

Internal and External EMS Auditing: Maximizing Value

DOE/EFCOG Training Workshop, Big Sky, Montana
June 20, 2008

Bet Zimmerman

Pacific Northwest National Laboratory
Certified Environmental Professional

RABQSA certified EMS Auditor



Outline

▶ Purpose:

- Understand requirements of DOE O 450.1A and how to meet them
- Share ideas on how to plan for and maximize value of internal and external EMS audits

▶ WHAT, WHY, WHEN and WHO

- Relevant documents
- Types of audits, terminology, scope, frequency

▶ HOW: Suggestions and Lessons Learned

- Tips of maximizing value as an Auditor/Auditee

▶ Q&A and share your suggestions/lessons learned



Acronyms

- ▶ CEQ – Council on Environmental Quality
- ▶ DOE – U.S. Dept. of Energy
- ▶ EMS – Environmental Management System
- ▶ EO – Executive Order
- ▶ EPA – U.S. Environmental Protection Agency
- ▶ ISM – Integrated Safety Management
- ▶ ISO – International Organization of Standardization
- ▶ NEPT – National Environmental Performance Track
- ▶ O – Order (as in DOE O 450.1A)
- ▶ OFEE – Office of the Federal Environmental Executive
- ▶ RABQSA – personnel and training certification organization

Acronymy – *the malicious overuse of acronyms*
- Bruce Angle, INL



Your Situation

- ▶ ? ISO 14001 Registered?
- ▶ Had an EMS audit of your organization?
- ▶ Been part of or led an EMS audit?



Types of Audits & Terminology

- **WHAT** – scope
- **WHY** - purpose
- **WHEN** – frequency
- **WHO** – auditors



Relevant Documents

▶ REQUIREMENTS

- **Executive Order 13423** - *Strengthening Federal Environmental, Energy, and Transportation Management, 01/24/07*
 - Supersedes EO 13148, *Greening the Government Through Leadership in Environmental Management (04/21/00)* which required EMS by 12/31/05
 - **CEQ Instructions** for implementing EO 13423, 03/29/07 (*“it is mandatory that executive departments and agencies implement the activities described in these instructions in accordance with Sections 1, 2, 3, and 4(b) of the E.O.”*)
 - **DOE Order 450.1A**, Environmental Protection Program + DOE O 430.2 implements EO 13423 + CEQ Instructions, issued 06/04/08
 - **Your contract**



Relevant Documents, con't

- ▶ **Voluntarily** ISO 14001 registered **must meet these requirements:**
ISO 14001:2004 Environmental Management Systems (EMS) - Requirements with Guidance for Use, 11/15/2004
 - Note: DOE O 450.1A says EMSs are to “*reflect the EMS elements and framework found in ISO 14001:2004*” – e.g., internal audit and compliance evaluation programs



Relevant Documents, con't

- ▶ **Existing GUIDANCE** (useful, but NOT requirements)
 - **CEQ Clarification of Declaration of Conformance**
Requirements in Instructions to Executive Order 13423, 01/15/08
 - **ISO 19011:2002** Guidelines for quality and/or EMS auditing
(replaces ISO 14010-12), 10/01/2002
 - **OTHER related documents**
 - **Draft** voluntary EMS ISO 14001 Registration Approach,
EFCOG – undated
 - EFCOG team exploring integrated assessment process for
ISM/QA audits to align requirements and drivers to effectively
utilize assessment resources (Tricia Allen coordinating)



WHAT

- ▶ **Definition of Audit:** *Systematic, independent, and documented process for obtaining audit evidence and evaluating it objectively to determine the extent to which agreed criteria are fulfilled.*

(Source: ISO 9000:2000 - Clause 3.9.1,
Fundamentals and Vocabulary and
ISO 19011:2002, Terms and Definitions, Clause 3.1)



WHAT

▶ SCOPE:

- Compliance
 - DOE O 450.1A requires environmental compliance audit program that identifies compliance needs and possible root causes of non-compliance [§4.b.(4); CRD §1.a.(5)]
- ISM
 - DOE offices will address implementation of DOE O 450.1A requirements in the annual reviews [§5.c.(2); §5.d.(2)]
- Quality
- EMS
 - EO 13423 and DOE O 450.1A – **EMS NOW CLEARLY HAS TO COVER ENERGY ETC.**
 - ISO 14001
- Combined (e.g., EMS + OSAS or EMS + Quality)



