

Recommendation 2000-2
*Configuration Management –
Vital Safety Systems*
Implementation Update



Ed Blackwood, EH-24

Interface Workshop - October 22, 2002



Current Status

- **Initial Phase 2 assessments complete**
- **Nuclear Air Cleaning Handbook revision**
- **Institutionalize safety system assessments**
- **FTCP items covered later today**

DOE ACTIONS TO INSTITUTIONALIZE ASSESSMENT OF SAFETY SYSTEMS



“Make the scrutiny of the status of all systems serving to protect the public, workers, and the environment a regularized part of the assessments performed as required by DOE P 450.5 Line Environment Safety and Health Oversight” -- DNFSB (March 8, 2000)

“As a long-term objective, the Department will institutionalize a process to ensure continued operational readiness of vital safety systems and support the Department’s continuing effort to establish Integrated Safety Management as the central, enduring framework for safety accomplishing the Department’s mission and work” -- DOE DNFSB 2000-2 Implementation Plan (October 31, 2000)

Viability of Safety Systems



- **Improved Functions and Responsibility Assignments Relative to Safety Systems (FRAM)**
- **Improved DOE Orders Relative to Contractor System Engineering Program and Maintenance of Safety Systems**
- **Establishing DOE/Contractor Agreement on How Safety System Assessments Will be Institutionalized and Use of Phase II Criteria**

Viability of Safety Systems



Functions, Responsibilities, & Authorities Manuals (FRAMs)

Corporate & HQ FRAMs explicitly address safety system operability.

HQ: Review Field Element Performance including their appraisals of the contractor to include the review of adequacy of contractor assessment of safety system operability and programs to support system operability.

FEM: The adequacy of the contractor assessment process, and assessments of safety system operability and programs that support system operability should be specifically appraised.

Viability of Safety Systems



Contractor System Engineering Program

- **DOE Order 420.1, Facility Safety, modified to add requirements related to establishing a contractor system engineering program.**
 - **Objective: ensure continued operational readiness of safety systems**
 - **System Assessments: periodic review of system operability**
 - **Configuration Management: develop and maintain consistency among system requirements, performance criteria, system documentation, and physical configuration**
 - **Qualification Requirements: establishes attributes of qualification and training requirements**

Viability of Safety Systems



Maintenance of Safety Systems

- **DOE Order 433.1, Maintenance Management Program**
 - ✓ **Nuclear Facilities must have an Approved Maintenance Implementation Plan addressing:**
 - **All safety systems**
 - **Periodic inspection of SSCs to determine whether degradation or technical obsolescence threatens performance and/or safety**
 - **Configuration Management process to ensure integrity of the identified SSCs**
 - **The Systems Engineering Program that is consistent with DOE O 420.1, Facility Safety**

Viability of Safety Systems



Startup and Restart of Nuclear Facilities

- **DOE Order 425.1B, Startup and Restart of Nuclear Facilities**
 - ✓ **Nuclear Facilities must meet minimum core requirements when performing an ORR or RA**
 - **Guiding Principle #5 – Hazards evaluated, standards and requirements established, adequate safety assurance**
 - **A program is in place to confirm and periodically reconfirm the condition and operability of safety SSCs. The material condition of all safety, process, and utility systems will support the safe conduct of work.**

