



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

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

August 4, 2016

Mr. Bryan C. Hanson
Senior VP, Exelon Generation Co., LLC
President and CNO, Exelon Nuclear
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: DRESDEN NUCLEAR POWER STATION, UNITS 2 AND 3 - NRC PILOT DESIGN BASES INSPECTION (PROGRAMS) INSPECTION REPORT 05000237/2016009; 05000249/2016009

Dear Mr. Hanson:

On July 1, 2016, the U.S. Nuclear Regulatory Commission (NRC) completed the team portion of the pilot Design Bases Inspection at your Dresden Nuclear Power Station, Units 2 and 3. The enclosed report documents the results of this inspection, which were discussed on July 1, 2016, with Mr. J. Washko, and other members of your staff.

Based on the results of this inspection, the NRC inspectors identified one finding of very-low safety significance (Green) in this report. The finding did not involve a violation of NRC requirements.

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390, "Public Inspections, Exemptions, Requests for Withholding," 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's Public Document Room or from the Publicly Available Records (PARS) component of the NRC's Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Mark T. Jeffers, Chief
Engineering Branch 2
Division of Reactor Safety

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

Enclosure:
IR 05000237/2016009; 05000249/2016009

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

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

Report No: 05000237/2016009; 05000249/2016009

Licensee: Exelon Generation Company, LLC

Facility: Dresden Nuclear Power Station, Units 2 and 3

Location: Morris, IL

Dates: June 27 - July 1, 2016

Inspectors: A. Dunlop, Senior Reactor Inspector, Lead
S. Sheldon, Senior Project Engineer
G. Hausman, Senior Reactor Inspector

Observers: M. Domke, Reactor Inspector

Approved by: M. Jeffers, Chief
Engineering Branch 2
Division of Reactor Safety

Enclosure

SUMMARY

Inspection Report 05000237/2016009; 05000249/2016009, 06/27/2016 – 07/01/2016;
Dresden Nuclear Power Station, Units 2 and 3; Pilot Design Bases Inspection (Programs).

The inspection was a 1-week onsite baseline inspection that focused on the implementation of the Environmental Qualification Program. The inspection was conducted by three regional engineering inspectors. One finding was identified by the inspectors. The significance of inspection findings are indicated by their color (i.e., greater than Green, or Green, White, Yellow, Red) and determined using Inspection Manual Chapter 0609, "Significance Determination Process," dated April 29, 2015. Cross-cutting aspects are determined using Inspection Manual Chapter 0310, "Components Within the Cross Cutting Areas," dated December 4, 2014. The U.S. Nuclear Regulatory Commission's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 5, dated February 2014.

NRC-Identified and Self-Revealed Findings

Cornerstone: Mitigating Systems

Green. The inspectors identified a finding of very-low safety significance for the failure to perform a 24-month channel calibration of the Regulatory Guide 1.97 safety/relief valve acoustic monitoring system in accordance with the Technical Requirements Manual. Specifically, the licensee failed to perform a channel calibration, where the channel calibration shall encompass all devices in the channel required for channel operability and the channel functional test.

The performance deficiency was determined to be more-than-minor because the finding was associated with the Mitigating System's cornerstone attribute of Procedure Quality and affected the cornerstone's objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the licensee failed to maintain the acoustic safety/relief valve position indicators instrumentation in accordance with the Technical Requirements Manual. The performance deficiency affected the design or qualification of a mitigating system, structure or component; however, the system, structure or component maintained its functionality based on successful completion of channel functionality checks. Since the system, structure or component remained functional, the inspectors screened the finding as having very low safety significance (Green). The inspectors did not identify a cross-cutting aspect associated with this finding because the finding was not representative of the licensee's current performance. (Section 1R21.3b)

Licensee-Identified Violations

No findings were identified.

REPORT DETAILS

1. REACTOR SAFETY

Cornerstone: Mitigating Systems and Barrier Integrity

1R21 Design Bases Inspection (Programs) (71111.21N)

.1 Introduction

This is a pilot inspection of a licensee program conducted per U.S. Nuclear Regulatory Commission (NRC) Inspection Procedure (IP) 71111.21N. The objective of the Design Bases Inspection is to gain reasonable assurance that structures, systems, and components (SSC) can adequately perform their design basis function. This includes reasonable assurance that electrical equipment important-to-safety for which a qualified life has been established can perform its safety functions without experiencing common cause failures before, during, and after applicable design basis events. This inspection will review the licensee's implementation of the electrical equipment Environmental Qualification (EQ) Program, as required by their license, for maintaining the qualified status of equipment during the life of the plant. The inspection is intended to assess the program's effectiveness by sampling a limited number of components. This inspectable area verifies aspects of the Mitigating Systems and Barrier Integrity cornerstones for which there are no indicators to measure performance.

