



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION III
2443 WARRENVILLE ROAD, SUITE 210
LISLE, ILLINOIS 60532-4352

August 24, 2021

Mr. Peter Dietrich
Senior VP and Chief Nuclear Officer
DTE Electric Company
Fermi 2 – 260 TAC
6400 North Dixie Highway
Newport, MI 48166

**SUBJECT: FERMIL POWER PLANT, UNIT 2 – TRIENNIAL INSPECTION OF EVALUATION
OF CHANGES, TESTS AND EXPERIMENTS BASELINE INSPECTION
REPORT 05000341/2021011**

Dear Mr. Dietrich:

On July 14, 2021, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Fermi Power Plant, Unit 2 and discussed the results of this inspection with Mr. M. Caragher, Director Nuclear Engineering, and other members of your staff. The results of this inspection are documented in the enclosed report.

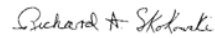
One finding of very low safety significance (Green) is documented in this report. This finding involved a violation of NRC requirements. We are treating this violation as a non-cited violation (NCV) consistent with Section 2.3.2 of the Enforcement Policy.

If you contest the violation or the significance or severity of the violation documented in this inspection report, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region III; the Director, Office of Enforcement; and the NRC Resident Inspector at Fermi Power Plant, Unit 2.

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 III; and the NRC Resident Inspector at Fermi Power Plant, Unit 2.

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 Title 10 of the *Code of Federal Regulations* 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,



Signed by Skokowski, Richard
on 08/24/21

Richard A. Skokowski, Chief
Engineering Branch 3
Division of Reactor Safety

Docket No. 05000341
License No. NPF-43

Enclosure:
As stated

cc w/ encl: Distribution via LISTSERV®

Letter to Peter Dietrich from Richard A. Skokowski dated August 24, 2021.

SUBJECT: FERMIL POWER PLANT, UNIT 2 – TRIENNIAL INSPECTION OF EVALUATION OF CHANGES, TESTS AND EXPERIMENTS BASELINE INSPECTION REPORT 05000341/2021011

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

Docket Number: 05000341

License Number: NPF-43

Report Number: 05000341/2021011

Enterprise Identifier: I-2021-011-0006

Licensee: DTE Electric Company

Facility: Fermi Power Plant, Unit 2

Location: Newport, MI

Inspection Dates: June 21, 2021 to July 14, 2021

Inspectors: M. Holmberg, Senior Reactor Inspector
V. Meghani, Reactor Inspector
J. Neurauter, Senior Reactor Inspector

Approved By: Richard A. Skokowski, Chief
Engineering Branch 3
Division of Reactor Safety

Enclosure

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee's performance by conducting a triennial inspection of evaluation of changes, tests and experiments baseline inspection at Fermi Power Plant, Unit 2, 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.

List of Findings and Violations

| Inadequate Design Verification for Replacement HPCI Suction Strainer | | | |
|---|---|----------------------|----------------|
| Cornerstone | Significance | Cross-Cutting Aspect | Report Section |
| Mitigating Systems | Green NCV 05000341/2021011-01 Open/Closed | [H.4] - Teamwork | 71111.17T |
| The inspectors identified a Green finding and associated Non-cited Violation (NCV) of 10 CFR Part 50, Appendix B, Criterion III for the licensee's failure to establish measures to assure that the design basis for the high pressure coolant injection (HPCI) suction strainer was correctly translated into specifications, drawings, procedures, and instructions. Specifically for the replacement HPCI system suction strainer, the licensee failed to consider the effects of suppression chamber (torus) hydrodynamic loads specified in Paragraph 3.8.2.4.2 and Section 3.9.2.2.1 of the Fermi Unit 2 Updated Final Safety Analysis Report (UFSAR) and also failed to evaluate changes to the original suction strainer welds. | | | |

Additional Tracking Items

None.

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 inspectors 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. Starting on March 20, 2020, in response to the National Emergency declared by the President of the United States on the public health risks of the coronavirus (COVID-19), inspectors were directed to begin telework. In addition, regional baseline inspections were evaluated to determine if all or a portion of the objectives and requirements stated in the IP could be performed remotely. If the inspections could be performed remotely, they were conducted per the applicable IP. In some cases, portions of an IP were completed remotely and on site. The inspections documented below met the objectives and requirements for completion of the IP.

