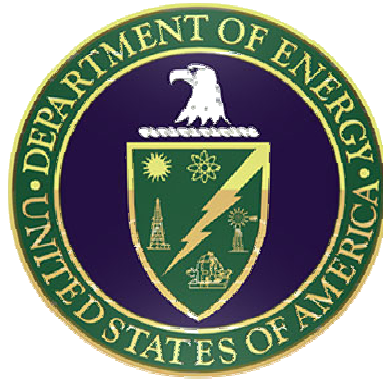


**DEPARTMENT OF ENERGY  
QUALITY COUNCIL**

**ANNUAL REPORT**

**For Calendar Year 2010**



**Office of Health Safety and Security**



## **Introduction**

The Department of Energy (DOE) Quality Council (Council) has been in effect since November 2008 and provides a corporate forum for Federal quality assurance (QA) experts from across the DOE complex to identify and address DOE QA policy needs, to identify and recommend actions for continuous improvement of the quality of DOE work, and to facilitate improvement of DOE QA program implementation and maintenance. The Council has promoted improvements in DOE's corporate approach to quality through providing a forum for interactions among quality experts in the DOE Secretarial Offices and Field Offices. It has also helped DOE quality professionals expand their networks, improve their communications complex wide, and gain knowledge of QA efforts within the Department that can be applied elsewhere. As a result, several outstanding capabilities or best practices developed by individual DOE organizations have been made available for use across the Department.

### **1.0 Summary of Notable CY2010 Accomplishments**

#### **1.1 Council Activities**

The Council's interactions with other DOE Offices have continued to be promoted resulting in DOE quality professionals expanding their networks across the DOE complex and achieving a greatly enhanced awareness of QA requirements, principles, and practices. The formation of the Council has promoted interaction between quality experts in Program Secretarial Offices, Headquarters' Staff and Support Offices, and Field Offices by their respective participation in the monthly teleconferences, Face-to-Face meetings, and in Council initiatives. These networking opportunities culminated with the 2010 Face-to-Face annual meeting held in December, where new and existing Council members participated in the sharing of information regarding QA activities within DOE and discussed the status of current Council initiatives. Efforts are ongoing to increase participation as well as an outreach to draw in more Council representation from other DOE offices. Increased participation by new members and other individuals outside of the Council has greatly improved the Council's posture within the various participating organizations.

Of special note has been the involvement of a Defense Nuclear Facilities Safety Board (DNFSB) Staff representative to the Council. Since the Council's inception, and especially this past calendar year, the DNFSB Staff representative has been highly interactive in all work conducted by the Council. His participation has been particularly value added in the areas of software quality assurance and the development of the revised DOE Order (O) 414.1D, *Quality Assurance*. Additionally, the representative has attended and provided input to the Annual Face-to-Face meeting; participated regularly in Council conference calls; and has participated in special initiatives.

The Council maintains a rapport with the Energy Facility Contractor Group (EFCOG) QA working group through participation of Council members in EFCOG meetings and other EFCOG working groups. The general EFCOG approach is to form a working group and develop lessons learned or guidance documents in specific areas of interest. These documents are then made available on the EFCOG webpage for general use. The EFCOG working groups also facilitate personnel exchanges

among members for purposes such as third-party reviews and joint supplier audits. In the QA improvement area, EFCOG has working groups addressing QA policy implementation, quality control benchmarking, supplier chain development, and feedback and improvement. These activities link directly to the Council activities in the Order revision, QA training, commercial grade dedication, performance metrics for effective QA programs, and lessons learned. Several Council members attended the EFCOG QA meetings held in June 2010 in Washington, DC and in December 2010 in Las Vegas, NV.

As part of the Council operations, various members share areas of best practices and lessons learned. Discussion of best quality practices and sharing implementation success stories occurs on each monthly conference call and results in the sharing of valuable information. Closely related is the area of lessons learned, where again much valuable information, particularly on vendor supplier deficiencies and HEPA filter deficiencies, has been shared. This information is posted to the Council webpage on a regular basis and can be found at <http://www.hss.doe.gov/nuclearsafety/qa/council/index.html>.

During 2010, Council members continued to be active participants in the effort to revise DOE O 414.1C, with some members directly participating on the writing team. Many other Council members were on the Order review team, and the Council, as a whole, continued to participate in a peer review capacity for several follow-on draft versions of the Order. In June 2008, a team comprised of DOE Headquarters, Field and Contractor personnel was formed to evaluate and draft a revision to DOE O 414.1C. In November 2009, the revision process changed to follow new guidance given in the Office of Health, Safety and Security (HSS) Policy Reform initiative. In early 2010, the draft revision to DOE O 414.1C was modified to accommodate a strong emphasis on streamlining and reducing redundancy, as well as being less prescriptive in the requirement set. As such, the Order was significantly re-structured to meet the expectations. Council members were instrumental in providing comments and feedback on each draft of the revised Order, including the revision that was submitted into RevCom. As a result of the Council efforts, DOE O 414.1D was signed by Deputy Secretary Poneman and issued on April 25, 2011.