The inspectors assessed the implementation of the EQ program, established to meet the requirements of Title 10 of the *Code of Federal Regulations*, Part 50.49, "Environmental Qualification of Electrical Equipment Important to Safety for Nuclear Power Plants." The scope of this rule included safety-related equipment relied upon to remain functional during and following design basis events, nonsafety-related equipment whose failure under postulated environmental conditions could prevent safety-related equipment from performing design functions, and certain post-accident monitoring equipment. The NRC originally verified plant's EQ Program implementation through a series of onsite inspections from 1984 – 1989. The EQ Program at that time established measures to ensure components met the EQ rule through the 40-year operating license period. Since that time, both units have renewed their operating licenses for an additional 20 years. Unit 2 entered its period of extended operation in 2009 and Unit 3 entered its period of extended operation in 2011.

Specific documents reviewed during the inspection are listed in the Attachment to the report.

.2 Inspection Sample Selection Process

The inspectors selected components for review using information provided by the licensee. This included risk informing the selection based in part on the Dresden Nuclear Power Station probabilistic risk assessment by generally selecting components that had a high Fussell Vesely Importance factor. Both safety-related and nonsafety-related components were considered in the selection process. Additional selection criteria included discussions with plant staff, reviewing procurement, maintenance, and design records, component location, Regulatory Guide (RG) 1.97, "Criteria for Accident Monitoring Instrumentation for Nuclear Power Plants," instruments and walking down plant areas susceptible to high-energy line breaks. Based on these reviews, the

inspectors focused the inspection on EQ Program elements and components repaired, modified, or replaced. Components from each unit were selected and included motor-operated valves, air operated valves, motors, electrical containment penetrations, breakers, and transmitters (pressure, flow, and level) located both inside and outside of containment. For each component selected, the inspectors evaluated the environmental qualifications of supporting sub-components including seals, lubricants, connectors, control and power cables, solenoids, transducers, limit switches, and terminal blocks.

This inspection constituted eight samples as defined in IP 71111.21N, Attachment 1, Section 02.01. The program Design Bases Inspection, in conjunction with the team portion of the Design Bases Inspection (IP 71111.21M), constitutes completion of the baseline triennial Component Design Bases Inspection (IP 71111.21).

.3 Component Design

a. Inspection Scope

The inspectors assessed the licensee's implementation of the EQ Program as required by Title 10 of the *Code of Federal Regulations*, Part 50.49. The inspectors evaluated whether the licensee staff properly maintained the EQ of electrical equipment important to safety through plant life (repair, replacement, modification, and plant life extension), established and maintained required EQ documentation records, and implemented an effective Corrective Action Program (CAP) to identify and correct EQ-related deficiencies and evaluate EQ-related industry operating experience.

This inspection effort included a review of EQ Program-related procedures, component EQ files, EQ test records, equipment maintenance and operating history, maintenance and operating procedures, vendor documents, design documents, and calculations. Additionally, the inspectors performed in-plant walkdowns of accessible components to verify installed equipment was the same as described in the EQ component documentation files, verify components were installed in their tested configuration, determine whether equipment surrounding the EQ component may fail in a manner that could prevent the EQ component from performing its safety function, and verify that components located in areas susceptible to a high energy line break were properly evaluated for operation in a harsh environment. Two components removed from the EQ program were reviewed to ensure an adequate basis existed to no longer require the components to meet EQ requirements. The inspectors reviewed procurement records and inspected a sample of replacement parts stored in the warehouse to verify EQ parts approved for installation in the plant were properly identified and controlled; and that storage time and environmental conditions did not adversely affect the components' qualified life or service life. Documents reviewed for this inspection are listed in the Attachment. The following eight EQ components (samples), including four components located within the drywell were reviewed:

- Main Steam Isolation Valve (3-0203-2B); EQ sub-components: AC Solenoid (3-0203-2B-1) and DC Solenoid (3-0203-2B-2);
- Isolation Condenser Reactor Outlet Isolation Motor-Operated Valves (2-1301-1); EQ sub-components: actuator, limit switch, power cable, and motor; RG 1.97 Instrument;
- High-Pressure Coolant Injection Room Cooler Fan Motor (3-5747);
- Low-Voltage Containment Penetration (2-1600-X-202-F);

