



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**

REGION III  
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LISLE, ILLINOIS 60532-4352

December 29, 2017

EA-17-012

Mr. Keith Polson,  
Senior Vice President and Chief Nuclear Officer  
DTE Energy Company  
Fermi 2 – 260 TAC  
6400 North Dixie Highway  
Newport, MI 48166

**SUBJECT: FERMI POWER PLANT, UNIT 2—NRC SUPPLEMENTAL (95001) INSPECTION  
REPORT 05000341/2017502 AND ASSESSMENT FOLLOW-UP LETTER**

Dear Mr. Polson:

On November 17, 2017, the U.S. Nuclear Regulatory Commission (NRC) completed a supplemental inspection using Inspection Procedure 95001, "Supplemental Inspection Response to Action Matrix Column 2 Inputs," at your Fermi Power Plant, Unit 2. On November 17, 2017, the NRC discussed the results of this inspection and the implementation of your corrective actions with you and other members of your staff in an exit and Regulatory Performance Meeting. The results of this inspection are documented in the enclosed report.

By letter dated May 11, 2017, (ADAMS Accession No. ML17132A263), the NRC informed you that as a result of a White (low-to-moderate safety significance) finding in the Emergency Preparedness Cornerstone that the NRC assessed Fermi Power Plant, Unit 2 performance to be in the Regulatory Response Column of the Reactor Oversight Process Action Matrix, effective January 2017. In the same letter, the NRC informed you of our intent to perform a supplemental inspection using Inspection Procedure 95001 upon notification of your readiness for the inspection. On July 28, 2017, you informed the NRC that your station was ready for the supplemental inspection.

This supplemental inspection utilized NRC Inspection Procedure 95001 and was conducted to provide assurance that: (1) the root and contributing causes of the White performance issue were understood; (2) the extent of condition and extent of cause were identified; and (3) your corrective actions were sufficient to address the root causes and contributing causes and to prevent recurrence.

The NRC performed this inspection to review your station's actions in response to a White finding in the Emergency Preparedness cornerstone which was documented and finalized in NRC Inspection Report 05000341/2017011. The finding was associated with your failure to maintain the effectiveness of the site's emergency plan. Specifically, inaccurate emergency action level classifications and protective action recommendations could result from the response of the standby gas treatment system accident range monitor, which was located in an area with increasing background levels during postulated accident conditions. Your staff determined the primary root cause of the White finding was that your staff failed to provide anticipated radiation levels that could be present in the area surrounding the monitor to your

vendor that designed and built the monitor. Consequently, the general design description of the monitor was less than adequate, and the monitor measurement would be inaccurate under accident conditions. Additionally, your staff adequately demonstrated that your design engineering program has evolved since this system was installed, such that additional corrective actions to prevent recurrence (beyond the existing changes to the program) were not necessary.

The NRC determined that completed or planned corrective actions were sufficient to address the performance issue that led to the White finding and restore compliance, and were prioritized commensurate with the safety significance of the issue. In addition, the NRC determined that the root cause evaluation was conducted to a level of detail commensurate with the significance of the problem and reached reasonable conclusions as to the root and contributing causes of the issue.

The NRC concluded that your actions in response to the White finding were adequate. Therefore, in accordance with the guidance in Inspection Manual Chapter 0305, "Operating Reactor Assessment Program," the White finding will only be considered in assessing plant performance for a total of four quarters. As a result, the NRC determined the performance at Fermi Power Plant, Unit 2 to be in the Licensee Response Column of the Reactor Oversight Process Action Matrix as of January 1, 2018.

The NRC did not identify any findings or violations.

