UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
2443 WARRENVILLE RD. SUITE 210
LISLE, IL 60532-4352

June 29, 2017

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

SUBJECT: BYRON STATION, UNITS 1 AND 2—EVALUATIONS OF CHANGES, TESTS, AND EXPERIMENTS BASELINE INSPECTION REPORT 05000454/2017009; 05000455/2017009

Dear Mr. Hanson:

On May 19, 2017, the U.S. Nuclear Regulatory Commission (NRC) completed an Evaluations of Changes, Tests, and Experiments inspection at your Byron Station. The enclosed inspection report documents the inspection results which were discussed on June 1, 2017, with Mr. T. Chalmers 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.

NRC inspectors documented one traditional enforcement Severity Level IV violation in this report. This traditional enforcement violation was identified with an associated finding. However, because the issue was a Severity Level IV violation and was entered into your corrective action program, the NRC is treating the issue as a Non-Cited Violation in accordance with Section 2.3.2 of the NRC Enforcement Policy.

If you contest the violation or significance of the 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 copies to the Regional Administrator, Region III; the Director, Office of Enforcement; and the NRC resident inspector at the Byron Station.

This letter, its enclosure, and your response (if any) will be made available for public inspection and copying at http://www.nrc.gov/reading-rm/adams.html and at the NRC Public Document Room in accordance with 10 CFR 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

/RA/

Robert C. Daley, Chief
Engineering Branch 3
Division of Reactor Safety

Docket Nos. 50–454; 50–455
License Nos. NPF–37; NPF–66

Enclosure:
IR 05000454/2017009; 05000455/2017009

cc: Distribution via LISTSERV®

Letter to Bryan Hanson from Robert C. Daley dated June 29, 2017

SUBJECT: BYRON STATION, UNITS 1 AND 2—EVALUATIONS OF CHANGES, TESTS, AND EXPERIMENTS BASELINE INSPECTION REPORT 05000454/2017009; 05000455/2017009

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U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No:	50–454; 50–455
License No:	NPF–37; NPF–66
Report No:	05000454/2017009; 05000455/2017009
Licensee:	Exelon Generation Company, LLC
Facility:	Byron Station, Units 1 and 2
Location:	Byron, IL
Dates:	May 15 through June 1, 2017
Inspectors:	G. Hausman, Senior Reactor Inspector A. Shaikh, Senior Reactor Inspector D. Szwarc, Senior Reactor Inspector (Lead)
Approved by:	R. Daley, Chief Engineering Branch 3 Division of Reactor Safety

Enclosure

SUMMARY

Inspection Report 05000454/2017009, 05000455/2017009; 05/15/2017 – 06/01/2017; Byron Station, Units 1 and 2; Evaluations of Changes, Tests, and Experiments.

This report covers a one-week announced Evaluations of Changes, Tests, and Experiments baseline inspection. The inspection was conducted by Region III based engineering inspectors. One violation was identified by the inspectors. The violation, and its associated finding, was considered a Non-Cited Violation of U.S. Nuclear Regulatory Commission (NRC) regulations. The significance of most findings is indicated by their color (i.e. greater than Green, or Green, White, Yellow, Red) using Inspection Manual Chapter 0609, "Significance Determination Process". Findings for which the Significance Determination Process does not apply may be Green or be assigned a severity level after NRC management review. All violations of NRC requirements are dispositioned in accordance with the NRC's Enforcement Policy dated November 1, 2016. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG–1649, "Reactor Oversight Process," Revision 6, dated July 2016.

Cornerstone: Mitigating Systems

Severity Level IV. The inspectors identified a Severity Level IV, Non-Cited Violation of 10 CFR 50.59, "Changes, Tests, and Experiments," Section(d)(1) and an associated finding of very low safety significance (Green) for the licensee's failure to provide a written evaluation which provided the basis for the determination that a change did not require a license amendment. Specifically, the licensee failed to provide a basis for why a change to the surveillance frequencies of emergency diesel generators described in the Updated Final Safety Analysis Report did not require prior NRC approval.

