



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION III
2443 WARRENVILLE ROAD, SUITE 210
LISLE, IL 60532-4352

June 15, 2009

Mr. Charles G. Pardee
Senior Vice President, Exelon Generation Company, LLC
President and Chief Nuclear Officer (CNO), Exelon Nuclear
4300 Winfield Road
Warrenville IL 60555

**SUBJECT: DRESDEN NUCLEAR POWER STATION, UNITS 2 AND 3
EVALUATION OF CHANGES, TESTS, OR EXPERIMENTS AND PERMANENT
PLANT MODIFICATIONS BASELINE INSPECTION REPORT
05000237/2009006; 05000249/2009006**

Dear Mr. Pardee:

On May 22, 2009, the U.S. Nuclear Regulatory Commission (NRC) completed an Evaluations of Changes, Tests, or Experiments and Permanent Plant Modifications inspection at your Dresden Nuclear Power Station, Units 2 and 3. The enclosed report documents the inspection findings, which were discussed on May 22, 2009, with Mr. T. Hanley and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the results of this inspection, one NRC-identified finding of very low safety significance was identified. The finding involved a violation of NRC requirements. However, because of its very low safety significance, and because the issue was entered into your corrective action program, the NRC is treating the issue as a Non-Cited Violation (NCV) in accordance with Section VI.A.1 of the NRC Enforcement Policy.

If you contest the subject or severity of a Non-Cited Violation, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with a copy to the Regional Administrator, U.S. Nuclear Regulatory Commission - Region III, 2443 Warrenville Road, Suite 210, Lisle, IL 60532-4352; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the Resident Inspector Office at the Dresden Nuclear Power Station. In addition, if you disagree with the characterization of any finding in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region III, and the NRC Resident Inspector at the Dresden Nuclear Power Station. The information that you provide will be considered in accordance with Inspection Manual Chapter 0305.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Website at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA by A. Dahbur Acting For/

Robert Daley, Chief
Engineering Branch 3
Division of Reactor Safety

Docket Nos. 50-237; 50-249
License Nos. DPR-19; DPR-25

Enclosure: Inspection Report 05000237/2009006; 05000249/2009006
w/Attachment: Supplemental Information

cc w/encl: Site Vice President - Dresden Nuclear Power Station
Plant Manager - Dresden Nuclear Power Station
Manager Regulatory Assurance – Dresden Nuclear Power Station
Senior Vice President - Midwest Operations
Senior Vice President - Operations Support
Vice President - Licensing and Regulatory Affairs
Director - Licensing and Regulatory Affairs
Manager Licensing - Clinton, Dresden, and Quad Cities
Associate General Counsel
Document Control Desk - Licensing
Assistant Attorney General
J. Klinger, State Liaison Officer,
Illinois Emergency Management Agency
Chairman, Illinois Commerce Commission

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Website at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA by A. Dahbur Acting For/

Robert Daley, Chief
Engineering Branch 3
Division of Reactor Safety

Docket Nos. 50-237; 50-249
License Nos. DPR-19; DPR-25

Enclosure: Inspection Report 05000237/2009006; 05000249/2009006
w/Attachment: Supplemental Information

cc w/encl: Site Vice President - Dresden Nuclear Power Station
Plant Manager - Dresden Nuclear Power Station
Manager Regulatory Assurance – Dresden Nuclear Power Station
Senior Vice President - Midwest Operations
Senior Vice President - Operations Support
Vice President - Licensing and Regulatory Affairs
Director - Licensing and Regulatory Affairs
Manager Licensing - Clinton, Dresden, and Quad Cities
Associate General Counsel
Document Control Desk - Licensing
Assistant Attorney General
J. Klinger, State Liaison Officer,
Illinois Emergency Management Agency
Chairman, Illinois Commerce Commission

DISTRIBUTION:
See next page

DOCUMENT NAME:G:\DRS\Work in Progress\Dresden 2009-006 DRS IR AXD.doc
 Publicly Available Non-Publicly Available Sensitive Non-Sensitive
To receive a copy of this document, indicate in the concurrence box "C" = Copy without attach/encl "E" = Copy with attach/encl "N" = No copy

OFFICE	RIII	RIII						
NAME	ADunlop:ls	RDaley						
DATE	06/15/09	06/15/09						

OFFICIAL RECORD COPY

Letter to Mr. Charles Pardee from Mr. Robert Daley dated June 15, 2009.

