carlsbad

Focus Area #2 Project Plan

- Task 1 - Develop EM Guidance on Commercial Grade Dedication – Due 08/06/10
  - EM-23 to transition draft guidance to Project Team Lead
  - Project Team to review and revise guidance and send to field elements for comment
  - Resolve field element comments and finalize guidance.
  - Draft endorsement and transmittal memo for Recommended Guidance from EM-1 to all Field Elements

Focus Area #2 Project Plan

- Task 2 - Develop, with EFCOG, a common process to perform commercial grade dedication - Due 12/31/10
  - Draft procedure for DOE/Contractor review and comment
  - Resolve comments and forward to all DOE contractors
  - Draft endorsement and transmittal memo for Recommended Procedure from EM-1 to all Field Elements
  - Sites complete implementation of the Recommended Procedure
  - Develop a checklist to be used during audit/assessment of CGD program and implementation
  - Assist EM-23 in assessing Recommended Procedure implementation at major EM Sites (complete 04/01/11)

Focus Area #2 Project Plan

- Task 3 - Determine need and conduct one additional Train-the-Trainer CGD Course - Due 08/20/10
  - Determine need for additional Train-the-Trainer Course
  - Publish notice of class if needed
  - Hold class

Focus Area #2 Project Plan

- Task 4 - Perform oversight of future CGD classes – Continue through 09/30/11
  - Case by Case Basis - Upon notification of CGD training class the Project Team Lead will assist EM-23 in identifying available Subject Matter Experts to assist in oversight

Actions Needed by Corporate Board

- Reiterate to the field the need to complete the assessments of CGD implementation directed by D. Chung memo
- Approve Focus Area #2 Project Plan
- Liaise with EM-1 regarding issuance of CGD guidance and standardization of CGD process

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Project Focus Area #3

Design Quality Assurance Focus Area

EM QA Corporate Board Meeting
Chicago, Il
June 9, 2010

Project Focus Area #3
Design Quality Assurance Focus Area

Team Leads

- **DOE Lead: Butch Huxford, DOE EM-23**
- **EFCOG Lead: Robert Thompson, CWI**

Project Focus Area #3
Design Quality Assurance Focus Area

Proposed Scope

- Determine existing processes within the EM complex for ensuring quality in design control functions
- Develop best practices for consideration across the EM complex
- Specifically evaluate:
  - Design definition, communication and verification
    - Code of Record development
  - Records required to satisfy NQA-1 requirements
  - Flow down of engineering requirements into specifications, work plans, procurement documents, etc.
  - Inspection and test requirements and acceptance criteria
  - Quality Assurance groups' role in design control
  - Configuration management

Project Focus Area #3
Design Quality Assurance Focus Area

Proposed Schedule

Task #	Estimated Due Date	Task Description	Deliverable	Deliverable To Be Submitted to Project Managers
Start Date June 9, 2010 – following Board approval				
1	18JUN10	Identify FA3 team and initiate planning activities	Roster	Yes
2	19JUL10	Develop final scope of the effort including deliverables, such as: • Questionnaire to major projects describing existing practices	Scope outline	Yes
3	02AUG10	Deliver questionnaire to major projects	Questionnaire	No

Proposed Schedule (continued)

Task #	Estimated Due Date	Task Description	Deliverable	Deliverable To Be Submitted to Project Managers
4	01SEP10	Receive results from major projects	Completed Questionnaire	No
5	01OCT10	Provide analysis for PM review/calibration	Tables/charts/ text documents describing FA3's recommended path forward for ultimate deliverable	Yes
6	01NOV10	White Paper for EM consideration communicating Design Quality Assurance expectations/recommendations/etc.	White Paper	Yes

Project Focus Area #3
Design Quality Assurance Focus Area

Project Plan (Background)

In 2009, EM issued an Interim Policy establishing the Code of Record (COR) concept for EM nuclear facilities. A COR serves as a management tool and source for the set of requirements that are used to design, construct, operate, and decommission a nuclear facility over its lifespan. Early establishment and lifecycle maintenance of applicable facility requirements are essential to provide for the protection of our workers, the public, and the environment. Consequently, the COR includes those requirements invoked during the design phase, and later used to initiate operations, to ensure they are available to all responsible parties during each lifecycle, organizational, and mission change.

Project Focus Area #3
Design Quality Assurance Focus Area

Project Plan (Background)

Additionally; EM finalized the preparation and of the 2nd Edition of the DOE Standard Review Plan (SRP) for capital and major construction projects. SRP review modules are developed consistent with project expectations and requirements defined in DOE O 413.3A, Change 1, *Program and Project Management for the Acquisition of Capital Asset*, DOE-STD-1189-2008, *Integration of Safety into the Design Process,* and EM's internal business management practices. The 2nd Edition was completed and the official release memo was issued by EM in March 2010. The 2nd Edition consists of 29 stand-alone SRP review modules that provide EM's core expectations and technical framework associated with Critical Decision (CD) review and approval process. The disciplines addressed include Engineering and Design, Safety, Project Management, Quality Assurance, Environment, and Security. The Review modules are on the DOE EM website at http://www.em.doe.gov/Pages/StandardReviewPlanModules.aspx

Focus Area #3 Team Make-up

- Proposed Project Team Composition Includes Representatives from the Following Projects
  - Waste Treatment Plant
  - Salt Waste Processing Facility
  - Sodium Bearing Waste
  - U233 Project
  - DUF6
  - Tank 48

Actions Needed by Corporate Board

- Approve Focus Area #3 Project Plan Scope
- Approve Approach for Staffing the Focus Area Team Members
- Provide Senior EM Management Support to Encourage Participation by the Various Construction Projects

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7TH EM QUALITY ASSURANCE CORPORATE BOARD MEETING

"Proposed Technical Approach for Grading QA for Deactivation & Decommissioning Projects"

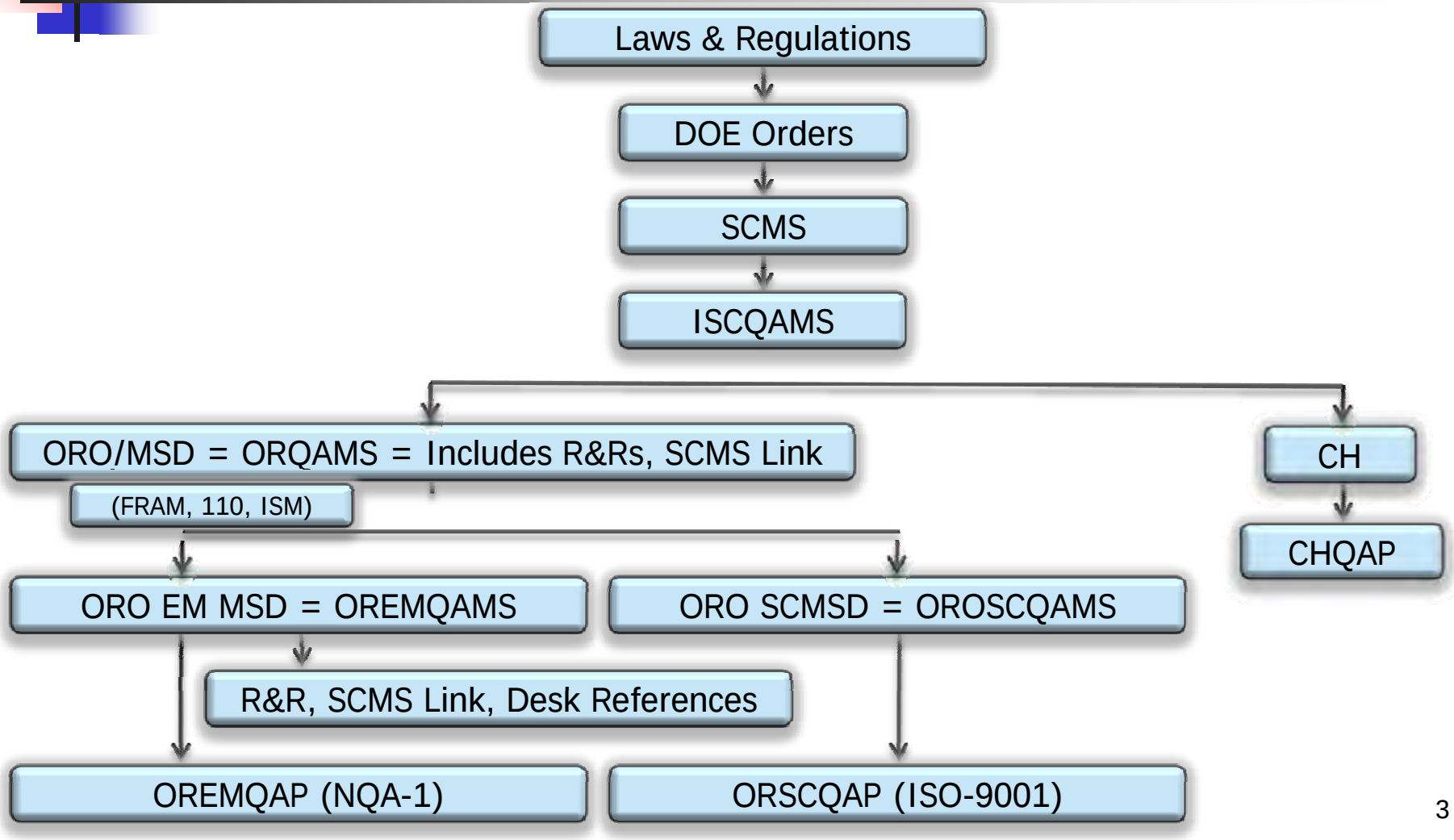
ROBERT BROWN – DEPUTY MANAGER, OAK RIDGE OFFICE

BRENDA HAWKS – EM QUALITY ASSURANCE DIRECTOR, OAK RIDGE OFFICE

ORO Background

ROBERT BROWN – ORO

ORO Quality Assurance Program



ORO Deactivation and Decommissioning Projects

BRENDA HAWKS – ORO

Current Allowance for Grading Exists

1. Environmental Management (EM) Corporate Quality Policy allows grading – “It is EM Policy that all EM projects will have a consistent quality assurance (QA) approach while allowing for grading based on importance to the EM mission and safety, and for site-specific requirements.”
2. EM Quality Assurance Program (QAP) Scope states: “The requirements of the QAP are applied in a graded fashion commensurate with the type of work being performed and the importance of the work contributing to safe completion of the EM mission.”
3. NQA-1 states: “...fosters the application of these requirements in a manner consistent with the relative importance of the item or activity.”