The inspectors determined that the performance deficiency was more than minor because the inspectors could not reasonably determine that the changes would not have ultimately required NRC prior approval. The associated finding screened to Green (very low safety significance) because it did not result in the loss of operability or functionality. The diesel generators passed their most recent surveillances. As a result the violation is categorized as Severity Level IV in accordance with section 6.1.d of the NRC Enforcement Policy. The issue did not have a cross-cutting aspect because it was not reflective of current performance. (Section 1R17.1b)

REPORT DETAILS

1. REACTOR SAFETY

Cornerstone: Initiating Events, Mitigating Systems, and Barrier Integrity

1R17 Evaluations of Changes, Tests, and Experiments (71111.17T)

.1 Evaluation of Changes, Tests, and Experiments

a. Inspection Scope

The inspectors reviewed evaluations performed pursuant to Title 10, *Code of Federal Regulations* (CFR), Part 50, Section 59 to determine if the evaluations were adequate and that prior U.S. Nuclear Regulatory Commission (NRC) approval was obtained as appropriate. The inspectors also reviewed screenings and applicability determinations 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, and 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, and 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 23 samples of evaluations, screenings, and/or applicability determinations as defined in IP 71111.17–05.

b. Findings

Failure to Perform 10 CFR 50.59 Evaluation for Updated Final Safety Analysis Report Change

Introduction: The inspectors identified a Severity Level IV, Non-Cited Violation of 10 CFR 50.59, "Changes, Tests, and Experiments," Section(d)(1) and an associated finding of very low safety significance (Green) for the licensee's failure to provide a written evaluation which provided the basis for the determination that a change did not require a license amendment. Specifically, the licensee failed to provide a basis for why a change to the surveillance frequencies of emergency diesel generators described in the Updated Final Safety Analysis Report (UFSAR) did not require prior NRC approval.

Description: The licensee relocated numerous surveillance frequencies from Technical Specifications to the licensee-controlled Surveillance Frequency Control Program (SFCP) since 2010. The relocated surveillance frequencies included emergency diesel generator surveillances required to be performed during every refueling outage as specified in Regulatory Guide 1.9, "Application and Testing of Safety-Related Diesel Generators in Nuclear Power Plants," Revision 3.

Appendix A, "Application of NRC Regulatory Guides," of the UFSAR listed the applicable NRC regulatory guides that the licensee complies with. The section covering Regulatory Guide 1.9 stated that:

> Regulatory Guide (RG) 1.9, Revision 3, endorses IEEE [Institute of Electrical and Electronics Engineers] Standard 387–1984, "IEEE Standard Criteria for Diesel Generator Units Applied as Standby Power Supplies for Nuclear Power Generating Stations." In addition to this standard, RG 1.9, Revision 3, provides supplemental regulatory positions. The Licensee complies with these supplemental regulatory positions in Revision 3 with the following clarifications regarding:

The licensee changed the last sentence to state:

> The Licensee complies with IEEE Standard 387–1984 and these supplemental regulatory positions in Revision 3 with the following clarifications regarding:

The licensee further added clarification number 8, "Regulatory Position C.2.3.2.3, Refueling Outage Testing" stating:

> Exception is taken to the statement that the overall emergency diesel generator unit design capability should be demonstrated at every refueling outage by performing the tests identified in Table 1 of Regulatory Guide 1.9. Refueling Outage Testing as identified in Table 1 of Regulatory Guide 1.9 is performed in accordance with the Technical Specifications, and the test interval may be supplanted with performance-based, risk-informed test intervals. This statement in Regulatory Position C.2.3.2.3 is in accordance with Section 6.5.2 of IEEE Standard 387-1984. By taking exception to Regulatory Position C.2.3.2.3, exception is also being taken to the statement in Section 6.5.2 of IEEE Standard 387-1984 that the diesel generator unit shall be given one cycle of each of the specified tests at least once every 18 months to demonstrate its continued capability of performing its required function.

The licensee documented the UFSAR change in 50.59 Screening 6E–14–017, "Revise Diesel Generator and Integrated Safeguards LOOP [loss of offsite power] / ESF [engineered safety feature] Surveillance Test Surveillance Frequency from 18 Months to 18 Months Staggered," Revision 0. In the screening, the licensee stated that the, "Proposed change does not have any effect on any SSC [Structure, System, or Component] described in the UFSAR." They further stated that, "The components that are not directly tested within an eighteen month frequency are justified to not be affected by the proposed change as evaluated in the evaluation required by NEI 04-10, Revision 1." The licensee also stated that, "The SFCP evaluation per NEI 04-10 ensures the reliability of the SSC to perform its intended design function is not decreased."