SUBJECT: DRESDEN NUCLEAR POWER STATION, UNITS 2 AND 3
EVALUATION OF CHANGES, TESTS, OR EXPERIMENTS AND PERMANENT
PLANT MODIFICATIONS BASELINE INSPECTION REPORT
05000237/2009006; 05000249/2009006

DISTRIBUTION:

Tamara Bloomer

RidsNrrDorLpl3-2

RidsNrrPMDresden Resource

RidsNrrDirslrib Resource

Patrick Hiland

Kenneth Obrien

Jared Heck

Allen Barker

Jeannie Choe

Linda Linn

Cynthia Pederson

DRPIII

DRSIII

Patricia Buckley

Tammy Tomczak

[ROPreports Resource](#)

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket Nos: 50-237; 50-249
License Nos: DPR-19; DPR-25

Report No: 05000237/2009006; 05000249/2009006

Licensee: Exelon Generation Company

Facility: Dresden Nuclear Power Station, Units 2 and 3

Location: Morris, IL

Dates: May 4, 2009 through May 22, 2009

Inspectors: Andrew Dunlop, Senior Reactor Inspector (Lead)
Alan Dahbur, Senior Reactor Inspector
Dariusz Szwarc, Reactor Inspector

Observer: Larry Jones, Reactor Engineer

Approved by: Robert Daley, Chief
Branch 3
Division of Reactor Safety

Enclosure

SUMMARY OF FINDINGS

IR 05000237/2009006, 05000249/2009006; 05/04/2009 – 05/22/2009; Dresden Nuclear Power Station, Units 2 and 3; Evaluations of Changes, Tests, or Experiments and Permanent Plant Modifications.

This report covers a two-week announced baseline inspection on Evaluations of Changes, Tests, or Experiments and Permanent Plant Modifications. The inspection was conducted by Region III based engineering inspectors. One Green finding was identified by the inspectors. The finding was considered a Non-Cited Violation (NCV) of NRC regulations. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

A. NRC-Identified and Self-Revealed Findings

Cornerstone: Mitigating Systems

- Green. A finding of very low safety significance and associated non-cited violation of license conditions 2.E and 3.G for Units 2 and 3, respectively, was identified by the inspectors for the failure to restore the Unit 1 diesel-driven fire pump to an operable condition within seven days as required by Technical Requirements Manual (TRM) 3.7.i.A.1. Specifically, the Unit 1 fire pump discharge valve was found closed rendering the pump inoperable for greater than seven days. Upon discovery of the valve in the closed position the licensee repositioned the valve in the correct locked open position and initiated Action Requests (AR) 922581 and 922585.

This finding is more than minor because the failure to provide the two required fire pumps could have resulted in a failure of the station's water based fire protection system should the Unit 2/3 fire pump have been out-of-service at the same time. The finding screened as very low safety significance because the performance of the system was not affected by the closed valve as the Unit 2/3 diesel-driven fire pump remained operable to provide water to the station's fire protection system, if required. This finding has a cross-cutting aspect in the area of human performance, work control because the licensee did not properly plan and coordinate activities consistent with nuclear safety. Specifically, the licensee failed to restore the Unit 1 diesel-driven fire pump to an operable condition within seven days as required by TRM 3.7.i.A.1 as a result of ineffective communications between licensee personnel to verify that valve 1-4199-109 was in its correct locked open position prior to declaring the pump operable [H.3(b)]. (Section 1R17.2)

B. Licensee-Identified Violations

No violations of significance were identified.

REPORT DETAILS

1. REACTOR SAFETY

Cornerstone: Initiating Events, Mitigating Systems, and Barrier Integrity

1R17 Evaluation of Changes, Tests, or Experiments and Permanent Plant Modifications (71111.17)

.1 Evaluation of Changes, Tests, or Experiments

a. Inspection Scope

From May 4, 2009 through May 22, 2009, the inspectors reviewed eight safety evaluations performed pursuant to 10 CFR 50.59 to determine if the evaluations were adequate and that prior NRC approval was obtained as appropriate. The inspectors also reviewed 19 screenings where licensee personnel had determined that a 10 CFR 50.59 evaluation was not necessary. The inspectors reviewed these documents to determine if:

- the changes, tests, or experiments performed were evaluated in accordance with 10 CFR 50.59 and that sufficient documentation existed to confirm that a license amendment was not required;
- the safety issue requiring the change, tests or experiment was resolved;
- the licensee conclusions for evaluations of changes, tests, or experiments were correct and consistent with 10 CFR 50.59; and
- the design and licensing basis documentation was updated to reflect the change.

