



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

REGION IV  
1600 EAST LAMAR BOULEVARD  
ARLINGTON, TEXAS 76011-4511

January 30, 2019

Mr. John Dinelli  
Site Vice President  
Entergy Operations, Inc.  
17265 River Road  
Killona, LA 70057-0751

SUBJECT: ERRATA - WATERFORD STEAM ELECTRIC STATION, UNIT 3 – NRC  
PROBLEM IDENTIFICATION AND RESOLUTION INSPECTION  
REPORT 05000382/2018008 AND NOTICE OF VIOLATION

Dear Mr. Dinelli:

The inspection report sent to you dated November 15, 2018 (NRC's Agencywide Documents Access and Management System (ADAMS) Accession No. ML18319A379), contained two documentation errors. The first error was in relation to the documented Severity Level IV Non-Cited violation, "Failure to Update the Final Safety Analysis Report." The specific write-up located on Pages 2, 3, 11, 12, and 13 incorrectly specified that the Waterford Steam Electric Station, Unit 3, had incorrect information in the plant's Updated Final Safety Analysis Report with regard to codes used (CEFLASH and TRANFLO). The actual code in question was in fact "TRANFLOW." The second error was in relation to the documented (Green) Non-Cited Violation, "Failure to Identify and Correct a Condition Adverse to Quality." The cross-cutting aspect, documented at the top of the write-up, located on Page 9, is listed as H.6, "Human Performance, Challenge the Unknown." The correct cross-cutting aspect, which was correctly documented in the "Performance Assessment," section of the write-up is H.14, "Human Performance, Conservative Bias." These errors have been corrected in the cover letter and in the attached report. These corrections did not affect the findings or the assessments previously provided in this report, nor does it affect the response timelines for the identified violations, as specified in the previous issuance of this report.

This letter and its enclosure (ADAMS Accession No. ML19029A088) supersedes and replaces the previously aforementioned report (listed above). If you have any questions regarding this letter, please feel free to contact me.

This letter, and its enclosure, 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."

J. Dinelli

2

To the extent possible, any responses to this letter or its enclosure should not include any personal privacy or proprietary information so that it can be made available to the public without redaction.

Sincerely,

*/RA/*

Ray L. Kellar, P.E., Acting Team Leader  
Inspection Program and Assessment Team  
Division of Reactor Safety

Docket No. 50-382  
License No. NPF-38

ERRATA Enclosure:  
Inspection Report 05000382/2018008  
w/ enclosures:

1. Notice of Violation
2. Inspection Report  
(ADAMS ML19029A088)

cc: Electronic Distribution to Waterford  
Steam Electric Station



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

REGION IV  
1600 EAST LAMAR BOULEVARD  
ARLINGTON, TEXAS 76011-4511

November 15, 2018

Mr. John Dinelli  
Site Vice President  
Entergy Operations, Inc.  
17265 River Road  
Killona, LA 70057-0751

SUBJECT: WATERFORD STEAM ELECTRIC STATION, UNIT 3 – NRC PROBLEM  
IDENTIFICATION AND RESOLUTION INSPECTION  
REPORT 05000382/2018008 AND NOTICE OF VIOLATION

Dear Mr. Dinelli:

On October 4, 2018, the U.S. Nuclear Regulatory Commission (NRC) completed a problem identification and resolution inspection at your Waterford Steam Electric Station, Unit 3. The NRC inspection team discussed the results of this inspection 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 corrective action programs. Based on the samples reviewed, the team determined that your staff's performance in each of these areas adequately supported nuclear safety. However, the team identified an area for improvement in the prioritization process for security-related condition reports. Specifically, unless associated with a significant NRC violation, plant corrective action procedures do not provide steps that would direct security-related condition reports to be assigned as a Category A, "Significant Condition Adverse to Quality," which requires corrective actions to preclude repetition.

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. However, in the area of self-assessment and audits, some examples were identified where extent of condition was not pursued in a timely fashion or apparently not considered.

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 that the Waterford Steam Electric Station, Unit 3, had an effective safety-conscious work environment. Your employees appeared willing to raise nuclear safety concerns through at

least one of the several means available. However, in the area of security, the team found evidence of challenges to your organization's safety-conscious work environment. Specifically, the staff complained that a number of non-safety work condition issues had not been successfully addressed, and that attempts to check on the progress of these issues went unanswered. As a result, the team concluded that the lack of tracking mechanisms or effectiveness reviews for actions taken to improve these work condition issues has created an environment where condition reports for non-safety issues may seem ineffectual.

The NRC inspection team documented one finding of very low safety significance (Green) in this report. This finding involved a violation of NRC requirements. Additionally, there was one violation that was determined to be Severity Level IV under the traditional enforcement process. The NRC is treating these violations as non-cited violations (NCVs) consistent with Section 2.3.2 of the Enforcement Policy.

The enclosed report also discusses a third violation associated with a finding of very low safety significance (Green). The NRC evaluated this violation in accordance with Section 2.3.2 of the NRC Enforcement Policy, which can be found at <http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html>. The violation is cited in the enclosed Notice of Violation (Notice) and the circumstances surrounding it are described in detail in the subject inspection report. The violation is being cited in the Notice because the violation did not meet the criteria to be treated as an NCV because your staff did not restore compliance within a reasonable period of time after the violation was previously identified by the NRC as NCV 05000382/2016008-01.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. If you have additional information that you believe the NRC should consider, you may provide it in your response to the Notice. The NRC's review of your response to the Notice will also determine whether further enforcement action is necessary to ensure your compliance with regulatory requirements.

If you contest the violations or significance of these NCVs, 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 IV; the Director, Office of Enforcement; and the NRC resident inspector at the Waterford Steam Electric Station, Unit 3.

If you disagree with a cross-cutting aspect assignment 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 IV; and the NRC resident inspector at the Waterford Steam Electric Station, Unit 3.

This letter, its enclosure, and your response 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." To the extent possible, your response should not include any personal privacy or proprietary information so that it can be made available to the public without redaction.

Sincerely,

*/RA/*

Geoffrey B. Miller, Team Leader  
Inspection Program and Assessment Team  
Division of Reactor Safety

Docket No. 50-382  
License No. NPF-38

Enclosures:

1. Notice of Violation
2. Inspection Report 05000382/2018008  
w/ Attachment: Information Request

cc: Electronic Distribution to Waterford  
Steam Electric Station

## NOTICE OF VIOLATION

Entergy Operations, Inc.  
Waterford Steam Electric Station, Unit 3

Docket No. 50-382  
License No. NPF-38

During a NRC inspection conducted September 17 through October 4, 2018, a violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy, the violation is listed below:

10 CFR Part 50, Appendix B, Criterion XV, requires, in part, that nonconforming items shall be reviewed and accepted, rejected, repaired or reworked in accordance with documented procedures.

Contrary to the above, in May 2016 the licensee failed to review and accept, reject, repair or rework nonconforming items in accordance with documented procedures. Specifically, following receipt of information from Electros witch that a number of basic components within relays and switches did not conform to quality requirements, the licensee failed to dedicate these commercial-grade parts as described in 10 CFR Part 21.

This violation is associated with a Green significance determination process finding.

