Table of Contents

8th EM QUALITY ASSURANCE CORPORATE BOARD MEETING

Meeting Location: ***Augusta Marriott Hotel & Suites*** ***Two Tenth Street, Augusta, GA 30901*** **Main Number:** ***706-722-8900***		
Room: ***Check Signs at the Hotel***		
Draft Agenda for September 13, 2010		
1:00	Opening Remarks, Agenda, Introductions, Status of Action Items from Last Board Meeting	Robert Murray (EM-23)
1:20	Cross Cutting Corporate QA Issues	Dr. Steven Krahn (EM-20)
1:50	Focus Area #1 – (NQA-1 Suppliers) – Joint Supplier Evaluation Program Demonstration	Christian Palay (EM-23)
2:20	**BREAK**	---
2:35	Focus Area #2 – (Commercial Grade Items and Services Dedication Implementation) - Commercial Grade Dedication Guidance Briefing	Patrick Carier (ORP)
3:05	Focus Area #3 – (Design Quality Assurance) – Status	Butch Huxford (EM-23)
3:25	Focus Area #4 – (Grading QA for D&D Projects) – Status	Brenda Hawks (ORO)
3:45	**BREAK**	---
4:00	EM HQ Quality Assurance (QA) Assessments	EM-23 Representative
4:30	Yucca Mountain Status Path Forward	Christian Palay (EM-23)
5:00	General Discussion: Path forward with CGD responses NQA-1 Accreditation Discussion	ALL Robert Murray (EM-23) Bud Danielson (CNS)
5:30	**Meeting Adjourn**	

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

Article 3 Goals and Objectives

The Board will ensure that QA programmatic decisions and recommendations promote effective execution and performance of EM projects through the use of the best practices and commonly accepted standards in nuclear industry, as applicable, including:

- Standardization and consistency in the graded establishment and implementation of nuclear QA programs in the EM complex;
- Institutionalization of a QA implementation verification process and proper integration of QA and Integrated Safety Management Systems;
- Validation of site and contractor QA programs consistent with the EM Corporate QA Program, EM-QA-001;
- Validation of High Level Waste/Spent Nuclear Fuel QA programs consistent with DOE/RW-0333P;
- Validation that adequate levels of competent and qualified QA personnel and resources are available to support effective implementation of EM projects;

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

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

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 (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, mission, 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 requirements of EM and the Department priorities established by senior EM leadership.
   d. Serves as Board spokesperson.
   e. Notifies participants of Board meetings.

2. Deputy Chair (Director of the Office of Standards and QA)
   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 agendas and minutes.
   g. Maintains Board records.

Article 7 Board Member Roles and Responsibilities

1. Provides solutions, ideas, and suggestions to meet and remove challenges or barriers, respectively, that affect the mission, as well as the management expectations 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 participate in committee 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 levels of DOE QA staff and contractors trained in QA principles and procedures exist 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:

- 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. Draw resources from their sites of record to support implementation of Board actions.
6. Interact with the Director of the Office of Standards and QA 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 to review general status of EM QA issues and committee activities 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 committee 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.

EM QA Corporate Board Contact List

The contact list was provided separately. Contact Larry W. Perkins at 202-287-5502 for more information.

8TH EM

QUALITY ASSURANCE

CORPORATE BOARD MEETING

Environmental Management

safety ❖ performance ❖ cleanup ❖ closure

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Energy Facility Contractors Group

Welcome & Actions from Chicago Meeting

Robert (Bob) Murray

Director

Office of Standards and Quality Assurance, EM-23

EM Corporate QA Board

Augusta, GA

September 13, 2010

Agenda

- Cross cutting Corporate QA Issues- Dr. Steven Krahn
- Focus Area #1 – JSEP Demonstration - Christian Palay
- Focus Area #2 – Draft CGD Guidance Briefing - Patrick Carier
- Focus Area #3 – Status - Butch Huxford
- Focus Area #4 – Status - Brenda Hawks
- QA Assessments - Phase 2 QAP/QIP, Schedule for Calendar Year 2010, & Resource Constraints – EM-23 Representative
- Yucca Mountain Status Path Forward - Christian Palay
- General Discussion

Status of Action Items from Chicago

Action	Person	Status
Evaluate the possibility of updating the QA resources database online (real-time).	Bob Murray	Complete EM-72 is ready to launch a database online that includes QA resources
Provide a draft copy of response to recent Defense Nuclear Facilities Safety Board letter regarding requirements flow down to the sites for comment.	Steven Krahn	Complete All site managers concurred Response was provided to DNFSB More details in briefing later today
Submit a response to the October 2009 memo for status on Commercial Grade Dedication.	Site Managers	Complete All sites have provided input
Provide a revised lesson learned document based on previous events surrounding Commercial Grade Dedication.	Dave Jantosik	In Progress Effectiveness review in Sept. with updated to lesson learned to follow
Ensure consistency on self-assessments for QAP implementation with OECM guide on staffing resources.	Bob Murray	Complete EM-23 reviewed the memo as part of the online database discussions

Status of Action Items from Chicago

Action	Person	Status
Provide support for populating the corrective action Hub.	Site Managers	In Progress Continue to populate Hub with new assessments, but still need support
Assign a JSEP coordinator.	Site Managers	In Progress Not all sites have identified one
Assign an EFCOG lead for Focus Area #2.	Chris Marden	Complete Dennis Weaver assigned
Evaluate and merge the EFCOG Joint Engineering Working Group with Focus Area #2 as appropriate during development.	Butch Huxford	Complete Topic being addressed by the team
Review and verify Tasks 1 and 2 of the draft project plan for Focus Area #2 are consistent with NQA-1 Subpart 2.14.	Pat Carier	Complete Topic being addressed by the team
Consider incorporating the Commercial Grade Dedication guidance into the next revision to the Standard Review Plan.	Larry Perkins	In Progress Once the guidance is complete, it will be evaluated for the SRP

Status of Action Items from Chicago

Action	Person	Status
Provide a lessons learned document from the status reports on Commercial Grade Dedication as soon as all sites have completed the submittal.	Bob Murray	Complete Included in the packages More detailed discussion later
Review DOE M 413.3-1 as part of the deliverable preparation for Focus Area #3.	Butch Huxford	Complete Topic being addressed by the team
Assign an EFCOG representative to address D&D and configuration management representation on the Focus Area #3 team.	Chris Marden	Complete Robert Thompson assigned
Review the recent Construction Project Review at Idaho which assessed inspections, tests, analyses and acceptance criteria. Consider the results of the review as part of the deliverable preparation for Focus Area #3.	Butch Huxford	Complete Topic being addressed by the team
Add an additional column in the spreadsheet attachment to the project plan for Focus Area #4 to include examples of grading for each req.	Brenda Hawks	In Progress Topic being addressed by the team

Status of Action Items from Chicago

Action	Person	Status
Assign an EFCOG representative to assist in leading Focus Area #4.	Chris Marden	Complete Frederick Leach assigned
Assign representatives to assist in the development and completion of Focus Area #4. (specifically Savannah River and Richland)	Site Managers	In Progress Additional team members have been contacted to help with this focus area. Awaiting input.
GS-R-3, ISO, and NQA-1 Overview with Comparison Matrix and examples of audits results from overseas audits	Chris Marden	In Progress Data collection complete. Draft Paper 75% complete. Draft to be complete for Peer review 9/13/10
Include a review of the SC/I program in the 2010 ISM review/declarations.	Bob Murray	Complete Review criteria provided July 2010
Consider a discussion for the next board meeting to address how DOE sites and contractors can be encouraged to allow the use of NQA-1-2008 with 2009 addenda.	Bob Murray	In Progress EM-23 is currently evaluating the use of 2009 and will issue a memorandum concerning its use

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EFCOG

Energy Facility Contractors Group

Cross Cutting Corporate QA Issues

Dr. Steven L. Krahn

Deputy Assistant Secretary

Office of Safety and Security Program, EM-20

8th EM Corporate QA Board

Augusta, GA

September 13, 2010

Outline

Update on select cross cutting EM corporate QA Issues

- **Flow down**
  - EM response to DNFSB Letter on WTP Flow down Issue, i.e. HPAV
  - EM corporate review of flow down practices:
    - Phase II Verification/Validation of site-specific QAP/QIPs
    - FY 2010 ISM/QA Declaration
- **Suspect/Counterfeit Items (S/CIs)**
  - DNFSB list of 18 questions related to DOE S/CI practices
  - EM Field/site actions relative to RL S/CI approach
- **Commercial Grade Dedication**
  - Analysis of Field/Site responses to EM-2 CGD memorandum (October 2009)
- **Other issues of interest**

Flow down

DNFSB Letter dated May 5, 2010

Concerns regarding QA aspects of hydrogen in piping and ancillary vessels (HPAV) experimental test program

1. Requirements of DOE O 414.1C were not cited by BNI in its subcontract with DEI
2. BNI did not adequately implement QA requirements of NQA-1 2000 Part I

- EM corporate position relative to Flow Down
  - DOE Orders apply only to contractors performing work directly for DOE and do not *automatically* extend to suppliers and subcontractors
  - EM holds prime contractors accountable to ensure performance of work is conducted consistent with contractual requirements and expectations regardless of who performs the work: prime contractor staff, subcontractors, vendors, or suppliers
    - Applicable attributes of the quality program relative to specific work scope must flow down to the subcontractors

Flow down

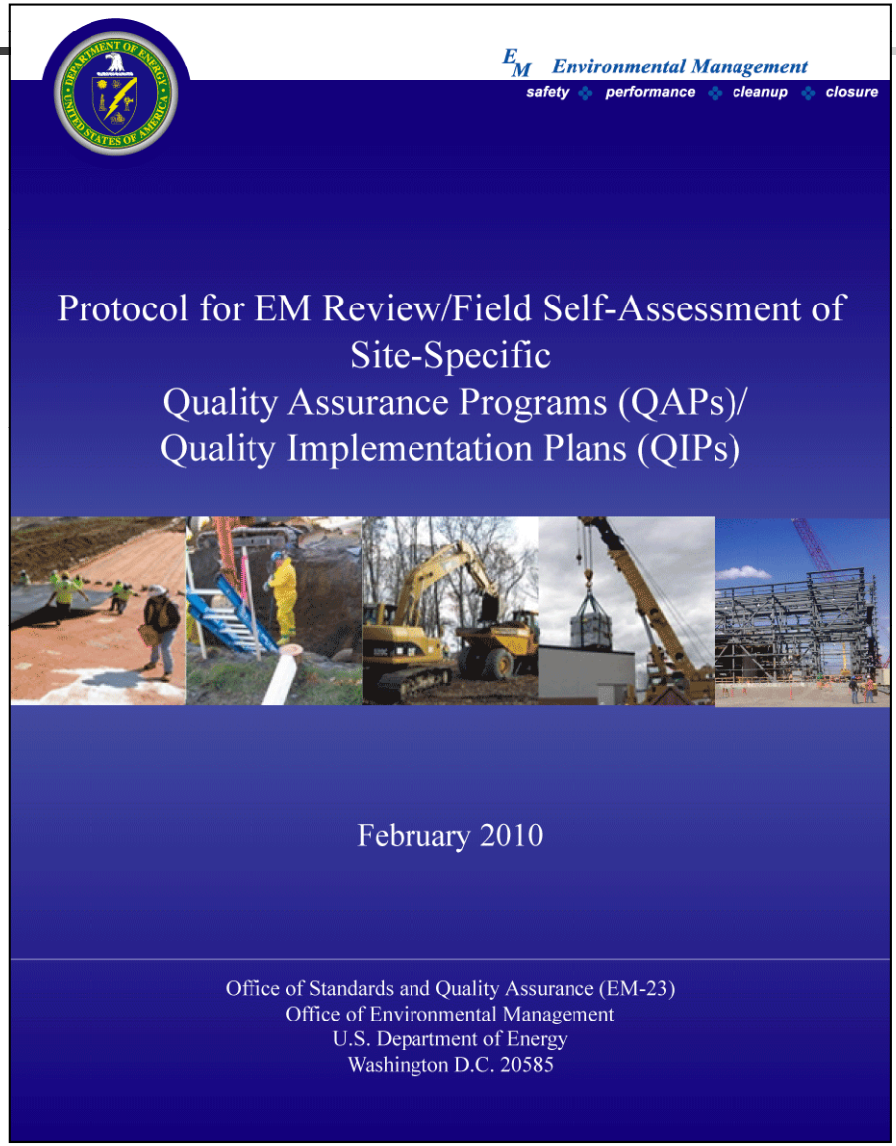
EM Corporate Review of Flow down Practices

- Corporate review of flow down practices is a critical element of Phase II verification/validation of site-specific quality assurance program (QAP)/quality assurance implementation plan (QIP)
  - All Phase II QAP/QIP reviews must be completed by the end of CY 2010
    - All EM sites have in place an approved or conditionally approved QAP for Phase I
  - Phase II corporate QAP/QIP reviews to be conducted as part of a Field/Site led self-assessment– will include EM-23 staff participation
  - Phase II review status:
    - Completed: SRS, West Valley
    - Completed pending EM-23 concurrence: ORO
    - Scheduled: RL, ID, ORP, CBFO, EMCBC

The results of these reviews will be evaluated and provided to the DNFSB

Flow down

Consistent Methodology for Phase II Corporate Review of QAP/QIPs



Prime Contractors

Sub-Contractors

Vendors/Suppliers

Suspect/Counterfeit Items

DNFSB Inquiry and Highlights of responses received to date

- DNFSB Information and Document Request (18 questions): July 20, 2010
- Prompted by Washington Post article regarding DOJ press release on counterfeit Integrated Circuits (IC)
- Based on the preliminary responses (initial report provided to the DNFSB on August 20, 2010)
- General Information/Thoughts Based on the Site Responses
  - Information regarding S/CI, including integrated circuits is passed on to prime contractors
  - Prime contractors determine if any of these items have entered the supply chain
  - Responses provide a baseline of the EM Field Offices approach to S/CI controls
  - Responses show a good, general understanding of the S/CI requirements and responsibilities

Suspect/Counterfeit Items

DNFSB Inquiry and Highlights of responses received to date (cont)

- General Questions/Concerns
  - The responses are not clear in how the approach would identify S/CI components purchased by subcontractors and their sub-tiers
  - Reporting (e.g., IG and HSS) was not clearly indicated in each response
- S/CI reviews will be considered to further evaluate the programs with a likely emphasis on electronics
- Additional information may be requested based on briefings to the DNFSB Staff

Suspect/Counterfeit Items

Interim Status of Site Responses to the 18 Questions by DNFSB

DNFSB Question	Responses Provided by EM Field/Sites							
	RL	ORO	ORP	SRS	CBC	ID	CBFO	PPPO
1	X	X	X	TBD	TBD	X	X	X
2	X	X	X	TBD	TBD	X	X	X
3	X	X	X	TBD	TBD	X	X	X
4	X	X	X	TBD	TBD	X	X	X
5	X		X	TBD	TBD	X	X	X
6	X		X	TBD	TBD	X	X	X
7	X		X	TBD	TBD	X	X	X
8	X		X	TBD	TBD	X	X	X
9	X		X	TBD	TBD	X	X	X
10	X		X	TBD	TBD	X	X	X
11	X		X	TBD	TBD	X	X	X
12	X		X	TBD	TBD	X	X	X
13	X		X	TBD	TBD	X	X	X
14		X		TBD	TBD	X	X	X
15		X		TBD	TBD	X	X	X
16		X		TBD	TBD	X	X	X
17		X		TBD	TBD	X	X	X
18		X		TBD	TBD	X	X	X

Related EM Corporate Commitments
S/CI – Flow down

- S/CI
  - 7th Corporate Board action item - Sites committed to evaluate their effectiveness approach as part of Phase II V/V and compare those results to the information presented by Richland
  - July 23, 2010 Memo - EM-20 asked the sites to use the 2010 Annual ISM/QA Declaration to document the S/CI results
- Flow-Down
  - August 31, 2010 Memo – EM-20 emphasized the use of the 2010 Annual ISM/QA Declaration to document flow-down results and asked the sites to emphasize flow-down during the Phase II QAP/QIP Self-Assessments
  - Criterion 8: FY 2010 Annual Integrated Safety Management and QA Declaration *Discuss how DOE assures that contractual requirements, including ISM and QA, are being applied for all work levels including prime contractors, subcontractors, and vendors. As part of the QA discussion, specifically address the flow-down of requirements from EM Corporate QA Program, EM-QA-001.*
  - Phase II Assessments and Information from the 2010 ISM/QA Declaration are *EM Commitments to the DNFSB -* Due date: December 2010

Commercial Grade Dedication
Field/Site Self-Evaluation

- 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
- Responses received from the following sites with varying degree of specificity and detail
  - Carlsbad Field Office (CBFO),
  - Idaho Operations Office (DOE-ID),
  - Oak Ridge Office (ORO),
  - Office of River Protection (ORP),
  - Portsmouth/Paducah Project Office (PPPO),
  - Richland (RL),
  - Savannah River (DOE-SR),
  - MOAB UMTRA, and
  - West Valley Demonstration Project (WVDP).

Field / Site Self-Evaluation of CGD

Highlights

Some sites indicated that:

- adequate training and qualifications have not been met for their CGD programs
- the existing program documentations do not clearly identify the correct steps or actions
- the site vendors/suppliers do not have a documented CGD process in place
- not all QA or Engineering personnel have had CGD training
- there is a disconnect in flow down of requirements
- the Field CGD oversight is lacking---there is lack of appreciation of the findings and conclusions

Field / Site Self-Evaluation of CGD

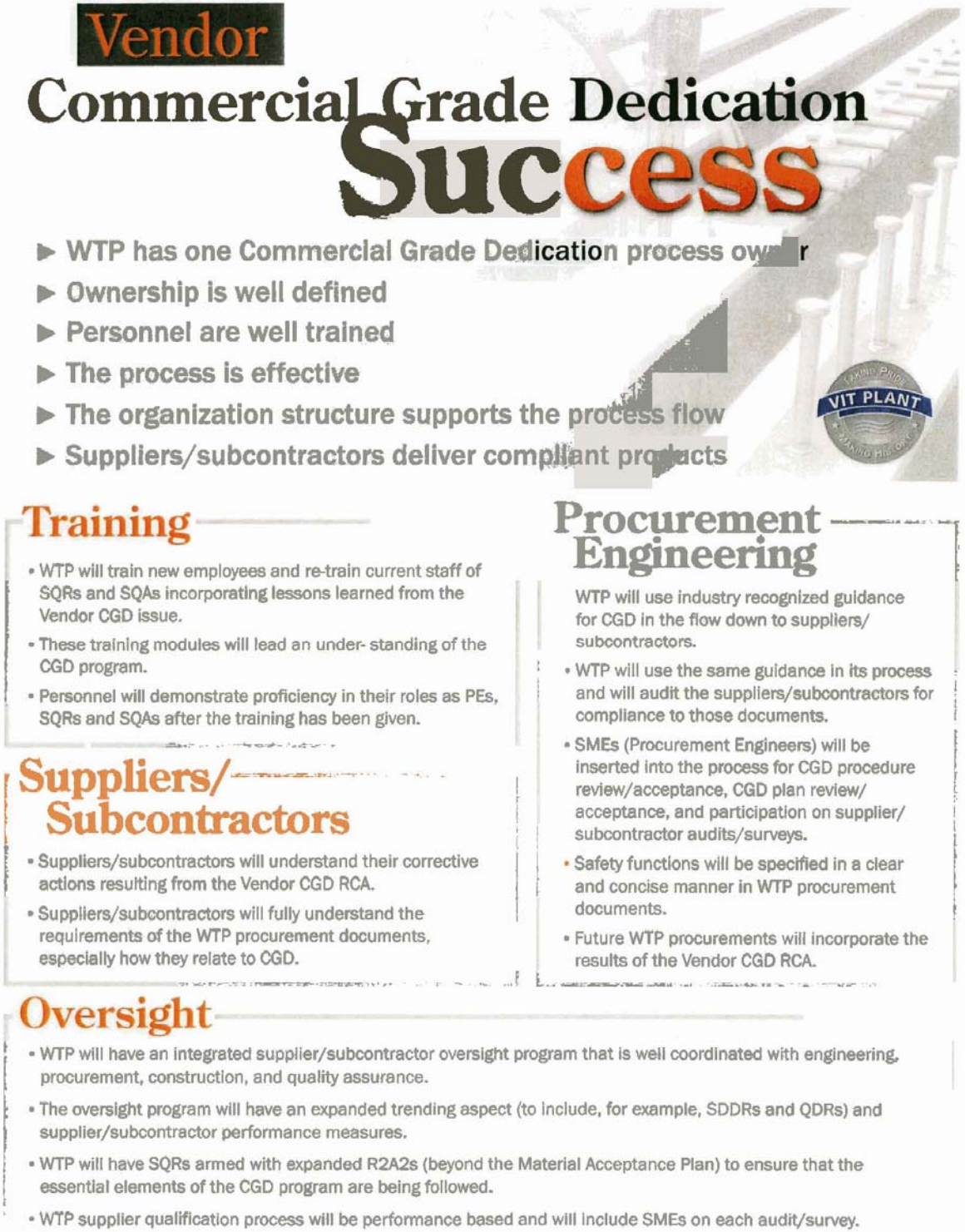
Highlights

- Noteworthy Site-Specific Practices:
  - Establishment of Vendor Review Board to evaluate and assess vendors
  - Assignment of a dedicated project manager to assess every vendor's CGD knowledge, procedure, and work practices
  - Use of multidisciplinary independent review teams
  - Performance of root cause analysis and reporting of issues to Nonconformance Tracking System (NTS)
  - Documented description of methods used for CGD by all suppliers
  - Confirmed initial supplier and sub-supplier qualification

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.*"



High Level Waste/Spent Nuclear Fuel

- EM senior leadership has determined that maintaining regulatory stability and the preservation of capital investment already made is in the best interest of EM mission pending further direction from the Secretary and results of the Blue Ribbon Commission recommendations on alternative disposal strategies
  - Prevent any QA programmatic instability or gaps in EM's mission commitments
- Interim Policy is to continue our current practices with Revision 20 of DOE/RW-0333P (Memorandum from EM-1/2 has been drafted and is in the approval process)
- Further details to be provided by Christian Palay

Other Issues of Interest

- Presentation at the ISM Champions Workshop regarding EM Corporate Board and its strategic role in advancing EM's mission
  - Tangible products and measurable contribution
- Progress on promoting regulatory stability and strengthening technical rigor
  - EM Standard Review Plan SRP Review Modules posted online http://www.em.doe.gov/Pages/StandardReviewPlanModules.aspx
  - SRP Critical Decision Pocketbook signed by EM-1
    - Key questions to ask during program review meetings!
    - Hardcopies sent to Field Office Managers and FPDs

Energy Facility Contractors Group

Focus Area #1

NQA-1 Suppliers – Joint Supplier Evaluation Program Database Presentation

Office of Standards and Quality Assurance, EM-23

EM Corporate QA Board

Augusta, GA

September 13, 2010

Outline of Briefing

- Screenshot presentation of the Joint Supplier Evaluation Program database
- Challenges in program development
- New approach for JSEP development


Joint Supplier Evaluation - Windows Internet Explorer provided by Idaho National Laboratory
File Edit View Favorites Tools Help
https://aqlacpportal.inl.gov/portal/server.pt?open=512&objID=381&mode=2&in_hi_userid=18095&cached=true
Joint Supplier Evaluation
Page Tools
Search: Everywhere
Environmental Management
EFCOG
My Home
Browse Directory
My Account
Administration
Edit this Community
You are logged in as
Brown, David C (BROWNDC)
Log Off
My Pages
My Communities
Browse Directory
Administration
Edit this Community
Joint Supplier Evaluation
Home
Evaluation System
Reference Materials
Calendar
Collaboration
Joint Supplier Evaluation
The Joint Supplier Evaluation Program (JSEP) is comprised of representatives from Department of Energy (DOE) and the Energy Facility Contractors Group (EFCOG) Contractors. This homepage houses program documentation used in the execution of JSEP policy and procedures. Furthermore, this homepage houses supplier related information that is considered "Official Use Only" and therefore controlled accordingly.
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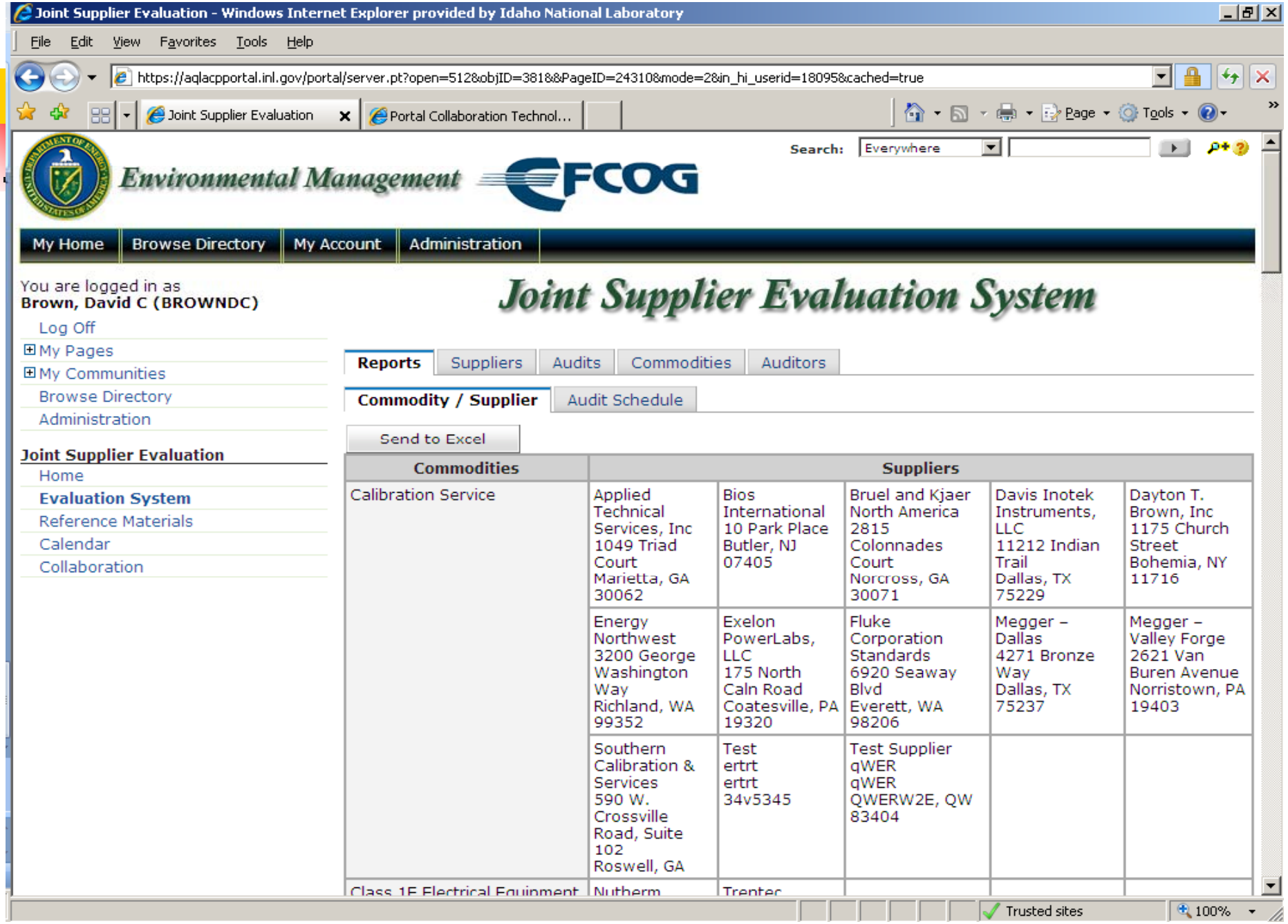
Done
Trusted sites
100%