The licensee performed evaluation BY–13–003, "Diesel Generator and Integrated Safeguards LOOP ESF Surveillance Test Surveillance Frequency Surveillance Test Interval (STI) Evaluation," dated March 3, 2014 under the SFCP. This evaluation provided the basis for extending the surveillance frequencies under the SFCP. In section C.7 of the evaluation the licensee concluded that:

> The Surveillance Frequency Control Program, as approved by the NRC for Byron and for other nuclear power plants, supplants prescriptive test intervals, such as those specified in the above standards and guides, with performance-based, risk-informed test intervals…However, a UFSAR change is required to reflect the fact that the frequency of the Class 1E Diesel Generator and Integrated Safeguards Test is per the SFCP, and that the station takes exception to the frequency specified in RG 1.9. Approval of this UFSAR Change Request is required prior to implementation of this Surveillance Test Interval extension.

The SFCP evaluation does not contain the same questions as a 50.59 evaluation and it therefore does not replace a 50.59 evaluation in evaluating the applicable criteria of 10 CFR 50.59(c)(2). In the 50.59 screening the licensee referred to the SFCP evaluation as providing the basis for why the change did not impact the reliability of the diesel generators. The SFCP evaluation stated that a UFSAR change would need to be processed to change the references to Regulatory Guide 1.9 and IEEE–384. This created a circular logic.

The Nuclear Energy Institute stated in guidance document NEI 04–10, "Risk-Informed Technical Specifications Initiative 5b Risk-Informed Method for Control Surveillance Frequencies," Revision 1 Step 3 in section 3.0 that, "the safety analysis acceptance criteria in the plant licensing basis (e.g., FSAR, supporting analyses) will continue to be met with the proposed changes to Surveillance Frequencies." Further, step 7 in section 4.0 states, in part, to, "Document that assumptions in the plant licensing basis would not be invalidated when performing the surveillance at the bounding interval limit for the proposed STI change."

Even though the SFCP allows licensees to change their Technical Specification surveillance frequencies, licensees are still required to process UFSAR changes per the 50.59 process. Therefore, completion of the STI evaluation does not preclude the need to perform a 50.59 review. The increase in the surveillance frequency does have an impact on the reliability of the diesel generators, and as such it is considered to be adverse. The licensee stated in section C.8 of the SFCP evaluation that, "Surveillances are primarily performed to demonstrate that equipment is operable…An extended surveillance interval could lead to less conditioning and component degradation, and some failure mechanisms could become more prominent and increase equipment failure probabilities." The licensee should have performed a 10 CFR 50.59 evaluation to determine if the change would have resulted in a more than minimal increase in the likelihood of occurrence of a malfunction of an SSC important to safety.

Analysis: The inspectors determined that the licensee's failure to provide a written evaluation which provided the basis for the determination that a change did not require a license amendment was contrary to 10 CFR 50.59(d)(1) and was a performance deficiency. Specifically, the licensee failed to provide a basis for why a change to the surveillance frequencies of emergency diesel generators described in the UFSAR did not require prior NRC approval.

The inspectors determined that the performance deficiency was more than minor because the finding was associated with the Mitigating Systems cornerstone attribute of Equipment Performance 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, by extending the surveillance frequency of the emergency diesel generators the licensee potentially affected the reliability of the diesel generators because certain components of the diesel generators could be affected due to less conditioning.

In addition, the associated violation was determined to be more than minor because the inspectors could not reasonably determine that the changes would not have ultimately required NRC prior approval.

Violations of 10 CFR 50.59 are dispositioned using the traditional enforcement process instead of the Significance Determination Process (SDP) because they are considered to be violations that potentially impede or impact the regulatory process. This violation is associated with a finding that has been evaluated by the SDP and communicated with an SDP color reflective of the safety impact of the deficient licensee performance. The SDP, however, does not specifically consider the regulatory process impact. Thus, although related to a common regulatory concern, it is necessary to address the violation and finding using different processes to correctly reflect both the regulatory importance of the violation and the safety significance of the associated finding.