REACTOR SAFETY

71111.17T - Evaluations of Changes, Tests, and Experiments

Sample Selection (IP Section 02.01) (24 Samples)

The inspectors reviewed the following evaluations, screenings, and/or applicability determinations for 10 CFR 50.59 from June 21, 2021, through July 14, 2021.

- (1) Evaluation 20-0027, EDP 80131 and LCR 20-007-UFS Torus Coating Modification
- (2) Evaluation 20-0074, Emergency Operating Procedure/Sever Accident Guidance Update to BWROG Emergency Planning Guidance/Sever Accident Guidance Revision 4 Volume 1 to VI, Appendix A, B, C and Technical Support Guidelines Revision 1
- (3) Evaluation 20-0122, Update of DC-6132 Volume I for Effects of 24-Month Cycle Operation and Impact on Main Control Room Unfiltered Air Infiltration
- (4) Evaluation 18-0286, LCR 20-044-UFS CARD 16-26536 - 2016 CDBI - EDG 12 & 14 LOP/ LOCA Minimum Voltage Values
- (5) Evaluation 18-0280, EDP 80071 Auto Closure of Torus to Reactor Building Vacuum Breaker Isolation Valve T2300F409 & T2300F410 & TSR 38087/LCR
- (6) Evaluation 19-0004, Resolution of Emergency Core Cooling Suction Strainer Modification Calculation Deficiencies
- (7) Evaluation 19-0026, TSR-38095 REV 0 GNF3 New Fuel Introduction
- (8) Evaluation 19-0208, TSR-38170 - GNF3 New Fuel Receipt
- (9) Evaluation 19-0264, Implementation of the Change in Methodology for the Anticipated Transient Without Scram Event
- (10) Screening 21-0024, Residual Heat Removal System
- (11) Screening 20-0155, Post Coating Margin to DC-5979 Volume I
- (12) Screening 20-0080, Main Turbine Generator Rotor Replacement
- (13) Screening 20-0011, Cycle 21 Reload Core Design and Licensing UFSAR Update
- (14) Applicability Determination DSN 37374, Changes to Thermal Transients and Number of Cycles

- (15) Screening 20-0021, Update Standby Liquid Control System Design Basis Documents
- (16) Screening 20-0046, Replacement of Residual Heat Removal Service Water Valve E1150F068A
- (17) Screening 20-0140, Issue Revision to Design Specification 3071-360
- (18) Applicability Determination DSN 60093, G1100F141 Air Operated Valve Replacement
- (19) Applicability Determination DSN 70097, Replacement of High-Pressure Coolant Injection Suction Strainer
- (20) Screening 18-0244, As-Built Support W-E51-5078-G17
- (21) Screening 19-0019, Evaluation for Scaffold Supported Temporary Shielding
- (22) Screening 19-0155, 10CFR50.59 Review of Temporary Laydown Area Established for >90 Days
- (23) Screening 20-0127, Torus Room Permanent Shielding Along Reactor Water Cleanup Line
- (24) Applicability Determination DSN 38036, Administrative Changes to Heavy Load Rigging Specification 3071-375

INSPECTION RESULTS

| Inadequate Design Verification for Replacement HPCI Suction Strainer | | | |
|---|---|----------------------|----------------|
| Cornerstone | Significance | Cross-Cutting Aspect | Report Section |
| Mitigating Systems | Green NCV 05000341/2021011-01 Open/Closed | [H.4] - Teamwork | 71111.17T |
| <p>The inspectors identified a Green finding and associated Non-cited Violation (NCV) of 10 CFR Part 50, Appendix B, Criterion III for the licensee’s failure to establish measures to assure that the design basis for the high pressure coolant injection (HPCI) suction strainer was correctly translated into specifications, drawings, procedures, and instructions. Specifically for the replacement HPCI system suction strainer, the licensee failed to consider the effects of suppression chamber (torus) hydrodynamic loads specified in Paragraph 3.8.2.4.2 and Section 3.9.2.2.1 of the Fermi Unit 2 Updated Final Safety Analysis Report (UFSAR) and also failed to evaluate changes to the original suction strainer welds.</p> | | | |
| <p><u>Description:</u></p> <p>In DSN 70097, the licensee identified that the HPCI suction strainer was damaged and needed to be replaced. The licensee utilized a contractor to reverse engineer an equivalent replacement strainer based on the original strainer, Chicago Bridge & Ironworks (CBI) drawings 227 and 228 as modified in Nuclear Technologies (Nutech) drawing DET-19-067. To support this activity, the licensee’s contractor developed new drawings (DSN 2700) for fabrication of the replacement HPCI strainer with critical dimensions and material identical or similar to the original strainer. One exception was that the replacement HPCI strainer could be fabricated using a lower strength stainless steel material, SA240 Type 304 or Type 304L. To verify the replacement strainer design dimensions and acceptance of the lower strength material, a different licensee contractor completed a stress analysis of the replacement HPCI strainer design using computer based finite element analysis that considered differential pressure and seismic loads at operating temperature (reference calculation C-7513-00-01). Because the replacement HPCI suction strainer was fabricated with similar material, and weight, and the analysis results as documented in calculation C-7513-00-01 were acceptable, the licensee determined the replacement strainer design was equivalent to the original HPCI</p> | | | |