PSO	FO	1ST	SYSTEM	PROJ. COMP. DATE	ASSESSMENT STATUS	DATE TO BOARD	COMMENTS
EM	CB	•	Waste Handling Building HVAC	Dec. 2001	Complete	3/28/2002	EM-1 Letter to Conway.
EM	ID	•	NWCF Confinement Ventilation	Jan. 2002	Complete	3/28/2002	EM-1 Letter to Conway.
EM	ID		IFSF Confinement Ventilation	Jan. 2002	Complete	3/28/2002	E-mailed to Dan Burnfield by Bill Boyce.
EM	ID		Tank Farm Confinement Vent.	May 2002	Complete	8/20/2002	E-mailed to Dan Burnfield by Bill Boyce.
EM	LLNL	•	Bldg. 625 Fire Protection	May 2002	Complete	9/3/2002	NA-10 Letter to Conway.
EM	NV	•	WEF Confinement Ventilation	May 2002	Complete	10/3/2002	NA-10 Letter to Conway.
EM	RF	•	Bldg. 371 Confinement Vent.	March 2002	Complete	4/9/2002	EM-1 Letter to Conway.
EM	RF		Bldg. 371 Fire Protection	March 2002	Complete	4/9/2002	EM-1 Letter to Conway.
EM	RL	•	CWC Fire Protection	March 2002	Complete	5/23/2002	EM-1 Letter to Conway.
EM	RL		Confinement Ventilation	March 2002	Complete	8/27/2002	E-mailed to Dan Burnfield by Bill Boyce.
EM	RL		T-Plant Confinement Vent.	June 2002	Not Started		Phase 2 as part of ORR - now scheduled 12/02.
EM	RL		Bldg. 222-S Confinement Vent.	April 2002	Complete	8/29/2002	E-mailed to Dan Burnfield by Bill Boyce.
EM	ORP	•	Transfer Leak Detection	March 2002	Complete	5/23/2002	EM-1 Letter to Conway.
EM	ORP		Primary Tank Leak Detection	April 2002	Complete	5/23/2002	E-mailed to Dan Burnfield by Bill Boyce.
EM	ORP		AN Primary/Secondary Vent.	May 2002	Complete	8/7/2002	E-mailed to Dan Burnfield by Bill Boyce.
EM	SR	•	F-Canyon Confinement Fans	April 2002	Complete	5/23/2002	EM-1 Letter to Conway.
EM	SR		HB-Line Back-up Power via ORR	May 2002	Complete	8/6/2002	E-mailed to Dan Burnfield by Bill Boyce.
EM	SR		HLW Multiple Systems	June 2002	In Review		In EM HQ review - expected to the Board 11/02.
NNSA	ORNL	•	Bldg. 3019 Cell Off-Gas System	April 2002	Complete	4/26/2002	NA-50 Letter to Conway.
NNSA	LANL	•	TA-48, RC-1 Fire Sprinklers	May 2002	Complete	7/23/2002	NA-10 Letter to Conway.
NNSA	LANL		TA-55, PF-4 Fire Alarm System	May 2002	Complete	7/23/2002	NA-10 Letter to Conway.
NNSA	LANL		TA-48, RC-1 Confinement Vent.	April 2002	In Progress		Expected November 2003
NNSA	LANL		Site Wide Fire Alarm System	July 2002	Not Started		OLASO has lead - expected to start 12/02
NNSA	LANL		Maintenance Program	April 2002	Complete	9/5/2002	E-mailed to Dan Burnfield by Jeff Kimball.
NNSA	LLNL		Configuration Management	May 2003	On Schedule		Scheduled for 2003
NNSA	NV		DAF Fire Suppression & Detect.	May 2002	Complete	9/18/2002	E-mailed to Dan Burnfield by Jeff Kimball.
NNSA	Y-12	•	Bldg. 9215 Stack 3 Exhaust	May 2002	Complete	7/10/2002	NA-10 Letter to Conway.
NNSA	Y-12		Bldg. 9204-2E CAAS	Sept. 2002	Complete		In NNSA HQ final review
NNSA	Y-12		BWXT System Engineering Pgm.	July 2002	Complete	9/5/2002	Delivered to Dan Burnfield by Jeff Kimball.
NNSA	PTX	•	System Drawing Program	April 2002	Complete	7/10/2002	NA-10 Letter to Conway.
NNSA	PTX		Zone 4 Thermal Monitoring	Sept. 2002	Complete		In NNSA HQ final review
NNSA	SNL	•	ACRR High Bay Ventilation	May 2002	In Review	10/10/02	NA-10 Letter to Conway.
NNSA	SR		Tritium - Fire Water Supply Sys.	April 2002	Complete	5/28/2002	E-mailed to Dan Burnfield by Jeff Kimball.