

**ENVIRONMENTAL MANAGEMENT SYSTEMS:
Integration, Lessons Learned and Best Practices
DOE/EFCOG Training Workshop
Big Sky, Montana
June 20, 2008**

MEETING MINUTES FOR REVIEW AND COMMENT
08/11/08, E Zimmerman

NOTE: PowerPoint Presentations have been posted on the EFCOG website by Ed Yatso at http://www.efcog.org/wg/esh_env/events/June08Mtg/ENVSGJune08mtg.htm

Opening Welcome:

- **Gary Shamber**, EFCOG, thanked Gretchen Farnung, Karoline Golovin and Battelle Columbus for preparation and support for workshop. Participants were asked to provide feedback on improvements.
- **Steve Woodbury**, DOE HQ (DOE liaison on EFCOG Subgroup), thanked Battelle for funding and supporting the workshop. The first EMS workshop was hosted in Columbus in 2005 prior to declaration of conformance for EMSs. The goal for this workshop was fewer presentations and more interaction.
- **Jim Tarpinian**, Battelle, Columbus: pleased with momentum on topics at federal level. Mentioned flywheel concept in Jim Collin's book **Good to Great**. It takes a lot of energy to get the process started, and incremental ideas and energy to keep the flywheel going.

Joe Cascio, Federal Environmental Executive

- Did pioneering work on EMS development, has worked at a number of institutions. Cascio was head of U.S. delegation that negotiated the ISO 14001 standard; Susi Jackson was on the Technical Advisory Group (TAG) along with a number of DOE staff. Even those who helped develop the standard had to learn how to implement it. Worked on developing the science of an EMS and implementation methodologies with Sue Briggs at BNL, created a very good EMS there. Art continues to grow and be perfected.
- Has been on the job 3 weeks, expects to have about 6 – 12 months during this administration to advance the interests of the environmental community. Involved with interagency working groups on EMS, biofuels, sustainable building, developing guidance on implementing Executive Orders (EO).
- One of the challenges of EO 13423 is that the areas it covers are traditionally managed by different groups within an agency/organization. The challenge will be tearing walls down, using systems to manage it across barriers, bring it all together under an EMS, get cooperation and collaboration across boundaries within an agency, and solutions that cut across agencies (e.g., GSA owns the building – how do you green it? Cascio felt GSA is getting serious about the EO.)

Implementing EO 13423 at DOE, Andy Lawrence, Director, DOE Office of Nuclear Safety and Environment, HS-20

- *See presentation.*
- Attendance of OFEE at this meeting seen as emblematic of close working relationship. Thanks to Bob Roulston (Pantex), Gary Shamber and Jim Tarpinian for hosting reception and making workshop possible.
- From the get-go, there has been an expectation that ISM and the EMS would be integrated. DOE recognizes there are differences from site to site.
- DOE O 450.1A guidance is taken wholesale from ISO 14001, have mimicked and closely followed its tenets. Formal audit requirement is new – need to figure out how to do it in a manner that works within the DOE system.

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- There are a lot of energy goals in the EO – EMS must be “aware” of the environmental aspects associated with those goals.
- President wants federal facilities to be good citizens and neighbors and good models in terms of environmental compliance. There is no expectation for a separate compliance plan – the EMS helps us meet the goals of the EO. If all EMS functions work together properly, compliance should be a given. By now, DOE sites should not be struggling with basics of how to meet permit and regulatory requirements – hopefully part of the way we do business, already on the screen.
- Mentioned 16 NOVs, and \$3,030,537 in fines for 12 month period ending in May 2008 – that money could have been spent performing work and changing the EMS. The sites generally do a good job at compliance, but are not perfect. Let’s not get tripped up by basics like labeling hazardous waste or exceeding storage time limits. The EMS should be designed to flag these things.
- Mentioned EPA’s Significant Noncomplier list. Indicated we should be aware of it, and that sites are working with EPA to make sure data is correct - in many cases it is not. If it is erroneous, sites should have a corrective action plan to get off the list.
- EO now sets top down expectations for sustainable practices. EO, DOE O 450.1A and 430.2B acknowledge each other. Ed Pinero (former OFEE) got an extension through March 30th to meet DOE O 450.1A conformance requirement (reflected in signed order), extended again through June 30, 2009 (reflected in version in RevCom database).
- DOE field and program offices are not expected to implement EMSs, but must have performance objectives, measures, and commitments to support compliance with environmental protection requirements.
- HS-20 is working on EMS guidance, welcome input from the field. Can call on Josh Silverman and Jeff Eagan for help.

