U.S. Department of Energy
Office of River Protection
P.O. Box 450, MSIN H6-60
Richland, Washington 99352

JUN 10 2005

05-WED-025

Mr. J. P. Henschel, Project Director
Bechtel National, Inc.
2435 Stevens Center
Richland, Washington 99352

Dear Mr. Henschel:

CONTRACT NO. DE-AC27-01RV14136 – U.S. DEPARTMENT OF ENERGY, OFFICE OF RIVER PROTECTION DESIGN OVERSIGHT ASSESSMENT REPORT ON THE IMPORTANT TO SAFETY (ITS) ELECTRICAL DESIGN (D-05-DESIGN-014)

This letter provides for your information the subject Design Oversight Assessment Report on the ITS Electrical Design. This assessment was conducted in May 2005 and evaluated the Bechtel National, Inc. Integrated Safety Management and Design Processes associated with implementation of the IEEE Class 1E standards, particularly with application to the ITS Electrical Switchgear Buildings and Emergency Diesel Generator facilities. The assessment also looked at design and construction progress of those facilities.

The assessment identified no findings or recommendations and at this time there are no open items or new actions identified for the Waste Treatment and Immobilization Plant (WTP) Contractor.

If you have any questions, please contact me, or your staff may call William F. Hamel, Jr., Director, WTP Engineering Division, (509) 373-1569.

Sincerely,

for Roy J. Schepens
Manager

WED:MLR

Attachment

cc w/attach:
S. Lynch, BNI
A. Tiwari, BNI

Attachment
05-WED-025

DESIGN OVERSIGHT ASSESSMENT REPORT IMPORTANT TO SAFETY (ITS) ELECTRICAL DESIGN D-05-DESIGN-014

May 2005

WED:MLR
June 8, 2005

U.S. Department of Energy, Office of River Protection

DESIGN OVERSIGHT ASSESSMENT REPORT

IMPORTANT TO SAFETY (ITS) ELECTRICAL DESIGN

May 2005

Design Oversight: D-05-DESIGN-014

Team Lead: Mark Ramsay

Submitted by:

Team Lead: _____ Date 6/8/05
Mark Ramsay

Concurrence:

WTP Engineering Division Director: _____ Date 6/8/05
Bill Hamel

WTP Project Manager: _____ Date 6/9/05
John Eschenberg
for JE

Executive Summary

This assessment evaluated how the Contractor's Integrated Safety Management (ISM) process functions to define requirements for electrical systems determined to be important to safety (ITS), particularly with respect to the application of IEEE Class 1E standards. This assessment also evaluated the general status of the electrical design and construction associated with the ITS switchgear buildings, which are subject to the IEEE Class 1E standards.

As verified in this assessment, the ISM process is well documented in Bechtel National, Inc. (BNI) procedures and authorization basis documents. The process ultimately results in control strategies to prevent or mitigate hazards and accidents for Waste Treatment and Immobilization Plant (WTP) process systems determined to be ITS. Since many of the preferred control strategies for mitigating or preventing hazards and accidents depend on reliable electrical power, some of the WTP electrical facilities and equipment must provide a very specific safety function. Through ISM teams comprised of electrical engineering expertise, consensus is arrived at regarding the approach to providing ITS electrical facilities and systems. Since IEEE Class 1E standards specifically address requirements for reliable electrical power involved in nuclear process systems, the ISM teams also determine to what extent the Class 1E standards apply. ISM meeting minutes document the consensus decisions and conclusions reached by ISM teams, and accordingly, safety basis documents are appropriately updated and design media is generated consistent with ISM determinations.

The extent in which the IEEE standards are applied in the design process is well documented in safety basis documents and detailed in BNI specifications, procedures and design guides. Brief review of selected design media indicates the standards are being adequately addressed and incorporated in the electrical design associated with the ITS Switchgear Buildings and Emergency Diesel Generator facilities.

Engineering progress related to the ITS Switchgear Buildings and Emergency Diesel Generator facilities is evident from the production of selected drawings, specifications, calculations and material requisitions, which appear to meet standards and design requirements. Construction of these facilities is in the preliminary stages but is consistent with planning and appears to be progressing well.