Joint Supplier Evaluation - Windows Internet Explorer provided by Idaho National Laboratory
File Edit View Favorites Tools Help
https://aqlacpportal.inl.gov/portal/server.pt?open=512&objID=381&&PageID=24310&mode=2&in_hi_userid=18095&cached=true
Joint Supplier Evaluation
Portal Collaboration Technol...
Page Tools
Search: Everywhere
Environmental Management
FCOG
My Home
Browse Directory
My Account
Administration
You are logged in as
Brown, David C (BROWNDC)
Log Off
My Pages
My Communities
Browse Directory
Administration
Joint Supplier Evaluation
Home
Evaluation System
Reference Materials
Calendar
Collaboration
Joint Supplier Evaluation System
Reports
Suppliers
Audits
Commodities
Auditors
Commodity / Supplier
Audit Schedule
Send to Excel
Commodities
Suppliers
Calibration Service
Applied Technical Services, Inc 1049 Triad Court Marietta, GA 30062
Bios International 10 Park Place Butler, NJ 07405
Bruel and Kjaer North America 2815 Colonnades Court Norcross, GA 30071
Davis Inotek Instruments, LLC 11212 Indian Trail Dallas, TX 75229
Dayton T. Brown, Inc 1175 Church Street Bohemia, NY 11716
Energy Northwest 3200 George Washington Way Richland, WA 99352
Exelon PowerLabs, LLC 175 North Caln Road Coatesville, PA 19320
Fluke Corporation Standards 6920 Seaway Blvd Everett, WA 98206
Megger – Dallas 4271 Bronze Way Dallas, TX 75237
Megger – Valley Forge 2621 Van Buren Avenue Norristown, PA 19403
Southern Calibration & Services 590 W. Crossville Road, Suite 102 Roswell, GA
Test ertrt ertrt 34v5345
Test Supplier qWER qWER QWERW2E, QW 83404
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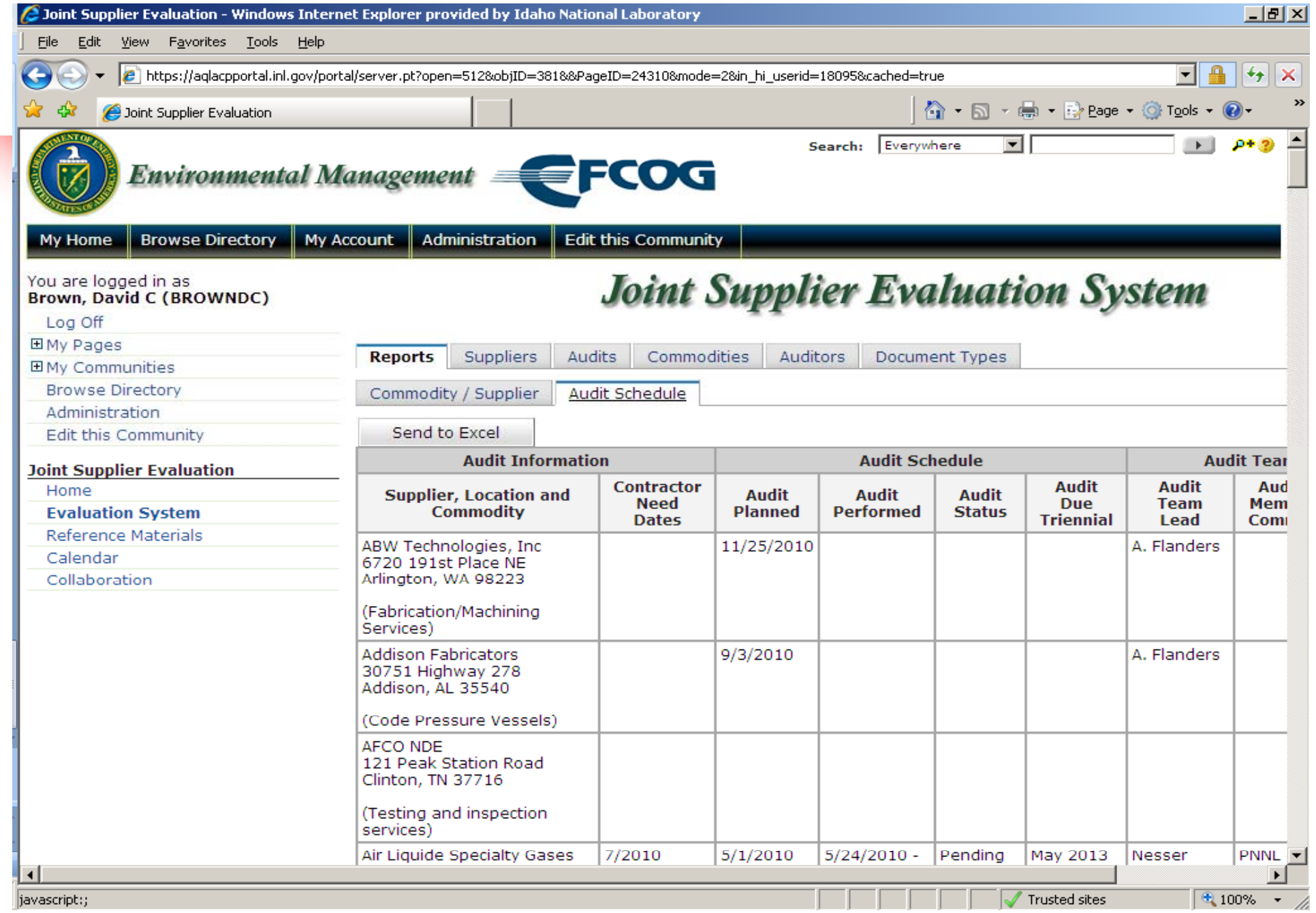
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Arlington, WA 98223
(Fabrication/Machining Services)
11/25/2010
A. Flanders
Addison Fabricators
30751 Highway 278
Addison, AL 35540
(Code Pressure Vessels)
9/3/2010
A. Flanders
AFCO NDE
121 Peak Station Road
Clinton, TN 37716
(Testing and inspection services)
Air Liquide Specialty Gases
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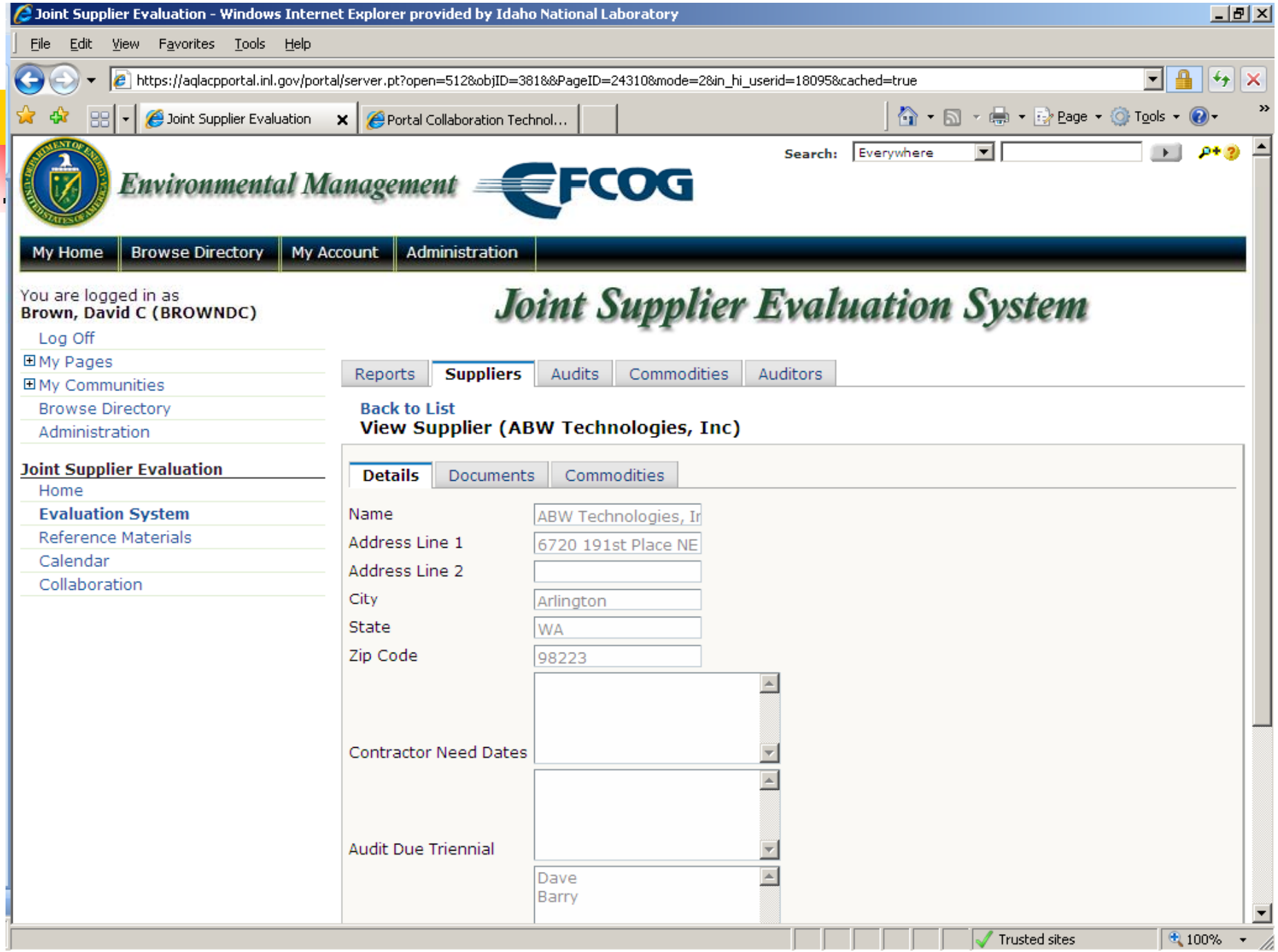
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ABW Technologies, Inc 9/1/2010 9/15/2010 A. Flanders
ABW Technologies, Inc 9/1/2010 Bills
Central Research Laboratory 7/31/2010 Hendrickson
Canberra Industries 6/30/2010 Nesser
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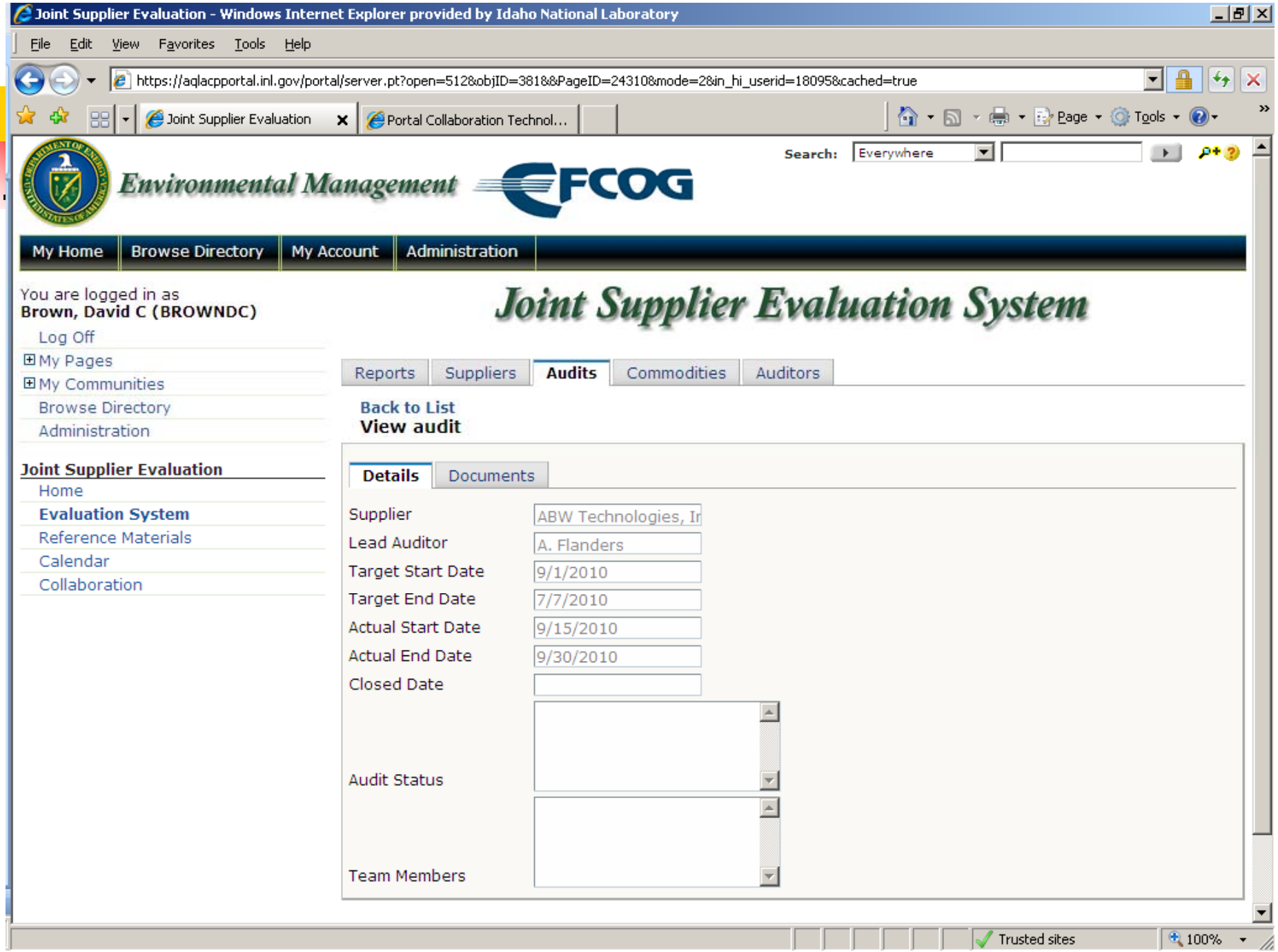
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Code Pressure Vessels
Compressed Gases
Containers (Boxes)
Containers (Drums)
Electrical Properties Testers
Engineering and design
Fabrication/Machining Services
Fasteners
Filters
Hazardous and non-hazardous waste management/transportation
Hoisting/Rigging Equipment
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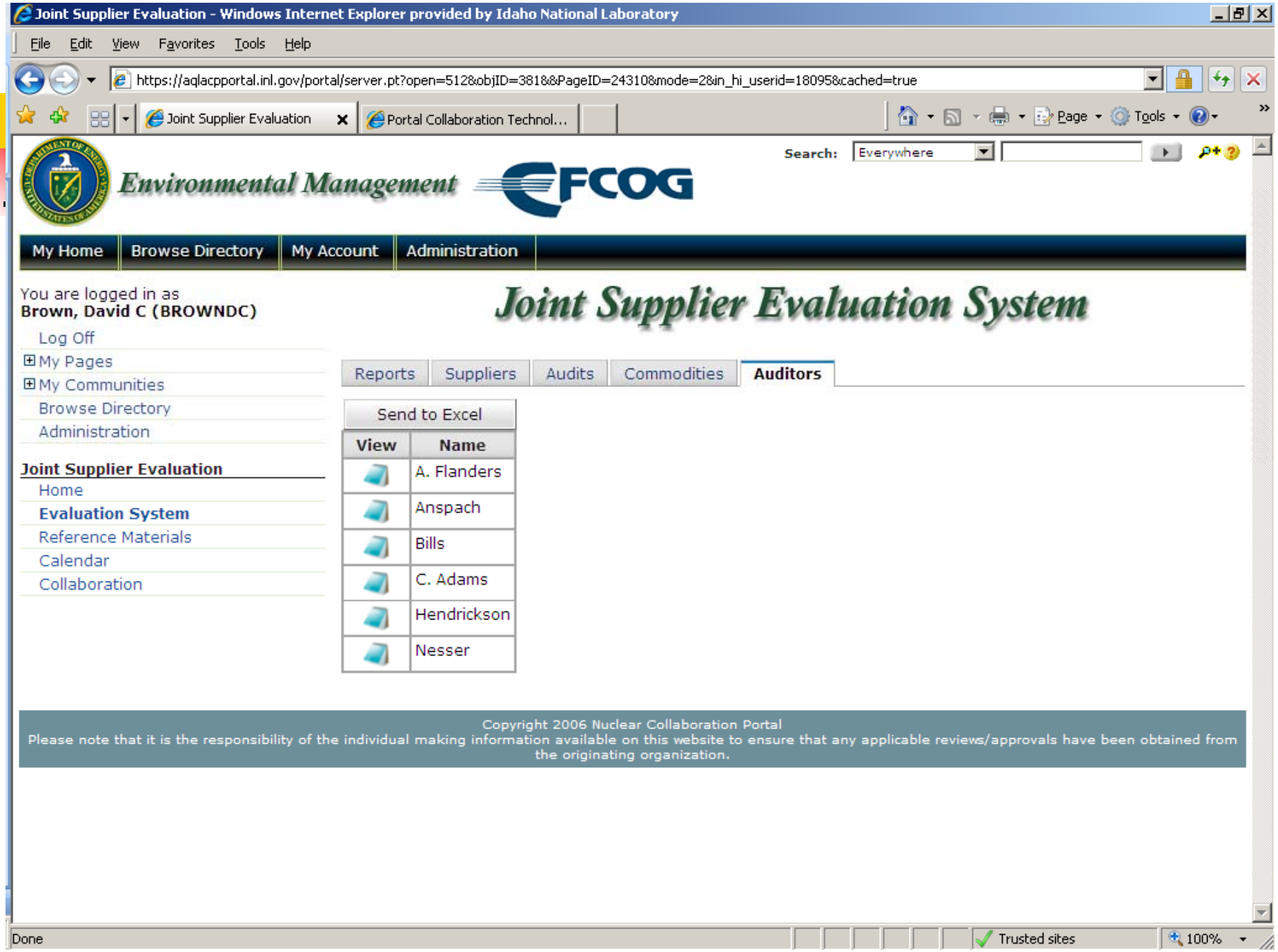
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Updates – Sites Committed to Support with POCs

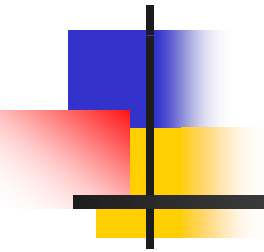
- Carlsbad –
  - Washington TRU Solutions
- Hanford –
  - Washington River Protection Solutions
  - CH2MHill Plateau Remediation
  - Washington Closure Hanford
  - Waste Treatment Project
- Idaho –
  - Bechtel-BWXT
  - CWI
- Oak Ridge –
  - Bechtel Jacobs
  - ISOTEK
- Portsmouth and Paducah
  - UDS
  - LPP
- Savannah River Site –
  - Savannah River Remediation (SRR)
  - Savannah River Nuclear Solutions (SRNS)
  - SWPF-Parsons

Adjustments

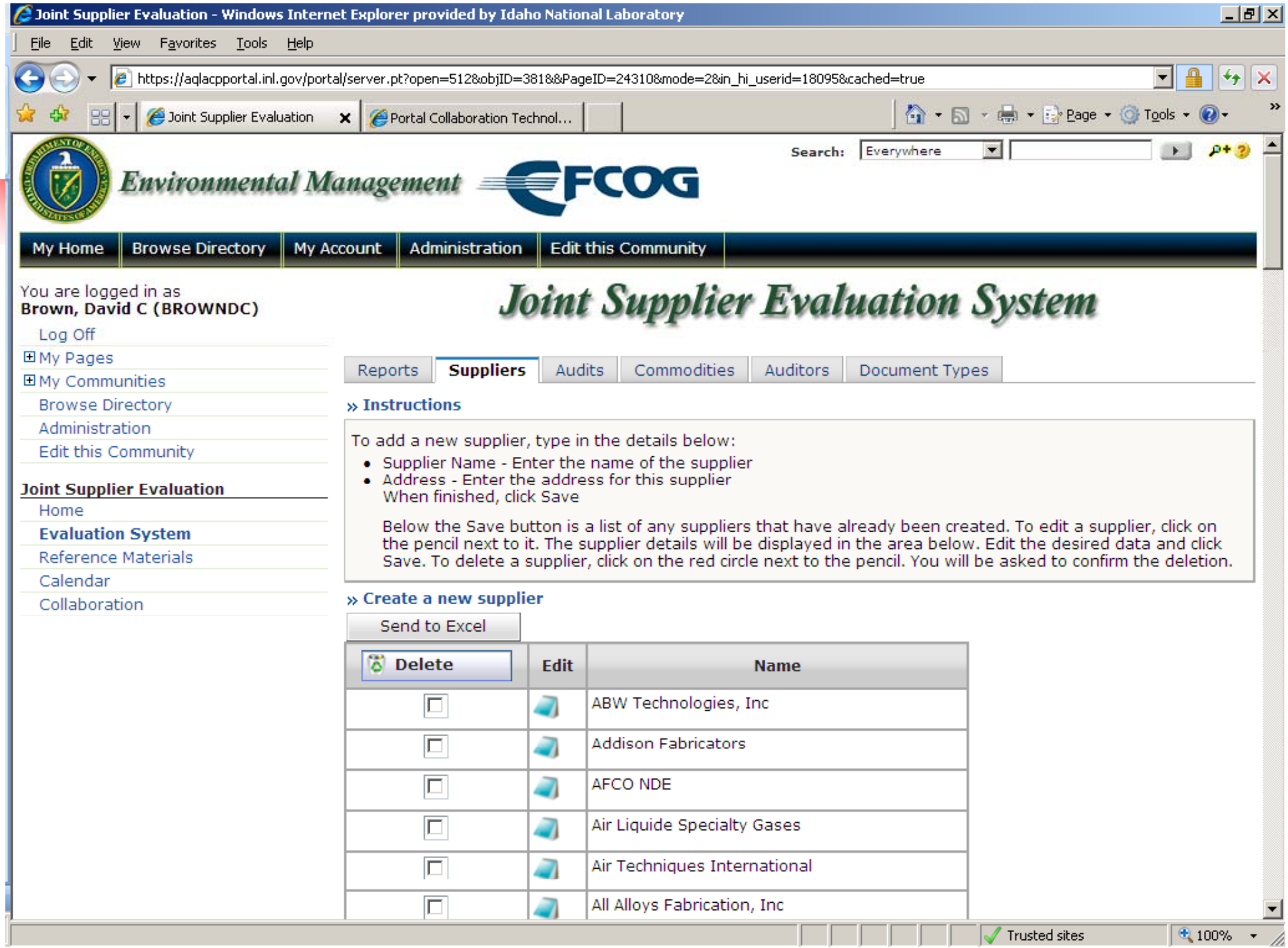
- Milestones:
  - POC coordination meeting – By early October 2010
  - Roles and Responsibility paper – By mid January 2011
  - FY 2011 Pilot Schedule – by end of February 2011
  - Pilot Assessment – by end of March 2011
  - List of common vendors – by end of December 2011

NQA-1 Suppliers – Joint Supplier Evaluation Program Database Presentation

Questions?