The inspectors used, in part, Nuclear Energy Institute (NEI) 96-07, "Guidelines for 10 CFR 50.59 Implementation," Revision 1, to determine acceptability of the completed evaluations, and screenings. The NEI document was endorsed by the NRC in Regulatory Guide 1.187, "Guidance for Implementation of 10 CFR 50.59, Changes, Tests, and Experiments," dated November 2000. The inspectors also consulted Part 9900 of the NRC Inspection Manual, "10 CFR Guidance for 10 CFR 50.59, Changes, Tests, and Experiments."

This inspection constituted eight samples of evaluations and 19 samples of changes as defined in IP 71111.17-04.

b. Findings

No findings of significance were identified.

.2 Permanent Plant Modifications

a. Inspection Scope

From May 4, 2009 through May 22, 2009, the inspectors reviewed 12 permanent plant modifications that had been installed in the plant during the last three years. This review included in-plant walkdowns for portions of the Unit 2/3 emergency diesel generator, crib house, station blackout diesel, Unit 2 standby liquid control system, Unit 1 and 2/3 diesel fire pumps, and the alternate service water connection to the fire water system. The modifications were selected based upon risk significance, safety significance, and complexity. The inspectors reviewed the modifications selected to determine if:

- the supporting design and licensing basis documentation was updated;
- the changes were in accordance with the specified design requirements;
- the procedures and training plans affected by the modification have been adequately updated;
- the test documentation as required by the applicable test programs has been updated; and
- post-modification testing adequately verified system operability and/or functionality.

The inspectors also used applicable industry standards to evaluate acceptability of the modifications. The list of modifications and other documents reviewed by the inspectors is included as an Attachment to this report.

This inspection constituted 12 permanent plant modification samples as defined in IP 71111.17-04.

b. Findings

(1) Diesel-Driven Fire Pump Discharge Valve Found Out of Position

Introduction: A finding of very low safety significance and associated Non-Cited Violation (NCV) of License Conditions 2.E and 3.G for Units 2 and 3, respectively, was identified by the inspectors for the failure to provide two diesel-driven fire pumps to maintain the required water flow during water suppression system operation as required by Section 2.4.1.1 of the Fire Hazards Analysis (FHA). Specifically, the Unit 1 fire pump discharge valve was found closed rendering the pump inoperable.

Description: On May 13, 2009, operators were performing a surveillance on the Unit 1 fire pump per Procedure DFPS 4123-07, "Unit 1 Fire Pump Capacity Check." The operators closed the fire pump discharge valve 1-4199-109 per Step I.32 of the procedure. Shortly thereafter the operators noticed an oil leak on the oil line going into the bottom of the turbo charger. At that point the operators declared that the surveillance had failed, exited the procedure, and recommended that the oil leak be repaired. Work Order 1235919 was generated to repair the oil leak. The oil leak repair

was completed and the Unit 1 diesel-driven fire pump was successfully run and the pump was declared operable on May 19, 2009.

The inspectors found the Unit 1 diesel-driven fire pump discharge valve 1-4199-109 in the closed position on May 21, 2009. Valve 1-4199-109 controls the flow of water from the Unit 1 diesel-driven fire pump to the station fire protection main yard loop. The main yard loop is dedicated exclusively to providing water to the station's fire protection system. When valve 1-4199-109 was closed the Unit 1 diesel-driven fire pump could not supply water to the fire protection main yard loop.

Step I.57 of Procedure DFPS 4123-07 would have required the operators to open and lock valve 1-4199-109. However, this step was not performed because the procedure was stopped upon discovery of the oil leak and was not resumed upon completion of repairs. There was ineffective communication between the group responsible for conducting the surveillance procedure, the group performing the maintenance, and the operators who returned the pump to service, to ensure the pump discharge valve was in its correct position prior to declaring the pump operable.

The TRM 3.7.i.A.1 required that if one fire pump or water supply system was inoperable that it be restored to operable status within seven days. When the Unit 1 diesel-driven fire pump was repaired and successfully run it was declared operable on May 19, 2009. This was six days after the pump was declared inoperable and therefore the operators believed that the TRM requirement was satisfied. However, valve 1-4199-109 remained in the closed position until discovered by the inspectors on May 21, 2009, eight days after being declared inoperable. Upon discovery of the valve in the locked position, the licensee repositioned the valve in the correct locked open position and initiated Action Requests (AR) 922581 and 922585.

