

## QUALITY COUNCIL TASK PLANNING DOCUMENT

**Action Number:** TPD-2010.04

**Action Title:** Upgrade Commercial Grade Dedication Implementation

**Action Statement:**

Upgrade the DOE Complex (EM and NNSA) knowledge base and implementation of commercial grade dedication (CGD) activities for nuclear safety related items and services at the contractor and sub-tier supplier level.

The practice of using CGD versus the use of NQA-1 approved vendors should be part of a sound procurement strategy for the acquisition of safety-related items and services in support of nuclear facilities and activities. The strategy can be based on vendor availability as well as economic considerations. In the past, industry (commercial nuclear power) typically procured equipment for safety related systems from approved nuclear vendors with only a fraction of procurements that support replacement parts being made using CGD. Over the years, many vendor/suppliers have eliminated their nuclear QA programs because of the cost to maintain an NQA-1 quality program and the reduction in the need for safety related parts. Currently, due to the reduction in the number of nuclear-grade qualified vendors, the nuclear industry including some DOE contractors, are increasing the numbers of safety related items and services procured through CGD. As a result, dedication processes for commercial-grade items and services have increased in importance. Based on the effort to improve Environmental Management (EM) site implementation of CGD, the DOE complex should establish a complex-wide initiative for consistency and standardization in the application of CGD process using the allowed graded approach and establish parity with the nuclear industry. This is important because the nuclear related vendor base supports both the nuclear industry and DOE.

ASME NQA-1-2004, *Quality Assurance Requirements for Nuclear Facility Applications*, Part I and Non-mandatory Appendix 7A-2, *Guidance on Commercial Grade Items and Services*, provide requirements and supporting guidance for the conduct of CGD of items and services that perform a safety function but were not fabricated or performed under an approved NQA-1 quality program. Recent Department of Energy (DOE) oversight activities of new construction and replacement part procurements have identified a significant lack of understanding of the basics for performance of CGD.

This has resulted in items which performed a safety function not having the appropriate technical evaluation and acceptance criteria to demonstrate with reasonable assurance that the item or service will perform its intended safety function.

On August 31, 2009, the American Society of Mechanical Engineers (AMSE) issued NQA-1a-2009, "Quality Assurance Requirements for Nuclear Facility Applications". The revision includes Part II, Subpart 2.14, "Quality Assurance Requirements for Commercial Grade Items and Services. Subpart 2.14 provides amplified requirements to provide reasonable assurance that a commercial grade item or service will perform its safety function. These new requirements are based on information that was originally provided in EPRI documents and NQA-1-2004, Appendix 7A-2. The Nuclear Regulatory Commission has endorsed Subpart 2.14 as an acceptable approach for the implementation of CGD within the commercial power industry. The work performed in this TPD is intended to be consistent with this newly published standard.

#### **Action Description:**

The TPD is intended to be performed in two phases. The first phase of the TPD (Phase A) is intended to leverage the work already performed by the Office of Environmental Management (EM). EM through the EM Quality Assurance Corporate Board has performed several activities in the area of Commercial Grade Dedication. The first phase of the TPD would consist of reviewing the completed EM actions/deliverables and determine the applicability of these actions/deliverables to the DOE wide complex. The TPD would also determine if those actions/deliverables need to be modified in order to address the DOE complex wide needs. These actions are summarized below and the recommended actions for Phase A are discussed as part of each action/deliverable.

#### Phase A:

1. **Completed surveys to determine the processes and standards used in performing Commercial Grade Dedication of Items and Services.**  
EM requested, through the EM Corporate Board Members, that contractors voluntarily provide information regarding the processes used to dedicate commercial items for nuclear safety application. The survey was also intended to determine the extent to which those processes are used at their facilities. This TPD action would review the EM surveys

for applicability. Revise the surveys as needed and then request, through the QA Council participants, that these surveys be filled out and returned to CGD Quality Council Team. The surveys will also be used to determine training needs for the complex.

2. **Performed benchmarking using selected high performing commercial power utilities.** This TPD action would review the conclusions drawn from the benchmarking study and determine applicability to the DOE complex. The intent is to not repeat the benchmarking study. The CGD would review the benchmarking study summary report to ensure the best practices are also applicable to the DOE complex.
3. **Developed a high level baseline/requirements document based on the results of the benchmarking.** This TPD action would review the EM high level baseline/requirements document for applicability to the DOE complex. This high level document was developed to communicate to contractor high level expectations to the DOE contractors.
4. **Developed and executed a training program focused at engineering and quality assurance for performance of CGD.** This TPD action would review the EM developed training for applicability to the DOE complex. Proposed modifications to the training material would be incorporated. The training class would then be offered as a pilot to the DOE complex. Logistics on how many classes and sources of instructors will be developed and provide to the Quality Council.