suction strainer.

The inspectors identified that in calculation C-7513-00-01, the licensee had not considered torus internal hydrodynamic loads applicable to design basis loss-of-coolant accident (LOCA)-related and safety relief valve (SRV) discharge-related loading events for the Fermi Mark 1 containment. Specifically, in UFSAR Paragraph 3.8.2.4.2 it identifies that "The torus-shaped suppression chamber is designed as an axisymmetric shell of revolution. Analysis techniques similar to those used for the drywell were applied in the original design of the suppression chamber. The suppression chamber design has subsequently been reevaluated and modified for the effects of the LOCA-related loads and SRV discharge-related loads defined by NUREG-0661, "Mark I Containment Long-Term Program, Safety Evaluation Report," July 1980, and General Electric Report NEDO-21888, "Mark I Containment Program Load Definition Report," Revision 2, November 1981. The loads, load application methods, and structural analysis techniques applied in the suppression chamber reevaluation are described in Nuclear Technologies (Nutech) Report DET-04-028-1,2,3,4,5, "Enrico Fermi Atomic Power Plant, Unit 2, Plant Unique Analysis Report," Revision 1, November 1983, and Nutech Report DET-19-076-6, "Enrico Fermi Atomic Power Plant, Unit 2, Plant Unique Analysis Report for Torus Attached Piping," Revision 0, June 1983. The criteria set forth in NUREG-0661 and the original containment design specifications have been applied as a basis for acceptance of the analysis methods and the suppression chamber design." In addition, UFSAR Section 3.9.2.2.1 identifies that the structural analyses for large and small-bore torus-attached piping, piping supports, and related equipment are described in the Plant Unique Analysis Report and DC-6003 Vol I, "Evaluation of New ECCS Suction Strainers on Existing TAP Analysis" for Torus-Attached Piping (TAP) and references the Nutech Report DET-19-076-6. Because, the licensee had not applied the hydrodynamic loads identified in these design basis documents, the inspectors could not determine that the replacement HPCI suction strainer design was equivalent to the original strainer.

As a result, the licensee entered this concern into to the corrective action program (CAP) as CARD 21-25514, "HPCI Strainer Evaluation in EDP 70097 Does Not Factor Design Basis Loading Conditions." In this CARD, the licensee stated, "Since the stress margins associated with the current engineering evaluation are substantially large, and since not all of the suction strainer components have reduced strength, it is concluded by Engineering judgement that the new HPCI suction strainer will be able to perform its intended design function during a postulated design basis accident. However, the stress margins (the difference between calculated stresses and material allowable stresses) are currently unknown, and therefore, further evaluation is required to both quantify and confirm that the margin is indeed positive (calculated stresses < max allowable stresses)." The inspectors considered this a reasonable basis to conclude that the replacement HPCI strainer was operable and capable of supporting the HPCI system design functions during a postulated design basis accident.

During followup of CARD 21-25514, the licensee completed a revised analysis that included the torus internal hydrodynamic loads and identified an overstressed condition at the location where strainer stiffener bars were tack welded to the perforated sheet material. The licensee documented this issue in CARD 21-25645 and believed that this condition existed since original construction but was missed in the original design basis torus internal hydrodynamic loading evaluation of the HPCI suction strainer. As a result, the inspectors performed additional reviews of the replacement strainer fabrication weld details for conformance to the original strainer and identified a change to the weld that attached the reinforcement plate to the perforated sheet. Specifically, in drawing DET-19-067 a continuous top-to-bottom fillet weld was identified but in drawing 2700 a top-to-bottom intermittent tack weld on 2-inch

