

QUALITY ASSURANCE EXCHANGE

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IN THE SPOTLIGHT: INTERVIEW WITH PATRICE BUBAR DEPUTY ASSISTANT SECRETARY OFFICE OF CORPORATE PERFORMANCE ASSESSMENT

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Earlier this year, Patrice M. Bubar was appointed as the Deputy Assistant Secretary for Corporate Performance Assessment (EH-3) within the Office of Environment, Safety and Health (EH). Ms. Bubar holds a B.S. in environmental engineering from the University of Pittsburgh. Her extensive background includes many years of experience with the National Water Program, the Superfund Program, and the Radiation Protection Program at the Environmental Protection Agency (EPA), and with the Office of Environmental Management (EM) at the Department of Energy (DOE). Ms. Bubar’s new responsibilities include providing assessments of safety and quality assurance performance as well as the further development and improvement of the DOE-wide Quality Assurance Program. In a recent interview, Ms. Bubar described the main objectives of the Office of Quality Assurance Programs (EH-31) and conveyed a quality message to the DOE community.

In your opinion, what are the three primary focus areas or priorities of the Office of Quality Assurance Programs?

“In the transition from EM to EH, I have had the opportunity to see the impact that Quality Assurance (QA) has on day-to-day operations and the overall necessity for a QA program to be developed and implemented. It has been enlightening to be able to view QA from an overall policy perspective. Working on the EM Quality Assurance Program Plan (EM QAPP) has really helped me get my arms around the need for a QA program, not only for internal operation, (your day-to-day activities that keep your organization running), but also for nuclear safety operations. With my line management expertise, I was able to appreciate the need for an effective quality assurance program. Now to come over to EH and lead the DOE-wide QA Program, I have a broader perspective in terms of the requirements, the policy, and the imple-

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“HOW TO” SERIES ON PERFORMING ASSESSMENTS: AUDITING TOOLS AND TECHNIQUES

Submitted by Bob Blyth, U.S. Department of Energy, Idaho Operations Office

This is the second in a series of articles containing auditing techniques and tools acquired over the years by auditors leading and participating in Quality Assurance (QA) audits across the DOE complex. These techniques and tools supplement DOE G 414.1-1A, Management Assessment and Independent Assessment Guide and can be used to become a more effective auditor.

Auditors are gatherers, processors and communicators of information. This article focuses on assessment team selection, interviewing approaches and techniques, and auditing tools utilized to make auditing more efficient and effective.

The first step in performing an assessment is developing the assessment team. Selection of the assessment team members is as important as the skills required to conduct the assessment. Inclusion of the entire team generally

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LESSONS LEARNED:

Quality Assurance Related to Fastener Torque Requirements

Improper torque applied to cap screws caused the failure of a support stand for a nuclear safety-related device at a DOE weapons facility. Fortunately, operations personnel observed a symptom in time to avoid potential injuries to personnel, damage to the item being supported, or damage to other equipment. A review of this occurrence, four others at other DOE facilities, and six at commercial nuclear power plants illustrate that fastener torque has been a key subject of a reportable occurrence related to nuclear-safety applications. The lessons learned point to the applicability of the QA requirements of DOE O 414.1C and 10CFR830 during design, fabrication, installation, and operation of safety-related equipment and components for the seemingly minor subject of specifying torque values and properly applying torque to fasteners. Additionally, the value of fieldwork practice in accordance with the maintenance rule, DOE O 433.1, has been demonstrated, as many of these occurrences were uncovered during installation, first use, and maintenance.

Lessons Learned

1. **In many instances root causes of errors related to fastener torque originate with design or engineering.**

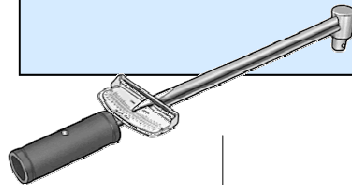
Observation: A key observation from this set of occurrences is that many of the primary root causes precede the conduct of work in the field. That is, they result from errors in design, engineering, or instructions provided to operators and maintenance workers. This indicates that for torque requirements, particularly in the case of new or unique applications, diligence is required by all who are in the chain from initial concept to use in the field.

Future avoidance of similar errors in design or engineering can be avoided by considering the following by the primary engineer and during design reviews required by QA.

