

Sandia National Laboratories Integrating EMS with ISMS



Bob Brandhuber

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SANDIA NATIONAL LABORATORIES



FISCAL YEAR 2008 ENVIRONMENTAL MANAGEMENT SYSTEM MANUAL



Sandia National Laboratories
FY 2008 EMS Manual Approval

Jack H. Mizner
Jack Mizner, 4131
EMS Program Coordinator

Sept. 24, 2007
Date

Hue-Su Hwang
Hue-Su Hwang, 4131
Environmental Planning, Manager

Sept. 24, 2007
Date

Terry Cooper
Terry Cooper, 4133
Environmental Programs & Assurance, Manager

Sept 24, 2007
Date

Robert Brandhuber
Robert Brandhuber, 4130
ES&H and Emergency Management, Acting Level II Manager

Sept 26, 2007
Date

Philip Newman
Philip Newman, 4100
ES&H Planning and Assurance, Director

Sept 24, 2007
Date

Michael Hazen
Michael Hazen, 4000
Vice President, CPO

Sept 24, 2007
Date

John Stichman
John Stichman, 00003
Executive Vice President

Sept 26, 2007
Date

Thomas O. Hunter
Tom Hunter, 00001
President and Laboratories Director

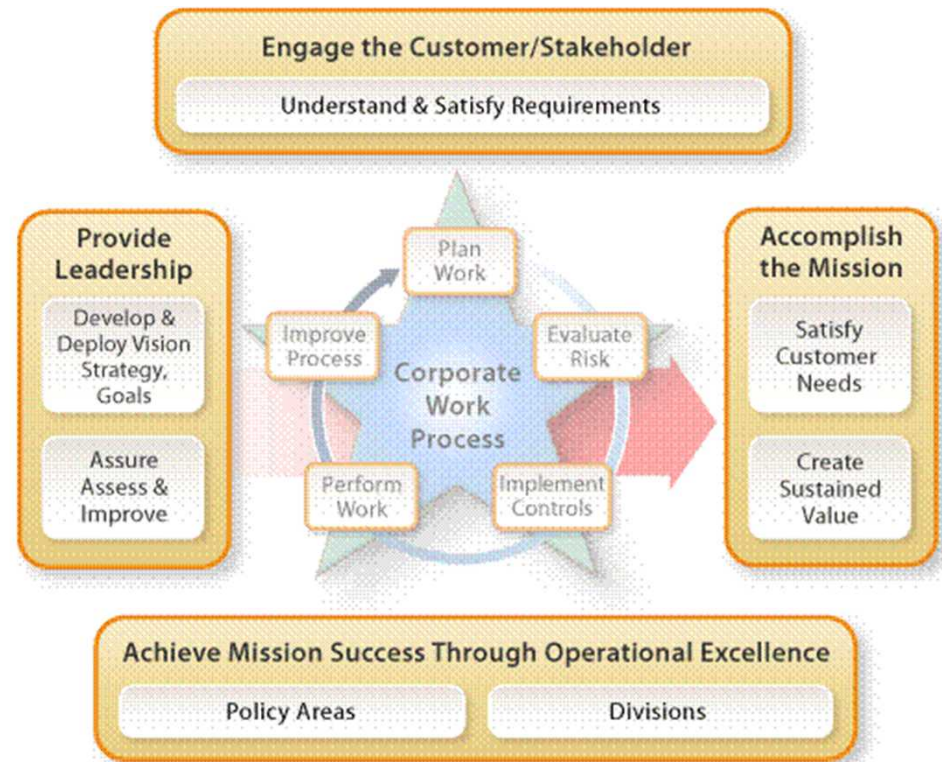
Sept 28, 2007
Date

Author: How frequently does this document need to be reviewed and/or revised?	Annually	
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Sandia's Implementation of EMS



- Element of the Integrated Laboratory Management System (ILMS)
- Implemented through the Integrated Safety Management System (ISMS)
- Executed through the following:
 - Division EMS Team
 - Environmental Programs
 - the EMS Core Team
 - The EMS Staff