Know Your Contract

No need to require something that does not add to safety or mission accomplishment – even if we all may like the “gold plated” model.

Things to Consider for Grading

1. Scope of contract
2. Length of contract
3. Size of contractor staff/employees
4. Hazard level of activities (nuclear, security, chemical, industrial, electrical, etc.)
5. Method of performance – direct, subcontract to qualified vendor, or memorandum of agreement with other Department of Energy (DOE) Prime Contractors
6. Complexity of work activities
7. What is the end state for the facility/activity

GRADING

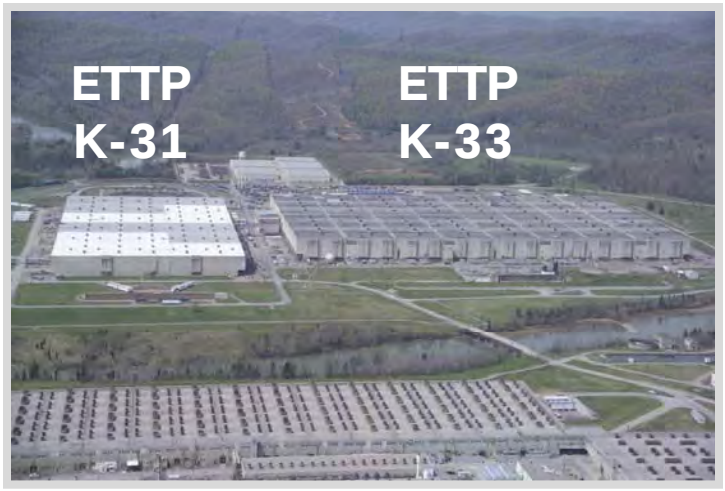
1. The field needs to wisely exercise grading through collaboration between the project, quality, and safety personnel on the DOE side and contractor side.
2. Deactivation and decommissioning (D&D) activities present a unique opportunity for grading as the end state of the facility/activity allows for quality grading of areas that would not be appropriate in an operating facility.
3. The application of Part II requirements can frequently be met by the requirements in the contract in lieu of the specifics in NQA-1.

ORO D&D Projects

ORNL 2000 Complex

ETTP K-25
West Wing Demo

ORNL 3026 Wooden Superstructure



Grading – Scope and Length of Contract

All 18 requirements are appropriate for grading based on the considerations discussed (e.g., scope, length of contract, hazard, size of contractor, etc.)

1. Organization
2. Quality assurance program
3. Design control
4. Procurement document control
5. Instructions, procedures, and drawings
6. Document control
7. Control of purchased items and service
8. Identification and control of items
9. Control of special processes
10. Inspection
11. Test control
12. Control of measuring and test equipment
13. Handling, storage, and shipping
14. Inspection, test and operating status
15. Control of nonconforming items
16. Corrective actions
17. Quality assurance records
18. Audits

Grading D&D Based on Hazard

NQA-1 Criteria	**Non D&D activity** (Operating facility with significant EM mission/moderate to high hazard)	**High Hazard D&D** (Cat 2, Cat 3, high chemical)	**Low / Moderate D&D** (< Cat 2, standard industrial)
Requirement 2:300 – Qualification Requirements (NDE/inspection and test/ lead auditor/auditors)	Need formal qualification of all personnel	Grade Lead Auditor and Auditor – Personnel need to meet knowledge and skill requirements, no formal qualification program NDE/inspection and testing – grade based on activities to be performed	Grade Lead Auditor and Auditor – Personnel need to meet knowledge and skill requirements, no formal qualification program – very few audits requiring lead auditor Grade NDE/inspection and testing – in rare occasions need can procure qualified individual

Grading D&D Based on Hazard

NQA-1 Criteria	**Non D&D activity** (Operating facility with significant EM mission/moderate to high hazard)	**High Hazard D&D** (Cat 2, Cat 3, high chemical)	**Low / Moderate D&D** (< Cat 2, standard industrial)
Requirement 17 – quality assurance records	Need formal records program	Grade applicability –401.2 – "... maintained for the life of the particular item while it is installed in the plant or stored for future use." Grade storage – 600 – allow enhanced use of 603 – temporary Storage allowance Grade maintenance – 800 – allow records to be turned over to DOE early for permanent storage	Grade applicability – 401 – very few if any record generated will meet requirements Grade storage Grade storage – 600 – allow use of appropriate storage based on records Grade maintenance – allow records to be turned over to DOE early if permanent storage needed

Conclusion

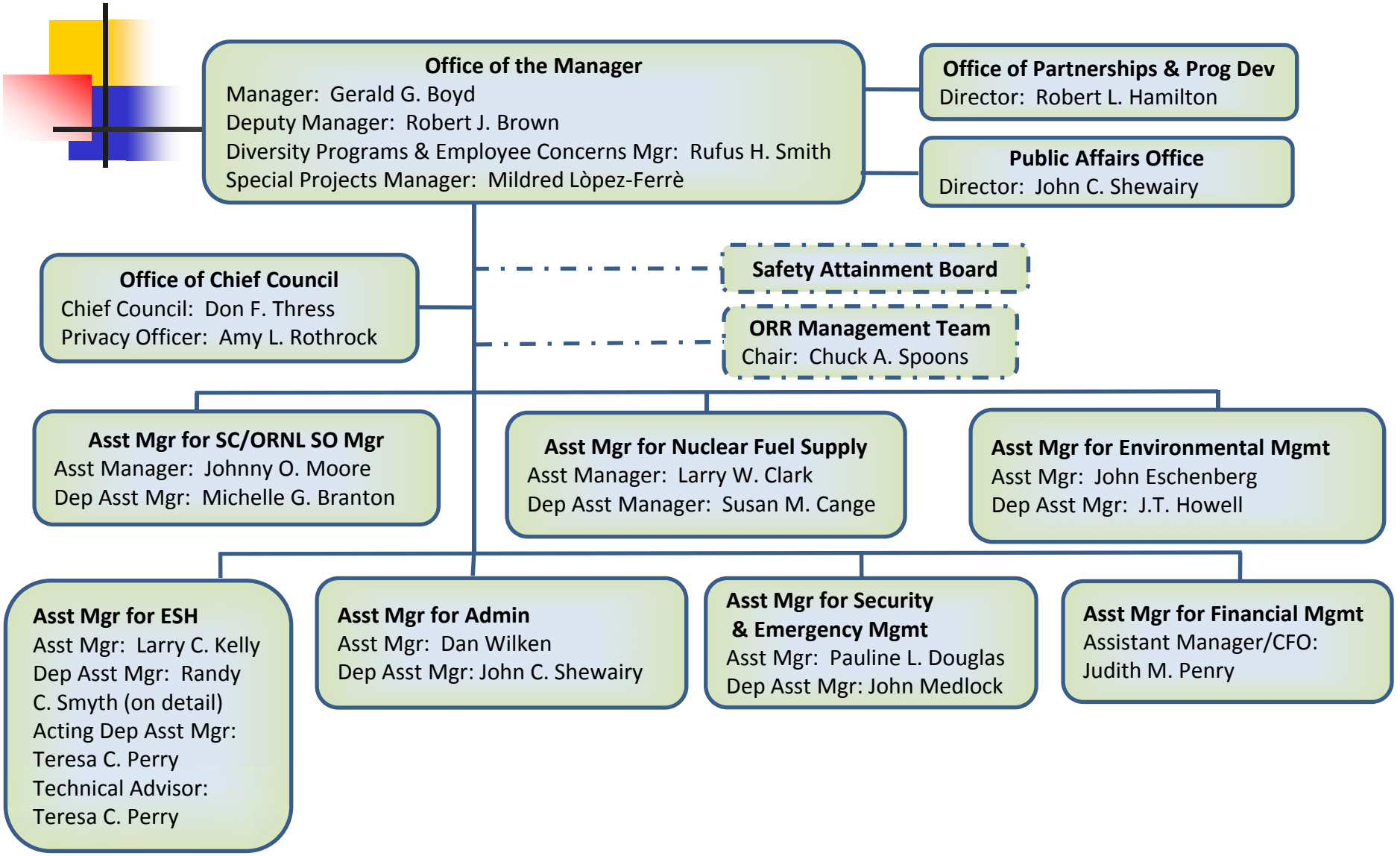
- The field has the authority to appropriately grade the implementation of quality requirements today.
- Grading must be made based on the contract, the contractor, and with regards to safety and overall EM mission.
- The approach that should be adopted is - grading should be specifically called out and specified in the DOE approved QAP/QIP. This ensures that all parties understand the quality requirements and there will be no confusion during oversight activities on either side.

