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Institute Of Professional Environmental Practice
Raising Professional Standards Since 1993

FALL 2007 NEWSLETTER

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QEP GETS 'A' FROM AIR FORCE

The United States Air Force has recognized the QEP as a 'Group A' certification in its highest Professional Development Pillar of the Civil Engineer Career Field Professional Credentials Program, indicating that it satisfies 100% of the Air Force's Professional Registration/Certification requirements for that program.

In developing this new policy, Kathleen Ferguson, Deputy Civil Engineer and author of the policy, notes as background:

The Air Force seeks to develop and attract employees who possess proven abilities in their professions; employees with a high degree of technical competence as evidenced by professional registration or certification. Professional registration and certification are indicative of a workforce with strong technical skills that have been developed and exhibited through a rigorous program of education, experience and testing . . ."

The policy further states:

...Professional certification serves to foster technical competence, and all eligible employees are encouraged to obtain professional certification in their discipline."

IPEP is aware that the Air Force thoroughly researched available credentials in the environmental field and is very proud that the QEP credential was ultimately chosen as a Group A certification, indicating that obtaining the QEP will qualify an individual for the full Professional Registration/Certification scoring.

We look forward to welcoming members of the Air Force Civil Engineer organizations to our global QEP network.

IPEP has participated in the annual USAF Environment, Safety and Occupational Health Training Symposium and Exhibition for the past two years, and we look forward to joining the Air Force again in 2008 at the ESOH Symposium in Reno, Nevada, March 2 - 7, 2008.

www.esympo.com

ALSO OF INTEREST:

'The Greening of the Military' is the cover story of A&WMA's October 2007 edition of *em* magazine.

CONGRATULATIONS!

Welcome our new
QEPs and EPIs!

QEPs

Sara Ethier
Robert Dilmore
Christopher Washington
Michael Gershenzon
Clarence Stuart
Randall Putnam
Paul James Macip

EPIs

Keith Gaydosh
Jessica Wagner
Patrick Sutton
Kevin Hahn

QEP PROFILE - JIM RYCKMAN

Mr. S. James Ryckman is an environmental engineer and program manager with the HQ Air Force Materiel Command, Environmental Quality Branch, Wright-Patterson AFB, in Ohio.



He is a registered Professional Engineer, registered Environmental Manager, and QEP, and his wide-ranging Federal Engineer experience covers areas from air and water quality to utilities and infrastructure systems and modernization. Mr. Ryckman currently provides policy, guidance, program management, surveillance and advocacy related to 13,000 stationary air quality compliance sites for sustained compliance with Clean Air Act regulations.

Mr. Ryckman is a long time very active member of the A&WMA, having served on numerous committees over the years. He was recently honored with an appointment to the A&WMA Board of Directors. Mr. Ryckman is a member of many additional professional service organizations, including IPEP participating organization the Water Environment Federation (WEF).

Mr. Ryckman's dedication to community service is as impressive as his professional credentials. He is especially well known for his long term active commitment to the Boy Scouts of America and National Scout Jamborees.

Mr. Ryckman has received countless honors and awards from the Air Force and from his professional affiliations. IPEP is grateful for his past and continued support of the QEP as a premier credential in the Air Force's Professional Development Pillar of the CECFPC Program.

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EPI PROFILE - TRILLIAN BALDASSARI



Trillian Baldassari, EPI, graduated with a B.S. in Environmental Engineering from the University of Central Florida in August of this year. She is just starting her MS program at UCF in Environmental Engineering with a focus in Water Resources and plans to graduate in August of 2008.

Trillian passed the EPI exam this past spring, and she has also passed the Fundamentals of Engineering Exam. She plans on sitting for the QEP exam and the Professional Engineer exam within the next few years, and her career goals revolve around a strong interest in research, though she would also like to teach and pursue a Ph.D.

