

DOE 450.1 IMPLEMENTATION WORKSHOP

SITE EXPERIENCE IN  
INTEGRATING  
EMS AND ISMS

Steven R. Woodbury

Panel Moderator

## DOE Panel

- Ron Peterson, SR
- Jerry Granzen, BAO
- Brent Smith, SPRPMO
- Cliff Clark, RL
- Teresa Perkins, ID

## Moderator

- Steven Woodbury, EH-41

# INTRODUCTION

- DOE sites have implemented ISMS
- Several DOE sites have EMSs which are third-party recognized
- These sites have integrated EMS with ISMS
- Presentation is structured around a series of questions

# ISMS CORE FUNCTIONS



Q: How did your facility go about developing its EMS? How did you ensure that the EMS is integrated with ISMS?

- *Ron Peterson, Savannah River Office*
- *Jerry Granzen, Brookhaven Area Office*
- *Brent Smith, SPRMPO*

# SRS – EMS Development

- SRS held a DOE-wide EMS Workshop in Augusta in 1995
- Determined that existing procedures and practices were close to conforming to ISO 14001
- SRS staff sought and obtained the top management's support and involvement in implementing an EMS that would conform to the requirements of ISO 14001
- SRS-EMS Task Committee was formed

# SRS – EMS Development (cont)

- Subcommittees addressed necessary elements of ISO 14001 (e.g., Site EMS policy statement, gap analysis of existing procedures and practices ....)
- Top Management decided SRS-EMS should be third-party certified
- Early 1997 -- SRS-EMS Policy Statement adopted
- RFP for certified registrar
- September 1997 -- entire site certified in conformance with ISO 14001

# SRS – Integration with ISMS

- ISMS Verification – December 1999
- SRS-EMS, since it was already certified in conformance with international standard ISO 14001, met or exceeded the ISMS environmental requirements
- EMS was immediately available for integration into the SRS ISMS by reference.

# BNL – EMS Development

- External Drivers:
  - EPA Memorandum of Agreement
  - New M&O Contractor
- Scope Development:
  - EPA Memorandum of Agreement emphasized P2, Compliance, and Community Outreach
  - Brookhaven Science Associates committed to ISO 14001 Registration

# BNL – EMS Development (cont.)

- Implementation
  - Project Management Approach
  - Contractor Appointed Full Time Project Manager
  - Prepared Project Management Plan
  - Project Execution
    - Senior Management Support – Lab Director
    - Project Team included Department EMS Representatives
    - Quarterly Status Presentations to Lab Management
    - Critical Project Milestones were incorporated as Contract Performance Measures

# BNL – EMS Development (cont.)

- Implementation (continued)
  - ISO 14001 Registration
    - Registrar selection board
    - Department registration first then site-wide
    - External regulators invited to observe
  - Project Transition
    - Project Manager role phased out
    - EMS coordinator assumed responsibilities

# BNL – EMS / ISMS Integration

- EMS and ISMS were implemented simultaneously
- Project Managers worked cooperatively
- ISMS gaps (w/respect to EMS) were identified and filled
- Certain ISM components were accelerated to meet EMS schedule needs
- Certain distinct subsystems were implemented solely for EMS
- Currently, EMS and ISMS are built on the Integrated Management Concept

# SPR – EMS Development

- ISO 14001 serves as the environmental portion of SPR's ISMS
- Implementation included:
  - ISO 14001 Gap Analysis
  - Environmental Management Review (EMR) by EPA Region 6
  - Lead Auditor & Implementation Training
  - DOE/M&O Contractor Pre-Assessment Audits

Q: How is the DOE field office integrated into the site ES&H management system?

- *Ron Peterson, Savannah River Office*
- *Cliff Clark, Richland Operations Office*

# SRS – SR/DOE Management System

- The DOE Savannah River Operations Office is a signatory to the SRS-EMS Policy Statement
- The DOE Savannah River Site is specifically listed on the Site's Certificate of Conformance to ISO 14001
- The DOE Savannah River Operations Office's Environmental Quality Management Division performs regular evaluations of the Site's organization's conformance to ISO 14001 and now to Executive Order 13148

# RL/DOE – RL Integrated Management System (RIMS)

- RL developed a DOE-only system
  - Designed to meet needs of DOE in managing federal functions & providing federal products and services
  - RL contractors each have their own ISMS systems
- RL system is an **Integrated Management System**
  - B, E, S, H, and SES are all integrated into a single system
- RL system is requirements based
- Each element of RIMS includes requirements, and procedures for accomplishing requirements

# RL/DOE – RL Integrated Management System (RIMS) (cont.)

- RIMS is entirely computer based and is available to over the internet to anyone who wishes to have access
- All RL personnel from the Manager down are able to access the system from their desk over intranet
- All elements of RIMS are cross-referenced and interlinked with hot links
- One element of RIMS is an EMS

# RL/DOE – RL Integrated Management System (RIMS) (cont.)

- EMS element addresses environmental regulatory requirements
  - Defines requirements and processes for acquiring permit, managing compliance actions, etc.
- It takes entire RIMS system to meet DOE Order 450.1, since it is truly and totally integrated.

