



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
2100 RENAISSANCE BOULEVARD, SUITE 100
KING OF PRUSSIA, PA 19406-2713

August 27, 2018

Mr. Timothy S. Rausch
President and Chief Nuclear Officer
Susquehanna Nuclear, LLC
769 Salem Blvd. NUCSB3
Berwick, PA 18603

SUBJECT: SUSQUEHANNA STEAM ELECTRIC STATION – BIENNIAL PROBLEM
IDENTIFICATION AND RESOLUTION INSPECTION REPORT
05000387/2018011 AND 05000388/2018011

Dear Mr. Rausch:

On June 29, 2018, the U.S. Nuclear Regulatory Commission (NRC) completed on-site inspection activities at your Susquehanna Steam Electric Station (SSES) and discussed the results of this inspection with you and other members of your staff. In-office review of additional information continued by the NRC, and a telephonic exit meeting was conducted on July 30, 2018, with you and other members of your staff. The results of this inspection are documented in the enclosed report.

The NRC inspection team reviewed the station's corrective action program and the station's implementation of the program to evaluate its effectiveness in identifying, prioritizing, evaluating, and correcting problems, and to confirm that the station was complying with NRC regulations and licensee standards for its corrective action program. Based on the samples reviewed, the team determined that your staff's performance in each of these areas adequately supported nuclear safety. The team identified one finding in the area of corrective action program effectiveness.

The team also evaluated the station's processes for use of industry and NRC operating experience information and the effectiveness of the station's audits and self-assessments. Based on the samples reviewed, the team determined that your staff's performance in each of these areas adequately supported nuclear safety.

Finally, the team reviewed the station's programs to establish and maintain a safety conscious work environment, and interviewed station personnel to evaluate the effectiveness of these programs. Based on the team's observations and the results of these interviews, the team found no evidence of challenges to your organization's safety conscious work environment. Your employees appeared willing to raise nuclear safety concerns through at least one of the several means available.

NRC inspectors documented one finding of very low safety significance (Green) in this report. The finding involved a violation of NRC requirements and is being treated as a non-cited violation consistent with Section 2.3.2.a of the Enforcement Policy. If you contest the violation or significance, 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 I; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspectors at SSES. In addition, if you disagree with a cross-cutting aspect assignment or a finding not associated with a regulatory requirement in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, Region I, and the NRC Resident Inspectors at SSES.

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 the NRC Public Document Room in accordance with Title 10 of the *Code of Federal Regulations* (10 CFR), Part 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

/RA/

Jonathan E. Greives, Chief
Reactor Projects Branch 4
Division of Reactor Projects

Docket Numbers: 50-387 and 50-388
License Numbers: NPF-14 and NPF-22

Enclosure:
Inspection Report 05000387/2018011 and
05000388/2018011

cc w/encl: Distribution via ListServ

SUBJECT: SUSQUEHANNA STEAM ELECTRIC STATION – BIENNIAL PROBLEM IDENTIFICATION AND RESOLUTION INSPECTION REPORT
05000387/2018011 AND 05000388/2018011 DATED AUGUST 27, 2018

DISTRIBUTION: (via email)

- DLew, RA (R1ORAMAIL Resource)
- JGiessner, DRA (R1ORAMAIL Resource)
- RLorson, DRP (R1ORAMAIL Resource)
- DPelton, DRP (R1DRPMAIL Resource)
- JYerokun, DRS (R1DRSMAIL Resource)
- BWelling, DRS (R1DRSMAIL Resource)
- JGreives, DRP
- SBarber, DRP
- ATurilin, DRP
- DBeacon, DRP
- LMicewski, DRP, SRI
- TDaun, DRP, RI
- AGould, DRP, AA
- JBowen, RI, OEDO
- RidsNrrPMSusquehanna Resource
- RidsNrrDorlLpl1 Resource
- ROPReports Resource

DOCUMENT NAME: G:\DRP\BRANCH4\SUSQUEHANNA\SQ PI&R 2018\SSSES PIR IR 2018-011 FINAL.docx
ADAMS ACCESSION NUMBER: **ML18241A044**

<input checked="" type="checkbox"/> SUNSI Review		<input checked="" type="checkbox"/> Non-Sensitive <input type="checkbox"/> Sensitive		<input checked="" type="checkbox"/> Publicly Available <input type="checkbox"/> Non-Publicly Available	
OFFICE	RI/DRP	RI/DRP	RI/DRP		
NAME	RBarkley/TDaun for via email	MFerdas	JGreives		
DATE	8/27/18	8/23/18	8/23/18		