Pursuant to the provisions of 10 CFR 2.201 Entergy Operations, Inc. is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with a copy to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region IV, 1600 E. Lamar Blvd, Arlington, Texas 76011 and a copy to the NRC Resident Inspector at the Waterford Steam Electric Station, Unit 3, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a, "Reply to a Notice of Violation, NRC Inspection Report 05000382/2018008" and should include for each violation: (1) the reason for the violation, or if contested, the basis for disputing the violation or severity level; (2) the corrective steps that have been taken and the results achieved; (3) the corrective steps that will be taken; and (4) the date when full compliance will be achieved. Your response may reference or include previous docketed correspondence, if the correspondence adequately addresses the required response.

If an adequate reply is not received within the time specified in this Notice, an Order or a Demand for Information may be issued as to why the license should not be modified, suspended, or revoked or why such other action as may be proper should not be taken. Where good cause is shown, consideration will be given to extending the response time.

If you contest this enforcement action, you should also provide a copy of your response, with the basis for your denial, to the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001.

Your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, it should not include any personal privacy or proprietary information so that it can be made available to the public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the

information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b), to support a request for withholding confidential commercial or financial information).

Dated this 15 day of November 2018

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

Docket Number: 05000382

License Number: NPF-38

Report Number: 05000382/2018008

Enterprise Identifier: I-2018-008-0000

Licensee: Entergy Operations, Inc.

Facility: Waterford Steam Electric Station, Unit 3

Location: Killona, Louisiana

Inspection Dates: September 17, 2018 to October 4, 2018

Inspectors: R. Azua, Senior Reactor Inspector  
J. Josey, Senior Resident Inspector  
C. Jewett, Physical Security Inspector  
C. Speer, Resident Inspector

Approved By: G. Miller, Team Leader  
Inspection Program and Assessment Team  
Division of Reactor Safety



## SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee’s performance by conducting a problem identification and resolution inspection at the Waterford Steam Electric Station, Unit 3 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. NRC-identified and self-revealed findings, violations, and additional items are summarized in the table below. Licensee-identified non-cited violations are documented in the Inspection Results at the end of this report.

### List of Findings and Violations

| Failure to Identify and Correct a Condition Adverse to Quality  |                                  |                               |  |
|---|----------------------------------|-------------------------------|--|
| Cornerstone   | Significance                     | Cross-cutting Aspect          | Inspection Procedure                           |
| Mitigating Systems  | Green<br>NCV 05000382/2018008-02 | [H.14] –<br>Conservative Bias | 71152<br>Problem Identification and Resolution |
| <p>The team identified a Green non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, “Corrective Action,” associated with the licensee’s failure to identify and correct condition adverse to quality associated with the breeching of hazard barriers. Specifically, while developing corrective actions for failure to close exterior doors the licensee identified that they had no process for tracking impaired hazard barriers such that control room operators would be aware of which barriers are impaired and which equipment may not be able to perform its specified function to protect safety-related structures, systems and components, but the licensee then failed to correct this issue. The licensee entered this issue into the corrective action program as Condition Report CR-WF3-2018-05273.</p> |                                  |                               |  |

| Failure to Update the Final Safety Analysis Report   |                                     |                      |  |
|--|-------------------------------------|----------------------|--|
| Cornerstone  | Significance                        | Cross-cutting Aspect | Inspection Procedure                           |
| NA   | SL-IV 05000382/2018008-03<br>Closed | None                 | 71152<br>Problem Identification and Resolution |
| <p>The team identified a Severity Level IV non-cited violation of 10 CFR 50.71(e), “Maintenance of Records, Making Reports,” associated with the licensee’s failure to correctly update the Updated Final Safety Analysis Report (UFSAR). Specifically, the licensee had incorrect information in the UFSAR with regard to codes used (CEFLASH and TRANFLOW). The licensee entered this issue into the corrective action program as Condition Report CR-WF3-2018-01612</p> |                                     |                      |  |

| Failure to Control Nonconforming Parts   |  |   |   |
|--|--|---|---|
| Cornerstone  | Significance                             | Cross-cutting Aspect                          | Inspection Procedure                            |
| Mitigating Systems   | Green<br>NOV 05000382/2018008-01<br>Open | [P.2] – Problem Identification and Resolution | 71152—<br>Problem Identification and Resolution |
| The team identified a Green cited violation of 10 CFR Part 50, Appendix B, Criterion XV, which occurred when the licensee failed to dedicate commercial-grade relays for use in safety-related applications. After receiving information from a vendor that more than 124 relays potentially installed in safety-related applications did not conform to quality assurance standards, the licensee failed to take appropriate steps to accept these commercial-grade relays as basic components. The licensee entered this issue into the corrective action program as Condition Report CR-WF3-2018-05590. |  |   |   |

## INSPECTION SCOPES

Inspections were 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 team reviewed selected procedures and records, observed activities, and interviewed personnel to assess licensee 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 team performed a biennial assessment of the licensee’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: Problem Identification, Problem Prioritization and Evaluation, and Corrective Actions – The 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 programs and procedures. The sample included approximately 250 condition reports and other documents reviewed. This included an in-depth 5-year review of condition reports associated with Control Room and Auxiliary Building Ventilation systems.
- (2) Operating Experience, Self-Assessments, and Audits – The team evaluated the station’s processes for use of industry and NRC operating experience. The team also evaluated

the effectiveness of the station’s audits and self-assessment program. The sample included industry operating experience communications including 10 CFR Part 21 notifications and other vendor correspondence, NRC generic communications, and publications from various industry groups including INPO and EPRI, plus associated site evaluations.

(3) Safety-Conscious Work Environment – The team evaluated the station’s safety-conscious work environment. The team interviewed station personnel and the employee concerns program manager.

(4) Beyond Design Basis Procedures – The team reviewed the licensee’s actions to address an identified concern with beyond design basis procedures addressing control room ventilation following a loss of power.

|   |   |
|---|---|
| Corrective Action Program Assessment  | 71152—Problem Identification and Resolution |
| <p>Corrective Action Program: Based on the samples reviewed, the team determined that the licensee’s performance in each of these areas adequately supported nuclear safety.</p> <p>Effectiveness of Problem Identification: Overall, the team found that the licensee’s identification and documentation of problems were adequate to support nuclear safety.</p> <p>Effectiveness of Prioritization and Evaluation of Issues: Overall, the team found that the licensee’s prioritization and evaluation of issues were adequate to support nuclear safety. However, the team identified an area for improvement in the assessment process of security-related condition reports. The Condition Report Classification Guidance found on page 45 of procedure EN-LI-102, Revision 33, did not provide guidance for security-related CRs to reach the level of Category A, “Significant Condition Adverse to Quality,” without an associated significant NRC violation. The team determined that the lack of mention of security or physical protection program in this section could lead to potential security issues that require corrective actions to prevent recurrence, to be missed. Of note, 10 CFR 73.55 (b)(10) explicitly states the need to prevent recurrence of failures and deficiencies in the physical protection program. The licensee entered this issue into their corrective action program as a corporate condition report HQN-2018-2201.</p> <p>Effectiveness of Corrective Actions: Overall, the team concluded that the licensee’s corrective actions adequately supported nuclear safety.</p> |   |

|   |   |
|---|---|
| Operating Experience, Self-Assessments, and Audits Assessment   | 71152—Problem Identification and Resolution |
| <p>Operating Experience and Self-Assessments and Audits: Based on the samples reviewed, the team determined that the licensee’s performance in each of these areas adequately supported nuclear safety. However, though the licensee appeared to do an adequate job in addressing identified issues, the team identified some examples where extent of condition was not pursued in a timely fashion or apparently not considered.</p> <p>For example, the licensee repeatedly identified shortcomings in the engineering department in a variety of areas (design control, acceptance testing, 10 CFR 50.59 reviews) from a variety of</p> |   |

sources (Nuclear Independent Oversight, Safety Review Committee), as well as declining performance trends in both design and system engineering throughout 2017. For each observation, the licensee initiated a condition report to document and evaluate the condition. As of September 2018 the licensee had planned but not initiated a condition report to evaluate and assess the overall performance of the engineering department to identify any other potential shortcomings. Though not procedurally required, the team determined that more timely action to evaluate and address the potential for overall degrading performance in engineering would have been appropriate.