At this time there are no findings or recommendations.

Introduction, Background, and Approach

As described in 24590-WTP-SRD-ESH-01-001-02, Revision 3q, *Safety Requirements Document, Vol. II* (SRD):

In nuclear power generating stations, equipment and systems are classified as either Class-1E or Non-Class 1E with the design criteria for each classification being clearly defined. For the WTP, a defense in depth strategy is implemented utilizing a graded approach to the safety classification of equipment and systems. There is therefore, no clear correlation between the term "Class 1E"

and a single safety classification within the WTP. In fact, the WTP has four safety classifications that must be considered in the Contractor's ISM process. The classifications are:

- Safety Design Class (SDC)
- Safety Class (CS)
- Safety Design Significant (SDS)
- Safety Significant (SS)

The ISM process, as implemented by BNI, determines the active SDC, SC, SDS, or SS equipment and systems, defines strategies for control and provides reliability requirements for each control strategy. Thus, plant system control strategies dictate reliability requirements as pertaining to ITS electrical equipment and systems, in terms of independence, redundancy, seismic qualifications, etc. ITS electrical equipment are then made subject to the design criteria of selected IEEE Class 1E standards, which specifically delineate requirements pertaining to independence, redundancy, seismic qualifications, prevention of single point failure, etc.

One part of this assessment was to determine how the ISM process functions to define requirements for electrical systems determined to be ITS with respect to the application of IEEE Class 1E standards. Since the applicability of the Class 1E standards is especially important in the design of the ITS electrical distribution systems now underway, a second part of this assessment was to obtain a general status of the electrical design and construction mainly associated with the ITS switchgear buildings.

The following lines of inquiry provided the focus for this assessment.

1. What criteria or process does the ISM use to determine which electrical equipment, systems or components, must meet the IEEE Class 1E standards?

2. How and to what extent are the IEEE Class 1E standards applied?

3. How does the ISM determine reliability requirements for control strategies relevant to the electrical equipment?

4. How are the ISM determinations documented and what BNI electrical design documents provide the traceability to the safety basis defined by the ISM? Provide procedures, meeting minutes, etc.

5. What is the current status of the electrical design for the ITS Switchgear Building?

6. What is the status of WTP electrical load(s) determinations?

These questions were communicated informally (via e-mail) to BNI and appropriate responses were provided back along with reference documentation. Documents were evaluated, interviews were conducted and a walkthrough was performed.

Discussion

1. What criteria or process does the ISM use to determine which electrical equipment, systems or components, must meet the 1E standards?

The ISM process involves performing an accident analysis and a hazards analysis in order to define and develop control strategies. The ISM process is performed by selected teams of appropriate discipline engineering expertise. The process analysis is performed on a plant systems basis and specific consideration is given to structures, systems and components (SSCs) of each plant system especially relative to control strategies. Two procedures govern these activities, 24590-WTP-GPP-SANA-001: *Accident Analysis* and 24590-WTP-GPP-SANA-002: *Hazard Analysis, Development of Hazard Control Strategies, and Identification of Standards.*

The general ISM process is also adequately described in the SRD, Appendix A, *Implementing Standard for Safety Standards and Requirements Identification.*

On a plant system basis, work is defined, hazards and accidents are identified, and the hazards and accidents are evaluated and bounded by severity levels defined in terms of radiation exposure. Control strategies are then identified in order to prevent or mitigate the hazards or accidents. The preferred control strategies are further developed and typically involve SSCs that perform safety functions in accordance with a given control strategy. The SSCs are assigned a safety classification and standards are identified and tailored for the requirements that the SSCs must meet.

As this process relates to electrical systems, the following example provides clarification.