During the entire period the Unit 1 pump was inoperable, the Unit 2/3 diesel-driven fire pump remained operable to provide water to the station's fire protection system, if required, such that the fire protection system was capable of performing its function.

Analysis: The inspectors determined that the failure to properly restore the Unit 1 diesel-driven fire pump to an operable condition within seven days was contrary to TRM 3.7.i.A.1 and was a performance deficiency.

The finding was determined to be more than minor because the failure to restore the Unit 1 diesel-driven fire pump to an operable condition within seven days was associated with the Mitigating Systems cornerstone attribute of Protection Against External Factors (Fire) and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, the failure to provide the two required fire pumps could result in a failure of the station's water based fire protection system should the Unit 2/3 fire pump fail to provide adequate water pressure/supply when required.

In accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 - Initial Screening and Characterization of Findings," Table 3b, the inspectors determined the finding degraded the fire protection defense-in-depth strategies. Therefore, screening under IMC 0609, Appendix F, "Fire Protection Significance Determination Process," was required. The inspectors assigned a

LOW degradation rating to the finding in Step 1.2, because the performance of the system was not affected by the closed valve as the Unit 2/3 diesel-driven fire pump remained operable to provide water to the station's fire protection system, if required. Additionally, the Unit 1 diesel-driven fire pump was out-of-service for only eight days. The inspectors determined that the finding was of very low safety significance (i.e., Green) in Task 1.3.1 because of the LOW degradation rating.

Additionally, the diesel-driven fire pumps are credited as mitigating systems to provide an alternate source of water to the isolation condenser. As a result, the inspectors also evaluated the finding using IMC 0609, Attachment 0609.04. The inspectors determined that a Phase 2 screening was necessary based on Table 4a because the finding represented an actual loss of one non-Technical Specification train of equipment designated as risk significant per 10 CFR 50.65, "Maintenance Rule," for greater than 24 hours. The finding was screened using Attachment 1 to IMC 0609, Appendix A, "Determining the Significance of Reactor Inspection Findings for At-Power Situations." The inspectors reviewed the site specific risk-informed inspection notebook and pre-solved table and determined that the finding was of very low safety significance (i.e., Green) in Phase 2.1 for duration of 3 to 30 days with one diesel-driven fire pump out-of-service.

This finding has a cross-cutting aspect in the area of human performance, work control because the licensee did not properly plan and coordinate activities consistent with nuclear safety. Specifically, the licensee failed to restore the Unit 1 diesel-driven fire pump to an operable condition within seven days as required by TRM 3.7.i.A.1, because of ineffective communication between the group responsible for conducting the surveillance procedure, the group performing the maintenance, and the operators who returned the pump to service. This ineffective communication led to the failure to ensure the correct position of the pump discharge valve prior to declaring the pump operable. [H.3(b)]

Enforcement: License Conditions 2.E and 3.G for Units 2 and 3, respectively, required the licensee to implement and maintain in effect all provisions of the approved fire protection program as described in the Updated Final Safety Analysis Report (UFSAR) and as approved through Safety Evaluation Reports. Section 9.5.1 of the UFSAR stated that the design of the fire protection system was described in the Fire Hazards Analysis (FHA). Section 2.4.1.1 of the FHA stated that two automatically controlled diesel-driven fire pumps were provided to maintain the required water flow during manual or automatic water suppression system operation. The TRM 3.7.i.A.1 allowed one diesel-driven fire pump to be inoperable for seven days.

Contrary to the above, between May 20 and May 21, 2009, the licensee failed to meet Section 2.4.1.1 of the FHA and TRM 3.7.i.A.1, because two automatically controlled diesel-driven fire pumps were not provided to maintain the required water flow when the Unit 1 diesel-driven fire pump was inoperable for greater than seven days. Specifically, the licensee declared the Unit 1 diesel-driven fire pump inoperable on May 13 and declared it operable on May 19, 2009, however, the discharge valve was in the closed position such that it could not provide the required water flow during manual or automatic water suppression system operation. Because this violation was of very low safety significance and it was entered into the licensee's corrective action program as ARs 922581 and 922585, this violation is being treated as an NCV, consistent with

Section VI.A.1 of the NRC Enforcement Policy (NCV 05000237/2009006-01; 05000249/2009006-01).