**PNNL Panel Discussion: EO 13423 – Putting it all together! (EMS, energy, fleet, sustainability, water, etc.) PNNL Panel: Kim Fowler, Kami Lowry, Mike Moran.
Facilitator: Karen Downer, INL**

- *See presentation.*
- PNNL did a detailed dive into their execution of the EO: how they are using the EMS, organization, communication, staffing, budget, relationships, measurement and barriers.
- Kami Lowry has a dual role – responsible for both ISM and EMS – same owner is one way to integrate.
- The PNNL focus on simultaneous excellence includes excellence in operations. EO has inspired lab to formalize integration. Fleet management was a separate organization in a separate world, concerned with rightsizing, diversifying, fuel and carpooling. The environmental folks were involved with Pollution Prevention (P2), environmental stewardship, EMS, energy. All were going in same direction but stuck in their own lanes. Doing good, hard work, proud of efforts, know we can be and need to be better. Now Contracts has gotten engaged, and Information Technology (IT) folks are partnering more aggressively, creating ability to change lanes and formally interact.
- Solutions involved getting stakeholders at the same table creating the strategy. Communication was formalized through an **EMS Core Team**, providing a unified message to senior leadership and DOE customer. Didn’t involve reorganization lab (e.g., for records management and document control, they are relying on laboratory systems already in place, and just mapping to them.)

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- Are running it like a project, but with no end date, and participants coming in and out as needed.
- *Question: IT function* (energy intensity, pseudoserver rooms affecting building operations). Needed criteria and language from IT to give to contracts to put into procurement requirements. Electronics management involves purchasing (acquisition and IT) and property (recycling and excessing). EMS audits to date have not looked much at some programs like electronics management.
- *Question: Who leads Core Team?* Owned by Lowry's management system, EMS. Facilitator energy specialist (Moran) coordinates meeting times, agenda, rallying troops. They will develop a set of FY09 goals and templates and put them in one package.
- *Question: Role of senior management?* They will be briefed, and receive presentations at quarterly PEMP reviews. They are excited about coordination and a unified message. Establishment of core team was actually recommended in last years EMS Management Review. This year they will status leadership team at management review and get more feedback.
- Working to gather information to take credit for things other programs are doing. Have created a "**roadmap**" table runner document that shows how each program (and objectives and targets or lack thereof) align with requirements and PEMP. (It is a bit of a challenge to explain to other programs why you care and need their data.) Will be providing a lot more information to management, need to report it in a streamlined way.
- **Dashboard concept** shows which program owns requirement, helps focus on core requirements. Helpful tool to see where you are and where work is needed. Helps senior management and DOE counterparts get on the same page. When an item is red it will get attention and help to meet the objective. You can drill down "aquaman" deep for supporting information. It will be posted on internal website as a "living" report card.
 - Scorecards are becoming de rigueur. Princeton is creating an executive dashboard for their entire PEMP. The tool will be used in the management review and quarterly reviews with DOE. It is a challenge to create it and populate it.
 - During Sandia presentation, they indicated there was interest from senior leadership in increasing costs of energy. They are not as good at tying the EMS to the PEMP as they would like to be. Their dashboard is only on the internal website, and they are pushing to include "E" in it. You can drill down to see the scoring criteria.
 - *Question: How does dashboard reflect compliance?* PNNL uses checklists (evaluation of compliance elements to ensure there are no gaps – e.g., EPP assessments may be needed) which will feed into how well they are doing. Currently there is no "button" on the dashboard for regulatory compliance- it is just a part of the management review. The dashboard focuses on sustainable practices. Plan to put the dashboard online.
- Use objectives to engage others and clarify who needs to do what. It is a good hook and will help avoid having to "push noodles."
- *Question: What's In It for Me?* Talk to those who resist about business and economics. First, try to convince them on the merits – e.g., how implementing offers value to them. Provide information, help them change their processes. Everybody wants to be part of a successful team with positive energy, high goals and synergy.
- *Question: How do you go about the sales job?* Explain why we care, show the tool, help them see where they fit, give them credit for what they are doing and then work to fill in the gaps (don't create new work), and also explain requirements. Build credibility with small wins. Dept. heads do not want to be the reason the Laboratory fails ISO 14001 registration with a major nonconformity.

