March 30, 2007

Mr. Christopher M. Crane
President and Chief Nuclear Officer
Exelon Nuclear
Exelon Generation Company, LLC
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: DRESDEN NUCLEAR POWER STATION, UNIT 2
NRC SUPPLEMENTAL INSPECTION REPORT 05000237/2007007(DRP)

Dear Mr. Crane:

On February 22, 2007, the U. S. Nuclear Regulatory Commission (NRC) completed a supplemental inspection using Inspection Procedure 95001, "Inspection for One or Two White Inputs in a Strategic Performance Area," at your Dresden Nuclear Power Station. The enclosed report documents the inspection findings which were discussed on February 22, 2007, with Mr. D. Bost and other members of your staff.

In October 2006, you reported the Unit 2 Scrams with Loss of Normal Heat Removal performance indicator as White in the third quarter of 2006. This represented a reduction in safety margin and adversely affected the Initiating Events cornerstone. The reduced safety margin associated with this performance indicator warranted a supplemental NRC inspection and assessment of your actions to improve performance in the Initiating Events cornerstone of the Reactor Safety Strategic Performance Area.

Three reactor scrams within 12 quarters resulted in the performance indicator crossing the Green/White threshold. These included an automatic scram on April 24, 2004, due to an induced main steam low pressure signal, an automatic scram on March 24, 2005, due to a main steam high flow signal and an automatic scram on July 4, 2006, due to a main steam high flow signal that actuated the closure of the main steam isolation valves.

The objectives of this inspection were to provide assurance that: (1) the root causes and contributing causes of risk significant performance issues were identified, (2) the extent of condition and extent of cause of the issues were identified, and (3) your corrective actions were sufficient to address the root causes and contributing causes so that recurrence is prevented.

Based on the results of this inspection, no findings of significance were identified and we concluded that you understood the root causes and contributing causes of the issues, that you identified the extent of condition and extent of cause of the issues, and that your corrective actions were sufficient to address the causes and to prevent recurrence of the issues.

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Sincerely,

/RA/

Mark A. Satorius, Director
Division of Reactor Projects

Docket No. 50-237
License No. DPR-19

Enclosure: Inspection Report 05000237/2007007
w/Attachment: Supplemental Information

cc w/encl: Site Vice President - Dresden Nuclear Power Station
Dresden Nuclear Power Station Plant Manager
Regulatory Assurance Manager - Dresden
Chief Operating Officer
Senior Vice President - Nuclear Services
Senior Vice President - Mid-West Regional Operating Group
Vice President - Mid-West Operations Support
Vice President - Licensing and Regulatory Affairs
Director Licensing - Mid-West Regional Operating Group
Manager Licensing - Dresden and Quad Cities
Senior Counsel, Nuclear, Mid-West Regional Operating Group
Document Control Desk - Licensing
Assistant Attorney General
Illinois Emergency Management Agency
State Liaison Officer
Chairman, Illinois Commerce Commission

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Vice President - Licensing and Regulatory Affairs
Director Licensing - Mid-West Regional Operating Group
Manager Licensing - Dresden and Quad Cities
Senior Counsel, Nuclear, Mid-West Regional Operating Group
Document Control Desk - Licensing
Assistant Attorney General
Illinois Emergency Management Agency
State Liaison Officer
Chairman, Illinois Commerce Commission

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No:	50-237
License No:	DPR-19
Report No:	05000237/2007007(DRP)
Licensee:	Exelon Generation Company, LLC
Facility:	Dresden Nuclear Power Station, Unit 2
Location:	Morris, IL 60450
Dates:	February 12 through February 22, 2007
Inspector:	D. Meléndez-Colón, Reactor Engineer, Region III
Approved by:	M. Ring, Chief Branch 1 Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000237/2007007(DRP); 02/12/2007-02/22/2007; Exelon Generation Company, Dresden Nuclear Power Station, Unit 2; Supplemental Inspection 95001 - Scrams with Loss of Normal Heat Removal White Performance Indicator.

This report covers a supplemental inspection performed by a Region III Reactor Engineer in accordance with Inspection Procedure 95001, “Inspection for One or Two White Inputs in a Strategic Performance Area.” There were no findings as a result of this inspection. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

Cornerstone: Initiating Events

The U.S. Nuclear Regulatory Commission performed this supplemental inspection in accordance with Inspection Procedure 95001, “Inspection for One or Two White Inputs in a Strategic Performance Area,” to assess the licensee’s evaluation associated with a White Scrams with Loss of Normal Heat Removal Performance Indicator in the Initiating Events cornerstone.