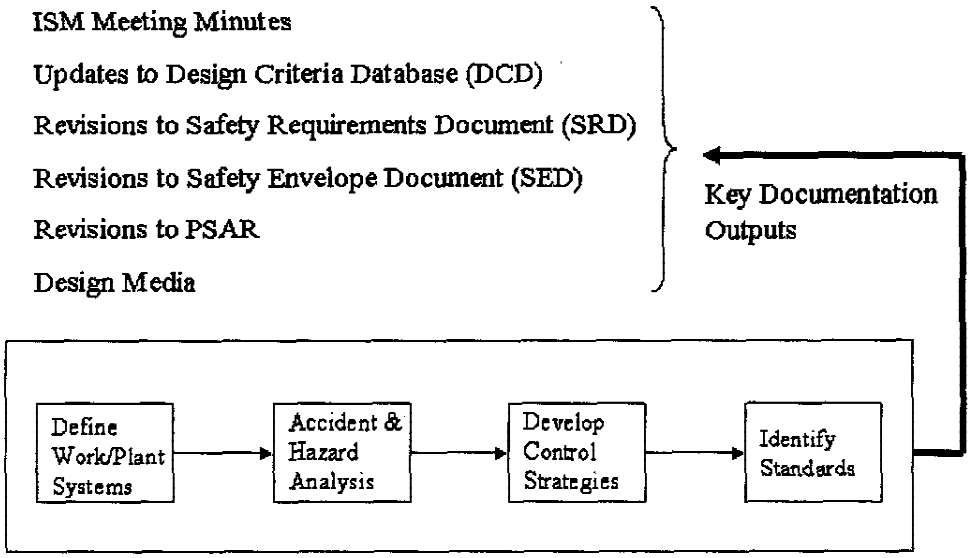
Example: The analysis of hazards and potential accidents associated with several plant systems in the PT and HLW facilities led to preferred control strategies would ultimately depend on electrical power always being available regardless of the design basis event or accident. Thus, as was determined by ISM teams, an ITS function of electrical power is to ensure process power (particularly emergency power) is always provided to the Pretreatment (PT) and High Level Waste (HLW) facilities. The ITS Switchgear Buildings and the Emergency Diesel Generators (EDG) were conceived to provide this safety function. Since these facilities provide a nuclear safety class function, the IEEE Class 1E series of standards were determined by the ISM teams to be applicable and subsequently designated as requirements in the design of these ITS electrical facilities.

Key outputs from the ISM process described above are:

- ISM Meeting Minutes

- Updates or revisions to other key documents such as, Design Criteria Database (DCD), Safety Requirements Document (SRD), and the Safety Envelope Document (SED) which provides a holding place for safety basis changes until a revision is made to the Preliminary Safety Analysis Report (PSAR), and design media.

Figure 1 provides a rough overview of the ISM process.



Key Elements of the ISM Process

Figure 1

The ISM meeting minutes capture the decisions and/or conclusions made from the ISM teams. As was evident from reviewing a sample of the meeting minutes, standards are assigned and applied based on team consensus. The meeting minutes verify the ISM process methodology and are an effective contribution to the traceable documentation that describes the basic thinking and decisions relating to safety and applicability of design standards.

Also reviewed were the Balance of Facility SED and the SRD, which lists the applicable class 1E standards. The SED follows the same format as the PSAR and provides a useful tool for capturing that latest safety basis information. Under the hazard evaluation results section, the ITS Switchgear and Diesel Generator facilities are adequately described. SC SSCs are adequately addressed in terms of credited safety functions, functional requirements, standards, system evaluation, and controls. Especially significant is the fact that the IEEE standards identified in the SED, provides a more comprehensive listing than that provided in the SRD and was specific to SSCs.

2. How, and to what extent, are the IEEE Class 1E standards applied?

The standards are generally applied as follows.

Section 8.0 of the BOD lists codes and standards that apply to electrical design, equipment design, and installation for the WTP. This listing is not intended to be all-inclusive but covers the major electrical SSCs in all the WTP facilities. This list of codes and standards also does not include those that are applicable to ITS items. The list of implementing codes and standards for ITS SSCs is provided in the SRD. The following IEEE Class 1E standards are listed in

Appendix C, (C.17) of the SRD and are specific to ITS systems and equipment in nuclear power generating stations. However, in most cases these standards are tailored to the WTP since the WTP does not generate nuclear power.