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

Sincerely,

*/RA/*

Steven K. Orth, Chief  
Plant Support Branch  
Division of Reactor Safety

Docket No. 50-341  
License No. NPF-43

Enclosure:  
IR 05000341/2017502

cc: Distribution via LISTSERV®

Letter to Keith Polson from Steven K. Orth dated December 29, 2017

SUBJECT: FERMI POWER PLANT, UNIT 2—NRC SUPPLEMENTAL (95001) INSPECTION REPORT 05000341/2017502 AND ASSESSMENT FOLLOW-UP LETTER

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No.: 50-341  
License No.: NPF-43

Report No.: 05000341/2017502

Licensee: Detroit Edison

Facility: Fermi Power Plant, Unit 2

Location: Monroe, MI

Dates: November 13–17, 2017

Inspector: G. Edwards, Health Physicist, DRS

Approved by: Steven K. Orth, Chief  
Plant Support Branch  
Division of Reactor Safety

## SUMMARY

Inspection Report 05000341/2017502; 11/13/2017–11/17/2017; Fermi Power Plant, Unit 2; Supplemental Inspection—Inspection Procedure 95001.

A region-based inspector performed this inspection. No findings were identified during this inspection. The U.S. Nuclear Regulatory Commission's (NRC) program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process."

### **Cornerstone: Emergency Preparedness**

The NRC staff performed this supplemental inspection in accordance with Inspection Procedure 95001, "Supplemental Inspection Response to Action Matrix Column 2 Inputs," to assess the licensee's evaluation associated with the failure to maintain the ability to accurately declare a General Emergency Classification and to develop and issue accurate protective action recommendations during the implementation of the site's Emergency Plan in response to a rapidly progressing accident. The NRC staff previously characterized this issue as having low to moderate safety significance (White), as documented in NRC Inspection Report 05000341/2017011. During this supplemental inspection, the inspector determined that the licensee performed a comprehensive evaluation of the specific performance issue and that comprehensive corrective actions, combined with the historical evolution of the design engineering process, addressed each of the root and contributing causes. The licensee identified one root cause. Specifically, the general design description of the accident range monitor was less than adequate. At the time of its design and installation, the licensee did not provide the vendor selected to design and manufacture the radiation monitor, Eberline, the radiation levels that the monitor would need to function in, as a result the accident range monitor measurement would be inaccurate under accident conditions. One contributing cause was identified as the location of the accident range subsystem of the process radiation monitoring system was mischaracterized as a mild environment, but was located in a harsh environment without proper Environmental Qualification Program analysis.

Given the licensee's acceptable performance in evaluating and correcting the issues associated with the failure to maintain the effectiveness of the sites emergency plan, the White finding associated with this issue will only be considered in assessing plant performance for a total of four quarters in accordance with the guidance in Inspection Manual Chapter 0305, "Operating Reactor Assessment Program." As a result, the NRC determined the performance at the Fermi Power Plant, Unit 2 to be in the Licensee Response Column of the Reactor Oversight Process Action Matrix as of January 1, 2018.

Findings: No findings were identified.

## REPORT DETAILS

### 4. OTHER ACTIVITIES

#### 4OA4 Supplemental Inspection (95001)

##### .1 Inspection Scope

The U.S. Nuclear Regulatory Commission (NRC) staff performed this supplemental inspection in accordance with Inspection Procedure (IP) 95001 to assess the licensee's evaluation of a White finding, which affected the emergency preparedness cornerstone in the reactor safety strategic performance area. The inspection objectives were to:

- provide assurance that the root and contributing causes of risk-significant issues were understood;
- provide assurance that the extent of condition and extent of cause of risk-significant issues were identified; and
- provide assurance that the licensee's corrective actions for risk-significant issues were or will be sufficient to address the root and contributing causes and to preclude repetition.

The licensee entered the Regulatory Response Column of the NRC's Reactor Oversight Process Action Matrix in the first quarter of 2017, as a result of one inspection finding of low to moderate safety significance (White). The finding was associated a failure to maintain the effectiveness of the emergency plan. A preliminary White finding and associated Apparent Violation 05000341/2017009-01 was issued in Inspection Report 05000341/2017009. A final White finding, based on the results of the emergency preparedness significance determination process, was issued with a Notice of Violation (NOV) by letter dated May 11, 2017.