Conclusion (continued)

- Remember:
  - ☞Long term solutions on a short term contract will not work.
  - ☞Maintaining a system in optimum working order, when the end state is to demolish the building is not practical.
  - ☞Formal assessments for the sake of assessments does not provide any benefit to safety or mission accomplishment.
  - ☞Must always keep the end in sight when executing quality requirements as NQA-1 states – focus on the achievement of results, emphasize the role of the individual and line management in achievement of quality and foster the application requirements in a manner consistent with the relative importance of the item or activity.

Backup Slide – Org Chart

ORO ORGANIZATION CHART



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EM-EFCOG Cooperation Strategy

EFCOG Tasks

EM QA Corporate Board Meeting

Chicago, IL

June 9, 2010

EFCOG QA Team Members

- **Leads: Mike Mason, Rich Campbell**
- **Lead for DOE EM: Chris Marden**
- QA/QE - Bob Thompson
- Supply Chain - Paul Bills
- Software QA - Sid Ailes
- QC & Inspection - Bob Carter
- Work Practices - Tim Flake

EFCOG ISM & QA DOE Sponsors

- Pat Worthington - HSS
- Frank Russo - NNSA
- Steve Krahn - EM
- Mike Thompson - NNSA
- Bill Roege - HSS
- Colette Broussard - HSS
- Jeannie Boyle - HSS

EFCOG Posted QA Guidance

http://efcog.org/wg/ism_qa/documents.htm

Under Documents

- Quality Engineering Roles & Responsibilities (11/09/09)
- Supplier Evaluation Program (08/29/08)
- NQA-1 Part II Application (08/06/08)
- Performance Analysis (04/08/08)
- Suspect Counterfeit Parts Alert (10/29/07)
- Effective Quality Improvement Processes (05/02/07)

EFCOG Posting Pending

- Software Engineering Guidance for Research Activities
- QA Program Comparison Matrices

Current EFCOG QA Tasks

- Software QA
  - A framework for assisting DOE contractors in effective graded approaches and impact on software rigor
  - Guidance on Software QA Practices to DOE contractors as applied to the performance of deterministic algorithms using commercial software packages (e.g., SPSS, MathCad, Matlab, Excel, etc.)

Current EFCOG QA Tasks

- ISM Work Control at Activity Level
  - QC & Inspection criteria within work control documents (As part of Work Control Joint DOE-EFCOG Task)
- Prioritizing QC & Inspection Issues Needing Attention
  - Includes inspection training, qualifications
  - Benchmarking QC & Inspection programs

Current EFCOG QA Tasks

- Supply Chain
  - Supplier Qualification & Common Audit Program
  - Includes Vendor Issues & Supplier QA
  - Small contractors & Overseas Suppliers not Planned for this Year but Possibly Next Year

Current EFCOG QA Tasks

Quality Engineering & QA Programs

- QA Program Metrics to Better Quantify QA Program Performance by Leading and Lagging Indicators
- Quality Engineering Process for Assuring Design Criteria for Product Quality is Translated into Supplier and Construction Requirements Resulting in Achieving the Expected Product Quality

EFCOG/EM Partnership

- Approach for partnership
  - EFCOG and EM-23 will coordinate to assign a Federal representative to participate with the EFCOG teams
  - EFCOG will continue to develop the focus area as currently specified
  - Final EFCOG deliverables will be distributed as normal by EFCOG and also presented to the Board for endorsement by EM

Actions Requested from the Corporate QA Board

- Provide Following Focus Areas to EFCOG
  - Inspector training/mentoring and understanding inspector expectations
  - Improve understanding of expectations for safety software and software QA
  - QC & Inspection criteria integration combined with the content of work plans for effectiveness

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Quality Assurance Directives Revision

EM QA Corporate Board Meeting

Chicago, IL

June 9, 2010

HSS Directives Reform Effort

DOE 2010 Safety and Security Reform Plan

- Streamline/clarify requirements to better support DOE Line Management
- Provide for flexibility in implementation
- Be less prescriptive
- Maintain DOE expectations for high standards of security and safety
- Follow DOE O 251.1C

DOE Order 414.1X Major Proposed Changes

- Require the use of NQA-1 for contractors performing nuclear work (i.e. Haz Cat 1, 2, 3 facilities)
  - Allows for an equivalent consensus standard to be used if approved by responsible SO
- Add Federal qualification requirements

Proposed Changes (cont)

- Reiterate QA requirements apply to non-safety software also
- Add Federal requirement for QA manager assigned by each HQ Element and Field Element
- Move CAMP requirements to one of the Worker Safety and Health Directives (e.g., 226.1A)

Proposed Changes (cont)

- Add requirement for Quality Council representation (DOE Field and HQ)
- Reiterate integration of QAP and ISM system description (and other management systems)
- Include requirements for developing a corrective action plan in CRD

Proposed Changes (cont)

- Add responsibility for GC to notify HSS of external legislation and cases before DOJ that may impact DOE S/CI programs
- Refine the S/CI and SQA attachments and corresponding sections of the CRD

Proposed Changes (cont)

- Update safety software QA requirements
  - Assign Federal SSQA leads for each Secretarial Office and Field Element
  - Detail attributes of safety software inventory
  - Establish and document grading levels for safety software

Proposed Changes to Guides

- DOE G 414.1-1B – Remains unchanged
- DOE G 414.1-2A – Update based on DOE O 414.1X revisions; add new IAEA reference for S/CI guidance
- DOE G 414.1-3 – Eliminate Guide and delete reference in DOE O 414.1X

Proposed Changes to Guides (cont)

- DOE G 414.1-4 – Remains unchanged
- DOE G 414.1-5 – Remains unchanged (may be deleted or be revised/moved to be consistent with where CAMP requirements are incorporated)

Actions to Date

- Revised draft DOE O 414.1X - started with last version from 2008-2009 effort
- Draft DOE O 414.1X reviewed by 2010 QA Order writing/review team
- Comments are being dispositioned
- Executive Steering Committee (ESC) being formed
  - SC, Energy and NNSA SES level participation

Actions to Date (cont)

- Directives Review Board approval of Justification Memorandum is pending
- Next phase includes review by HSS, DNFSB, and stakeholders (e.g., Quality Council and EFCOG) and ESC
- RevCom anticipated late summer 2010
- Issuance anticipated early 2011

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Enhance Corporate Operational Awareness of Corrective Action Plan Commitments, milestones, and Implementation Effectiveness

Presented to: EM QA Corporate Board

Dr. Larry W. Perkins

Office of Standards and Quality Assurance (EM-23)

Chicago, IL

June 9, 2010

Corporate Objectives

- Enhance Headquarters/Field Office partnership to accomplish EM mission

- Increase corporate return-on-investment of Quality Assurance (QA) related corrective action plans (CAPs). Corporate strategy is to ensure that:
  - Commitments agreed to in CAPs are responsive to the underlying causes
  - Commitments are implemented consistent with agreed upon milestones and resources
  - Timely effectiveness review is performed to verify and validate root causes have been addressed

- Enhance dissemination and application of lessons learned
  - Provide technical basis and tangible operating experience for use by other projects and sites
  - Support root cause analysis

HQ - Legacy Issues

- There is lack of real-time (or timely) operational awareness of implementation status of CAP commitments.
- Onsite verification of CAPs completion and effectiveness reviews are not consistently performed.
- Development of CAP commitments are not always based on effective root cause analysis.
- Frequent observation of similar or citing of repeat QA issues raise corporate concerns in terms of soundness of CAP development process, effectiveness, and value-added.

EM-20 Corporate Strategy

- Strengthen EM-20's QA assessment process and practices *(EM-HQ SOPP #43)*:
  - Clarity in capturing/communicating the essence and technical basis for QA issues
  - Proactive engagement/partnership with Field QA Managers in early phases of CAP development
  - Greater reliance on root cause analysis (extent of condition) for review/approval of CAPs
  - Requisite Federal staff verification of CAPs completion and final effectiveness review
  - Responsiveness to Field needs and schedules: Clear identification of timelines for EM-23 review
- Improve development of lessons learned and dissemination of CAP experience
  - Ready and ease of access to information and source documents
  - Facilitate information exchange among sites/project
- Leverage Information Technology and other tools to increase efficiencies

Hub Overview

- Web-based--- One of its key attributes is to shed greater transparency and accountability on how EM-20 discharges its QA assessment/audit responsibilities
  - Reflects the institutionalized processes and steps defined in EM-HQ SOPP #43
  - Provides a traceable history and technical basis for HQ-Field-Contractor commitments and decisions
  - Enhances communication and cooperation between EM-20 and the Field Offices
- Enhances the rigor and formalism in identification of QA findings that require CAPs
  - Links each finding to a specific regulatory requirement and expectation—not the auditor's wish list
  - Provides relative significance and priority for findings—Helps management with basis for resource allocation decisions and sense of urgency
  - Identifies repeat findings, and SQA issues—helps with performance analysis
  - Requires root cause analysis for high priority findings– needed for CAP approval
  - Requires supporting documentation for CAP completion, verification, and effectiveness reviews

Hub - Pilot Implementation

- Implemented on a pilot basis in July 2009
  - System populated with 2008 and 2009 audit reports and approved CAPs
  - System demonstrations have been conducted at several sites (RL/SRS/ORP/ID/ORO)
- Positive feedback and suggestions have been received to enhance the system
  - Enhancements in the user interface and notifications
  - Considerations on who should have access to each site
  - Clarifications on timing tracked by the database
  - Reporting and metrics capabilities
  - Potential for site-level use to facilitate implementation of a standardized tool for contractors
- Hub is hosted at the EM Consolidated Business Center
  - Secure server environment
  - Further update and refinements

Hub Demonstration

- http://correctiveactionhub.em.doe.gov

Discussion/Questions

?