The team reviewed a variety of sources of Operating Experience including 10 CFR Part 21 notifications and other vendor correspondence, NRC generic communications, and publications from various industry groups including INPO and EPRI. The team determined the licensee is adequately screening and addressing issues identified through operating experience that apply to the station, and that this information is evaluated in a timely manner once it is received.

The team did identify an example where the licensee failed to correct a previously identified NRC non-cited violation (NCV) related to a 10 CFR Part 21 notification. This issue is documented in the Inspection Results section of this report.

|  |   |
|--|---|
| Safety-Conscious Work Environment Assessment   | 71152—Problem Identification and Resolution |
| <p>Safety-Conscious Work Environment: 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 that the licensee had an effective safety-conscious work environment. Plant employees appeared willing to raise nuclear safety concerns through at least one of the several means available.</p> <p>However, in the area of security, the team found evidence of challenges to this organization’s safety-conscious work environment. Specifically, the staff complained that a number of non-safety work condition issues had not been successfully addressed. The team reviewed a number of condition reports in security and observed that there were a number of repeat condition reports that have been frustrating the security staff related to the secure owner controlled area fence and the air conditioning system in the security roving vehicle. The security staff also complained that they had written a number of reports regarding conditions in the bullet-resistant enclosures and felt that these issues have not been addressed. Furthermore, the security staff indicated that emails sent to ask about the progress on these condition reports went unanswered. One officer complained that he/she felt that writing condition reports for these issues was a waste of time. As a result, the team concluded that the lack of tracking mechanisms or effectiveness reviews for actions taken to improve these work condition issues has created an environment where condition reports for non-safety security-related issues may seem ineffectual.</p> |   |

|  |   |
|--|---|
| Beyond Design Basis Procedures   | 71152—Problem Identification and Resolution |
| <p>The team identified that the licensee had made limited progress in this area in the short period of time that had passed since Violation 05000382/2017009-01 was identified. The team reviewed those actions that the licensee was planning to take and determined that these actions appear to be appropriate to address NRC concerns if implemented as described. The team determined that any conclusions regarding NRC concerns will require a final review of licensee actions in a future inspection. .</p> |   |

**INSPECTION RESULTS**

| Failure to Control Nonconforming Parts |  |   |  |
|--|--|---|--|
| Cornerstone                            | Significance                             | Cross-cutting Aspect                          | Inspection Procedure                         |
| Mitigating Systems                     | Green<br>NOV 05000382/2018008-01<br>Open | [P.2] – Problem Identification and Resolution | 71152— Problem Identification and Resolution |

The team identified a Green cited violation of 10 CFR Part 50, Appendix B, Criterion XV, “Nonconforming Materials, Parts, or Components,” when the licensee failed to dedicate commercial-grade relays for use in safety-related applications. After receiving information from a vendor that more than 124 relays potentially installed in safety-related applications did not conform to quality assurance standards, the licensee failed to take appropriate steps to accept these commercial-grade relays as basic components.

Description: On May 10, 2016, Electroswitch submitted a 10 CFR Part 21 report to the NRC (ML16139A834) documenting that a large population of rotary switches and relays it had manufactured since 1984 had not conformed to quality assurance program requirements. (Electroswitch discontinued its 10 CFR Part 50, Appendix B, quality assurance program effective March 24, 2016). The 10 CFR Part 21 notification noted that, “Electroswitch did not procure materials, parts, equipment, and/or services from an Appendix B supplier nor were applicable Commercial Grade Surveys, Source Inspections, and Material Analyses performed,” for a number of materials used in the manufacture of these components, which it sold as safety-related basic components. The Waterford Steam Electric Station, Unit 3 was listed as an affected facility in a May 11, 2016, update to Electroswitch’s report.

On May 27, 2016, the NRC issued Inspection Report 99900833/2016-201 for the vendor inspection of Electroswitch and issued a Notice of Nonconformance (ML16147A211). This inspection report states:

“Electroswitch did not use any form of commercial grade dedication (CGD) for their commercially procured materials, parts, and services, and instead chose to manufacture and test final products under their 10 CFR Part 50, Appendix B program. This approach is acceptable, provided all safety function characteristics for their products are verified or tested to ensure the products can meet their intended safety function under the most adverse design conditions. However, Electroswitch used commercial materials, components, and services without performing adequate verification during the receipt, testing, or other phases of their manufacturing process to ensure that the materials and components are equivalent to what was originally

qualified, and the services were suitable for use in that they had the capability and traceability to perform the required tests. The NRC inspection team noted this practice had been in place since Electros witch began offering products under their 10 CFR Part 50, Appendix B program. Electros witch decided to discontinue their Appendix B program as of March 2016.”

On May 25, 2016, the licensee initiated Condition Report CR-WF3-2016-03525 to evaluate Electros witch’s Part 21 report. On June 13, 2016, the licensee performed a Part 21 screening using procedure EN-LI-108-01, Attachment 9.1, which required that for safety-related parts installed in the plant, personnel performing the screen must, “assure that the issue has been or is being evaluated under 10 CFR 50.72 and/or 50.73, and includes the requirement of 10 CFR Part 21. Issue a new condition report if needed.” The evaluator noted that, “Electros witch has determined it does not have the capability to perform the evaluation to determine if a defect, which could create a substantial safety hazard, exists.” On June 21, 2016, the licensee documented that no Part 21 notification was required because a Part 21 notification had been issued by the vendor. However, the licensee failed to account for Electros witch’s statement that it lacked information to determine whether the identified deviation could create a substantial safety hazard, and was therefore a defect, at any individual station.

On July 19, 2016, the licensee completed an engineering evaluation concluding the following:

Electros witch relays and rotary switches have been designed by Electros witch for decades and have been proven through testing and performance (i.e., OEs) as being reliable. Based on corrective actions taken by Electros witch and the applications and reliability of these relays and switches, it is concluded that the nonconformance issues on Electros witch products described in this Part 21 report does not create a substantial safety hazard such that the loss of a safety-related function is initiated. Therefore, the function of a Technical Specification system, structure, or component is not adversely affected as a result of this Part 21 report.

The licensee further concluded that, “No additional corrective actions are required and Electros witch materials in the warehouse may be issued as required.” The team determined these conclusions were not valid because they accepted nonconforming components as fully qualified and permitted further installation of commercial grade components in safety-related applications with no acceptance testing or other dedication, contrary to the requirements of 10 CFR Part 21.