OFFICIAL RECORD COPY

**U.S. NUCLEAR REGULATORY COMMISSION
Inspection Report**

Docket Numbers: 50-387 and 50-388

License Numbers: NPF-14 and NPF-22

Report Numbers: 05000387/2018011 and 05000388/2018011

Enterprise Identifier: I-2018-011-0029

Licensee: Susquehanna Nuclear, LLC (Susquehanna)

Facility: Susquehanna Steam Electric Station, Units 1 and 2

Location: Berwick, PA

Dates: June 11 – July 30, 2018

Inspectors: R. Barkley, PE, Senior Project Engineer, Team Leader
T. Daun, Resident Inspector
M. Patel, Operator Licensing Examiner
P. Boguszewski, Reactor Engineer

Approved By: Jonathan E. Greives, Chief
Reactor Projects Branch 4
Division of Reactor Projects

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring Susquehanna's performance by conducting the biennial problem identification and resolution inspection in accordance with the Reactor Oversight Process. The Reactor Oversight Process is the NRC's program for overseeing the safe operation of commercial nuclear power reactors. Refer to <https://www.nrc.gov/reactors/operating/oversight.html> for more information.

Based on the samples selected for review, the inspection team concluded that Susquehanna was effective in identifying, evaluating, and resolving problems and that Susquehanna effectively used operating experience and self-assessments. The inspectors found no evidence of significant challenges to Susquehanna's safety conscious work environment and concluded that the staff are willing to raise nuclear safety concerns through at least one of the several means available.

NRC-identified and self-revealing findings and violations are summarized in the table below.

List of Findings and Violations

Failure to conduct proper testing of 125 VDC molded case circuit breakers to confirm their design adequacy long-term			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Barrier Integrity	Green NCV 05000387; 05000388/2018011-01 Closed	P.5 – Operating Experience	71152B
The inspectors identified a Green non-cited violation (NCV) of Title 10 of the <i>Code of Federal Regulations</i> (10 CFR) Part 50, Appendix B, Criterion XI, "Test Control." Specifically, Susquehanna has not established a program to adequately exercise and test safety-related 125VDC molded case circuit breakers (MCCBs) since initial plant operation.			

INSPECTION SCOPES

This inspection was conducted using the appropriate portions of the inspection procedures (IPs) in effect at the beginning of the inspection unless otherwise noted. Currently approved IPs with their attached revision histories are located on the public website at <http://www.nrc.gov/reading-rm/doc-collections/insp-manual/inspection-procedure/index.html>. Samples were declared complete when the IP requirements most appropriate to the inspection activity were met consistent with Inspection Manual Chapter (IMC) 2515, "Light-Water Reactor Inspection Program - Operations Phase." The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel to assess Susquehanna's performance and compliance with Commission rules and regulations, license conditions, site procedures, and standards.

OTHER ACTIVITIES – BASELINE

71152 - Problem Identification and Resolution

Biennial Team Inspection (1 Sample)

The inspectors performed a biennial assessment of Susquehanna's corrective action program, use of operating experience, self-assessments and audits, and safety conscious work environment. The assessment is documented below.

- (1) Corrective Action Program Effectiveness – The inspection team evaluated Susquehanna's effectiveness in identification, prioritization and evaluation, and correcting problems; and verified the station complied with NRC regulations and Susquehanna's standards for corrective action programs.
- (2) Operating Experience – The team evaluated Susquehanna's effectiveness in its use of industry and NRC operating experience information and verified the station complied with Susquehanna's standards for the use of operating experience.
- (3) Self-Assessments and Audits – The team evaluated the effectiveness of Susquehanna's audits and self-assessments and verified the station complied with Susquehanna's standards for the use of operating experience.
- (4) Safety Conscious Work Environment – The team reviewed Susquehanna's programs to establish and maintain a safety conscious work environment, and interviewed station personnel to evaluate the effectiveness of these programs.