Based on the inspector’s review of the licensee’s root cause evaluations for the three reactor scrams and the licensee’s regulatory and self-assessment evaluations of all three events, the inspector concluded that the licensee adequately conducted the root cause evaluations to a level of detail commensurate with the significance of the problems. The evaluations were determined to be adequate and followed a structured approach for performing such reviews. The licensee’s planned corrective actions, if properly implemented, are sufficient to adequately address each of the identified root and contributing causes.

While the root cause evaluations were generally thorough, two observations were identified. The licensee did not document the conclusions regarding the excess vibrations on the panel for the 2 ‘A’ electro-hydraulic control system pressure regulator. The troubleshooting team determined that the vibrations did not contribute to the scram on March 24, 2005, but no documents were found to support this conclusion. Also, the extent of condition evaluation for the scram on July 4, 2006, considered the inboard and outboard air operated MSIVs for both Unit 2 and Unit 3, but did not consider any other air operated valves in the units.

A. Inspector-Identified and Self-Revealed Findings

No findings of significance were identified.

B. Licensee-Identified Violations

None.

REPORT DETAILS

01 INSPECTION SCOPE

A supplemental inspection was performed to assess the licensee's root cause evaluation associated with the Unit 2 Initiating Events Cornerstone performance indicator for Scrams with Loss of Normal Heat Removal which exceeded the Green/White threshold in the third quarter of 2006. The three reactor scrams which caused this threshold to be exceeded are described below:

- An automatic reactor scram occurred on April 24, 2004, due to an induced main steam low pressure signal that actuated the closure of the main steam isolation valves. Closure of the main steam isolation valves caused a loss of the normal heat removal path to the main condenser. The induced main steam low pressure signal was attributed to reduced steam drain flows which led to water accumulation in the main steam piping during low power operations. A planned main turbine trip was executed at low power in preparation for a planned maintenance outage. The turbine trip and subsequent turbine control valve closure resulted in the rapid movement of the water slug. The movement of the water slug induced a low pressure condition in main steam piping upstream of the main turbine stop valves. The induced low pressure condition was detected by main steam line low pressure switches which provided a signal to close the main steam isolation valves.

- An automatic reactor scram occurred on March 24, 2005, due to a main steam high flow signal that actuated the closure of the main steam isolation valves. The main steam high flow signal was attributed to a failure of the ‘A’ electrohydraulic control (EHC) pressure regulator. The regulator transient caused the turbine control valves to ramp open and opened approximately 2 ½ bypass valves; this resulted in increased steam line flow and a Group 1 isolation on “main steam line flow high.” Further troubleshooting determined that the cause of the Group 1 isolation and subsequent scram was the fracture of the terminal 4 connection wire to the setpoint potentiometer causing intermittent connection of the phasing on the ‘A’ EHC pressure regulator pressure setpoint potentiometer.

- An automatic reactor scram occurred on July 4, 2006, due to a main steam line high flow signal that actuated the closure of the main steam isolation valves. The main steam high flow was attributed to the closure of the 1 ‘A’ MSIV. The ¼ inch air supply tubing to the 1 ‘A’ inboard MSIV pilot valve separated from its fitting due a loose nut-to-tubing connection causing the pilot valve to bleed down and MSIV 1 ‘A’ to close.

This supplemental inspection was performed in accordance with Inspection Procedure 95001, “Inspection for One or Two White Inputs in a Strategic Performance Area.” The following inspection results are organized by the specific inspection requirements of Inspection Procedure 95001 which are noted in italics in each section.

02 EVALUATION OF INSPECTION REQUIREMENTS

02.01 Problem Identification

a. Determine that the evaluations identify who (i.e., licensee, self-revealing, or NRC), and under what conditions the issues were identified.

The April 24, 2004, scram was credited as a Scram with Loss of Normal Heat Removal performance indicator occurrence due to the induced main steam line low pressure signal due to the transport of a water slug causing closure of the main steam isolation valves and the subsequent reactor scram.

The March 24, 2005, scram was credited as a Scram with Loss of Normal Heat Removal performance indicator occurrence due to the fracture of the terminal 4 connection wire to the setpoint potentiometer causing intermittent connection of the phasing on the 2 'A' pressure setpoint potentiometer. This intermittent connection caused the turbine control valves to ramp open and opened approximately 2 ½ bypass valves; this resulted in increased steam line flow and a Group 1 isolation on "main steam line flow high."