Though still in process, her thesis topic deals with the toxicity of tire crumb (ground-up used tires) and the impact of that toxicity on aquatic systems. Because of the waste tire problem, different creative uses for tire crumb have emerged, resulting in this product being used as an aggregate in concrete and asphalt as well as in different landscape applications, such as playground surfacing, mulch replacement and as a soil additive. Trillian is just in the beginning stages of her thesis work, but she theorizes that she will be attempting to quantify the level of toxicity involved in using this substance. She says, "tire crumb is mostly composed of carbon and iron, however, studies have shown that zinc and volatile organic compounds can be leached out of tire crumb at levels toxic to both plants and animals. Depending on the degree of usage, the toxic components can work their way into surface water and disrupt the ecosystem."

She hopes to be part of a field that can switch its goals from "good enough" to "above and beyond." Interested in all aspects of sustainability, Trillian says, "In order to support both current and future populations, it is important that we grow and expand in such a way that we don't contaminate and pollute the very resources necessary for life."

She says that studying environmental engineering allows her to be surrounded by current research, much of which is aimed at keeping the planet livable. University search engines work best in her research efforts, but she also likes the sites sciencenews.org and earthjustice.org.

Regarding the EPI exam, Trillian says, "In environmental engineering, we learn how to treat water and prevent emissions, but it is easy to forget why. The EPI exam brings you back to why do what you do, and I think that is important. It covered material different from my engineering background, but equally important. Actually, after taking the exam, I went home and did a little brushing up on health issues. Now that I have taken the exam, I think professionals in all fields dealing with the environment should be encouraged to do the same."

*Trillian was recommended to us for profile with extremely high regard by IPEP Board Member **David Cooper, PhD, PE, QEP**, Graduate Coordinator and Professor of Engineering in UCF's Civil & Environmental Engineering Department.*

PACIFIC NORTHWEST & INTERNATIONAL SECTION OF THE A&WMA - CONFERENCE IN BOISE, IDAHO

The Pacific Northwest and International Section (PNWIS) of the [Air & Waste Management Association \(A&WMA\)](http://www.aawma.org) held their annual conference October 16th through 19th. In addition to an invitation to attend, IPEP was invited to exhibit and participate in the events of the conference. Special thanks to **Brad Waldron, QEP**, and a member of IPEP's Board of Trustees, who traveled to Boise, Idaho, on behalf of IPEP.

IPEP's booth was prominently displayed in the exhibit hall, directly in front of the main entrance and attracted a great deal of attention. Visitors included QEPs from the region, **Tony van der Vooren, QEP and the President of the A&WMA**, and students involved in the Environmental Challenge (EC) that was conducted at the conference. According to Mr. Waldron, there were always people at the booth, a great sign of the growing awareness of IPEP and its programs.



The EC is an event for students to showcase their environmental knowledge and professionalism by working to solve a complex multidisciplinary problem. This year's problem covered everything from odors to groundwater pollution to public outcry. The solutions proposed by the students were incredibly creative, diverse, and well formulated, showing the students' great potential for EPI certification. Mr. Waldron served as a role player and judge during the EC.

During the event Mr. Waldron also gave a presentation about the value of the EPI and QEP credentials, and he talked with many professionals about why they should become QEPs. The students were particularly interested in the EPI credential, which they found would be useful in distinguishing themselves from other recent graduates seeking first jobs in their respective fields.

Based on the positive conversations and interactions throughout the four day conference, IPEP hopes to see a number of new QEP/EPI applications from the PNWIS conference.

The heavy focus on students and young professionals in the PNWIS section of A&WMA proved to be a great opportunity to educate young professionals on the value of the QEP/EPI credential. IPEP hopes to continue its participation in this unique annual conference.



GHG INVENTORY AND CORPORATE CLIMATE CHANGE STRATEGY

CASE STUDY BY GAURAV SHIL, QEP, AND KATHERINE BLUE OF TRINITY CONSULTANTS

- Mr. Shil graduated with a B.S. in Chemical Engineering from the Panjab University, India, and an M.S. in Chemical Engineering from the University of Kentucky.
- He is an active member of IPEP, A&WMA, and the American Academy of Environmental Engineers.
- He is a registered Professional Engineer in Kentucky and Ohio and currently works at Trinity Consultants' Kentucky office.

In keeping with the current awareness and trend of global warming, many companies are developing global climate change strategies to prepare their businesses. In addition to basic concern for the environment, companies must prepare for changes in energy supply and cost, supply chain management, and growing involvement from consumers in the safe and environmentally sound production of goods.