Back-up Slides
Administrator's View of the JSE System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Supplier Name - Enter the name of the supplier
Address - Enter the address for this supplier
When finished, click Save
Below the Save button is a list of any suppliers that have already been created. To edit a supplier, click on the pencil next to it. The supplier details will be displayed in the area below. Edit the desired data and click Save. To delete a supplier, click on the red circle next to the pencil. You will be asked to confirm the deletion.
» Create a new supplier
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Air Techniques International
All Alloys Fabrication, Inc
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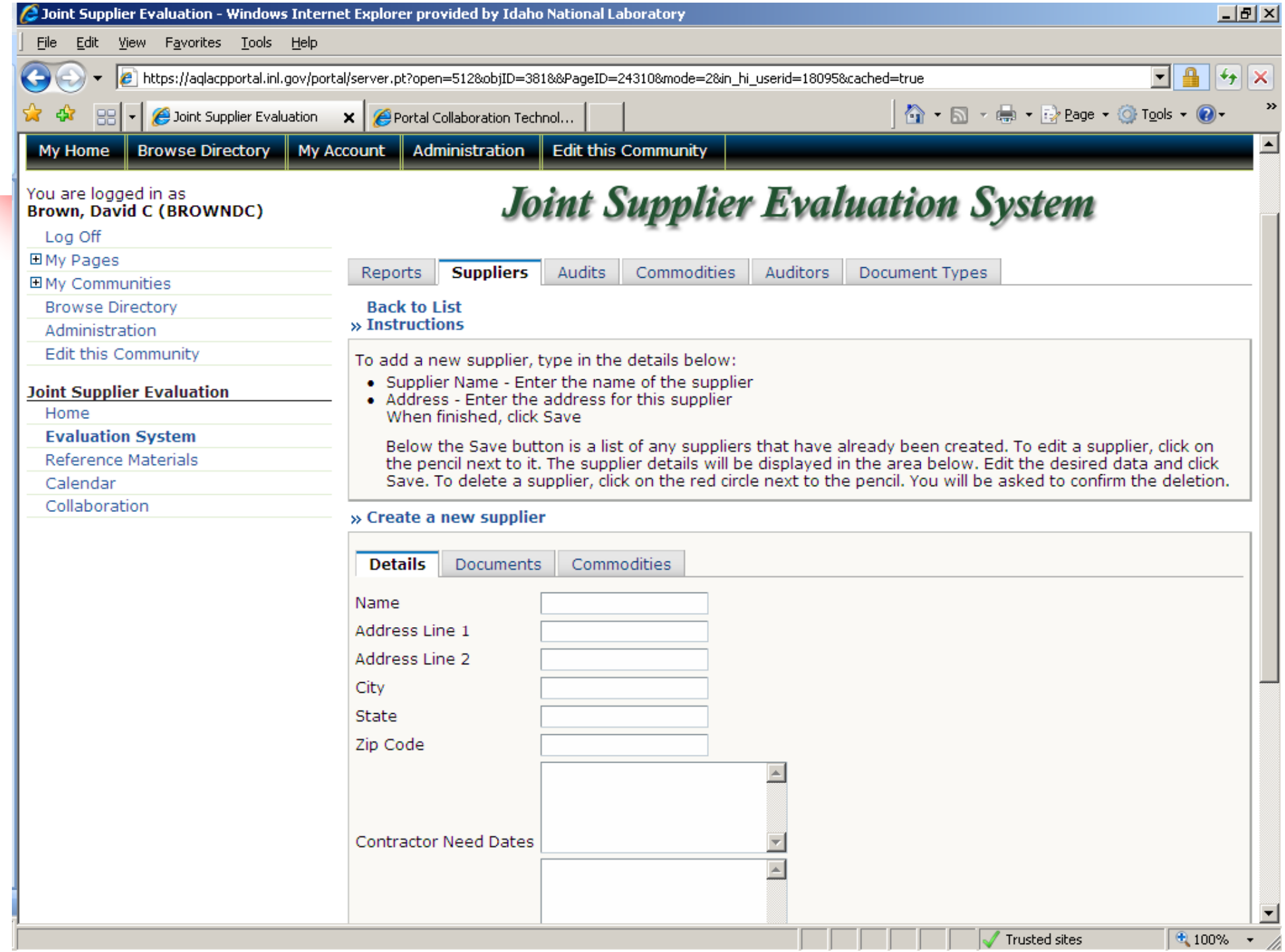
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Project Documents
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Supply Chain Contact Listing June 2010.doc
Forms
Apendix G Finding and Observation Form (Expandable).doc
Appendix A - Audit Plan.doc
Appendix B - Notification Letter.doc
Appendix C - Entrance and Exit Meeting Form.doc
Appendix D - Required Reading Completion Form.doc
Appendix E - Audit Title Page and Report.doc
Appendix F - Audit Report.doc
Appendix G - Finding and Observation Report Form.doc
Appendix H - Closure Letter.doc
Audit Form.doc
Cost Tracking Draft.doc
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Box Checklists
49 CFR 172 Subpart H Training.doc
49 CFR 173.411 IP-1.doc
Master Type A Checklist.doc
NQA-1-2000 Basic Checklist.doc
Welding Process Checklist 1.doc
Drum Checklists
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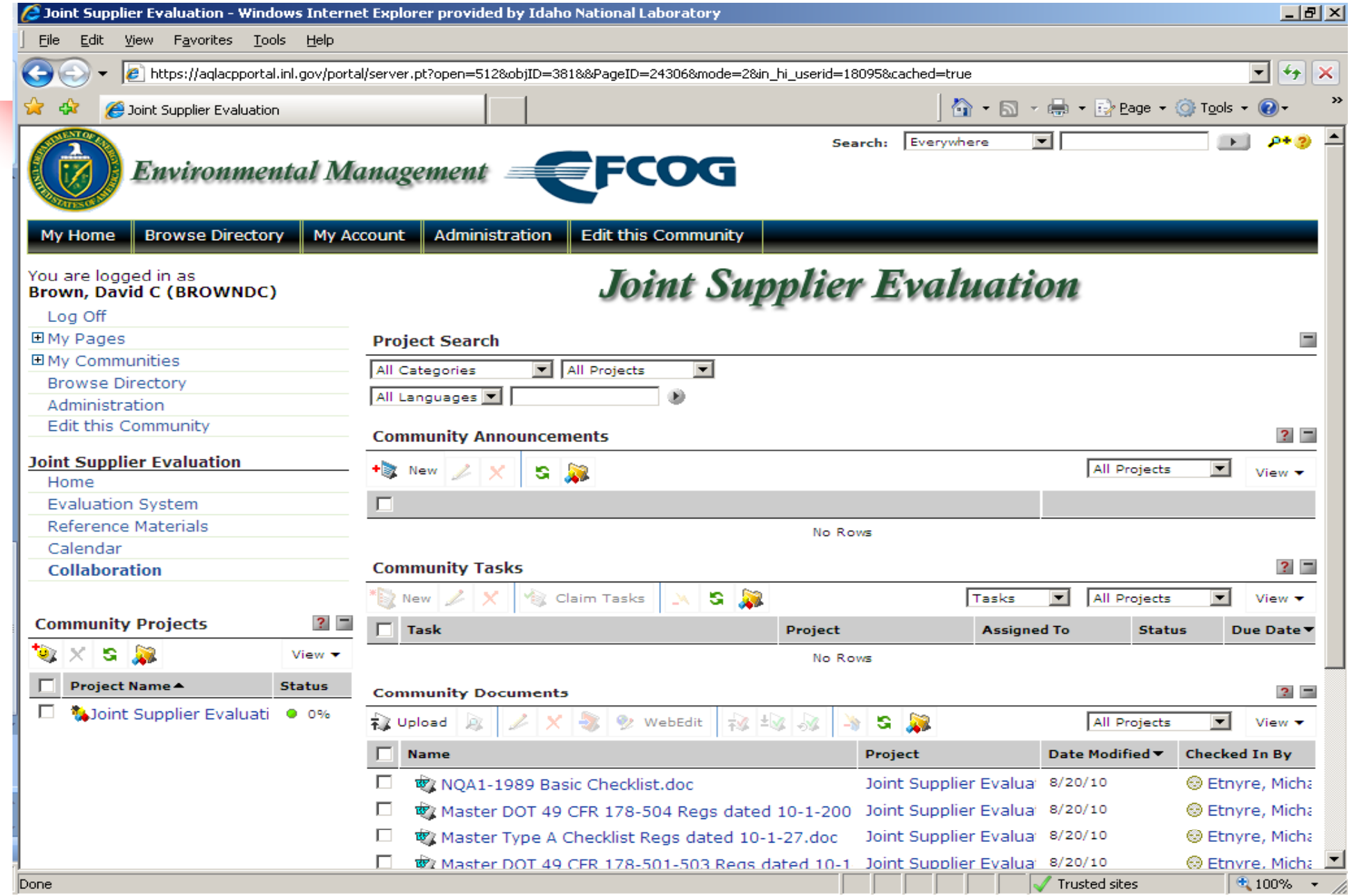
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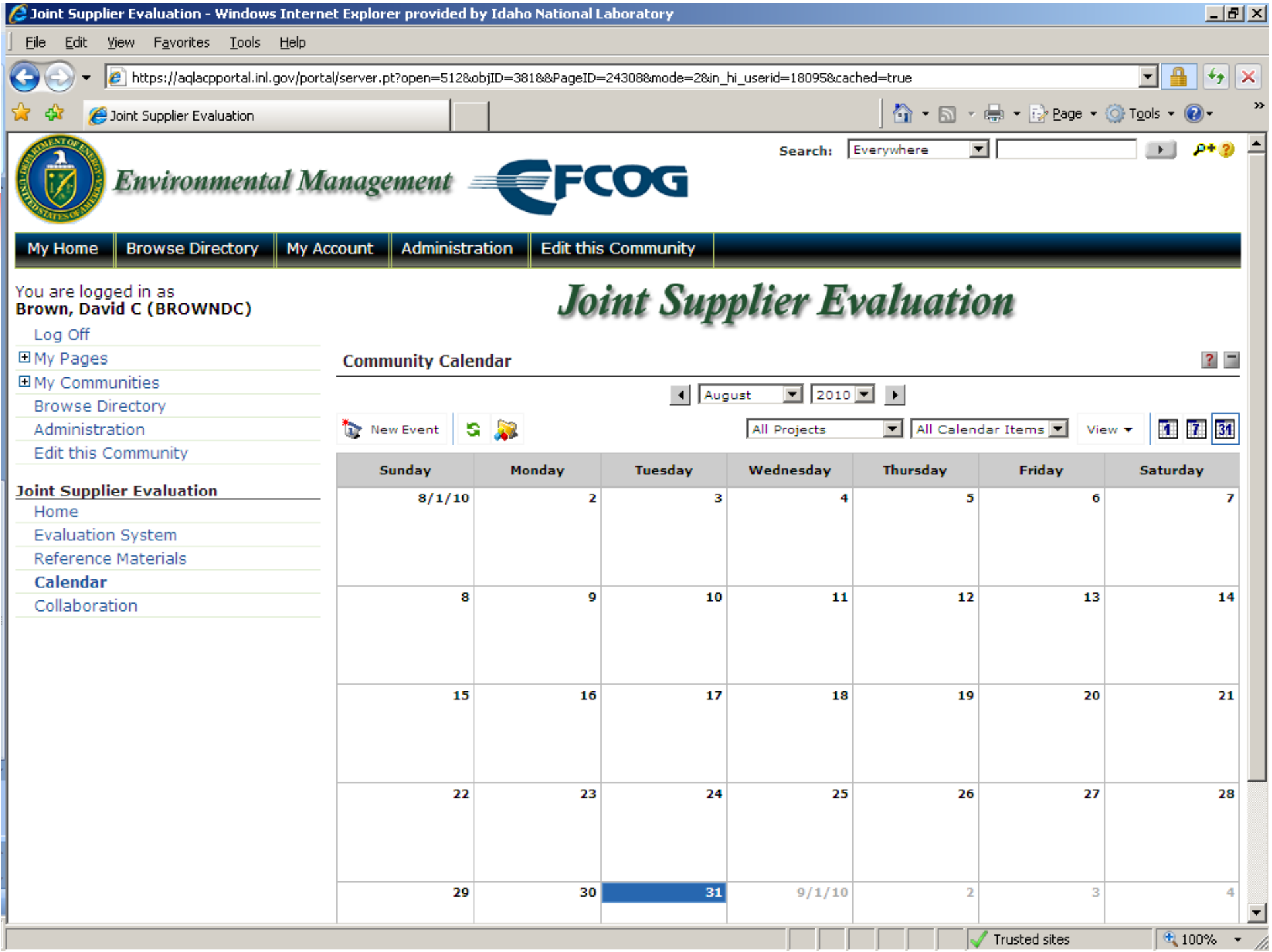
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100%

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Project Focus Area #2

Commercial Grade Item and Services Dedication Implementation – Lessons Learned

EM QA Corporate Board Meeting
September 13, 2010
Augusta, Ga

EM Initiatives

- In 2009, EM Corporate Board Championed the development of a standardized training course that is based on DOE requirements and established industry guidance for CGD
- The training is structured to address engineering and quality needs for proper implementation of CGD for prime contractors, sub-tier vendors, and third-party dedicators
- A small number of experienced individuals have been prepared to teach the DOE course through the “Train the Trainer” course taught by EM
- Integrity of the training is being maintained by management of the training material and the small number of trained individuals conducting the training

CGD Standard

- A CGD Standard is being developed as a companion to and driver for the approved training.
- While EM Corporate Board has not provided a sub-task group, a draft standard has been prepared by Dave Faulkner (DOE-EM), Pat Carier (DOE-ORP), and Bill Smoot (ORP-LAA). Jack Poe (RL-NA) developed the model CGD Plan included in the Standard.
- The current draft is based on NQA-1a-2009.

CGD Standard Contents

- The Draft Standard includes the following information:
  - Definitions, including basis
  - CGD Overview of the Generic Process
  - Technical Evaluation
    - Equivalency evaluation
    - Safety functions
    - Critical Characteristics for design
    - Failure Modes Effect Analysis
    - Critical Characteristics for Acceptance

CGD Standard Contents, cont.

- Methods of Acceptance
  - Method 1 – Special Tests, Inspections and or Anaysis
  - Method 2 – Commercial Grade Survey of Supplier
  - Method 3 - Source Verification
  - Method 4 – Acceptable Supplier/Item Performance Record

CGD Standard Contents, cont.

- Sampling Plans and Lot Formation
- Suitability
- Oversight and Flow-down Expectations
- Dedication Documentation
- Model CGD Plan

CGD Standard Review

- The limited review of the Draft Standard has been performed by experienced individuals, several who have been teaching the course over the past year
- Comments that were provided have been addressed with several improvements to the Standard

Path Forward

- We believe that the Standard is ready for a broader EM Corporate Board review and approval.
- Pat Carier and Bill Smoot have initiated review of the DRAFT EFCOG procedures to insure that the CGD Standard, Approved Training, and implementing procedures are aligned.
- Any comments from this review will be provided to Dennis Weaver for EFCOG consideration as appropriate.

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Project Focus Area #3

Design Quality Assurance Focus Area

EM QA Corporate Board Meeting
Augusta, GA
September 11, 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

Scope

- 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	30SEP10	Develop final scope of the effort including deliverables	Scope outline	Yes
3	15OCT10	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	15NOV10	Receive results from major projects	Completed Questionnaire	No
5	30NOV10	Provide analysis for PM review/calibration	Tables/charts/ text documents describing FA3's recommended path forward for ultimate deliverable	Yes
6	15DEC10	White Paper for EM consideration communicating Design Quality Assurance expectations/recommendations/etc.	White Paper	Yes

Project Focus Area #3
Design Quality Assurance Focus Area

Roster

Butch Huxford
Robert Thompson
Greg Hayward
Robert Leugemors
Ray Wood
Larry Zalants

Progress

- Somewhat slow, but improving
- Team has agreement on scope and approach
- Narrowing the individual deliverables typical of EM projects relying on:
  - DOE Order 413.3,
  - EM's Standard Review Plan and
  - Team experience

Scope Resolution

- Team struggled initially resolving the beginning and ending points for this effort
  - Agreed the effort start at the point in time projects inception is being worked and terminate with the Department's issuance of CD-4.
  - Deliverable will examine project QA from both the responsibilities of departmental as well as contractor organizations.
  - Also agreed limited focus on D&D activities.
    - The final deliverable will briefly discuss similarities to captial project activities and address broad considerations for applying the recommendations to D&D activities
    - Team's feelings the topic is worthy of separate and detailed research, but our focus should be on capital projects.
- Approach coordinated with Project Managers

To-Go Activities

- Deliver outline for review/approval of project managers
- Develop and field questionnaire to capital projects and other candidate organizations
- Compile data and Identify best practices in use within EM Complex
- Prepare white paper including narrative and other figures to describe QA involvement in design.

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Project Focus Area #4

Proposed Technical Approach for Grading QA for Deactivation & Decommissioning Projects

EM QA Corporate Board Meeting
September 13, 2010
Augusta, Ga

Brenda Hawks

Reference Project Plan for Discussion of Status

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EM HQ Quality Assurance (QA) Assessments

Office of Standards and Quality Assurance, EM-23

EM Corporate QA Board

Augusta, GA

September 13, 2010

Outline of Briefing

- Purpose & Drivers for EM Corporate QA Oversight
- Review of FY 2010 QA Assessments
- FY2011 QA Assessment Priorities
- Next Steps

Purpose and Drivers

- Current corporate QA strategy implemented since 2007
  - Successfully raised DOE and contractor management awareness of QA requirements and expectations
  - Effectively put the corporate spotlight on QA including its inclusion as part of the critical decision (CD) process
  - Resulted in elevating senior management hands-on engagement and involvement in shaping/influencing QA direction (Corporate QA Board)
- Alignment with EM Business Model/EM-20 A3 Concept (Awareness, Assistance, Assessment)
  - Assist the Field to achieve mission success
  - Ensure QA assessments provide value-added results to improve project performance

Review of FY 2010 QA Assessments

- Participated in numerous targeted performance-based QA assessments in FY2010
  - 5 Construction Project Reviews
  - 2 Department Operational Readiness Reviews
  - 10 Issue-driven audits/surveillances of Field Office vendors
  - 4 High-Level Waste and Used Nuclear Fuel audits at major sites
- Performed 5 assists/reviews of QA focus areas (CGD, Work Packages) at major sites
- Conducted Phase I HQ reviews of Field QAP/QIPs (large/small)
- Assisting HQ and Field Offices in preparation for Phase II reviews (conducting QAP/QIP adequacy reviews – in process)

Common QA Issues and Observations

- 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 lack of clearly defined QA requirements in procurement process, flow down, and real-time performance monitoring of vendors and subcontractors
- 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
- Improvement in commercial grade dedication program/process

Corporate Oversight Approach for FY2011

Objectives

- Closer alignment between corporate QA oversight and real-time EM mission/project performance
- Greater coordination with and continued assistance to the Field
- Focus on risk significant and critical path activities
- Priority-based allocation of resources responsive to senior EM leadership expectations:
  - Major Construction Projects
  - Waste Disposition Activities (TRU, HLW, Used Nuclear Fuel)
  - Implementation of Site-specific QAPs/QIPs
  - Crosscutting generic QA issues (CGD, S/CI, procurement and flow down of requirements, monitoring of vendors/subcontractors, graded approach, configuration management, software QA, Code of Record requirements, ARRA projects)
  - Follow-up of CAP implementation/commitments

FY2011 QA Assessment Priorities

- Phase II EM-23 Review/Field Self Assessments of QAP/QIP Implementation (to be completed during 1st Quarter of FY2011)
  - DOE-WVDP, DOE-SRS (completed to date)
  - Scheduled: DOE-ORP (9/27/10), DOE-RL (10/04/10), DOE-ID (10/25/10)
  - DOE-ORO (completed pending EM-HQ concurrence)
- Headquarters Assistance in Phase II Self-Assessments
  - Sites have insufficient QA expertise and oversight resources
  - EM-23 is providing a representative on each self assessment team
  - EM-23 is providing assistance in reviewing adequacy of flow-down to the site procedures to identify gaps prior to the on-site Phase II Self-Assessment (using LOIs defined in the Protocol/SRP)

FY2011 QA Assessment Priorities (cont'd)

- Other FY2011 Priority Areas:
  - Lead QA component of planned EM-10 Construction Project Reviews, Independent Project Reviews, Operational Readiness Reviews
  - Assessments/Assist visits focusing on waste disposition activities (TRU, HLW, Used Nuclear Fuel) and cross-cutting generic QA issues
  - Continued participation in Site monitoring of vendor/subcontractor QA programs
- FY2011 Audit Schedule
  - Preliminary schedule is being developed
  - Coordinating with Field QA managers on timing and scope of planned assessments

Next Steps

- Continue corporate QA technical assistance to the sites
  - Strengthen/supplement site QA expertise and oversight resources
- Further refine the timing and scope of QA assessments to provide greatest value to the projects
  - Project-specific needs and milestones
  - Life-cycle related considerations
  - Planned activities
  - Oversight and monitoring of major subcontractors, vendors/fabricators, and upcoming project related procurements
  - Review criteria
- EM-23 Action Items
  - Develop and share draft strategy and approach for updated corporate QA oversight with the Board: November 15, 2010
  - Present final approach at the next Corporate QA Board Meeting (incorporating Board feedback and perspectives)

EM Corporate Assessments

Questions?

The following two presentations are provided for information. The presentations were not given at the 8th EM QA Corporate Board Meeting in Augusta, GA due to time restraints.

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Status on Path Forward for Oversight of High Level Waste and Spent Nuclear Fuel Quality Assurance Programs

Office of Standards and Quality Assurance, EM-23

EM Corporate QA Board
Augusta, GA
September 13, 2010

Yucca Mountain – Current Status

- NRC Commissioner ruling on the LA withdrawal is still pending
- Two of the NRC Commissioners, who had been asked to withdraw themselves because perceived bias, have declined to withdraw
- NRC issued YMP SER Volume 1 in August
  - Does not represent a licensing decision
  - Represents one of five planned volumes

Current Status of Oversight for HLW/SNF QA Programs

- West Valley, NY
  - West Valley Demonstration Project – Triennial audit completed July 2010
- Savannah River, SC
  - Defense Waste Processing Facility – Annual audit delayed until proposed NSNFP modification is approved
- Hanford, WA
  - Office of River Protection – Pending management realignment at the Waste Treatment Plant Project

Interim Policy for HLW/SNF Programs

- The Blue Ribbon Commission is scheduled to submit a draft report within 18 months
- Until the final report is issued, EM needs an Interim Policy with respect to HLW/SNF to prevent any QA programmatic instability or gaps in EM's mission commitments
- Pending Interim Policy: Until such time that the Secretary issues new programmatic and policy directions, the EM interim policy is to continue with our current practices in accordance with Revision 20 of DOE/RW-0333P. (currently in the approval/signature process)

Questions and Answers

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NATIONAL NUCLEAR QUALITY ASSURANCE CERTIFICATION and ACCREDITATION PROGRAMS

Gustave Danielson

Chief of Nuclear Safety Staff

Office of the Under Secretary

U.S. Department of Energy

CONFORMITY ASSESSMENT ORGANIZATIONS in the U.S.

- Four Organizations Provide Conformity Assessment Services in the U.S.; ANAB, ANSI & ASME
  - ANAB Accredits management system certifiers
  - ACLASS Accredits laboratories, etc.
  - ANSI Accredits product & auditor certifiers and training providers
  - ASME To accredit nuclear QA program

ASME QA CERTIFICATION PROGRAM

- “A certification program that verifies by QA manual evaluation and implementation audit that a supplier* has implemented a quality program that meets the requirements of the ASME NQA-1 standard.”
- At their June 8, 2010 meeting, the ASME Standards and Certification Board of Directors voted: *To approve the establishment of the Nuclear Supplier Certification Program.*
- Expect program to begin by June 30, 2011, followed by lead auditor certification program

*asme proposes to exclude BPV Section III Suppliers and Regulated Nuclear Facilities

ASME SEES NEED for a QA CERTIFICATION PROGRAM

- Resurgence of nuclear power
- Nuclear supply chain expansion
- New NQA-1 editions and addenda NRC RG 1.28 endorses NQA-1-2008 with 2009 Addenda
- Promote consistent application
- Assist suppliers in becoming “qualified” bidders

BENEFITS for NEW CONSTRUCTION

- Advantage for new suppliers
- Consistency and standardization
- Recognition by ASME that program meets NQA-1 Standard
  - Independent quality evaluation
  - Confirms program implementation to supplier's management
- Allows new supplier to state they are "ready to be a nuclear supplier"

ASME SEES CHALLENGES or ISSUES

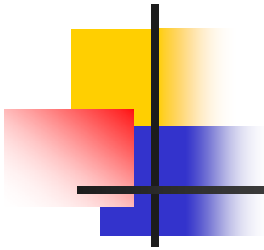
- Certification cost
- Certification renewal after becoming an established supplier
- New suppliers without contracts would not be able to demonstrate compliance
- No initial regulatory recognition
- Need to share audit results with purchasers

ANAB PROGRAM

Some Family Responsibilities

- ANAB
  - ISO 17021 – Management System Certifiers
- ANSI
  - ISO Guide 65 – Product
  - ISO 14065 – GHG Validation and Verification
  - ISO 17024 – Personnel Certifiers
- ACLASS
  - ISO 17025 – Laboratories
  - ISO Guide 34 – Reference Materials
  - ISO 17020 – Inspection Bodies

Brand Structure



ANSI

ASQ

ANSI-ASQ National Accreditation Board

ANAB Brand
Milwaukee, WI

ACLASS Brand
Alexandria, VA

Accredits

Accredits

Management Systems Certification Bodies

Laboratories, RMPs, Inspection Bodies, etc.

Government Collaboration (CCR database)

- ANAB
  - DHS
  - DOJ
  - EPA
  - FAA
  - FEMA
  - NIJ
  - NIST
- ACLASS
  - Dept. of Navy
  - DOD
  - DOE
  - EPA
  - FCC
  - FDA
  - NIST
  - NRC
  - USDA
  - U.S. Army

ANAB's Business

- The national accreditation body for management systems in the USA
- Accredit CBs to perform management system certifications on global basis
- Work closely with other national accreditation bodies
- Recognized by peers as major leader of MS accreditation in the world

ANAB programs

- Management system CB accreditation areas:
  - Quality
  - Environmental
  - Health and safety
  - Software and software security
  - Emergency response planning
  - Security
  - Other

ANAB programs

- We operate under ISO 17011 with some flexibility
- We accredit certification bodies (CBs) to recognized standards
- Stakeholder participation:
  - ANAB provides oversight on behalf of industry and federal agencies
  - ANAB partners with industry and federal agencies to provide oversight
  - ANAB works with industry and federal agencies to ensure accreditations granted are credible and remain credible

Accreditation process

- ISO 17011
  - General requirements for ABs (organization, management system, competency, etc)
  - Impartiality measures
  - Oversight requirements (initial assessment, surveillance, re-assessment)
  - Accreditation decision
  - Scope extensions, reductions, etc
  - Appeals and complaints process

Accreditation process

- Involvement of stakeholders (Aerospace representation on committees, e.g.)
- Participation of principle industry parties (Aeropsace, Telecommunications, government agencies)
- Impartiality and independence
- Competence
- Oversight based on risk
- Follow-up of complaints from stakeholders, others

Supporting DOE programs

- Accreditation in accordance with ISO 17011
- Use ISO 17021 as framework for CBs
  - Structure and process
  - Emphasis on competence
  - Requirements for audits and surveillance
  - Impartiality and decision on certification
  - Oversight by AB under ISO 17011
  - Provides for industry-specific requirements to be applied as part of process

Supporting DOE programs (continued)

- Examples of modified processes for specific government needs
  - Medical devices – FDA and EU requirements
  - Aerospace – FAA
  - Telecommunications
  - Other examples

New program development

- Stakeholder involvement
- Development of criteria, e.g.
  - Standards providing the basis for certification (10CFR830 Subpart A, Applicable DOE orders, NQA-1, other)
  - Specific accreditation and certification process requirements, e.g.
    - Auditor competency
    - Reporting
    - Handling nonconformities and noncompliance issues
    - Confidentiality
    - Partner with industry via oversight
    - Other

New program development (continued)

- Identification and training of auditors
- Pilot program (phased?) and stakeholder participation
- Lessons learned and launch

Discussion

- Potential benefits to DOE from national accreditation and certifications
- Application of ASME Program
- Development of an ANAB program for 10 CFR 830 and O 414.1

7th Environmental Management Quality Assurance Corporate Board Meeting Minutes
June 9, 2010 – Chicago, IL

Voting Board Members in Attendance (general attendance sheet for the meeting is attached):

Brian Anderson – Idaho	Steven Krahn (chair) – Headquarters EM-20
Robert Brown – Oak Ridge	Russell McCallister – Portsmouth/Paducah
Ray Corey – Richland	Bob Murray (vice-chair) – Headquarters EM-23
Jack Craig – Savannah River	No Voting Member Present - Carlsbad
Bud Danielson –Chief of Nuclear Safety	No Voting Member Present - River Protection
Ralph Holland –Consolidated Business Center	

Bob Murray discussed the Revision to the EM Corporate QA Board By-Laws which were sent out via email prior to the meeting. The By-Laws were passed by the email vote; however, Idaho provided comments to have addressed before voting in favor of the revision. Mr. Murray indicated that he and Larry Perkins of EM-23 would meet with Brian Anderson from Idaho to address the comments during the week of June 14th. Based on the resolution agreed to in that meeting, the by-laws will be finalized and posted via the web or will be re-sent for vote via email if the changes are substantive. Although not required, the desire is to have unanimous agreement on the document.

Presentation by Dr. Steven Krahn: Corporate Quality Assurance Issues, Challenges, and Priorities

Dr. Krahn discussed the previous day's activities as part of the Nuclear Energy Institute Outreach Workshop prior to his presentation and encouraged everyone to participate in the future workshops. DOE-EM partnered with representatives from our construction projects to present forecasting and procurement opportunities to the potential vendors and manufacturers at the event.