4. OTHER ACTIVITIES (OA)

4OA2 Identification and Resolution of Problems

.1 Routine Review of Condition Reports

a. Inspection Scope

From May 4, 2009 through May 22, 2009, the inspectors reviewed Corrective Action Process documents that identified or were related to 10 CFR 50.59 evaluations and permanent plant modifications. The inspectors reviewed these documents to evaluate the effectiveness of corrective actions related to permanent plant modifications and evaluations for changes, tests, or experiments issues. In addition, corrective action documents written on issues identified during the inspection were reviewed to verify adequate problem identification and incorporation of the problems into the corrective action system. The specific corrective action documents that were sampled and reviewed by the inspectors are listed in the attachment to this report.

b. Findings

No findings of significance were identified.

4OA6 Meetings

.1 Exit Meeting Summary

On May 22, 2009, the inspectors presented the inspection results to Mr. T. Hanley, and other members of the licensee staff. The licensee personnel acknowledged the inspection results presented. The inspectors confirmed that proprietary material was reviewed during the inspection and was either returned to the licensee staff or will be handled in accordance with NRC policy on proprietary information.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

T. Hanley, Site Vice President
C. Byers, Design Engineering
G. Howard, Rapid Response – Engineering
J. Koach, Design Engineering
D. Lee, Design Engineering
J. Lizalek, Nuclear Oversight
T. Loch, Senior Manager Design Engineering
S. Mattson, Maintenance Superintendent
J. Reda, Mechanical/Structural Design Manager
J. Sipek, Engineering Director
J. Strasser, Design Engineering
S. Taylor, Regulatory Assurance Manager

Nuclear Regulatory Commission

R. Daley, Chief, Branch 3, DRS
C. Phillips, Senior Resident Inspector, Dresden

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Opened and Closed

05000237/249/2009009-01 NCV Diesel-Driven Fire Pump Discharge Valve Found Out of Position

Discussed

None

LIST OF DOCUMENTS REVIEWED

The following is a list of documents reviewed during the inspection. Inclusion on this list does not imply that the NRC inspectors reviewed the documents in their entirety, but rather, that selected sections or portions of the documents were evaluated as part of the overall inspection effort. Inclusion of a document on this list does not imply NRC acceptance of the document or any part of it, unless this is stated in the body of the inspection report.

CALCULATIONS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
BSA-D-00-01	Dresden 2/3 ECCS Room Temperature Response with Loss of Room Cooler	1
DRE06-0001	NPSH (NPIP) for EDG Diesel Fuel Oil Transfer Pump	0
DRE07-0032	Unit 2 – Reactor Building MCC Thermal Overload Relay Heater Sizing for AC Loads at Post LOCA Temperature	0
DRE-3-1501-27B	AC Motor Operated Gate Valve Calculation – 3-1501-27B	6
NED-I-EIC-0122	Diesel Fuel Oil Storage Tanks Level Loops Error Analysis	0
NUC-60	Air Accumulator System Analysis to Ensure Operability in LOCA for 1(2)-0203-3AB at Quad Cities and 2(3)-0203-3AB	1

CORRECTIVE ACTION PROGRAM DOCUMENTS REVIEWED

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
AR 00516467	U2/3 Diesel Fire Pump Flow is Low Out of Spec	August 3, 2006
AR 00571424	Target Rock Accumulator Does Not Meet T.S. Bases Parameter	December 20, 2006
AR 00575431	LP Heater Bay EQ Zones List Different Parameters	January 04, 2007
AR 00578451	DG Frequency Tolerance Band Not Reflected in Calculations	January 12, 2007
AR 00580250	HPCI Room Cooler Calculation Issues	January 18, 2007
AR 00600850	UFSAR Not Revised After Old Mods	March 8, 2007
AR 00619989	2A EDG Start Air Compressor Repl Not Completed per Schedule	April 21, 2007
AR 00742145	Unit 2 ESS Inverter Panel Left Muffin Cooling Fan not Working	February 27, 2008
AR 00894615	MOD/5059 FASA Basis of DFP Day Tank Level Must be Formalized	March 18, 2009