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- *Question: Failures and false starts?* Language barriers (ISO-speak), integrating P2 and sustainability, formalizing integration, regular communication (so much is dispersed, people are not good at reporting P2 successes), missed opportunity with renegotiation of 10 year leases (because it was not in the contract they were not able to impose it, but every contract can be modified, although it may cost \$ or involve adding performance incentives to the contract). Purchased 17 min-maintenance vehicles that could not be used licensed and thus could not be used on city roads, so they had to excess 4, will probably donate to another Hanford contractor – are now looking at plug-in DOT approved and licensable hybrids. Challenging to get EMS plugged into other lab initiatives.
- *Question: What about ISM reporting under the DEAR clause?* Are trying to identify opportunities for efficiencies. The ISM review is via the program description certification. An ISM management review is not held with senior management. Are planning to push the management review down and hold mini-management reviews for each directorate. ESH mini-reviews could also be held.
- **Andy Lawrence on ISM/EMS Integration:** The last ISM conference was held in BNL. Not many environmental people were present. There was some overlap, as some attendees were also responsible for environment. Still working to integrate “E” into corporate structure. The Deputy Secretary of DOE did attend the P2 Star Ceremony and the EPA Deputy Administrator was there to give the electronics stewardship award. There will be an ISM conference on August 26-27 at INL. The theme is building mission success. The date has passed for abstracts but they are still soliciting papers on ISM and EMS integration. Podansky will be in attendance.
 - The Office of Legacy Management did not want to integrate their EMS and ISM description due to the rigorous validation process – should they meld them together now? There are opportunities to meld reporting, work planning, training, audits.
 - PNNL is maintaining two program descriptions which point to each other, as the ISM declaration is much different.
 - Some sites have worked hard to tightly integrate ISM and EMS, but the validation and verification processes are independent. Systems developed to meet those requirements are also independent by design.
 - During the WA Closure Hanford ISM/EMS verification, DNFSB was not interested in recycling.
 - Argonne ISM team was primarily safety professionals and their focus was on safety. A more balanced team could look at “E”. CRADS are generic. *Question: Can you take credit for ISM verification if it does cover E?*
 - Sandia noted they did include EMS as part of the ISM readiness review, but had a difficult time making them mesh.

Sandia Panel Discussion: EO 13423 – Putting it all together! Sandia Panel: Bob Branhuber, Lynwood Dukes, Jack Mizner, Gary Shamber. Facilitator: Steve Woodbury, DOE HQ

- *See presentation.*
- “Sandia” includes sites in Albuquerque, Kauai, Pantex, Livermore, Tonapath Test Range, Yucca, and Carlsbad – about 12,000 people. They are implementing the EMS through Division Structure and the Integrated Laboratory Management System. Implementation varies quite a bit at individual sites. Each Division has an EMS team, and there is an **EMS Core Team**. The Core Team meets monthly; pulls in fleet, procurement, energy, reps from line and divisions especially those that have environmental aspects. They interface between the corporate EMS and Division implementation. The EMS coordination team implements

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the EMS on a corporate basis. See slides for roles. CA reorganized to make the EMS manager responsible for logistics (e.g., property, receiving, shipping) to allow more of a lifecycle approach to material and fleet management.