The licensee staff informed the NRC staff on July 28, 2017, that they were ready for the supplemental inspection. In preparation for the inspection, the licensee performed a root cause evaluation (RCE), CARD No. 16-29230, Revision 2, to identify the root and contributing causes of the White finding and to determine the organizational attributes that resulted in the White finding. The licensee also addressed safety culture in the RCE.

The inspector reviewed the licensee's RCE in addition to other evaluations conducted in support of and as a result of the RCE. The inspector reviewed corrective actions that were taken or planned to address the identified causes. The inspector also held discussions with licensee personnel to ensure that the root and contributing causes and the contribution of safety culture components were understood and that corrective actions taken or planned were appropriate to address the causes and preclude repetition.

## .2 Evaluation of the Inspection Requirements

### 02.01 Problem Identification

- a. Determine whether the licensee's evaluation of the issue documents who identified the issue (i.e., licensee-identified, self-revealing, or NRC-identified) and the conditions under which the issue was identified.

The issue related to radiation levels measured by the standby gas treatment system accident range monitor potentially indicating higher than actual radiation release levels due to increasing background levels was identified by an NRC health physics inspector during a routine baseline inspection. The licensee's RCE identified that the issue was discovered by the NRC.

- b. Determine whether the licensee's evaluation of the issue documents how long the issue existed and prior opportunities for identification.

The licensee's RCE documented that the inadequacies of the general design description of the accident range monitor due to increasing area background during accident conditions had been in place since 1981. The RCE also indicated that the issue went unrecognized by the licensee due to various changes in plant design, changes in contractors who were working with the licensee to develop and implement the accident range monitor, and in changes in regulations due to the events of Three Mile Island which occurred in March of 1979. The RCE also indicated that the issue went unrecognized in May of 1996 when it was identified that the accident range monitor's description in the licensee's Updated Final Safety Analysis Report was not consistent with actual plant design.

- c. Determine whether the licensee's evaluation documents the plant-specific risk consequences, as applicable, and compliance concerns associated with the issue.

A plant-specific probabilistic risk assessment is not applicable to this issue. However, the licensee did perform evaluations via onsite staff and through a contractor to confirm that the background radiation levels that would potentially be present in accident conditions (due to the standby gas treatment system filter train's location) would cause the accident range monitor to not perform its intended function. This evaluation resulted in the licensee declaring both divisions of the accident range monitor inoperable on November 16, 2016. The evaluation determined that radiation levels measured by the monitor could indicate higher than actual radiation release levels due to increasing background levels which could result in inaccurate emergency action level classifications and protective action recommendations under accident conditions.

- d. Findings

No findings were identified.

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

- a. Determine whether the licensee evaluated the issue using a systematic methodology to identify the root and contributing causes.

The licensee analyzed the issue to determine the root and contributing causes using Procedure MQA12, "Quality Assurance Conduct Manual, Root Cause Evaluations," Revision 20, and other implementing procedures. The licensee utilized the Events and Causal Factor Charting method and the Management Oversight and Risk Tree Manual in accordance with these procedures. The inspector determined that the licensee evaluated the issue using a systematic methodology to identify root and contributing causes.

- b. Determine whether the licensee's RCE was conducted to a level of detail commensurate with the significance of the issue.

The inspector concluded that the RCE had identified and assessed the potential contributors to the White finding in sufficient detail to identify appropriate corrective actions.

The licensee identified the following root cause and contributing cause:

Root Cause: The general design description (design input) of the accident range monitor was less than adequate because Detroit Edison Did not provide Eberline the accident radiation levels that the monitor would need to function in, as a result the accident range monitor measurement will be inaccurate under accident conditions.

Contributing Cause: The location of the accident range subsystem of the process radiation monitoring system was mischaracterized as a mild environment, but was located in a harsh environment without proper Environmental Qualification Program analysis.

- c. Determine whether the licensee's RCE included a consideration of prior occurrences of the issue and knowledge of Operating Experience (OE).