On January 26, 2017, the NRC issued a non-cited violation of 10 CFR 50, Appendix B, Criterion XV, for the licensee’s failure to adequately address the two nonconformance issues identified in the Electros witch 10 CFR Part 21 report (ML16139A834). The licensee addressed the first identified nonconformance sufficiently through Condition Report CR-WF3-2016-07710, Corrective Action 15, which developed and completed an Adverse Condition Analysis. However, the 10 CFR Part 21 also identified the failure to utilize an Appendix B supplier and the failure to perform the applicable Commercial Grade Surveys, Source Inspections, and Material Analyses on a list of materials. This portion of the 10 CFR Part 21 report was not addressed through corrective actions.

On October 3, 2018, the licensee provided the NRC team a white paper outlining their justification for not verifying the basic components of the products listed as potentially nonconforming (found in Appendix A, Nonconformance 2, of the Electros witch 10 CFR

Part 21 letter to the licensee, dated May 11, 2016). The white paper was based on the assumption that previous Nuclear Procurement Issues Corporation (NUPIC) audits (completed from 2003-2015) and a source surveillance completed in 2015 (which reviewed drawings and purchase orders) provided assurance that the basic components of the switches currently installed in the plant conform to the vendor's design documents. While the team agreed the source surveillance and NUPIC audits did not identify a nonconformance, the licensee did not inspect the receipt of actual material in a manner that compared them against the vendor design specifications. The 2016 NRC inspection of Electroswitch Corporation identified a nonconformance that has existed since Electroswitch began offering products under their 10 CFR Part 50, Appendix B program.

The team determined that because Electroswitch failed to either: a) utilize an Appendix B vendor for the parts/pieces or b) perform a Commercial Grade Dedication for the commercially procured materials, parts, and services, and because the licensee failed to address the nonconformance identified in the Electroswitch Part 21 letter and the non-cited violation issued in NRC Inspection Report 05000382/2016008-01, the violation remained uncorrected.

Corrective Action(s): The licensee initiated efforts to perform operability evaluations for those systems and components impacted by the Electroswitch relays.

Corrective Action Reference(s): Condition Report CR-WF3-2018-05590

Performance Assessment:

Performance Deficiency: The failure to dedicate commercial-grade relays used as, or intended for use as, basic components (in safety-related applications) as required by plant procedures and by 10 CFR Part 21, was a performance deficiency.

Screening: This performance deficiency was more-than-minor because it was associated with the design control attribute of the Mitigating Systems Cornerstone and adversely affected the objective of ensuring the availability, reliability, and capability of systems that respond to initiating events.

Significance: Using Inspection Manual Chapter 0609, Appendix A, dated June 19, 2012, the team determined that this finding was of very low safety significance (Green) because it was a deficiency affecting the design or qualification of a structure, system, or component, however operability was maintained.

Cross-cutting Aspect: The team determined that the finding has a cross-cutting aspect in the area of Problem Identification and Resolution associated with evaluation, because the organization did not take effective corrective actions to thoroughly evaluate issues to ensure that resolutions address cause and extent of conditions commensurate with their safety significance. Specifically, the licensee failed to effectively address NCV 05000382/2016008-01 in the corrective actions contained in Condition Report CR-WF3-2016-07710 [P.2].

Enforcement:

Violation: Title 10 CFR Part 50, Appendix B, Criterion XV, requires, in part, that nonconforming items shall be reviewed and accepted, rejected, repaired or reworked in accordance with documented procedures.

Contrary to the above, in May 2016 the licensee failed to review and accept, reject, repair or rework nonconforming items in accordance with documented procedures. Specifically, following receipt of information from Electroswitch that a number of basic components within relays and switches did not conform to quality requirements, the licensee failed to dedicate these commercial-grade parts as described in 10 CFR Part 21. Because this violation was previously issued as very low safety significance and was entered into the licensee’s corrective action program (CR-WF3-2016-07710), but not fully addressed, it is being treated as a Notice of Violation in accordance with Section 2.3.3 of the NRC Enforcement Manual: NOV 05000382/2018008-01, “Failure to Control Nonconforming Parts.”

Enforcement Action: A Notice of Violation is enclosed (Enclosure 1). This violation is being cited because the licensee failed to restore compliance within a reasonable period of time after the violation was identified consistent with Section 2.3.2 of the Enforcement Policy.

| Failure to Identify and Correct a Condition Adverse to Quality  |  |   |   |
|---|--|---|---|
| Cornerstone   | Significance                               | Cross-cutting Aspect                          | Inspection Procedure                        |
| Mitigating Systems  | Green<br>NCV 05000382/2018008-02<br>Closed | [H.14] – Human Performance, Conservative Bias | 71152 Problem Identification and Resolution |
| <p>The team identified a Green non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, “Corrective Action,” associated with the licensee’s failure to identify and correct condition adverse to quality associated with the breeching of hazard barriers. Specifically, while developing corrective actions for failure to close exterior doors, the licensee identified that they had no process for tracking impaired hazard barriers such that control room operators would be aware of which barriers are impaired and which equipment may not be able to perform its specified function to protect safety-related structures, systems and components, but the licensee then failed to correct this issue.</p>  |  |   |   |
| <p><u>Description:</u> While developing corrective actions for NCV 05000382/2017002-01, “Failure to Prepare the Site for Impending Adverse Weather,” in Condition Report CR-WF3-2017-06756 the licensee identified that formal controls did not exist for the operations department to track hazard barriers that were out of service for maintenance. Corrective action 1 directed coordinating and developing a plan with outage management to control door access during refuel outages to include evaluating the need for creating an impairment process for tracking disabled hazard barriers. However, corrective action 2 (closed January 25, 2018), determined that station procedure MM-006-106, “Plant Door Maintenance,” contained procedural guidance to contact the control room prior to performing maintenance on doors, and this action was sufficient.</p> |  |   |   |
| <p>The team reviewed the licensee’s corrective actions and determined the doors identified as not being shut in NCV 05000382/2017002-01 had been blocked open for maintenance activities and were not shut because of this, and operators were not aware that these doors were not capable of performing their specified function at the time. Based on this information, the team determined that the licensee had failed to correct an identified condition adverse to quality. Specifically, while station procedure MM-006-106 provided guidance to craft personnel to contact the control room prior to performing maintenance on doors, there was no</p>  |  |   |   |



process in place for tracking impaired hazard barriers such that the operations department would be aware of which barriers were impaired and which equipment may not be able to perform its specified function to protect safety-related structures, systems and components should the need arise. The team determined that the lack of a process in place for tracking impaired hazard barriers was a condition adverse to quality the licensee had failed to correct.

Corrective Action: At the time of discovery all doors were closed so there was not an ongoing safety concern. The licensee initiated Condition Report CR-WF3-2018-05273 to assess how to correct the condition.

Corrective Action Reference: CR-WF3-2018-05273

Performance Assessment:

Performance Deficiency: The licensee's failure to identify and correct a condition adverse to quality was a performance deficiency.

Screening: The team determined the performance deficiency was more than minor because it adversely affected the equipment performance attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the licensee had no process for tracking impaired hazard barriers such that control room operators would be aware of which barriers are impaired and which equipment may not be able to perform its specified function to protect safety-related structures, systems and components.