centers was identified. In addition, for the replacement strainer, drawing 2700 specified a perforated sheet overlap of 1/2 inch, with intermittent tack welds inside and outside on 2-inch centers, which was not consistent with the original HPCI strainer, which was fabricated with a full weld along this seam (e.g. no overlap present). However, the inspectors noted that the original CB&I drawing 228 lacked weld details for this perforated sheet seam. In addition, the reinforcement welds to the original strainer were designed per the ASME Section III Code Subsection NF as identified in calculation 50.301.2320 and the inspectors were not able to identify specific rules in Subsection NF or Subsection NC for welding 14 gauge perforated sheet steel that would ensure the specified weld configuration had sufficient structural capacity for torus internal hydrodynamic design loads (i.e., intermittent tack welds are normally used for fit-up prior to final welding and are not normally considered structural welds). The licensee entered these weld discrepancies into the CAP (CARD 21-26053 and CARD 21-25645) and determined that the operability basis established in CARD 21-25514 remained sufficient to bound these additional issues.

Corrective Actions: The licensee performed evaluations of the identified concerns and determined the replacement HPCI strainer was operable in its current configuration. Also, the licensee established actions to restore the replacement HPCI suction strainer stress margins in accordance with design basis Code requirements.

Corrective Action References: CARDS 21-25514, 21-25522, 21-25645, 21-26053, 21-26055, and 21-26056

Performance Assessment:

Performance Deficiency: The inspectors determined that the licensee's failure to establish measures to assure that the design basis for the HPCI suction strainer was correctly translated into specifications, drawings, procedures, and instructions was contrary to 10 CFR Part 50, Appendix B, Criterion III and was a performance deficiency. Specifically, the licensee failed to apply and verify the design basis hydrodynamic loading for analysis of the replacement HPCI suction strainer and failed to evaluate changes to original HPCI suction strainer fabrication welds.

Screening: The inspectors determined the performance deficiency was more than minor because it was associated with the Design Control 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. The inspectors also compared the performance deficiency with the examples listed in IMC 0612, "Power Reactor Inspection Reports," Appendix E, "Example of Minor Issues" and identified that the performance deficiency was more than minor using example 3.a. Specifically, the failure to ensure the replacement HPCI suction strainer configuration was based on supporting calculations that included the Mark I containment design loads resulted in a component that was not demonstrated to be adequate to meet the design basis requirements. Therefore, without objective evidence, reasonable assurance did not exist that the strainer availability and reliability would be maintained, and this deficiency will require substantial revision to the existing design calculations and/or replacement HPCI suction strainer rework to ensure that the strainer design including fabrication welds is adequate to withstand the torus hydrodynamic loads.

Significance: The inspectors assessed the significance of the finding using Appendix A, "The Significance Determination Process (SDP) for Findings At-Power."

The inspectors determined the finding was of very low safety significance (Green) because the inspectors answered "YES" to question A.1 in Exhibit 2. Specifically, the licensee provided reasonable assurance that the operability/functionality of the strainer and HPCI system was maintained under the required loading.

Cross-Cutting Aspect: H.4 - Teamwork: Individuals and work groups communicate and coordinate their activities within and across organizational boundaries to ensure nuclear safety is maintained. Specifically, the licensee did not establish adequate communication between the contractor that reverse engineered the original HPCI suction strainer, and the contractor that performed stress analysis of the replacement HPCI suction strainer to ensure the design basis for components subjected to torus internal hydrodynamic loads was maintained.

Enforcement:

Violation: Title 10 CFR Part 50, Appendix B, Criterion III, "Design Control," requires in part, that measures shall be established to assure that applicable regulatory requirements and the design basis, as defined in 10 CFR 50.2 and as specified in the license application, for those structures, systems, and components are correctly translated into specifications, drawings, procedures and instructions. In addition, design control measures shall provide for verifying or checking the adequacy of design, such as by the performance of design reviews, by the use of alternate or simplified calculational methods, or by the performance of a suitable testing program.

Contrary to the above, on August 16, 2018, the licensee failed to establish measures to assure that the applicable regulatory requirements and design basis for the HPCI suction strainer were correctly translated into procedures or instructions and failed to verify or check the design adequacy of the safety-related HPCI suction strainer replacement. Specifically, in supporting calculation C-7513-00-01, the licensee failed to consider torus internal hydrodynamic design basis loads, as identified in UFSAR Sections 3.8.2.4.2 and 3.9.2.2.1, and also failed to evaluate changes to the original HPCI suction strainer welds.