- EMS logo shows it as part of ISMS. They use this logo as a “brand” on everything. The term EMS is sometimes confused with energy or emergency management.
- The EMS manual has been signed off on by top management. Energy has been inside the EMS from the beginning.
- EMS excellence awards are given twice a year in five categories: Water, risk mitigation, EPP, waste minimization and recycling. You are not eligible to lead a team for an award if its part of your job. They get a burrito breakfast, and management recognition. They also do an annual, one-day event, bringing in a well known speaker, with external and internal booths. E.g., one speaker was Paul McCrady on doing more with less. This years’ focus is on earth, wind and sun (energy management and sustainability) with Ed Maserie (2030 architecture) as the keynote speaker.
- 5.4 FTEs in New Mexico work on sustainable design, EMS, communications, and ecological footprint, with a total budget of \$580,000. Does not include environmental programs, division implementation, energy management or fleet, but 0.5 FTE is funded by energy management. The EMS is seamlessly incorporated into environmental programs in California.
 - *Question: How did you get those resources?* They were good at articulating during the budget cycle what was needed, with a rationale (pointing to Orders and regulations). Used the ISO Standard as a club. CA said they implemented on the backs of an existing 1100 people vs. 12000 Sandians. It is easier to influence a smaller community. They are always under pressure to justify resources and what they are doing. They have been able to show enough progress and performance and savings (e.g., for recycling and P2) to keep funding. They are putting about 0.5 M into projects on energy management – the increased cost of gas helps justify that expenditure.
- The Management Review includes a quarterly review of objectives and targets. Have not connected with a corporate dashboard yet.
- They did an ISO 14001 gap analysis, which noted a deficiency in the management review. They are forming a management advisory group review to strengthen communications. They are also developing fact sheets (e.g., on water conservation.)
- Sandia, CA is ISO 14001 certified; Sandia NM is targeting February 2009. Plan to apply for National Environmental Performance Track.
- Compliance audits are conducted through the internal audit and assessment program, as well as by regulators. They look at how people know the requirements, how they stay in compliance, how they deal with noncompliance, how they verify corrective actions.
- **Their “ecological footprint”** is mainly energy-related. They look at transportation, waste, land use, and energy (including travel). Energy makes up 88% of impact, transportation is 10%. Even though most of the scrutiny is on air and water, from a regional and global perspective it’s not the biggie. They used a student to develop their carbon footprint. The student looked at aspects and impacts (beyond compliance). They looked at a lot of existing calculators, but wanted to be able to put in parameters and local factors and assess their local (vs. global only) footprint. They also considered the sequestration potential of an unproductive desert landscape, and found that they need eight times as much land on a local basis vs. global. They will be publishing a report on their methodology. It got awareness in the line.
 - SLAC in CA did a greenhouse gas emissions footprint.

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- Princeton has a student intern fine-tuning the footprint for a lab campus.
- Once challenge is defining the “fence line” when there are a lot of commuters.
- Kim Fowler from PNNL is working with a student intern on a carbon analysis for PNNL.
- FEMP wants to develop a federal template. A lot of cities (Chicago, NY) close to DOE sites want this info. The next administration will probably move more aggressively on this. Congress is struggling with the carbon footprint issue, but the two presidential candidates are expressing strong commitments.
- There is no consistent methodology out there. The greenhouse gas protocol has stages - #1 is onsite transportation/electricity generation; #2 includes electrical generation (some cities exclude that); #3 option is not required and considers waste production and commuting. Sandia did all 3 and found it was hard to do the embodied energy of products, that they lacked information, and that the boundaries were not clear.
- There is a NPS downloadable tool that calculates the footprint and actions to take to reduce –see the fedcenter website.
- A lot of cities use the ICLEI Model (see <http://www.iclei.org/>) which is being reformulated. Models usually have generic factors. It is best to also take local factors into account. For example, at Sandia, coal-based energy includes NOX which has a global warming potential 300x times as great as CO2. If local factors are not taken into consideration, you will under/overestimate the footprint.
- There was a discussion about EFCOG looking at commonalities and approaches and trying to influence the form it comes out in, or maybe establishing it as an EFCOG subgroup task.
- One person commented that Fortune 100 and 500 companies view it as one of their largest business risks. It would be good to try to align with business and take advantage of their expertise vs. try to redo it. Sandia did look at a lot of those business models but they had different motivations for doing it (e.g., selling carbon credits.)
- Logistics Management Inc. is developing an application, working with the agencies, of that protocol for the public sector, under contract with EPA. It will further build links between energy and the environment, enhance the importance of our work with managers, and make our work more valuable. Need to invite energy group to play as most of those managing EMSs don't have a lot of knowledge about energy and fleet. Might be a good idea to offer training. FEMP is offering training on LEED for existing buildings, specifically for DOE sites.
- Energy costs are expected to double for gas and electric use; lab and industrial energy intensity has increased by 15% due to new buildings; water use is expected to decrease.
- They are looking at revising contracts to use EMS as one of the evaluation/selection criteria. They feel they need more rigor on assessments and audits.
- *Question: What about flow down to contracts?* The DEAR clause requirements and construction contractors must submit a safety plan. Sandia oversees waste generation processes. Questioning how to flow down “E” without scaring people away or dramatically impacting costs.
- A lot of new work involves energy intensive operations. Tough to get the sites to acknowledge there is an environmental impact to new work before bringing it in. Sandia is working on a cost model to build in environmental consequence costs, but are struggling with it (not an easy sell or easy product to make). Some sites (like BNL) could not operate if they had to pay commercial rates. Need to look at what the dollar value of work gained is vs. cost

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to the company. They said you have to go beyond “cradle to grave” to “inception/idea to grave” as the cradle is too late. Maybe even lust to grave. Think about the cost to raise a child.