The July 4, 2006, scram was credited as a Scram with Loss of Normal Heat Removal performance indicator occurrence due to a main steam line high flow signal that actuated the closure of the main steam isolation valves. The main steam high flow was attributed to the closure of the 1 'A' MSIV. The ¼ inch air supply tubing to the 1 'A' inboard MSIV pilot valve separated from its fitting due a loose nut-to-tubing connection causing the pilot valve to bleed down and MSIV 1 'A' to close.

All of the scrams were self-revealing events.

b. Determine that the evaluations document how long the issues existed, and prior opportunities for identification.

The Dresden Unit 2 Scrams with Loss of Normal Heat Removal performance indicator exceeded the Green/White threshold as reported in the third quarter 2006 performance indicator submittal.

The April 24, 2004, scram was a result of an induced main steam line low pressure signal due to the transport of a water slug causing main steam isolation valve closures and the subsequent reactor scram. The condition existed for less than two hours while the plant was held at low power which allowed for the build-up of water droplets from steam condensing in the main steam lines. Although it was not confirmed, it is believed that foreign material limited flow in the drain line. No prior opportunity for identification was identified.

The March 24, 2005, scram occurred due to an intermittent connection on the 2 'A' pressure setpoint potentiometer. The root cause was initially indeterminate. The most probable cause was attributed to an increase in resistance between pins 13 and 22 of the A54 card.

Three events exhibiting similar indications to the March 24, 2005, scram took place in late 2002, but did not involve scrams. Attempts to find the failed component were not successful, failure analysis was inconclusive, and the failed component was not identified. In June 2005, additional transients were experienced on the 2 'A' EHC pressure regulator and additional troubleshooting was undertaken. Further investigation and failure analysis determined the root cause to be the fracture of the terminal 4 connection wire to the setpoint potentiometer causing intermittent connection of the phasing on the 2 'A' pressure setpoint potentiometer. There were no prior opportunities for identification as the resistance problem was intermittent and confined to a small component part (connection wire).

The July 4, 2006, scram was the result of a main steam line high flow signal. The main steam high flow was attributed to the closure of the 1 'A' MSIV. The air supply tubing to the 1 'A' MSIV pilot valve separated from the fitting causing the pilot valve to bleed down and MSIV 1 'A' to close. The last time work was performed on the 1 'A' MSIV was in October 2003. A review of the work orders for this work showed that there were no work instructions on proper tubing assembly located within the package and that the post maintenance test (PMT) for this work order did not have any tasks to inspect for air leakage from the manifold block or from fittings.

A review to determine if drywell pressure trending might have proactively discovered degradation of the failed connection prior to the inadvertent closure of the 1 'A' MSIV was performed. The review concluded that the degraded condition of the tubing connection caused drywell pressure parameters to change approximately three hours prior to failure. Due to the short degradation period, trending would not have been able to proactively discover the degradation/failed drywell pneumatic tubing connection prior to the inadvertent closure of the 1 'A' MSIV.

c. Determine that the evaluations document the plant-specific risk consequences (as applicable) and compliance concerns associated with the issues.

For all the scrams reviewed the inspectors determined that systems responded as designed and no human performance errors complicated the event response.

The licensee's risk analysis was considered to be acceptable. No concerns were identified.

02.02 Root Cause, Extent of Condition, and Extent of Cause Evaluation

a. Determine that the problems were evaluated using a systematic method(s) to identify root cause(s) and contributing cause(s).

The licensee performed a root cause evaluation for each of the three reactor scrams which caused the Scrams with Loss of Normal Heat Removal performance indicator to cross the Green/White threshold. A self-assessment was also performed to determine if any potential common causes for the three events existed. These root cause evaluations and self-assessment report are listed below.