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

EXIT MEETINGS AND DEBRIEFS

The inspectors confirmed that proprietary information was controlled to protect from public disclosure.

- On July 14, 2021, the inspectors presented the triennial inspection of evaluation of changes, tests and experiments baseline inspection results to Mr. M. Caragher, Director Nuclear Engineering, and other members of the licensee staff.
- On June 25, 2021, the inspectors presented the triennial inspection of evaluation of changes, tests and experiments inspection results to Eric Olsen, Site Vice President, and other members of the licensee staff.

DOCUMENTS REVIEWED

| Inspection Procedure | Type | Designation | Description or Title | Revision or Date |
|----------------------|-----------------------------|---------------------|--|---|
| 71111.17T | Calculations | 50.301.1381 | Torus Attached Piping Penetration Analysis (Load Development for Suction Strainers) | 0 |
| | | 50.301.2320 | Suction Strainer Reinforcement Stress Analysis | 1 |
| | | C-7513-00-01 | ASME Code Evaluation of Fermi 2 Suppression Pool Strainer | 0 |
| | | DC-5227 Vol 1 DCD 1 | Seismic Qualification of New Fuel Uprighting Stand | 0 |
| | | FER 175797 | Hydrodynamic Load Factors Fermi Nuclear Generating Station Unit 2 | 1 |
| | | URS 148 C 1 | Fermi 2 HPCI Suction Strainer Operability Evaluation | 1 |
| | Corrective Action Documents | CARD 12-22492 | Variance from BWRVIP-205 | 03/30/2012 |
| | | CARD 16-26536 | EDG 12 & 14 LOP/ LOCA Minimum Voltage Values Do Not Meet Regulatory Guide 1.9 Criteria | 08/17/2016 |
| | | CARD 18-26261 | Actuator of the F054 Interference | 08/17/2018 |
| | | CARD 19-20901 | Trend CARD - Documentation | 02/06/2019 |
| | | CARD 19-21369 | Technical Specification 3.1.7 Figure 1, SLC Tank Level Limits Potentially Non-Conservative | 02/21/2019 |
| | | CARD 19-24099 | Evaluate Potential Impacts CFR50.59 Program due to Revision 1 to Regulatory Guide 1.187 | 05/28/2019 |
| | | CARD 19-26263 | 50.59 for RHR Div 1 Decant Pump Being Removed Greater than 90 Days | 08/20/2019 |
| | | CARD 19-27432 | Calculations Establishing Seismic II/I Qualifications for New Fuel Uprighting Machine and Inspection Stand Invalid | 10/01/2019 |
| | | CARD 20-21633 | Transient Permit at 90 Days End of Life, and No 50.59 Review Completed | 02/13/2020 |
| | | CARD 20-25435 | Status of Thermal Recombiner System Needs to Be Reconciled with 10 CFR 50.59, 10 CFR 50.71(e), and TS 5.5.2 | 04/30/2020 |
| | | CARD 20-26999 | Torus Recoat - Update to Unqualified Coatings Log | 06/17/2020 |
| | | CARD 20-31725 | 50.59 Evaluation Not Completed Per Procedure MLS14 within the 90-Day Timeframe For Torus Equipment | 10/28/2020 |
| | | Corrective Action | CARD 21-25514 | 2021 NRC 50.59 Inspection – HPCI Strainer Evaluation in |