- High-Pressure Coolant Injection Turbine Auxiliary Oil Pump Breaker (3-83250-3AB1);
- Main Steam Safety Relief Valve (2-203-4B) Leak Detector; EQ sub-components: Acoustic Sensor (2-0261-63B) and Preamplifier (2-0261-64B); Nonsafety-Related; RG 1.97 Instrument;
- Main Steam Line Electromatic Relief Valve Actuator (2-0203-3E); and
- Recirculation Loop Sample Air-Operated Valves (3-0220-45); EQ sub-components: Solenoid Valve and Limit Switch; RG 1.97 Instrument.

b. Findings

Main Steam Acoustic Safety/Relief Valve Monitoring Channel Calibration Not Performed

Introduction: The inspectors identified a finding of very-low safety significance (Green) for the failure to perform a 24-month channel calibration of the RG 1.97 safety/relief valve acoustic monitoring system in accordance with the Technical Requirements Manual (TRM). Specifically, the licensee failed to perform a channel calibration, where the channel calibration shall encompass all devices in the channel required for channel operability and the channel functional test.

Description: The inspectors reviewed EQ-01D, “Environmental Qualification of NDT [Non-Destructive Testing Company] Acoustic Safety/Relief Valve Monitoring System Sensor Model 838-1 & Preamplifier Model 400A.” The inspectors determined from Tab E, Section 2, “Maintenance and Surveillance Requirements to Maintain Qualification,” the licensee was required to install new Raychem heat shrink tubing whenever the connector was disengaged for any reason. Based on this EQ Binder requirement, the inspectors reviewed documentation to verify during acoustic monitoring system activities that new Raychem heat shrink tubing was installed as directed by EQ-01D. The inspectors were also concerned based on the sensor’s EQ qualified life (i.e., >60 years) that existing Raychem heat shrink tubing was periodically inspected, if it was not replaced. The inspectors review also identified Tab D, Section 4.2 “Justification for Including/Excluding of Maintenance and Surveillance Requirements,” Paragraph 4.2.2, “Requirement,” stated, “Perform the following calibration and evaluation activities every refueling outage [i.e., 24-months] or whenever the sensor is giving unusual data.” These activities included the following:

- Sensor sensitivity calibration
- Preamplifier checkout calibration
- System sensitivity calibration
- Alarm verification and
- Valve crosstalk evaluation

The licensee stated that the above activities were considered non-EQ related and therefore, were not included in Tab E. However, EQ-01D stated “the recommended calibration and evaluation activities shall be performed to satisfy the system performance and technical specification requirements or whenever the sensor sensitivity is in doubt.”

The inspectors’ review also noted the main steam acoustic safety/relief valve monitoring instrumentation was a RG 1.97 variable. The instrumentation was designated in RG 1.97, Revision 2, Table 1, “BWR [Boiling Water Reactor] Variables,” as the primary system safety/relief valve positions instrumentation and classified as a Category 2, Type D

variable. In addition, RG 1.97, Section 1.5h, stated for Category 1, 2, and 3 variables: Periodic checking, testing, calibration, and calibration verification should be in accordance with the applicable portions of RG 1.118, "Periodic Testing of Electric Power and Protection Systems," pertaining to testing of instrument channels. The Commonwealth Edison submittal, "Dresden Station Units 2 and 3 Compliance with RG 1.97," dated August 1, 1985, stated the station complied with the requirements of RG 1.97, Revision 2, for the primary system safety/relief valve positions instrumentation variable.

The TRM, dated June 2013, Section 3.3.b, "Post Accident Monitoring (PAM) Instrumentation," required the acoustic safety/relief valve position indicators' instrumentation shall be operable during plant Modes 1 and 2. The TRM Surveillance Requirement (TSR) 3.3.b.3, required a channel calibration be performed every 24-months for the acoustic safety/relief valve position indicators' instrumentation. The TRM Section 1.1, "Definitions," stated, in-part, that a channel calibration shall encompass all devices in the channel required for channel operability and the channel functional test. Licensee procedure DIS 0203-02, "Safety and Safety/Relief Valve Acoustic Monitoring System Channel Calibrations and Functional Tests," satisfied the requirements of TSR 3.3.b.3.