During the presentation, Dr. Krahn encouraged sites to provide feedback on the ongoing Construction Project Reviews at our major locations/sites.

Headquarters is currently working on a draft response to a recent Defense Nuclear Facilities Safety Board letter regarding requirements flow-down and will provide the draft response to the various EM sites for review once the draft is complete.

Sites need to check with EM-23 to verify they have formally submitted a response to the October 2009 memo requesting a status regarding Commercial Grade Dedication. Not all sites have provided a formal response.

Bechtel National has committed to provide a revised lesson learned document based on previous events surrounding Commercial Grade Dedication.

Robert Brown had a question about cross-training with field assessments and whether outside field elements would participate on the self-assessments. The consensus was that this is a good idea that would be considered during the assessments as appropriate. The QA resources database also needs to be updated and possibly placed online for update real-time.

For QAP/QIP implementation self-assessments, the protocol document is posted as part of the SRP on the DOE-EM website and questions about the assessments can be directed to Bob Murray, EM-23.

Bud Danielson noted that there is an Office of Engineering and Construction Management guide available on staffing resources that could help during the self-assessments. EM needs to make sure we are consistent. EM-23 will verify this consistency.

A brief introduction to the purpose of the corrective action Hub was presented. The site offices were asked to provide a commitment to help populate the Hub, noting that collaboration is a key to the success of QA.

Presentation by Joe Yanek: Nuclear Quality Assurance Industry Perspectives – One View

The Nuclear Regulatory Commission has endorsed NQA-1-2008 with 2009 addenda (RG 1.28, R4).

Based on recent discussions, it was noted that it was never intended that only Part 1 Paragraph 100 would be implemented to achieve compliance with NQA-1.

Yanek asked the board to consider including implementing Subpart 2.14 from the 2009 addenda to NQA-1 regardless of the version of NQA-1 that was currently required (e.g., NQA-1-2004).

Yanek also asked the board to consider forming a QA/QC human capital task group. This effort could help provide a smoother approach to getting temporary resources to the sites that need them.

During the discussion, Tony Umek brought up the recent Rad Con program at a local community college and thought this approach would be beneficial for QA. Murray discussed the current efforts with Aiken Technical College to produce a certificate and also a 2 year AS program focused on QA/QC. This effort is under way and a Developing a Curriculum (DACUM) meeting has already been held. The current efforts are to have a certificate program in place soon (goal of this calendar year) with the AS program to follow (ultimately offering the program online). In addition, the University of Cincinnati has expressed an interest in ultimately having a 4 year BS program with a focus on QA. EM-20 is helping fund the initiation of the program, but other funding support will be needed to maintain the program beyond the first year.

In closing out the presentation, Bud Danielson emphasized the importance of the NRC endorsement of NQA-1-2008 with 2009 addenda and the impact it will have upon DOE contractors and suppliers who also support the commercial nuclear power industry, especially new nuclear power plants. Having all of the nuclear regulating agencies in sync will reduce supplier confusion; reduce costs for supplier compliance; increase supplier base; and, simplify DOE contracting, QAP approval and oversight. In order to reap the maximum from the newly endorsed NQA-1, DOE and its prime contractors need to accept the new edition and addenda as an equivalent or better standard for all DOE nuclear facility applications regardless of the current contracts or Orders. This is not to say that contract requirements would be superseded, but that DOE would accept the new edition and addenda as an alternate/equivalent. DOE PSOs should develop boilerplate language that accepts the new NQA-1 without necessarily requiring the QAP, procedures, commitments, etc. to be altered immediately. This effort highlights the need for other agencies (DOE, EPA) to agree and endorse the new revision in rules and Orders.

Presentation by Christian Palay: Project Focus Area #1 - NQA-1 Suppliers

The proposed information from the Draft Project Plan for Focus Area #1 was presented emphasizing the use of the Joint Supplier Evaluation Program (JSEP). The Board subsequently discussed the focus area.

Palay noted that a JSEP coordinator was needed from each site to make the program work and asked for a commitment to providing a coordinator.

Brenda Hawks asked if this was headed to be something like the DOE CAP program. Palay and Mike Mason emphasized that there would not be an EM “approved” list, only an “evaluated” list that could be used as a basis for leading in to the site’s individual reviews.

Brenda Hawks noted that the Office of Science has been closely using similar items, but we need to address ISO and NQA-1.

Ray Corey emphasized the reduction in the burden to the vendors with multiple reviews from different contractors.

Norm Barker noted that the NNSA has a similar need now and this would be beneficial.

Robert Brown asked what the shelf-life for an EFCOG evaluation was in the program. Paul Bills indicated it was currently 3 years, but this was not a hard number and could be adjusted as needed.

Joe Yanek asked that the Board be careful to not confuse the triennial supplier audit with the 3 year oversight review.

Rick Warriner asked how the system would work because to use a previous review the organization would need to know how the audit was performed and what was addressed and not just a copy of the report. Paul Bills addressed the question by noting that the current program has one procedure and the various audits are all performed to that procedure. Everyone is on the same playing field.

Brenda Hawks asked if there was any expectation that all suppliers would be in the database or only those with an audit performed under the one procedure. Palay responded that it was only those under the one procedure and not every supplier that EM uses at any site.

Brian Anderson asked if any audits that have already been completed to date but did not follow the procedure noted would qualify to go into JSEP. Paul Bills responded that some could be included initially, but ultimately the audits will be required to be performed per the procedure. Palay also noted that there is no real database information to turn on, but the data will have to be loaded as the audits are completed.

Bob Murray asked what obstacles were envisioned for this Focus Area. Palay answered that the JSEP coordinator is the primary need and asked that the upcoming vote provide agreement to provide resources to support the JSEP.

Brenda Hawks asked if EM would be joining with EFCOG in the JSEP or would be maintaining a separate database. The response was that there will be only one database. However, Mike Mason indicated that ultimately the management of the JSEP will turn into a full time job. EFCOG will continue to manage the system until there are 20-25 vendors and then it will likely require a fulltime person to manage the system. Joe Yanek agreed that the JSEP will have to be transitioned to DOE at some point; it won't be able to stay with EFCOG.

Bud Danielson asked if a discrete step was needed in the project plan to address the interaction/transition plan with EFCOG. Mr. Danielson did not see how the existing steps addressed this interaction. Steve Krahn noted that he felt the list of milestones in the project plan, as a whole, addressed this concern.

Tony Umek noted that similar efforts have been successful in the past such as the Electrical Handbook. As such, there is a precedent and there is no need to get bogged down, but should move forward with the approach.

Brian Anderson went through the items listed in the project plan and asked the Board to vote to adopt the plan for Focus Area #1.

Steve Krahn called for a vote to adopt items 1.1 through 1.2.8 as listed in the draft project plan for Focus Area #1.

Brian Anderson – Yes	Steven Krahn (chair) – Yes
Robert Brown – Yes	Russell McCallister – Yes
Ray Corey – Yes	Bob Murray (vice-chair) – Yes
Jack Craig – Yes	No Voting Member Present - Carlsbad
Bud Danielson – Abstain	No Voting Member Present - River Protection
Ralph Holland – Yes	

Presentation by Pat Carier: Project Focus Area #2 - Commercial Grade Items and Services Dedication Implementation

The proposed information from the Draft Project Plan for Focus Area #2 was presented regarding Commercial Grade Dedication. The Board subsequently discussed the focus area.

There is currently no EFCOG lead for this Focus Area. Chris Marden will take an action to provide an EFCOG lead to support this team.

Carier gave a status of recent training classes involving Commercial Grade Dedication.

Rick Warriner asked if the "train-the-trainer" course is the same as the fundamentals class. Carier answered no and elaborated on some of the main differences in the course including who should attend the "train-the-trainer" courses.

Al Hawkins asked how the information on CGD guidance will be put out to the sites. Carier indicated the expectation was a memorandum from HQ to the field offices including the guidance document for CGD.

Norm Barker noted that there was a need to merge what EFCOG is doing (Joint Engineering Working Group) to ensure consistency with the guidance from EM.

Bud Danielson asked what the difference would be between the "guide" deliverable and the "procedure" deliverable. Carier explained the level of detail would be more enhanced in the procedure since it would not be expert based for general use. Carier also noted that a lot of homework has been completed to ensure consistency with the existing corporate CGD information.

Joe Yanek asked if Subpart 2.14 from NQA-1 would be considered in the guidance document. Carier indicated the draft guidance should be consistent with Subpart 2.14 and the team will review and verify the consistency before distribution.

Ray Corey asked what the goal was for the number of trainers needed for EM. Carier indicated there was not a hard number goal, but there were estimates generated as to whether adequate trainers were available. Carier also noted that efforts were still underway to evaluate how to maintain the list of trainers.

The group briefly discussed upcoming courses that were scheduled for CGD.

Brenda Hawks asked if the development with EFCOG included both the QA and Engineering groups. Carier and Norm Barker both said yes, and Barker expanded that the Engineering group is now taking the lead for EFCOG.

Brian Anderson noted that federal employees don't perform Commercial Grade Dedications and asked how this approach and guidance will fit in with the existing procedures in place by contractors. Norm Barker and Carier noted this approach was only considered a tool for use to demonstrate the EM expectations.

Steve Krahn indicated that his vision would be that this Commercial Grade Dedication guidance would be a perfect fit as a review module in the next revision to the Standard Review Plan.

Rick Warriner asked if this guidance would be a good fit with the upcoming revision to DOE O 414.1C. Colette Broussard addressed the question and indicated that the current direction and guidance provided would not lend itself to including this type of information in the revision to DOE O 414.1C.

Ray Corey and Pat Carier asked how the responses from the October 2009 memo requesting a status regarding Commercial Grade Dedication would fit in with the Focus Area. Steve Krahn committed to providing a lessons learned document from the status reports as soon as all sites have completed the status and the submittals have been reviewed by HQ.

The team was asked to evaluate the consistency of the draft guidance with Subpart 2.14 of NQA-1 for Task 1 (Develop EM Guidance on Commercial Grade Dedication) & Task 2 (Develop, with EFCOG, a common process to perform Commercial Grade Dedication).

Steve Krahn called for a vote to adopt the draft project plan for Focus Area #2 with the added requirement to evaluate the guidance for consistency with Subpart 2.14 of NQA-1 and lessons learned from the Commercial Grade Dedication status reviews.

Brian Anderson – Yes	Bud Danielson – Yes
Robert Brown – Yes	Ralph Holland – Yes
Ray Corey – Yes	Steven Krahn (chair) – Yes
Jack Craig – Yes	Russell McCallister – Yes

Bob Murray (vice-chair) – Yes

No Voting Member Present - River Protection

No Voting Member Present - Carlsbad

Presentation by Butch Huxford: Project Focus Area #3 - Design Quality Assurance Focus Area

The proposed information from the Draft Project Plan for Focus Area #3 was presented regarding Design Quality Assurance. The Board subsequently discussed the focus area.

Huxford noted that the proposed schedule was aggressive and good support was needed from the various site offices.

Ray Corey asked how the projects to be included on the team were selected. Huxford addressed the question that the main projects were included but an attempt was made to keep the team broad. Additional members could be included as needed.

Russell McCallister indicated he would need to check with the various contractors before committing the resources from the projects, but did not oppose the approach.

Broussard asked if the approach was to look at QA level for each critical decision. If so, there is a guide DOE M 413.3-1 that may be useful for consideration in this work. The answer was yes and the guide will be reviewed by the focus area team, including how CD phases and QA are broken out.

Ray Corey indicated there seems to be a focus on construction and maybe some representatives from D&D groups would be useful. Joe Yanek indicated the D&D group at EFCOG would be available. Chris Marden will address providing an EFCOG representative for D&D to the team and will assist the team with any needed modifications to the scope of the Focus Area.

Ray Corey also noted that configuration management needs to be considered.

Bud Danielson noted that feed-back from recent the Construction Project Review at Idaho should also be considered.

Steve Krahn called for a vote to adopt the draft project plan for Focus Area #3 with the added requirement to evaluate the additional team members and feedback from the recent Construction Project Review at Idaho.

Brian Anderson – Yes

Robert Brown – Yes (but noted that given current status – the U_{233} project may not be able to provide resources for the effort)

Ray Corey – Yes

Jack Craig – Yes

Bud Danielson – Yes

Ralph Holland – Abstain (not present during vote)

Steven Krahn (chair) – Yes

Russell McCallister – Yes (but noted the DUF6 project may be resource limited at this time)

Bob Murray (vice-chair) – Yes

No Voting Member Present - Carlsbad

No Voting Member Present - River Protection

Presentation by Robert Brown and Brenda Hawks: Project Focus Area #4 - Proposed Technical Approach for Grading QA for Deactivation & Decommissioning Projects

The proposed information from the Draft Project Plan for Focus Area #4 was presented regarding Grading of QA for D&D. The Board subsequently discussed the focus area.

Brown and Hawks emphasized that Oak Ridge is a Science site; therefore, they need to use ISO and not just NQA-1. In addition, most of the actions proposed for this Focus Area have been completed and everything is already in

place to address grading of QA for D&D. It was noted that more details of the approach are in the draft project plan.

Joe Yanek asked if the lessons learned from Rocky Flats have been incorporated in this approach. Hawks explained that yes, K-25 and some of the other larger projects in Oak Ridge have addressed these lessons learned; however, some of the smaller contracts are not feasible to address all of the items addressed at Rocky Flats.

Joe Yanek asked about records retention for items such as worker exposure and how they were maintained with a graded approach. Hawks explained that the plan is for them to turn the records over to DOE earlier than would normally be expected, but the details are still being worked.

Steve Krahn noted that the focus of this team needs to stay on D&D and not get too broad.

Bud Danielson noted that the approach seems to be taking exceptions to some of the requirements and not strictly grading. The comment was not intended to question the validity of the approach but to emphasize the need to be careful with the terminology of "grading".

Rick Warriner asked about EM work and how the work was performed to the NQA-1 standard via EM-QA-001. Hawks agreed and explained that EM-QA-001 is flowed down in their contracts but then the contractors have to provide ORO with an explanation of how they meet the EM-QA-001 requirements.

Steve Krahn noted that Hawks is presenting a concept for comment and the grading is based on time and risk – not because it is hard for the contractors to meet. Dr. Krahn also indicated he liked the spreadsheet example in the draft project plan and would urge the board to provide other resources from the various sites to support ORO on this team.

Steve Krahn asked that an additional column be added to the spreadsheet in the draft project plan to include additional examples of each grading.

Ray Corey noted that the Board should recognize that grading can be more restrictive, for example: shipping requirements. It is not always less. Broussard acknowledged the concept, but emphasized to be careful with the term "grading" as it is normally meant to indicate less and not more. Broussard also suggested using a term more like "tailoring" in lieu of "grading" if the intent was that additional requirements may be needed.

Steve Krahn asked that EFCOG provide a member to help ORO in this effort to provide more prospective. In addition, some other sites with D&D work may want to have some input by providing a team member. Chris Marden will work to provide an EFCOG representative to the group.

Steve Krahn asked the team to update the spreadsheet table in the draft project plan to include the comments discussed by the next Board Meeting.

Steve Krahn called for a vote to adopt the draft project plan for Focus Area #4 with the request to update the project plan table and add additional prospective from other sites.

Brian Anderson – Yes	Steven Krahn (chair) – Yes
Robert Brown – Yes	Russell McCallister – Yes
Ray Corey – Yes	Bob Murray (vice-chair) – Yes
Jack Craig – Yes	No Voting Member Present - Carlsbad
Bud Danielson – Yes	No Voting Member Present - River Protection
Ralph Holland – Yes	

Presentation by Norm Barker - EM-EFCOG Cooperation Strategy EFCOG Tasks

Norm Barker provided a presentation on what EFCOG is currently working on with respect to the priorities expressed by the Board in the past.

Dave Janitosik noted that overseas work does not have the same approach as the U.S. For overseas work, if a vendor is ISO, then it is good enough and no more reviews are needed.

Steve Krahn noted we are not looking for an answer now, but would like a couple pages from EFCOG on what has been seen in audits overseas. Mike Mason and Norm Barker agreed to take the lead to generate a white paper to provide this information.

It was noted that the distinction between Quality programs and Quality Products was not clear and may need to be addressed.

Presentation by Colette Broussard - Quality Assurance Directives Revision

Colette Broussard presented an overview of the primary changes that are in the process for DOE O 414.1X and indicated the RevCom process was anticipated in late summer 2010 with issuance in early 2011. The draft Order will include a requirement to use the new NQA-1-2008/NQA-1a-2009 edition and addenda for new DOE nuclear facilities that have not reach Critical Decision-2.

Joe Yanek asked how the standard contract language from previous Board meetings impacted the revision. Broussard explained that the various offices (e.g., EM) can be more restrictive so there is no impact on the revision. Steve Krahn noted that the response was consistent with senior EM DOE management expectations.

Bud Danielson noted that each office will go through their individual process on what to do and how to implement once the new revision to the order is issued.

Brenda Hawks asked how nuclear work was defined (e.g., Hazard Category 1, 2, 3). Since this is the reference, can we clarify the order to indicate nuclear work is not simply Hazard Category 1, 2, 3? Broussard indicated the clarification was included in the order.

Joe Yanek asked how radiological facilities will be addressed. Broussard indicated they were only addressed in "other work". Hawks noted that "radiological" facilities do not exist anymore (they are Less Than Hazard Category 3 Facilities) and the use of the term should not be included. Broussard is going to ensure the terminology is consistent in the revision (e.g., radiological hazards versus radiological facilities).

Hawks asked if there would be any elaboration on what is safety software. Broussard said there has been a lot of discussion but there is no commitment to any changes at this time.

Presentation by Larry W. Perkins - Enhance Corporate Operational Awareness of Corrective Action Plan Commitments, milestones, and Implementation Effectiveness

Larry Perkins discussed the need for a corrective action tracking Hub at HQ. The need was to prevent reoccurrence, provide visibility, transparency, and lessons learned to the sites, and ensure root cause analysis was completed properly.

Perkins provided a live demonstration of the Hub and showed the various functionalities and uses.

Perkins encouraged the sites to contact EM-23 if they would like a demonstration of the Hub onsite for their personnel.

Perkins encouraged feedback as the system is used and committed to addressing any concerns (e.g., issue numbering question was previously discussed with Richland and is being worked).

Steve Krahn encouraged the sites to learn the system and see how the system could benefit the sites and the interaction between the field and HQ.

Presentation by Rick Warriner - Managing Suspect/Counterfeit Items – The CHPRC Experience

Rick Warriner presented the background and approach used by Richland to address the Suspect and Counterfeit Item issues.

Joe Yanek asked how this related to UL certifications. Is UL purifying their chain or is this an area that needs to be a concern for EM – i.e., what percentage of UL items are found to be suspect or counterfeit? Warriner discussed that not all items are required to be UL listed, however on the big items that are procured the suspect/counterfeit items are probably less than 0.1% - on general items it may be 1-5%. Warriner does not have any hard numbers on this but is estimating based on his experience.

Brenda Hawks noted the difference in UL parts and a combined system that uses UL parts. Just because you use UL parts does not necessarily mean you can construct a system from those parts and the system is UL approved.

Steve Krahn noted that ORP has had Richland personnel come over and perform training on SC/I identification. If you look at the items identified (illustrated in Warriner's presentation) – is it really reasonable to say that 80% of all SC/I within EM is located at Hanford? Obviously not – you find what you are looking for in the field. Other sites need to look at this area and determine how to address the concern similar to RL. EM has been lucky so far that none of the SC/I found have been on credited safety equipment and challenged the ability of the equipment to perform.

Steve Krahn indicated the ISM review for 2010 will ask that sites look at their SC/I program and make sure they are identifying the SC/I – especially associated with safety equipment.

Presentation by Christian Palay - Potential Implications of Recent RW Developments on EM QA Oversight of HLW/SNF Activities

Christian Palay presented the background and current approach associated with developments in RW and HLW/SNF activities.

Ray Corey asked if RW was on the same schedule as far as Yucca Mountain. Steve Krahn explained that we are working with NE and they are putting together an implementation plan to address this type of concern.

Steve Krahn also discussed that this topic is very sensitive given the current litigation. EM will continue to update the various sites at the QA Corporate Board Meetings until we have a clear path forward. If there are any specific questions, please contact the EM-20 office to discuss in more detail.

General QA Corporate Board Discussion

San Horton gave a brief list of issues that the DNFSB is interested in and indicated that several of those issues were discussed during the QA Corporate Board Meeting.

Bud Danielson reinforced importance and interaction with the NQA Committee. Specifically, Mr. Danielson addressed the NRC endorsement of NQA-1-2008 with 2009 addenda; noted that nearly ½ of the committee is associated with DOE in some form and asked for support by EM management to continue to allow this participation; and the committee would be happy to discuss current work activities and how they fit in with the QA Corporate Board objectives (e.g., possibility of a new subpart 2 to address gaps with 830, address management assessment elements you may not pick up elsewhere, etc.). Mr. Danielson also noted that the other CNS items are on the priority list of the board and they continue to focus on the PSO-site level assessments.

Robert Murray thanked everyone for attending and participating in the discussion. He also thanked those that participated in the NEI meetings the previous two days.

Meeting Adjourned

SUMMARY OF ACTION ITEMS

Action for Follow-Up	Individual Responsible	Status
Evaluate the possibility of updating the QA resources database online (real-time).	Bob Murray	In Progress
Provide a draft copy of response to recent Defense Nuclear Facilities Safety Board letter regarding requirements flow-down to the sites for comment.	Steven Krahn	In Progress – 45 day extension requested for response to DNFSB
Submit a response to the October 2009 memo for status on Commercial Grade Dedication.	Site Managers that have not responded to date	Follow up email from EM-20 to be sent requesting a status
Provide a revised lesson learned document based on previous events surrounding Commercial Grade Dedication.	Dave Janitosik	In Progress
Ensure consistency on self-assessments for QAP implementation with OECM guide on staffing resources.	Bob Murray	In Progress
Provide support for populating the corrective action Hub.	Site Managers	In Progress
Assign a JSEP coordinator.	Site Managers	In Progress
Assign an EFCOG lead for Focus Area #2.	Chris Marden	Dennis Weaver has been identified and has communicated this to Pat Carier. - Complete
Evaluate and merge the EFCOG Joint Engineering Working Group with Focus Area #2 as appropriate during development.	Butch Huxford	In Progress
Review and verify Tasks 1 and 2 of the draft project plan for Focus Area #2 are consistent with NQA-1 Subpart 2.14.	Pat Carier	In Progress
Consider incorporating the Commercial Grade Dedication guidance into the next revision to the Standard Review Plan.	Larry Perkins	In Progress
Provide a lessons learned document from the status reports on Commercial Grade Dedication as soon as all sites have completed the submittal.	Bob Murray	In Progress
Review DOE M 413.3-1 as part of the deliverable preparation for Focus Area #3.	Butch Huxford	In Progress
Assign an EFCOG representative to address D&D and configuration management representation on the Focus Area #3 team.	Chris Marden	In Progress
Review the recent Construction Project Review at Idaho which assessed inspections, tests, analyses and acceptance criteria. Consider the results of the review as part of the deliverable preparation for Focus Area #3.	Butch Huxford	In Progress
Add an additional column in the spreadsheet attachment to the project plan for Focus Area #4 to include examples of grading for each requirement.	Brenda Hawks	In Progress
Assign an EFCOG representative to assist in leading Focus Area #4.	Chris Marden	An EFCOG member has been identified and will be assigned by July 1, 2010. – In Progress
Assign representatives to assist in the development and completion of Focus Area #4.	Site Managers (specifically Savannah River and Richland)	In Progress

SUMMARY OF ACTION ITEMS		
Generate a whitepaper to discuss what EFCOG has experienced with respect to audits overseas.	Mike Mason Norm Barker	In Progress
Include a review of the SC/I program in the 2010 ISM review/declarations.	Bob Murray	SC/I was included in the declaration which is currently in the approval cycle. - Complete
Consider a discussion for the next board meeting to address how DOE sites and contractors can be encouraged to allow the use of NQA-1-2008 with 2009 addenda.	Bob Murray	In Progress

ATTENDANCE				
#	**First Name**	**Last Name**	**Contact Information**	**Organization**
1.	Larry	Adkinson	803-952-6012	SR
2.	Brian	Anderson	208-526-0086	ID
3.	Norm	Barker	404-269-4116	Energy Solns.
4.	Paul	Bills	208-526-5726	INL
5.	Colette	Broussard	301-903-5452	HSS
6.	Robert	Brown	865-576-4444	ORO
7.	Pat	Carier	509-376-3574	ORP
8.	Ray	Corey	509-376-0108	RL
9.	Jack	Craig	513-233-5147	SR
10.	Bud	Danielson	301-903-2954	CNS
11.	Tom	Fallon	208-557-6344	Bechtel-BWXT-ID
12.	TJ	Jackson	513-246-0077	EMCBC
13.	Dave	Jantosik	509-371-2377	BNI
14.	Ashok	Kapoor	202-586-8307	EM-45
15.	Steve	Krahn	202-586-5151	EM-20
16.	Al	Hawkins	509-376-9936	RL
17.	Brenda	Hawks	865-576-2503	ORO
18.	Butch	Huxford	803-646-5455	EM-23
19.	Ralph	Holland	513-744-4000	EMCBC
20.	San	Horton	202-694-7114	DNFSB Staff
21.	Jerry	Lipsky	865-574-2208	EM-23
22.	Dave	Lowe	720-286-2221	CH2MHill
23.	Mike	Mason	240-379-3581	BNI
24.	Chris	Marden	303-589-9720	Energy Solns.
25.	Russell	McCallister	859-219-4012	PPPO
26.	Robert	Murray	202-586-7267	EM-23
27.	Christian	Palay	202-586-7877	EM-23
28.	Larry	Perkins	202-287-5502	EM-23
29.	Eric	Runnerstrom	703-519-0200	MPR
30.	Tony	Umek	803-952-7198	SRNS
31.	Rick	Warriner	509-366-6996	CHPRC
32.	Cynthia	Williams	803-645-5451	SRNS
33.	Joe	Yanek	864-281-6282	Fluor

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EFCOG Energy Facility Contractors Group

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

2010 Quality Assurance
Improvement Project Plan

Approved by:

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

Joe Yanek, Fluor
EFCOG Board of Directors

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

ISM

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 (4 total focus areas). 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, Integrated Safety Management (ISM)/QA, Energy*Solutions*, Chairperson, EFCOG 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 ISM/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 review is to assess adequacy of the technical approach, soundness of the underlying assumptions, and progression of 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, Joe Yanek, and Norm Barker)
- Third Level of Review: EM QA Corporate Board Members (voting and non-voting Full Members)

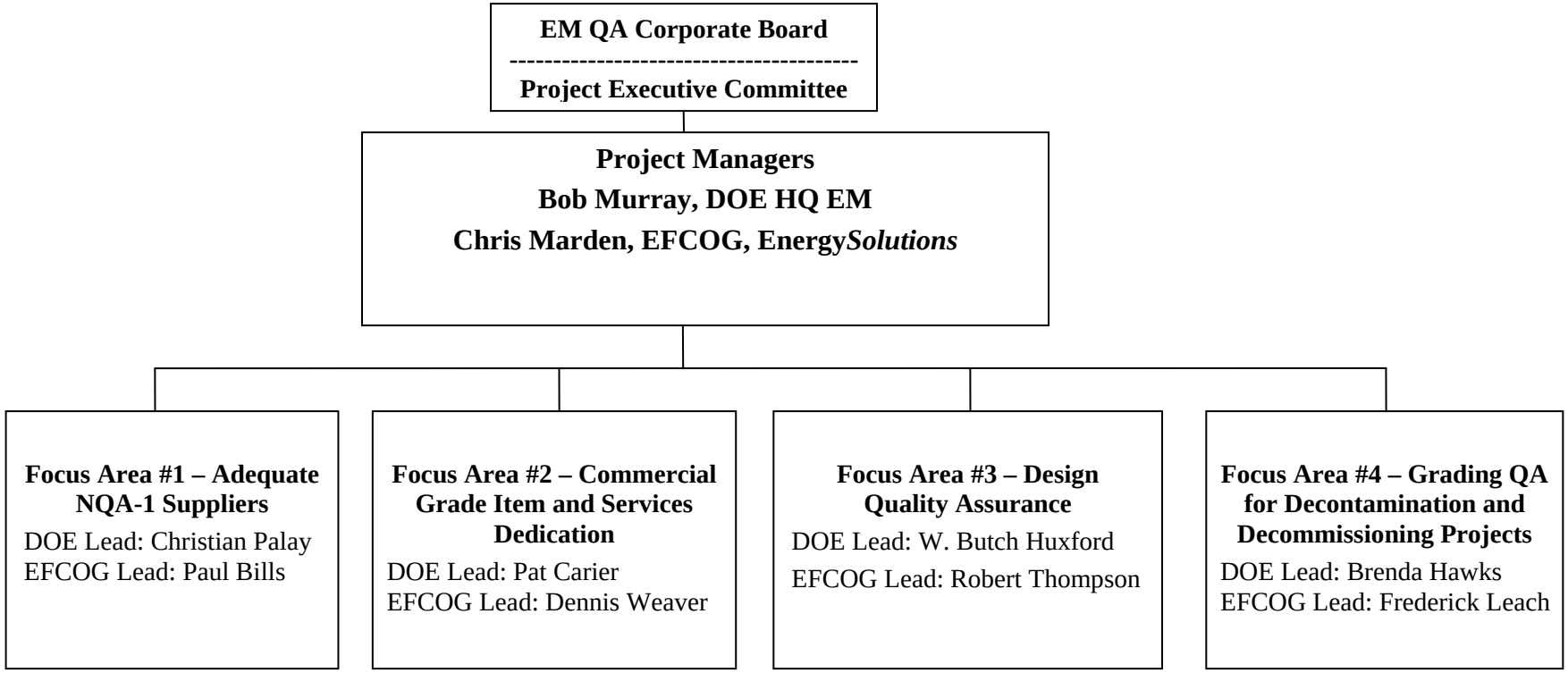
Communications:

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, 2011

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 JSEP.