In this case, the inspectors determined the finding could be evaluated using the SDP in accordance with Inspection Manual Chapter 0609, “Significance Determination Process.” Using 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 evaluated the finding using Appendix A, “The Significance Determination Process (SDP) for Findings At-Power,” Exhibit 2 for the Mitigating Systems cornerstone. The finding screened to Green (very low safety significance) because it did not result in the loss of operability or functionality. The diesel generators passed their most recent surveillances.

In accordance with section 6.1.d of the NRC Enforcement Policy this violation is categorized as Severity Level IV because the resulting changes were evaluated by the SDP as having very low safety significance (i.e., green finding).

The inspectors did not identify a cross-cutting aspect associated with the finding because the finding was not representative of current performance. The licensee performed the screening over three years prior to the start of the inspection.

Enforcement: Title 10 CFR Part 50.59, “Changes, Tests, and Experiments,” section (d)(1) requires the licensee to maintain records of changes in the facility, of changes in procedures, and of tests and experiments made pursuant to 10 CFR 50.59(c). Title 10 CFR 50.59(d)(1) requires that these records include a written evaluation which provides the basis for the determination that a change, test, or experiment did not require a license amendment. Title 10 CFR 50.59(c)(2) requires a licensee to obtain a license amendment prior to implementing a proposed change, test, or experiment if the change, test, or experiment would result in more than a minimal increase in the likelihood of occurrence of a malfunction of an SSC important to safety.

Contrary to the above, between February 14, 2014 and June 1, 2017, the licensee failed to provide a written evaluation which provided the basis for determining that a change, test, or experiment made pursuant to 10 CFR 50.59(c) did not require a license amendment. Specifically, the licensee failed to provide a basis for why a change to the surveillance frequencies of emergency diesel generators described in the Updated Final Safety Analysis Report did not require prior NRC approval. The licensee did not provide a basis for why the change would not result in more than a minimal increase in the likelihood of occurrence of a malfunction of an SSC important to safety.

This violation is being treated as an Non-Cited Violation, consistent with Section 2.3.2 of the Enforcement Policy because it was a Severity Level IV violation and was entered into the licensee's corrective action program as Action Request 04017182, "NRC Question on 50.59 Screening for DRP 15-073," dated June 1, 2017. The licensee planned to work to disposition the issue. (NCV 050004542017009–01; 05000455/2017009–01, Failure to Perform 10 CFR 50.59 Evaluation for UFSAR Change).

4. OTHER ACTIVITIES (OA)

4OA2 Problem Identification and Resolution

.1 Routine Review of Condition Reports

a. Inspection Scope

The inspectors reviewed several corrective action process documents that identified or were related to 10 CFR 50.59 evaluations. The inspectors reviewed these documents to evaluate the effectiveness of corrective actions related to evaluations of changes, tests, and experiments. 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 June 1, 2017, the inspectors presented the inspection results to Mr. T. Chalmers, and other members of the licensee staff. The licensee personnel acknowledged the inspection results presented and did not identify any proprietary content. The inspectors confirmed that all proprietary material reviewed during the inspection was returned to the licensee staff.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

J. Bauer, Corporate Licensing Engineer
T. Chalmers, Plant Manager
G. Contrady, Regulatory Assurance Engineer
Z. Cox, Regulatory Assurance
D. Gullott, Corporate Licensing Manager
C. Keller, Engineering Director
D. Spitzer, Regulatory Assurance Manager
G. Wilhelmsen, Senior Engineering Manager
K. Zlevor, Senior Engineer
L. Zurawski, Regulatory Assurance

U.S. Nuclear Regulatory Commission

R. Daley, Branch Chief, EB3
C. Hunt, Resident Inspector
J. McGhee, Senior Resident Inspector

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000454/2017009–01; 05000455/2017009–01	NCV	Failure to Perform 10 CFR 50.59 Evaluation for UFSAR Change (Section 1R17.1b)

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.