Q: How do you go about identifying the environmental aspects and impacts of activities at your site?  
How do you integrate NEPA into this process?

- *Teresa Perkins, Idaho Operations Office*
- *Brent Smith, SPRPMO*

# INEEL – Aspects & Impacts

- INEEL environmental aspects/impacts were identified through interviews with project and program managers
  - Determined inputs to activities, i.e. chemicals, radioactive materials, transportation activities
  - Determined the activity outputs, i.e. waste products, air emissions, cultural resource impacts
  - Approximately 20 environmental aspects identified
  - A subgroup of environmental aspects with the potential for significant impacts has been identified

# INEEL – NEPA & EMS

- NEPA is first integrated into the ISMS/EMS through our environmental checklist process
  - Project managers are required to describe the project and identify the associated environmental aspects
  - The project analysis is used to document a NEPA determination
  - The environmental aspect identification is used to determine regulatory and other requirements that the project must meet to control impacts

# SPR – Environmental Aspects/Impacts & NEPA Integration

- Initial identification of environmental aspects/impacts accomplished through on-site ISO 14001 implementation training
- SPR has created a dynamic process to identify environmental aspects and keep them current
  - SPR employs pre-existing NEPA framework to evaluate new projects and activities
  - NEPA documents are prepared for every Engineering Design Review, all purchases, and for evaluation of upset conditions
  - PMO NEPA Compliance Officer revised NEPA Review document format to identify aspects and impacts and had aspects/impacts entered into EMS Manual

Q: How do you flow down environmental requirements to procedures at the work level?

- *Teresa Perkins, Idaho Operations Office*

# INEEL – Flowdown of Requirements

- A single, activity-based environmental procedure is used that:
  - Applies to all INEEL activities
  - Identifies all relevant environmental requirements, based on the activities being performed
- The process has personnel do what they do best
  - Project managers describe their projects as a combination of activities, such as installing and operating a generator.
    - Integrates requirements into project procedures
  - Environmental personnel identify and communicate all environmental regulatory requirements & mitigation

# INEEL – Flowdown of Req'ts (cont.)

- Emerging environmental requirements, such as proposed Federal and State regulations, are systematically reviewed by environmental personnel to:
  - Determine applicability and impacts
  - Determine and initiate appropriate changes to procedures as the regulations take effect

Q: What EMS training did you provide? How did you develop or select training materials?

- *Brent Smith, SPRPMO*
- *Teresa Perkins, Idaho Operations Office*
- *Cliff Clark, Richland Operations Office*

# SPR – EMS Training

- Key Individuals for DOE and Contractor have taken ISO 14001 Lead Auditor Training
- DOE/M&O Contractor Staff involved with ISO 14001 Implementation and Auditing had ISO 14001 Implementation Training
- All M&O contractor employees currently required to take annual ISO 14001 CBT
  - Focuses on Policy, Environmental Aspects/Impacts and Operational Controls

# INEEL – EMS Training

- Web-based general EMS training for all personnel
  - Reviews the Environmental Policy, EMS & its purpose
  - Reviews the employee's responsibilities for complying with the policy and protecting the environment
  - Reviews the employee's tools for complying with the policy and protecting the environment.
    - Use of procedures and processes for performing work
    - Use individual stop-work authority if an activity could not be performed as planned.
- ISO 14001 Training for Key Personnel

# INEEL – EMS Training (cont.)

- EMS team and training organization cooperation
- The EMS team determined
  - What and when EMS-related information was needed by:
    - all personnel
    - personnel with significant aspect responsibilities
- The training organization
  - Determined the methods of conveying the information
    - Economical & effective
  - Tracked and recorded completion of training (>96% of employees completed training by the scheduled completion date.)