Status:

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

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	JSEP 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, 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 Commercial Grade Dedication (CGD) is currently being defined and implemented. A summary of the results of the evaluations were expected by November 30, 2009.
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 300 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 CGD 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 CGD. 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: Dennis Weaver

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 (including consistency verification with Subpart 2.14 of NQA-1)	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 (including consistency verification with Subpart 2.14 of NQA-1)	Draft procedure	No
2-2	08/27/10	Comment period ends	N/A	N/A

Task #	Estimated Due Date	Task Description	Deliverable	Deliverable To Be Submitted to Project Managers
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 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:
Initiated team meetings and started work on the deliverables for the focus area.

DOE Lead: W. Butch Huxford

EFCOG Lead: Robert Thompson

Support Team:

Representatives from the following projects:

- Waste Treatment Plant
- Salt Waste Processing Facility
- Sodium Bearing Waste
- U233 Project
- DUF6
- Tank 48
- Deactivation and Decommissioning (D&D) site representatives
- Others as needed

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	06/18/10	Identify FA3 team and initiate planning activities	Roster	Yes
2	07/19/10	Develop final scope of the effort, specifically addressing feedback from recent CPRs (e.g., Idaho). Include deliverables, such as: • Questionnaire to major projects describing existing practices	Scope outline	Yes
3	08/02/10	Deliver questionnaire to major projects	Questionnaire	No
4	09/01/10	Receive results from major projects	Completed Questionnaire	No
5	10/01/10	Provide analysis for PM review/calibration	Tables/charts/ text documents describing FA3's recommended path forward for ultimate deliverable	Yes
6	11/01/10	White Paper for EM consideration communicating Design Quality Assurance expectations/recommendations/etc.	White Paper	Yes

Project Focus Area #4 – Grading QA for Deactivation 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 desirable 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: Frederick Leach

Support Team and Milestones:

The activities and milestones required to complete the recommendations for this focus area have already been completed and are in place. Additional examples will be added to the information provided in the attachments to address the Board's request. 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.

Task #	Estimated Due Date	Task Description	Deliverable	Deliverable To Be Submitted to Project Managers
1	11/01/10	Obtain additional perspective from other D&D sites within EM.	N/A	No
2	01/01/11	Update the attachments/tables to provide examples of each grading.	Updated Table	Yes

Attachment A for Focus Area #4
Things to Consider when Evaluating 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.

Preliminary Analysis of Site-Specific Responses to EM-2 Request for Self-Evaluation of Commercial Grade Dedication Practices

A memorandum by Principal Deputy Assistant Secretary, Mr. Dae Y. Chung, on October 6, 2009, requested for all the Department of Energy (DOE) Office of Environmental Management (EM) sites to evaluate the adequacy of each site's Commercial Grade Dedication (CGD) programs. This document presents a preliminary analysis of the responses provided by Carlsbad Field Office (CBFO), Idaho Operations Office (DOE-ID), Oak Ridge Office (ORO), Office of River Protection (ORP), Portsmouth/Paducah Project Office (PPPO), Richland (RL), Savannah River (DOE-SR), MOAB UMTRA, and West Valley Demonstration Project's (WVDP[1]).

Overview

The site-specific responses were varied in depth and breadth of self evaluations performed. The application of graded approach is probably one key factor resulting in variation in detail and approach to examining the CGD programs.

In instances where sites and projects are not involved in significant nuclear activities the site review was limited to the evaluation of the site or project Quality Assurance Plan (QAP) and the associated implementing procedures. In other cases, where significant construction, design and/or operations are ongoing at the site the reviews showed more depth and detail, attributed to the application of the graded approach.

One general weakness that was noted in the responses was the limited number of sites that performed or documented field level verification and validation (V/V) of program implementation. This weakness has potentially significant corporate wide implications as the few sites that performed an assessment of program implementation; identified relatively significant deficiencies in the execution of the CGD processes.

Overall, the site-specific information provided is valuable and provides a snapshot of the EM CGD program. The insights gained from the responses will be used to develop site-specific and corporate strategies to further improve the development and implementation of the CGD program.

Preliminary Trends and Observations

The site-specific responses contained several comment trends across majority of the field offices and projects.

These insights provide an excellent foundation for EM projects and field offices to build upon in improving the implementation of the CGD process. These include:

1. Site or project Quality Assurance Plans (QAPs). Most sites reported that their QAPs were generally aligned with the requirements and expectations of EM Corporate QAP. For the most part the feedback

[1] Please contact Mr. Robert Murray, Director, Office of Standards and Quality Assurance, EM-23, for any assistance or questions on CGD program development/implementation.

demonstrated high degree of consistency and awareness of EM corporate requirements and expectations relative to the CGD program.

2. Commercial Grade Dedication program procedures. Almost every site or project identified that they had programs and procedures that addressed the requirements of the CGD program. Some sites identified areas for improvement in their site-specific procedures.

3. CGD Training is being implemented and recognized as a priority. While all the sites recognized the need and priority for CGD training, the responses indicate that not all site training programs meet the needs of personnel involved in CGD including those representing the QA, engineering, and the procurement organizations. This gap adversely impacts the staff ability to clearly understand or effectively implement the CGD process. The need to develop, update, or improve content and uniformity of the available CGD training material was not cited as a deficiency to explain the absence of training. It should also be noted that several sites/projects took advantage of the recently developed and delivered EM corporate CGD training.

4. Recognition of the need for and identification of CGD subject matter experts (SMEs) for projects and sites was another noteworthy practice. As with the unresolved safety question (USQ) process in nuclear safety, the CGD process requires a specific skill set, specific training, and a focus on the objectives of the program. Recognizing this critical need, several sites/projects have identified SMEs that are responsible for implementation or oversight of the CGD process.

Potential Areas for Improvement

The assessment results identified several specific areas that need to be improved. These varied to some degree, as expected, from site to site. These include:

1) Training – the maturity of and consistency in level of CGD training varied from site to site. These ranged from offering a comprehensive EM corporate sponsored CGD training to a simple computer based training. The issue of training is one that must be addressed at the site-specific level to ensure all affected personnel and organizations have a clear understanding of CGD requirements and operational competency relative to their roles and responsibilities. EM corporately has made progress to develop consistent and uniform training. This training can serve as the starting point for development of additional CGD training tailored to site-specific needs and complexities.

2) Field level implementation of the CGD program. The sites/projects reported to be generally complaint with programmatic aspects of procedures that identified the required elements of the CGD program. In cases where the CGD self-evaluation included assessment of field implementation, the site responses concluded that the field implementation of procedures needed improvement. A

key area found to be needing improvement relates to technical description, identification, and verification of critical characteristics. This is an important area that requires site-specific management attention and follow ups.

3) Verification of sub-suppliers and implementation of the CGD requirements in procurement documentation was identified as an area that needs improvement. This issue was highlighted in site-specific assessments that considered the evaluation of procurement documents and the evaluation of Vendor and sub-supplier CGD programs. Again, this is a key area that requires sustained site-specific management attention and follow-ups.

Summary

The preliminary analysis of site-specific responses is encouraging as it demonstrates clear recognition and understanding of the CGD requirements and expectations.

The results seem to indicate that continued site-specific CGD improvements and strides are needed and warranted. Specifically; it demonstrates that the rigor, formalism, and discipline associated with current status of the CGD process within the EM sites and projects need to be strengthened to ensure the required level of safety for the operation of a dedicated commercial piece of equipment.

Additionally; it is critical that EM both corporately and at the field level continue to strengthen its Federal monitoring, technical engagement, and presence at dedicating suppliers.

Office of Environmental Management (EM)

Consolidated Response to DNFSB Staff Questions

Suspect Counterfeit Parts






August 20, 2010

Office of Standards and Quality Assurance, EM-23
U.S. Department of Energy

Work in Progress - Reflects Input received as of August 16, 2010

Table of Contents

Foreword

This document provides the Office of Environmental Management's initial consolidated response to the eighteen questions posed by the Defense Nuclear Facilities Safety Board (DNFSB) Staff on Suspect/Counterfeit Items (S/CI) in the request dated July 20, 2010.

The consolidated response reflects preliminary input received from the EM sites as of August 16, 2010. The data provided is a listing of the information received from our EM sites. EM was given limited time to gather the attached response; therefore, the responses have not been modified and are provided as EM-23 received them. It is the intent of EM-20/23 to brief the DNFSB Staff on this response and further determine how best to address the identified concern related to S/CI. Once further clarification is received and all EM sites have responded with information about their programs, a compilation of the results will be provided to the DNFSB for each question.

Any questions regarding EM input should be directed to:

Mr. Robert Murray, Acting Diretor
Office of Standards and Quality Asurance, EM-23
Robert.Murray@EM.doe.gov
(202) 586-7267

DNFSB Staff Question 1

How do EM, NNSA, and HSS determine whether DOE has purchased ICs or devices containing ICs supplied by the following companies or persons for safety related use (including systems, structures, and components) at defense nuclear facilities or in nuclear weapon systems?

(MVP Micro, Inc., BeBe Starr Consulting, Inc., Red Hat Distributers, Inc., RH Distributers, Red Hot Distributers, Force-One Electronics, Inc., Labra, Inc., Labra Electronics, Inc., Becker Components, Inc., Pentagon Components, Inc., Mustafa Abdul Aljaff, Marwah (Aljaff) Felahy, Neil Felahy)

Site/ Office	Response from Contractor/Site Office	Comments
Carlsbad Field Office/ WIPP	Site Office	As the Carlsbad Field Office receives information on potential suspect/counterfeit items or vendors associated with those items, a call is passed on to the subordinate organizations (i.e., M&O contractor and/or other WIPP participants as appropriate) to verify whether the listed items or vendors have provided products or services for the respective project. The WIPP M&O contractor has a Suspect/Counterfeit Item Program Coordinator that becomes the point-of-contact for requests for information. Organizations within the M&O then evaluate through the supply chain process whether the listed items have been ordered/received or vendors have been used. The results of this evaluation are reported back to the Field Office.
Idaho Falls Office	CWI	CWI reviewed vendors by names back to the start of the CWI contract (May 2005) and found no instances where any of the names companies provided products.
Richland Operations Office/Office of River	Site Office	We researched all the above names in both our purchasing databases (PassPort and P-Card) and did not get any hits. Recognizing all the company names on this list were owned and run by the same team of individuals Mustafa Abdul Aljaff, (see "Aljaff Plea" attached) and his sister Marwah (Aljaff) Felahy, and his brother-in-law Neil Felahy, we

How do EM, NNSA, and HSS determine whether DOE has purchased ICs or devices containing ICs supplied by the following companies or persons for safety related use (including systems, structures, and components) at defense nuclear facilities or in nuclear weapon systems?

(MVP Micro, Inc., BeBe Starr Consulting, Inc., Red Hat Distributers, Inc., RH Distributers, Red Hot Distributers, Force-One Electronics, Inc., Labra, Inc., Labra Electronics, Inc., Becker Components, Inc., Pentagon Components, Inc., Mustafa Abdul Aljaff, Marwah (Aljaff) Felahy, Neil Felahy)

Site/ Office	Response from Contractor/Site Office	Comments
		also sorted by various combinations of the above names as well as each single word such as BeBe, Micro, Red Micro, etc. Again we found no hits, except for one, the word Micro. The company we identified in PassPort with Micro in its title was not in the field of electronics and is located in a different state.
Oak Ridge Office	Site Office	Members of the contractors' Quality Assurance Team are tasked to verify whether a newly identified S/CI was previously installed into their process equipment. This is done by verifying the procurement information. Additionally, through the procurement procedures receipt inspections are performed to verify that all labels are present (even on circuit boards.)
PPPO	LATA	Not applicable. LATA KY does not include purchase of ICs or devices containing ICs for safety related use in the current scope of work.
	LPP	A review of LPP project procurement records shows that none of these vendors have been used.
	SST	Not applicable to SST. The SST scope of work does not include purchase of ICs or devices containing ICs for safety related use.

DNFSB Staff Question 2

How do EM, NNSA, and HSS perform assessments, surveys, and/or inspections concerning whether DOE M&O contractors or subcontractors of DOE M&O contractors have purchased ICs or devices containing ICs supplied by the above companies for safety related use at defense nuclear facilities or nuclear weapon systems?		
Site/ Office	**Response from Contractor/Site Office**	**Comments**
Carlsbad Field Office/ WIPP	Site Office	The Quality Assurance program within the Carlsbad Field Office routinely assesses the supply chain process, training process, as well as the inspection and testing process of the M&O contractor to ensure compliance with requirements. Suspect/Counterfeit Item verbiage within applicable procurement contracts is included in those assessments. Training and adequacy of inspections for materials coming in are also evaluated.
Richland Operations Office/Office of River	Site Office	Our Acquisition Verification Services organization tracks supplier trends and works with suppliers to correct issues. We respond to issues identified through the Occurrence Reporting process and provided via Lessons Learned. Within our Central Plateau organization we have a senior QA individual who serves as the S/CI Subject Matter Expert and monitors GIDEP, INPO, newspaper articles, trade journals and industry blogs to stay current on S/CI. This individual periodically attends the bimonthly Hanford Site QA Managers meeting to update site QA managers on current S/CI issues. For example, he determined GIDEP identified 2 issues with integrated circuits; Justyn Tyme Components Inc. and Visiontech Components. (In November 2009 and January 2010 respectively they provided suspect items to a government contractor.) Our review did not identify where either Justyn Tyme or Visiontech Components have been a supplier to Hanford. DOE staff knowledgeable of S/CI requirements periodically assesses contractor activities in identifying, controlling, monitoring, and disposing of S/CIs. In addition, DOE staff works with contractor staff when S/CI is reported to the Office of Inspector General (OIG) and remain cognizant of OIG investigation activities.
Oak Ridge Office	Site Office	All contactors perform supplier audits on frequently counterfeit items. SMEs (in reference to the aforementioned IC suppliers, the SMEs would be IT managers)

How do EM, NNSA, and HSS perform assessments, surveys, and/or inspections concerning whether DOE M&O contractors or subcontractors of DOE M&O contractors have purchased ICs or devices containing ICs supplied by the above companies for safety related use at defense nuclear facilities or nuclear weapon systems?		
Site/ Office	**Response from Contractor/Site Office**	**Comments**
		would perform these Audits. Most components with ICs have been procured via their certified vendors list and the contractors are performing a query on the vendors stated and are working through their procedures to comment.
PPPO	LATA	LATA KY does not include purchase of ICs or devices containing ICs for safety related use in the current scope of work.
	SST	The SST scope of work does not include purchase of ICs or devices containing ICs for safety related use.

DNFSB Staff Question 3

If items containing ICs supplied by the above companies have been identified, what were the device, application, and location?		
Site/ Office	**Response from Contractor/Site Office**	**Comments**
Carlsbad Field Office/ WIPP	Site Office	A check with the M&O contractor for the Waste Isolation Pilot Plant indicates that there is no evidence that any of the listed vendors have been used to provide products or services.
Idaho Falls Office	CWI	This is not applicable since we have not discovered any items at this point.
Richland Operations Office/Office of River	Site Office	None Identified.
Oak Ridge Office	Site Office	Whenever there is a S/CI, a letter goes out to each of the subvenders asking them to verify the fact that they have not utilized work or procured items with those venders.
PPPO	LATA	Not applicable. LATA KY does not include purchase of ICs or devices containing ICs for safety related use in the current scope of work.
	LPP	Not Applicable
	SST	Not applicable to SST. No items containing ICs have been purchased from the companies listed for safety related devices, applications, or locations that fall under the SST scope of work.

DNFSB Staff Question 4

In EM, NNSA, and HSS, what information was disseminated, how was the information disseminated, when was the information disseminated, and what were results and feedback?		
Site/ Office	**Response from Contractor/Site Office**	**Comments**
Carlsbad Field Office/ WIPP	Site Office	When CBFO QA receives notices regarding S/CI, those notices are forwarded to the WIPP M&O QA Department with a request for evaluation. In connection with the companies of interest, all evaluations have indicated that materials from these companies have not been received and are not in the WIPP supply system. Regarding the DNFSB's list of specific companies of concern, all were identified in a single document prepared by the US Attorney's Office dated October 9, 2009. This document was received by CBFO QA on 2/25/2010 and was forwarded to the WIPP participant organizations, including the WIPP M&O QA Department on the same day.
Idaho Falls Office	CWI	This is not applicable since we have not discovered any items at this point.
Richland Operations Office/Office of River	Site Office	In the field we depend heavily on the DOE Lessons Learned system and on bulletins from both HSS and EM. To accelerate the process of getting information, our S/CI SME participates directly in the Lessons Learned conference call when issues dealing with S/CI or Quality are discussed.
Oak Ridge Office	Site Office	Most of the work performed by EM at ORO is D&D. Therefore there is a graded approach to most of the S/CI programs here. Nonetheless, procedures are in place to address most of the above issues.
PPPO	SST	Not applicable to SST. As no items containing ICs have been purchased for safety related use, there has been no information, results, or feedback specific to the companies listed. Note: While no items containing ICs have been purchased, a search of the SST MS Outlook folder for Lessons Learned / OPEX was performed. This email folder is further parsed into categories that include: No Impact, Potential Impact, Impact, and Product Recall, amongst others. Due to the limited response time, only the

In EM, NNSA, and HSS, what information was disseminated, how was the information disseminated, when was the information disseminated, and what were results and feedback?		
Site/ Office	**Response from Contractor/Site Office**	**Comments**
		Impact and Product Recall folders were reviewed by email titles as originally screened that most likely contain information of impact to SST. No emails related to this criteria resulted from this search. Given additional time, a more thorough review of all folders may be performed.

DNFSB Staff Question 5

How do vendors report/self-report S/CI problems?		
Site/ Office	**Response from Contractor/Site Office**	**Comments**
Carlsbad Field Office/ WIPP	Site Office	• Contracts contain clauses to identify the supplier or subcontractor's responsibilities regarding S/CIs. • Procurement documents for items also specify the appropriate technical specifications, QA standards, and documentation requirements [e.g., Certificate of Conformance (C of C), Certified Material Test Reports (CMTRs), and other supplier generated documentation]. • Vendors may distribute notices to DOE regarding suspicious items, recalled or defective items, and items under investigation by the Defense Criminal Investigation Service.
Idaho Falls Office	BBWI	AMWTP Response: AMWTP flows down requirements in regards to S/CI items via the procurement process using standard quality clauses. These clauses require vendors to procure items directly from original manufacturers or authorized master distributors. These clauses also provide notification to the supplier that AMWTP will inspect items for indications of suspect or counterfeit conditions. For Safety Significant and Mission Critical Engineered Item procurements, an additional standard quality clause is used that requires the vendor notify AMWTP of specific nonconforming conditions.
	CWI	The vendors report via the normal procurement reporting process on an information request.
Richland Operations Office/Office of River	Site Office	Our current contracts do not require vendors to notify us of S/CI items they identify. ORP Contractors are required to pass down S/CI requirements to their

How do vendors report/self-report S/CI problems?		
Site/ Office	**Response from Contractor/Site Office**	**Comments**
		vendors. This is done via standard contract clauses. When S/CI is identified any reporting is done through the ORP contractor. Also, ORP contractors check at receipt inspection for S/CI.
PPPO	LATA	Purchase Requisitions/Orders require that supplier's warranty the items provided to LATA Kentucky are genuine, new and unused unless otherwise specified in writing by LATA Kentucky and the supplier indemnifies LATA Kentucky, its agents, and third parties against financial loss, injury, or property damage resulting directly or indirectly from materials that are defective, suspect, or counterfeit or materials that are provided under false pretenses. S/CI items that are discovered are reported through the DOE Occurrence Reporting and Processing System (ORPS).
	LPP	LPP procedure requires that the DOE and OIG be notified when S/CI are discovered.
	SST	Vendors of Quality Level I and Quality Level II items purchased by SST report identified issues such as S/CI problems, via the nonconformance process. In the event that an S/CI item is identified, the SST QA program requires reporting to the US DOE Office of Inspector General as well as US DOE PPPO.

DNFSB Staff Question 6

Is or should there be a legal requirement for contractors, subcontractor, suppliers or vendors to report problems to DOE as the facility owner similar to reporting within the Defense, Aerospace, and Commercial Nuclear Power Community?		
Site/ Office	**Response from Contractor/Site Office**	**Comments**
Carlsbad Field Office/ WIPP	Site Office	• When an S/CI is discovered, the IG is notified. • S/CI Reporting requirements and guidelines are followed in accordance with DOE O 231.1A, Environment, Safety, and Health Reporting, and DOE O 221.1, Reporting Fraud, Waste, and Abuse to the Office of Inspector General.
Idaho Falls Office	BBWI	AMWTP Response: Currently, contractors are required to report S/CI items via DOE-M-231.1-2, Occurrence Reporting and Processing of Operations Information. The QA Program (Federal law under 10 CFR 830 Subpart A requires an element for Inspection and Acceptance Testing. This program along with awareness training for S/CI is designed to ensure S/CI issues are reported. Safety Significant, Mission Critical and all other facility equipment items are inspected as part of Supply Chain Inspection activities which includes an inspection for indications of suspect or counterfeit conditions. Issues pertaining to S/CI are also reported to the INL Inspector General office.
	CWI	Presently S/CI requirements are included in the Procurement documents. (Additional legal requirements may not be necessary.)
Richland Operations Office/Office of River	Site Office	We believe vendors may not report items because they do not want to be thought of as a questionable vendor, or they are concerned about the legal implications of identifying a supplier as a problem. Hanford does not maintain a debarred contractors list. Rather our approach has been to work with contractors to address non-S/CI issues with procurements and raise the quality of our suppliers. Hanford procurement does consult the Excluded Parties List System. We are following the work of the Electric Power Research Institute (EPRI - Mr.

Is or should there be a legal requirement for contractors, subcontractor, suppliers or vendors to report problems to DOE as the facility owner similar to reporting within the Defense, Aerospace, and Commercial Nuclear Power Community?		
Site/ Office	**Response from Contractor/Site Office**	**Comments**
		Marc Tannenbaum) to put together counterfeit and fraudulent item computer based training and a counterfeit and fraudulent item database. Mr. Tannenbaum stated on the Lessons Learned call last month that the project is in the planning stages and is not currently operational. A recent EPRI communication noted they are benchmarking the DOE's Occurrence Reporting System and GIDEP. NRC staff has expressed concern about the decrease in the pool of qualified suppliers and the pressure this places on utility commercial dedication programs. EM shares this concern. We have supported the EM response to this concern by participating in the EM-developed commercial grade dedication training and by increasing our oversight of commercial grade dedication programs and practices at Hanford. So to answer the question, Hanford feels there is no need. Currently, via DOE Order 414.1C contractors are required to report S/CI. Contractors also have processes in place to look for S/CI. Additional requirements would only drive up cost, reduce the supplier pool, and would be very difficult to enforce.
PPPO	SST	The principal contractual based drivers for the SST Quality Assurance Plan (QAP) include 10CFR830 Subpart A (Quality Assurance Requirements) and DOE O 414.1C (Quality Assurance). Consideration of an approach for reporting of S/CI problems such as 10CFR21 (Reporting of Defects and Noncompliance) for the commercial nuclear power industry for potential benefit to DOE as the facility owner, its contractor, subcontractor, supplier, and vendor community is recommended.