- Root Cause Report 216768-07, “U2 Group I Isolation and Subsequent Reactor Scram Resulting from Inadequate Drainage of the Main Steam Lead System”

- Root Cause Analysis 316625-02, “Dresden Unit 2 Group I Isolation and Subsequent Automatic Reactor Scram”

- Root Cause Investigation Report 506230, “Dresden Unit 2 Scrammed Due to Main Steam Isolation Valve (MSIV) Closure Resulting from a Failed Tube Connection on the Pneumatic Supply to the 1 ‘A’ MSIV Solenoid Manifold Pilot Block”

- Self-Assessment Report 575408-04, “NRC 95001 Supplemental Inspection - White Performance Indicator for Scrams with Loss of Normal Heat Removal”

The inspector concluded that the licensee’s root cause evaluations were conducted to a level of detail commensurate with the significance of the problem. The inspector reviewed the extent of condition evaluation for the three scram events and identified that the extent of condition evaluation for the scram on March 25, 2005, did not document the conclusions regarding the excess vibrations on the panel for the 2 ‘A’ electro-hydraulic control (EHC) system pressure regulator. The licensee’s troubleshooting team determined that the vibrations did not contribute to the scram, but no documents were found to support this conclusion.

The three root cause evaluations were conducted using a structured methodology to evaluate the root causes and contributing causes of the events. These included event and causal factors analyses, failure modes and effects analyses, human performance contribution determinations, Kepner-Tregoe analysis, and TapRoot methodology. The documented root cause evaluations adequately described the methods used to identify the root causes for the events.

The inspector reviewed the methods employed and concluded that the licensee had used a formal, structured approach to perform the root cause evaluations to identify root causes and contributing causes.

b. Determine that the root cause evaluations were conducted to a level of detail commensurate with the significance of the problems.

The inspector determined that the three root cause evaluations were performed with sufficient detail and analysis to support the conclusions reached. The root cause evaluations adequately considered programmatic weaknesses, human error, procedure and training adequacy, operating experience, and external events. In addition, each of the three root cause evaluations adequately incorporated internal and external operating experience into the scope of review. The analysis techniques chosen were considered to be appropriate to each particular event and causal factor identified. The causal factors were then used to identify the root causes and contributing causes.

The license’s root cause evaluations identified the individual root causes for each event. The April 24, 2004, event was most probably the result of inadequate drainage of the main steam line drain system. The March 24, 2005, event was attributed to a fracture of

the Terminal 4 connection wire to the setpoint potentiometer which caused an intermittent connection of the phasing on the 2 'A' pressure setpoint potentiometer.

The July 4, 2006, event was attributed to two potential failure modes: (1) inadequate tightening of the Crawford-Swagelok nut causing inadequate compression of the ferrule to the tubing to the 1 'A' main steam isolation valve or (2) the existing tubing to the 1 'A' main steam isolation valve was undersized. These potential failure modes caused low mechanical gripping force between the tube and ferrule.

The inspectors determined that the root cause evaluations were conducted to a level of detail commensurate with the significance of the problem.

c. *Determine that the root cause evaluations include a consideration of prior occurrences of the problem and knowledge of prior operating experience.*

The root cause evaluations for the three reactor scram events did specifically consider prior plant history of similar events or applicable equipment problems and industry operating experience.

Overall, the inspector concluded that the licensee's root cause evaluations properly considered and evaluated prior operating experience.

d. *Determine that the root cause evaluations address the extent of condition and the extent of cause of the problems.*

The inspector concluded that the licensee's root cause evaluations were conducted to a level of detail commensurate with the significance of the problem. The inspector reviewed the extent of condition evaluations for the three scram events and identified that the extent of condition evaluation for the scram on July 4, 2006, considered all of the inboard and outboard air operated MSIVs for both Unit 2 and Unit 3. However, the extent of condition evaluation did not consider any other air operated valves in the units.

No common causes were identified for the three scram events.

e. *Determine that the root cause evaluation, extent of condition and the extent of cause appropriately considered the safety culture components as described in IMC 0305.*

The inspector determined that the root cause evaluation, extent of condition, and the extent of cause appropriately considered the safety culture components as described in IMC 0305. Even though two of the scrams occurred in 2004 and 2005, prior to the NRC's development of the safety culture components in IMC 0305, the licensee addressed safety culture components in the self assessment for the three root cause evaluations. The inspector did not have any concerns with the licensee's conclusions regarding safety culture.

02.03 Corrective Actions

a. *Determine that appropriate corrective action(s) are specified for each root/contributing cause or that there is an evaluation that no actions are/were necessary.*

The inspector reviewed each of the three root cause evaluations and the associated corrective actions. The corrective actions were clearly described and were entered into the licensee's tracking system. The proposed corrective actions were determined to appropriately address the root causes of the events and if properly implemented would address the problems identified within each of the root cause evaluations. For those events where a definitive root cause was not identified, corrective actions were taken to predict and prevent future events. The established corrective actions were verified not to create new or different problems as a result of the corrective actions to be taken.

b. Determine that the corrective actions have been prioritized with consideration of the risk significance and regulatory compliance.