| Inspection Procedure | Type | Designation | Description or Title | Revision or Date |
|---------------------------|-------------------------------------|---|--|------------------|
| | Documents Resulting from Inspection | | EDP 70097 Does Not Factor Design Basis Loading | |
| | | CARD 21-25522 | 2021 50.59 Inspection: DEC 70097 "HPCI Suction Strainer Replacement" Did Not Meet Requirements of Design Equivalent Change per MES90 | 06/22/2021 |
| | | CARD 21-25523 | Use of Silicone in CCHVAC May Not Be Addressed by an Aging Management Program | 06/22/2021 |
| | | CARD 21-25525 | 2021 50.59 Inspection: Radiation Shielding Not Evaluated per 65.000.303 | 06/21/2021 |
| | | CARD 21-25547 | 2021 NRC 50.59 Inspection – Isometric Drawing 6BM721-4188-1 Seismic Classification Update Required | 06/23/2021 |
| | | CARD 21-25645 | 2021 NRC 50.59 Inspection – Original HPCI Strainer Does Not Evaluate Stress on Tack Welded Components | 06/25/2021 |
| | | CARD 21-26053 | 2021 NRC 50.59 Inspection – EDP 70097 Did Not Evaluate Smaller Welds on HPCI Suction Strainer Basket | 07/09/2021 |
| | | CARD 21-26055 | 2021 NRC 50.59 Inspection – EFA-E41-21-007 and CARD 21-25645 Did Not Envelope All Material Used in the Replacement HPCI Suction Strainer | 07/09/2021 |
| | | CARD 21-26056 | 2021 NRC 50.59 Inspection – Incorrect Construction / Design Code Used during the HPCI Suction Strainer Replacement Project | 07/09/2021 |
| | Drawings | CB&I 228 | Strainers | 3 |
| | | DET 19 076 Page 1 | Nutech Engineers Sketch - Details of Suction Strainers Reinforcement Issued for Construction | 0 |
| | | DET 19 076 Page 2 | Nutech Engineers Sketch - Details of Suction Strainers Reinforcement Issued for Construction | 0 |
| | | DET 19 076 Page 3 | Nutech Engineers Sketch - Details of Suction Strainers Reinforcement Issued for Construction | 0 |
| | | DET 19 076 Page 4 | Nutech Engineers Sketch - Details of Suction Strainers Reinforcement Issued for Construction | 0 |
| | | DET 19 076 Page 5 | Nutech Engineers Sketch - Details of Suction Strainers Reinforcement Issued for Construction | 0 |
| Energy Steel 2700 Sheet 1 | | Strainer Basket 'Ref. CB&I Drawing 228 Rev. 3 and Nutech Drawing DET-19-067 | 0 | |
| Energy Steel | | Strainer Basket 'Ref. CB&I Drawing 228 Rev. 3 and Nutech | 0 | |

| Inspection Procedure | Type | Designation | Description or Title | Revision or Date |
|----------------------|-------------------------|---------------------------|--|------------------|
| | | 2700 Sheet 2 | Drawing DET-19-067 | |
| | | Energy Steel 2700 Sheet 3 | Strainer Basket 'Ref. CB&I Drawing 228 Rev. 3 and Nutech Drawing DET-19-067 | 3 |
| | | Energy Steel 2700 Sheet 4 | Strainer Basket 'Ref. CB&I Drawing 228 Rev. 3 and Nutech Drawing DET-19-067 | 1 |
| | | W-E51-5078-G17 | Pipe Support Drawing | A |
| | Engineering Changes | DC-4997 | SLC Changes to Meet ATWS Rule | 0 |
| | | DC-6132 Vol I | GNF3/24 Month Fuel Cycle (TSR # 3) | D |
| | | DECP 70183 | Main Turbine Generator (MTG) Rotor Replacement | 05/19/2020 |
| | | EDP 80071 | Automatic Closure of Torus to Reactor Building Vacuum Breakers Isolation Valves T2300F409 and T2300F410 after Loss of AC Power | 0 |
| | | EDP 80131 | Torus Coating Modification | B |
| | Engineering Evaluations | EFA-E41-21-007 | Omission of Suppression Pool Hydrodynamic Loading from Structural Evaluation of Installed HPCI Torus Suction Strainer | 0 |
| | | TE-T23-20-008 | Unqualified Coatings Log | A |
| | | TSR- 37700 | Technical Service Request: Resolution of ECCS Suction Strainer Modification Calculation Deficiencies | 0 |
| | | TSR-37374 | Changes to Thermal Transients and Number of Cycles | B |
| | | TSR-38129 | Update of DC-6132 VOL I for Effects of 24-Month Cycle Operation and Impact on MCR Unfiltered In-Leakage and ESF Filter Loading | 0 |
| | | TSR-38216 | Technical Service Request: Update SLCS Design Basis Documents | 0 |
| | | TSR-38279 | Technical Service Request – Issue Revision to Design Specification 3071-360 | 0 |
| | | TSR-38286 | Post Coating Margin to DC-5979 Vol I | 0 |
| | Miscellaneous | | BWR Owners' Group Emergency Procedure and Severe Accident Guidelines Volume I to Volume VI | 4 |
| | | | Understanding the Effects of In-Service Temperature and Functional Fluid on the Ageing of Silicone Rubber | 02/26/2019 |
| | | 16-0026 | Screening - Resolution of ECCS Suction Strainer Modification Calculation Deficiencies | A |