- IEEE 308-1991 *Criteria For Class 1E Power Systems for Nuclear Power Generating Stations*
- IEEE-323-1983 *IEEE Standard for Qualifying Class 1E Equipment for Nuclear Power Generating Stations*
- IEEE-344-1987 *Recommended Practice for Seismic Qualification of Class 1E equipment for Nuclear Power generating Stations*
- IEEE 384-1992 *Standard Criteria for Independence of Class 1E Equipment and Circuits*
- IEEE 628-1987 *Standard Criteria for the Design, Installation, and Qualification of Raceway Systems for Class 1E Circuits for Nuclear Power Generating Stations.*
- IEEE 741-1997 *Criteria for the Protection of Class 1E Power Systems and Equipment in Nuclear Power Generating Stations.*

A more complete and specific listing of standards is provided in the SED, which will also eventually serve as an update to the PSAR.

As explained by one of the BNI engineers interviewed, certain standards are applicable for system design by the WTP engineering group and certain standards provide criteria for WTP engineering *and* for equipment suppliers. Some of these standards are applied in the following manner.

While IEEE 308 applies to ITS electrical power system design and provides the principle design criteria for Class 1E power systems, the project Basis of Design (BOD) 24590-WTP-DB-ENG-01-001, section 8.0, provides the design basis for implementing this standard. While this standard is not specifically called out in the BOD, it was verified that the BOD appears to implement many if not all, of the provisions in IEEE 308. Moreover, IEEE 308 references many of the other standards listed in the SRD and the SED.

BNI has also developed specifications for implementing selected IEEE standards. A few of these were reviewed and are described below.

- Specification, 24590-WTP-3PS-JQ06-T0005, *Engineering Specification for Environmental Qualification of Controls and Electrical Systems and Components,* provides specific details for implementing IEEE 323. IEEE 323 applies to safety class SSCs required to perform a credited safety function in a harsh environment and provides criteria guidelines for environmental qualification of Class 1E equipment, by equipment suppliers.

- Specification, 24590-WTP-3PS-SS90-T0001, *Engineering Specification for Seismic Qualification of Category I/II Equipment and Tanks*, provides clear direction for implementing IEEE 344, which is specific to ITS SSCs having a seismic safety function. This standard provides criteria and guidelines for the seismic qualification of SSCs by engineering and by equipment suppliers.

- IEEE 384 applies to ITS electrical, controls, and instrumentation systems with redundant and independent circuits and components. This standard provides criteria for separation and independence of redundant equipment and circuits for engineering and for equipment suppliers. Details and guidance for implementing this standard are found in 24590-WTP-DC-E-01-001, *Electrical Design Criteria and Guide, Section 12.*

- IEEE 628 applies to raceway for ITS electrical, control, and instrumentation circuits. This standard provides criteria for raceway design for engineering. Further guidance on implementing this standard is found in 24590-WTP-GPG-ENG-076, *Implementation of IEEE 628-1987 for Raceway Systems.*

Specific application of IEEE class 1E standards is also provided in ISM meeting minutes and equipment/vendor specifications.

ISM Meeting Minutes

ISM meeting minutes indicate how standards are applied as determined by the ISM team. Several meeting minutes were reviewed and one (CCN: 099785) is provided in the Appendix as a good example of how the ISM process gets documented. This meeting minute involves safety class electrical cable in which the applicability of certain IEEE class 1E standards is discussed. The safety function of the cable is addressed and reference is made to updating the SED accordingly.

Specifications

In evaluating sample specifications, there is in some cases a general clause that includes the words, "in accordance with, but not limited to, the applicable portions of the following codes and standards." These words appear to leave to the seller the determination as to how much a given standard is applicable. This was discussed further with a BNI engineer who indicated that the NQA-1 qualification is determined prior the awarding a contract to a prospective vendor of safety class (quality level, QL-1 or QL-2) equipment. Hence, where Class 1E standards are applicable, there is a quality assurance process to ensure that the standards are adequately complied with. It remains for a possible future assessment to evaluate more specifically how standards are implemented at the vendor specification level and how the BNI quality assurance process verifies the adequacy of implementation.

3. ***How does the ISM determine reliability requirements for control strategies relevant to the electrical equipment?***

Reliability requirements for electrical equipment are defined by the ISM process in the context of assuring power to safety class plant process systems and controls. Control strategies that depend on reliable and available power during and following design basis events or accidents dictate requirements for specific electrical equipment independence, redundancy, seismic qualifications, protection against single point failures, etc. These types of requirements are specifically detailed in associated IEEE Class 1E standards.