Prioritization of the corrective actions from the root cause evaluations were based on a deterministic approach considering the significance of the problem identified rather than being based on a risk perspective.

The inspector reviewed the prioritization of the corrective actions and verified that actions of a generally higher priority were scheduled for completion ahead of those of a lower priority. No concerns were identified.

c. Determine that a schedule has been established for implementing and completing the corrective actions.

Issue reports were evaluated and corrective actions were identified. All corrective actions for the three scram events have been completed except for the effectiveness review of the training provided to maintenance personnel following the July 4, 2006, scram event. This remaining assignment has a due date of December 29, 2007. No concerns were identified.

d. Determine that quantitative or qualitative measures of success have been developed for determining the effectiveness of the corrective actions to prevent recurrence.

The licensee established an effectiveness review (EFR) to validate the effectiveness of the corrective action plans. The EFR contained qualitative measures of success for validating the corrective actions to prevent recurrence (CAPR). The EFR assignments for the April 24, 2004, and March 24, 2005, scram events have been completed. The EFR assignment for the July 4, 2006, scram event has a due date of December 29, 2007.

03 MANAGEMENT MEETINGS

Exit Meeting Summary

On February 22, 2007, the inspector presented the inspection results to Mr. D. Bost, Site Vice President of the Dresden Nuclear Power Station, and other members of the Dresden staff. The inspector also confirmed that proprietary information was not provided or examined during the inspection.

This meeting also constituted the Regulatory Performance Meeting required per the NRC Action Matrix (contained in NRC Manual Chapter 0305, “Operating Reactor Assessment Program”) for a licensee in the Regulatory Response Column. As discussed in the NRC Assessment Follow-up Letter dated November 8, 2006, Dresden Nuclear Power Station, Unit 2 is in the Regulatory Response Column due to the White performance indicator that was the subject of this inspection.

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

D. Bost, Site Vice President
D. Wozniak, Plant Manager
J. Ellis, Regulatory Assurance Manager
J. Griffin, Regulatory Assurance
V. Earl, Regulatory Assurance
A. Abbasi, Regulatory Assurance
P. Boyle, Mechanical Maintenance
A. Brewer, Component Maintenance Organization
R. Harvey, Maintenance Programs
C. Bowser, Plant Engineering
R. Molenhouse, Maintenance Planning
J. Mourikes, Plant Engineering

Nuclear Regulatory Commission

M. Ring, Chief, Division of Reactor Projects, Branch 1
C. Phillips, Senior Resident Inspector, Dresden
M. Sheikh, Resident Inspector, Dresden