Explicit specification: While skill of the trade may be sufficient in many designs, *nuclear safety-related* assemblies and installations should always have explicit torque specifications where loads, structural support, or fluid containing joints are part of the design.

Use of generic drawings and tables: Use of generic references vs. case-by-case specification can lead to oversights. Many fabrication and construction drawings refer to general reference

Workers should be challenged to have a questioning attitude when something unusual happens.



drawings that have requirements that would be impractical to list on every drawing. Thus, it is important that worker training emphasize the importance of being aware when such reference drawings exist and how to use them. A similar practice is providing tables of torque values and leaving it to the field individual to interpret the table, which is accepted procedure. However, when the application is *nuclear safety-related*, regardless of whether the specifications are on a general drawing or in a generic table on the specific drawing, prudent practice would be for the engineer/designer to determine the specific torque requirements and explicitly state them on the drawing or in the procedure being addressed.

Translation errors: Several of the errors in the reviewed examples resulted from improper translation of engineering or manufacturer's torque requirements into installation or assembly procedures. The basic cause has been both lack of understanding and lack of attention to detail. Where fastener torque is a design or procedure requirement, training of reviewers should emphasize that only verifying the presence of a torque value is not sufficient. The value should be compared with the source document. If translation has been conducted from general references into a specific value in a procedure or on a drawing, the translation itself should be validated.

2. **Errors in field maintenance related to improper fastener torque are less prevalent.**

Observation: While some of the reviewed occurrences occurred in the field, they tended to be committed by subcontracted or new mechanics. This reinforces the need to be especially diligent when workers are new to the job or are not used to working in a safety-related environment and/or the need to be rigorous when safety is vulnerable to improper fastening of components. Section 4.2 DOE G 433.1-1, the guide to the maintenance rule, addresses training. Section 4.2.3.4 which discusses on-the-job training may be particularly appropriate for temporary or subcontracted workers.

3. **Alertness of construction and maintenance personnel who exercise a questioning attitude was the action that uncovered a mistaken torque requirement.**

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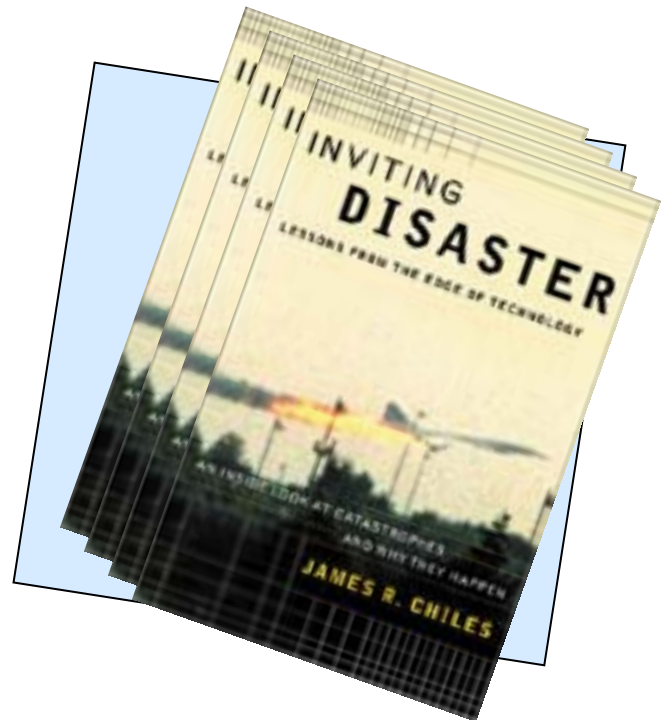
"Lessons Learned..." (Continued from page 2)

Observation: In several of the cases examined, an error was discovered because of a questioning attitude by field personnel. The technically complex world of today calls for being alert to precursors of potential occurrences. Thus, an important lesson from the set of occurrences is that *workers should be challenged to have a questioning attitude when something unusual happens.*

The concept of having a questioning attitude when something does not look or feel right is one of the main themes of an excellent book titled *Inviting Disaster: Lessons from the Edge of Technology* by James R. Chiles; ISBN 0-06-662082-1, Harper Collins, Publisher (<http://www.invitingdisaster.com>). This publication provides good case studies for training and is recommended reading for anyone interested in the safety challenges posed by technology.