4. How are the ISM determinations documented and what BNI electrical design documents provide the traceability to the safety basis defined by the ISM? Provide procedures, meeting minutes, etc.

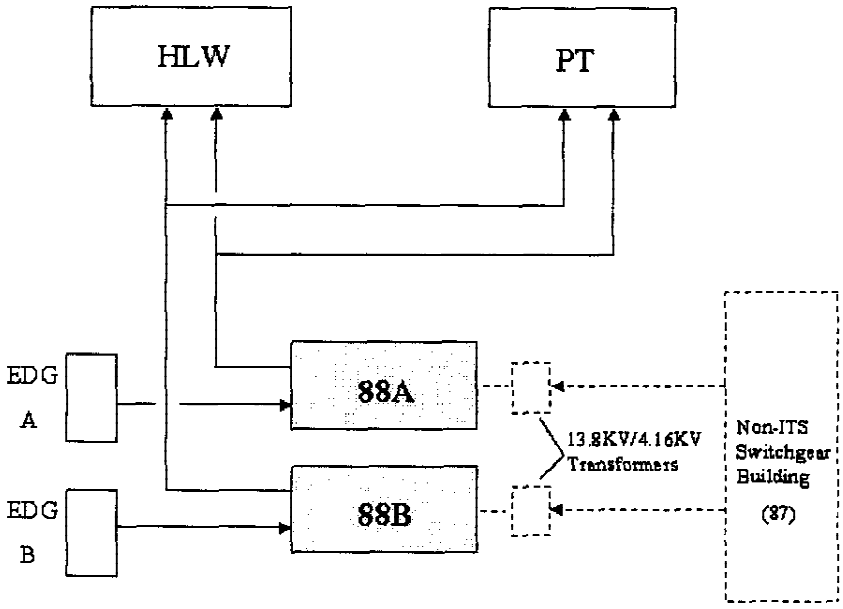
The ISM determinations are initially documented in ISM meeting minutes according to 24590-WTP-GPP-SANA-002, *Hazard Analysis, Development of Hazard Control Strategies, and Identification of Standards* and are ultimately incorporated in the respective facility Safety Envelope Document, (SED). This was verified by evaluation of selected meeting minutes. The information in the SEDs is also included in the project Design Criteria Database (DCD). Updates as necessary are also made to the following electrical design documents.

- Electrical Single Line Diagrams (Important to Safety [ITS], only)
- Motor Control Center (MCC) Schedules
- Site Plan
- Plant Design General Arrangement Plans
- Engineering Specifications for Quality Level-1 (QL-1) and QL-2 items, including:
  - Material Requisitions containing new, revised, or deleted technical notes for QL-l and QL-2 items (excluding Field Material Requisitions)
  - Datasheets describing QL-1 and QL-2 components
  - Commercial Grade Dedication (CGD) Packages
- System Descriptions
- Design Criteria Documents

These design documents are reviewed by the appropriate BNI organizations for AB compliance and are documented in accordance with procedure 24590-WTP-GPP-SREG-002, *Authorization Basis Maintenance.*

5. *What is the current status of the electrical design for the ITS Switchgear Building?*

The ITS Switchgear facility is comprised of two identical buildings, 88A and 88B. Building 88A provides for ITS train A power to PT and HLW facilities and building 88B provides for ITS train B power to those facilities. These electrical facilities satisfy IEEE class 1E standards particularly in terms of redundant and independent safety class power. See Figure 2.



ITS Switchgear Buildings 88A & 88B

To ensure emergency power is always available to the High Level Waste (HLW) and Pretreatment (PT) facilities.

ITS – Important to Safety

EDG – Emergency Diesel Generator

------ Non-ITS

Figure 2

As verified by a field walkthrough, the status of the ITS Switchgear Building construction as of this date is as follows:

General excavation has been completed down to the interface of the two 4.16KV ITS (SC-1) duct banks extending from the south ends of 88A and 88B (parallel buildings) to the PT and HLW facilities. Six inch conduit is being installed that will connect the duct banks with the ITS switchgear. Rebar and concrete forms (for SC-1) has been installed to prepare for concrete pour around the conduit. The under-slab non-ITS 4.16KV duct banks have been completed. These extend the length of each building from the 13.8KV/4.16KV service transformers (not yet installed) to the location of the 4.16KV switchgear. No foundation or pad work for the building structure has yet started.