Environmental Programs



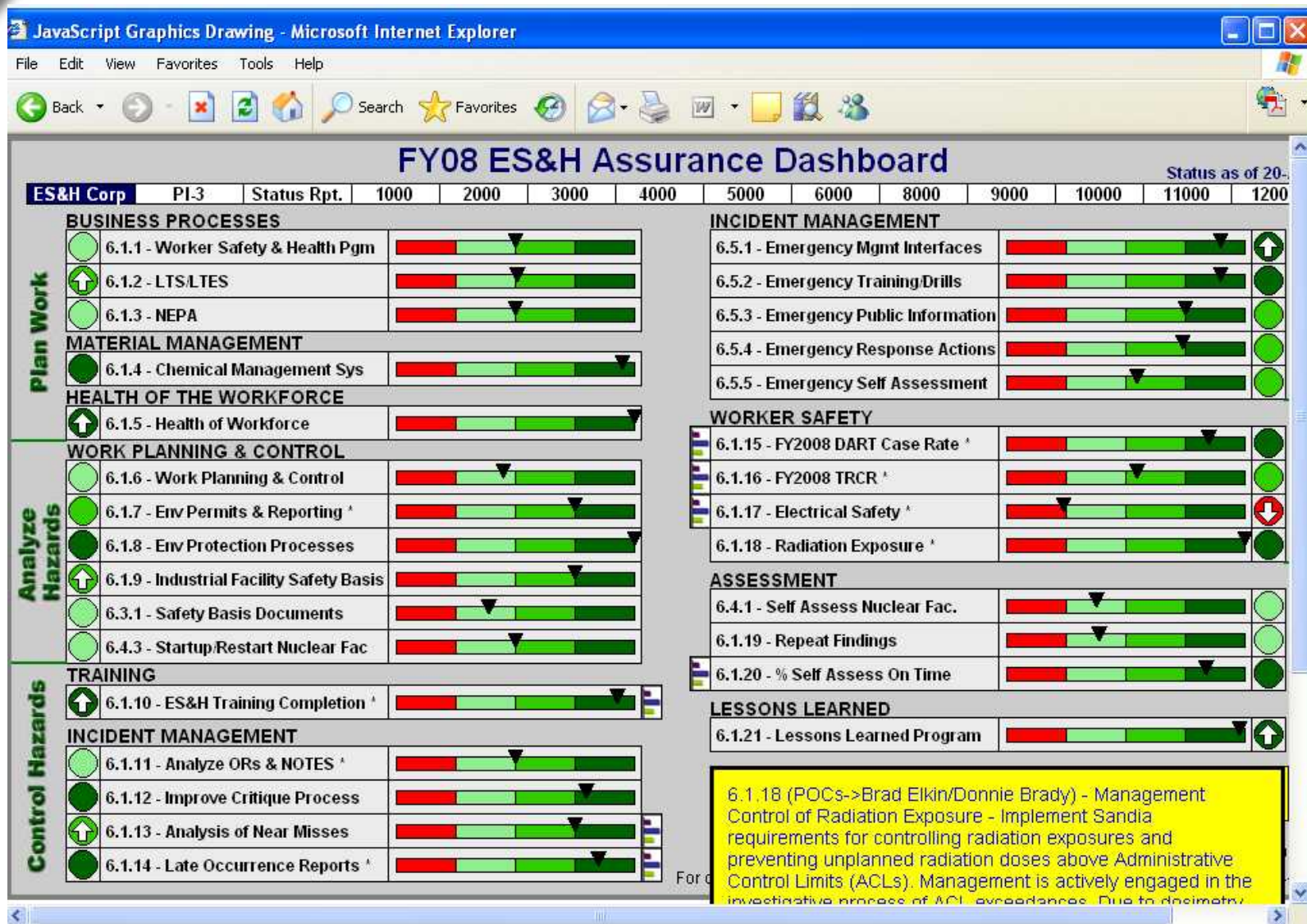
- Terrestrial Surveillance
- Environmental Compliance Coordinators (ECC)
- Meteorology
- Energy Management
- Storm Water
- Groundwater Monitoring
- Safe Drinking Water Protection
- Oil Storage
- Waste water Discharge
- Ecology
- Fleet Services
- National Environmental Policy Act (NEPA)
- Pollution Prevention (P2)
- Air Quality Compliance
- Surface Discharge
- Rad National Emission Standards for Hazardous Air Pollutants (NESHAPs)
- Long Term Environmental Stewardship (LTES)
- Hazardous Waste Permitting & Compliance
- Sustainable Design



Integration with ISMS



- **EMS description is included and integrated with the ISMS description.**
- **ISMS lead is a member of the EMS Core Team**
- **Synergy with Safety and Industrial Hygiene in mitigation of hazards**
- **Dashboard tracks ES&H metrics**
- **Division integration is implemented through ISMS and EMS reports and integrated with the MAR, an integrated ES&H report**





ISMS Core Function	Environmental Activity
Plan Work	Complete NEPA reviews
	Complete PHS (Preliminary Hazard Analysis)
	Complete and annually update Environmental Program Plans
	Review and update the ES&H Manual, ISMS Description, Operating Procedures, & Quality Control Plans

NEPA and PHS modules are part of ISMS (web-based) software



ISMS Core Function	Environmental Activity
Analyze Hazards	Obtain and maintain environmental permits
	Complete division and corporate aspects and impacts analysis
	Monitor environmental conditions using calibrated monitoring equipment
	Conduct environmental baseline studies
	Conduct Pollution Prevention Opportunity Assessments



ISMS Core Function	Environmental Activity
Control Hazards	Develop Technical Work Documents (TWDs) and operating procedures to control environmental hazards
	Review aspects and impacts, set objectives and targets for improvement
	Substitute chemicals for less hazardous alternatives



ISMS Core Function	Environmental Activity
Perform Work	Comply with requirements outlined in the ES&H Manual
	Implement environmental program plans and division EMS plans
	Perform work following guidance in TWDs and operating procedures



ISMS Core Function	Environmental Activity
Feedback and Improve	Identify effectiveness of environmental controls and mitigation techniques (waste minimization, chemical substitutions, water and energy conservation)
	Use Lessons-learned and Corrective Action programs (ES&H Manual, Chapter 22)
	Complete self-assessments
	Quarterly track progress in meeting division and corporate EMS targets
	Review waste generation and environmental monitoring reports



Challenges and Planned Improvements



- **CHALLENGE:** Full integration is difficult given the fact the Safety and Environmental programs have separate regulatory drivers, professionals with different education and technical skills and separate budgets.
- **ES&H Dashboard will be improved to track EMS Objectives and Targets**
- **Full integration of environmental considerations into the Work Planning and Control process**