INSPECTION RESULTS

Evaluation of the Susquehanna PI&R Program	71152B
<p>The NRC inspection team reviewed the station's corrective action program and the station's implementation of the program to evaluate its effectiveness in identifying, prioritizing, evaluating, and correcting problems, and to confirm that the station was complying with NRC regulations and licensee standards for corrective action programs. Based on the samples reviewed, the team determined Susquehanna staff's performance in each of these areas adequately supported nuclear safety. The team identified one finding in the area of the Corrective Action Program Effectiveness.</p>	

The team also evaluated the station's processes for use of industry and NRC operating experience information and the effectiveness of the station's audits and self-assessments. Based on the samples reviewed, the team determined that Susquehanna's performance in each of these areas adequately supported nuclear safety.

Finally, the team reviewed the station's programs to establish and maintain a safety conscious work environment, and interviewed station personnel in focus groups to evaluate the effectiveness of these programs. Based on the team's observations and the results of these interviews, the team found no evidence of challenges to Susquehanna's safety conscious work environment. Site employees appeared willing to raise nuclear safety concerns through at least one of the several means available.

Failure to conduct proper testing of 125 VDC molded case circuit breakers to confirm their design adequacy long-term

Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Barrier Integrity	Green NCV 05000387; 05000388/2018011-01 Closed	P.5 – Operating Experience	71152B

The inspectors identified a Green NCV of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control." Specifically, Susquehanna had not established a program to adequately exercise and test safety-related 125VDC MCCB since initial plant operation.

Description: During the 2013 NRC Component Design Bases Inspection (CDBI), inspectors reviewed Susquehanna's response to NRC Information Notice 93-64, "Periodic Testing and Preventive Maintenance of Molded Case Circuit Breakers." The inspectors identified a violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," because Susquehanna did not provide design control measures to verify or check the adequacy of the design for 125VDC MCCBs to ensure that the safety-related function credited to provide external circuit protection of primary containment electrical penetrations under the overload or fault conditions was maintained (ADAMS Accession No. ML13275A074). Specifically, the CDBI team concluded "that the time-current characteristic curves for the fuse, breaker, and penetration conductors depicted in UFSAR Figure 3.13-5 indicated that proper coordination between the breaker and power cable is required to be maintained in order to protect the containment penetration from damage during fault conditions." The CDBI team also concluded "that the overcurrent and instantaneous trip functions of these breakers have a safety-related function for these MCCBs because they are credited to operate in order to maintain the mechanical integrity of primary containment penetration assemblies under overload or fault conditions."

In 2016 while preparing for the next CDBI, Susquehanna identified that they had not taken corrective actions associated with the previously identified NRC violation and a licensee-identified violation was documented in the 2016 CDBI inspection report (ADAMS Accession No. ML16328A097).

Inspectors reviewed the corrective actions taken for the 2013 NRC-identified and 2016 licensee identified violations. Inspectors questioned what action was taken to address the 2013 NCV. While the inspectors noted that Susquehanna performed breaker panel

thermography dating back to 1996, they did not plan to complete the corrective actions they had identified, including internal inspection, cleaning, and manual cycling of these 125VDC MCCBs, until Unit 1 and 2 outages ending in 2021 and 2022. Their corrective actions did not include electrical testing.

The inspectors noted that even though Susquehanna had plans to conduct manual cycling of the MCCBs, this type of testing does not adequately provide test control measures during plant operation to assure that 125VDC MCCBs credited to provide external circuit protection of primary containment electrical penetrations under overload or fault conditions. Manually cycling the breakers provides lubrication through the manual tripping mechanism and a means of detecting the deterioration of the manual operating mechanism toward an unacceptable condition, but it does not provide any means of testing the automatic tripping mechanisms (i.e., thermal and electromagnetic). Additionally, manually cycling the breaker does not provide a means of detecting the deterioration of the overcurrent trip features toward an unacceptable condition, which is the safety-related function of the MCCB.

Corrective Actions: Susquehanna entered the issue into the corrective action program as CR-2018-09952 to evaluate the corrective actions taken to address the 2013 NRC-identified and 2016 licensee identified violations. The team noted that Susquehanna subsequently rescheduled the MCCB preventive maintenance (PM) schedule such that the cycling of these 125VDC MCCBs would occur one outage (approximately 2 years) earlier than previously planned. To address the lack of electrical testing of these 125VDC MCCBs, Susquehanna initiated CR-2018-11415. The MCCBs provide an independent backup fault protection for each load to preclude a single failure from impairing the integrity of a containment electrical penetration. Inspectors determined that the continued noncompliance while adequate corrective actions are developed did not represent a safety concern because the primary method of maintaining integrity of the containment penetrations are the fuses in the control panel and are independent of the MCCBs.