AR 00916607	Errors in Procedure Change 50.59 Screening 2008-0145	May 6, 2009
AR 00917349	Calculation Error Regarding Target Rock Accumulator Volume	May 8, 2009
AR 00917578	Correction Needed for DOA 6900-01	May 07, 2009
AR 00919110	NRC Concern – EDG Fuel Oil Storage Tank Alarm Setpoint Margin	May 08, 2009
AR 00919152	NRC 5059 ID Enhancement – FP DFP Valve Status	May 13, 2009
AR 00920166	Incomplete Basis for Inverter Cooling Fan OOS Screening	May 13, 2009
AR 00922581	NRC Identified U1 DFP Discharge Valve Closed	May 21, 2009
AR 00922585	U1 DFP Inoperable for Greater than 7 Days	May 21, 2009
AR 00922715	Incomplete Engineering Review of IR 575431	May 20, 2009
AR 00922719	NRC MOD Concern – Schematic Diagram Discrepancy	May 21, 2009

DRAWINGS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
12E-3440, Sheet 3	Schematic Diagram – LPCI/Containment Cooling System MOVs	X
12E-3530	Schematic Diagram High Pressure Coolant Injection Auxiliary Valves	V, W
F-434	Arrangement of Fire Protection System	S
M-23	Diagram of Fire Protection Piping: Sheet 1	AJ
M-23	Diagram of Fire Protection Piping: Sheet 5	Q
M-41	Diagram of Turbine and Diesel Oil Piping	AD
M-947	Diagram of Fire Pump Diesel Piping	N

EQUIVALENCY EVALUATIONS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
00059162	Actuator, Valve, Limitorque SMB-00, Less Motor	October 29, 2007
00062225	Valve, Gate, 16 Inch, Class 300, Butt Weld, Bolted Bonnet, ASTM A216 GR WCB	August 15, 2008

10 CFR 50.59 EVALUATIONS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
2006-08-001	EC356823 – Replacement of Steam Dryer – U3	November 3, 2006
2006-09-001	Change Boron 10 Enrichment in Standby Liquid Control Tank	September 2, 2006
2006-12-001	UFSAR Change 06-028	December 29, 2006

EQUIVILENCY EVALUATIONS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
2007-01-001	Temporary Configuration Change to Install an Enclosure Over SBLC Leak at TS 2-1155 Bushing	January 19, 2007
2007-01-003	Unit 2 Digital EHC Mod	May 22, 2007
2007-03-001	Force the 2A GSC LOOP Seal Valve (LCV 2-5404A) Full Open	August 2, 2007
2007-03-002	EC 367256, Changes to MOV Stroke Times for Main Steam Drain, RWCU, and HPCI Valves	September 19, 2007
2008-04-001	EC 372901, Cumulative Effects of Foreign Material on U3 RPV	November 18, 2008

10 CFR 50.59 SCREENINGS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
2006-0299	2/3 Diesel Fire Pump Operability	October 3, 2006
2007-0048	Change to Technical Specification Bases B 3.5.1 Concerning Target Rock Valve Accumulator Capacity	January 29, 2007
2007-0118	Thermal Overload Setpoint Change for Unit 2 SBO Diesel Generator Lube Oil Circulating Pump 2-6620-8B Motor Replacement	April 2, 2007
2007-1119	High Pressure Coolant Injection (HPCI) System Standby Operation	April 4, 2007
2007-1252	High Pressure Coolant Injection (HPCI) Minimum Flow Bypass Motor Operated Valves (MOV) 2(3)-2301-14 Open/Close Torque Switch Modification	September 6, 2007
2008-0020	Re-Orient the U2/3 EDG Engine AC Continuous Lube Oil Pump/Motor (2/3-6657)	February 25, 2008
2008-0039	Failure of Unit 2(3) 24/48 VDC Power Supply	February 18, 2007
2008-0041	MOV Stroke Time Increases for Isolation Condenser Valves	February 19, 2008
2008-0045	LPCI Torus Spray Outboard Isolation MOVs 2(3)-1501-18A/B. Revise Open/Close Schemes	February 29, 2008
2008-0056	Install Isolation Condenser Return Header Vent – U3	March 3, 2008
2008-0126	Batch Procedure/TRM Change List	May 12, 2008
2008-0145	Emergency Shutdown of 2(3) SBO Diesel Generator	June 4, 2008