To ensure EQ and RG 1.97 requirements were maintained, the inspectors reviewed DIS 0203-02, Work Order (WO) 01487194 01, "IMD - D2 24M TS Safety & Acoustic Mon Chn Cal & Func Test," and WO 01692895 01, "IMD - D2 24M TS Safety & Acoustic Mon Chn Cal & Func Test." Based on the inspectors' review of the procedure and WO, the inspectors had the following concerns:

- Did not perform a sensor sensitivity calibration and valve crosstalk evaluation, which was contrary to the requirements of EQ-01D, Tab D, Section 4.2, Paragraph 4.2.2, which stated "the recommended calibration and evaluation activities shall be performed [every refueling outage (i.e., every 24-months)] to satisfy the system performance and technical specification requirements or whenever the sensor sensitivity is in doubt."
- Did not meet the TRM, Section 1.1, definition of a complete channel calibration, where a channel calibration shall encompass all devices in the channel (e.g., the channel calibration did not include the sensor) required for channel operability and the channel functional test.
- Did not meet the TSR 3.3.b.3, which required a channel calibration be performed every 24-months for the acoustic safety/relief valve position indicators' instrumentation.

- Provided and/or showed no reference in the procedure or WO data sheets that existing Raychem heat shrink tubing was periodically inspected, if it was not replaced.

Therefore, the inspectors concluded a complete channel calibration per the TRM was not performed every 24-months as required by the EQ Binder and questioned if Raychem heat shrink tubing was inspected and/or replaced during performance of the work orders. As a result, the licensee issued AR 02687869, AR 02692185, and AR 02692192.

Analysis: The inspectors determined that the licensee's failure to perform a 24-month channel calibration of the RG 1.97 safety/relief valve acoustic monitoring system was contrary to the TSR 3.3.b.3. Specifically, the licensee failed to perform a channel calibration, where the channel calibration shall encompass all devices in the channel required for channel operability and the channel functional test.

The performance deficiency was determined to be more than minor because the finding was associated with the Mitigating System's cornerstone attribute of Procedure Quality and affected the cornerstone's objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the licensee failed to maintain the acoustic safety/relief valve position indicators instrumentation in accordance with the TSR 3.3.b.3.

In accordance with Inspection Manual Chapter 0609, "Significance Determination Process," Attachment 0609.04, "Initial Characterization of Findings," Table 2, the inspectors determined that the finding affected the Mitigating Systems' cornerstone. As a result, the inspectors determined the finding could be evaluated using Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," Exhibit 2, for the Mitigating Systems' cornerstone. The performance deficiency affected the design or qualification of a mitigating SSC; however, the SSC maintained its functionality based on successful completion of channel functionality checks performed for TSR 3.3.b.1. Therefore, the inspectors answered "yes" to the Mitigating Systems' Screening Question A.1 in Exhibit 2 and screened the finding as having very-low safety significance (Green).

The inspectors did not identify a cross-cutting aspect associated with this finding because the finding was not representative of current performance.

This finding was entered into the licensee's CAP as AR 02687869, AR 02692185, and AR 02692192. The licensee's Design Engineering organization will review the EQ binder, TRM requirements, and surveillance procedure; and then recommend a resolution to this issue. **(FIN 05000237/2016009-01; 05000249/2016009-01, Main Steam Acoustic Safety/Relief Valve Monitoring Channel Calibration Not Performed)**

Enforcement: Inspectors did not identify a violation of regulatory requirements associated with this finding.

.4 Operating Experience

a. Inspection Scope

The inspectors reviewed two EQ-related operating experience issues associated with the selected components to ensure that associated generic concerns had been adequately evaluated and addressed by the licensee. The operating experience issues listed below were reviewed as part of this inspection: NRC Information Notice 2014-04, "Potential for Teflon® Material Degradation in Containment Penetrations, Mechanical Seals"; and

- OPXR 01162082-04, "Limitorque Actuators Orientation and T-Drains."

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

4OA2 Identification and Resolution of Problems

.1 Review of Items Entered Into the Corrective Action Program

a. Inspection Scope

The inspectors reviewed a sample of the selected component problems identified by the licensee and entered into the CAP. The inspectors reviewed these issues to assess the licensee's threshold for identifying issues and the effectiveness of corrective actions related to design issues. In addition, corrective action documents written on issues identified during the inspection were reviewed to verify adequate problem identification and incorporation of the problem into the CAP. The specific corrective action documents sampled and reviewed by the inspectors are listed in the attachment to this report.

b. Findings

No findings were identified.