10 CFR 50.59 EVALUATIONS

Number	Description or Title	Date or Revision
6G-14-003	Implementation of WCAP-15063-P-A, Revision 1, with Errata, "Westinghouse Improved Performance Analysis and Design Model (PAD 4.0)," and WCAP-12610-P-A and GENPD-404-P-A Addendum 2-A, "Westinghouse Clad Corrosion Model for ZIRLO and Optimized ZIRLO"	0
6G-14-004	Establishing a Nitrogen Blanket on the Volume Control Tank (VCT)	0
6G-15-004	Implement Use of Westinghouse SHIELD for Use in Reactor Coolant Pump Seal Configurations	0
6G-16-001	Remove AF Diesel Air Intake Elbow and Blank Off TB Air Intake	0
6G-16-006	Reroute AF Diesel Pump Combustion Air Intake to 364' General Area Unit 1 & 2	0
6G-16-007	Temporarily Defeat FW Water Hammer Prevention System (WHPS) FW Isolation Signals During Normal Power Operation For Steam Generators 2A/2B/2C/2D (EC 406958)	0
6G-16-008	Appendix J Scope Reduction	0
6G-17-001	Lost SFP Crimps and RVLIS Pins	0

10 CFR 50.59 SCREENINGS

Number	Description or Title	Date or Revision
6D-15-002	UFSAR Update to Reflect Current LOCA Design Inputs for Unit 2	1
6D-15-010	Alternate Main Control Room Ventilation	2
6D-15-016	LCOAR ESF Battery Room Ventilation	7
6D-15-025	Revision to BCB-2 Table 1-6 to Add Most Reactive Stuck Rod Worths to Use in the Event of Untrippable RCCAs	0
6E-14-017	Revise Diesel Generator and Integrated Safeguards LOOP/ESF Surveillance Test	0

10 CFR 50.59 SCREENINGS

Number	Description or Title	Date or Revision
	Surveillance Frequency from 18 Months to 18 Months Staggered	
6E-14-020	Operation of 1A SX Pump With One-Half of a Cubicle Cooler	0
6E-14-040	Drill Holes in Line 2CD31AD to Stop Crack Propagation	0
6E-14-042	Modify Logic for Unit 2 Condensate and Condensate Booster Pumps Lube Oil Pressure Switches (EC 398037)	0
6E-14-046	Modify Logic for Unit 1 Condensate and Condensate Booster Pumps Lube Oil Pressure Switches (EC 398036)	0
6E-14-052	SSPS Wiring Changes Needed to Address Westinghouse Technical Bulletin TB-13-7 Solid State Protection System New Design Universal Logic Board and Safeguards Driver Board 48 Vdc Input (EC 397531)	0
6E-14-060	Plant Barrier Impairment (Penetration 026087)	0
6E-15-035	Increase Pressurizer PORV Accumulator Tank Operating Pressure to Increase Margin for PORV Operation (Unit 1)	0
6E-16-001	UFSAR Update of the Diesel-Generator Fuel Oil Storage and Transfer System Description	0
6E-16-061	Technical Requirements Manual (TRM) Technical Surveillance (PR No. 16-009)	0
6E-16-097	Appendix J Scope Reduction	0

CALCULATIONS

Number	Description or Title	Date or Revision
BY-13-003	Diesel Generator and Integrated Safeguards LOOP/ESF Surveillance Test Interval Evaluation	0
BYR 10-053 / BRW-10-0033-1	Calculation Feedwater Pressure Uncertainty for Input to LEFM CheckPlus System	0
BYR10-054	ER-800 Bounding Uncertainty Analysis for Thermal Power Determination at Byron Unit 1 Using the LEFM CheckPlus System	3
BYR10-055	ER-801 Bounding Uncertainty Analysis for Thermal Power Determination at Byron Unit 2 Using the LEFM CheckPlus System	2

CORRECTIVE ACTION PROGRAM DOCUMENTS INITIATED DURING INSPECTION

Number	Description or Title	Date or Revision
4002071	50.59 Screening Form for BOP DO-16 Missing	04/24/2017
4017182	NRC Question on 50.59 Screening for DRP 15-073	06/01/2017