Significance: The team assessed the significance of the finding using Inspection Manual Chapter 0609, Attachment 04, "Initial Characterization of Findings," dated October 7, 2016, and Inspection Manual Chapter 0609, Appendix A, "Significance Determination Process for Findings At-Power," Exhibit 2, "Mitigating Systems Screening Questions," the team determined the finding was of very low safety significance (Green) because: (1) it was not a design deficiency; (2) it did not represent a loss of system and/or function; (3) it did not represent an actual loss of function of at least a single train for longer than its technical specification allowed outage time; and (4) it did not result in the loss of a high safety-significant non-technical specification train.

Cross-cutting Aspect: The team determined that the finding has a cross-cutting aspect in the area of Human Performance associated with conservative bias because the licensee failed to use decision making practices that emphasize prudent choices over those that are simply allowed. Specifically, the licensee failed to evaluate conditions beyond those that were identified to correct NRC NCV 05000382/2017002-01 [H.14].

Enforcement:

Violation: 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," requires, in part, measures shall be established to assure that conditions adverse to quality are promptly identified and corrected.

Contrary to the above, from January 25 through October 4, 2018, the measures established by the licensee failed to promptly identify and correct a condition adverse to quality. Specifically, while developing corrective actions for breeching of hazard barriers, the licensee identified that they had no process for tracking impaired hazard barriers, but failed to correct this issue, a condition adverse to quality.

Enforcement Action: This violation is being treated as a non-cited violation, consistent with Section 2.3.2 of the Enforcement Policy.

| Failure to Update the Updated Final Safety Analysis Report   |  |                      |   |
|--|--|----------------------|---|
| Cornerstone  | Severity                               | Cross-cutting Aspect | Inspection Procedure                              |
| Not Applicable   | SL-IV<br>05000382/2018008-03<br>Closed | Not Applicable       | 71152<br>Problem Identification<br>and Resolution |
| <p>The team identified a Severity Level IV non-cited violation of 10 CFR 50.71(e), "Maintenance of Records, Making Reports," associated with the licensee's failure to correctly update the Updated Final Safety Analysis Report (UFSAR). Specifically, the licensee has incorrect information in the UFSAR with regard to computer codes used (CEFLASH and TRANFLOW) which has not been removed. The licensee entered this issue into the corrective action program as Condition Reports CR-WF3-2017-07782 and CR-WF3-2018-01612.</p> <p><u>Description:</u> Inspection Report 05000382/2016008 (ML17026A338) documented an issue where the licensee failed to obtain a license amendment prior to using the computer code TRANFLOW (NCV 05000382/2016008-04, "Departure from Approved Method to Determine Steam Generator Internal Loads During Main Steam Line Break"). For this issue the NRC determined that the licensee had failed to obtain a license amendment prior to using the computer code TRANFLOW. The licensee initiated Condition Report CR-WF3-2017-07782 to address this issue in the corrective action program. On April 12, 2018, the licensee submitted a license amendment request (W3F1-2018-0014) to allow the use of the computer code TRANFLOW. As of October 4, 2018, this amendment had not been approved.</p> <p>While preparing their license amendment request the licensee discovered that the UFSAR contained incorrect information. Specifically, UFSAR, Section 3.9.1.2.2.1.28, stated that the computer program CEFLASH-4A was used to calculate steam generator internal loadings following a postulated steam line break for the original steam generators. However, the licensee determined that these calculations were actually performed as hand calculations. The licensee initiated Condition Report CR-WF3-2018-01612 to address this issue in the corrective action program.</p> <p>Inspection Report 05000382/2018002 (ML18199A643) documented an unresolved item (URI) associated with a modification made by the licensee to the emergency feedwater logic (URI 05000382/2018002-02, "10 CFR 50.59 Evaluation Associated with Emergency Feedwater Logic Modification"). This modification changed the emergency feedwater logic, as described in the UFSAR, Section 7.3.1.1.6, from flow control mode to level control mode during a safety injection actuation signal. The NRC team questioned whether the emergency feedwater modification required additional information to determine if the 10 CFR 50.59 evaluation was adequate or if NRC approval was needed for the change. Specifically, the NRC team questioned if the emergency feedwater logic change:</p> <ul style="list-style-type: none"> <li>• Used a method of evaluation other than what was described in the UFSAR (e.g. the use of the TRANFLOW program) or</li> <li>• Would result in a more than minimal increase in the likelihood of occurrence of a malfunction of a system important to safety. Specifically, because the emergency feedwater logic change introduced the potential to overcool the reactor and</li> </ul> |  |                      |   |

substituted a previous automatic action for manual operator action, the NRC team questioned if the change and associated 50.59 evaluation addressed these concerns.

The team reviewed the licensee actions in response to NCV 05000382/2016008-04 and URI 05000382/2018002-02. During this review, the team determined that the corrective action of submitting a license amendment was appropriate to address NCV 05000382/2016008-04. With regard to URI 05000382/2018002-02 the team determined that:

- The use of the computer code TRANFLOW for the emergency feedwater logic modification did not represent a change in method of evaluation because the original analysis was done by hand calculations.
- The emergency feedwater logic modification would not result in a more than minimal increase in the likelihood of occurrence of a malfunction of a system important to safety. Specifically, emergency feedwater flow for all events will be higher and result in a more rapid cooldown rate of the reactor coolant system than previously experienced, but it would not result in a cooldown rate that would exceed technical specifications nor would it result in cooling the reactor coolant system down to the safety injection setpoint.

Based on this information, the team concluded the licensee's 10 CFR 50.59 evaluation was adequate and NRC approval was not required. However, the team noted that UFSAR Section 3.9.1.2.2.1.28 still stated that the original computer code used for determining pressure drop across the original steam generator secondary side components was CEFLASH-4A, and UFSAR Section 3.9.1.2.2.1.35 still stated that the computer code TRANFLOW had been evaluated and benchmarked against CEFLASH-4A and was acceptable. The team determined that the facility's UFSAR did not contain the most current information with regard to approved analysis for either the original or replacement steam generators which created the potential that future changes to the facility could be made using incorrect information.

Corrective Actions: On April 12, 2018, the licensee submitted a license amendment request (W3F1-2018-0014) to allow the use of the computer code TRANFLOW and initiated Condition Reports CR-WF3-2017-07782 and CR-WF3-2018-01612 to determine what additional corrective actions are necessary.

Corrective Action References: CR-WF3-2017-07782 and CR-WF3-2018-01612

Performance Assessment:

Performance Deficiency: The licensee's failure to update the UFSAR was a performance deficiency.

Screening: Because this performance deficiency had the potential to impact the NRC's ability to perform its regulatory function, the team evaluated the performance deficiency using traditional enforcement. Using Inspection Manual Chapter 0612, "Power Reactor Inspection Reports," dated January 24, 2013, Appendix B, "Issue Screening," the Reactor Oversight Program aspect of this performance deficiency was minor.

Significance: Using the NRC Enforcement Policy, dated January 28, 2013, the traditional enforcement performance deficiency was determined to be a Severity Level IV violation in accordance with Section 6.1.d.3, because the lack of up-to-date information in the UFSAR had not resulted in any unacceptable changes to the facility or procedures.

Cross-cutting Aspect: The finding was not assigned a cross-cutting aspect because the finding was not indicative of current performance.

Enforcement:

Violation: 10 CFR 50.71(e), requires, in part that licensees shall update periodically, as provided in paragraphs (e) (3) and (4) of 10 CFR 50.71, Updated Final Safety Analysis Report originally submitted as part of the application for the license, to assure that the information included in the report contains the latest information developed.”