4OA6 Management Meeting(s)

.1 Exit Meeting Summary

On July 1, 2016, the inspectors presented the inspection results to Mr. J. Washko, and other members of the licensee staff. The licensee acknowledged the issues presented. Several documents reviewed by the inspectors were considered proprietary information and were either returned to the licensee or handled in accordance with NRC policy on proprietary information.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

J. Washko, Station Plant Manager
G. Baxa, CMO Manager
M. Bcelman, Procurement Engineering Supervisor
M. Budelier, Senior Engineering Manager
D. Eaman, Senior Design Engineer
M. Hosain, Site Equipment Qualification Engineer
M. Hossain, Equipment Qualification Engineer
B. Madderom, Engineering Manager
M. Murskyj, Senior Engineering Manager
S. Raja, Electrical Design Engineer
A. Rehn, Sr. Licensing Engineer
D. Walker, Regulatory Assurance – NRC Coordinator
D. Wolverton, Engineering Manager

U.S. Nuclear Regulatory Commission

M. Jeffers, Chief, Engineering Branch 2
D. Hills, Chief, Engineering Branch 1
R. Elliot, Resident Inspector

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000237/2016009-01; FIN Main Steam Acoustic Safety/Relief Valve Monitoring
05000249/2016009-01 Channel Calibration Not Performed (Section 1R21.3.b)

Discussed

None

LIST OF ACRONYMS USED

ADAMS	Agencywide Document Access Management System
AR	Action Request
CAP	Corrective Action Program
CFR	Code of Federal Regulations
EQ	Equipment Qualifications
IP	Inspection Procedure
NRC	U.S. Nuclear Regulatory Commission
PARS	Publicly Available Records System
RG	Regulatory Guide
SSC	System, Structure or Component
TRM	Technical Requirements Manual
TSR	TRM Surveillance Requirement
WO	Work Order

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 of 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.

COMMERCIAL GRADE DEDICATION EVALUATIONS

<u>Number</u>	<u>Description or Title</u>
DRE-31635 (83133)	Cat ID 300188 2, Contactor Coil
DRE-34025	Cat ID 25281-2, SBM Switch
DRE-35937	Cat ID 1234672-2, Contactor Coil
DRE-38045	Cat ID 270599-2, SBM Switch
DRE-59419	Cat ID 42211-2, Relay

CORRECTIVE ACTION DOCUMENTS GENERATED DUE TO THE INSPECTION

<u>Number</u>	<u>Description or Title</u>	<u>Date</u>
AR 02686250	Typographical Error in EQ Binder EQ-24D/Q	06/27/16
AR 02687869	Acoustic Mon Calibration Not Being Performed	06/30/16
AR 02687957	Degraded Sealtite Connector to Motor	06/30/16
AR 02688348	Inspection of Field Cables for MOV5	07/01/16
AR 02692185	Acoustic Mon Vendor Cal Frequency Exceeded	07/13/16
AR 02692192	Acoustic Mon Raychem Assy Not Being Inspected	07/13/16

CORRECTIVE ACTION DOCUMENTS REVIEWED DURING THE INSPECTION

<u>Number</u>	<u>Description or Title</u>	<u>Date</u>
AR 01215344	Opex-Limitorque Actuators Orientation and T-Drains	05/12/11
AR 01223831	Troubleshooting Results for IC 2-1301-1 Valve	06/02/11
AR 01290601	Degraded Wiring Found during Motor Replacement	11/15/11
AR 01441517	Brittle Wires Discovered During Work	11/17/12
AR 01586553	Degraded Cable Feed to MOV 2-1301-1	11/18/13
AR 01593335	Degraded Motor Power Cables	12/05/13
AR 01593423	MOV 2-1301-1 Limit Switch Lubricant Grade 4	12/05/13
AR 01596220	Historical Operability Degraded Cable Feed to MOV 2-1301-1	12/12/13
AR 01641008	Potential for Teflon Material Degradation in Containment	03/31/14
AR 02406014	TE 3-0203-2BB Degraded Flex Conduit Connection	11/03/14
AR 02406023	U3 2B MSIV LS Seal Tites Degraded	11/03/14
AR 02422741	Historical Operability of MOV 3-1201-3	12/09/14
AR 02481819	U3 DW EQ Temperature Limit Approached	04/08/15
AR 02493115	U3 DW EQ Temperature Limit Exceeded	04/30/15
AR 02607808	Review of ASCO Interim Part 21 Notification 50681	01/05/16