DNFSB Staff Question 7

What interagency activities does DOE participate in for S/CI activities, e.g. Industrial Base Evaluations, etc.? Describe the groups and their operations.		
Site/ Office	**Response from Contractor/Site Office**	**Comments**
Carlsbad Field Office/ WIPP	Site Office	Interagency activities are identified in the Office of Environment, Safety, and Health, *Process Guide for the Identification and Disposition of Suspect/Counterfeit or Defective Items at Department of Energy Facilities*.
Idaho Falls Office	BBWI	AMWTP Response: The Operating Experience Committee, ref. DOE O 210.2, DOE Corporate Operating Experience Program, is currently comprised of multiple contractors/agencies and serves as a conduit for disseminating a number of issues associated with S/CI. Recent committee meetings have included Bruce Power LP-Canada, EPRI, NNSA, NRC, Shaw Power Group and various DOE contractor/field office representation. Committees (e.g. ISM & QA) from EFCOG also address S/CI issues.
	CWI	CWI does not participate in any interagency activities.
Richland Operations Office/Office of River	Site Office	DOE has contacts with Defense, NRC, and various industries. We feel our internal Occurrence Reporting & Lesson Learned systems are on par with systems currently in operation outside of the Department. With additional resources we could do more to glean emerging issues from news reports, trade journals, and industrial blogs. As presented in the last EM QA Corporate Board meeting, at Hanford we are actively working to get all of our staff (DOE, prime contractor, and subcontractor) engaged in looking for S/CI. The following resources available through DOE are also monitored for S/CI information: • DOE HSS S/CI Web site; http://www.eh.doe.gov/sci.

What interagency activities does DOE participate in for S/CI activities, e.g. Industrial Base Evaluations, etc.? Describe the groups and their operations.		
Site/ Office	**Response from Contractor/Site Office**	**Comments**
		• Suspect Indications List; https://sbms.bnl.gov/sbmsearch/subjarea/72/2e05e011.pdf • Suspect Bolt Head Marking Card; https://sbms.bnl.gov/sbmsearch/subjarea/72/2e03e011.pdf • Suspect Stainless Steel Fastener Headmark List; https://sbms.bnl.gov/sbmsearch/subjarea/72/72_Exh4.cfm • Detecting Suspect/Counterfeit Items During Facility Inspections; https://sbms.bnl.gov/sbmsearch/subjarea/72/72_Exh4.cfm • Government-Industry Data Exchange Program (GIDEP); http://www.gidep.org.
PPPO	LATA	The following are examples of the databases and notification systems utilized by LATA KY for informing personnel and contractors of potential S/CI sources; • DOE Office of Safety and Security's S/CI website at http://www.hss.energy.gov/csa/csp/sci/, and • Underwriters Laboratories (UL) website located through http://www.ul.com/global. • Active participation in US DOE Operating Experience Committee; and Local Site Combined DOE / Contractor Safety Committee
	SST	SST relies upon the following databases and notification systems for alerting contractors of newly identified threats: • Government-Industry Data Exchange Program (GIDEP), • DOE Office of Safety and Security's S/CI website at http://www.hss.energy.gov/csa/csp/sci/, and • Underwriters Laboratories (UL) website located through http://www.ul.com/global. • Active participation in US DOE Operating Experience Committee; and Local Site Combined DOE / Contractor Safety Committee

DNFSB Staff Question 8

How do DOE and NNSA ensure vendor QA and S/CI reporting to DOE and NNSA, and how is this information received and documented?		
Site/ Office	**Response from Contractor/Site Office**	**Comments**
Carlsbad Field Office/ WIPP	Site Office	• Contracts contain Terms and Conditions to identify the supplier or subcontractor's responsibilities regarding S/CIs. • Performance of Source Inspections to inspect inventory and storage areas to identify, control, and disposition S/CIs. • Vendor audits include an evaluation of purchased item controls, nonconformance process, and reporting requirements. • Resources and guidance documents are provided to vendors to assist in the identification of S/CIs and reporting requirements.
Idaho Falls Office	BBWI	AMWTP Response: See answer to item 6 above for contractor identification and reporting.
	CWI	See item 5 above for CWI response.
Richland Operations Office/Office of River	Site Office	See responses to items 5 and 6 above. If an item is found at receipt inspection, we report the S/CI using standard processes. We resolve the S/CI using our approved NCR process. If the item is found during an offsite vendor inspection, the item and S/CI still belongs to the vendor. We document the failure of the inspection form but it is up to the vendor to correct the item and again present the item for inspection. We do not document S/CI items in this case nor do we report them to the IG or in an Occurrence Report. In the case of the Waste Treatment Plant (WTP) and Tank Farms (TF), vendors report S/CI through Bechtel National Inc. or Washington River Protection Solutions and these DOE contractors report the S/CI as required by

How do DOE and NNSA ensure vendor QA and S/CI reporting to DOE and NNSA, and how is this information received and documented?		
Site/ Office	**Response from Contractor/Site Office**	**Comments**
		DOE Order 414.1C.
PPPO	LATA	S/CI information is received from various sources, including US DOE Operating Experience Committee, via email alerts or discussed amongst committee members. LATA KY evaluates such alerts for applicability against scope of work and notifies appropriate Project or Functional Managers for verification that the S/CI is or is not in use or in stock.
	LPP	LPP utilizes the Occurrence Reporting and Processing System to report these issues.
	SST	S/CI information received from various sources, including US DOE Operating Experience Committee and Local Site Combined DOE / Contractor Safety Committee, are typically received via email alerts or discussed amongst committee members. Upon receipt, SST screens such alerts for applicability against scope of work and notifies appropriate functional managers and work supervisors to perform a positive verification that the S/CI is or is not in use or in stock. Metrics of alerts received, screening results, and S/CI verifications are reported to DOE Site Office on a periodic basis.

DNFSB Staff Question 9

How do DOE and NNSA approach reluctance to report S/CI? What has been the impact on DOE and NNSA and on understanding the current threat?		
Site/ Office	**Response from Contractor/Site Office**	**Comments**
Carlsbad Field Office/ WIPP	Site Office	Purchase orders and contracts contain specific quality clauses prohibiting delivery of S/CIs, including provisions prohibiting subcontractors from bringing S/CIs on site, holding subcontractors accountable for replacing S/CIs at their expense.
Idaho Falls Office	BBWI	AMWTP Response: AMWTP has not experienced reluctance to report S/CI items
	CWI	To date, CWI has no knowledge of vendor's not reporting S/CI issues so there is no impact.
Richland Operations Office/Office of River	Site Office	RL and ORP and their contractors report all S/CI we find at receiving or on-site. We strongly believe major construction projects such as the Vitrification Plant, and the 200-W Area Pump and Treat have a large exposure, much like new power plants. In the case of Pump and Treat we have a multi-person independent QA organization in the contractor performing oversight, the RL Project Office has added a dedicated QA resource, and construction oversight is a focus of the RL QA organization.
PPPO	LATA	The Paducah Environmental Remediation Project has a history of reporting of S/CI discoveries and maintaining communications regarding potential S/CI that could be encountered during the course of work performed. Personnel involved in procurement, inspection or testing, construction, surveillances, assessments and corrective action complete training enabling them to recognize common suspect/counterfeit items and the processes necessary to disposition such items. QA and Engineering have coordinated efforts to identify, report, and evaluate the impact when S/CI is encountered.
	LPP	LPP performs aggressive receipt inspections to identify S/CI regardless of the source.
	SST	SST has historically had open communications about S/CI. Work supervisors have been proactive and diligent and are aware to contact QA in matters concerning

How do DOE and NNSA approach reluctance to report S/CI? What has been the impact on DOE and NNSA and on understanding the current threat?		
Site/ Office	**Response from Contractor/Site Office**	**Comments**
		work packages that may involve potential S/CI. Likewise, as an example, an informal discussion with a PPPO Facility Representative regarding S/CI in general resulted from this specific information request.

DNFSB Staff Question 10

What measures are taken against suppliers or vendors that do not allow QA inspections (including receipt, onsite, and factory audits and inspection)? What happens with this information and with these vendors?		
Site/ Office	**Response from Contractor/Site Office**	**Comments**
Carlsbad Field Office/ WIPP	Site Office	• Potential suppliers are not included on the Qualified Supplier's List. • Information is documented and retained as a QA record. • Other actions (lines of inquiry, investigations, legal actions) are dependent upon contract requirements and the scope of work performed.
Idaho Falls Office	BBWI	AMWTP Response: AMWTP issues "General Provision" clauses as part of the procurement process that provides notification of hold points to vendors for the purpose of QA/Engineering evaluation of work being performed on behalf of AMWTP. AMWTP has not experienced a vendor refusing or not honoring requested access or hold points for inspection.
	CWI	To date, no CWI vendors have refused free access.
Richland Operations Office/Office of River	Site Office	With Safety Class, Safety Significant, and Quality Level 3 (Enhanced Commercial) it is quite simple; if you do not let us come and visit, we do not use you. For standard General Service items the risk has been determined to be low enough that we do not look or perform a formal receipt inspection. However, all receipt inspection activities include looking for S/CI. Also, periodic warehouse inspections are performed of bulk items and spare parts which include looking for S/CIs.
PPPO	LATA	Purchase Requisitions/Orders require that supplier's warranty that items provided to LATA Kentucky are genuine, new and unused unless otherwise specified in writing by LATA Kentucky and the supplier indemnifies LATA Kentucky, its agents, and third parties against financial loss, injury, or property damage resulting directly or indirectly from materials that are defective, suspect, or counterfeit or materials that are provided under false pretenses. Suppliers or vendors that do not comply with LATA KY Procurement Policies, including prohibited items such as S/CI, may be disqualified as a supplier or vendor. QA audits of facilities and/or in-

What measures are taken against suppliers or vendors that do not allow QA inspections (including receipt, onsite, and factory audits and inspection)? What happens with this information and with these vendors?		
Site/ Office	**Response from Contractor/Site Office**	**Comments**
		process, final, or receipt inspections are generally limited to suppliers of critical items; however, refusal of any level of oversight would result in a supplier or vendor being removed from the LATA KY Approved Supplier List (ASL). Procurement and affected end users are notified of updates to the ASL as they occur.
	LPP	LPP has not experienced suppliers who refused access or have not allowed QA inspections. The right of access is imposed through LPP's procurement documents.
	SST	SST reserves the right to discontinue use of suppliers or vendors that do not allow QA audits of their facilities or in-process, final, or receipt inspection. Under such circumstances, the supplier or vendor is removed from the SST Approved Supplier List (ASL). This information is shared with SST Procurement and affected functional managers.

DNFSB Staff Question 11

How do DOE and NNSA require contractor QA and S/CI reporting to DOE, and how is this information received and documented?

Site/ Office	Response from Contractor/Site Office	Comments
Carlsbad Field Office/ WIPP	Site Office	• Contractor Requirement Documents (CRDs) are issued for each contractor. • When an S/CI is discovered, the IG is notified. • S/CI Reporting requirements and guidelines are followed in accordance with DOE O 231.1A, Environment, Safety, and Health Reporting, and DOE O 221.1, Reporting Fraud, Waste, and Abuse to the Office of Inspector General.
Idaho Falls Office	BBWI	AMWTP Response: See answer to item 6 above for contractor identification and reporting.
	CWI	CWI is required to comply with DOE O 414.1C including the S/CI attachments. PRD-5095, "Suspect/Counterfeit Items," establishes the high-level requirements and MCP-9110, "Suspect/Counterfeit Item Identification and Control," describes the process for S/CI from discovery through reporting and closure.
Richland Operations Office/Office of River	Site Office	The requirement to prevent the introduction of S/CI flows down from DOE Order 414.1C. Our contractors typically expand this requirement in their Quality Assurance Implementation Plans and in their procedures for dealing with S/CI and Non-conformance Reporting. Reporting to Department systems is typically covered by a procedure for reporting occurrences and operations information. Once in the Department's reporting systems, S/CI information is handled in a standardized way across the Department.
PPPO	LATA	Disposition of S/CIs is accomplished in accordance with the LATA QAPIP and includes notification of S/CI discovery to cognizant DOE Offices and representatives. S/CI items that are discovered are reported through the DOE Occurrence Reporting and Processing System (ORPS).
	LPP	LPP provides the DOE S/CI information as part of the procurement package. LPP performs receipt inspections on all items that have potential to be S/CI.

How do DOE and NNSA require contractor QA and S/CI reporting to DOE, and how is this information received and documented?		
Site/ Office	**Response from Contractor/Site Office**	**Comments**
	SST	S/CI information received from various sources, including US DOE Operating Experience Committee and Local Site Combined DOE / Contractor Safety Committee, are typically received via email alerts or discussed amongst committee members. Upon receipt, SST screens such alerts for applicability against scope of work, encompassing project equipment and activities, and notifies appropriate functional managers and work supervisors to perform a positive verification that the S/CI is or is not in use or in stock. Metrics of alerts received, screening results, and S/CI verifications are reported to DOE Site Office on a periodic basis.

DNFSB Staff Question 12

Are Approved or Qualified Vendor/Suppliers Lists passed down/shared for use by sub-tier suppliers? • If so, to what level are these lists fully vertically integrated through the supply chain? • If so, what are the mechanisms used to encourage or require the use of these lists by subcontractors or other potentially effected entities within the DOE system? • How does DOE and/or the M&O contractors acquire and use these lists?		
Site/ Office	**Response from Contractor/Site Office**	**Comments**
Carlsbad Field Office/ WIPP	Site Office	No. However, procurements requirements are flowed down to sub-tier suppliers to include the following: • The Supplier shall require, in writing, subcontractors of all tiers to comply with all applicable quality program/system requirements. The quality system and control of "Special Processes" of the Supplier and subcontractors of all tiers shall be subject to audit to the extent practicable at all times and places. • Any portion of the PO which is subcontracted, including procurement of material and parts, shall include the applicable PO specifications that affect quality or manufacturing requirements. Those portions of un-priced copies of Supplier's subcontracts reflecting these requirements shall be forwarded concurrently with the subcontracting action. • Suppliers are required to have a quality program in place to address control of their sub-suppliers (i.e. NQA-1 Basic Requirement 7, Control of Purchased Items and Services).
Idaho Falls Office	BBWI	AMWTP Response: Approved Vendor Lists are not passed down to suppliers. Vendors being utilized for procurements which require evaluation for placement on the AMWTP Approved Vendor List are made aware of the evaluation being performed and any weaknesses/limitations identified as part of the evaluation.
	CWI	CWI does not routinely pass down the CWI Qualified Suppliers List to sub-tiers.

Are Approved or Qualified Vendor/Suppliers Lists passed down/shared for use by sub-tier suppliers?

- If so, to what level are these lists fully vertically integrated through the supply chain?
- If so, what are the mechanisms used to encourage or require the use of these lists by subcontractors or other potentially effected entities within the DOE system?
- How does DOE and/or the M&O contractors acquire and use these lists?

Site/ Office	Response from Contractor/Site Office	Comments
Richland Operations Office/Office of River	Site Office	We do not qualify vendors for our subcontractors nor do we require them to use a specific vendor list. We believe the legal issues of developing and maintaining such a list require careful review and consideration. Hanford contractors and sub suppliers are required to meet QA requirements specified in their contract for selecting suppliers. Contractors do not share approved supplier lists.
PPPO	LATA	Subcontractors at any level may utilize the LATA KY Approved Supplier List (ASL) for purchasing critical items or may submit an internal Approved Supplier List for evaluation by LATA KY.
	LPP	LPP does not flow down their Approved Suppliers List to sub-tier vendors. Approved Suppliers are utilized on a graded approach system. When items are purchased that could potentially be or contain S/CI, the Procurement is accomplished by imposing the S/CI clauses to the supplier per procurement document.
	SST	While there is no precedent for passing down the SST Approved Supplier List (ASL) for use by sub-tier suppliers, there is also no restriction for such information sharing.

DNFSB Staff Question 13

What standards must be met to be placed on an Approved or Qualified Vendors/Suppliers List and are these standards consistently applied across the DOE complex? • What is the "re-fresh" rate for these lists? • How is uniformity checked among sites or site contractors concerning such standards? • How is information shared between sites within the complex?		
Site/ Office	**Response from Contractor/Site Office**	**Comments**
Carlsbad Field Office/ WIPP	Site Office	• A graded approach is applied based on the specific application and the potential impact of failure of the item on the health and safety of the public, environment, or worker, resulting in determination of specific quality controls and verification methods. • Consensus standards identified in the Basic requirements of NQA-1 (or equivalent) must be addressed in the Seller's QA program. • QA Program Crosswalks are performed to ensure adequacy. Site-specific Qualified Suppliers are evaluated annually or when notified of changes to the quality management system. Each site implements controls based upon specific contract requirements. • Lessons Learned and Operating Experience programs • Annual S/CI Report • Safety Alerts and Safety Bulletins • IG Web site • Information Exchange forums through EFCOG and NIAC • Government Information Data Exchange Program (GIDEP)

What standards must be met to be placed on an Approved or Qualified Vendors/Suppliers List and are these standards consistently applied across the DOE complex? • What is the "re-fresh" rate for these lists? • How is uniformity checked among sites or site contractors concerning such standards? • How is information shared between sites within the complex?		
Site/ Office	**Response from Contractor/Site Office**	**Comments**
		• Nuclear industry journals and publications, including those available through the Institute of Nuclear Power Operations (INPO) • DOE S/CI web site Occurrence Reporting System (ORPS) Database
Idaho Falls Office	BBWI	AMWTP Response: AMWTP evaluates vendors providing non-commercial grade Safety Significant items or Mission Critical Engineered Items or Services. The evaluation is performed against AMWTP QA Program requirements (i.e. 10 CFR 830 Subpart A and NQA-1-2008). The evaluation is performed based on the scope of work being performed (e.g. if the vendor is purely doing fabrication activities based on AMWTP approved design, the vendors design program may not warrant evaluation). Vendors who are listed on the AMWTP Approved Vendor List are subject to a comprehensive and systematic annual performance evaluation which includes determination as to whether the vendor is to be retained on the Approved Vendor List. Commercial Grade Items and Services (safety related) are evaluated in accordance with NQA-1-2008, Subpart 2.14. In consideration of the number of contractors within the complex and the fact that each contract may be subject to different regulatory agencies, uniformity among sites may not be realistic (e.g. various versions of NQA-1 may be specified as part of the contractual/permit requirements).

What standards must be met to be placed on an Approved or Qualified Vendors/Suppliers List and are these standards consistently applied across the DOE complex? • What is the "re-fresh" rate for these lists? • How is uniformity checked among sites or site contractors concerning such standards? • How is information shared between sites within the complex?		
Site/ Office	**Response from Contractor/Site Office**	**Comments**
		Information is shared between sites via the Operating Experience program. Data from a wide variety of sources is reviewed daily for affect or impact to AMWTP operations, processes and vendors being utilized.
	CWI	Various standards are used based on the end use of the item; for example, ASME NQA-1-2008, ISO-9001:2008, etc. The re-fresh rate is triennial with annual performance reviews
Richland Operations Office/Office of River	Site Office	We use the appropriate portions of the standards that are applicable to the specific item being procured. We use NQA-1-2008. Prime Contractor staff conducts desk evaluations comparing vendor/supplier performance and QA Program changes on an annual basis. Vendors and suppliers are visited every two years with a complete field audit. If we have a vendor that has an ISO program we may evaluate their program and see if it will meet the need of the product we are having them manufacture. Having an ISO program does not necessarily disqualify them as long as that program is demonstrated to be robust enough to meet relevant QA requirements. Many commodity suppliers such as those for drums, only have ISO programs, however their programs are robust enough to meet Hanford requirements. As for standards, EM has designated NQA-1-2000 (or later editions) to be an acceptable standard for nuclear work, and ISO-9000 for non-nuclear work. Both of these standards have requirements for selecting suppliers. To some extent, the application of these standards in regards to approved suppliers lists can be consistent, but because of work scope and complexity, the application of the QA requirements is graded to fit the applied need, so the approved supplier lists are

What standards must be met to be placed on an Approved or Qualified Vendors/Suppliers List and are these standards consistently applied across the DOE complex?

- What is the "re-fresh" rate for these lists?
- How is uniformity checked among sites or site contractors concerning such standards?
- How is information shared between sites within the complex?

Site/ Office	Response from Contractor/Site Office	Comments
		not interchangeable. Given the differing work scopes, the sharing of this information within the Department is difficult. For example, when we have taken other sites evaluations and tried to use them, many times they are not complete or evaluate different sections of NQA-1 than we need for our procurement. Even when using the same standard the application of that standard can be different based on the scope and complexity of the work. For example an NQA-1 based QA program for a contractor doing decommissioning work would not be the same as an NQA-1 based program for a contractor operating a nuclear waste processing facility. Because of these differences in work scope and complexity, it is not a good policy to have the approved supplier lists be interchangeable. NQA-1 based programs could not accept suppliers just because they are on DOE's or another DOE contractor's approved suppliers list and be in compliance with NQA-1. Vendors on approved supplier lists are reevaluated annually. EFCOG, DOECAP related assessments are available for DOE contractors to use as a basis for selecting suppliers. However, these assessments by themselves are not sufficient to approve a supplier.
PPPO	LATA	As a requirement for placement on the LATA KY Approved Supplier List (ASL), a supplier of critical items is evaluated in accordance with the ASME NQA-1-2004 (with 2007 Addenda) per the LATA KY Quality Assurance Program and Implementation Plan (QAPIP). Consistent application of the standards across the DOE complex is dependent on contractual requirements. The LATA KY ASL is updated monthly or more frequently as needed for

What standards must be met to be placed on an Approved or Qualified Vendors/Suppliers List and are these standards consistently applied across the DOE complex? • What is the "re-fresh" rate for these lists? • How is uniformity checked among sites or site contractors concerning such standards? • How is information shared between sites within the complex?		
Site/ Office	**Response from Contractor/Site Office**	**Comments**
		changes to supplier status. Each supplier is individually evaluated upon a determined expiration date. The LATA ASL is maintained and updated by qualified QA personnel in accordance with procedural requirements. LATA KY may exercise the option to review a supplier evaluation performed by another site in lieu of conducting separate evaluation. At the request of another site within the complex, a supplier evaluation conducted by LATA KY would be made available.
	LPP	LPP utilizes a graded approach to the approval of suppliers. The requirements are tailored for the level of quality required for the items or services being obtained. The most stringent requirements are the imposing of ASME NQA-1 requirements. LPP procedure requires an annual evaluation of approved suppliers and a three year audit cycle.
	SST	To be placed on the SST Approved Supplier List (ASL), a Quality Level I supplier is currently evaluated to ASME NQA-1-2004 (with 2007 Addenda) as stipulated by the SST QA Plan. Principal factors that would influence the application of quality standards would include the contract, scope of work, flow-down requirements, intended application of purchased item or service, and performance history of the supplier. Entries for each supplier on the SST ASL are updated on an annual basis or as needed to reflect a change in status of the supplier.

DNFSB Staff Question 14

How do DOE and NNSA ensure that all interested elements of DOE and NNSA are fully informed or consulted regarding the S/CI program and incidents that require action?		
Site/ Office	**Response from Contractor/Site Office**	**Comments**
Carlsbad Field Office/ WIPP	Site Office	• Applicable requirements are flowed down to affected field elements through DOE orders, manuals, guides, notices and policies. • DOE O 414.1C and Title 10 Code of Federal Regulations (CFR) 830 Subpart A, set forth requirements for DOE/NNSA and its contractors to implement effective controls to assure that items and services meet specified requirements. • DOE O 414.1C further requires DOE/NNSA and its contractors to implement processes to prevent entry, detect, control, report, and disposition S/CIs as part of their quality assurance (QA) programs commensurate with the facility/activity hazards and mission impact. • The QAP must be applied to identifying and analyzing S/CIs, removing them, and preventing S/CIs from being supplied to DOE/NNSA and its contractors. • DOE S/CI Subject Matter Experts periodically conduct site training, which includes current methods, trends, and up-to-date information.
Idaho Falls Office	CWI	CWI reports S/CI issues via ORPS which is shared with the complex.
Oak Ridge	Site Office	All DOE contractors subscribe to the OPEX/LL databases and take part in the monthly conference calls where, if any, SC/I issues could be addressed. Currently this serves as our working group that would cover S/CI issues from across the complex. Additionally, either formally, through a memo or letter, or informally, through a phone call or email, whenever there has been a S/CI item report the information was disseminated by the DOE EM Quality Assurance Division to all five of our current prime contractors asking to return through a similar method,

How do DOE and NNSA ensure that all interested elements of DOE and NNSA are fully informed or consulted regarding the S/CI program and incidents that require action?		
Site/ Office	**Response from Contractor/Site Office**	**Comments**
		formal or informal communications, their response. If the contractor issues an interoffice memo, we concur; if they need to verify with their suppliers, then we are immediately forwarded their report/comments.
PPPO	LATA	The LATA Operating Experience Program Coordinator (OEPC) monitors information regarding Suspect Counterfeit Items (S/CI) various sources including the DOE Office of Health, Safety, and Security. As the information becomes available S/CI notifications are sent to the Company Subject Matter Expert(s) by the OEPC and to the Project or area that would be affected. The OEPC also participates in monthly conference calls with the multi site task team on Operating Experience which is as a source for sharing lessons and information such as S/CI. The following are examples of the databases and notification systems utilized by LATA KY for informing personnel and contractors of potential S/CI sources; • DOE Office of Safety and Security's S/CI website at http://www.hss.energy.gov/csa/csp/sci/, and • Underwriters Laboratories (UL) website located at http://www.ul.com/global. • Active participation in US DOE Operating Experience Committee; and Local Site Combined DOE / Contractor Safety Committee
	SST	SST relies upon the following databases and notification systems for alerting contractors of newly identified threats: • Government-Industry Data Exchange Program (GIDEP), • DOE Office of Safety and Security's S/CI website at http://www.hss.energy.gov/csa/csp/sci/, and • Underwriters Laboratories (UL) website located at http://www.ul.com/global.