Contrary to the above, from 2016 through October 4, 2018, the licensee failed to update the Updated Final Safety Analysis Report to assure that the information included in the report contained the latest information developed. Specifically, UFSAR Section 3.9.1.2.2.1.28 incorrectly indicated that the original computer code used for determining pressure drops across the original steam generator secondary side components was CEFLASH-4A and UFSAR Section 3.9.1.2.2.1.35, indicated that the computer code TRANFLOW had been evaluated and benchmarked against CEFLASH-4A.

Disposition: This violation is being treated as a non-cited violation, consistent with Section 2.3.2 of the Enforcement Policy.

The disposition of this violation closes URI 05000382/2018002-02

## **EXIT MEETINGS AND DEBRIEFS**

On October 4, 2018, the team presented the inspection results to Mr. J. Dinelli, Site Vice President and other members of the licensee staff. The team confirmed that proprietary information was controlled to protect from public disclosure.

## DOCUMENTS REVIEWED

### Condition Reports

|                   |                   |                   |                   |
|-------------------|-------------------|-------------------|-------------------|
| CR-HQN-2018-01259 | CR-HQN-2018-00792 | CR-WF3-2011-06852 | CR-WF3-2011-06956 |
| CR-WF3-2012-02332 | CR-WF3-2013-04561 | CR-WF3-2013-04843 | CR-WF3-2013-04857 |
| CR-WF3-2013-04860 | CR-WF3-2013-04986 | CR-WF3-2013-05053 | CR-WF3-2013-05091 |
| CR-WF3-2014-00922 | CR-WF3-2014-02250 | CR-WF3-2014-04633 | CR-WF3-2014-04187 |
| CR-WF3-2015-02606 | CR-WF3-2015-03900 | CR-WF3-2015-04094 | CR-WF3-2015-04387 |
| CR-WF3-2015-05155 | CR-WF3-2015-05234 | CR-WF3-2015-05580 | CR-WF3-2015-05660 |
| CR-WF3-2015-06760 | CR-WF3-2015-06782 | CR-WF3-2016-00170 | CR-WF3-2016-00521 |
| CR-WF3-2016-00797 | CR-WF3-2016-01577 | CR-WF3-2016-02516 | CR-WF3-2016-02807 |
| CR-WF3-2016-03522 | CR-WF3-2016-03525 | CR-WF3-2016-03761 | CR-WF3-2016-04581 |
| CR-WF3-2016-04957 | CR-WF3-2016-04986 | CR-WF3-2016-05039 | CR-WF3-2016-05155 |
| CR-WF3-2016-06222 | CR-WF3-2016-06322 | CR-WF3-2016-06410 | CR-WF3-2016-06477 |
| CR-WF3-2016-06905 | CR-WF3-2016-07050 | CR-WF3-2016-07092 | CR-WF3-2016-07219 |
| CR-WF3-2016-07337 | CR-WF3-2016-07379 | CR-WF3-2016-07477 | CR-WF3-2016-07487 |
| CR-WF3-2016-07551 | CR-WF3-2016-07639 | CR-WF3-2016-07710 | CR-WF3-2016-07782 |
| CR-WF3-2016-07847 | CR-WF3-2017-00100 | CR-WF3-2017-00102 | CR-WF3-2017-00277 |
| CR-WF3-2017-00365 | CR-WF3-2017-00571 | CR-WF3-2017-00628 | CR-WF3-2017-00648 |
| CR-WF3-2017-00752 | CR-WF3-2017-01056 | CR-WF3-2017-01063 | CR-WF3-2017-01064 |
| CR-WF3-2017-01212 | CR-WF3-2017-01233 | CR-WF3-2017-01250 | CR-WF3-2017-01414 |
| CR-WF3-2017-01433 | CR-WF3-2017-01481 | CR-WF3-2017-01483 | CR-WF3-2017-01562 |
| CR-WF3-2017-01723 | CR-WF3-2017-01958 | CR-WF3-2017-02707 | CR-WF3-2017-03055 |
| CR-WF3-2017-03273 | CR-WF2-2017-03566 | CR-WF3-2017-03610 | CR-WF3-2017-03726 |
| CR-WF3-2017-03961 | CR-WF2-2017-04094 | CR-WF3-2017-04294 | CR-WF3-2017-04313 |
| CR-WF3-2017-04535 | CR-WF3-2017-04552 | CR-WF3-2017-04748 | CR-WF3-2017-04770 |
| CR-WF3-2017-04944 | CR-WF3-2017-05006 | CR-WF3-2017-05046 | CR-WF3-2017-05108 |
| CR-WF3-2017-05173 | CR-WF3-2017-05329 | CR-WF3-2017-05397 | CR-WF3-2017-05571 |
| CR-WF3-2017-05572 | CR-WF3-2017-05614 | CR-WF3-2017-05688 | CR-WF3-2017-05753 |
| CR-WF2-2017-05802 | CR-WF2-2017-05842 | CR-WF2-2017-05844 | CR-WF2-2017-05882 |
| CR-WF2-2017-06182 | CR-WF2-2017-06218 | CR-WF3-2017-06343 | CR-WF3-2017-06458 |
| CR-WF3-2017-06463 | CR-WF3-2017-06499 | CR-WF3-2017-06542 | CR-WF3-2017-06617 |
| CR-WF3-2017-06620 | CR-WF3-2017-06698 | CR-WF3-2017-06709 | CR-WF3-2017-06715 |
| CR-WF3-2017-06753 | CR-WF3-2017-06755 | CR-WF3-2017-06756 | CR-WF3-2017-07148 |
| CR-WF3-2017-07390 | CR-WF3-2017-07433 | CR-WF3-2017-07464 | CR-WF3-2017-07565 |
| CR-WF3-2017-07605 | CR-WF3-2017-07710 | CR-WF3-2017-07819 | CR-WF3-2017-07847 |
| CR-WF3-2017-07853 | CR-WF3-2017-07881 | CR-WF3-2017-08257 | CR-WF3-2017-08574 |
| CR-WF3-2017-08611 | CR-WF3-2017-08635 | CR-WF3-2017-08716 | CR-WF3-2017-08720 |
| CR-WF3-2017-08721 | CR-WF3-2017-08752 | CR-WF3-2017-08757 | CR-WF3-2017-09106 |
| CR-WF3-2017-09109 | CR-WF3-2017-09125 | CR-WF3-2017-09143 | CR-WF3-2017-09150 |
| CR-WF3-2017-09177 | CR-WF3-2017-09201 | CR-WF3-2017-09207 | CR-WF3-2017-09373 |
| CR-WF3-2017-09494 | CR-WF3-2017-09513 | CR-WF3-2017-09574 | CR-WF3-2017-09901 |
| CR-WF3-2017-09913 | CR-WF3-2017-09952 | CR-WF3-2017-09953 | CR-WF3-2017-09954 |