IEMA

R. Schulz, Illinois Emergency Management Agency

LIST OF DOCUMENTS REVIEWED

Issue Report 216768; “U2 Reactor Scram”
Root Cause Report 216768-07; “U2 Group 1 Isolation and Subsequent Reactor SCRAM Resulting from Inadequate Drainage of the Main Steam Lead Drain System”
Licensee Event Report 2004-002-00;”Unit 2 SCRAM Due to Main Steam Isolation Valve Closure and Subsequent Inoperability of the Isolation Condenser”
OE 18537; “Dresden Unit 2 Group 1 Isolation and Subsequent Reactor Scram Resulting from Inadequate Drainage of the Main Steam Lead Drain System”
Nuclear Event Report DR-04-036; “Group 1 Isolation and Subsequent Reactor Scram Resulting from Inadequate Drainage of the Main Steam Lead Drain System”
Issue Report 258376; “NER DR-04-036 S1, Yellow – Main Steam Lead Drainage Inadequate”
Issue Report 216779; “MSIV Failed DOS 250-02”
Issue Report 216787; “U2 Iso Condenser Inoperable (ENS Notification)”
Issue Report 216801; “Open Torque Switch Bypass Not Set per Setpoint Binder”
Issue Report 222785; “Turbine Steam Lead Drain Strainer Not Previously Identified”
Issue Report 280245; “Documentation of Main Steam Drain Line Inspections”
Work Order 700783-01; “CT CV Stroke Length Measurements”
Work Order 700663-01; “CM Inspect/Clean for FME the 4 Turbine MSL Drains”
Work Order 700662-01; “MM Inspect/Clean for FME the 4 Turbine MSL Drains”
Work Order 690860-01; “Replace Local Pressure Gauge. The Needle is Badly Damaged”
Work Order 693148-01; “MM Inspect Orifice and Boroscope Drain Lines for FME”
Engineering Change 350982; “Technical Evaluation of Degraded Main Steam Isolation Valve Belleville Springs Identified During D2R18”
Engineering Change Evaluation 349338, Revision 0; “Unit 2 Scram. 04/24/2004 RCR: 1) Estimation of Droplet Deposition in Turbine Steam Lead During Low Power Operation, 2) Main Steam Lead Drain Line Capacity, and 3) Assessing Slug Water Hammer Pressure”
DGP 01-01; “Unit Startup,” Revision 113
DGP 02-01; “Unit Shutdown,” Revision 86
DGP 01-S1;”Start-Up Checklist,” Revision 81
DGP 02-01; “Unit Shutdown,” Revision 88
DGP 01-01; “Unit Startup,” Revision 115
Issue Report 181498; “Damage to Main Stop Valve #3 Inlet Basket Screen”
Issue Report 183278; “Damage to Main Stop Valve #1 Inlet Basket Screen”
M-345; Diagram of Main Steam Piping; Sheet No. 2; Revision QA
M-12; Diagram of Main Steam Piping; Sheet No. 2; Revision ABI
Service Request 36896; “Predefine Add PMID/RQ: Clean RO 2(3)-3041-05 Including Strainer”
PMRQ 176360-01; “D2 2RFL PM CLN/INSP RO 2-3041-05 & Strainer; Main Steam Leads Drain RO”
PMRQ 176361-01; “D3 2RFL PM CLN/INSP RO 3-3041-05 & Strainer; Main Steam Leads Drain RO”
Issue Report 316625; “U2 Rx, Group 1 Isolation and Scram”
Root Cause Analysis 316625-02; “Dresden Unit 2 Group 1 Isolation and Subsequent Automatic Reactor SCRAM”
Licensee Event Report 237/2005-002; “Unit 2 Group 1 Isolation and Resulting Scram”
OE 20690; “Dresden Grp 1 and SCRAM due to A Pressure Regulator”
Issue Report 382021; “Re-Open Root Cause 316625 (EHC Pressure Regulator)”
Issue Report 316600; “2B RFP Aux Oil Pump Thermals Tripped”