EQ FILES

<u>Number</u>	<u>Description or Title</u>	<u>Revision</u>
DRE01-0041	Update EQ Zone Parameter Tables Following Implementation of Extended Power Uprate	3
DRE98-0091	Update EQ Zone Parameter Tables Update EQ Zone Parameter Tables	3

EQ FILES

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
EQ-01D	Environmental Qualification of NDT Acoustic Safety Relief Valve Monitoring System Sensor Model 838-1 & Preamplifier Model 400A	10A
EQ-100D	Environmental Qualification of the ERV Actuator, General Electric Model 352B2632G001, Used With The Dresser 1525VX Electromatic Relief Valve	00
EQ-24D/Q	Environmental Qualification of GE Motor Control Center Model 7700 Series	10
EQ-39D	Environmental Qualification of ASCO Catalog NP-1 Solenoid Valves Models 206-832-3VF, 206-832-SF, NP8300142VF, NP8316A54E, NP8321A5E, NP8344A75E, NP8344A75V, NPEF8300382EF, NPEF8300142VF, NP8344A71E, NP8344A77E & NP8316E36E	13
EQ-40D	Solenoid Valve Assembly, AVCO 6910-010, 6910-020	09A
EQ-65D	250 VDC Motor Control Center	09
EQ-75D	Limiterque SMB Valve Actuators (Located inside the Drywell)	6
EQ-81D	General Electric HPCI Room Cooler Fan Motor Model 5K182SX205	1
EQ-93D	Instrumentation Containment Penetration CONAX 7RV2-10001-01	02
EQER-01-00-003	Cutler Hammer Control Relay, Catalog no. BFD11T (SI# 807H33, Catalog ID 42211-2) for use in 250 VDC MCCs, 1(2)DC06E	05/08/00
ER#9904708		
EQ-GEN004	EPR Insulated Low Voltage (600V) Power and Control Cables (Okonite)	8
EQ-GEN023	Environmental Qualification of Namco Controls Limit Switch Series EA180	15

ENGINEERING CHANGES

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
EC 353002	Revise EQ Binder EQ-74D to Incorporate EC 345509 per ATI 318883-26, and Revise EQ-75D per ATI 318883-26	06/06/06
EC 375804	Classification Change of LPCI/CS Room Coolers, Motors, and Thermostats from EQ to Non-EQ	01/28/14
EC 380152	Evaluation of Impact of elevated Drywell Temperature on 3-1301-1 and 3-2301-4 MOV Actuators	1
EC 388159	Bases for Declassification of Transfer Panels 2202-75 & 2203-75 to Non-EQ	05/03/12
EC 397685	Evaluation of Replacement Relay for Bus 23-1/33-1 Xtie Lockout Relay, GE Model 12HEA61B235	04/18/14

MISCELLANEOUS

<u>Number</u>	<u>Description or Title</u>	<u>Revision</u>
12E-3532	Schematic Diagram High Pressure Coolant Injection System Turbine Auxiliary Pumps	AG
12E-3684A	Wiring Diagram Reactor Building 250V DC MCC 3A	G
CGD 59419	Commercial Grade Dedication for CATID 42211	

MISCELLANEOUS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
D-1998-0577-000	Alternate Replacement Analysis for a GE Contactor Coil P/N 55-501336G004 (SI 603680) in Lieu of P/N 55-501336G35 (SI 196537)	12/15/98
NDT International Letter	Periodic Inspection of the NDT Fluid Flow Detection System Technical Manual FFDS-01, Rev. 4 Update January 2001, Per Section 3.5 (Revision 3 May 23, 1991)	07/08/16
OSDD 0000387	Over/Short/Discrepant Data report for CATID 42211-2	11/28/00
PO 68305	Purchase Order for AVCO Solenoid Valves	2
PO 406348	Actuator, Relief Valve, Solenoid / Actuator Assembly for Dresser Model 1525VX-3 Electromatic Relief Valves	15
Receipt 47776	Receipt Inspection Report: Relay, 2-pole, 250VDC, Fixed Contacts	11/16/99