#### Phase B:

Phase B of this TPD would also leverage the work performed by EM through the EM Quality Assurance Corporate Board. EM has continued to develop actions to ensure CGD continues to mature throughout the EM complex. These actions and deliverables were recently presented to the EM QA Corporate Board and approved in the early summer of 2010. The primary actions for Phase would consist of the following:

1. **DOE EM has developed a Standard on CGD to provide additional guidance on the application of NQA-1 requirements and NQA-1 and EPRI guidance for application during performance of CGD. As part of the process for development of the standard, EM is evaluating new CGD requirements provided in NQA-1a-2009, Subpart 2.14.** Phase B of the TPD will evaluate/review the EM standard for applicability to the DOE complex. Changes to the standard

will recommended and incorporated as needed. The EM standard has been developed in cooperation with EFCOG and any changes to the standard would be discussed with EFCOG prior to incorporation into the standard.

2. **DOE EM is in the process of developing a proposed CGD implementing procedure. The procedure is being developed in a collaborative effort with EFCOG.** The TPD action would be to evaluate the proposed implementing procedure and propose any modifications. These modifications would be discussed with EFCOG prior to incorporation. The procedure would then be distributed as an acceptable model for the

**Action Deliverable:**

Section A:

Engineering and Quality Assurance personnel supporting DOE, Contractors and major sub-tier suppliers should attend training to ensure that their procedures and processes meet the standardized approach for conducting CGD.

**Action Completion Due and Sub-Action Milestones<sup>1</sup>:**

Section A:

<b>Task #</b>	<b>Estimated Due Date</b>	<b>Task Description</b>	<b>Deliverable</b>
1	T + 2 mo.	Complete a survey of selected non-EM contractors requesting them to identify the process and basis for their CGD program including safety classification of items being dedicated for nuclear applications within their facilities.	A completed Survey
2	T + 2 mo.	Complete a survey of selected non-EM contractors requesting them to identify the process and basis for the process used to accept nuclear services.	A completed Survey
3	T + 2 mo.	Review EM's benchmarking studies for applicability to the DOE complex. Document the review performed and conclusions reached by the	A memo to the Quality Council documenting result

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<sup>1</sup> See Action Lead for detailed Action schedule.

		CGD team.	of the review
4	T + 2 mo	Provide to the DOE Complex for review and acceptance for implementation, recommended baseline requirements/guidance actions considered necessary for implementation of an effective CGD process for items and services within DOE.	Recommendation to the Quality Council
5	T + 4 mo	Issue final baseline requirements/guidance actions considered necessary for implementation of an effective CGD process within the DOE Complex nuclear facilities.	Baseline requirements issued to the DOE Complex
6	T + 6 mo	Review the EM Training Program for applicability to the DOE complex. Modify training modules as necessary. Send the training modules out for comment and review throughout the DOE complex.	Draft training modules provided to the DOE complex for review/comments
7	T + 8 mo	Incorporate review comments as necessary. Finalize the Training modules and provide to the Quality Council for approval.	Comment resolution forms and a set of finalized training slides
8	T + 10 mo	Provide a pilot training class on CGD with the target audience being DOE complex wide Engineering and QA individuals involved in developing and overseeing CGD.	Training package, test results, class roster, and certificates of completion.
9	T + 12 mo	Provide train the trainer training for the DOE Complex at some centralized location.	Training package, test results, class roster, and certificate of

Phase B:

<b>Task #</b>	<b>Estimated Due Date</b>	<b>Task Description</b>	<b>Deliverable</b>
1	TBD	CGD team will review the approved EM CGD standard for applicability to the DOE Complex. Provide comments as necessary. Any review comments would have to be coordinated with EFCOG for disposition. Obtain Council approval to send the Standard out for complex wide for review and comment. Resolve any comments.	Memo to the Quality Council endorsing the CGD standard and Comment Resolution Forms if needed.
2	TBD	Distribute the Council approved Standard to the	Letter to the DOE

		DOE Complex	complex endorsing the Standard and the approved standard as an attachment
3	TBD	CGD team will review the approved EM implementing procedure for applicability to the DOE complex. Provide comments as necessary. Any review comments would have to be coordinated with EFCOG for disposition. Obtain Council approval to send the Procedure out for complex wide review and comment. Resolve any comments	Memo to the Quality Council endorsing the CGD procedure and Comment Resolution forms as needed
4	TBD	Distribute Council approved Implementing Procedure for DOE wide distribution	Letter to the DOE complex endorsing the Procedure and the approved procedure as an attachment.

**Action Members (Identify Lead Member):**

1. Pat Carier, Lead
2. Sonya Barnette
3. Duli Agarwal
4. Kriss Grisham
5. Mary Haughey
6. Carl Sykes
7. Terry Montgomery
8. Michael Marelli
9. Steven E. Chalk
10. Matt Cole

**Action Resources:**

1. EFCOG

**TPD Approved:**

  
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 Quality Council Chair

10/26/10  
 \_\_\_\_\_  
 Date



Abstains: \_\_\_\_\_

**Differing Opinions:**