For the second year in a row, the Council organized a QA Track for the Annual DOE Integrated Safety Management (ISM) Conference in Augusta, GA from September 15-16, 2010. This year's QA Track at the conference was entitled "*Quality Assurance: Minimizing Risks and Hazards.*" A variety of presentations, panel discussions, and poster sessions were held, illustrating the complex issues facing the Department and its contractors in the QA area. Field elements and contractors performing work on Office of Environmental Management (EM) projects discussed specific aspects of their QA efforts. Topics included a graded approach method, software quality assurance, analysis methods, suspect and counterfeit items, and welding quality. However, perhaps the most pressing issue facing the EM program is supplier quality. The rigor required for the procurement of many items for the current EM projects is challenging all involved, especially given the decreasing numbers of vendors who have QA programs appropriate for nuclear components. The panel discussions and interactions between the presenters and audience produced valuable information that could be used across the DOE complex. For more information on the QA Track at the 2010 Annual ISM Conference or to obtain copies of any of the presentations listed above, see [http://www.srs.gov/general/ism2010/webcast/track\\_4.html](http://www.srs.gov/general/ism2010/webcast/track_4.html).

## **1.2 Task Planning Document Teams**

The Council operations, as specified in the Charter, states that Task Planning Document (TPD) teams are established to accomplish a specific task, such as commenting on a QA-related document, performing a peer review, or developing a technical paper. Participation in these TPD teams has contributed to the furtherance of the Council's objective of improving QA communication and collaboration. Accomplishments of the TPD teams are highlighted below.

### **2009 Survey on Quality Assurance Implementation**

The establishment of the Council in 2008 provided a new vehicle for DOE to issue the Survey on QA Implementation. At the direction of Deputy Secretary Poneman, the 2009 Survey was issued by the Council on October 1, 2009. After analyzing the results, five potential areas for improvement were identified and include the following:

- All DOE Offices are required to have an approved Quality Assurance Program.
- DOE Field Offices must verify that QA requirements are flowed down to subcontractors.
- All DOE offices must ensure that DOE personnel receive appropriate QA training.
- All DOE offices must ensure that work is done to approved work processes.
- All DOE offices that use or oversee the use of safety software for nuclear facilities must ensure that it meets the DOE safety software QA requirements.

The Council will work in 2011 to provide a suggested path forward to address these improvement areas. For more details, the Survey report can be found at <http://www.hss.doe.gov/nuclearsafety/qa/>.

In addition to the DOE-wide report on the Survey results, individual reports were developed and issued informally to representatives of the National Nuclear Security Administration (NNSA) and EM on November 15, 2010, and December 1, 2010, respectively. These informal reports provided an analysis which focused on the responses for these offices and compared those responses to the DOE-wide responses.

### **DOE QA Requirement Training**

The development of DOE Headquarters QA training was identified as a priority task at the 2008 Face-to-Face Council meeting. The Council decided that QA training for Headquarters personnel was necessary to educate staff on the importance of quality and the DOE expectations contained in the QA Order. Consequently, a TPD team was formed in 2009 to develop training that would provide a general explanation of QA definitions, principles and DOE requirements. The first pilot training was conducted on August 19, 2010, in Germantown, MD and had 14 participants from the Office of Information Management, HSS, Office of Science, as well as a DNFSB technical staff member. Based on the comments and feedback received from the pilot participants, the training materials were revised and presented at the 2010 Annual Face-to-Face meeting of the Council. Further revision will take place prior to the second pilot training session which is expected to be provided during 2011. The final package will be submitted for review and approval by the Council, and then submitted to the Chief Health, Safety and Security Officer for final approval before the first class is offered. Prior to finalization, the training package will also be reviewed by the National Training Center (NTC), for recommendations on presentation options (i.e., on-line,

classroom, etc) and other aspects of the training. The Chief Health, Safety and Security Officer approved training will be provided and maintained by Office of Quality Assurance Policy and Assistance staff in conjunction with Council efforts, and made available to all Headquarters and Field personnel on an as-requested basis. The training may also be available online.