Corrective Action References: CR-1732454, CR-2016-04833, CR-2018-09952, DI-2018-03458

Performance Assessment:

Performance Deficiency: Susquehanna's failure to establish a test program to assure that all testing required to demonstrate that safety-related 125VDC MCCBs will perform satisfactorily in service was a performance deficiency and was within Susquehanna's ability to foresee and correct.

Screening: The inspectors determined the performance deficiency was more than minor because it adversely affected the Design Control and Configuration Control attributes of the Barrier Integrity cornerstone objective to provide reasonable assurance that physical design barriers (containment) protect the public from radionuclide release caused by accidents or events.

Significance: The inspectors assessed the significance of the finding using IMC 0609, Appendix A, Exhibit 3, "Barrier Integrity Screening Questions," Section B, "Reactor Containment," and determined that this performance deficiency did not represent an actual open pathway in the physical integrity of reactor containment and did not involve an actual reduction in the function of hydrogen igniters in the reactor containment. Therefore, the finding was determined to be of very low safety significance (Green).

Cross-Cutting Aspect: The finding has a cross-cutting aspect in the area of Operating Experience [P.5] since the organization did not systematically and effectively collect, evaluate, and implement relevant internal and external operating experience in a timely manner. Specifically, while operating experience was available in the form of an information notice, industry guidance, and regulatory enforcement actions on low voltage MCCB testing, Susquehanna had not systematically evaluated this information into their corrective actions associated with the previously identified violations such that it included electrical testing as well as the inspection and cycling of the breakers.

Enforcement:

Violation: 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," requires, in part, "that a test program shall be established to assure that all testing required to demonstrate that structures, systems, and components will perform satisfactorily in service is identified and performed in accordance with written test procedures which incorporate the requirements and acceptance limits contained in applicable design documents. The test program shall include, as appropriate, proof tests prior to installation, preoperational tests, and operational tests during nuclear power plant or fuel reprocessing plant operation, of structures, systems, and components."

Contrary to the above, prior to July 2018, Susquehanna had not established a test program to assure that all testing required to demonstrate that safety-related 125VDC MCCBs that provide the necessary external circuit protection of primary containment electrical penetration under overload or fault conditions.

Disposition: This violation is being treated as an NCV, consistent with Section 2.3.2 of the Enforcement Policy.

Observation and Minor Performance Deficiency

71152B

Corrective Action Program Effectiveness: The team concluded that Susquehanna's corrective action program was effective. However, the following observation was noted during this inspection:

Problem Identification

During a walkdown of the Engineered Safeguards Service Water (ESSW) building, the inspectors questioned Susquehanna regarding the impact on the far field seismic monitor from groundwater that leaked into the basement of each division. While the monitor was found to be above the level of the water, the water level in the basements of both ESSW building divisions was greater than the actuation set point (7 inches and 13 inches versus 3.25 inches) of the flood detection instruments in each basement. Neither division flood instrument had actuated and alarmed in the control room. Upon identification on June 12, 2018, Susquehanna initiated additional compensatory measures per procedure EP-115, "Equipment Important to Emergency Response (EITER)," Revision 12, to detect flooding in this building while the instruments were examined and the water was pumped out. The equipment failures were entered into the corrective action program as CR 2018-09364 and 2018-09365. Susquehanna found that the one instrument had corroded sufficiently to restrict the internal float from moving upward and actuating the alarm; once the corrosion was removed, the instrument tested properly. The float in the other instrument was found to move

freely, but a micro switch in the instrument was not operating. That instrument was returned to service once the micro switch was replaced.

The inspectors noted that this area had historically been inspected once per month and pumped out if measurable water was found, leaving the flood instruments in a relatively dry condition. However, the PM activity was last performed in March 2017 and was assigned a low priority. The inspectors also noted that operators check the ESSW pump rooms once per 12-hour shift, but do not examine the basement areas during routine rounds as it is unlit and 30 feet down below 2 levels of deck grating. Given the slow rate of groundwater in-leakage, inspectors determined Susquehanna had a reasonable opportunity to have identified the non-functional emergency equipment. The inspectors noted that while these instruments are used to warn of possible flooding in each ESSW division, alternative measures are available to detect flooding in these rooms above the ESSW basements in adequate time to make an accurate emergency action level declaration. As such, inspectors determined the failure to identify the degraded emergency equipment was of minor safety significance because it did not adversely affect the emergency preparedness cornerstone objective.