The RCE included a review of the licensee's corrective actions database. Although several previous condition reports were reviewed for similarities to this issue, none were determined to be similar. The RCE also included a review of external OE. Although several pieces of external OE were reviewed for similarities to this issue, none were determined to be similar. The inspector concluded that the licensee's RCE appropriately considered both internal and external OE.

- d. Determine whether the licensee's RCE addresses the extent of condition and extent of cause of the issue.

The licensee's evaluation considered the extent of condition associated with process radiation monitoring systems and area radiation monitoring systems for these components to impact the accuracy of classifications and protective action recommendations under accident conditions. Process radiation monitoring systems and area radiation monitoring systems were also evaluated for any adverse impact that may be caused by reading higher than the actual process or area being monitored due to background radiation levels.



The licensee's evaluation also considered the extent of cause associated with potential failures from the licensee to provide design inputs to suppliers in the same or similar types of situations that existed during the time period that the error associated with the accident range monitor occurred. This evaluation did not reveal any additional errors. The licensee was able to conclude that no other systems or components were impacted by the root cause.

The inspector concluded that the licensee's RCE addressed the extent of condition and the extent of cause of the issue.

- e. Determine whether the licensee's root cause, extent of condition, and extent of cause evaluations appropriately considered the safety culture components described in Inspection Manual Chapter 0305.

The licensee's RCE considered the safety culture components. The licensee determined that the root cause and contributing cause were related to aspects with design margins. The inspector concluded that the safety culture aspects associated with this issue were appropriately considered in the licensee's RCE and included consideration of whether a weakness in any safety culture component was a root cause or a significant contributing cause of the issue.

- f. Examine the common cause analyses for potential program programmatic weaknesses in performance when a licensee has a second White input in the same cornerstone.

The licensee did not have a second white input in the same cornerstone, therefore the common cause analyses was not implemented for this issue.

- g. Findings

No findings were identified

## 02.03 Corrective Actions

- a. Determine whether: (1) the licensee specified appropriate corrective actions for each root and/or contributing cause, or (2) an evaluation that states no actions are necessary is adequate.

Corrective actions were developed to address the root and contributing causes to prevent recurrence of the performance issue. Corrective actions, as documented in the root cause evaluation, included:

- Implementation of Modification EDP-37759 to install lead walls to shield the accident range monitors in both divisions of the standby gas treatment system;
- Providing a calculation to show lead walls installed will adequately shield the accident range monitors so they will provide accurate indication under accident conditions;
- Implementation of Modification EDP-37759 to install lead walls to change the environmental qualification from "Harsh" to "Mild" or to show components required for accident range monitor functionality that are not shielded adequately by the wall are qualified for their intended service for both divisions; and
- Developing and providing a lessons learned from the accident range monitor root cause to distribute to licensee staff.

When the corrective actions were reviewed, the inspectors considered that the licensee's Design Engineering Program has evolved since this system was installed and determined that the proposed corrective actions were appropriate and addressed each root and contributing cause.

- b. Determine whether the licensee prioritized corrective actions with consideration of risk significance and regulatory compliance.

The licensee declared both divisions of accident range monitors inoperable on November 16, 2016. The action taken by the licensee to declare both divisions of monitors inoperable was initiated, in part, by the data that was collected in response to NRC Unresolved Item 05000341/2016003-02, "Fluctuating Background Effect on Accident Range Noble Gas Monitor." As part of its near term corrective actions, the licensee implemented alternate sampling capabilities and verified that it retained the ability to implement accurate emergency classifications and protective action recommendations. At the time of the inspection, long-term corrective actions had been completed which included the construction and implementation of shield walls for both accident range monitors in each division of the standby gas treatment system and implementing training to staff concerning this issue.

The inspector considered the prioritization of the established corrective actions to be appropriate.

- c. Determine whether corrective actions taken to address and preclude repetition of significant performance issues are prompt and effective.

