Table 1 **Corporate Analysis of Key Insights/Lessons Learned Shared During the EM QA Summit**
February 17, 2011 Oak Ridge, TN

#	Insights/Lessons Learned Description[1]	Related Discipline[2]					Applicable Critical Decision (CD) Phase				Recommended EM Strategy to Leverage Insight/ Lessons Learned[3]	
		PPM	CS	PM	SME	VSQ	1	2	3	4	Complex-Wide[4]	Project-Specific[5]
1	In an effort to ensure continuous improvement in QA, the Naval Reactors (NR) has a practice of having each vendor self- identify and address, on an ongoing basis, 3 key issues, called 'A' items. Each subsequent oversight visit evaluates these 3 items and the expectation is that by the next visit these 3 issues have been resolved and work has begun on the next 3 identified items. This practice is intended to ensure continued vigilance and organizational focus/priority on QA performance.	x		x		x	X	X	X	X	Based on the results of ongoing operational awareness, assist visits, and insights resulting from audits, Site Managers may provide the QA Corporate Board with candidate QA issues that have crosscutting complex-wide implications. The QA Corporate Board may choose to evaluate, discuss, and consider appropriate strategies to facilitate development of consistent and cost-effective approaches to address the generic QA issues.	Strengthen implementation and application of in-house QA lessons learned and continuous improvement program including efforts to self-identify critical issues that warrant management attention and improvement.

[1] The insights/lessons learned were derived from presentations and discussions at the QA Summit.

[2] The general disciplines used for binning purposes include: Project Planning/Management (PPM), Contracting Strategy (CS), Performance Monitoring (PM), Technical/Engineering Subject Matter Expertise (SME), and Vendor/Supplier Qualification (VSQ).

[3] The recommended strategies to leverage the lessons learned were designed with the following objectives in mind: a) be consistent with existing DOE/EM corporate QA requirements and expectations, b) can be readily implemented as part of current/planned work scope activities, and c) do not create unfunded mandates for the sites/projects.

[4] Complex-Wide strategies refer to actions formulated based on consistent solutions that need to be implemented by majority of EM sites and projects. Development/implementation of these strategies requires a concerted collaboration and coordination between EM-23 and the QA Board Corporate.

[5] Project-specific refers to actions that are limited to individual projects. The results are suited for sharing with other sites and projects, as appropriate, to enhance continuous improvement.

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2	In addressing the commercial grade dedication issues at WTP, an extensive assessment by an independent team was performed and several root and contributing causes were identified as follows: ***Root Cause 1:*** Failure to confirm that rigorous CGD expectations and requirements were clearly understood by suppliers and sub-suppliers. ***Root Cause 2***: Failure to execute rigorous supplier and sub-supplier qualification requirements at the time of initial qualification survey and subsequent performance-based audits, surveillances, and in-shop inspections. ***Contributing Cause 1:*** Over reliance on quality suppliers' knowledge of CGD and flow down of CGD requirements to their suppliers. ***Contributing Cause 2:*** Inadequate monitoring and acting on supplier and sub-supplier CGD issues through trending and analysis, lessons learned, and performance indicators. ***Contributing Cause 3:*** Ineffective roles, responsibilities, accountabilities, and authorities, interfaces, and training for effective CGD program implementation. ***Contributing Cause 4:*** Inadequate use of CGD subject matter experts in the review, approval, and oversight of CGD program activities.	x	x	x	x	x	X	X	X	X	Finalize the development and issue EM CGD Guide. Continue to sponsor a limited number of CGD training via Federal or commercial sources while the comprehensive EM QA training strategy is being evaluated and formalized by the QA Corporate Board.	Define and implement requirements and expectations for the implementation of the CGD process at the project level. Communicate requirements and expectations to all quality suppliers performing CGD associated with project. Define project specific requirements and expectations for monitoring of quality suppliers involved in the CGD process Define and implement requirements and expectations for roles, responsibilities, accountabilities and authorities (R2A2) regarding CGD activities, including prerequisite training and qualification requirements. Define and implement requirements to ensure timely and effective use of CGD SMEs in the development and

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												execution of the CGD process including oversight and monitoring activities. Require suppliers/ sub-suppliers to provide documentation/ evidence/ checklist that prove they have met all specified CGD expectations and requirements. Confirm before suppliers implement actions (during pre-planning) that they are aware of CGD expectation and requirements, have the prerequisite technical capability and capacity, and a robust process in place to assure effective implementation.