Per interview and feedback from BNI design personnel, the following design documents have been issued for construction. These have been reviewed and appear to meet standards and requirements.

Drawing Title	Title	Revision
24590-B88-E1-DCE-00001	ITS Switchgear Building 125V DC System Train A Single Line Diagram	0
24590-B88-E1-DCE-00002	ITS Switchgear Building 125V DC System Train B Single Line Diagram	0
24590-B88-E22-E54T-00001	ITS Switchgear Buildings 88A & B Underground Duct Bank Yard Layout	2
24590-B88-E22-E54T-00002	ITS Switchgear Buildings 88A & B Embedded Raceway Plan	0
24590-B88-E22-GRE-00001	ITS Switchgear Buildings 88A & B Ground Plan	0
24590-B88-EC-LVE-00001	Motor Control Center Schedule LVE-MCC-88001A	0
24590-B88-EC-LVE-00002	Motor Control Center Schedule LVE-MCC-88001B	0

The following electrical equipment material requisitions have also been issued for purchase or bid.

Material Requisition No.	Title	Rev	Status
24590-QL-MRA-EAA0-00001	Distribution Panels and Transformers (277/208/120) - ITS	3	Issued for Purchase
24590-QL-MRA-EC00-00001	480V Motor Control Centers - ITS	3	Issued for Purchase
24590-QL-MRA-ED00-00001	125V DC System - ITS	0	Issued for Bid
24590-QL-MRA-ES00-00001	Switchgear 4.16KV - ITS	3	Issued for Purchase
24590-QL-MRA-ET00-00001	4.16KV/480V Transformers - ITS	3	Issued for Purchase

The release of equipment for fabrication is on hold pending the receipt of revised seismic response spectra.

6. What is the status of WTP electrical load(s) determinations?

The WTP electrical loads are maintained in an electrical load database. The database is made up from load lists specific to each of the five WTP major facilities. The database is updated as the design progresses and electrical loads for the facilities are confirmed and committed to. Hence, at any given time in the design process, electrical load determinations and calculations represent only snapshots as recent as the last database update or the issuance of the latest electrical calculations.

The status of electrical load determinations is reflected in the facility load lists shown in the table below. The revisions and issue dates for these load lists indicate electrical load determinations, though in progress, are maturing. The loads are listed as 480V loads since this is the typical

facility service distribution voltage. The lists are comprehensive providing not only load information, but also other useful data such as, reference P&IDs or drawings, full-load amperage ratings, cable sizes, power sources, and equipment location information. Some of the load lists are comprised of very large amounts of data.

Document Number	Description	Rev.	Date Issued
24590-BOF-E8-LVE-00001	*Electrical Load List BOF*	Rev.3	6/8/04
24590-HLW-E8-LVE-00001	*Electrical Load List HLW*	Rev.3	3/8/05
24590-LAB-E8-LVE-00001	*Electrical Load List LAB*	Rev.1	12/22/04
24590-LAW-E8-LVE-00001	*Electrical Load List LAW*	Rev.1	9/7/04
24590-PTF-E8-LVE-00001	*Electrical Load List PTF*	Rev.2	1/25/05

Electrical load determinations are especially important for sizing large items of medium voltage electrical (MVE) equipment (13.8 KV and 4.16 KV voltages) such as emergency or standby diesel generators, distribution transformers, switchgear, etc. These calculations also provide a glimpse of the electrical design progress. Some of the calculations with respect to the ITS electrical facilities were briefly considered and are listed below.