The details of this review and the occurrences are posted at: <http://www.eh.doe.gov/qa/newsletters/ImproperTorqueOccurrences.pdf>

For more information contact: Bud Danielson at Bud.Danielson@eh.doe.gov



Washington Closure Hanford Safety Software Surveillance Completed

In February, staff from the Office of Quality Assurance Programs (EH-31) and Environmental Management headquarters (EM-22) assisted the DOE Richland Operations in conducting a safety software surveillance. The objectives of the surveillance were to determine what national or international consensus standard(s) were used by Washington Closure Hanford (WCH) for their safety software quality assurance (SQA), how well this standard has been implemented in the WCH safety software quality assurance program, and what the methods are used in applying a graded approach to SQA.

The starting point for identifying the relevant safety software was the list of safety and design and analysis system software prepared by WCH. The surveillance team chose to review all 14 applications that WCH had identified as safety software. During the surveillance, several applications were determined not to meet the definition of safety software as per DOE O 414.1C, *Quality Assurance*. This determination was made through investigation and discussion of the use of applications. For the software applications determined not to be within the scope of the specific safety SQA requirements, quality assurance requirements including a consensus standard using a graded approach is required by 10 CFR 830.

This surveillance and the resultant removal of applications from consideration as safety software were extremely benefi-

cial to DOE Richland and WCH staff while providing valuable field specific applicability to headquarters staff in EH and EM. For additional information on the surveillance objectives and process, contact Cliff Ashley at: clifford_a_ashley@rl.gov.

DID YOU KNOW?

Did you know quality records provide evidence that appropriate quality activities took place and that the execution of the activities met required standards? Documentation that includes quality planning dates and corrective actions identifies what should be done or what is planned but does not include evidence that the appropriate quality activities were performed or that the activities met the desired result.

“In the Spotlight...” (Continued from page 1)

mentation of the policy.

One of the responsibilities of my office is to determine what we can do in the EH organization to ensure that the QA culture is adopted by all managers within the Department. Our managers must accept that QA needs to penetrate everything we do. Here’s what I mean by a QA culture: QA culture drives the appropriate levels of QA into all activities within the Department to the extent that QA becomes second nature. So, what do we need to do in EH to ensure that the QA culture has penetrated the organization? The three main priorities that I have for the short term are as follows: 1) to ensure that management expectations for QA are clear and achievable and that all managers understand what is expected of them; 2) to provide assistance and guidance in integrating QA into their activities and provide support in implementing quality assurance programs. Examples are providing proper training, providing required tools, providing feedback from assessments, and fostering a “QA cultural way of thinking;” and 3) to ensure that adequate resources and proper skill sets are identified within EH.”

How will you take what was learned through the development of the EM QAPP and apply it to the EH Management System?

“What I learned from developing the EM QAPP is that it had to be a team effort with the support of management. We spent a lot of time and effort working with the staff to ensure that their views, as well as management’s, were accurately captured. Communication between team members and management was needed on a regular basis. We tried to ensure that management understood that this plan was a tool to achieve higher quality products and services. I am told that this was how the EH Management System was developed. Recently, we have been conducting training in the EH organization on the Management System. My expectation is that managers will take their training back to their offices and determine what they need to do differently to be consistent with the Management System requirements.

It has been a great experience over the past year developing the EM QAPP, and now using the EH Management System as a tool to outline how to achieve these requirements has been very helpful in my day-to-day operations. One of the first things I did when I came to this office was put in place office procedures and disciplines for our day-to-day operations. I want to make certain that everyone in the organization understands how we conduct business.”

As Integrated Safety Management (ISM) Champion for EH and the sponsor of the EFCOG – ISM Working Group, how do you see these activities helping to achieve the***ISM/QA mission/objectives for the Department?***

“I really see a great synergy between ISM and QA. Being the ISM Champion for EH gives me the ability to integrate all tenets of ISM into the QA missions and objectives. It also provides the Program Secretarial Officers (PSOs) and other organizations guidance on how to utilize the ISM principles and disciplines within a QA culture in their operations. I think this will really make a difference in the organization and provide the Department the ability to perform operations at a much higher level in safety and quality. In addition, as the EH ISM Champion on the ISM Council, I will have the opportunity to concentrate on shaping the mindset of DOE management about the integration of safety management and QA culture.