EM Environmental Management

safety ❖ performance ❖ cleanup ❖ closure

www.em.doe.gov

EFCOG

Energy Facility Contractors Group

Managing Suspect/Counterfeit Items – The CHPRC Experience

Presented to: EM QA Corporate Board

Presented by: Rick Warriner, CHPRC Quality Systems

Chicago, IL

June 9, 2010

CH2MHILL
Plateau Remediation Company

CHPRC1005-24
HNF-46555

Have you been impacted?

How did it all begin?

- As best as can be determined, the first S/CI fasteners entered the U.S. sometime in 1974. It took until the mid-1980s for the petroleum, aircraft, and nuclear industries to recognize that they had a problem and begin to act.
- These industries issued warnings, criteria, and recommended actions specific to their business needs. They also began to place pressure on the Federal Government to take action.
- By the late 1980s S/CI fasteners had permeated the U.S. market. There were documented events where S/CI caused deaths. The situation was so severe that in 1990 Congress passed the Fastener Quality Act. This was only the beginning...

What has been Hanford's experience with S/CI?

- Since the early 1990s, Hanford has received S/CI bolts, fabrication metal, breakers, HEPA filters, fire system valves, pressure switches, pipe, and many other items. We also received a large number of assemblies containing S/CI components.
- At Hanford, we had the tie down strap effort in 2003, the heat treated aluminum review in early 2004, the forklift problem in 2005, and the weather enclosure hardware issue in 2007

The World Today!

- The International Chamber of Commerce's Counterfeit Intelligence Bureau estimates that 5 to 7 percent of world commerce is counterfeit.
- The World Health Organization estimates that over 10 percent of the medications taken world wide are counterfeit.
- Electrical Industry's Anti-Counterfeiting Products Initiative estimates that counterfeit and pirated products cost U.S. Industry $250 billion a year and result in the loss of over 750,000 jobs

The World Today!

- Since 1991 U.S. paper currency has been in a continuous state of change trying to stay ahead of sophisticated counterfeiting efforts.
- Since 1996 UL has had to change their labeling requirements on listed products three times because of continued counterfeiting.
- Historically excellent suppliers (some with new offshore corporate owners) are no longer supplying the same level of quality that they have in the past.

The Fastener Quality Act (FQA) 15 CFR 280 - 1990

- Requires certain fasteners to conform to specifications to which they are represented.
- Provided accreditation of testing laboratories.
- Required standardized methods for inspection, testing, and certification.
- Provided recordation of manufacturers' insignias.
- Established remedies and penalties.
- Established authority for regulation and enforcement.

What is a Fastener?

- A metallic screw, nut, bolt, or stud having internal or
- external threads, with a nominal diameter of 6 millimeters
- (1/4 inch) or greater, or a load-indicating washer, that is
- through-hardened or represented as meeting a consensus
- standard that calls for through-hardening, and that is grade
- identification marked or represented as meeting a
- consensus standard that requires grade identification
- marking ...

...except that such term does not include any screw, nut, bolt, stud, or load-indicating washer that is

- a part of an assembly
- a part that is ordered for use as a spare, substitute, service, or replacement part unless the part is in a package containing more than 75 of any such part at the time of sale or that part is contained in an assembly kit
- produced and marked as ASTM A 307 Grade A
- produced in accordance with ASTM F 432
- specifically manufactured for use on an aircraft
- manufactured in accordance with a fastener quality assurance system
- manufactured to a proprietary standard

Headmark List

All Grade 5 and Grade 8 Fasteners of Foreign Origin Which Do Not Bear Any Manufacturers' Headmarks:

Grade 5 Grade 8

Grade 5 Fasteners with the Following Manufacturers' Headmarks:

MARK	MANUFACTURER	MARK	MANUFACTURER
J	Jinn Her (TW)	KS	Kosaka Kogyo (JP)

Grade 8 Fasteners with the Following Manufacturers' Headmarks:

MARK	MANUFACTURER	MARK	MANUFACTURER
A	Asahi Mfg (JP)	KS	Kosaka Kogyo (JP)
NF	Nippon Fasteners (JP)	RT	Takai Ltd (JP)
H	Hinomoto Metal (JP)	FM	Fastener Co of Japan (JP)
M	Minamida Sleybo (JP)	KY	Kyoei Mfg (JP)
MS	Minato Kogyo (JP)	J	Jinn Her (TW)
Hollow Triangle	Infasco (CA TW JP YU) (Greater than 1/2 inch dia)		
E	Daiei (JP)	UNY	Unytite (JP)

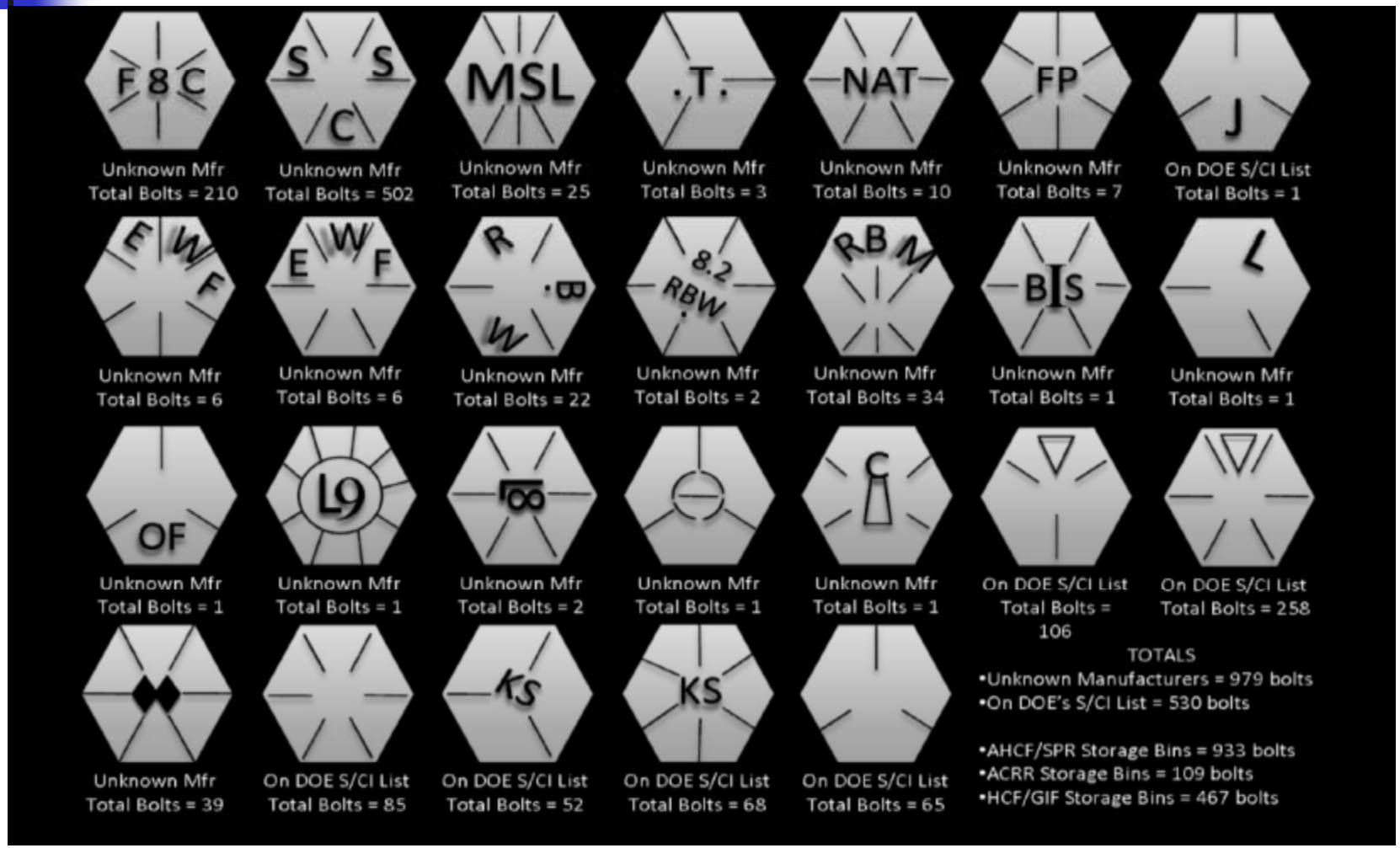
Grade 8.2 Fasteners with the Following Manufacturers' Headmarks:

MARK	MANUFACTURER
KS	Kosaka Kogyo (JP)

Grade A325 Fasteners (Bennet Denver Target Only) with the Following Headmarks:

	MARK	MANUFACTURER
Type 1	A325 KS	Kosaka Kogyo (JP)
Type 2		
Type 3		

Identified S/CI Headmarkings in TA-V's Storage Bins



Our Business Changed

- New contractors bringing new perspectives.
- Historical focus on nuclear safety – cleanup mission with a clear focus on personnel safety.
- Greater emphasis on subcontracting.

Our Business Changed (continued)

- Involving small businesses is important – and expected.
- Influx of ARRA funds – increasing our budget and stretching our ability to control S/CI.
- S/CI problems have changed (Bolts to Bread).

The CHPRC Approach

- Involve Our Staff
  - Target Zero, Morning Safety Analysis Center Call, Quality Center of Excellence, Quality Program Change Training, ISMS Phase I and II Assessment efforts.
- Involve Our Suppliers
  - Essential unless you are prepared to inspect “everything”
  - Contract language critical! Provide training and materials & Technical Support. Focused contract letters if performance falters.
- Involve Our Customer
  - Facility Representative Training & Technical Support.