GHG Inventory is often chosen as the best way begin the evaluation, and the information in this case study will be extremely useful to anyone beginning that process, with attention to subjects including: Educating Decision Makers, Principles of Reporting, Establishing Organizational and Operational Boundaries, Establishing Guidance and Protocols, and Data Collection and Validation.

USEPA Conference Paper, May 15, 2007

Greenhouse Gas Emissions:

A Case Study of Development of Data Collection Tool and Calculation of Emissions

Abstract - The absence of federal greenhouse gas (GHG) regulation in the United States has not diminished the importance of businesses assessing their impact on global climate change.

Growing concern among shareholder and investor groups has motivated many organizations to quantify their green house

(GHG) emissions and commit to GHG reductions. Accurate quantification and de-

tailed documentation of GHG emissions data enables a company to demonstrate transparency and enhance the credibility of its corporate climate change strategy. Establishing a comprehensive corporate GHG inventory is an important first step in developing a climate change strategy. However, conducting a baseline corporate GHG inventory can be a challenging process, particularly with respect to data gathering and data validation.

This paper will present a general approach for preparing the inventory with case study in conducting a baseline GHG inventory using Environmental Management Information Systems (EMIS). The paper will present best practices in establishing the organizational and operational boundaries of a corporate GHG emissions inventory, conducting data collection and data validation process using an EMIS, completing the calculation procedures, and establishing appropriate performance metrics. In addition, methods for improving data quality and integrating the GHG inventory with energy management systems will be presented. Finally, the paper provides guidance on continuous improvement and maintenance of the GHG inventory.

Full text of the case study and contact information for the authors is available at:

http://www.trinityconsultants.com/Technical_Papers.asp?p=483

Co-author of this paper, **Katherine Blue**, Principal Consultant within Trinity Consultants' Sustainability & Environmental Management (SEM) business line, received a B.S. in Mechanical Engineering from Georgia Institute of Technology, and a M.S. in Mechanical Engineering from the University of South Carolina.



Gaurav Shil, QEP

QEP EXAM STUDY GROUPS SUCCESS FOR PEs AT ELI LILLY & CO.

Three enterprising Professional Engineers at Eli Lilly & Co. formed a study group for the QEP exam, and it worked.

Using the model of Eli Lilly & Co.'s Professional Engineer test prep program, the group met once a week for two to four hours over a twelve week period and used the recommended materials available on the [AWMA web-site's online library](#), including both the text book, *Environmental Practices Review Study Guide*, and the problem sets, Exam Preparatory Guide for the Environmental Professional.

The group assigned chapters of the Exam Preparatory Guide to specific weeks, typically going in order of the book and going over one to three chapters each week, depending on length and difficulty of a subject. Each person in the study group was expected to examine the chapters and complete the problems *prior to* the study group meeting, ensuring that this time was reserved for problem review. At the meeting, the group compared answers and discussed the problems in which they disagreed with the answers, sometimes even disagreeing with the answers in the guide and book.

Group members agreed that this process was extremely helpful in preparing for the QEP test, because typically at least one of the group either knew how to do each problem or where to find the answers. Seeing how someone else correctly solved the problem saved many hours of researching, and one of the group members, **Todd Haley, PE, QEP, CHMM**, and Associate Environmental Consultant for Eli Lilly and Co.'s Indianapolis Environmental Services says that, "At the same time, when I completed a problem correctly, it gave me confidence that I knew the topic and was able to teach the others."

Whether or not Todd would have passed the QEP exam without the text and the study group, he is not sure; but he does know that it would have been much more difficult. If he had not read and reviewed every chapter of the Exam Preparatory Guide, he would have had no idea how to answer some of the questions. The study group provided even more help with understanding topics that are not his strengths, and it created accountability to his peers that was even more motivation to prepare and be ready for the test; no one wanted to fail while others might pass, and that kept them focused on doing well.

The study group did more than just refresh the group's environmental knowledge. Working together also reminded them, having been out of school a number of years, how to take multiple choice tests. Even though the correct answer wasn't always obvious to them, the group would have discussions about *how* to get the correct answer, often using the process of elimination to explain why the other answers in the question were wrong— a test taking technique they certainly used on the QEP exam.