10 CFR 50.59 SCREENINGS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
2008-0176	Install Lining in Underground Fire Protection Piping, Add Isolation Valve	July 8, 2008
2008-0237	Issue Calculation Optima2-TR021DR-LOCA Rev. 3.0 and Affected Documents	August 28, 2008
2008-0254	Installation of SCRAM Bypass Jumpers	September 24, 2008
2008-0346	Setpoint Change for Unit 2/3 DFP Day Tank Level Switches	December 11, 2008
2008-0351	Unit 2 ESS Inverter Fan Out-Of-Service	December 10, 2008
2009-0048	Install Alternate Service Water Pipe-Outdoor Portion	April 29, 2009
2009-0064	Replace HPCI Turbine High Exhaust Pressure Switches 2(3)-2368-A and B	February 20, 2009

MODIFICATIONS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
EC 350135	Change Boron 10 Enrichment in Standby Liquid Control Tank	November 27, 2006
EC 357212	Replace Existing 3" Velan Gate Valve (Minus the Operator) with an Equivalent 2-1/2" Velan Valve (Minus the Operator)	March 5, 2009
EC 357339	Revise Setpoints and Tolerances for EDG Fuel Oil Storage Tanks Level Instruments	December 28, 2006
EC 360611	Install Digital EHC (DEHC) Upgrade – U2	July 30, 2008
EC 361194	Change Setpoint on the SBO DG Starting Air Compressors - U2	November 3, 2006
EC 361771	480 V MCC Westinghouse Bucket Replacement for MCC 29-8 1C, 2C, 2B, 1D, 2D and 3D	September 30, 2008
EC 363701	Air Accumulator System Analysis to Ensure Operability in LOCA for 2(3)-0203-3AB for Dresden	December 12, 2006
EC 365667	Delete the Internal Disconnect Switch at Diesel Fire Pump (DFP) Panel 2/3-2223-52	April 30, 2007
EC 366256	Add Interposing Relay for Unit 3 Diesel Generator Output Breaker	January 28, 2008
EC 369320	3-1501-27B Install 4 Rotor Limit Switch, Add TS Open Protection, and Change Close Scheme to LS Control	April 23, 2008

OTHER DOCUMENTS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
	SBO Diesel Generator Set Test	September 29, 1993
	TS Bases Revision #35	March 14, 2007
00868850-03	FASA-NRC Triennial Modification and	March 20, 2009

MODIFICATIONS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
TR-1023488	10CFR50.59 Inspection Guideline on Licensing Digital Upgrades	Revision 1
UFSAR-07-004	Revise UFSAR Table 3.11-2	February 21, 2007
WO 00319744	MOV Diagnostic & Limitorque Surveillance 3-1501-27B	April 22, 2008
WO 00945923	3-1501-27B Install 4 Rotor Lim Switch & Change to LS Control	April 22, 2008
WO 01131454-01	D1 AN TSTR Diesel Fire Pump Flow Capacity Test	May 7, 2009
WO 01235919-01	Oil Leak on U1 DFP Turbo Oil Line	May 14, 2009

PROCEDURES

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
DFPS 4123-05	2/3 Diesel Fire Pump Operability	34
DFPS 4123-07	Unit 1 Fire Pump Capacity Check	38
DOP 0500-10	Installation of SCRAM Bypass Jumpers	01
DOP 2300-01	High Pressure Coolant Injection (HPCI) System Standby Operation	35
OP-AA-108-103	Locked Equipment Program	2

LIST OF ACRONYMS USED

AC	Alternating Current
ADAMS	Agencywide Documents Access and Management System
AR	Action Request
CFR	Code of Federal Regulations
DFP	Diesel Fire Pump
DRP	Division of Reactor Project
DRS	Division of Reactor Safety
EC	Engineering Change
ECCS	Emergency Core Cooling System
EDG	Emergency Diesel Generator
ESS	Essential Service System
FASA	Functional Area Self-Assessment
FHA	Fire Hazards Analysis
HPCI	High Pressure Coolant Injection
IMC	Inspection Manual Chapter
LLC	Limited liability Company
LOCA	Loss of Coolant Accident
LP	Low Pressure
LS	Limit Switch
MCC	Motor Control Center
MOV	Motor-Operated Valve
NCV	Non-Cited Violation
NEI	Nuclear Energy Institute
NPSH	Net Positive Suction Head
NRC	U.S. Nuclear Regulatory Commission
PARS	Public Available Records System
RPV	Reactor Pressure Vessel
RWCU	Reactor Water Cleanup
SBLC	Standby Liquid Control
SBO	Station Blackout
SDP	Significance Determination Process
TRM	Technical Requirements Manual
TS	Technical Specification
UFSAR	Updated Final Safety Analysis Report
VDC	Volts Direct Current