- *Question on getting the line organizations to understand utility costs and how to actively engage them?* The users have to own it. Need to separate utility vs. operations costs. For new mission work, look at resources including energy use and buildings needed to support it on the front end. Remind staff that before they make a commitment to the customer that they better check. Very few people understand the Sitewide EIS at the macro level, and staff can not commit to something that does not fit within that envelope.
- A new “green” mentality is coming in – even summer students are having green dorm competitions. But there are still a significant number of folks in line organizations that have a very narrow focus. P2 began in the margins (e.g., maintenance shops). They do have an awards program (and had to develop criteria). EMS folks end up going out and writing award applications for the line. The program has created awareness and the opportunity to recognize folks doing great work out in the line. The VPs know about it and want to be there to give out awards at the breakfast for nominees (where they receive a certificate.)

EFCOG Task – EO 13423 Survey Feedback, Wayne McMahon, DOE Y-12

- *See presentation.*
- Gary Shamber reminded people that EFCOG meets 2x/year plus monthly telecons to talk about issues. It is a great forum for what is happening around the complex, to discuss common problems, issues and concerns. Everyone who participates in the environmental subgroup finds it worth their time because they can bring so much back.
- Andy Lawrence also indicated it is very useful to DOE, and provides a forum to reach out to other subgroups like the Energy Working Group. They want to leverage EFCOG’s approach to think about integration. Their early participation in the DOE Order RevCom process was extraordinarily valuable. The next meeting will be the second week of October at the DOE Las Vegas facility.
- McMahon reviewed the results of the survey, and provided a handout summarizing the results.
 - For those that have chosen not to register to ISO 14001, one reason (e.g., for Y-12) was because it was not driven by the customer or didn’t align with what the customer was asking them to do. 6 out of 14 respondents have registered; 2 plan to pursue. Some sites don’t even have DOE O 450.1 in their contracts.
 - Funding: Some are funding through site overhead/common site support accounts. 3 get direct appropriated funding.
 - 11 out of 14 will develop a new program element (e.g., contract with an ESCO); 13 out of 14 will revise elements (e.g., objectives and targets.) Nine expected no changes in many areas. Some requirements were not applicable (e.g., green landscaping, contract with an ESCO, compliance management plan.) The survey did not ask about reduction in water use.
 - The SER framework has aged – discussed how to line it up with the new Executive Order. Need to show public progress against it. LLNL has transitioned one chapter to deal with the EMS. (So has BNL.) Some sites are already putting info in the 2006 report for Executive Order parameters. Ross was making an effort to incorporate it, but moved in the DOE reorganization.
 - Gretchen Farnung of Battelle Columbus discussed the Integrated Combined certification program, PAS 99, a British Standard. They are trying to make it an ISO standard, combining 9001, 14001 and OHSAS 18001 elements. A Quality Manager

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was hired who had combined all 3 standards in a previous job, but tacking on quality to safety and environment received a lot of resistance. Some organizations did not want to be forced to follow different standards – e.g., ISO 9001, if they were already following FDA lab practices. They did provide formal training.

Open Forum/Discussion of topics raised in morning panel sessions, Gary Shamber, Sandia

Internal and External EMS Auditing: Maximizing Value, Bet Zimmerman, PNNL

- *See presentation for details.*
- *Questions and comments:*
 - *Executable plans may not be in place before the deadline – is that a problem? Need an answer from DOE. Objectives and targets WILL have to reflect goals.*
 - *What if you have the ISO 14001 audit BEFORE the executable plans are required? (end of calendar year) – this is a timing issue. DOE said within a month the template will be out, but this question was not answered.*
 - *How does DOE O 2206.1 fit in? This is a tiered process where DOE looks at contractors programs – EMS (which will encompass EO) is just one of those programs. Should take credit for it.*
 - *Comment: Sites should ask their registrar to more fully document in their report how they determined conformance.*
 - *Comment: Ask registrar NOT to use ISO-speak (it isn't necessary for staff to be "fluent" in ISO language to demonstrate conformance.)*

