

Performance Measurement for Integrated Safety Management

Emil Morrow

DOE/DP

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Outline for Discussion

- Background
- Initial Work Product Efforts
- Peer Review Groups
- Current Status
 - Federal Personnel Accountability
 - Implementation Milestone Completion
 - Effective ISM Implementation

Background

- S-1 3/99 letter “Safety Accountability and Performance” tasked the Secretarial Safety Council to develop Performance Standards for effective & timely ISM Implementation
- SSC tasked SMIT to develop measures for:
 - Federal Personnel Accountability
 - Implementation Milestone Completion
 - Effective ISM Implementation

Initial Work Product Efforts

- ISM Performance Measures forum 5/99 OH with presentations from Field org. and HQ
- Established ISM PM Subgroup & met 6/99
- Subgroup has broad complex representation
- Focus on Effectiveness Measures
- Concepts presented to SSC 7-8/99

Initial Work Product Efforts (continued)

- Starting Point:
 - NLIC 8 recommended measures
 - EFCOG 11 recommended measures
 - PI Report 21 measures currently tracked
 - Other 60 plus (other field measures)
- Recommendation: 13 key critical performance measures to gauge effective ISM implementation

The Thirteen Indicators

- #1** Total Recordable Case Rate
- #2** Occupational Safety and Health Cost Index
- #3** Hypothetical Radiation Dose to the Public
- #4** Worker Radiation Dose – Average Measurable TEDE
- #5** Reportable Occurrences of Releases to the Environment
- #6** Near Misses
- #7** Inadequate Procedures / Procedures Not Followed

- #8** Effectiveness of Corrective Actions
(Problem Correction and Prevention)
- #9** Mission Productivity
(i.e., getting work done -- to be compared with safety)
- #10** Percentage of Employees with Required Training
- #11** Authorization Basis Maintenance
- #12** Self-Assessment
- #13** Management Walkthroughs

Peer Review Groups

- National Laboratory Improvement Council
- Energy Facility Contractors Group
- Enhanced Work Planning Group
- EFCOG ISM Subgroup
- ISM Management Team
- ISM PM Subgroup
- Institute of Nuclear Power Operations 9/99
- DNFSB Staff

Current Status/ Federal Personnel

- “The Federal Manager has taken the necessary initiatives to fully implement the principles of the Department’s Safety Management System Policy in programs for which the Manager is responsible. This includes demonstrating an appropriate emphasis with ensuring the technical competence of the Federal staff associated with those programs, and while conducting effective oversight of work products and schedules.”

Current Status/ Implementation Milestone Completion

- SSC looks at four milestones monthly:
 - Completion of Phase I ISM verifications
 - Completion of Phase II ISM verifications
 - Approval of Authorization Agreements
 - Implementation of Line Oversight Policy 450.5
 - Milestones are color coded for quick review; Blue (complete), Green (in progress), and Red (needs Management attention). See examples.

PRIORITY FACILITIES

LEAD PROGRAM SECRETARIAL OFFICE – DEFENSE PROGRAMS

Site/Facility	Management Self-Assessment System	Phase I	Phase II	Authorization Agreement	Notes
ALBUQUERQUE OPERATIONS OFFICE					
LANL, TA-55 Facility	■	■	■	■	■ Phase I & II review started October 12, 1999 – combined with “off ramp” review. Past the September 1999 milestone for ISM implementation at priority facilities.
LANL, TA-3 Facility (CMR)	■	■	■	■	■ Phase I & II review started October 12, 1999 – combined with “off ramp” review. Past the September 1999 milestone for ISM implementation at priority facilities.
PANTEX	■	■	■	■	■ Repeat Phase I review scheduled for January 2000. Phase II scheduled for June 2000. Past the September 1999 milestone for ISM implementation at priority facilities.

LEAD PROGRAM SECRETARIAL OFFICE – SCIENCE

Site/Facility	Management Self-Assessment System	Phase I	Phase II	Authorization Agreement	Notes
OAKLAND OPERATIONS OFFICE					
LLNL Bldg. 332 SUPERBLOCK	■	■	■	■	
OAK RIDGE OPERATIONS OFFICE					
LMES, Y-12 Plant	■	■	■	■	

**LEAD PROGRAM SECRETARIAL OFFICE – ENVIRONMENTAL
MANAGEMENT**

Site/Facility	Management Self-Assessment System	Phase I	Phase II	Authorization Agreement	Notes
RICHLAND OPERATIONS OFFICE // OFFICE OF RIVER PROTECTION					
HLW Tank Farms [ORP]	■	■	■	■	ISM milestones complete.
K-Reactor Fuel Storage Basins [RL Ops]	■	■	■	■	■ Phase I & II verifications commenced October 12, 1999. Past the September 1999 milestone for ISM implementation at priority facilities.
ROCKY FLATS FIELD OFFICE					
Bldg. 771	■	■	■	■	ISM milestones complete.
Bldg. 371/374	■	■	■	■	ISM milestones complete.
SAVANNAH RIVER OPERATIONS OFFICE					
CANYONS	■	■	■	■	ISM milestones complete.

Current Status/ Effective ISM Implementation

- Initial Set of Five Indicators
 - Total Recordable Case Rate
 - Occupational Safety Cost Index
 - Hypothetical Radiation Dose to the Public
 - Worker Radiation Dose
 - Reportable Occurrences of Releases to the Environment
 - SSC review in 12/99; In FMC concurrence

Current Status/ Effective ISM Implementation (continued)

- Definitions for Effectiveness Indicators
- Sample Chart: Total Recordable Case Rate

- **Total Recordable Case Rate** - Work-related death, injury or illness, which resulted in loss of consciousness, restriction of work or motion, transfer to another job, or required medical treatment beyond first aid.
- **Occupational Safety and Health Cost Index** – Represents the approximate amount of dollars lost (indirect and direct) per 100 hours worked for all injuries/illnesses. The index is not commonly used in private industry. DOE sites use this index to measure their progress in improving worker safety and health.
- **Hypothetical Radiation Dose to the Public** - Estimated collective radiation dose (person-rem) to the public within 50 miles of DOE facilities due to radionuclide airborne releases. (“Collective radiation dose” is the sum of the effective dose equivalent to all off-site people within a 50-mile radius of a DOE facility over a calendar year. This figure is estimated by each site using a mathematical model with data on airborne radionuclide releases, meteorology, and population distribution)
- **Worker Radiation Dose** - Average measurable dose to DOE workers, calculated by dividing the collective total effective dose equivalent (TEDE) by the number of individuals with measurable dose.
- **Reportable Occurrences of Releases to the Environment** - Releases of radionuclides, hazardous substances, or regulated pollutants that are reportable to federal, state, or local agencies.