I am also taking over the responsibility as the EFCOG-ISM Working Group sponsor. This working group provides us the avenue to talk with contractors and help penetrate their organizations with the QA culture. Being involved with both activities provides a broad opportunity to help improve safety and quality management within all levels of Federal and contractor organizations.”

Effective QA implementation throughout the Department requires your office to collaborate closely with the PSOs and the Field. How do you plan to support them and what are your expectations of them?

“I intend to work very closely and cooperatively with the other organizations within DOE. The Office of Corporate Performance Assessment has a special role to provide support and assistance to the other PSOs. When I was with EM, we had received significant support and assistance from EH-3 in terms of QAPP development, training, and site office QAP reviews and assessments. I am now in a position to continue supporting DOE organizational elements in developing and implementing successful QA programs. We also provide support through QA data analysis and interpretation.

QA data analysis is a key component of what we do in the Office of Corporate Performance Assessment. The Department collects data from the field through various existing systems such as Occurrence Processing Reporting System (ORPS), Computerized Accident/Incident Reporting System (CAIRS), Non-compliance Tracking System (NTS), and others. We think that, if properly mined, this data provides an opportunity to identify possible areas for improving quality. To that end, EH-3 is analyzing the data to identify possible areas of improvement and then assist the PSOs to address these issues. I believe that this is one way we can help the line organizations and improve quality and safety throughout the complex.

My expectations are that the other PSOs will view EH as a

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“In the Spotlight...” (Continued from page 4)

partner in achieving our shared vision of success in growing the quality assurance and ISM culture in the Department. I look forward to working with them in improving quality and safety in our daily operations at Headquarters and in the field.”

What quality message would you like to send to the DOE community in regards to management expectations?

“One clear message I would like to send to the DOE community is that there is a unified set of management expectations. Senior Management does expect QA requirements to be followed in everybody’s day-to-day operations. The commitment to QA through the senior management community is strong and I think that we are on our way to getting that message across to all managers in the Department through some of the discussions we’ve been having with the Deputy Secretary’s office. One metric to use to determine if the message is getting out to the DOE community would be to ascertain that every manager understands QA and uses it in their vernacular.

It’s funny. We may not realize it but we can’t get away from quality assurance. It is in our everyday activities, not just at work. The other day I was trying to call Sears to have them send out someone to fix my dryer and while on hold I heard: “This call may be monitored for quality assurance purposes.” Now please do not construe this story as saying DOE will start monitoring calls for quality assurance purposes, but it does seem that everyone is using QA in their vernacular. It’s following through with an effective program that really measures our progress.”

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DID YOU KNOW?

Did you know that the practice of a software engineer using the source code to create the needed design and requirements documentation is referred to as *reverse engineering*? Reverse engineering is different from reengineering. Whereas reengineering is the process of rebuilding existing software products to create a product with added functionality, better performance and reliability, and improved maintainability, reverse engineering recreates software design and interface information from the source code. Reengineering is frequently performed when a customer requests an enhancement to an existing feature in a legacy software system but because of poor configuration management or other software quality engineering practices, the past design and requirements for that feature cannot be found and.

Software tools are available through several vendors to assist in the reverse engineering process.

Newsletter Articles Needed

The *Quality Assurance Exchange* is intended to be a forum for the exchange of ideas and the sharing of experience among DOE field offices, contractors, and DOE headquarters in the effort to meet quality assurance requirements. Readers are strongly encouraged to contribute articles on the implementation of QA requirements, on lessons learned and to offer suggestions.