Moving from P2 to Sustainability, Robert Sheneman, Princeton Plasma Physics Lab (PPPL)

- *See presentation.*
- Rob Sheneman sees climate change as a business and human risk, and our profession has a new and vitally important role to play – sustainability. In its most general sense, sustainability means using resources to meet the needs of the present generation without compromising the ability of future generations to meet their needs. (UN World Commission on Environment and Development, 1986). PPPL had to rebrand the EMS under the sustainability principles to get imaginations engaged. The dialogue has to be broader than greenhouse gases and focus less on technological solutions and more on a holistic approach.
- Sustainability has different meanings for labs vs. legacy sites.
- PPPL was the first DOE facility to become an Energy Star partner.
- They have focused on results that people can recognize. They de-emphasized tuning of documents and tried to focus on the making a difference every day, like recycling, greening the supply chain (lots of work to do there on lower toxics, more recycled content, etc.)
- To get people engaged, they feel everyone wants to be on a winning team, so share the credit and talk it up. If you make a mistake (e.g., thinking biodiesel fuels will perform well in the winter), apologize and fix it.
- If your EMS approach is comprehensive you were already looking at what is covered by the Executive Order.
- Xanterra is an example of movement towards a sustainable organization – e.g., net zero energy user, looking at water, air, materials, waste, land use, ecosystem, and community.
- To get to zero waste you may need to branch out beyond your organization to find markets for your waste. E.g., PPPL's biggest waste stream comes from the cafeteria. They are looking at a tri-county program (Yellowstone came up with a regional composting facility) to

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manage food waste. Bob Pojasek, a P2 expert, is a proponent of setting zero waste generation goals.

- *Question: Why do documents from HQ make no mention of the Executive Order? DOE is fragmenting even more.* Gary volunteered to lead a sustainability boot camp. Earth day events can help shape consciousness. Look for openings.
- Drivers (other than Executive Order) include dynamic leadership, collaboration, business focus (on competitive advantage), corporate policy, and guilt (do it for the planet). Need to focus on how it relates to the organizations mission and day-to-day work, as they are under a great deal of stress and pressure. Show them cost effectiveness, personnel safety, more space in lab, more time to do job – don't lead with global sustainability – focus on practical change at the ground level.
- "E" now has a seat at the table in formulating company strategy. PPPL's costs for natural gas have increased from 11 million to 18 million, without a dime in increased money from sponsors, so conservation means jobs.

Wrap Up & Closing Remarks, Andy Lawrence (DOE HQ) and Gary Shamber (EFCOG)

- Andy Lawrence indicated that he was both encouraged and frustrated that there are still some things that are not entirely coherent. He will take messages back, and get clarification on the expectations for achieving the goals of the Executive Order. He indicated that the interactions helped get a sense of accomplishment and ideas on how to do things better. He was encouraged by the number of people who took the time and the brain power devoted to doing it right. He is not looking for more requirements – the focus now is on providing a model and training.

June 2008 EFCOG/DOE Workshop Feedback Results

	<i># of Responses</i>	<i>No Opinion</i>	<i>Poor</i>	<i>Fair</i>	<i>Average</i>	<i>Good</i>	<i>Excellent</i>
Presentation Quality	31	0%	0%	0%	3%	52%	45%
Presentation Content – Relevancy	31	0%	0%	0%	3%	39%	58%
Time Allotment for each Session	31	0%	0%	0%	6%	62%	32%
Communications Prior to the Meeting	28	7%	0%	7%	22%	32%	32%
Meeting Location	31	0%	0%	3%	13%	26%	58%
Meeting Room Comforts	31	0%	0%	3%	32%	32%	33%
Meeting Room Audio/Visual	31	0%	0%	3%	26%	45%	26%
Meeting Length	31	0%	0%	0%	13%	64%	23%
Number of Breaks Provided	31	0%	0%	10%	19%	55%	16%
Agenda (Meeting Content)	29	0%	0%	0%	3%	38%	59%
Handout(s) Quality	23	17%	0%	4%	7%	50%	22%
Time Allotted for Questions/Answers	31	0%	0%	3%	13%	48%	36%
Pace of the Meeting	30	0%	0%	0%	17%	53%	30%
Information Exchanged	30	0%	0%	0%	0%	50%	50%
Overall Rating of the Workshop	31	0%	0%	0%	0%	52%	48%

Topics covered: What would you like to see more of during future EFCOG Environmental Subgroup meetings and/or future Workshops:

- How to really be a green organization. Best practices. Biggest mistakes.
- More ISM/EMS, and more GMC programming.
- How can we improve as an entity?
- I'm new to DOE, EMS, and EFCOG. This was an excellent session to attend.