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3	DUF6 facilities at Paducah and Portsmouth have both recently undergone ORR activities and there were several lessons learned with regard to the planning and execution of readiness activities. Specifically there were four lessons learned identified: 3a It is vital to establish and then clearly communicate the level of readiness expectations to all employees. 3b Senior management must hold high expectations and avoid check the box mentality in approach to readiness. 3c Starting and stopping Contractor ORR has greater impact on schedule than ensuring true readiness prior to the declaration. 3d Establishment of a Joint Line Management review board was positive in ensuring consistent expectations for readiness level by functional area.	X		X					X		Ensure that the Federal Project Directors (FPDs), the Integrated Project Teams (IPTs), and the QA managers are aware of the core performance objectives and criteria provided in EM Standard Review Plan (SRP), in particular the review modules associated with the readiness, including: • SRP Review Module on Checkout, Testing, and Commissioning • SRP Review Module on Readiness Review	Proactively establish the expectations/criteria for readiness for all functional areas being considered. Strengthen implementation of the in-house processes to communicate readiness expectations to all the employees, including affected subcontractors and vendors.

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4	The Sodium Bearing Waste Treatment Project (SBWTP) identified several quality issues and lessons learned, including 1. Impacts due to lack of nuclear experience (e.g., QA/QC, engineering, supervision, document control). 2. Work control and documentation issues including lack of line management oversight, lack of QC oversight and lack of nuclear documentation discipline. The resulting lessons included: 4a) The need to make conservative QA risk assumptions focusing on: • Nuclear experience across the board in the project • A lack of NQA-1 Qualified vendors and suppliers	X	X	X	X	X		X	X	X	Complete current focus area effort by the QA Corporate Board to develop a recommended approach to address EM-wide QA training needs. Continue with implementation of EM-23's enhanced QA oversight process to ensure that the high priority critical activities are evaluated, proposed corrective action plans are developed based on sound root cause analysis, and agreed upon commitments are met. Continue to encourage complex-wide use of the corporate web-based system (QA Hub) to improve timely operational awareness of the status of corrective action commitments, and to ensure effectiveness reviews are performed.	Ensure the adequacy of the work force (including availability, qualification, and /skill-mix) to meet the project needs and consider these impacts in the development of schedules and project planning.

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5	The Salt Waste Processing Facility presented several lessons learned regarding the Supplier Evaluation and Oversight. These lessons learned covered all phases of the process from the contract development to acceptance of the finished product. ***Bid Evaluation Lessons Learned:*** • Research the supplier performance • Consider best values rather than low price • Use a formal documented evaluation process ***Supplier Oversight Plan Lessons Learned*** • Key elements of the Supplier Oversight Plan (SOP) must be identified based on the items being procured • Proper oversight personnel are required to effectively implement the process. ***Supplier Assessment Lessons Learned:*** • Identification of hold and witness points • Directly linked to PO requirements • Identification of sampling requirements • It is the responsibility of the resident inspector/surveillance representative to ensure supplier compliance with the assessment plan. ***Fabrication Lessons Learned:*** • Have pre-fabrication meetings • Apply adequate numbers and types of resources • Hold status meetings • Evaluate key aspects such as welds for the product being procured. ***Release for Shipment Lessons Learned*** • Reviewed for acceptance by the QA representative prior to authorizing shipment (a hold point).	X	X	X	X	X		X	X	X	Ensure that the appropriate procurement groups (including contracting, engineering, operation, etc.) are aware of core performance objectives and criteria in the EM Standard Review Plan module on Acquisition Strategy. Explore, through the QA Corporate Board, the feasibility of developing an EM Best Practices Acquisition Strategy Guide aimed at dealing with never-built-before or procured items and services Explore, through the QA Corporate Board, the feasibility of providing strategic advice and technical support, on an as needed basis, to major projects on critical purchases.	Ensure that qualification, capacity, and capability of the vendor and its supply chain are well understood. For critical components and long lead construction items ensure that all potential risks are understood and contingencies are in place for any production setbacks to avoid adverse cost/schedule effects. Ensure that there is clarity on end-product specifications and availability of qualified personnel to verify the fabrication, manufacturing, and assemble processes conform to specified expectations.

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6	The uranium processing facility identified several lessons learned: 6a Procurement strategies should be developed with maximum consideration of CGD. 6b Quality requirements need to be identified early, controlled throughout the life of the project, specified in procurement documents and clearly communicated to suppliers. 6c A clearly defined and funded process for supplier and sub-tier supplier oversight must be developed and implemented.	X	X	X	X	X	X	X	X	X	See strategy related to Item #2 (WTP CGD Lessons)	See strategy related to Item #2 (WTP CGD Lessons) Ensure that adequate funding is obligated to implement the approved supplier evaluation plan and oversee fabrication of critical parts and components.