Corrective action for this event included reclassifying the PM activity for checking and pumping out the basements to ensure they are performed on a monthly basis (PMCR # 2018-09585) as well as performed an extent of condition review of other rooms with flood level instruments.

Observation	71152B
<p>Operating Experience: The team concluded that Susquehanna's use of operating experience was effective. However, one Green NCV was identified during this inspection and was attributed to ineffective use of relevant internal and external operating experience.</p>	

Observation	71152B
<p>Self-Assessments and Audits: The team concluded that Susquehanna's self-assessments were effective. However, the following observation was noted during this inspection:</p> <p>The NRC inspectors noted numerous condition reports starting in February 2018 related to malfunctions of a specific security feature requiring compensatory actions. Though appropriate corrective actions were taken for individual alarms, inspectors identified that Susquehanna was not effective in identifying this potential adverse trend. Susquehanna subsequently initiated a trend condition report (CR-2018-09335) and identified all malfunction alarms received between January and mid-June of 2018.</p>	

Observation	71152B
<p>Safety Conscious Work Environment: The team found no evidence of challenges to the Susquehanna organization's safety conscious work environment. Site employees appeared willing to raise nuclear safety concerns through at least one of the several means available. The comments made by the Susquehanna staff were consistent with Susquehanna internal employee survey results, particularly with regard to the use of the corrective action system and concerns with knowledge management. Several senior staff noted improvements in the corrective action process in recent years; the only concerns expressed regarding the corrective action system were with the resolution of long-term, lower level equipment issues.</p>	

EXIT MEETINGS AND DEBRIEFS

Inspectors verified no proprietary information was retained or documented in this report.

- On June 29, 2018, the inspectors presented the biennial problem identification and resolution initial inspection results to Mr. Timothy Rausch and other members of the Susquehanna staff. Following additional in-office review, the final results were presented in a telephonic exit meeting on July 30, 2018, with Mr. Timothy Rausch and other members of the Susquehanna staff.

DOCUMENTS REVIEWED**71152B**Action Requests

1738163	2014-29799	2015-06525	2015-10389
2016-02190	2017-05278	2017-05294	2017-12969

Condition Reports (*initiated in response to inspection

1296516	2016-21028	2017-13956
1712812	2016-22634	2017-15420
1732454	2016-22888	2017-16089
2014-05827	2016-23373	2017-16380
2014-28018	2016-23477	2017-16577
2014-36140	2016-23627	2017-16676
2015-00612	2016-23631	2017-19491
2015-19111	2016-23874	2017-19713
2015-19390	2016-23934	2017-20923
2015-27535	2016-24458	2017-21300
2015-33668	2016-24888	2018-01219
2016-02369	2016-25099	2018-01261
2016-04833	2016-25162	2018-02040
2016-06960	2016-25622	2018-02090
2016-08377	2016-26213	2018-03194
2016-09940	2016-27867	2018-04388
2016-12047	2017-00476	2018-04535
2016-12619	2017-03943	2018-05044
2016-13058	2017-04957	2018-06662
2016-13220	2017-05265	2018-08976
2016-14128	2017-05330	2018-09294
2016-14789	2017-05775	2018-09290*
2016-15603	2017-06068	2018-09291*
2016-15710	2017-06476	2018-09292*
2016-16692	2017-06836	2018-09335*
2016-16794	2017-09515	2018-09364*
2016-18466	2017-11504	2018-09365*
2016-19187	2017-11559	2018-09598
2016-19445	2017-11583	2018-09673*
2016-20307	2017-11645	2018-09808*
2016-20156	2017-11912	2018-09952*
2016-20472	2017-11996	2018-09953*
2016-20859	2017-12182	2018-10596*
2016-20623	2017-12685	2018-10597*
2016-20859	2017-13746	