Thinking Target Zero

Suspect/Counterfeit And Defective Items

Issue 40, July 15, 2009

Be on the lookout...

The Department of Energy requires CHPRC to mitigate the introduction of suspect/counterfeit and defective items (S/CIs) into our projects, facilities and equipment.

These items include:

- High-strength fasteners
- Hoisting and rigging equipment
- Electrical breakers
- Piping
- Relays
- Pressure switches
- Control valves
- Personnel protection equipment

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The CHPRC Quality Assurance organization oversees the S/CI Program for CHPRC. The program oversees the processes associated with S/CIs, such as:

- Identification
- Documentation
- Disposition
- Reporting
- Controlling
- Disposal

The CHPRC S/CI Program is documented in **PRC-PRO-QA-301**, *Control of Suspect/Counterfeit and Defective Items.*

Supervisor Briefing Points

Suspect/Counterfeit and Defective Items

It is the responsibility of every CHPRC employee to be watchful for Suspect/Counterfeit and Defective Items (S/CI). Many times these items can be identified by suspicious marking or packaging, or the material simply looks like it has been used previously.

There are tools for helping identify S/CI materials, such as the "High-Strength Fastener Head Mark" list. In addition, formal training is available for individuals that work in an area with a high probability of encountering S/CI equipment.

If you believe you have a suspect item, inform your supervisor and project Quality Assurance Engineer. The Quality Assurance Engineer can verify whether the item is a S/CI and can document it on a Nonconformance Report (NCR). The item will be segregated from other conforming material, and marked with a red "QC-HOLD" tag.

Due to the vigilance of many Hanford workers, S/CI materials have been identified in a number of active electrical, piping, and structural systems across the Site.

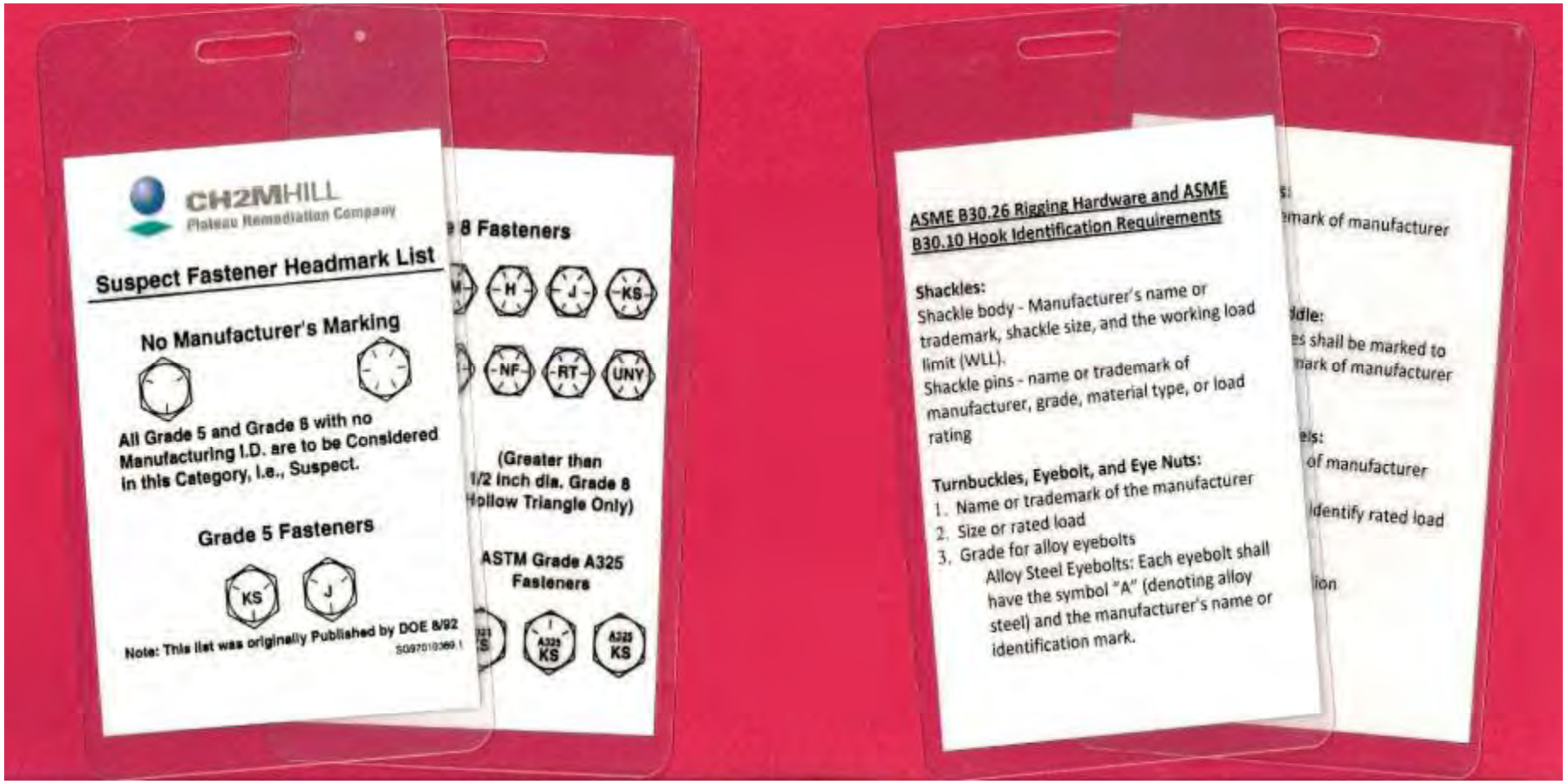
If you have any questions related to the S/CI program, contact the CHPRC S/CI Coordinator, Jim Bolm at 949-9465 or via email at James_G_Jim_Bolm@rl.gov, or Jim Duda at 948-5796 or email at James_E_Duda@rl.gov.

Ask the following questions:

- What items in your work scope could be S/CI?
- What should you do if you suspect an item may be a counterfeit or defective?

Comments and suggestions for issues of *Thinking Target Zero* can be sent via email to ^CHPRC Occupational Safety & Industrial Hygiene

Badge Cards


CH2MHILL
Plateau Remediation Company
Suspect Fastener Headmark List
No Manufacturer's Marking
All Grade 5 and Grade 8 with no Manufacturing I.D. are to be Considered in this Category, i.e., Suspect.
Grade 5 Fasteners
KS
J
Note: This list was originally Published by DOE 8/92
8 Fasteners
H
J
KS
NF
RT
UNY
(Greater than 1/2 inch dia. Grade 8 Hollow Triangle Only)
ASTM Grade A325 Fasteners
A325 KS
A325 KS
ASME B30.26 Rigging Hardware and ASME B30.10 Hook Identification Requirements
Shackles:
Shackle body - Manufacturer's name or trademark, shackle size, and the working load limit (WLL).
Shackle pins - name or trademark of manufacturer, grade, material type, or load rating
Turnbuckles, Eyebolt, and Eye Nuts:
1. Name or trademark of the manufacturer
2. Size or rated load
3. Grade for alloy eyebolts
Alloy Steel Eyebolts: Each eyebolt shall have the symbol "A" (denoting alloy steel) and the manufacturer's name or identification mark.

Subcontractor Training

CH2MHILL
Plateau Remediation Company

How tight are your fasteners?

...or why did it snap.

Presented to: Procurement Forum

Presented by: Rick Warriner
CHPRC Quality Systems Manager

January 2010

One Culture. One Team.

