

PROJECT PLAN - TWG #5

HIGHLY INTEGRATED CONTROL ROOM - HUMAN FACTORS

3. PROBLEM STATEMENT:

Existing Human Factors Engineering review guidance, regulatory positions, and acceptance criteria could be modified or developed, as needed, to facilitate consistent and efficient licensing of new digital Human-System Interface technology at operating and new reactors and certain fuel facilities.

- a. Minimum Inventory. Review existing NRC regulatory positions and acceptance criteria, and make necessary changes, to better define of minimum inventory of alarms, controls, and displays needed to implement the emergency operating procedures and bring the plant to a safe condition; eliminate any inconsistencies in the use of minimum inventory that exist in current NRC guidance; and review a process to develop a plant-specific minimum Inventory of alarms, displays and controls.
- b. Computerized Procedures and Soft Controls. Review existing NRC regulatory guidance, positions, and acceptance criteria, and make necessary changes, to facilitate consistent and efficient licensing of computerized procedures and soft controls in highly integrated control rooms. Develop guidance and acceptance criteria, if necessary, to minimize the impact of degraded digital instrumentation and controls associated with computerized procedures and soft controls on human performance.
- c. Role of Personnel. Review existing NRC regulatory guidance, positions, and acceptance criteria, and make necessary changes, to accommodate changes to personnel roles and responsibilities that may result from implementing a highly integrated control room (e.g., greater automation and knowledge-based systems that digital instrumentation and controls would facilitate).
- d. Safety Parameter Display System. Review existing NRC regulatory guidance, positions, and acceptance criteria, and make necessary changes, to determine the need to revise 50.34 (f)(iv) and associated guidance relative to safety parameter display consoles to ensure consistent understanding of the term "console."

4. DELIVERABLES:

- a. A listing of regulatory guidance documents, industry standards, and regulations (if needed) that should be revised.

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- b. Interim guidance describing or clarifying the current regulatory guidance and acceptance criteria on each of the identified problem areas will be developed.
- c. Final guidance, acceptance criteria, and regulations (if needed) addressing each of the problem areas will be developed.
- d. Update the Standard Review Plan guidance to provide acceptable regulatory and licensing criteria for new reactors, modernized LWRs, and fuel facilities.

Draft

5. MILESTONES, ASSIGNMENTS AND DELIVERABLES:

NEAR-TERM					
Milestones, Assignments and Deliverables	Deliverable	Due Date	Fsct/Actual	Lead	Support
1) Minimum Inventory					
Receive industry proposal on minimum inventory		05/2007	F	NEI	N/A
Identify and list guidance and acceptance criteria that may need to be revised to facilitate consistent and efficient reviews associated with minimum inventory.	✓	06/2007			
Prepare interim guidance, if appropriate		TBD			
CRGR interaction (as needed)		TBD	F	NRC	N/A
Issue interim guidance, if appropriate	✓	TBD	F	NRC	N/A
Prepare final guidance, if appropriate		TBD			
Issue final guidance for public comment, if appropriate		TBD			
Receive public comments		TBD	F	NRC	N/A
Disposition public comments		TBD			
CRGR interaction (as needed)		TBD	F	NRC	N/A
ACRS interaction (as needed)		TBD	F	NRC	NEI
Issue final guidance, if appropriate	✓	TBD	F	NRC	N/A
2) Computerized Procedures and Soft Controls					
Receive industry white paper on computer-based procedures		04/2007	F	NEI	N/A

NEAR-TERM					
Milestones, Assignments and Deliverables	Deliverable	Due Date	Fsct/Actual	Lead	Support
Identify and list guidance and acceptance criteria that may need to be revised to facilitate consistent and efficient reviews associated with computerized procedures and soft controls	✓	06/2007			
Prepare interim guidance, if appropriate		TBD			
CRGR interaction (as needed)		TBD	F	NRC	N/A
Issue interim guidance, if appropriate	✓	TBD	F	NRC	N/A
Prepare final (i.e., "DRAFT") guidance, if appropriate		TBD			
Issue final (i.e., "DRAFT") guidance for public comment, if appropriate		TBD			
Receive public comments		TBD	F	NRC	N/A
Disposition public comments		TBD			
CRGR interaction (as needed)		TBD	F	NRC	N/A
ACRS interaction (as needed)		TBD	F	NRC	NEI
Issue final guidance, if appropriate	✓	TBD	F	NRC	N/A
3) Role of Personnel					
3a) Identify and list guidance and acceptance criteria for the role of personnel, including staffing levels, training and qualifications that may need to be revised	✓	06/2007	F	NRC	NEI
Prepare interim guidance, if appropriate		TBD			
CRGR interaction (as needed)		TBD	F	NRC	N/A
Issue interim guidance, if appropriate	✓	TBD	F	NRC	N/A

NEAR-TERM					
Milestones, Assignments and Deliverables	Deliverable	Due Date	Fsct/Actual	Lead	Support
Prepare final (i.e., "DRAFT") guidance, if appropriate		TBD			
Issue final (i.e., "DRAFT") guidance for public comment, if appropriate		TBD			
Receive public comments		TBD	F	NRC	N/A
Disposition public comments		TBD			
CRGR interaction (as needed)		TBD	F	NRC	N/A
ACRS interaction (as needed)		TBD	F	NRC	NEI
Issue final guidance, if appropriate	✓	TBD	F	NRC	N/A
4) Safety Parameter Display System					
4a) Review safety parameter display system and related guidance to determine if gaps or inadequacies exist as related to digital systems to determine if 10CFR50.34(f) needs to be revised so that exemptions would not be needed to address SPDS and related functions		TBD	F	NRC	NEI
4b) CRGR interaction (as needed)		TBD	F	NRC	N/A
4c) Issue draft document, if appropriate	✓	TBD	F	NRC	N/A
4d) Receive public comments		TBD	F	NRC	N/A
4e) CRGR interaction (as needed)		TBD	F	NRC	N/A
4f) ACRS interaction (as needed)		TBD	F	NRC	NEI
4g) Issue final document, if appropriate	✓	TBD	F	NRC	N/A