Self-Assessment and Audits

DI-2016-16175
 DI-2016-19792
 DI-2016-22542
 DI-2016-22543
 DI-2017-00312

DI-2017-00313
 DI-2017-12776
 DI-2017-12777
 DI-2017-12776
 DI-2017-18729
 DI-2017-18730
 DI-2018-09542
 NCV 2016002-01 – Failure to Promptly Identify a Condition Adverse to Quality Associated with Primary Containment Isolation Valves
 NCV 2016002-02 – Failure to Promptly Correct a CAQ with the A EDG MOC Switch
 NCV 2016002-04 – Failure to Critique an Incorrect PAR Notification
 NCV 2016004-03 – Refuel Floor Rad Monitor Inoperable due to Improper Calibration
 NCV 2016004-04 – Auxiliary Bus Load Shed When a Daisy Chained Neutral was Interrupted During Maintenance
 NCV 2016008-01 – Failure to Write a Condition Report for Degraded Conditions Which Challenged the Operability of Safety-Related Equipment
 NCV 2016008-02 – Failure to Implement and Maintain Quality Procedure Results in MCR Chiller being Inoperable
 NCV 2017003-01 – RBCCW PCIV Design Control Issue
 NOS Audit Report AR-2016-22717, Emergency Preparedness Audit Report
 Nuclear Safety Culture Assessment - 2017
 Nuclear Safety Culture Monitoring Reports for the 2nd, 3rd and 4th quarters of 2017 and the 1st quarter of 2018
 FASA Report – Readiness for the 2016 NRC/FEMA Evaluated Exercise Team Susquehanna Plan for Excellence, Revision 8

Maintenance Orders/Work Orders

1900523	2028885	2114562
1900539	2028886	2114670
1903970	2031798	2114675
1914356	2037890	2114724
1914357	2070562	2165429
2001009	2070563	2165490
2007122	2112937	2166230
2019613	2114386	2184374
2028884	2114560	

Procedures

EP-115, Revision 12 - Equipment Important to Emergency Response (EITER)
 LS-125-1001, Revision 4, Root Cause Analysis Manual
 LS-125-1009, Revision 2, Station Trending Manual
 NDAP-00-0109, Revision 19, Employee Concerns Program
 NDAP-00-0784, Revision 6, SSES Safety Culture Monitoring
 NDAP-00-0909, Revision 15, Overview of Security Requirements
 NDAP-QA-0703, Revision 31, Operability Determinations and Functionality Assessments
 SI-099-210 – Semi-Annual Functional Test – Strong Motion Seismic Monitor

Engineering Changes / Evaluations

ERPM 1880933, AOV Diagnostic Test / Repack XV147F010
 EPRM 1880952, AOV Diagnostic Test / Repack XV147F180

GDG-09, Valve Design Considerations for Design Changes Which Affect Components or System Parameters, Revision 10
 NDAP-QA-1170, Air Operated Valve Program, Revision 4
 NDAP-QA-1220, Engineering Change Process, Revision 12
 NSE-DTG-008, Station Engineering Desktop Guide #8, Valve Packing, Revision 0
 SO-155-002, Quarterly SDV Vent and Drain Valve Operability Check, Revision 26

Calculations

EC-002-0518, Main Steam Isolation Valve Solenoid Fuse to Breaker Coordination 125 VDC, Revision 0
 EC-002-0533, 125 VDC Class 1E Distribution Panel 1D624 2D624, Revision 0
 EC-002-0657, Coordination of 125 VDC Class 1E Distribution Panel, Revision 0

Drawings

E-26, Sheet 1, Unit 1 Schematic Meter and Relay Diagram 125 VDC System
 E-26, Sheet 2, Unit 1 Schematic Meter & Relay Diagram 125 VDC Distribution Panels – ESS 1D614, 1D624, 1D634 & 1D644
 M-147, P&ID for the Scram Discharge Volume, Revision 38

Operating Experience

CR-2017-06541, Security OE Review Performed under AR-2016-00376 was Inadequate
 CR-2017-11645, Part 21 on Cutler Hammer/Eaton A200 Series Starters, 06/09/2017
 CR-2017-11912, Reactor Recirculation Pump Trip at FitzPatrick Could Apply to SSES, 06/16/2017
 CR-2017-11951, 2-inch abandoned conduit was drilled on hardened vent at Hope Creek
 DI-2018-03696
 ICES Report 438577

Miscellaneous

DBD001, Design Basis Document for Class 1E DC Electrical, Revision 6
 DBD003, Design Basis Document for Containment Isolation, Revision 4
 DBD012, Design Basis Document for Primary Containment, Revision 4
 IOM117, ET EH-Frame Circuit Breakers 2 Pole, 15-100 Amperes, Revision 43
 MRC and Screening Reports for day the team was onsite
 PM Change Request Form 2018-09585, dated June 21, 2018
 PM Change Request Form ACT-03-CR-2016-04833
 Startup PORC Package for a Unit 2 Scram on 05/12/2016