When Performance is Less Than Adequate

January 6, 2010 CHPRC-QA-02

To: Master Drilling Contractors

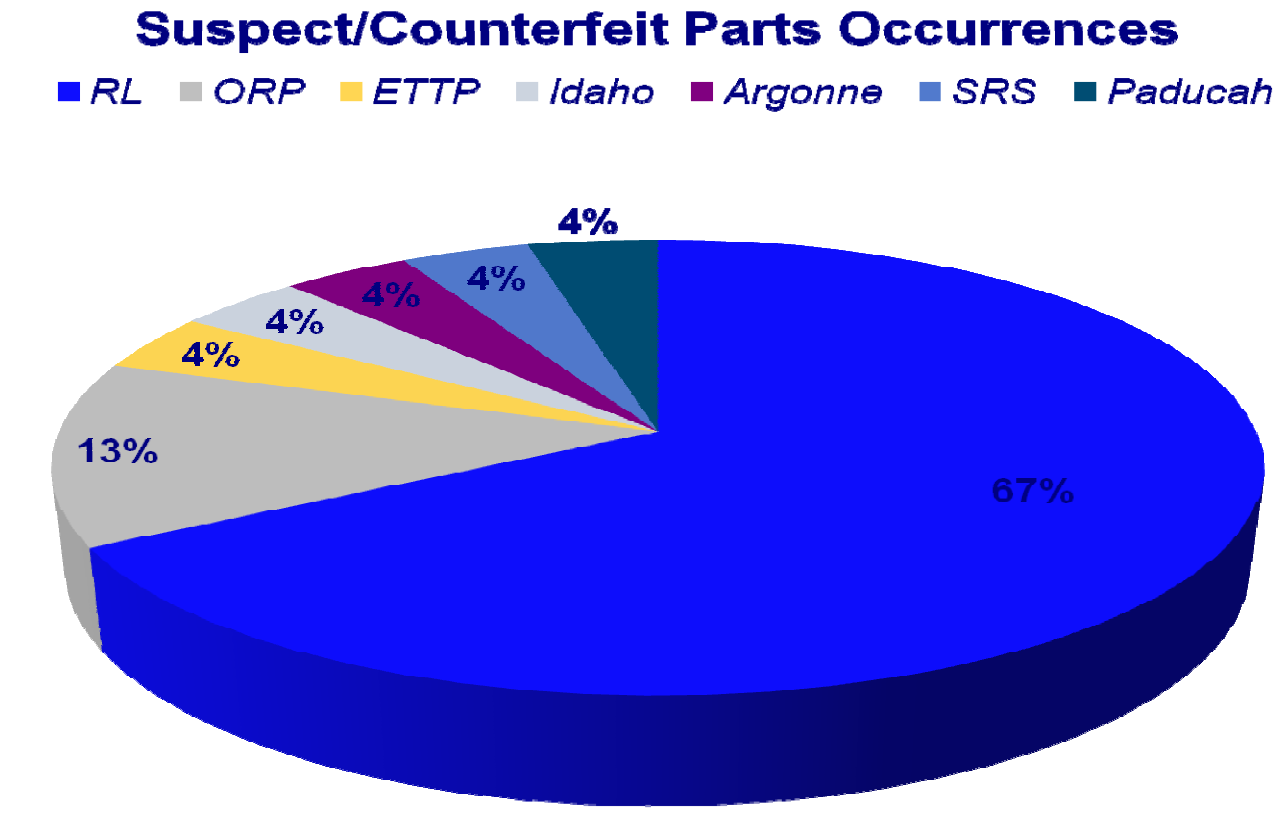
RE: Suspect/Counterfeit Items

CHPRC has seen a significant increase in QC nonconformance and occurrences on site due to suspect/counterfeit items in the last 60 days. In FY2009 there were a total of 6 reports of suspect/counterfeit items within the Drilling program. Attached is a typical example of an NCR and occurrence. CHPRC takes this issue very seriously and continued violations will become an issue. In accordance with your contract, General Provisions, GPR001_PRC, Section 3.10 Counterfeit Fasteners and Components you are to certify and/or furnish proof of the quality, authenticity, application or fitness or use of the items supplied. The SOW Section 3.1.3 Section C also states that you will ensure that Suspect/Counterfeit items, such as non-compliant shackles or fasteners with head marks shown on the S/CI fastener head mark list are not brought onto the Hanford Site.

GPR001_PRC Section 3.4 states that you will inspect all materials which are incorporated into work done on site. Also, you are required to enforce the inspection and suspect/counterfeit provisions on equipment rented from others. We have recently seen a number of suspect/counterfeit items showing up on third party equipment.

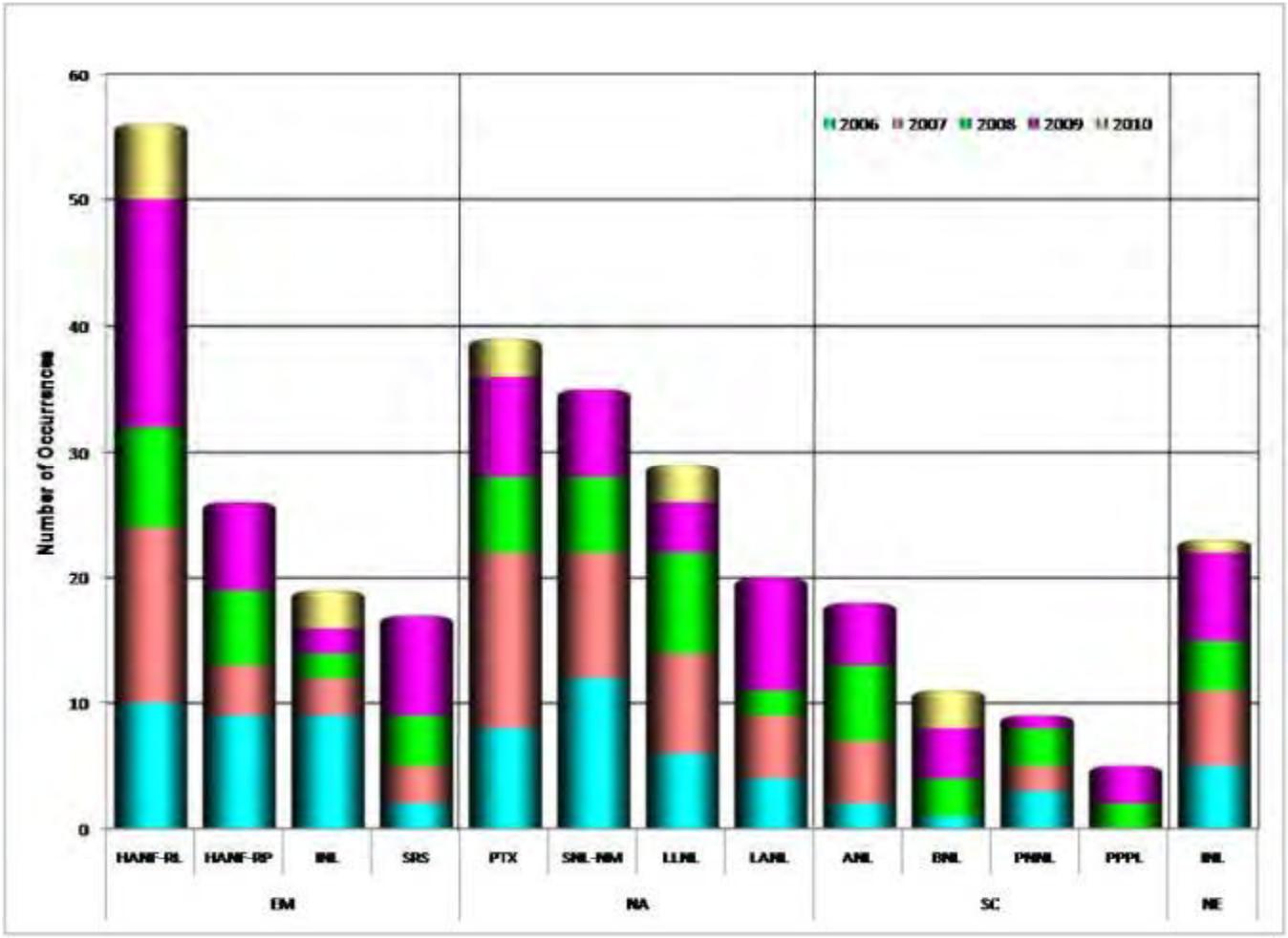
All equipment brought on site (rented or purchased) is subject to these provisions. Obvious suspect bolts or other hardware on rented equipment, trucks, rigs, or tool boxes may be inspected. CHPRC does not plan to dissemble trucks or equipment to locate suspect counterfeit components, but if we identify suspect/counterfeit items they will be confiscated. Let me know if you have any questions.

The Results



Data July 1 to December 22, 2009

The Results


60
50
40
30
20
10
0
Number of Occurrences
2006
2007
2008
2009
2010
HANF-RL
HANF-RP
INL
SRS
PTX
SNL-NM
LLNL
LANL
ANL
BNL
PNNL
PPPL
INL
EM
NA
SC
NE

The Bottom Line

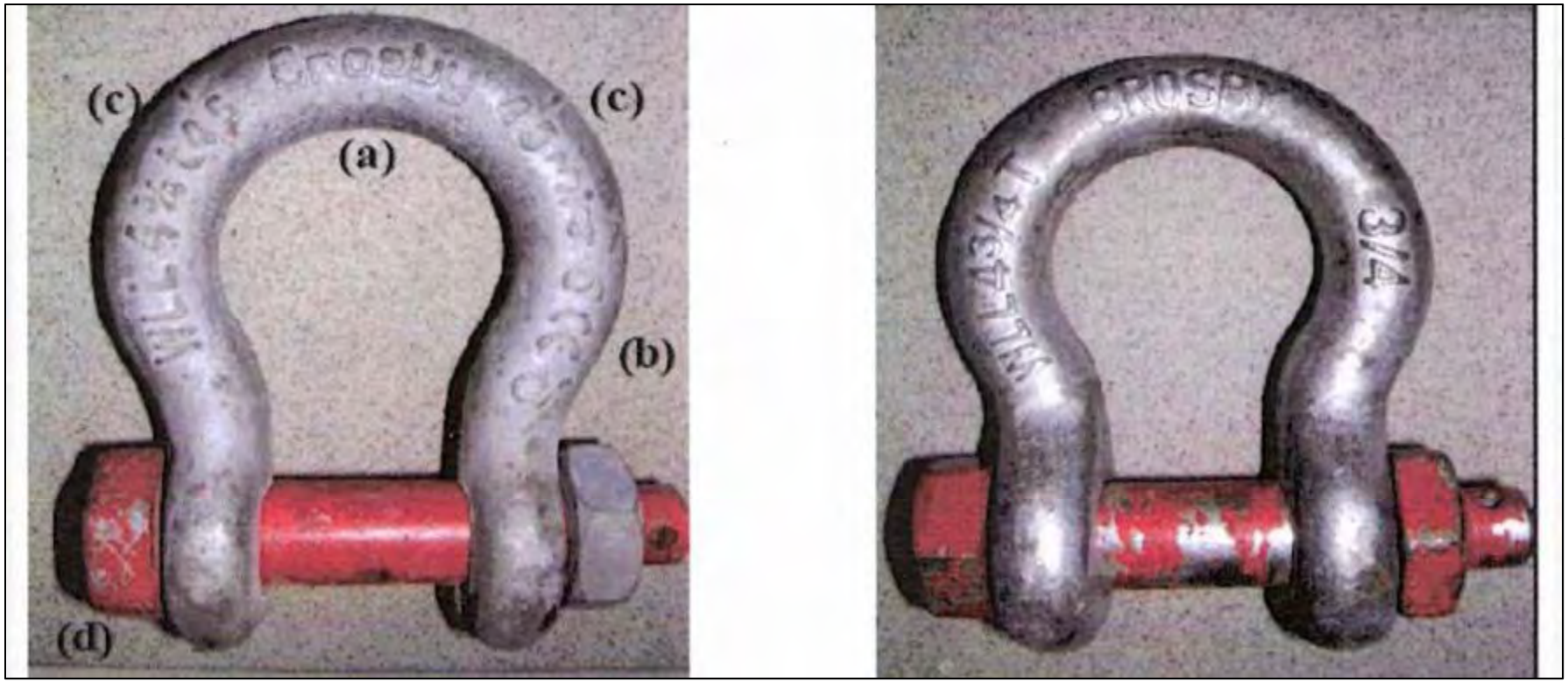
- Current approaches need to be reconsidered, augmented.
- Specific action is needed.
- S/CI problem is ubiquitous, we must keep current.