# INEEL – EMS Training (cont.)

- The INEEL provides web-based, activity-specific, EMS training to employees whose jobs have the potential to significantly impact the environment.
  - Identifies the specific potential impacts, such as release of radioactive material
  - Identifies the specific controls in place, such as operating procedures
  - Reviews the employee responsibilities to conduct activities within the controls

# RL/DOE – EMS Training

- RL does not do separate EMS Training
- RIMS is totally integrated – EMS requirements are built in with business management, safety management, safeguards and security, and other management elements
- All RL employees, including Senior Management, are trained on RIMS requirements and procedures

Q: How do you assess (audit)  
environmental compliance and  
environmental management systems  
at your site?

Role of DOE, contractors?

Protocols used?

Integration with ISMS reviews?

- *Jerry Granzen, Brookhaven Area Office*
- *Brent Smith, SPRPMO*

# BNL – Environmental Assessment/Audit

- Compliance:
  - Contractor (BSA) Self-Assessment Program
    - Program is managed as part of site-wide integrated assessment program
    - Focus on Compliance Subject Areas (Air, PCB's, etc.)
    - Topics determined based upon risk, prior issues, prior audits, etc.
    - Assessment Team is led by Contractor's Env't'l Services Division
    - Has served as a Contract Performance Measure
    - DOE has option to observe or participate on Team
  - DOE-led Environmental Assessments/Audits have been reduced since ISO 14001 Registration
  - DOE, or BNL Office of Independent Oversight may conduct “for cause” assessments

# BNL – Env't'l Assessment/Audit (cont.)

- EMS Self Assessment:
  - BNL (contractor) EMS Self-Assessments
    - Each Department is required to conduct one assessment annually
    - Important part of registration audit – always looked at
    - DOE participation is optional
    - Numerous contractor employees have received Lead Auditor training

# BNL – Env't'l Assessment/Audit (cont.)

- Annual EMS Management Review:  
a very Important Part of EMS
  - Conducted by each Department
  - Each EMS coordinator presents the environmental status to the Department/Division Manager
  - Fosters line management involvement in environmental issues, and critiques adequacy of their EMS

# BNL – Env't'l Assessment/Audit (cont.)

- Independent EMS audits  
(by independent subcontractor)
  - Significant planning is required
  - Registration Audit is comprehensive
  - Surveillance Audits consist of a sampling of Departments and EMS criteria

# SPR – Environmental Compliance & EMS Audits/Assessments

- Integrated assessments include:
  - Environmental Compliance Audit
  - EMS Audits
  - M&O Contractor Organizational Assessment Programs
  - DOE On-Site Management Appraisals
- Each SPR site has annual audit/assessment by M&O Contractor
- Each SPR site has annual audit/assessment by DOE

# Q: Did you seek third-party registration or recognition for your EMS?

Why or why not?

How does EMS relate to other external recognition programs?

- *Brent Smith, SPRPMO*
- *Ron Peterson, Savannah River Office*
- *Cliff Clark, Richland Operations Office*
- *Teresa Perkins, Idaho Operations Office*

# SPR – EMS Third-Party Registration & Recognition

- SPR facilities received multi-site ISO 14001 certification on May 19, 2000
- Other Programs/Recognition
  - Louisiana Environmental Leadership Program (1996)
  - EPA's National Environmental Performance Track (11/00)
  - Texas EMS Regulatory Incentives Program (pending)
  - ISO 9001 Quality Management System Implementation (02/01)
  - Voluntary Protection Program (VPP) STAR Facility for 4 sites (07/01)
  - Louisiana Environmental Management Award (12/02)
  - OHSAS 18001 Gap Analysis (02/03)

# SRS – Third Party Registration

- SRS-EMS was certified to ISO 14001 in September 1997 and again in September 2000.
- Top management of the SRS wanted to be recognized as a center of excellence in environmental management
- SRS wanted to improve its relationships with interested external parties such as regulators, citizen groups, state and local planning groups, etc
- SRS wanted to position itself in good standing to receive new DOE missions
- In February 2002, the top management of SRS decided that the Site would no longer seek third-party certification of its EMS

# RL – EMS Third-Party Registration

- RL has not sought third-party certification
- RL contractors have obtained or are considering third party certification
  - Battelle Pacific Northwest has obtained formal certification to ISO 14001
  - Bechtel Hanford is actively pursuing self-certification and is considering third party certification to ISO 14001
  - Fluor Hanford is considering self-certification

# INEEL – Third-Party Registration

- ISO 14001 Registration June 2002
- DOE and Contractor agreed:
  - ISO 14001 registration should be, and is, a contract requirement
  - ISO 14001 registration is a desirable credential for our Research and Development programs
  - Third party registration:
    - Provides independent validation of the EMS
    - Increases the credibility of the EMS to the public and regulatory agencies
    - Provides an effective, and economical, means for periodic external review of the EMS

# Questions from the Audience

## For More Information:

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