The licensee validated the effectiveness of the corrective actions for the performance deficiency. The licensee provided a calculation that demonstrated that the installed lead shield wall will adequately shield the accident range monitors so that they will provide accurate indication under accident conditions. The licensee also constructed shield walls for both accident range monitors in each division of the standby gas treatment system to change the environmental qualification environment from "Harsh" to "Mild" which would ensure that the instrumentation retained functionality during an emergency event.

The licensee evaluated the changes to its design engineering program that had occurred since the original design of the monitors in 1981. The licensee confirmed that the changes to procedures, training, and other enhancements would preclude recurrence of a similar issue. Consequently, no additional corrective actions to prevent recurrence were determined to be necessary.

- d. Determine whether the licensee's planned or taken corrective actions adequately addressed a Notice of Violation (NOV) that was the basis for the supplemental inspection, if applicable.

The NRC issued an NOV to the licensee on May 11, 2017. The licensee provided the NRC a written response to the NOV on July 28, 2017. During this inspection, the inspector confirmed that the licensee's RCE and planned and taken corrective actions addressed the NOV.

e. Findings

No findings were identified

2.04 Corrective Action Plans

- a. Determine whether appropriate corrective action plans are specified for each root and contributing cause or that the licensee has an adequate evaluation for why no actions were necessary.

The inspector reviewed each of the causes identified and their associated corrective actions. The specific causes identified by the licensee for each of the issues were discussed above in Section 2.02.b.

The inspector concluded that the corrective actions were clearly described and were entered into the licensee's Corrective Action Program tracking system. The inspectors further concluded that the corrective actions appropriately addressed the root and contributing causes of the events, and if properly implemented would address the problems identified within each of the evaluations. No concerns were identified.

- b. Determine whether corrective plans direct prompt actions to effectively address and preclude repetition of significant performance issues.

The inspector determined that corrective plan adequately directed prompt action to effectively address and preclude repetition of significant performance issues through the RCE, extent of condition and extent of cause review.

The licensee evaluated the changes to its design engineering program that had occurred since the original design of the monitors in 1981. The licensee confirmed that the changes to procedures, training, and other enhancements would preclude recurrence of a similar issue. Consequently, no additional corrective actions to prevent recurrence were determined to be necessary.

- c. Determine whether appropriate quantitative or qualitative measures of success have been developed for determining the effectiveness of planned and completed corrective actions

The inspector determined that the licensee adequately developed quantitative measures of success for determining effectiveness of the corrective actions to prevent recurrence.

The licensee performed an effectiveness review of the installed radiation barrier walls placed around the accident range monitor (Shielding Calculation 2016-003). The shielding calculation used by the licensee provided a quantitative measure by analysis to demonstrate the reduction of expected background radiation to the standby gas treatment system-accident range monitor detectors and equipment.

The inspector determined that overall the effectiveness reviews appeared to be appropriate.

- d. Determine whether each NOV related to the supplemental inspection is adequately addressed in corrective actions taken or planned.

The NRC issued an NOV to the licensee on May 11, 2017. During this inspection, the inspector confirmed that the licensee's RCE and planned and taken corrective actions addressed the NOV.

The inspector concluded that corrective action to construct and install shield walls in both divisions of the standby gas treatment system to minimize the background radiation that the accident range monitor will be exposed to during an accident scenario, in response to the White performance issue and associated Notice of Violation for the licensee's failure to maintain the effectiveness of the sites emergency plan, appropriately addressed the performance issue.

The inspector walked down both divisions of the standby gas treatment system to visually observe the installed shield walls, performed interviews of licensee personnel to determine the effectiveness of the corrective actions associated with installation of the shield walls, and reviewed the licensee's interim effectiveness reviews for the completed corrective actions. The inspector reviewed the licensee's documentation and determined that the issue of radiation levels measured by the standby gas treatment system accident range monitor was resolved and full compliance was restored on January 31, 2017. At that time, all corrective actions associated with the implementation, construction and training associated with the shield wall on both divisions of the standby gas treatment system were completed. Based on this assessment, the inspector concluded the licensee's corrective actions appropriately addressed the reason for the violation.