CORRECTIVE ACTION PROGRAM DOCUMENTS REVIEWED

Number	Description or Title	Date or Revision
1500984	2B DG Shut Down Earlier than Desired During Sequence Test	04/12/2013
1500993	2B DG Sequence Times Acceptance Criteria not Met	04/12/2013
1673329	Concern About Testing Performed For HELB Dampers	06/19/2014
2467656	Issues Identified in Engineering Evaluation	03/12/2015
2496142	CDBI – 50.59 And DRP Did not Explicitly Evaluate GDC 5	05/05/2015
2727378	MCC 234V4 not Energized Subsequent U-2 Rx Trip	10/12/2016
3978965	2017 50.59 FASA Identifies 50.59 Requires Revision	02/27/2017

DRAWINGS

Number	Description or Title	Date or Revision
M-129, Sheet 1C	Diagram of Containment Spray, Unit 2	09/01/2000
M-138, Sheet 2	Diagram of Chemical & Volume Control & Boron Thermal Regen, Unit 2	09/22/2000
M-46, Sheet 1C	Diagram of Containment Spray, Unit 1	01/08/1998
M-50, Sheet 1B	Diagram of Diesel Fuel Oil	AP
M-64, Sheet 2	Diagram of Chemical & Volume Control & Boron Thermal Regen, Unit 1	03/05/1998
M-64, Sheet 5	Diagram of Chemical & Volume Control & Boron Thermal Regen, Unit 1	02/24/1999

ENGINEERING CHANGES

Number	Description or Title	Date or Revision
397531	SSPS Wiring Changes Needed to Address Westinghouse Technical Bulletin TB-13-7 Solid State Protection System Logic Board and Safeguards Driver Board 48 Vdc Input	0
398036	Modify Logic for Unit 1 Condensate and Condensate Booster Pumps Lube Oil Pressure Switches	1

ENGINEERING CHANGES

Number	Description or Title	Date or Revision
398037	Modify Logic for Unit 2 Condensate and Condensate Booster Pump Lube Oil Pressure Switches	1
406958	Temporarily Defeat FW Water Hammer Prevention System (WHPS) FW Isolation Signals During Normal Power Operation for Steam Generators 2A/2B/2C/2D	0
617642	Temporarily Defeat FW Water Hammer Prevention System (WHPS) FW Isolation Signals During Normal Power Operation for Steam Generators 2A/2B/2C/2D (Braidwood)	01/09/2017

OTHER DOCUMENTS

Number	Description or Title	Date or Revision
LER 455-2016-001	Manual Reactor Trip due to Circuit Breaker Failure that Caused Actuation of Feedwater Hammer Prevention System with Automatic Isolation of Feedwater to Two Steam Generators and Low Steam Generator Levels	10/12/2016
PR No. 16 009	Revision to Technical Requirements Manual (TRM) Technical Surveillance Requirement TSR 3.3.k.2 LEFM Channel Calibration	07/12/2016
TB-13-7	Westinghouse Technical Bulletin Solid State Protection New Design Universal Logic Board and Safeguards Driver Board 48 Vdc Input	12/10/2013

PROCEDURES

Number	Description or Title	Date or Revision
1BOSR 4.11.3-1	Unit One Pressurizer PORV Accumulator Pressure Decay Test	7
2BGP 100-1	Plant Heatup	58
2BGP 100-3	Power Ascension	93
2BGP 100-4	Power Descension	50
2BGP 100-4T4	Reactor Trip Post Response Guideline	7
BAR 1-12-D7	PZR PORV SUP PRESS HIGH LOW	7
ER-AA-425	Implementation of the Technical Specification Surveillance Frequency Control Program	1
ER-AA-425-1005	Monitoring the Effects of Changes to the Surveillance Frequency Control Program (SFCP)	1
LS-AA-104	Exelon 50.59 Review Process	10
OP-MW-201-007	Fire Protection System Impairment Control	7
RP-BY-301-1001	Radiological Air Sampling Program	13

LIST OF ACRONYMS USED

CFR	*Code of Federal Regulations*
IEEE	Institute of Electrical & Electronics Engineers
LOOP	Loss of Offsite Power
NEI	Nuclear Energy Institute
NRC	U.S. Nuclear Regulatory Commission
RG	Regulatory Guide
SDP	Significance Determination Process
SFCP	Surveillance Frequency Control Program
SSC	Structure, System, or Component
STI	Surveillance Test Interval
UFSAR	Updated Final Safety Analysis Report