Please forward your input to: qaexchange@hq.doe.gov

“Performing Assessments...” (Continued from page 1)

results in a more focused and accurate assessment process. To help make sure that the team will work in a unified manner with a common purpose, ensure that each team member is the following:

- knowledgeable of his/her assignment
- responsible for his/her performance task
- unbiased
- team oriented
- willing to contribute in a caucus

After the assessment team has been determined, it is necessary to have core-interviewing skills established. Although each auditor has his/her own style of interviewing, there are a few commonalities of approach that should be emphasized to ensure a complete and accurate assessment. These include:

- pre-planning
- strategic selection of interviewees
- maintaining interview focus
- establishing a good working rapport with the audited organization

Pre-planning. Pre-planning for the assessor is a crucial element to ensure an adequate understanding of the subject matter with respect to the assessment objectives. The assessor must realize that, more often than not, the interviewee is more knowledgeable of the field of inquiry than the assessor. While the assessor may have a better handle on specific DOE Orders and regulatory requirements that apply to the work, the interviewee has been working in the field of inquiry for many years and has been through numerous assessments of his/her area. Despite the knowledge differential that may exist between the assessors and the assessed, it is incumbent on the assessor to become adequately knowledgeable of the subject matter being investigated. At a minimum, the assessor should take the time to review the following in regards to the field of inquiry:

- DOE Orders, technical standards, and the regulatory basis
- organizational structure and management/technical interfaces
- corporate and division level policies and procedures
- previous assessment reports and corrective action plans

It is also crucial that the assessor understands his/her roles and responsibilities in the assessment plan in regards to the completion of the assessment objective and scope.

Strategic selection of interviewees. Once the assessor is fa-

miliar with the field of inquiry and the implementation approach employed by the assessed organization, the assessor must select individuals to interview and the order in which interviews must be completed. Selection of the right interviewees will draw on the information gained in pre-planning evaluations of organization charts, etc. In addition, it is prudent to select only interviewees that are essential for answering the specific assessment lines of inquiry assigned. Specific timing of the interviews is also important, as the assessor must be able to construct a conceptual model of organization management effectiveness. This can be done by obtaining information from the lowest organizational level and then validating effectiveness of organizational interaction (or invalidating it) while moving up the organizational chart or by starting at an upper level and working downward. In the end, however, a strategic scheduling of interviews with forethought to the vertical and lateral interactions of an organization is a crucial planning element.

Maintaining interview focus. The specific technique of the interview must be given high importance. Developing and implementing a successful interview technique requires experience and a constructive attitude. As with other assessment elements, the delivery of an effective interview draws heavily on the assessment pre-planning. The assessor must have sufficient knowledge of the lines of inquiry to steer and maintain the interview in the right direction. Inevitably, the interviewee will want to jump ahead or deviate from the planned course of questions. The assessor must be able to allow this in order to set the interviewee at ease and to allow the interviewee to address the questions in a manner that is most comfortable to him/her. However, the assessor must be able to know where the interview deviated from course and be able to resume from the same point.

Establishing a good working rapport. An attitude of sincere inquisitiveness helps determine the effectiveness of the assessor as an interviewer. The best assessors are those that are genuinely intrigued by the subject matter being investigated and, as such, have a natural inclination to dig deep in order to learn more. Displaying an attitude of inquisitiveness and concern for the subject matter also sets interviewees more at ease as they feel they are speaking more to a technical peer than to an enforcement agent. A good assessor is one that is more concerned with learning “what makes the program tick” than with what can be found. Understanding the workings of the field of inquiry and its internal and external requirements, enables the natural discovery of strengths and weaknesses. An assessor must also maintain a calm disposition. Interviewees are inclined to feel stressed by the fact that they have to be interviewed; the assessor must work hard to make sure that they are set at ease and that their stress level does not build.

Finally, the assessor must work hard to ensure that a *legacy of trust* has been established with the assessed community.

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“Performing Assessments...” (Continued from page 6)

There is nothing that will bode less well with an assessment program than the use of assessors who are noted to be unfair or non-objective in the conduct of their work. A successful assessor should be professional, open-minded and unbiased. Specific and factual information with sufficient and objective evidence to support findings should be reported. The assessor must be able to place each issue in the proper context, even if it means making it less significant than felt deserved. If assessors find an issue that they feel is indicative of a much broader management system breakdown but they have insufficient evidence to support such a claim, they must still report it as is and resist their temptation to report otherwise. Assessors must realize that their role is to provide an assessment and not a judgment. Furthermore, assessors do not necessarily have to find weaknesses. It is just as important to praise good performance and recognize positive attributes from good or compliant performance as it is to identify areas needing improvement.