- e. Findings

No findings were identified.

#### 4OA5 Other

- .1 (Closed) Violation No. 05000341/2017009-01, "Failure to Maintain the Effectiveness of the Site's Emergency Plan"

The inspector determined the licensee's RCE was conducted to a level of detail commensurate with the significance of the problem and reached reasonable conclusions as to the root and contributing causes of the event. The inspector also concluded the licensee identified reasonable and appropriate corrective actions for the root and contributing causes and the corrective actions appeared to be prioritized commensurate with the safety significance of the issue. This violation is closed.

#### 4OA6 Management Meetings

- .1 Exit Meeting Summary

On November 17, 2017, the inspector presented the inspection results to Mr. K. Polson, Senior Vice President, and other members of his staff who acknowledged the results of the inspection. The inspector confirmed that proprietary information was not provided or examined during this inspection.

ATTACHMENT: SUPPLEMENTAL INFORMATION

## **SUPPLEMENTAL INFORMATION**

### **KEY POINTS OF CONTACT**

#### Licensee

K. Polson, Senior Vice President  
M. Caragher, Plant Manager  
W. Colonnello, Director – Nuclear Projects  
E. Kokosky, Director – Organizational Effectiveness  
G. Strobel, Director – Outage and Work Management  
M. Himmelspach, Manager – Chemistry  
S. Maglio, Manager – Licensing  
L. Anderson, Manager – RERP  
N. Avrakotos, (95001 Licensee Team Member)  
A. Mann, (95001 Licensee Team Member)  
B. Rumens, (95001 Licensee Team Member)  
K. Drittman, (95001 Licensee Team Member)  
J. Thorson, (95001 Licensee Team Member)  
K. Mann, (95001 Licensee Team Member)  
S. Galler, (95001 Licensee Team Member)

#### U. S. Nuclear Regulatory Commission

S. Orth, Chief, Plant Support Branch  
K. Reimer, Chief, Reactor Projects Branch 2  
T. Briley, Senior Resident Inspector, Fermi 2  
P. Smagacz, Resident Inspector, Fermi 2

### **LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED**

#### Opened and Discussed

None

#### Closed

05000341/2017009-01	VIO	Failure to Maintain the Effectiveness of the Site's Emergency Plan (Section 4OA5)
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### **LIST OF ACRONYMS USED**

IP	Inspection Procedure
OE	Operating Experience
NOV	Notice of Violation
NRC	U.S. Nuclear Regulatory Commission

## LIST OF DOCUMENTS REVIEWED

The following is a list of documents reviewed during the inspection. Inclusion on this list does not imply that the NRC inspectors reviewed the documents in their entirety, but rather, that selected sections or portions of the documents were evaluated as part of the overall inspection effort. Inclusion of a document on this list does not imply NRC acceptance of the document or any part of it, unless this is stated in the body of the inspection report.