Todd's group also offered the following advice for anyone interested in forming such a study group for the QEP exam:

- **THE NET** - Easy access to an internet search engine is extremely helpful when reviewing problems, especially when disagreements occur.
- **BOOK IT** - An administrative assistant prepared each of the participants a binder with the questions from the Exam Preparatory Guide. Having a separate binder to add paper allowed coordination of the questions, solution worksheets, and notes in one book, and it also allowed for "retaking" the test questions without having the answer in plain sight. At the end of the studying process, each participant had a personal book with all the notes made about a given subject. This made the review a few days before the test much easier.
- **KEEPING MOTIVATED** - Scheduling regular meetings on our calendars forced us to meet. All of the members of our group are also friends, so a little peer pressure went a long way.
- **KNOW THE APPLICATION PROCESS** - You can avoid unwanted delays between the time you study and the time you take the exam by becoming familiar with the application procedure first. It is also a good idea to talk to other QEPs at your company to discuss the application process and what to expect on the exam.



Special thanks to **Todd Haley, PE, QEP, CHMM**, Associate Environmental Consultant from Eli Lilly and Co.'s Indianapolis Environmental Services, for his assistance in writing this feature.

- Study groups help motivate and support employees in the testing process and also make it possible to divide the workload.
- Eli Lilly & Co. has a very successful class/study group to help its engineers prepare for the Professional Engineering exam. **The pass rate on the PE exam for those employees is near 100% compared to the 40% national average.**
- Studying together keeps you focused.

Also participating in the study group at Eli Lilly & Company were **Bryan J. Sheets, QEP and Sr. Environmental Associate**, and **Breck Schmidtkofer, PE, QEP, CHMM and Senior Environmental Engineer**.

CALLING ALL TEST QUESTION WRITERS!

IPEP is in the process of revising its QEP specialty air and waste exams and we are looking for QEP volunteers to assist the Exam Committee in the writing of questions.

If you are an air or waste expert, you can earn PDH recertification credits for your participation.

Please contact Libby Ford, QEP and Senior Environmental Health Engineer of Nixon Peabody, LLP, at lford@nixonpeabody.com.

Libby is an IPEP Trustee and Chair of the Exam Committee.

Member Savings

2008 Renewals and Recertifications are coming due, so it's a great time to remind you that in addition to the early payment benefits with your annual renewal, there is a

\$25 reduction in dues

for every QEP applicant you recommend and a

\$15 reduction in dues

for every EPI applicant you recommend.

This benefit will be applied to the following year's total dues.

2008 RENEWALS

&

RECERTIFICATIONS

How does renewal work?

- All EPIs and QEPs must renew **every year** by sending in their annual dues and updating their contact information.
- There is an annual mailing in September that informs you of this process, which gives you more than 120 days notice of the need for completion of your renewal.
- Dues paid by January 31 of the renewal year are discounted \$25.

For questions or concerns regarding your EPI or QEP renewal, please contact Noreen Murano, Certification Services Coordinator, at 412-396-1703, or send email toi pep@duq.edu.



How does recertification work?

- All QEPs must recertify **every five years**.
- Recertification timelines are based on the date of exam completion, and notifications are therefore sent out and returned on a rolling basis.
- Your expiration date is listed on your certificate.

What is an audit/how are they chosen?

- 10% of recertifications each year are chosen at random for audit. For detailed information, see our online [audit and recertification](#) instructions.

For questions or concerns regarding your QEP Recertification or Audit, please contact Diana Kobus, Certification Services Assistant, at 412-396-1581, or send email to ipep@duq.edu.



Admissions Committee

EPI Committee

Examination Committee

Marketing/International Committee

Recertification Committee

IPEP is a non-profit organization supported by the tremendous volunteer efforts of our member QEPs and EPIs.

Please contact us if you would like to support the strategic growth and promotion of our premier credentials by active participation in one of our important committees.

[See our committee page online!](#)

EXPLORE LINKS TO OUR PARTICIPATING ORGANIZATIONS, SHARE IDEAS FOR NEWS AND FEATURES, AND SEND JOB INFO FOR POSTING ON OUR WEBSITE www.ipep.org