In addition to team selection and interviewing techniques, there are many tools and resources available to auditors to aide in their assessment reporting and documentation. Two such tools are the Issue Development Sheet and the “Toro Tracking Tool” or Audit Summary Sheet.

The [Issue Development Sheet](#) (IDS) is one tool used to help auditors clearly and definitively record their thoughts and observations of what requirement was violated, what objective evidence was examined that supports this conclusion, who was involved in the discussion of this issue, and what was the proposed categorization (i.e. notable practice, concern or finding).

The IDS can be emailed to the audited organization and presented at the daily management information meetings to keep the audited organization informed and help them to respond. QA auditors are well-educated and intelligent people, but they may not fully understand or be aware of all the intricacies of the program they are auditing. Giving the audited organization the IDS early in the audit process gives them the opportunity to clarify any misunderstandings, and when a discrepant condition is easily remedied, the opportunity to correct the situation during the audit.

The IDS is best used as the foundation for discussions between the auditing and audited organizations. These discussions clarify what the real issue is, its level of severity, and possible solutions. Most importantly, for the audited organization, using the IDS removes the element of surprise.

Furthermore, the IDS speeds up the audit report writing. After thorough discussion and revision, the information contained on an IDS will be factually accurate. This vetted in-

formation can then be quickly copied and pasted into the audit report. A completed example and blank IDS are found at the URL listed below. Another IDS format that works well is the *Form 2*, found in Appendix 4 of [DOE STD-3006-2000](#). Issue Debrief Sheets take many forms. IDS variants used by from EM and OQA/OCRW can also be found at the URL listed below.

Keeping track of responsibilities, issues generated, progress in completing field investigation, and overall program effectiveness is an essential and complicated part of managing an audit. A very effective tool for this is the [Audit Summary Sheet](#), or “Toro’s Tracking Tool”, named after its primary developer, Bob Toro with Navarro Research and Engineering, OCRWM Office of Quality Assurance.

The Audit Summary Sheet identifies the auditor and his/her responsibilities for a particular audit element. It also summarizes issues developed and their status. Some teams use this tool for internal use only, others present it in their daily management information meetings. In cases where the audit is to determine overall program effectiveness, this tool works very well at exit briefings, as part of the agenda, and a scorecard for the audited organization. The Audit Summary Sheet is easy to use and customize to fit specific needs. Example and blank Audit Summary Sheets can be found at the URL listed below.

In conclusion, in addition to the administrative and mechanical auditing tools, maintaining an open mind and conducting audits in a professional manner will eliminate problems and complaints and make for a successful and productive assessment.

Credit for developing this article goes to Bob Blyth, NE; David Carden, ORO; Don Brown, LANL; Dan Truman, BNI; and Dave Kimbro, CTAC. For more information contact Bob Blyth at: Robert.Blyth@nuclear.energy.gov

This article and the accompanying worksheets may be found at: www.eh.doe.gov/qa/newsletters/index.html

DID YOU KNOW?

Did you know that validation includes system testing a code to ensure that it is consistent, complete and correct with respect to the system requirements? Validation is the process of determining whether the final product satisfies its requirements. Validation differs from verification in that verification is the process of determining whether the output from the current software lifecycle phase is consistent, complete and correct with respect to the previous life-cycle phase.

ANNOUNCEMENTS, UPDATES, & ACTIVITIES

Announcements

Integrated Modules for Bioassay Analysis (IMBA) Software Evaluation. The Office of Quality Assurance Programs has assembled a team and initiated an evaluation of the IMBA Expert™ USDOE-Edition software for possible inclusion in the DOE Central Registry for safety software. The evaluation team will also assess the advantages of upgrading DOE users to the IMBA Professional Plus version of the software. The bioassay analysis software is currently being used by the Office of Environmental Management, the Office of Environment, Safety and Health, the Office of Science, the Office of Nuclear Energy, Science and Technology, and the National Nuclear Security Administration. The IMBA software is being evaluated using the DOE safety software quality assurance work activities specified in DOE O 414.1C, *Quality Assurance*. Evaluation of the IMBA software is expected to be completed by May 2006. If accepted, the addition of the IMBA software into the Central Registry may reduce the effort and costs of implementing the software quality assurance requirements at each site.