WHAT

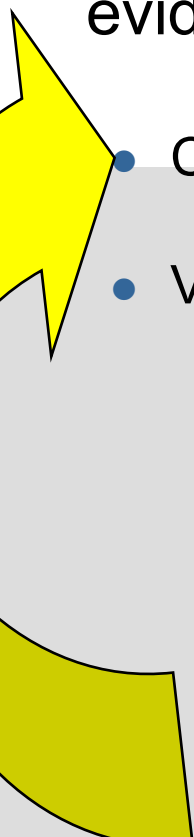
- ▶ **Formal Audit**, criteria for Declaration of Conformance (from CEQ guidance on EO):
 - Conducted by **qualified party outside the control or scope** of the EMS
 - Audit plan
 - Document review (policy; aspects; objectives, targets, plans)
 - Physical audit
 - Audit report



WHAT

- ▶ **Formal Audit, criteria for Declaration of Conformance**
(from CEQ guidance on EO), con't:
 - EMS has been implemented and is maintained
 - Presented to senior management (with authority over policy and EMS resources)
 - Formal audit findings (NO major nonconformities)
 - EMS suitability, adequacy, effectiveness
 - Need to follow through on recommendations
 - Basis for declaration of conformance by senior management
 - Declaration under EO 13148 doesn't count

WHY

- 
- A large, thick yellow arrow that curves from the left side of the slide towards the right, pointing towards the text.
- ▶ **Verification/Validation:** Confirm through objective evidence that requirements have been fulfilled
 - Contractual requirement like DOE O 450.1A / EO 13423
 - Voluntarily achieve registration or re-registration to **ISO 14001**
 1. Internal audit
 2. Initial audit by registrar to decide whether to certify (or re-certify) to standard
 3. Periodic surveillance to check that organization continues to meet requirements
 - Look at intent, implementation, effectiveness and continual improvement where needed
 - **Registrar audit meets requirement for “formal audit” for declaration of conformance to EO 13423**

WHY

- ▶ The **REAL** reason: KNOW (vs. guess)
 - how you are doing (performance) at protecting the environment
 - where problems/risks exist/improvements needed – if resolved, will enhance performance, reduce risk
 - whether corrective/preventive actions worked
 - recognize best practices you can share
 - how confident you should be
 - Provide info to top management on ability to meet strategic objectives

WHY

- ▶ Keeps you in shape





Things you want audits to identify

- ▶ EMS that is a paper program only
- ▶ Overly complex program not maintained
- ▶ Failure to implement requirements
- ▶ EMS not adopted by management or line or integrated into day-to-day activities or other business systems
- ▶ Weak objectives and targets not improving environmental performance/reducing environmental footprint
- ▶ Band-aid corrective actions that don't solve cause and prevent recurrence
- ▶ Real risk of environmental harm



WHO

▶ **Internal:** self-assessment (First Party)

- required under ISO 14001 for management review and other internal purposes
- can form the basis of “self-declaration” of conformance with ISO 14001
- In smaller organizations, can be conducted by auditor free from responsibility for activity they audit
- Does **NOT** meet CEQ definition of “outside the control or scope of the EMS”
 - An Independent Oversight/Auditing organization’s audit also probably does not meet the criteria



WHO

▶ External:

- “Second party” (by someone with an interest in the organization like a customer)
- “Third party” (by external, independent auditing organizations e.g., ISO 14001 registrar)

▶ Independent (“Third Party”)

- No conflict of interest - enable unbiased, objective review
- Should not be involved in developing or implementing EMS
- Should not work at facility
- Could be HQ team, from another facility/federal agency/contractor/consultant
- Meets CEQ definition of “outside control/scope of EMS” for formal audit



WHO

▶ External:

- Second party (by someone with an interest in the organization like a customer)
- Third party (by external, independent auditing organizations e.g., ISO 14001 registrar)

▶ Independent (third party), continued

- **Registrar:** ISO 14001
 - Can not consult on “how to” (creates conflict)
 - Meets CEQ definition of “outside control/scope” and “formal” criteria