PROCEDURES

<u>Number</u>	<u>Description or Title</u>	<u>Revision</u>
CC-AA-102	Design Input and Configuration Change Impact Screening	28
CC-AA-103	Configuration Change Control for Permanent Physical Plant Changes	27
CC-AA-203	Environmental Qualification Program	11
CC-AA-203-1001	Environmental Qualification Program Performance Indicators	4
DES 7300-05	Maintenance and Surveillance of EQ and Safety Related 480 Volt MCC	24
DIS 0203-02	Safety and Safety Relief Valve Acoustic Monitoring System Channel Calibrations and Functional Tests	23
MA-AA-723-301	Periodic Inspection of Limitorque Model SMB/SB/SBD-000 Through 5 Motor Operated Valves	11
MA-AA-726-620	Installation Instructions for 0-600 Volt EQ Related Splices	4
PES-S-002	Shelf Life	8
PES-S-003	In-Storage Maintenance Of Nuclear Material	9
SM-AA-102	Warehouse Operations	21
SM-AA-300	Procurement Engineering Support Activities	6
SM-AA-300-1001	Procurement Engineering Process and Responsibilities	18

VENDOR MANUALS

<u>Number</u>	<u>Description or Title</u>	<u>Date</u>
VTIP D1991	Instructions for Installation and Maintenance, Consolidated ElectroMatic® Relief Valve (ERV), Type 6" 1525-VX	01/1986
VTIP D1387	Cutler Hammer Molded Case Circuit Breakers	01/2003

WORK DOCUMENTS

<u>Number</u>	<u>Description or Title</u>	<u>Date</u>
WO 00684851	6Y PM Insp MCC CUB 3-7838-7C3 for MOV 3-1501-21A	11/04/10
WO 00986900	6Y PM Insp/Replace HPCI Room Cooler Fan Bearings	03/18/13
WO 01077399	3RFL PM Lube/Insp Limitorque Valve Operator 2-1301-1	11/11/13
WO 01080961	3RFL PM Insp 480V MCC BKR MOV 2-1201-1A Group 3	01/28/13
WO 01082034	#RFL MOV Electrical Insp & Diagnostic Test 2-1301-1	11/24/13

WORK DOCUMENTS

<u>Number</u>	<u>Description or Title</u>	<u>Date</u>
WO 01094256	6Y PM Insp 480V MCC BKR MOV 3-1402-24B Group 2	06/16/14
WO 01184541	D3 4RFL/8Y EQ Repl MSIV 28 AVCO AC Sol	12/03/12
WO 01184542	D3 2RFL/4Y EQ Repl MSIV 28 AVCO DC Sol	12/03/12
WO 01310717	Replace the 2-1301-1 MOV Motor	11/10/11
WO 01384052	Contingency Overhaul 3-0203-28 MSIV	11/27/12
WO 01487194	24M TS Safety & Acoustic Mon Chn Cal & Func Test	11/24/13
WO 01508116	Rebuild Spare Actuator Removed under WO 1083649	11/16/12
WO 01626242	2Y PM Surv/Maint HPCI Room Cooler Fan Motor	03/23/15
WO 01692895	24M TS Safety & Acoustic Mon Chn Cal & Func Test	11/15/15
WO 01893327	QTR PM Fan Bearings HPCI Pump Room Cooler	04/14/16
WO 99104294	30 M/RFL EQ PM Replace the 2-1301-1 MOV Motor	10/26/01

August 4, 2016

Mr. Bryan C. Hanson
Senior VP, Exelon Generation Co., LLC
President and CNO, Exelon Nuclear
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: DRESDEN NUCLEAR POWER STATION, UNITS 2 AND 3 - NRC PILOT DESIGN BASES INSPECTION (PROGRAMS) INSPECTION REPORT 05000237/2016009; 05000249/2016009

Dear Mr. Hanson:

On July 1, 2016, the U.S. Nuclear Regulatory Commission (NRC) completed the team portion of the pilot Design Bases Inspection at your Dresden Nuclear Power Station, Units 2 and 3. The enclosed report documents the results of this inspection, which were discussed on July 1, 2016, with Mr. J. Washko, and other members of your staff.

Based on the results of this inspection, the NRC inspectors identified one finding of very-low safety significance (Green) in this report. The finding did not involve a violation of NRC requirements.

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390, "Public Inspections, Exemptions, Requests for Withholding," 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's Public Document Room or from the Publicly Available Records (PARS) component of the NRC's Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,
/RA/
Mark T. Jeffers, Chief
Engineering Branch 2
Division of Reactor Safety

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

Enclosure:
IR 05000237/2016009; 05000249/2016009

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