Issue Report 316605; “U2 Turning Gear Oil Pump Didn’t Start”
Issue Report 128661; “Max Combined Flow Limiter Settings”
Work Order 829609-01; “Install Temporary Recorder to Monitor the Primary Regulator”
Work Order 829609-02; “Remove Temporary Recorder to Monitor the Primary Regulator”
Work Order 829609-03; “Install Temporary Recorder to Monitor the Primary Regulator”
TCCP 356093, Revision 001; “Install Temporary Recorder to Monitor the Primary Pressure Regulator Card”
Engineering Change 356093, Revision 001; “Install Temporary Recorder to Monitor the Primary Pressure Regulator Card”
Work Order 794777-01; “IM Install Jumper on EHC SLRC to Bypass ‘A’ Press Control”
Work Order 794777-02; “IM Remove Jumper on EHC SLRC for ‘A’ Press Cntrl Bypass”
Work Order 794266-01; “Troubleshoot Unit 2 ‘A’ EHC Pressure Regulator – U2 Scram”
Work Order 812436-01; “IM Rework Connections for ‘A’ EHC Pressure Reg A54 Card”
Engineering Change 354629, Revision 1; “Evaluation of Operating Limitations to Protect against a Core Flow Runup Transient with the Max Combined Flow Limiter (MCFL) set to 106 percent”
Engineering Change 345758; “Main Steam Hi Flow Setpoint Change to Increase Margin – U2”
Engineering Change 345759; “Main Steam Hi Flow Setpoint Change to Increase Margin – U3”
SIL No. 130; “Main Steam Line Low Pressure Isolation Limit Change”
Issue Report 506230; “Unit 2 Automatically Scrammed on MSIV Closure”
Root Cause Investigation Report 506230; “Dresden Unit 2 Scrammed Due to Main Steam Isolation Valve (MSIV) Closure Resulting from a Failed Tube Connection on the Pneumatic Supply to the 1A MSIV Solenoid Manifold Pilot Block”
Licensee Event Report 237/2006-004-00; “Unit 2 Reactor Scram due to Main Steam Isolation Valve Closure”
OE 23147; “Main Steam Isolation Valve Closure Resulting from Failed Tube Connection on Pneumatic Supply Line (LER 237-06004)”
Nuclear Event Report (NER) DR-06-030; “Main Steam Isolation Valve Closure Resulting from Failed Tube Connection on Pneumatic Supply Line”
Issue Report 556011; “Bad Air Fitting Found During Inspection”
Issue Report 522132; “Implement Corrective Actions from Root Cause Report 506230”
Issue Report 506532; “White PI for Unplanned Scrams with Loss of Heat Sink”
Issue Report 506252; “Reset Generator Reverse Power Relay”
Issue Report 506240; “Following Unit 2 Scram, Received H2/O2 Monitor Failure Alarm”
Issue Report 151288; “Minor Leaks on 3 of 4 MSIVs at the Air Line to Manifold Conn”
Work Order 949250-01; “MM Inspect Inboard MSIVs for Intermixed Pneumatic Fittings”
Work Order 949250-02; “MM Inspect Outboard MSIVs for Intermixed Pneumatic Fittings”
Work Order 949250-03; “VMM 3-0203-1A Replace Bad Air Fitting Found During Insp”
Work Order 97119030-01; “MM-D2 2RFL PM INSP 203-1B MSIV AO & PRFRM AVCO MNFLD ASM SU”
Work Order 97122560-01; “MM-D3 2RFL PM INSP 203-1C MSIV AO & PRFRM AVCO MNFLD ASM SU”
Work Order 97122558-01; “MM-D3 2RFL PM INSP 203-1B MSIV AO & PRFRM AVCO MNFLD ASM SU”
Work Order 97122578-01; “VM D3 2RFL PM INSP 203-2A MSIV AIR OP/AVCO MNFLD ASSY SURV”
Work Order 97099227-01; “VMM D2 2RFL PM INSP 203-2B MSIV AIR OP/AVCO MNFLD ASSY SURV”
Work Order 97122581-01; “MM D2 2RFL PM INSP 203-2B MSIV AIR OP & PRFRM AVCO MNFLD AS”

Work Order 97099237-01; VMM D2 2RFL PM INSP 203-2D MSIV AIR OP/AVCO MNFLD ASSY SURV"
Work Order 97122587-01; "VM D2 2RFL PM INSP 203-2D MSIV AIR OP & PRFRM AVCO MNFLD AS"
Work Order 97099213-01; "VMM D2 2RFL PM INSP 203-2A MSIV AIR OP/AVCO MNFLD ASSY SURV"
Work Order 97119037-01; "MM-D2 2RFL PM INSP 203-1C MSIV AO & PRFRM AVCO MNFLD ASM SU"
Work Order 97122569-01; "MM-D3 2RFL PM INSP 203-1D MSIV AO & PRFRM AVCO MNFLD ASM SURV"
Work Order 95014790-01; "MM-D2 2RFL PM INSP 203-1A MSIV AO &PRFRM AVCO MNFLD ASM SU"
Work Order 97122542-01; "MM-D3 2RFL PM INSP 203-1A MSIV AO & PRFRM AVCO MNFLD ASM SU"
Work Order 949249-01; "Inspect Inboard MSIVs for Intermixed Pneumatic Fittings"
Work Order 949249-02; "Inspect Outboard MSIVs for intermixed Pneumatic Fittings"
Work Order 949249-03; "MM Perform Correction to Findings of Task 01"
Issue Report 588604, "NOS IDS CHECK-IN SELF-ASSESSMENT FOR NRC INSPECTION UNTIMELY"
Issue Report 585321, "Root Cause Evaluation Documentation Problems"
Issue Report 591389, "Evaluation of WHITE Performance Indicator Issue"
Issue Report 588695, "NOS Ids Weakness in NRC Inspection CHECK-IN"
Issue Report 594577, "Work Instructions Added in Error During ATI Closure"

LIST OF ACRONYMS

AOV	Air Operated Valve
CAPR	Corrective Actions to Prevent Recurrence
DRP	Division of Reactor Projects
EFR	Effectiveness Review
EHC	Electro-Hydraulic Control
IR	Inspection Report
MSIV	Main Steam Isolation Valve
NRC	Nuclear Regulatory Commission
PARS	Publicly Available Records
PMT	Post Maintenance Test