For further information, please contact Robert Loesch at (301) 903-4443 or Robert.Loesch@eh.doe.gov

DOE O 414.1C, Quality Assurance, Orientation Activities Coming to a Close. The seventh and final regional training meeting was held on March 14, in Argonne, IL. This Midwest regional training was sponsored by the Chicago Operations Office. The regional orientation meetings detailed the new safety SQA requirements that are included in DOE O 414.1C and the guidance for those requirements in DOE G 414.1-4. Approximately 150 staff members for DOE field, headquarters and contractors attended these meetings. The meeting format allowed attendees and DOE O 414.1C policy staff to discuss in detail the specific safety SQA requirements and how the requirements may be applied to their facility or organization. The main area of discussion included clarification of the three safety software definitions. The presentation and frequently asked questions related to the DOE O 414.1C safety SQA requirements are available on EH's SQA Knowledge Portal, <http://www.eh.doe.gov/sqa/dir.htm>. Additional regional orientation or site specific meetings will be conducted upon request. Please contact Bud.Danielson@eh.doe.gov

DNFSB Briefing and Closure of DNFSB Recommendation 2002-1. Periodically, representatives from EH, NNSA, and EM brief the Defense Nuclear Facilities Safety Board (DNFSB) on QA related issues. The most recent briefing was conducted on March 13, 2006 at the DNFSB offices in Washington, D.C. This briefing included both QA and SQA and addressed key accomplishments since the last briefing as well as ongoing and planned activities. At this briefing, as the responsible organization for the Implementation Plan for DNFSB Recommendation 2002-1, EH proposed that the DOE will be requesting closure of the recommendation at the next DNFSB briefing. The DNFSB will continue to monitor DOE's progress in implementing SQA requirements.

SEVOCA: The Systems/Software Engineering Vocabulary Administrator Project. The following is being distributed from the project lead, Annette D. Reilly, for the ISO/IEC JTC 1 SC7 Working Group 22 to develop a single authoritative software engineering vocabulary with world-wide recognition.

The initial scope of the SEVOCA project is to include definitions from all the current IEEE and ISO standards relating to systems and software engineering. The vocabulary will be available for online lookup. IEEE contributed IEEE 610 as a source for this project. This project is intended to encourage widespread public use of the definitions and interest in purchasing and using the source standards.

The IEEE-Computer Society has completed work on the first phase of the system to host the vocabulary database. Many definitions from key standards have already been uploaded. The next step is for IEEE working group members and other volunteers to load the vocabulary.

The next phase of the SEVOCA system development will be to prepare the system for public use in late 2007. Through the Internet, SEVOCA will allow people who view and print definitions to go to the ISO or IEEE standards stores and purchase the source standards. Public use will not require a password.

For more information on the SEVOCA Project contact:
Annette D. Reilly, Editor at annette.d.reilly@lmco.com

ANNOUNCEMENTS, UPDATES, AND ACTIVITIES

“Updates...” (Continued from page 8)

Updates

QA and safety SQA Criteria and Review Approach Documents Align with DOE M 226.1-1. As part of DOE’s Implementation Plan for Recommendation 2004-1, the Oversight manual requires that CRADs across several topical areas are consistent. QA and safety software QA are 2 of the CRADs that require a common organization and structure. The QA CRAD is completed and is available. The QA CRAD was developed based on content of the *Quality Assurance Management System Guide*, DOE G 414.1-2A, 6-17-05, with exceptions as noted in the front of the document applicable to the Carlsbad Field Office WIPP project, and the DOE Office of Civilian Radioactive Waste Management’s Yucca Mountain Project. The safety SQA CRAD is expected to replace Appendix F in DOE G 414.1-4. A draft of the safety SQA CRAD was distributed for a wide review by quality assurance and software quality assurance subject matter experts. Comments are being collected and evaluated. The safety SQA CRAD is expected to be completed in May. For more information on the QA CRAD contact Paul Evans, pevans@pec1.net or on the SQA CRAD contact Debra Sparkman, debra.sparkman@eh.doe.gov.