WHO (and a little How)

- ▶ **All auditors should be objective and impartial**
 - Free from bias/conflict of interest
 - Won't be evaluating their own work/have to fix findings/get in trouble for if there are findings
 - Fresh set of eyes
 - Maintain an objective state of mind
 - Ensure findings and conclusions are based only on verifiable audit evidence



WHO (Internal/External)

▶ Auditor **Qualifications** (for reliable assessment)

- **Competent team** - demonstrated personal attributes and ability to apply knowledge and skills
- **Understand requirements**
 - Legal
 - EMS – able to trace failures to EMS requirements
- **Understand auditing of management systems**
 - Should have training (e.g., 40 hours – techniques to examine, question, record, evaluate, report, communicate, plan, organize)
 - Note: completion of lead auditor course does **not** = certification by RABQSA
 - Experience: e.g., 4 complete audits in training under qualified lead
- **Education and background** (team)
 - Should have college education
 - **Knowledge of environmental aspects, impacts and controls**
 - Technical knowledge of activities
 - Quality



WHEN

- ▶ Formal Independent Audit to declare EMS conformance to EO 13423/DOE O 450.1A
 - Every 3 years
 - DOE negotiated with OFEE to extend deadline for **declaration of conformance** (based on formal audit) to **JUNE 30, 2009**. (Remember, EMS required since 12/05)
 - conducted within the previous 3 years per DOE O 450.1A § 4.d.(2); 5.c.(1); 5.d.(1)

- ▶ Internal audit for ISO 14001
 - At planned intervals in accordance with audit procedure
 - E.g., can audit all 18 elements over 3 year period

- ▶ Registration to ISO 14001
 - Valid for 3 years (then Re-registration required)
 - Periodic surveillances (every 6-12 mos.) in between to check that continue to meet requirements



HOW

- ▶ Why try to maximize value?
 - Audits demand considerable resources and **can be painful**
 - Time to plan, participate, follow-up
 - \$\$\$ for participants and auditors (hours, travel)
 - If done poorly/overly burdensome can alienate staff and management, lose buy-in for program





HOW

▶ AUDIT GOAL:

- **Internal:** Hard, honest look to identify real issues and risks, inform management, prepare for external audits (e.g., ISO 14001 registration)
- **External:** Pass or excel as painlessly as possible
- **Both:** Identify inefficiencies, stimulate improvement, provide credibility and assurance



HOW

- ▶ Suggestions and lessons learned
 - apply to internal or external EMS audits
 - some are approaches, others are logistics
 - grouped by:
 - Auditor
 - Auditee
 - Both



HOW – Planning & Resources

- ▶ For a large organization:
- ▶ **Auditee:** Point of contact, administrative support, escorts
 - Scheduling (time consuming at a large facility), coordination and support, preparation (e.g., documents for desk audit), attend debriefs and outbriefs, respond to issues raised, collect comments on report, get findings into corrective action system, track to closure
- ▶ **Audit Team:** Lead and at least one other auditor
 - Lead: Figure 100-120 hours to plan, desk audit, onsite audit, outbrief, written report, respond to comments and finalize, travel
 - Support: Figure ~ 80 hours: 10-20 hours planning and desk audit, 40 hours onsite, 20 hours to write up, plus travel



HOW - Auditor

- ▶ Know the facility, people, requirements, understand processes
- ▶ If joint, clearly define responsibilities and lead
- ▶ Do desk audit to prepare, save time
- ▶ Avoid ISO/EMS-speak
 - Audit can increase awareness and understanding throughout organization
- ▶ Spend time in field – drive-bys are of little value
 - First determine whether requirements exist
 - Then see if they are implemented
 - Then attempt to determine if the program and implementation are effective
- ▶ Look for ways organization meets requirement – **success** orientation (give credit)

HOW – Auditor, con't

- ▶ Listen, observe, be inquisitive
 - Look for objective evidence of implementation
 - **Be tenacious**
- ▶ Try to be sensitive to delicate issues (diplomatic)
- ▶ Seek to continually improve audit process



No Surprises



HOW - Auditor, con't

► Findings:

- No surprises: Preview findings for closeout with Point of Contact (clarity, corrections, messages)
- Avoid opinions
- Be clear on what problem is
 - **Must separate nonconformities from observations/opportunities for improvement**
- Report results in a meaningful way
 - Overall conclusion
 - Put in perspective
 - Roll up findings
- Leave auditee with preliminary findings



HOW - Auditee

- ▶ For internal audits, be open if you want to identify problems
 - Skip the smoke and mirrors
 - Don't make things up
- ▶ **PREPARE**: set aside adequate time to plan, communicate, shepherd, respond, calm people down and help organization succeed
 - Access to documents, examples
 - Refresher okay for interviewees for external audits or if requested
 - If seeking registration, conduct gap analysis, then rigorous internal audit, verify plans/closure of nonconformities
- ▶ Promptly follow-up
- ▶ Help auditor connect with right people
- ▶ Have right people (owners) at close-out

HOW – Auditee, con't

► Findings:

- Don't punish people for being honest – do encourage them to communicate internally
- Try not to be defensive - use results to improve
- Prioritize findings
- Assign to real owner and take ownership
 - encourage teaming
- Recognize it's a sampling: Consider whether issues are isolated/part of larger issue
- PREVENT recurrence (avoid band-aids)
- Track to closure



HOW – Auditee & Auditor

- ▶ Allow adequate time in schedule to explore, follow-up
- ▶ Don't bully or be bullied
- ▶ Encourage cross-pollination by bartering auditors
 - Fresh set of eyes
 - Recognize potential problems
 - Bring home best practices
 - Training
 - Create personal connections, enhance communication
 - Develop a list of trained, experienced EMS auditors to draw from?
 - Plan ahead!





Audit Relief - VALUE

- ▶ Note: Many of these audits last a week or more, address same scope
- ▶ Relief/Leveraging can:
 - Reduce contractor costs
 - Provide time to effectively follow-up on other audit findings
 - Enable contractor to demonstrate value of registration/NEPT membership to senior management
 - Increase likelihood contractors would pursue ISO 14001 -> stronger EMS implementation and performance
 - Focus limited auditing resources
 - Keep focus on contractual work scope and implementation of improvements



Audit Relief to Date for ISO 14001 registered organizations?

- ▶ Hard to quantify something tangible
- ▶ Are leveraging some internal audits (e.g., quality document review – check environmental documents)
- ▶ ISM Audits: Appears to be some reliance on rigorous internal and registration ISO 14001 audits – take credit
- ▶ Relief on formal audit requirement if you're ISO 14001 registered.



Audit Relief to Date for ISO 14001 registered organizations?

- ▶ **BNL:** No EPA multi-media since 1996. ISM audit considered EMS. More credibility with regulators.
- ▶ **ORNL:** No measurable reduction in number of external assessments, may be subject to less scrutiny.
- ▶ **PNNL:** North Richland facilities designated low priority for routine inspections. Small facilities rarely inspected. No audit relief for larger facilities.
- ▶ **INL:** None to date. (Not a Performance Track member)
- ▶ Some regulatory relief and expedited permitting at BNL and ORNL



Remember

- ▶ If you're ISO 14001 registered, you've got formal audit requirement for EO 13423/DOE O 450.1A covered (of course **your EMS scope has to cover appropriate areas**)
- ▶ If NOT, **better start planning now** to meet June 30, 2009 date!
 - Do internal audit first
 - Identify formal audit team, dates, prepare plan, get documents together
- ▶ Share resources
- ▶ Use competent, tenacious audit team with success orientation



Q&A

- ▶ Your **lessons learned/tips** to maximize value?
- ▶ Examples of value **gained** from audits?
- ▶ Examples of **relief** enjoyed from audits (e.g., if registered to ISO 14001/National Environmental Performance Track member)?
- ▶ Ideas on how to effectively integrate audits?
- ▶ Other questions:
 - Timing Issue: does formal audit have to occur AFTER all scope under DOE O 450.1A is incorporated into EMS (e.g., executable plans developed, reflected in objectives and targets)? This could disrupt scheduled independent audits. Need guidance from DOE.
 - How does this requirement fit with DOE Order 226.1A (DOE Oversight Policy)? EMS is like any other program covered.