- 24590-BOF-E1C-MVE-00003, Rev. C (4/7/04) *Emergency Diesel Generator Sizing Calculation*
- 24590-BOF-E1C-MVE-00004, Rev. B (6/3/04) *Standby Diesel Generator Sizing Calculation*
- 24590-BOF-E1C-MVE-00006, Rev. B (6/30/04) *MVE-XFMR-88001A&B ITS Switchgear Building Transformer Sizing*
- 24590-WTP-E1C-MVE-00009, Rev. A (7/21/04) *ITS MV Switchgear Short Circuit and Load Flow Analysis*

These calculations though in the preliminary stages, appear to be thorough and are in accordance with the BNI procedure, 24590-WTP-3DP-G04B-00037, Revision 7, *Engineering Calculations.* The calculations are informative, easy to follow with supportable conclusions, and reference is made to key industry standards, many of which are IEEE.

According to the calculations procedure, numeric revisions to the listed calculations will form the basis of drawings, specifications, and other design documents. Thus, by the alpha revisions, the ITS electrical switchgear equipment is currently in the formative stages of design.

Future ORP oversight assessments should consider detailed review of some or all of the listed calculations.

Appendix:

R10404646

Meeting Minutes

CCN: 099785
Group Chair/Secretary: Mark Medsker
Meeting: October 14, 2004 / 2:00 PM
PONA / 2368
Purpose: **ISM for Standards Selection for BOF Electrical Cable**
Prepared by: Scott Johnson

1 This meeting was held to select standards for the BOF SDC/SC electrical cable. The BOF SDC/SC electrical cable provides the basic safety function of delivering emergency electrical power to SDC/SC and SDS/SS loads in PT and HLW. As part of a system, the design must also meet separation and redundancy, and be qualified for NPH where applicable.

2 Cable attributes that must be considered include proper rating for the application, sufficient insulation, conductor sizing, and meeting conduit fill requirements. Per electrical engineering, the implementing standard for the SDC/SC electrical cable is IEEE 384, *Standard Criteria for Independence of Class 1E Equipment and Circuits*, along with daughter standard IEEE 690, *Design and Installation of Cable Systems for Class 1E Circuits in Nuclear Power Generating Stations*, and these will be added to the BOF SED in section 4.3.4.3.

3 IEEE 690 requires qualification to IEEE 323, *IEEE Standard for Qualifying Class 1E Equipment for Nuclear Power Generating Stations*, and IEEE 383, *IEEE Standard for Type Test of Class 1E Electric Cables, Field Splices, and Connections for Nuclear Power Generating Stations*. Since no cable in BOF has been identified as being in a harsh environment, the team questioned whether IEEE 323 was required, but consensus following the meeting was that it should be applied. It does not have to be listed in the SED, however, since it is required by IEEE 690.

4 The current BOF SED lists IEEE 383 as an implementing standard for cable for the flame test only. Review of the SIPD entries however determined that flame retardency is not a required ITS control. Fire is addressed by having redundant emergency power trains in separate fire areas. Therefore, the flame test is not required by the ISM process as an implementing standard for electrical cable. IEEE 383 will be deleted from the SED.

10/21/04

099785

Distribution (Attendees have an asterisk following their name)

Allen, Todd	MS7-BSW	Johnson, Scott*	MS12-2B
Chan, Charles*	MS12-2B	Kelly, Paul*	MS12-B
Cheung, Bill	MS12-2B	Lowry, Pete	MS7-ESW
Dallas, Tim*	MS12-2B	Medsker, Mark*	MS12-2B
Garrett, Richard	MS4-A1	Tiwari, Ajit	MS5-L
Harshberger, Bob*	MS5-L	Wilkins, Jeremy*	MS12-2B
Henry, Bob	MS6-R1	Woolfolk, Steve	MS5-G
PDC	MS11-B		