### Administrative Procedures

- FBP-59; Self-Evaluation Program; Revision 12
- MES07; Fermi 2 Engineering Reporting Manual; Revision 15
- MES19; Fermi 2 Engineering Support Conduct Manual; Preparation and Control of Engineering Design Packages; Revision 47B
- MES20; Fermi 2 Engineering Support Conduct Manual; Implementation of Modifications; Revision 34
- MES33; Fermi 2 Engineering Support Conduct; Conduct of Environmental Qualification Program; Revision 9
- MES51; Preventative Maintenance Program; Revision 17A
- MES90-112; Fermi 2 Engineering Support Conduct; Performing Temporary Modifications; Revision 0
- MES90-119; Fermi 2 Engineering Support Conduct; Preparation and Control of Engineering Design Packages; Revision 0
- MGA12; Fermi 2 General Administration Conduct Manual; Fermi Employee Concern Program; Revision 4
- MLS04; Fermi 2 Licensing/Safety Engineering Conduct Manual; Operating Experience Manual; Revision 30
- MMM03; Fermi 2 Materials Management Conduct Manual; Technical Evaluations of Procurement Documents; Revision 32C
- MMM11; Fermi 2 Materials Management Conduct Manual; Dedication of Commercial Grade Items; Revision 16A
- MQA12; Fermi 2 Quality Assurance Conduct Manual; Root Cause Evaluations; Revision 20
- MQA13-100; Fermi 2 Quality Assurance Conduct Manual; CARD Trend Coding and Analysis; Revision 2
- MQA13; Fermi 2 Quality Assurance Conduct Manual; Trending; Revision 11
- MQA15; Fermi 2 Quality Assurance Conduct Manual; Apparent Cause Evaluations; Revision 18
- MQA16; Fermi 2 Quality Assurance Conduct Manual; Self-Assessment; Revision 13
- MQA17; Fermi 2 Quality Assurance Conduct Manual; Benchmarking Process; Revision 10
- MQA18; Fermi 2 Quality Assurance Conduct Manual; Common Cause Analysis; Revision 2
- MWC10; Fermi 2 Work Controls Manual; Work Package Preparation; Revision 35

### Condition Reports

- CARD Number 06-26924; Westinghouse and Reliance Fan Motor EQ Documentation Deficiencies; 10/26/2006
- CARD Number 16-29387; EDP-37759 Install Shield Walls for Div 1 and Div 2 SGTS D1100 AXM Monitors; 11/23/2016
- CARD Number 16-28818; NRC Unresolved Item (URI) – Background Detection on AXM Impact on Classifications; 12/06/2016
- CARD Number 16-29760; SBGTS AXM Radiological Qualification Discrepancy; 12/07/2016

- CARD Number 16-29230-02; Implement Modification (EDP-37759); 12/22/2016
- CARD Number 16-29230-03; Provide a Calculation for Dose from AXM; 12/22/2016
- CARD Number 16-29230-04; Implement EDP – 37759 to Change Environment from Harsh to Mild; 12/22/2016
- CARD Number 16-29230-05; Develop and Provide Lessons Learned from RC 16-29230; 12/22/2016
- CARD Number 16-29230-06; Complete Effectiveness Review; 12/22/2016
- CARD Number 16-29824; AXM Not Currently in the EQ Harsh Program; 01/10/2017
- CARD Number 16-30082; Evaluate AXM Grab Sampling Time and Motion Study; 01/10/2017
- CARD Number 17-21709; NRC Violation – Failure to Maintain the Effectiveness of the Site's Emergency Plan; 03/03/2017
- CARD Number 16-23995; NRC Question – RERP Noble Gas Accident Range Monitor Response during Design Base Accidents; 05/04/2017
- CARD Number 16-29230; NRC Identified – AXM Radiation Monitors; Root Cause Evaluation Report; Revision 2; 08/02/2017
- CARD Number 17-24055; NRC IP 95001 QHSA Recommendation; 05/01/2017

### Miscellaneous

- Design Calculation 5639; Post – LOCA EQ Doses at the SGTS Filters; Revision 0
- Engineering Design Plan (EDP) 37759; Revision A; Index Item Number 004
- Work Order 46562551; EDP-37759 Install Shield Walls for Div 2 SGTS DI 100 AXM Monitor; 12/10/2016
- FERMI SGTS MCNP Model; Chesapeake Nuclear Services; 01/12/2017
- FERMI 2 UFSAR; DTE Electronic Company; Revision 20
- Radiological Engineering Group Evaluation; Changes to SPING Channel 5 Background Subtract Values; Work Request 016B072788; 07/19/1988
- Procedure Number 78.000.40; Source Calibration of the Eberline AXM-1 Monitor; 10/24/1984
- Vendor Manual Number; VMC1-151; Eberline, AXM, Accident Range Monitor; 08/17/2005