How do DOE and NNSA ensure that all interested elements of DOE and NNSA are fully informed or consulted regarding the S/CI program and incidents that require action?		
Site/ Office	**Response from Contractor/Site Office**	**Comments**
		• Active participation in US DOE Operating Experience Committee; and Local Site Combined DOE / Contractor Safety Committee

DNFSB Staff Question 15

Is there a DOE intra-agency S/CI working group? • How are technical and programmatic issues coordinated, i.e., information sharing, lessons learned, notifications and database synchronization, harmonization, and integration? • What is the nature of the interactions within those parts within HSS responsible for the S/CI database? How do the line programs interface with HSS? How does HSS maintain the S/CI databases and disseminate information? • What information does HSS require in order to build, maintain, and use the HSS S/CI database?		
Site/ Office	**Response from Contractor/Site Office**	**Comments**
Carlsbad Field Office/ WIPP	Site Office	• Description of the S/CI (e.g., raw material, fasteners, electrical components, valves, fittings, ratchet straps); • Location of discovery (e.g. receiving inspection, specific building and room installed) • Name of manufacturer, distributor, and supplier; • Identifying numbers (e.g., serial number, model number, product code); • Point of contact for information on the location of the S/CI and documentation; • Date of S/CI discovery; • Occurrence report number (if available); • Intended end use (e.g., facility construction, component or equipment assembly); • Significance of the S/CI; • Dollar value of the S/CI; and • Other pertinent information, including action that is underway by the DOE/NNSA or other agencies.
Oak Ridge	Site Office	At ORO, an Office of Science site office (OSc), we constantly deal with intra-agency as our main OPEX/LL Coordinator works out of the OSc. We serve as

Is there a DOE intra-agency S/CI working group? • How are technical and programmatic issues coordinated, i.e., information sharing, lessons learned, notifications and database synchronization, harmonization, and integration? • What is the nature of the interactions within those parts within HSS responsible for the S/CI database? How do the line programs interface with HSS? How does HSS maintain the S/CI databases and disseminate information? • What information does HSS require in order to build, maintain, and use the HSS S/CI database?		
Site/ Office	**Response from Contractor/Site Office**	**Comments**
		support to the greater ORO OPEX/LL program and deal with specific EM issues (usually D&D since EM does not have much construction in Oak Ridge). Additionally, HSS services as the main entity for synchronizing, harmonizing, and integrating S/CI information. With reports flowing up to HSS from the contractors and field offices then back down across the complex.
PPPO	LATA	The LATA Operating Experience Program Coordinator (OEPC) monitors information regarding Suspect Counterfeit Items (S/CI) from various sources including the DOE Office of Health, Safety, and Security. As the information becomes available, S/CI notifications are sent to the Company Subject Matter Expert(s) by the OEPC and to the Project or area that would be affected. The OEPC also participates in monthly conference calls with the multi site task team on Operating Experience which serves as a source for sharing lessons and information such as S/CI. The following are examples of the databases and notification systems utilized by LATA KY for informing personnel and contractors of potential S/CI sources; o DOE Office of Safety and Security's S/CI website at http://www.hss.energy.gov/csa/csp/sci/, and o Underwriters Laboratories (UL) website located at http://www.ul.com/global. o Active participation in US DOE Operating Experience Committee; and Local Site Combined DOE / Contractor Safety Committee
	SST	SST relies upon the following databases and notification systems for alerting contractors of newly identified threats:

Is there a DOE intra-agency S/CI working group? • How are technical and programmatic issues coordinated, i.e., information sharing, lessons learned, notifications and database synchronization, harmonization, and integration? • What is the nature of the interactions within those parts within HSS responsible for the S/CI database? How do the line programs interface with HSS? How does HSS maintain the S/CI databases and disseminate information? • What information does HSS require in order to build, maintain, and use the HSS S/CI database?		
Site/ Office	**Response from Contractor/Site Office**	**Comments**
		• Government-Industry Data Exchange Program (GIDEP), • DOE Office of Safety and Security's S/CI website at http://www.hss.energy.gov/csa/csp/sci/, and • Underwriters Laboratories (UL) website located at http://www.ul.com/global. • Active participation in US DOE Operating Experience Committee; and Local Site Combined DOE / Contractor Safety Committee

DNFSB Staff Question 16

For S/CI discoveries that may have occurred in the past, how was information concerning the discoveries disseminated, when was the information disseminated, and what were the results of the feedback?		
Site/ Office	**Response from Contractor/Site Office**	**Comments**
Carlsbad Field Office/ WIPP	Site Office	• An S/CI database is maintained that tracks Legacy S/CI's as well as SCI's as part of receipt inspections • An ORPS report is generated for S/CI's (legacy or new) • Information is shared through Lessons Learned
Idaho Falls Office	CWI	All S/CI discoveries are handled using MCP-9110 and reported in ORPS
Oak Ridge	Site Office	A perfect example of the process was seen by Wastren Advantage Inc. where labels had come off of a component within an electrical system. The item was segregated and verified through the receipt inspection that when it arrived the label was present. Prior to verification the operators pulled and reviewed the procedures to determine when and if DOE needs to be contacted.
PPPO	LATA	S/CI items that are discovered are reported through the DOE Occurrence Reporting and Processing System (ORPS).
	SST	Vendors of Quality Level I and Quality Level II items purchased by SST report identified issues such as S/CI problems, via the nonconformance process. In the event that an S/CI item is identified, the SST QA program requires reporting to the US DOE Office of Inspector General as well as US DOE PPPO.

DNFSB Staff Question 17

What is the interface and information sharing within DOE and across the complex-- EM, NE, SC, HSS, etc. -- in the S/CI arena?		
Site/ Office	**Response from Contractor/Site Office**	**Comments**
Carlsbad Field Office/ WIPP	Site Office	• Lessons Learned and Operating Experience programs • Safety Alerts • Information Exchange forums through EFCOG and NIAC • Government Information Data Exchange Program (GIDEP) • Nuclear industry journals and publications, including those available through the Institute of Nuclear Power Operations (INPO) • DOE S/CI web site • Occurrence Reporting System (ORPS)
Idaho Falls Office	CWI	CWI reports via ORPS and DOE determines how the information is shared.
Oak Ridge	Site Office	Most of the interface within DOE and across the complex is through HQ and HSS. Both entities are proactive in forwarding issues through the Noncompliance tracking system and the Suspect counterfeit items databases. Furthermore, all issues are reviewed through the Quality Assurance divisions for each contractor and, when, applicable followed up through memos and/or Lessons Learned. This information is forwarded to the ORO OPEX/LL coordinator to be disseminated.
PPPO	LATA	The following are examples of the databases and notification systems utilized by LATA KY for informing personnel and contractors of potential S/CI sources; • DOE Office of Safety and Security's S/CI website at http://www.hss.energy.gov/csa/csp/sci/, and • Underwriters Laboratories (UL) website located at http://www.ul.com/global. • Active participation in US DOE Operating Experience Committee; and Local

What is the interface and information sharing within DOE and across the complex-- EM, NE, SC, HSS, etc. -- in the S/CI arena?		
Site/ Office	**Response from Contractor/Site Office**	**Comments**
		Site Combined DOE / Contractor Safety Committee
	SST	SST relies upon the following databases and notification systems for alerting contractors of newly identified threats: • Government-Industry Data Exchange Program (GIDEP), • DOE Office of Safety and Security's S/CI website at http://www.hss.energy.gov/csa/csp/sci/, and • Underwriters Laboratories (UL) website located at http://www.ul.com/global. • Active participation in US DOE Operating Experience Committee; and Local Site Combined DOE / Contractor Safety Committee

DNFSB Staff Question 18

What is the interaction with other relevant DOE elements, including the General Counsel, Office of Counterintelligence, Inspector General, etc.?		
Site/ Office	**Response from Contractor/Site Office**	**Comments**
Carlsbad Field Office/ WIPP	Site Office	• When an S/CI is discovered, the IG is notified and the S/CI is reported through ORPS. • S/CI Reporting requirements and guidelines are followed in accordance with DOE O 231.1A, Environment, Safety, and Health Reporting, and DOE O 221.1, Reporting Fraud, Waste, and Abuse to the Office of Inspector General.
Idaho Falls Office	CWI	CWI reports potential and confirmed S/CI issues to the DOE Field Office and Inspector General.
Oak Ridge	Site Office	Any communications with the "relevant DOE elements" would only be necessary when there has been the identification of an issue. The contractor's procedures that would be used in the event of the identification of a S/CI are clear and correct.
PPPO	LATA	Disposition of S/CIs is accomplished in accordance with the LATA QAPIP and includes notification of S/CI discovery to cognizant DOE Offices and representatives. S/CI items that are discovered are reported through the DOE Occurrence Reporting and Processing System (ORPS).
	SST	Vendors of Quality Level I and Quality Level II items purchased by SST report identified issues such as S/CI problems, via the nonconformance process. In the event that an S/CI item is identified, the SST QA program requires reporting to the US DOE Office of Inspector General as well as US DOE PPPO.

General Comments of EM Sites

General Comments of EM Sites		
Site/ Office	**Response from Contractor/Site Office**	**Comments**
EMCBC	Site Office	The majority of the small sites are in the process of closing and most of them do not deal in any Safety Significant (SS) or Safety Class (SC) systems nor are they defense nuclear facilities. Most of those facilities are on the ground or are cold and dark. As a rule, we include DOE O 414.1C and its Contractor Requirements Document (including paragraph 4) in all of our contracts. We also communicate lessons learned and all of the sites are on distribution for ORPS data which frequently address S/CI related issues. Recently, the ISMS Phase II reviews and ISMS annual assessments that we have assisted with have included S/CI related LOIs in the CRADS. While we have not seen data on any Integrated Circuits for these sites, we have verified S/CI actions on the part of the site contractors and the facility representatives at the sites we have assisted with oversight activities.
Richland Operations Office/Office of River	Site Office	We buy very few electronic items on the component level. Virtually all of our electronics are repaired by the manufacturer or disposed of on failure. Very rarely do we specify items down to the chip level. We buy electronic components and determine their acceptability for a specific application by our inspection and testing processes. Due to our scope of work, our electronics operate within the design range of Commercial off-the-shelf (COTS) components. This is unlike industrial, automotive, and military chips that must specify the range of temperature, moisture, vibration, radiation, thermal excursions, and atmospheric pressures their components must operate under. Since we use COTS chips, there is much less chance someone would counterfeit a 50 cent item. We do not have the exposure of those purchasing a $20 dollar military grade chip or a $200 satellite component. Finally, many manufacturers give us little or no documentation on the internal specifications of their devices. Some even “black-

General Comments of EM Sites		
Site/ Office	**Response from Contractor/Site Office**	**Comments**
		top" or paint over the top of the chips to obscure the chip specifications to control their intellectual property and insure we do not try to do component level repairs ourselves. Kurz Instruments, a well known flow meter manufacturer, is one such company.
Savannah River Site	Site Office	Regarding part 1 of the DNFSB questions, SRS prime contractors searched both their active and inactive vendor data bases in the SRS Procurement Cycle System for any current or past dealings with the companies or individuals in the list of interest to the DNFSB. The results were negative. Typically, as news reports about companies or individuals that are involved in counterfeiting components are issued, the SRS Lessons Learned program will disseminate that information to the appropriate groups onsite so that everyone with a need to know is aware and can be on the lookout for suspect items.

Department of Energy

Washington, DC 20585

September 2, 2010

The Honorable Peter S. Winokur
Chairman
Defense Nuclear Facilities Safety Board
625 Indiana Avenue, N.W., Suite 700
Washington, DC 20004-2901

Dear Mr. Chairman:

Thank you for your May 5, 2010, letter regarding the Defense Nuclear Facilities Safety Board's (Board) review of the Quality Assurance (QA) aspects of the hydrogen in pipes and ancillary vessels experimental test program for the Waste Treatment and Immobilization Plant. QA is one of the cornerstones of the Office of Environmental Management's (EM) overall safety program. Since the development of the EM Quality Assurance Program (QAP) in November 2008, EM has been involved in an effort to continuously improve QA across all of our sites and projects. We take any concerns dealing with potential shortcomings in our QAP very seriously and respond accordingly to address the concerns.

Your letter requested that the Department of Energy provide a report that addresses the QA and safety concerns identified in the letter, including flow down of QA requirements to subcontractors and more rigorous application of consensus quality standards to contractor and subcontractor QA programs. The requested response is included in the Enclosure to this letter.

We look forward to continuing to work closely with the Board to ensure the EM QAP is maintained at a high level of excellence.

If you have any further questions, please contact me or Dr. Steven L. Krahn, Deputy Assistant Secretary for Safety and Security Program at (202) 586-5151.

Sincerely,

Inés R. Triay
Assistant Secretary for
Environmental Management

Enclosure

cc: S. Krahn EM-20
M. Campagnone, HS-1.1

bcc: D. Chung, EM-2
K. Picha, EM-2
M. Gilbertson, EM-3 (Acting)
J. Poppiti, EM-21
R. Murray, EM-23
D. Moody, CBFO
R. Lagdon, CNS
T. Brennan, EMCBC
B. Diamond, GC-51
A. Lawrence, HS-20
J. Cooper, ID
J. Eschenberg, SC-OR
D. Brockman, RL
D. Knutson, WTP
W. Murphie, PPPO
M. McCormick, RL
J. Craig, SRS (Acting)

DEFENSE NUCLEAR FACILITIES SAFETY BOARD
QUALITY ASSURANCE REPORT

The Department of Energy (DOE) Office of Environmental Management (EM) received from the Defense Nuclear Facilities Safety Board (Board) a letter dated May 5, 2010, expressing concerns regarding the quality assurance (QA) aspects of the hydrogen in pipes and ancillary vessels (HPAV) experimental test program. The Board identified two issues and made four specific requests for responses from DOE. DOE's response to the issues raised and the requests made in the Board's May 5, 2010, letter is set forth below.

Board Issue One:

"BNI did not impose the quality assurance requirements cited in Department of Energy (DOE) Order 414.1C, *Quality Assurance,* upon Dominion Engineering Incorporated (DEI), BNI's subcontractor for the HPAV test program. Consequently, DEI and its subcontractor did not use the DOE order's quality assurance requirements, including those related to safety software, for the HPAV test program. This challenges the reliability and usefulness of the data resulting from the test program in demonstrating the safety of this aspect of the HPAV design."

Response:

DOE imposes DOE O 414.1C on contractors by inclusion of the Contract Requirements Document (CRD) in the contract. DOE Orders apply only to contractors performing work directly for DOE and do not *automatically* extend to suppliers and subcontractors. The CRD for DOE O 414.1C incorporated into Bechtel National Inc.'s (BNI) contract with DOE states that the "contractor is responsible for flowing down the requirements of this CRD to subcontractors at any tier to the *extent necessary* to ensure the contractor's compliance with the requirements and safe performance of the work." [emphasis added]. Therefore, flow-down to suppliers and subcontractors is only required as it is necessary to ensure the contractor's compliance with the requirements of the CRD and performance of the work to the requisite levels of quality.

EM Headquarters (HQ) empowers and expects the several field offices to audit their contractors to ensure compliance with QA requirements, which includes requirements flow-down. Also, EM HQ reserves the right to itself, as part of its oversight role, to audit both the field office and the prime contractor to ascertain and ensure that QA requirements are passed down to lower tier contractors as applicable.

In addition to the CRD provision quoted above, DOE O 414.1C states at paragraph 3.b. (4) that, "Regardless of the performer of the work, the contractor with the CRD incorporated into its contract is responsible for compliance with the requirements of the CRD."

It is possible for contractors to ensure that suppliers and subcontractors comply with the requirements of DOE O 414.1C, *Quality Assurance*, without explicitly specifying DOE O 414.1C in subcontracts and purchase orders; for example, placing specific, applicable requirements from DOE O 414.1C in contractually binding technical specifications achieves this end. A contractor may also apply the necessary QA criteria for the subcontractor or require the subcontractor to perform under the contractor's QA Program (QAP), rather than requiring the subcontractor to develop a separate QAP compliant with EM QA rules and Orders (see the first paragraph of Attachment 2, *Contractor Requirements Document*, of reference 33).

BNI self-identified the lack of flow-down (September 16, 2009, Ref. 8) and was working with DEI to resolve the deficiency. A surveillance was conducted on May 20-21, 2010, (EM was an observer) to confirm resolution of this deficiency. BNI flows down the requirements of Nuclear Quality Assurance (NQA)-1 (including subpart 2.7) to DEI in the DEI subcontract and then stipulates the specific additional applicable requirements from DOE O 414.1C (e.g., safety software requirements) directly in the purchase order/subcontract exhibits or in specifications. Explicitly specifying the DOE Order in DEI's subcontract is not required to achieve the objective of the DOE Order (as discussed above).

As discussed in greater detail below, EM has determined that BNI has done the following:

- Identified the correct set of QA requirements to DEI (Note: BNI previously identified a gap in the flow-down of the appropriate software requirements to suppliers/subcontractors, including DEI. These software requirements are being applied to DEI at this time);

- Verified that DEI's QA program and implementation satisfy those requirements, with the exception of software quality requirements (this is discussed in greater detail below);

- Verified that DEI identified the correct QA program requirements to the DEI subcontractor, Southwest Research Institute (SwRI®); and

- Verified that SwRI®'s QA program and implementation satisfy those requirements. (Note: SwRI®is also an acceptable supplier for Nuclear Regulatory Commission-regulated nuclear power plants under the Nuclear Procurement Issues Committee).

As a result of the reviews described below, the SwRI® HPAV test program data is reliable and useful (Ref. 10). Joint audits of DEI by both EM and BNI have concluded the DEI analysis of the data from the SwRI® HPAV test program using software is at an acceptable level of risk for use. However, DEI currently is restricted from issuing any calculations using developed software until the proper requirements are in place and is restricted from further software development or revision until BNI verifies the implementation of the NQA-1 Part II, Subpart 2.7, and the applicable DOE O 414.1C

software requirements (Ref. 10). Prior to May 22, 2010 (when these restrictions were accepted by DEI), DEI's QA Manual (QAM), DEI-002, *Quality Assurance Manual for Safety-Related Nuclear Work,* used 10 C.F.R. Part 50, Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants" as its basis. Although implementing the requirements of 10 C.F.R. Part 50 results in a robust QA program, this is not the underlying regulation in DOE O 414.1C. However, using 10 C.F.R. Part 50 allowed the SwRI® QAP to be developed using a sound regulatory framework.

On May 13, 2010, the DEI subcontract was revised to update the *Q Datasheet of ANSI/ASME, Quality Assurance Program Requirements NQA-1* (hereafter, "Q Datasheet"), to address the BNI identified gap in the flow-down of software requirements discussed later in this section. Also, a design analysis specification is being flowed down to DEI to apply the appropriate DOE O 414.1C safety software requirements.

Verification of Compliance and Implementation of the DEI QA Program

BNI has been contracting with DEI since early 2006 and has performed five audits and one surveillance of DEI activities to ensure DEI compliance with the identified QA requirements and implementation of the DEI QA program. The scope of the initial subcontract was associated with design analysis only. When the HPAV testing scope was added to the subcontract, BNI Supplier Qualification performed an audit of DEI in February 2008, with a subsequent audit in March 2009, to assess the DEI program for this scope of work. BNI Supplier Qualification also completed a surveillance of DEI in September 2009 to perform a limited scope audit, based on the re-location of the DEI facility, and reviewed the progress of the resolution of open Supplier Corrective Action Reports (SCARS, Refs. 1-5) resulting from the previous audits. In addition, a May 8, 2009, audit (Ref. 4) identified some SCARs, all related to adequacy of DEI documentation. None of these SCARs are related to the flow-down of requirements from BNI to DEI. These audits document DEI's acceptable compliance with the required QA requirements and implementation of DEI's QAP.

Verification of Compliance and Implementation of the SwRI® QA Program

DEI qualified SwRI® to perform the work scope through qualification audits. The DEI QA Manager and Principal Officer also performed an assessment to verify SwRI® compliance to identified QA requirements and implementation of the SwRI® QAP. To confirm SwRI® qualification and add confidence to the data collection activity, BNI also performed an audit of SwRI®. The BNI audit activity occurred July 15-16, 2008 (Ref. 6). This audit was observed by a representative of the Office of River Protection (ORP) QA office and evaluated the SwRI® QAP and implementation for each NQA-1 requirement specified by DEI. There were no programmatic or implementation deficiencies noted, although several areas of interest dealing primarily with records were identified. SwRI® was given two weeks to perform the corrective actions and a subsequent audit (Ref. 7) of SwRI® was performed on July 29-31, 2008. No deficiencies in the program or implementation were identified.

These audit activities document SwRI®'s compliance with the required QA requirements and implementation of the SwRI® QAP.

BNI Identified a Gap in Flow-down of Safety Software Requirements for Design and Safety Analysis Related Procurements and Subcontracts

On April 15, 2008, the effective date of 24590-WTP-QAM-QA-06-001, *Quality Assurance Manual*, Revision 2b, the BNI QA program was revised to implement American Society of Mechanical Engineers (ASME) NQA-1-2000 and DOE O 414.1C. At that time, BNI believed that the application of ASME NQA-1-2000 sufficiently addressed the applicable requirements of DOE O 414.1C for suppliers/subcontractors because NQA-1-2000 added the requirements of Subpart 2.7 for software quality assurance (SQA). However, Subpart 2.7 requirements were not flowed down for software used in design analysis as a result of a note on the Q Datasheets that limited the scope of Subpart 2.7 to software procurement. Discussions with individuals involved in the development of the BNI supplier QA program requirements prior to the addition of DOE O 414.1C indicate that NQA-1 requirements 3 and 11 and Supplemental Requirements 3S-1 and 11S-2 were selected in lieu of Subpart 2.7 to satisfy the minimum requirement basis for a graded approach to the flow-down of requirements for software used in design and analysis. This application of the graded approach has remained on the Q Datasheet until the recent revision to address the identified gap.

In late September 2009, BNI identified that implementation of the revised BNI QAM in April 2008 did not result in appropriate flow-down of SQA requirements to suppliers/subcontractors performing design or safety analysis. Specifically, BNI did not flow-down NQA-1 2000 Part II, Subpart 2.7, contrary to the suggested guidance of DOE G 414.1-4 and did not provide a justified alternative approach when the supplier/subcontractor scope of work included the use of software to perform safety-related design and analysis. Also, the necessary safety software requirements from DOE O 414.1C were not applied to suppliers and subcontractors when the scope of work included the use of software to perform safety-related design and analysis.

This condition is documented in the BNI corrective action program system (Ref. 8) as a Project Issues Evaluation Report (PIER) and is in the process of being corrected at this time.

To address this issue, the flow-down of NQA-1 Part II, Subpart 2.7 requirements for design analysis is being accomplished utilizing a revised NQA-1 Quality Assurance Requirements Datasheet (Ref. 9). The new datasheet was added to the DEI subcontract scope on May 13, 2010. This action upgraded the ASME NQA-1 2000 requirements to include Part II, Subpart 2.7, *Quality Assurance Requirements for Computer Software for Nuclear Facility Applications*. The flow-down of the applicable DOE O 414.1C Safety Software Requirements is being accomplished using a design analysis specification. These are the current QA requirements for the DEI subcontract.

As noted above, BNI conducted a supplier surveillance (Ref. 10) of DEI on May 21-22, 2010. The surveillance team evaluated the adequacy, implementation, and effectiveness of the DEI QA Program as it pertains to software quality. The surveillance activity was observed by EM HQ staff with expertise in SQA. This assessment concluded that the scope of work and work activities performed by SwRI® to date did not call for the use of safety software; therefore, these requirements should not be applicable to SwRI®. However, the audit results indicate that the DEI QAP did not fully implement the NQA-1 2000 Part I; Part II, Subpart 2.7; and DOE O 414.1C software quality requirements. Although several gaps were identified, none of them impacted the technical performance of any deliverables as of the date of the audit. The surveillance found the following gaps:

- DEI calculation C-6916-00-09, did not contain the required information in accordance with DEI Procedure, DEI-QAP-2, "Control of Analysis," section 1.12 (Ref. 11).
- DEI did not implement the contractual requirements flowed down from BNI (Ref. 12), which imposed NQA-1-2000 requirements for *Design Control*, Section 800, *Software Design Control* (Ref. 13).
- DEI software Commercial Grade Dedication reports (i.e., verification and validation reports) did not provide objective evidence of the range of inputs for use and the Functional Requirements to IGOR.IPF software code, CS-6916-00-01, and did not address performance requirements. This SCAR condition was described as being in noncompliance with NQA-1-2000, Requirement 3, "Design Control," Section 401, "Use of Computer Programs," subparagraph (a).

In the case of the Quantitative Risk Analysis (QRA) software, DEI is in early development of this software, and the software will be in compliance with NQA-1 Part II, Subpart 2.7 and DOE O 414.1C requirements prior to its use in full production.

BNI placed the following restrictions on DEI as a result of the identified gaps: DEI is restricted from providing calculations using developed software (e.g., CS-6916-00-01 Rev. 3, QRA, etc.) until NQA-1 (2000) Requirement 3, Section 800, "Software Design Control," Part II, Subpart 2.7, and applicable DOE O 414.1C software requirements are developed, implemented, and verified by BNI Supplier Qualification. Additionally, DEI is restricted from modifying any developed software and QRA-related computer programs until approved by BNI Supplier Qualification. EM and ORP will continue to monitor these corrective actions.

Board Issue Two:

"BNI bases its quality assurance program requirements for the procurement of all categories of supplies and services on the ASME standard for nuclear quality assurance (NQA-1-2000). The Board supports the use of NQA-1-2000 for the WTP project; however, BNI did not properly implement the quality assurance requirements of NQA-1-2000, Part I, for the HPAV test program. Specifically, NQA-1-2000, Part I, consists of 18 requirements; 15 of these contain detailed requirements in addition to a basic initial introductory-level expectation paragraph. Implementation of the detailed requirements is

necessary to ensure full compliance with the NQA-1 standard. BNI has only required its subcontractors to meet the basic paragraph for each of the applicable Part I requirements (Paragraph 100, *Basic),* which does not provide the rigor necessary to ensure quality work."

The Board also observed:

> "The Board believes this approach is (1) inconsistent with the intent of the ASME NQA-1 Code and Standards Committee, (2) fails to meet the requirements established in DOE Order 414.1C, and (3) produces a flawed quality assurance program. An initial discussion with NQA-1 code committee members confirmed that invoking only the basic introductory-level expectation for requirements of the standard is not consistent with the intent of the standard.
>
> Further, the Board is concerned that the practice of only invoking Paragraph 100, *Basic*, is being applied to other DOE-Office of Environmental Management (DOE-EM) projects."

Response:

EM notes that NQA-1 permits "judicious application of the entire standard or portions of the standard," as noted in the Foreword to NQA-1-2000. In addition, the Foreword to NQA-1-2000 encourages organizations using the standard to select the portions of the standard, based on their applicability, to use in a graded approach, based on the work scope. EM understands that using a graded approach means that implementing the NQA-1 requirements can be done with varying degrees of rigor, depending on conditions, as described in 10 C.F.R. Part 830, *Nuclear Safety Management*. Several criteria to be used in applying the graded approach are listed in the definition of the term, "graded approach" in that regulation.

As such, appropriate application of the standard requires thoughtful consideration and selection of the requirement elements that are appropriate to the work scope[1]. The content of the BNI Q Datasheets represents the results of the selection of applicable requirements based on supplier/subcontractor scope. This datasheet is implemented using 24590-WTP-PD-MGT-0001, *WTP Graded Approach* (Ref. 15).

Additionally, EM disagrees that "BNI has only required its subcontractors to meet the basic paragraph for each of the applicable Part I requirements." As discussed below (see section "Identification of Quality Assurance Requirements contained in the DEI

[1] The EM QA Corporate Board created a focus area to develop a model for requirements flow-down and use of the graded approach. The focus area report (Ref. 32) provided two important concepts. First, the graded approach is the application process for administrative controls. It is a process by which the level of analysis, extent of documentation, and degree of rigor of process control are applied commensurate with their significance, importance to safety, life cycle state of a facility or work, or programmatic mission. The second concept is the graded approach does not allow for a requirement to be waived, but rather allows for varying levels of managerial controls to be applied to provide adequate assurance, commensurate with risk, that the requirement is being met.

Subcontract for Analysis and Testing Work Scope"), some requirements were specified in full, only the basic requirements were imposed in other cases, and some requirements were not applicable.