Task# ORP-WTP-2005-0139

E-STARS™ Report
Task Detail Report
06/13/2005 0753

TASK INFORMATION

Task#	ORP-WTP-2005-0139		
Subject	CONCUR: (05-WED-025) U.S. DEPARTMENT OF ENERGY, OFFICE OF RIVER PROTECTION DESIGN OVERSIGHT ASSESSMENT REPORT ON THE IMPORTANT TO SAFETY (ITS) ELECTRICAL DESIGN (D-05-DESIGN-014)		
Parent Task#		**Status**	CLOSED
Reference	05-WED-025 / CARS 6612	**Due**	
Originator	Almaraz, Angela	**Priority**	High
Originator Phone	(509) 376-9025	**Category**	None
Origination Date	06/07/2005 1603	**Generic1**	
Remote Task#		**Generic2**	
Deliverable	None	**Generic3**	
Class	None	**View Permissions**	Normal
Instructions	Hard copy of the correspondence is being routed for concurrence. Once you have reviewed the correspondence, please approve or disapprove via E-STARS and route to the next person on the list. Thank you. bcc: MGR RDG File WTP OFF File J. J. Short, OPA W. F. Hamel, WED M. L. Ramsay, WED J. R. Eschenberg, WTP		

ROUTING LISTS

1	Route List	Inactive

- Ramsay, Mark L - Review - Concur - 06/09/2005 0923
  Instructions:
- Short, Jeff J - Review - Concur with comments - 06/13/2005 0753
  Instructions:
- Hamel, William F - Review - Concur - 06/09/2005 0923
  Instructions:
- Eschenberg, John R - Review - Concur with comments - 06/09/2005 0926
  Instructions:
- Schepens, Roy J - Approve - Cancelled - 06/13/2005 0755
  Instructions:

ATTACHMENTS

Attachments

1. 05-WED-025.MLR.Attachment.doc
2. 05-WED-025.MLR.Design oversight rpt D-05-DESIGN-014.doc

RECEIVED
JUN 13 2005
DOE-ORP/ORPCC

COLLABORATION

COMMENTS

Task# ORP-WTP-2005-0139

Poster	Eschenberg, John R (Almaraz, Angela) - 06/09/2005 0906
	Concur
	Bill Hamel signed for Eschenberg on 6/9/05.
Poster	Short, Jeff J (Almaraz, Angela) - 06/13/2005 0706
	Concur
	Jeff signed the hard copy on 6/8/05.
Poster	Almaraz, Angela (Almaraz, Angela) - 06/13/2005 0706
	CLOSED
	Shirley Olinger signed for Roy on 6/9/05.

TASK DUE DATE HISTORY

No Due Date History

SUB TASK HISTORY

No Subtasks

-- end of report --

Task# ORP-WTP-2005-0139

E-STARS™ Report
Task Detail Report
06/07/2005 0405

TASK INFORMATION

Task#	ORP-WTP-2005-0139		
Subject	CONCUR: (05-WED-025) U.S. DEPARTMENT OF ENERGY, OFFICE OF RIVER PROTECTION DESIGN OVERSIGHT ASSESSMENT REPORT ON THE IMPORTANT TO SAFETY (ITS) ELECTRICAL DESIGN (D-05-DESIGN-014)		
Parent Task#		**Status**	Open
Reference	05-WED-025 / CARS 6612	**Due**	
Originator	Almaraz, Angela	**Priority**	High
Originator Phone	(509) 376-9025	**Category**	None
Origination Date	06/07/2005 1603	**Generic1**	
Remote Task#		**Generic2**	
Deliverable	None	**Generic3**	
Class	None	**View Permissions**	Normal
Instructions	Hard copy of the correspondence is being routed for concurrence. Once you have reviewed the correspondence, please approve or disapprove via E-STARS and route to the next person on the list. Thank you. bcc: MGR RDG File WTP OFF File J. J. Short, OPA W. F. Hamel, WED M. L. Ramsay, WED J. R. Eschenberg, WTP		

ROUTING LISTS

1	Route List	Active

- Ramsay, Mark L - Review - Awaiting Response
  Instructions:
- Short, Jeff J - Review - Awaiting Response
  Instructions:
- Hamel, William F - Review - Awaiting Response
  Instructions:
- Eschenberg, John R - Review - Awaiting Response
  Instructions:
- Schepens, Roy J - Approve - Awaiting Response
  Instructions:

MLR 6/8/2005
6/8/05
WFH 6/9/05
WFH for JE 6/9/2005
RJS 6/9/05

ATTACHMENTS

Attachments

1. 05-WED-025.MLR.Attachment.doc
2. 05-WED-025.MLR.Design oversight rpt D-05-DESIGN-014.doc

COLLABORATION

COMMENTS