Condition Reports

|                   |                   |                   |                   |
|-------------------|-------------------|-------------------|-------------------|
| CR-WF3-2017-09955 | CR-WF3-2017-00031 | CR-WF3-2018-00054 | CR-WF3-2018-00387 |
| CR-WF3-2018-00399 | CR-WF3-2018-00490 | CR-WF3-2018-00560 | CR-WF3-2018-00785 |
| CR-WF3-2018-00951 | CR-WF3-2018-00951 | CR-WF3-2018-00983 | CR-WF3-2018-01001 |
| CR-WF3-2018-01259 | CR-WF3-2018-01821 | CR-WF3-2018-01302 | CR-WF3-2018-01491 |
| CR-WF3-2018-01612 | CR-WF3-2018-01969 | CR-WF3-2018-01994 | CR-WF3-2018-01997 |
| CR-WF3-2018-02037 | CR-WF3-2018-02038 | CR-WF3-2018-02058 | CR-WF3-2018-02097 |
| CR-WF3-2018-02104 | CR-WF3-2018-02105 | CR-WF3-2018-02106 | CR-WF3-2018-02109 |
| CR-WF3-2018-02111 | CR-WF3-2018-02154 | CR-WF3-2018-02186 | CR-WF3-2018-02233 |
| CR-WF3-2018-02735 | CR-WF3-2018-03042 | CR-WF3-2018-03086 | CR-WF3-2018-03104 |
| CR-WF3-2018-03111 | CR-WF3-2018-03145 | CR-WF3-2018-03167 | CR-WF3-2018-03179 |
| CR-WF3-2018-03276 | CR-WF3-2018-03340 | CR-WF3-2018-03398 | CR-WF3-2018-03503 |
| CR-WF3-2018-03509 | CR-WF3-2018-03587 | CR-WF3-2018-03669 | CR-WF3-2018-03900 |
| CR-WF3-2018-03948 | CR-WF3-2018-03971 | CR-WF3-2018-03991 | CR-WF3-2018-04242 |
| CR-WF3-2018-04443 | CR-WF3-2018-04580 | CR-WF3-2018-04908 | CR-WF3-2018-04909 |
| CR-WF3-2018-04910 | CR-WF3-2018-05234 | CR-WF3-2018-05272 | CR-WF3-2018-05273 |
| CR-WF3-2018-05401 | CR-WF3-2018-05531 | CR-WF3-2018-05546 | CR-WF3-2018-05569 |
| CR-WF3-2018-05590 | CR-WF3-2018-06067 |                   |                   |

Work Orders

52394076 52727106 52790268 00393027

| Procedures Number | Title  | Revision or Date |
|-------------------|--|------------------|
| EN-DC-115         | Engineering Change Process   | 20, 21           |
| EN-DC-306         | Acceptance of Commercial-Grade Items/Services in Safety-Related Applications | 1                |
| EN-LI-102         | Corrective Action Program  | 28 - 33          |
| EN-LI-108-01      | 10 CFR 21 Evaluations and Reporting  | 6                |
| EN-HU-102         | Human Performance Traps and Tools  | 16               |
| EN-HU-106         | Procedure and Work Instruction Use and Adherence                             | 6                |
| EN-OP-104         | Operability Determination Process  | 11 - 16          |
| IP-ENG-001        | Design Standard Process  | 33               |
| ME-004-004        | Isophase Bus Maintenance and Inspection                                      | 302              |
| ME-004-155        | Reactor Trip Switchgear  | 307              |
| OI-037-000        | Operations' Risk Assessment Guideline  | 313              |
| OP-902-003        | Loss of Offsite Power/Loss of Forced Circulation Recovery                    | 10               |

| Procedures<br>Number                 | Title   | Revision<br>or Date                        |
|--------------------------------------|---|--|
| OP-903-029                           | Safety Injection Actuation Signal Test  | 22   |
| OP-903-035                           | Containment Spray Pump Operability Check  | 24   |
| OP-903-115                           | Integrated Emergency Diesel Generator/Emergency Safety Features Test - train A  | 39, 40                                     |
| OP-903-124                           | CVAS Pressure Boundary Testing  | 305, 306                                   |
| QA-1-2017-W3-1                       | Fitness For Duty/Access Authorization QA Report   | August 2017                                |
| QA-14-15-2016-W3-1                   | Combined Radiation Protection and Radwaste QA Report  | October 2016                               |
| QA-14-15-2016-W3-1                   | Combined Radiation Protection and Radwaste QA Report  | October 2017                               |
| QA-16-2016-W3-1                      | Security QA Report  | December 2016                              |
| QA-16-2017-W3-1                      | Security/Cyber Security QA Report   | December 2017                              |
|                                      | Quality Assurance Program Manual  | 307  |
| Miscellaneous<br>Documents<br>Number | Title   | Revision<br>or Date                        |
| 17-4/0                               | EC64801 Emergency Feedwater Logic Modification  |  |
| CP-NPSD-1107                         | Guidance for Developing A CRMP  | March 1998                                 |
| LTR-SCC-16-017                       | Non-LOCA Transient Analysis Impact Evaluation for EFW System Modification at Waterford Steam Electric Station, Unit 3 | 0  |
| LO-WLO-2017-00012                    | Design Engineering - Modification/50.59 Pre-NRC Focused Self-Assessment   | February 16, 2018                          |
| QA-8-2017-W3-1                       | Quality Assurance Audit Report, Engineering Programs  | 0  |
| QA-8-2017-W3-2                       | Quality Assurance Audit Report, Engineering Programs  | 0  |
| QA-4-2018-W3-1                       | Quality Assurance Audit Report, Engineering (Design Control)  | 0  |
|                                      | System Health Report: HVCC - Control Room Cooling and Envelope  | 3 <sup>rd</sup> & 4 <sup>th</sup> Qtr 2013 |
|                                      | System Health Report: HVCC - Control Room Cooling and Envelope  | 1 <sup>st</sup> - 4 <sup>th</sup> Qtr 2014 |

| Miscellaneous Documents Number | Title  | Revision or Date                              |
|--------------------------------|--|---|
|                                | System Health Report: HVCC - Control Room Cooling and Envelope   | 1 <sup>st</sup> - 4 <sup>th</sup> Qtr<br>2015 |
|                                | System Health Report: HVCC - Control Room Cooling and Envelope   | 1 <sup>st</sup> - 4 <sup>th</sup> Qtr<br>2016 |
|                                | System Health Report: HVCC - Control Room Cooling and Envelope   | 1 <sup>st</sup> – 4 <sup>th</sup> Qtr<br>2017 |
|                                | System Health Report: HVCC - Control Room Cooling and Envelope   | 1 <sup>st</sup> & 2 <sup>nd</sup> Qtr<br>2018 |
|                                | Nuclear Independent Oversight Function Area Performance Report   | June 16, 2018                                 |
|                                | Nuclear Independent Oversight Function Area Performance Report   | March 1, 2018                                 |
| Calculations Number            | Title  | Revision                                      |
| CN-TAS-08-30                   | Waterford Steam Electric Station, Unit 3, Post-Trip Main Steam Line Break Analysis for RSGs                          | 1   |
| CN-TAS-08-40                   | Waterford Steam Electric Station, Unit 3, Feedwater Line Break Analysis for RSGs                                     | 0   |
| ECS00-007                      | PSA-Study Calc – Basis for Qualitative Level 2, External Events, and Non-PSA SSC Guidance                            | 2   |
| WCAP-17066-P                   | Waterford Steam Electric Station, Unit 3, Steam Electric Station Delta 110 Replacement Steam Generator Design Report | 0   |



**Information Request**  
**Biennial Problem Identification and Resolution**  
**Inspection Waterford Nuclear Generating Station, Unit 3**  
**July 24, 2018**

**Inspection Report:** 50-482/2018007  
**On-site Inspection Dates:** September 17-21 & October 1-5, 2018

This inspection will cover the period from December 16, 2016, through October 5, 2018. All requested information is limited to this period or to the date of this request unless otherwise specified. To the extent possible, the requested information should be provided electronically in word-searchable Adobe PDF (preferred) or Microsoft Office format. Any sensitive information should be provided in hard copy during the team's first week on site; do not provide any sensitive or proprietary information electronically.