### **Application of NQA-1, Part II**

This TPD is divided into two sections. Section A included providing the revision team for DOE O 414.1C language to clarify terms specifically used in Part II of NQA-1, which is the consensus standard for nuclear projects. The deliverable for Section A of this TPD provided language that clarified the use of the terms Nuclear Reactor and Nuclear Facility in NQA-1 Part II, for DOE applications. Because not all of the sections of Part II of NQA-1 are applicable to some DOE programs, Section B of the TPD focused on providing an informal methodology that DOE programs can use to make the NQA-1 Part II applicability determination more efficient, supportable and uniform across the DOE complex. Once completed, this methodology will be made available on the Council website. The deliverable for Section B was developed with input from the EFCOG QA working group.

### **Quality Assurance Program (QAP) Incorporated with ISM**

The TPD team worked to develop a non-mandatory template to aid users in documenting implementation of DOE requirements for ISM and QA into a single program description document. ISM and QA are well established DOE programs. Each requires its own implementing documents; i.e., for ISM, the ISM System Description Document, and for QA, the Quality Assurance Program (QAP) plan. Although distinct, ISM System Description Documents and QAPs have similarities and overlap in many areas. This TPD focused on developing a template which incorporated both sets of requirements into a single description document. The TPD team reviewed DOE requirements for ISMS and QA and determined an approach for documenting the ISM in a QAP. The QA criteria being addressed are mandated in DOE O 414.1D, *Quality Assurance* and the guiding principles and core safety functions for ISM are described in DOE O 450.2, *Integrated Safety Management*. The final product will be approved by the Council and will be available to DOE programs as a suggested method to integrate required ISM and QA program documentation in a single document.

### **Upgraded Commercial Grade Dedication Implementation**

Through maintaining ongoing contact with the EFCOG QA working group, the Council, by initiating a joint venture with EFCOG, developed a TPD to determine if DOE-wide guidance on Commercial Grade Dedication (CGD) is warranted. The task will also address CGD training for Federal QA personnel. This TPD team is initiating the activities associated with the TPD and is expected to work closely with EFCOG to complete this TPD. In 2011, the Council will continue to pursue appropriate CGD actions.

### **Performance Metrics for QA Program Effectiveness**

The Council formed a TPD team to develop guidelines, processes, and/or methodologies for writing performance metrics for QA program effectiveness for both Federal and contractor QA programs. Examples of QA program effectiveness performance metrics, and the processes by which they were developed, are being collected from DOE Headquarters Offices, Field Offices, and contractors, as well as from government agencies external to DOE. The TPD team plans to evaluate the collected

information and formulate guidance on developing QA program effectiveness performance metrics, and develop a generic template for such metrics.

### **1.3 New Task Planning Document Teams**

During 2011, the Council will be increasing the coordination with EFCOG and its initiatives to develop additional tasks/issues that can be collaborated on. In particular, the Council will develop new TPD teams for the following areas:

- Guidance on performing management assessments
- Recommendations to address the areas for improvement from the 2009 Survey on QA Implementation
- Formation of a task force to address Suspect/Counterfeit Item (S/CI) issues

## **2.0 Changes to Council Operations**

The original Council Charter was signed and issued in November 2008. Based on lessons learned in 2009, the Charter was revised and re-issued in February 2010. Additional changes to the Charter were discussed during the 2010 Annual Face-to-Face meeting. Potential revisions to the Charter were discussed (e.g., frequency of the conference calls) and changes will be incorporated and an updated Charter will be submitted to the Chief Health, Safety and Security Officer for approval and signature. The changes to the Charter are expected to reflect less constrictive operational procedures to prevent the need for annual revision to it. The proposed change includes moving from monthly to bimonthly conference calls with the time slot in the opposing months to be used for TPD team meetings and activities.

## **3.0 Path Forward**

The membership of the Council changed during this year with the loss of two member organizations, four replacements of current members, and one new member. Three new members are anticipated to be nominated in 2011.

During 2010, Council members participated in the EFCOG QA subgroup monthly conference calls to share ideas and strengthen the interface/partnership with EFCOG. During 2011, the Council will be increasing the coordination with the EFCOG and its initiatives. The Council will continue to work with EFCOG and plans to pilot an effort to develop a protocol where Council TPD teams and EFCOG working groups merge efforts on similar topics to jointly develop deliverables and products that will provide guidance and education for consistent and proper implementation of QA across the DOE. In addition, Council members will participate in semi-annual meetings with EFCOG to maximize skills usage and coordination for the betterment of the Department's implementation of QA.

Additionally, in 2011 the Council will finalize the development of the basic QA training for Headquarters personnel to educate them on the importance of quality and the DOE expectations, and the training will take into account the contents of the revised Order, DOE O 414.1D. It is expected that once the Staff and Support Offices receive this training and reaffirm that QA affects them as well, there will be increased participation in the Council membership from those Staff and Support Offices.