Standard Updates

Revision to HEPA Technical Standards: In December 2005, a revision to DOE Technical Standard, DOE-STD-3020-2005, *Specification for HEPA Filters used by DOE Contractors* was approved and issued within the DOE Directives System. The Standard was prepared by a team of DOE HEPA filter subject matter experts and was revised to comply with ASME AG-1, *Code on Nuclear Air and Gas Treatment* and to incorporate the results from previous assessments and advances in HEPA filter technology. Revisions to other HEPA Technical Standards will be completed by December 2006. A copy of the revised Standard can be downloaded at <http://www.standards.doe.gov/>.

For further information, please contact Subir Sen at (301) 903-6571 or Subir.Sen@eh.doe.gov

QA and SQA Functional Area Qualification Standards to be Updated. The Office of Quality Assurance Programs (EH-31) will soon initiate the update of the QA and SQA functional area qualification standards, DOE Standard 1150-2002 and DOE Standard 1172-2003, respectively. These updates will align the functional area qualification standards with the newly released DOE O 414.1C, *Quality Assurance*. The update process will be performed in accordance with

DOE M 426.1-1A, *Federal Technical Capability Manual*. If you are interested in participating in these efforts, please contact Bud Danielson at bud.danielson@eh.doe.gov or Debra Sparkman at debra.sparkman@eh.doe.gov.

Upcoming Meetings & Conferences

Nuclear Quality Assurance Committee

When: March 27– 29, 2006

Where: Phoenix, AZ

Information:

<http://cstools.asme.org/csconnect/CommitteePages.cfm?Committee=O1050000&Action=5566>

Nuclear Weapons Complex Software Quality Assurance Subcommittee

When: April 25 – 27, 2006

Where: Lawrence Livermore National Laboratory
Livermore, CA

For more information:

<http://sqas.lanl.gov/source/orgs/cio/sqas/spring2006mtg>

Emergency Management SIG and SCAPA Conference

When: May 1-6, 2006

Where: Renaissance Las Vegas Hotel, Las Vegas, NV

9th NRC/ASME Symposium on Valves, Pumps & In-service Testing

When: July 17-19, 2006

Where: Washington, DC

For more information: www.asmeconferences.org/nrcasme9

14th International Conference on Nuclear Energy

When: July 17-20th, 2006

Where: Miami FL

For more information: www.conferencetollbox.org/icon14

NNSA Roadmap for Excellence Workshop

When: April 19-20, 2005

Where: Lawrence Livermore National Laboratory
Livermore, CA

For more information:

Rabi Singh, rabindra.singh@nnsa.doe.gov or

Nancy Day, nancy.day@nnsa.doe.gov

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EDITORIAL NOTE:

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www.eh.doe.gov/SQA

UPCOMING WORKSHOPS, TRAINING & COURSES***2006 DOE Price-Anderson Coordinators Training Workshop***

When: April 4-6, 2006

Where: Holiday Inn, Gaithersburg, MD

For more information: Sue Petersen@eh.doe.gov or
Office of Price-Anderson Enforcement: (301)-903-0100,
www.eh.doe.gov/enforce/workshop2006

***6th Meeting of the U.S. Software System Safety
Working Group***

When: April 25-27, 2005

Where: Stratton Student Center, MIT, Cambridge, MA USA

For more information: <http://sunnyday.mit.edu/safety-club/workshop6/>

***International Training Course on the Physical Protection of
Nuclear Material and Facilities***

When: April 30 - May 19 2006

Where: Albuquerque, New Mexico, USA

For more information:
<http://www-pub.iaea.org/MTCD/Meetings/Announcements.asp?ConfID=29595>

Software Quality Engineering Courses

The following Software Quality Engineering
Courses are being conducted by the Westfall Team.

For more information: http://www.westfallteam.com/Training.htm#Quality_Training

ASQ Software Quality Engineering Course

When: April 3-7, 2006 @ Brooklyn, NY

Software Quality Engineering - A CSQE Refresher

When: April 17-21, 2006 @ Orlando, FL

Software Quality Engineering - A CSQE Refresher

When: May 8-12, 2006 @ Washington, D.C

ASQ Software Quality Engineering Course

When: June 5-9, 2006 @ Dallas, TX

System Safety for Software-Intensive Systems Course

When: July 10-14, 2006 @ Talaris Conference Enter, Seattle, WA

For more information: sunnyday.mit.edu/announce06.html