Questions, Materials or Training

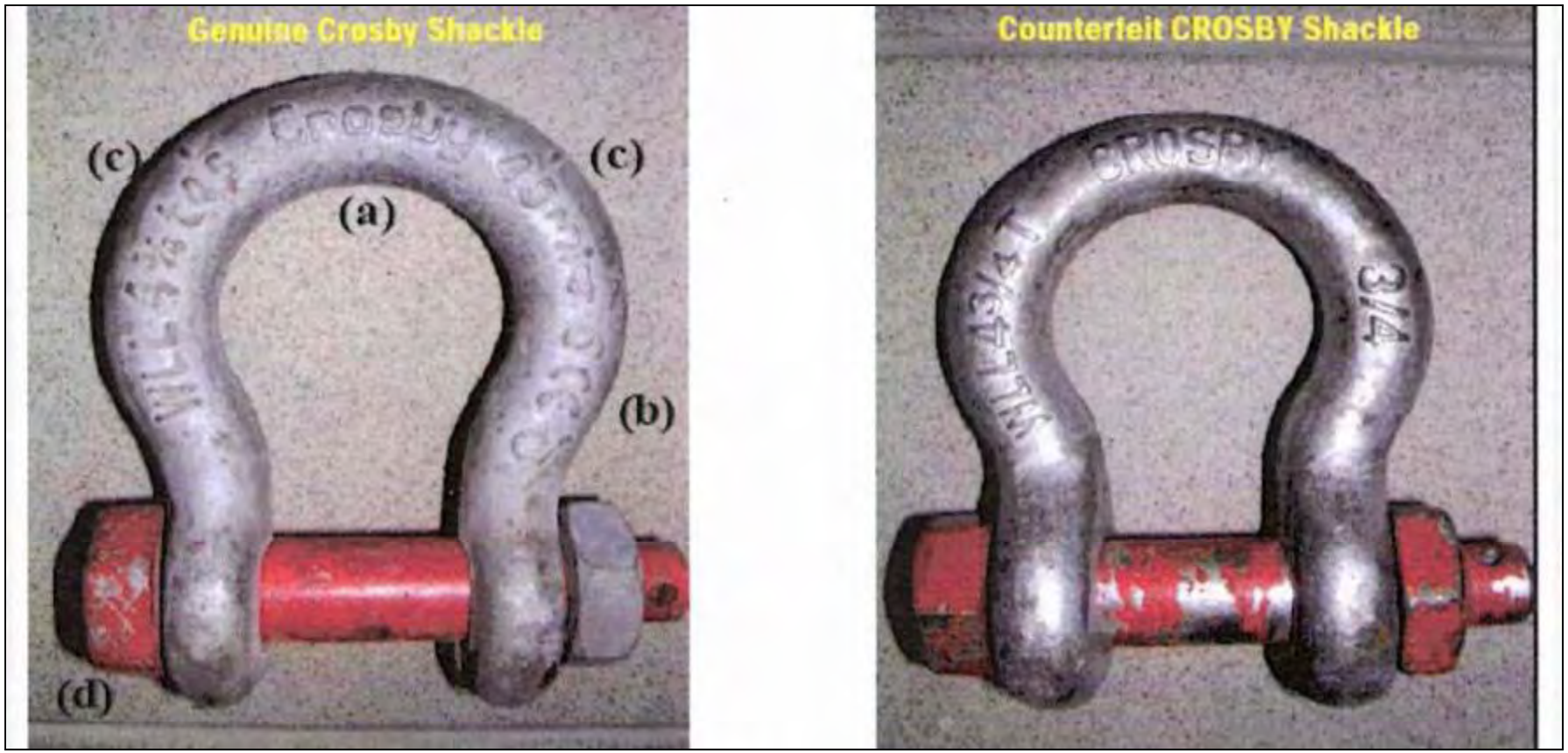
- Rick Warriner,
  CHPRC Quality Systems Manager
  - (509) 376-6956
- Jim Duda,
  Quality Assurance Engineer
  - (509) 376-0727
- Jim Bolm,
  Quality Assurance Engineer
  - (509) 373-1109

Any Questions?

Hoisting and Rigging Equipment



Hoisting and Rigging Equipment (continued)



43652

OOR USE ONLY
A USO EN INTERIORS

MADE IN CHINA
HECHO EN CHINA
Distributed by
Home Depot U.S.A., Inc.,
2455 Paces Ferry Rd., N.W.
Atlanta, GA 30339

640-435

6 923046 216140

Description

1500 Watt Utility Heater includes convenient carry handle and 6' Power Cord. Instant-off tip-over safety switch. Instant-off overheat protection device. Heavy-Gauge Steel Construction. Quick Set Thermostat Controls Room Temperature - Easy Adjustment Control Knobs.

1500 Watts
Instant off safety switches
Easy adjustment control knobs
6' power cord
MFG Brand Name : Workforce
MFG Model # : 640435
MFG Part # : S640435

Specifications

Assembled Depth (In Inches) : 10.43 in
Assembled Height (In Inches) : 15.16 in
Assembled Weight (In LBS) : 7.27 lb
Assembled Width (In Inches) : 8.86 in
Automatic Shut-off : Yes
BTU Heat Rating : 5200 Btu/h
Depth : 8.86 in
ETL Safety Listing : Yes
Fuel Type : Electric
Heater Power Rating : 1500 W
Heater Type : Other
Heating Area : 15 ft²
Remote Control : No
Safety Listing : Yes


ANDERSON GREENWOOD CROSBY, WRENTHAM, MA.
130
BACK PRESS
PSIG


BRAZIL

1969

1991-2003

2010

Tungsten Anyone?

1

2 LISTED
3 CLASS 2 POWER SUPPLY
4 ####

1: UL trademark

2: "LISTED" in capital letters

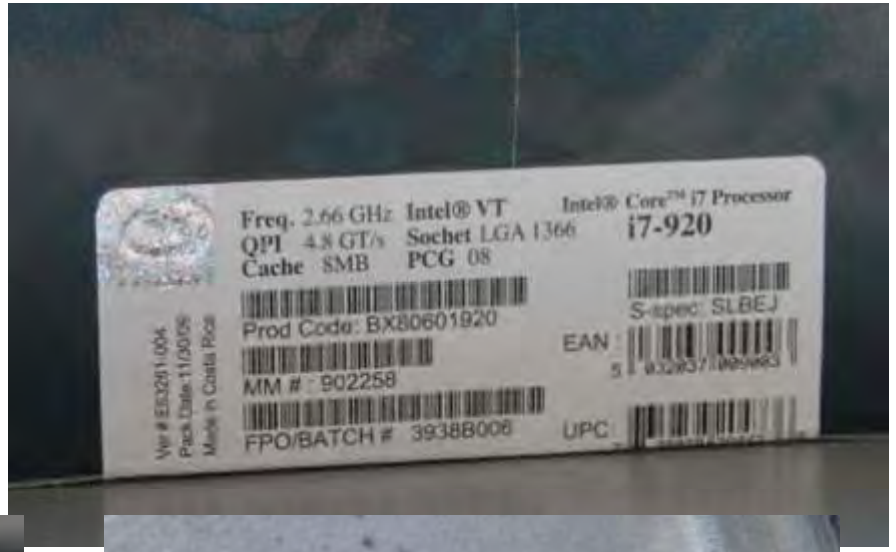
3: Product identity
(optional for molded Marks)