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- Integration of safety and environmental issues into management systems.
- Carbon footprint standard guidelines so we can be consistent.
- Discussions on special topics that may be common to different sites.
- The DOE/site interaction and the work toward breaking down barriers and achieving common goals.
- Lessons learned.
- The more “on the ground” experiences that can be shared will be to the benefit of all. Challenges faced by closure sites.
- Best practices.

Would you prefer holding this meeting at a different time of the year, if so when?

- Eight responses indicated that the time for this meeting was okay. Some specific comments:
 - Holding it in conjunction with a related symposium/conference like this one is a great idea.
 - I support combining the EFCOG Environmental Subgroup spring meeting with a larger conference like we did this year.
 - Great timing; far to travel for east coast folks.
- Two responses indicated that the meeting should be held in mid-October with the fall meeting with the rest of the EFCOG group.

Which session did you find most useful and why?

- The two Lab discussions in the am.
- PNNL approach.
- The site presentations, auditing, and directed discussion led by Rob Sheneman.
- They were all excellent.
- Discussion sessions.
- Audit information.
- Panel discussions and open forum.
- All were very useful.
- Panel discussion on EO 13423.
- Sandia Panel Discussion. They had honest and reasoned responses.
- The panel discussions by PNNL and SNL were excellent. Both have sound approaches and both had unique variations. Good to hear the positives and negatives.
- The two site panel discussions – PNNL and SNL.

What did you find was the most valuable take away from today’s workshop?

- Ideas – heads up on ecological footprint.
- Dialogue, answers to questions, networking, and speakers did a great job staying on schedule. Good engagement by participants.
- Links between energy and environment will only get stronger. GMC issues will create opportunities.
- What sites were doing related to footprinting. Also, status of EMSs.
- Other viewpoints we can use.
- Discussion on integration and implementation schedule, and examples from other sites.
- Contacts.
- Some key issues for DOE HS-22 to address, and insights into successes and issues faced “on the ground” at DOE sites.
- P2 communication, change the equation.
- The idea of consistency for implementing the new EO.
- Dashboard/Footprint.
- Challenges other sites are having.

**ENVIRONMENTAL MANAGEMENT SYSTEMS:
Integration, Lessons Learned and Best Practices
DOE/EFCOG Training Workshop
Big Sky, Montana
June 20, 2008**

- The discussion and the interaction.
- Lessons learned.
- EO 13423 survey feedback – most everybody is in the same boat with implementation.
- How much trouble I am in.
- Everyone has their problems.
- There's no set path to excellence and compliance. I thought the difficulty with integrated understanding of ISMS and EMS was just at "my" site. Learning that it is not helps me recognize there are a lot of people who can help me/us.
- The interaction and discussions, sharing of information, concerns/frustrations.
- How the other sites are incorporating the new DOE Order into the EMS.

Please provide any additional suggestions for improvement:

- Let people know where to eat/bathrooms – maybe bring lunch in so people stay and talk to each other. Hotel was wonderful.
- Some trouble hearing speakers. Good visual; fair audio.
- Meeting pace was exhausting.
- Plus: Like piggy backing on another event, and minus: it was tiring.
- Meeting location was not ideal (but the mountains are beautiful).
- If scheduling a "discussion session" (Audits) do not have a 65 min presentation and 7 min for discussion.
- Got a little confused on scheduled times and in some cases locations of meetings.
- Hard to hear presenters. Consider use of microphones. Length of presentations did not leave much time for discussion.
- Hard after week of meetings to have another full day on similar/same topics. Perhaps would have been better to have this first day not last.
- Speaker system, and surveys are great, but we should focus on the obvious next step: What to do with the information?
- Battelle does a good job of conference organization.
- Battelle's experience in putting together the workshop is invaluable; we ought to plan on a future workshop in 2010 or 2011.