Lists of documents ("summary lists") should be provided in Microsoft Excel or a similar sortable format. Please be prepared to provide any significant updates to this information during the team's first week of on-site inspection. As used in this request, "corrective action documents" refers to condition reports, notifications, action requests, cause evaluations, and/or other similar documents, as applicable to the Waterford Nuclear Generating Station, Unit 3.

Please provide the following information no later than September 3, 2018:

i. Document Lists

Note: For these summary lists, please include the document/reference number, the document title, initiation date, current status, and long-text description of the issue.

- a. Summary list of all corrective action documents related to significant conditions adverse to quality that were opened, closed, or evaluated during the period
- b. Summary list of all corrective action documents related to conditions adverse to quality that were opened or closed during the period
- c. Summary list of all apparent cause evaluations (or equivalent) performed during the period; if fewer than approximately 20, provide full documents
- d. Summary list of all currently open corrective action documents associated with conditions first identified any time prior to January 1, 2017, including prior to the beginning of the inspection period
- e. Summary lists of all corrective action documents that were upgraded or downgraded in priority/significance during the period (these may be limited to those downgraded from, or upgraded to, apparent-cause level or higher)
- f. Summary list of all corrective action documents initiated during the period that identify an adverse or potentially adverse trend in safety-related or risk-

significant equipment performance or in any aspect of the station's safety culture.

- g. Summary lists of operator workarounds, operator burdens, temporary modifications, and control room deficiencies (1) currently open and (2) that were evaluated and/or closed during the period; this should include the date that each item was opened and/or closed.
- h. Summary list of all prompt operability determinations or other engineering evaluations to provide reasonable assurance of operability
- i. Summary list of plant safety issues raised or addressed by the Employee Concerns Program (or equivalent) (sensitive information should be made available during the team's first week on site—do not provide electronically)
- j. Summary list of all Apparent Cause Evaluations completed during the period

## 2. Full Documents with Attachments

- a. Root Cause Evaluations completed during the period; include a list of any planned or in progress
- b. Quality Assurance audits performed during the period
- c. Audits/surveillances performed during the period on the Corrective Action Program, of individual corrective actions, or of cause evaluations
- d. Functional area self-assessments and non-NRC third-party assessments (e.g., peer assessments performed as part of routine or focused station self- and independent assessment activities; do not include INPO assessments) that were performed or completed during the period; include a list of those that are currently in progress
- e. Any assessments of the safety-conscious work environment at the Waterford Nuclear Generating Station, Unit 3, including any safety culture survey results; if none performed during the inspection period, provide the most recent
- f. Corrective action documents generated during the period associated with the following:

- i. NRC findings and/or violations issued to the Waterford Nuclear Generating Station, Unit 3
  - ii. Licensee Event Reports issued by the Waterford Nuclear Generating Station, Unit 3
- g. Corrective action documents generated for the following, if they were determined to be applicable to the Waterford Nuclear Generating Station, Unit 3 (for those that were evaluated but determined not to be applicable, provide a summary list):
  - i. NRC Information Notices, Bulletins, and Generic Letters issued or evaluated during the period
  - ii. Part 21 reports issued or evaluated during the period
  - iii. Vendor safety information letters (or equivalent) issued or evaluated during the period
  - iv. Other external events and/or Operating Experience evaluated for applicability during the period
- h. Corrective action documents generated for the following:
  - i. Maintenance preventable functional failures which occurred or were evaluated during the period
  - ii. Adverse trends in equipment, processes, procedures, or programs that were evaluated during the period
  - iii. Action items generated or addressed by offsite review committees during the period

3. Logs and Reports

- a. Corrective action performance trending/tracking information generated during the period and broken down by functional organization (if this information is fully included in item 3.b, it need not be provided separately)
- b. Current system health reports, Management Review Meeting package, or similar information; provide past reports as necessary to include  $\geq 12$  months of metric/trending data

- c. Radiation protection event logs during the period
- d. Security event logs and security incidents during the period (sensitive information should be made available during the team's first week on site—do not provide electronically)
- e. Employee Concern Program (or equivalent) logs (sensitive information should be made available during the team's first week on site—do not provide electronically)
- f. List of training deficiencies, requests for training improvements, and simulator deficiencies for the period

Note: For items 3.c–3.d, if there is no log or report maintained separate from the corrective action program, please provide a summary list of corrective action program items for the category described.

4. Procedures

Note: For these procedures, please include all revisions that were in effect at any time during the period.

- a. Corrective action program procedures, to include initiation and evaluation procedures, operability determination procedures, cause evaluation procedures, and any other procedures that implement the corrective action program at the Waterford Nuclear Generating Station, Unit 3
- b. Quality Assurance program procedures (specific audit procedures are not necessary)
- c. Employee Concerns Program (or equivalent) procedures
- d. Procedures which implement/maintain a Safety Conscious Work Environment
- e. Conduct of Operations procedure (or equivalent) and any other procedures or policies governing control room conduct, operator burdens and workarounds, etc.
- f. Operating Experience (Ope) program procedures and any other procedures or guidance documents that describe the site's use of Ope information

5. Other
  - a. List of risk-significant components and systems, ranked by risk worth; if the list uses system designators, provide a list of the associated equipment/system names
  - b. List of structures, systems and components and/or functions that were in maintenance rule(a)(1) status or evaluated for (a)(1) status at any time during the inspection period; include dates and results of expert panel reviews and dates of status changes
  - c. Organization charts for plant staff and long-term/permanent contractors
  - d. Electronic copies of the UFSAR (or equivalent), technical specifications, and technical specification bases, if available
  - e. Table showing the number of corrective action documents (or equivalent) initiated during each month of the inspection period, by screened significance
  - f. For each day the team is on site,
    - i. Planned work/maintenance schedule for the station
    - ii. Schedule of management or corrective action review meetings (e.g. operations focus meetings, condition report screening meetings, CARBs, MRMs, challenge meetings for cause evaluations, etc.)
    - iii. Agendas and materials for these meetings

Note: The items listed in 5.f may be provided on a weekly or daily basis after the team arrives on site.

All requested documents should be provided electronically where possible. Regardless of whether they are uploaded to an internet-based file library (e.g., Certrec's IMS), please provide copies on CD or DVD. One copy of the CD or DVD should be provided to the resident inspector office at the Waterford Nuclear Generating Station, Unit 3; three additional copies should be provided to the team lead, to arrive no later than September 3, 2018:

Ray Azua  
Senior Reactor Inspector  
Inspection Program and Assessment Team  
Division of Reactor Safety, Region IV  
1600 E. Lamar Blvd, Arlington, TX 76011  
Office: (817) 200-1445

ERRATA - WATERFORD STEAM ELECTRIC STATION, UNIT 3 – NRC PROBLEM  
 IDENTIFICATION AND RESOLUTION INSPECTION REPORT 05000382/2018008 AND  
 NOTICE OF VIOLATION – JANUARY 30, 2019

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