4: Control or issue number

Pre-1997 style

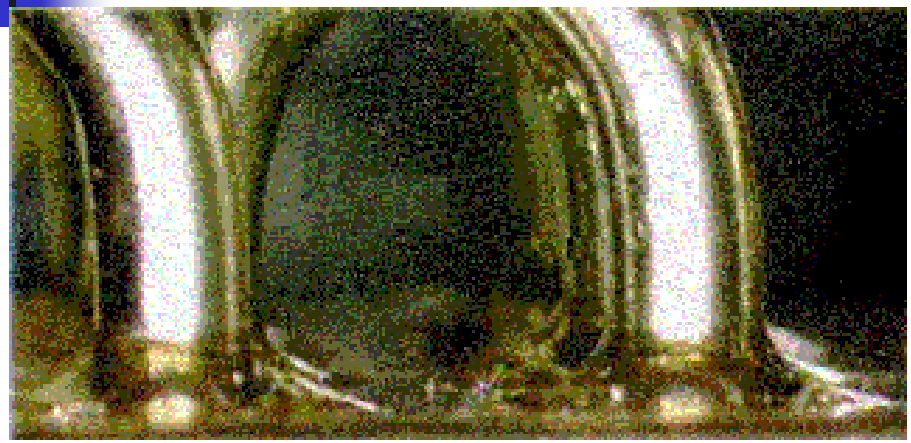
Bolder style

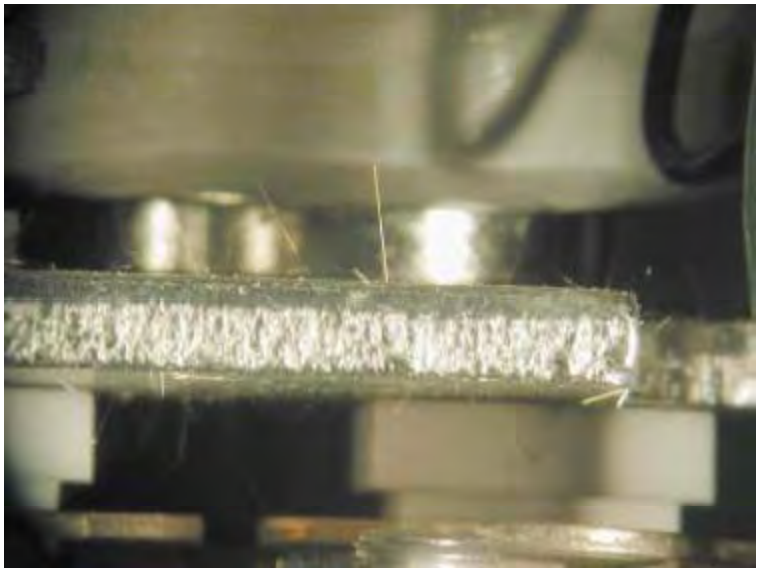
Software and Electronics

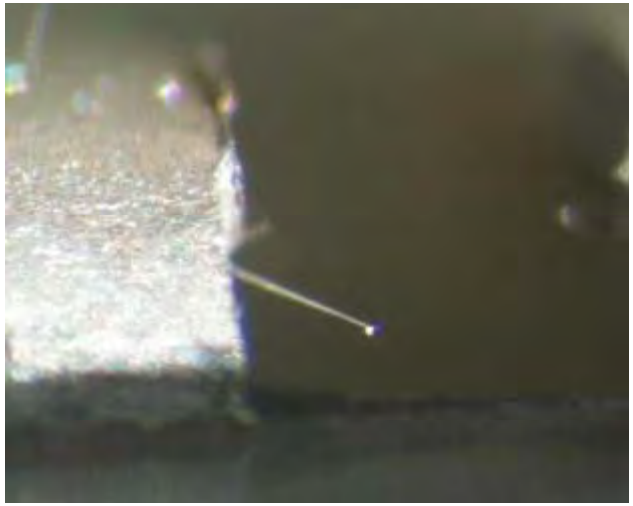


Software and Electronics (continued)

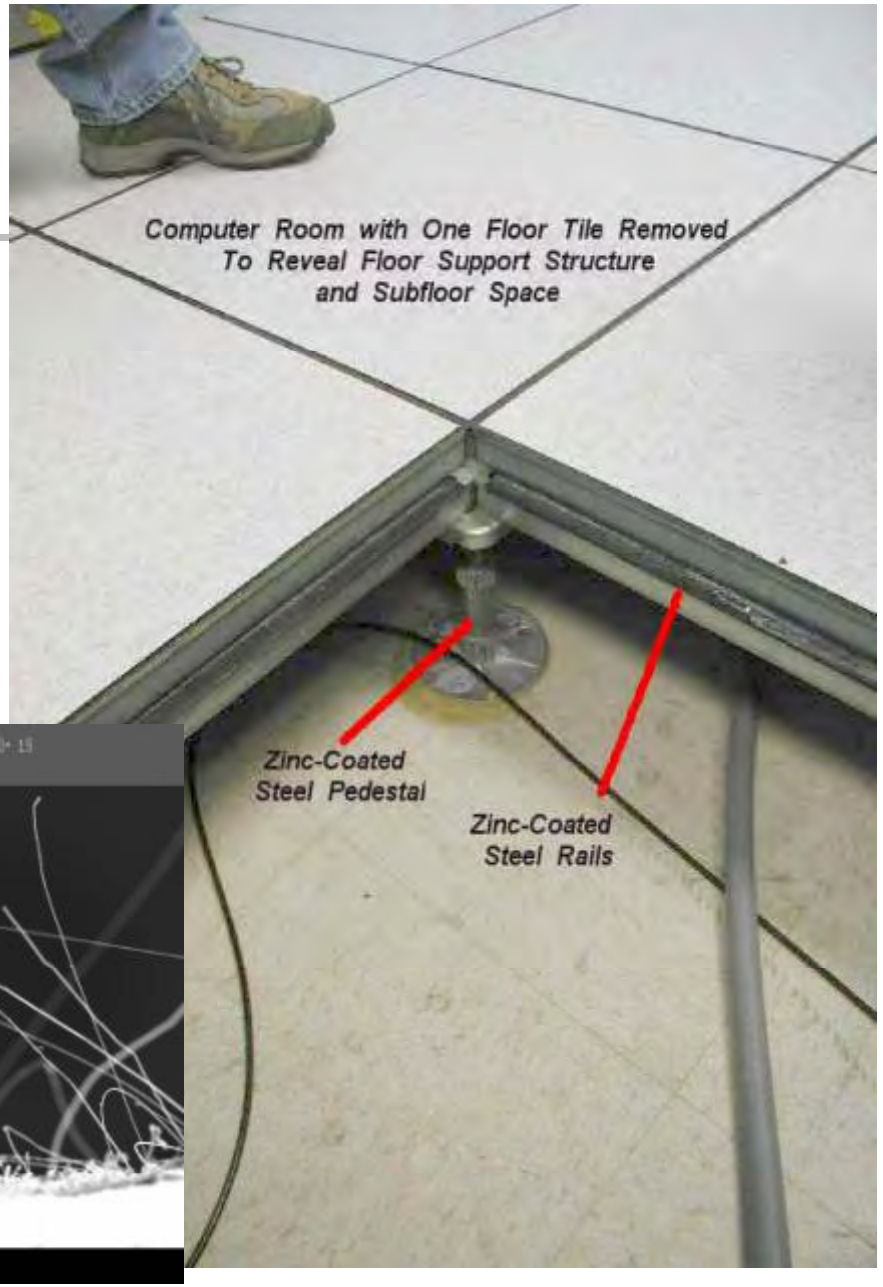
Tin Whiskers







Zinc Whiskers



Environmental Management

safety ❖ performance ❖ cleanup ❖ closure

www.em.doe.gov

Energy Facility Contractors Group

Potential Implications of Recent RW Developments on EM QA Oversight of HLW/SNF Activities

EM QA Corporate Board Meeting
Chicago, IL
June 9, 2010

Yucca Mountain
Current Status

- DOE has submitted a motion to the Nuclear Regulatory Commission (NRC) to withdraw with prejudice its pending License Application for a geologic repository at Yucca Mountain, Nevada
- DOE has established a Blue-Ribbon Commission on America's Nuclear Future to conduct a comprehensive review of policies for managing the back end of the nuclear fuel cycle
  - One of the elements of the charter for Blue-Ribbon Commission is to make recommendations for permanent disposal of SNF and/or HLW, including deep geological disposal.

Quality Assurance Program Governing SNF and HLW

- Memorandum of Agreement (MOA) between EM and OCRWM specifies quality agreements for OCRWM's acceptance of EM's SNF and HLW at Yucca Mountain.

- MOA requires:
  - EM must meet and implement the RW *Quality Assurance Requirements and Description* (QARD) document (DOE/RW-0333P)
  - Periodic audits via joint teams with participants from both EM-HQ and OCRWM
  - Audits can not exceed 3 years interval

Current Sites with HLW/SNF QA Programs

- Hanford, WA
  - Immobilized High Level Waste Program
  - Waste Stabilization & Disposal Project and K-Basins Closure Project SNF Program
- Idaho Falls, ID
  - Calcine Disposition Project
  - Idaho Cleanup Project
  - National Spent Nuclear Fuel Program
  - Licensed Integrated Spent Fuel Storage Installation Program
- Savannah River, SC
  - Defense Waste Processing Facility
- West Valley, NY
  - West Valley Demonstration Project

EM Corporate Strategy

- Continue to implement existing QA programs at the EM sites with SNF and HLW
  - Meet current commitments
  - Ensure integrity and effectiveness of established QA programs for the HLW and SNF programs in such a way as to facilitate final disposition at a future date
  - Maintain the associated records and objective evidence of QA Program implementation for the stabilization, processing, handling, and storage to facilitate final disposition

Path Forward

- Short Term
  - Proceed with audits planned for FY 2010:
    - Immobilized High Level Waste Program at the Office of River Protection (first audit)
    - DWPF at SRS (annual audit)
    - WVDP at West Valley (tri-annual audit)
  - Maintain current QARD programs at the SNF/HLW Sites
  - Pursue alternative infrastructure to replace the current use by EM-HQ of the OCRWM programmatic procedures to conduct QARD audits of HLW/SNF

Path Forward

- Long Term
  - Engage the DOE Office of Nuclear Energy in discussions regarding their future role in the disposition of HLW and SNF
  - Consult with the DOE Office of General Counsel to maintain consistency with the established guidelines of the Nuclear Waste Polity Act, the License Application Withdrawal, and the Blue Ribbon Commission Charter
  - Coordinate with EM-30 and EM-40 to maintain the technical requirements regarding waste acceptance at a geologic repository

Questions and Answers