Identification of QA Requirements contained in the DEI Subcontract for Analysis and Testing Work Scope

On April 10, 2008, the subcontract 24590-QL-SRA-W000-00125 was awarded to DEI and BNI elected to impose NQA-1 2000 requirements in this subcontract as the project was within days of implementing NQA-1 2000 and DOE O 414.1C (April 15, 2008). As the 2000 *Q Datasheet* was not available at the time of award, an older form was used. The Q Datasheet is a tool used to provide consistent selection and application of quality requirements (Ref. 34) and specifies that a subcontractor scope of "Engineering Design and/or Service Supplier" and "Laboratory/Material Analysis Service Supplier" was required to address the full set of ASME NQA-1 2000 requirements for Part I Requirements 3, 4, 8, 9, 10, 11, 12 and basic requirements for Part I Requirements 1, 2, 5, 6, 7, 13, 14, 15, 16, 17, and 18. BNI applied the graded approach in identifying the appropriate quality requirements for the scope of work (see response to Board Issue Two for details on the application of the graded approach).

In the DEI subcontract with SwRI®, DEI specified the following NQA-1 2000 requirements as applicable to the SwRI® scope (Laboratory/Material Analysis Service Supplier) through DEI specification S-6916-00-02, *Specification for HPAV Gaseous Deflagration, Detonation and Deflagration-to-Detonation Transition (DDT) Test Program*: NQA-1 2000 Part I Basic requirements 1, 2, 4, 5, 6, 7, 13, 14, 15, 16, 17, 18 and full requirements 8, 9, 10, 11, 12. These requirements are consistent with the requirements BNI flowed down to DEI and are appropriate for the scope of work in the DEI contract to SwRI®.

Table 1. QA Requirements Flow-down from BNI to DEI and from DEI to SwRI®

	From BNI to DEI		From DEI to SwRI®	
Requirement	**Basic**	**Full**	**Basic**	**Full**
1.	**X**		**X**	
2.	**X**		**X**	
3.		**X**		
4.		**X**	**X**	
5. *	**X**		**X**	
6.	**X**		**X**	
7.	**X**		**X**	
8.		**X**		**X**
9.		**X**		**X**
10.		**X**		**X**
11.		**X**		**X**
12.		**X**		**X**
13.	**X**		**X**	
14. *	**X**		**X**	
15.	**X**		**X**	
16. *	**X**		**X**	
17.	**X**		**X**	
18.	**X**		**X**	
Sub Part 2.7				

*Requirements 5, 14, and 16 contain only a single paragraph (100).

The shaded rows in the table illustrate the differences in QA requirements as they were passed down from contractor to subcontractor. Differences show up in NQA-1 Requirements 3 (full requirement passed from BNI to DEI but neither basic nor full requirement passed from DEI to SwRI®), and 4 (full requirement passed from BNI to DEI but only the basic requirement passed from DEI to SwRI®). Neither party invoked Subpart 2.7 on SQA.

NQA-1 Requirement 3 describes the steps for a design control program. Requirement 4 describes a procurement document control program. This analysis suggests that DEI dropped inclusion of Requirement 3, *Design Control*, and reduced Requirement 4, *Procurement Document Control*, from the full requirement to the basic requirement.

Requirement Flow-down and Graded Approach:

BNI takes a graded approach to the implementation of NQA-1 for the Waste Treatment Plant (WTP). The implementation of NQA-1 requirements by BNI is provided as follows:

- BNI has been directed, by contract, to implement the ASME NQA-1-2000 edition of the standard for the construction of the facility.

- BNI assesses the content of ASME NQA-1-2000 for requirements applicable to its work scope.

- A QAM is prepared to incorporate the applicable NQA-1 requirements. In a limited number of cases, NQA-1 language is modified for use in the EM environment. (Although outside the scope of this question, BNI also complies with Quality Assurance Requirements Document (QARD) Revision 20 for High Level Waste Acceptance Impacting items and services).

- The QAM is issued by BNI for ORP review and approval. When approved by ORP, the QAM is issued for use.

- Project procedures are prepared and issued to implement QAM requirements.

- In the case of procurement and subcontracting processes, project procedures identify the applicable ASME NQA-1-2000 requirements to flow-down to supplier/subcontractor scope types.

The Graded Approach program description (Ref. 15) describes this process in more detail.

BNI procedures (Ref. 16) provide QA Requirements Datasheets to specify the ASME NQA-1 requirements imposed on a supplier/subcontractor's QA program. NQA-1 requirements are designated on the Q Datasheets as either "Basic" or "Full" based on the supplier/subcontractor scope of work, risk, and task complexity. The Q Datasheets address 11 different supplier/subcontractor scope types. Suppliers are also required to flow-down the applicable requirements to each of their sub-tier suppliers. BNI audits supplier/subcontractor QA programs and implementation to ensure conformance with applicable requirements. Although three different versions (Ref. 17–19) of the Q datasheet have been used, the NQA-1 requirements have been flowed down and remain the same, with the exception of the addition of Part II, Subpart 2.7, as discussed previously.

Three versions of the Q Datasheet have been applied to DEI within the duration of the subcontract.

- Subcontract Award April 10, 2008 - The BNI *Q Datasheet of ANSI/ASME NQA-1 (1989) Quality Assurance Program Requirements* (BNI Form 24590-G06B-F0008, Revision 7) was provided in Exhibit J of the DEI subcontract.

- May 8, 2009 - The DEI subcontract was updated to include Revision 9 of the Q Datasheet. This revision was completed to replace the NQA-1 1989 Q Datasheet with the current NQA-1 2000 Q Datasheet.

- May 13, 2010 – The DEI subcontract was updated to include Revision 11 of the Q Datasheet. This revision was completed to add the NQA-1 2000 Part II, Subpart 2.7 software quality requirements to the subcontract.

The WTP regulatory basis for the selection of applicable NQA-1-2000 requirements is developed pursuant to the BNI Contract, Statement of Work, Section C.6, Standard 7, Section (e)(3)(i), which requires that:

> QA for radiological, nuclear, and process safety shall be conducted in accordance with 10 C.F.R. Part 830, Subpart A and DOE O 414.1C.

Title 10 C.F.R. § 830.7, *Graded Approach,* states that:

> Where appropriate, a contractor must use a graded approach to implement the requirements of this part, document the basis of the graded approach used, and submit that documentation to DOE. The graded approach may not be used in implementing the unreviewed safety question (USQ) process or in implementing technical safety requirements.

The BNI Contract also identifies ASME NQA-1-2000 as the primary QA reference document. ASME NQA-1-2000, Appendix 2A-2, *Non-Mandatory Guidance on Quality Assurance Programs,* Section 502, *Graded Approach,* states:

> Items and services may require varying degrees of control and verification to ensure compliance with requirements.

ASME NQA-1-2000, Appendix 2A-2, Section 502 also provides a series of grading factors for use in making grading decisions. These factors are used by BNI Engineering in, *Quality Designation and Grading* (Ref. 20).

BNI is complying with the ORP-approved document *WTP Graded Approach,* (Ref. 15), which states in Section 11.7, NQA-1 Compliance:

> In accordance with the BNI Contract and QAM, and following a graded approach, BNI design and procurement activities comply with applicable NQA-1-2000 requirements. NQA-1 compliance is achieved either by literal application as the quality standard for supplier quality assurance programs, or BNI will specify applicable NQA-1 requirements directly in procurement package documents. The quality assurance requirements of ASME NQA-1-2000 specification have been considered during development of the Supplier Quality Assurance Program Requirements Datasheets for a material or service requisition or subcontract as defined in *Specifying Supplier Quality Assurance Program Requirements* (Ref. 16).

The foregoing addressed the two issues mentioned on page 1 of the Board's May 5, 2010, letter. The four specific requests are addressed below.

1. ***Delineate DOE-EM's policy regarding the application of consensus quality assurance standards in quality assurance programs for WTP and across DOE-EM.***[2]

   EM issued its QAP, EM-QA-001[3], in October 2008. The EM QAP serves as the QA roadmap to ensure that the EM mission gets accomplished safely, correctly, and efficiently. The objective of the QAP is to provide consistent QA implementation across EM while allowing both for grading based on importance to the EM mission and safety, and for site-specific requirements to be addressed (e.g., DOE/RW-0333P, *Quality Assurance Requirements and Description*; Environmental Protection Agency requirements; state permit requirements; etc.). The graded approach is used to determine the applicability of the QAP and Quality Assurance Implementation Plan (QIP) requirements to any activity and the extent of rigor in applying these requirements. Each QA criterion is stated as an expectation for management of work, performance of work, and assessment of work. As such, rigorous QA controls for any high-risk activity within EM might include: identifying required and/or appropriate standards; establishing a work plan to prescribe work; assigning responsibilities; specifying personnel, qualification and training provisions; developing and implementing work control processes and procedures, including configuration control; implementing procurement process control; instituting verification and validation of items or services performed or procured; and performing assessments to verify adequacy of performance and to identify and implement improvement opportunities when performance is unsatisfactory. Less rigorous or routine controls may be considered when appropriate levels of analysis, documentation, and planned actions allow.

   Some of the implementation requirements and characteristics for the EM QAP follow:

   - The EM QAP meets and implements the governing DOE and EM-specific QA requirements. These include DOE O 414.1C, *Quality Assurance*; 10 C.F.R. Part 830, Subpart A; *Quality Assurance Requirements*[4]; ASME NQA-1-2004, *Quality Assurance Requirements for Nuclear Facility Applications* (with addenda through 2007); and EM Management Expectations.

   - Each Field organization (including ORP which has direct responsibility for the WTP), is required to prepare a QAP. The field organizations are permitted to either adopt the EM QAP or prepare their own. In either case, the QAPs must be based on the EM QAP requirements, including the required consensus quality standard NQA-1, for acceptance by the local site office (for contractor QAPs) or EM HQ (for site office QAPs). A variance from the requirement to base the site

[2] Note: DOE's response is limited to information pertaining to EM "defense nuclear facilities."
[3] Internet available at: http://www.em.doe.gov/pdfs/EM-HQ%20QAPP%20(Final)%2005-2008.pdf
[4] Per 10 C.F.R. Part 830, quality assurance requirements apply to all "DOE nuclear facilities."

QAP on NQA-1-2004 is the Waste Isolation Pilot Plant near Carlsbad, New Mexico. Their QAP is based on NQA-1-1989 by regulation (Ref. 36).

- Their SQA is based on NQA-2 (1990) Addenda 2.7. DOE O 414.1C contains the provision that "In the case of a conflict between this Order and any QA regulation, the regulation prevails."

- Using a graded approach, each HQ and Field organization is required to prepare a QIP, identifying procedures and documents that directly implement the applicable requirements of the QAP. The QIP demonstrates how the QAP requirements are being implemented. Appendix G of the EM QAP presents an acceptable template for preparation of a site-specific QIP.

- The EM HQ oversight and review of local site office QAPs/QIPs is performed consistent with the *Protocol for EM-HQ Review/Field Self-Assessment of Site-Specific Quality Assurance Programs (QAPs)/Quality Implementation Plans (QIPs)* dated February 2010. This document is based on the requirements of NQA-1 (Ref. 34), DOE Order 414.1C (Ref. 33), and 10 C.F.R. Part 830. The EM HQ review and approval of site-specific QAP/QIP consists of two distinct phases.

  Phase 1 is focused on the *Approval for Implementation of QAP/QIP*. Phase 2 is focused on the *Verification and Validation (V&V) of QAP/QIP* implementation.

- Phase 1 review consists of a programmatic review of the submitted QAP/QIP. The Phase 1 review addresses the following key areas: format and content, applicability and scope, and the reasonableness of the graded approach.

- The Phase 2 review consists of an onsite review of program implementation and addresses the following key areas: adequacy of implementing procedures and processes; and maturity and effectiveness of program implementation. In addition, the Phase 2 onsite review process focuses on the following:

  - Status of issues identified as part of the Phase 1 programmatic review of the QAP/QIPs. The expectation is that by the time an onsite visit is scheduled, the site has fully addressed these issues.

  - High priority and cross-cutting QA issues such as the Commercial Grade Dedication, Code of Record, Suspect/Counterfeit Items, Procurement, and flow-down of QA requirements to subcontractors and vendors.

The lines of inquiry (LOIs) and protocol for the Phase 2 review are organized consistent with the ten program criteria listed in the EM Corporate QAP. Each

criterion is based on the requirements of DOE O 414.1C; 10 CFR 830, Subpart A; NQA-1-2004; and EM Management Expectations.

2. *Describe DOE-EM's approach to ensuring that the quality assurance requirements of DOE Order 414.1C are flowed down to DOE-EM's contractors and their subcontractors (e.g., BNI and its subcontractors for WTP).*

- The requirements contained within the EM QAP apply to EM HQ, EM Field/Project Offices, and are used to oversee EM contractors (as applicable to the work being performed by each entity). Each organization will have an organization-specific QIP describing how the applicable requirements of the QAP are implemented and/or flowed down to lower-tier organizations. (Note: this process does not alter a contractor's legal obligation to comply with 10 C.F.R. Part 830, or other regulations affecting QA[5].)

- The Contracting Officer incorporates the CRD and NQA-1 into the contract per the DOE Acquisition Regulation (DEAR) Clause 970.5204–2, *Laws, regulations, and DOE directives* (Laws Clause), and DOE O 414.1C.

- The DOE expectations relative to flow-down are stated in the CRD for DOE O 414.1C: "Regardless of the performer of the work, the contractor is responsible for complying with the requirements of the Contractor Requirements Document (CRD). The contractor is responsible for flowing down the requirements of this CRD to subcontractors at any tier to the *extent necessary* to ensure the contractor's compliance with the requirements and the safe performance of work." [emphasis added]. Paragraph 3.b (2) of the QA Order requires the CRD to be included in the contracts of all Departmental work: "This CRD must be included in contracts that require or involve responsibility for work or operations at DOE sites or facilities. This includes work that may take place outside the physical boundaries of a DOE facility, such as design or analysis services."

- The DOE's definition of "contractor," as stated in DOE O 251.1C *Departmental Directives Program* does not include subcontractors; the language in 3.b of DOE O 414.1C is directed to and instructs *DOE Elements only*—and the requirements in the CRD pertain to the contractors. See para. 3.b.(1) "Except for the exclusions in paragraph 3c, the Contractor Requirements Document (CRD), Attachment 2, sets forth requirements of this Order that will apply to contractors whose contracts include the CRD." The CRD is not required to be included in all subcontracts. It is the responsibility of the prime contractor to determine what requirements from the CRD need to be flowed down to each particular subcontractor in order to ensure that contractor's compliance with the requirements of the CRD (Ref. 33, see Attachment 2, *Contractor Requirements Document*, Section 2.a(3)).

[5] See Section 3.0 APPLICABILITY, EM Corporate QAP, EM-QA-001.

- The DOE-EM approach to ensuring QA requirements of DOE Order 414.1C are appropriately flowed down rests on the following key principles:

    - The EM QAP requires HQ and each Field organization, and their respective prime contractors, to develop a QIP for EM review and approval. EM uses a two-phase approach to verify and validate effectiveness of approved QIPs. The LOIs and expectations used have been documented in *Protocol for EM-HQ Review/Field Self-Assessment of Site-Specific Quality Assurance Programs (QAPs)/Quality Implementation Plans (QIPs)*, dated February 2010 (see footnote 4).

    - In review and approval of the site-specific QAP/QIPs, the associated LOIs focus on the proposed approach (graded strategy, risk and complexity of work scope, etc.) to ensure all applicable requirements and expectations of DOE O 414.1C, *Quality Assurance*; 10 C.F.R. Part 830, Subpart A; *Quality Assurance Requirements*; ASME NQA-1-2004 (with addenda through 2007), *Quality Assurance Requirements for Nuclear Facility Applications (QA)*; and EM management expectations are addressed.

    - EM QA audits and oversight (both Field and HQ) are based on contract-specific terms and conditions (including List B under the Laws Clause) and the specifications outlined in approved site/contract-specific QIPs.

    - 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 in contributing to safe completion of the EM mission. As stated explicitly in the QAP, "EM expects applicable requirements will be passed down to subcontractors."[6] As such, the EM expectation is for all work to be executed in conformance with the approved contractor QIP. This is regardless of whether the prime contractor's employees, subcontractors, vendors, or consultants actually do the work.

    - It is the prime contractor's responsibility to determine which aspects of an approved QIP (which includes DOE O 414.1C and NQA-1-2004 with addenda through 2007) apply to the work scope that is assigned to a subcontractor. Regardless of whether the work is performed by the prime contractor or subcontractor, EM holds the prime contractor accountable for work performance.

[6] See Section 3.0 APPLICABILITY, EM Corporate QAP, EM-QA-001

- EM oversight also evaluates execution of the work performed by subcontractors to ensure that it is consistent with the requirements and expectations outlined in the prime contractor's approved QIP.

- With respect to the WTP (and other major EM design/construction projects), the immediate day-to-day oversight responsibility for the quality of any work performed under EM contracts, including work performed by any subcontractor, vendors, or consultants, rests with the assigned Federal Project Director (FPD), the Integrated Project Team (IPT), and the local Field/Site Federal personnel. EM HQ performs assessments of the effectiveness and adequacy of the oversight activities conducted by the FPD, IPT, and local EM Field/Site office personnel. EM HQ works to stay apprised of the performance of subcontractors and coordinates these efforts with its Field Offices and prime contractors to determine the adequacy and efficiency of the subcontractors.

3. Provide an assessment of the flow-down of requirements and proper application of consensus standards in contractor quality assurance programs for DOE-EM design and construction activities to determine the state of compliance with the requirements of DOE Order 414.1C.

- EM has established an annual Integrated Safety Management System (ISMS) and QA Effectiveness Review and an Annual Declaration. This declaration includes a summary of the results of each Field organization's annual effectiveness review and the status of ISMS and QA implementation. These annual reviews encourage the necessary adjustments to promote continuous improvement. The declarations address specific criteria, one of which is evidence of flow-down of requirements; they address evidence of flow-down of DOE O 414.1C not only from DOE Field organizations to the contractors but also to the subcontractors as well. The Field organizations have been requested to provide a description of the method of oversight and how proper implementation of these requirements is ensured as part of the declaration for calendar year 2010 (Ref. 35).

- EM's recently initiated Construction Project Reviews are also designed to assist in evaluating that EM's capital projects conform with QA requirements throughout the design, construction, and commissioning phase. To ensure a technically rigorous process, DOE EM, in conjunction with the Chief of Nuclear Safety, Office of the Under Secretary, has developed and issued a Standard Review Plan (SRP, Ref. 23). The technical basis and foundation for the SRP are centered on project expectations and requirements defined in DOE O 413.3A, Change 1, *Program and Project Management for the Acquisition of Capital Assets*, DOE-STD-1189-2008, *Integration of Safety into the Design Process,* and EM's internal business management practices. It also leverages the best practices and lessons learned from the Office of Engineering and Construction Management, Office of Science, National Nuclear Security Administration, EM

Headquarters (HQ) and Field reviews, existing project review guides and protocols, and consensus standards.

- The SRP serves as the corporate framework designed to formalize the DOE and EM institutional processes and requirements associated with the review of project activities in support of Critical Decision approvals. The SRP is designed to improve project performance, including quality, by strengthening and formalizing the technical basis for evaluating the readiness of EM capital and major operating projects. It is modeled after similar principles used extensively and successfully by the Nuclear Regulatory Commission for evaluating U.S. commercial nuclear industry licensed activities.

- The SRP is a series of standalone Review Modules (RMs) and Topical Reports, which provide a set of core performance objectives and criteria in addressing specific project review areas tailored to each Critical Decision phase. The Second Edition of the SRP, issued in March 2010, consists of 28 review modules and Topical Reports. Each RM or Topical Report addresses specific disciplines grouped by: Project Management; Engineering and Design; Safety; Environment; Security; and QA. There are three QA-related modules. These are: 1) Quality Assurance for Critical Decision Reviews; 2) Protocol for EM Review/Field Self Assessment of Site Specific QAP/QIP; and 3) Facility SQA for Capital Project Critical Decisions Reviews[7]. All three of these SRP modules, related to QA, address flow-down of requirements.

- The Office of Standards and Quality Assurance (EM-23) has the responsibility of ensuring the implementation of the EM QAP. This responsibility is fulfilled by EM-23 through the assessments of EM projects, field offices, and contractors. After reviewing the 47 audits performed from the year 2007 to date, difficulties in flow-down appear to occur primarily at the subcontractor level. EM has recently increased the frequency of subcontractor audits and are including LOIs specific to the flow-down of QA requirements to subcontractors.

A survey of these audits and other reviews was performed to quantify the assertions in the preceding paragraph. On completion, this initial audit was subjected to a peer review. The peer review team had two major observations: first, the LOIs among the audits reviewed were inconsistent, so that a direct comparison of one audit with another is difficult; and second, including Construction Project Reviews in the data set was inappropriate as these high-level assessments do not normally include detailed inquiries regarding flow-down. Because of these two observations, the audit methodology was changed to the following general steps:

1. Select a data set of audits;
2. Review the LOIs of each audit;

[7] Please see http://www.em.doe.gov/Pages/StandardReviewPlanModules.aspx.

3. Select audits with LOIs concerning QA requirements of interest as a subset for analysis; and
4. Extract LOIs regarding QA requirements flow-down for consideration.

This survey provided the following results. Of the 47 documented assessments performed by EM HQ, 14 assessments mentioned flow-down of QA requirements. This subset of 14 contained a total of 183 comments or observations, 81 of which were related to QA requirements. It should be noted that audit scope frequently is greater than just examining QA requirements. For example, one recent vendor audit focused on welding issues. While the question of QA requirements flow-down would certainly be discussed in such an audit, it is not the primary focal point of the LOIs and may not be formally documented in the audit plan. The results of this survey were determined to be inconclusive due to sample size. The data set only included HQ (EM-23 and Office of Project Management) sponsored audits. EM agrees to conduct a survey specifically designed to examine the issue of QA requirements flow-down with a larger population of field-sponsored audits and report the results to the Board in March 2011.

4. Describe actions taken by DOE EM to correct any noted deficiencies.

Among the lessons learned from EM's QA implementation experience over the past two years, and observed from other parts of DOE and the private sector, is that there are several important factors and characteristics that need to exist and function for QA to be truly embraced and embedded in EM's work culture. Towards this end, EM has embarked on the following:

- Developed and issued its QAP in 2008 to provide explicit and clear identification and communication of its QA requirements and expectations. The QAP promotes consistent QA implementation across EM while allowing both for grading based on importance to the EM mission and safety, and for site-specific requirements to be addressed.

- The issuance of the QAP was followed by a series of corporate QA assist visits to work closely with EM field elements to identify and address programmatic weaknesses.

- The assist visits were augmented by development of performance objective/expectations, and LOIs to provide further clarity of EM's QA expectations, including expectations regarding requirements flow-down (i.e., SRP Review Modules such as the *EM Protocol for Review/Field Self-Assessment of Site-Specific QAP/QIP*) [8].

[8] EM Protocol for Review/Field Self-Assessment of Site-Specific QAP/QIP, dated February 2010.

- To formalize approval of site-specific QAPs/QIPs, EM HQ instituted a two-phase review process using consistent criteria based on requirements and expectations of the EM QAP, including a formalized peer review.

- The insights and lessons learned from reviews, assessments, and assist visits have also resulted in the development of focused outreach and awareness to expand and strengthen EM's QA capacity and capability. For example, EM HQ, in conjunction with the Chief of Nuclear Safety and EM Field Offices, has sponsored a series of basic QA training, NQA-1 Lead Auditor, Commercial Grade Dedication, and train-the-trainer courses. The expectation is that the EM Field elements and contractors will leverage the developed content to augment and expand their indigenous QA capacity and capability.

- Where deficiencies or weaknesses are found, corrective and preventive actions are taken.

Another factor that impacts the effectiveness of QA implementation is the degree to which the corporate decision-making framework offers a sense of regulatory stability, technical soundness, and predictability. To strengthen technical rigor and consistency in quality throughout the Critical Decision process, EM in collaboration with the Chief of Nuclear Safety, Office of the Under Secretary, has developed EM SRP, including several review modules on QA (http://www.em.doe.gov/Pages/StandardReviewPlanModules.aspx).

EM HQ is pursuing, concurrently, several initiatives and approaches to address noted QA deficiencies. Examples include:

- Foremost among these initiatives is the EM QA Corporate Board. The Corporate Board provides the management structure to integrate the independently managed Federal and contractor QAPs into a single corporate entity. The Board serves as a consensus-building body to facilitate institutionalization of a QA Management System across the EM-Complex. The Board will ensure that major QA decisions and recommendations incorporate and promote the use of the best practices and commonly accepted standards in nuclear industry. (The Board has formed specific focus areas to work on Commercial Grade Dedication, Suspect/ Counterfeit Items, graded approach as well as requirements flow-down.)

- EM has initiated a methodical approach to verify and validate site-specific QAPs/QIPs consistent with the *Protocol for EM HQ Review/Field Self-Assessment of Site-Specific Quality Assurance Programs (QAPs)/Quality Implementation Plans (QIPs)*, dated February 2010. As discussed previously, the site offices are currently engaged in performing Phase 2 self-assessments to validate the implementation of the site-specific QAP/QIPs. The Phase 2 reviews are being conducted using the *Protocol for EM Review/Field Self-Assessment of Site-Specific Quality Assurance Programs (QAPs)/Quality Implementation Plans*

(QIPs), which includes the statement that the Phase 2 onsite review process will include:

> High priority and cross-cutting QA issues such as the adequacy of QA oversight associated with the American Recovery and Reinvestment Act projects, Commercial Grade Dedication (CGD), Code of Record, Suspect/Counterfeit Items (S/CI), Procurement, and flow down to subcontractors and Venders.

In order to further emphasize flow-down in the Phase 2 reviews, The Office of Safety and Security Program, EM-20, issued a memorandum to the field offices in August 2010. This memorandum asks each site to provide a heightened awareness and emphasis on the flow-down of requirements during the Phase 2 self-assessments. The Phase 2 reviews are scheduled to be completed by the end of December 2010. Once received, EM HQ will review the results of the reviews and compile the flow-down information into a single report. That report will be made available to the Board for review in March 2011.

- EM has also included the discussion of flow-down to contractors, subcontractors, and vendors as part of the 2010 Annual Integrated Safety Management System and Quality Assurance Review Criteria and Declaration Guidance. The guidance was provided to the field offices on July 1, 2010, and includes the following criteria:

  > Discuss how DOE assures that contractual requirements, including ISM and QA, are being applied for all work levels including prime contractors, subcontractors, and vendors. As part of the QA discussion, specifically address the flow-down of requirements from EM Corporate Quality Assurance Program, EM-QA-001; and the effectiveness of the suspect/counterfeit item programs including how DOE assures suspect/counterfeit items are not introduced in safety related equipment.

  The declarations are due by the end of December 2010. Once received, EM HQ will review the results of the annual declarations and compile the information into a single report. That report will be made available to the Board for review in March 2011.

- As discussed in the response to question number 3, EM HQ has conducted a review of the HQ assessments with regards to flow-down. Since the results of that review were inconclusive due to small sample size, EM has expanded the review to specifically include site office assessments of contractors, sub-

contractors and vendors. This review is ongoing and the results will be compiled with the results from the annual QA declarations and Phase 2 reviews into a single report. That report will be made available to the Board for review in March 2011.

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