| Inspection Procedure | Type | Designation | Description or Title | Revision or Date |
|----------------------|------|-------------|--|------------------|
| | | 18 - 0280 | Screening - Automatic Closure of Torus to Reactor Building Vacuum Breakers Isolation Valves T2300V409 and T2300F410 after a Loss of AC Power | 0 |
| | | 18-0280 | Evaluation - EDP 80071, Automatic Closure of Torus to Reactor Building Vacuum Breakers, Isolation Valves T2300F409 and T2300F410, and TSR 38087/LCR 18-065-UFS/LCR 18-068-TSB | 0 |
| | | 18-0286 | Evaluation - LCR 20-044-UFS: CARD 16-26536 – 2016 CBDI - EDG 12 and EDG 14 LOP/ LOCA Minimum Voltage Values Do Not Meet Regulatory Guide 1.9 Criteria | 0 |
| | | 19-0004 | Evaluation - Resolution of Emergency Core Cooling System Suction Strainer Modification Calculation Deficiencies | 0 |
| | | 20-0011 | Screening - Cycle 21 Reload Core Design and Licensing UFSAR Update | 0 |
| | | 20-0021 | Screening - Update Standby Liquid Control System Design Basis Documents | 0 |
| | | 20-0027 | Evaluation - EDP 80131 and LCR 20-007-UFS Torus Coating Modification | A |
| | | 20-0046 | Screening - Replacement of Residual Heat Removal Service Water (RHRSW) Valve E1150F068A | 0 |
| | | 20-0074 | Evaluation - Emergency Operating Procedure/Sever Accident Guidance Update to BWROG Emergency Planning Guidance/Sever Accident Guidance Revision 4 Volume 1 to VI, Appendix A, B, C AND Technical Support Guidelines Revision 1 | 0 |
| | | 20-0080 | Screening - Main Turbine Generator Rotor Replacement | 0 |
| | | 20-0122 | Evaluation - Update of DC-6132 Volume I for Effects of 24-MONTH Cycle Operation and Impact on Main Control Room Unfiltered Air Infiltration | 0 |
| | | 20-0140 | Screening - Issue Revision to Design Specification 3071-360 | 0 |
| | | 20-0155 | Screening - Post Coating Margin to DC-5979 Volume I | 0 |
| | | 20-0202 | Screening - UFSAR Change to Address CARD 16-26536 - 2016 CBDI - EDG 12 & 14 LOP/ LOCA Minimum Voltage Values Do Not Meet Regulatory Guide 1.9 Criteria | 0 |

| Inspection Procedure | Type | Designation | Description or Title | Revision or Date |
|----------------------|------|--------------------|---|------------------|
| | | 21-0024 | Screening - Residual Heat Removal System | 0 |
| | | 3017-360 | Design Specification - Interior Protective Coating Suppression Chamber – Reactor Building | G |
| | | DSN 37374 | Applicability Determination - Changes to Thermal Transients and Number of Cycles | B |
| | | DSN-60093 | Applicability Determination - G1100F141 Air Operated Valve Replacement | A |
| | | DSN-70097 | Applicability Determination - Design Equivalent Change Package: Replacement of High-Pressure Coolant Injection (HPCI) Suction Strainer | A |
| | | LCO 2019-0084 | Technical Specification 3.1.7 Figure 1, SLC Tank Level Limits Potentially Non-Conservative | 02/21/2019 |
| | | LCR 14-052-UFS | Changes to RCPB Duty Cycles and Fatigue Usage Calculation Results | 02/05/2016 |
| | | LCR 18-065-UFS | UFSAR Update | 0 |
| | | LCR 18-068-TSB | Technical Specification Bases | 0 |
| | | LCR 19-059-UFS | Updating the UFSAR for Cycle 21 Core Design Changes, Control Blade Changes, and Introduction of GNF3 Fuel | 10/16/2020 |
| | | LCR 19-060-COL | Update the COLR for Cycle 21 | 04/09/2020 |
| | | LCR 20-007-UFS | EDP 80131 Torus Coating Modification and Update to UFSAR Chapter 6 and Appendix A | 07/28/2020 |
| | | LCR 20-013-UFS | Replacement of Main Turbine Generator (MTO) Rotor per EDP 70183 | 09/29/2020 |
| | | LCR 20-027-UFS | Impact of 24 Month Cycle Operation on Post-LOCA Dose Consequences and MCR Unfiltered In-Leakage | 05/13/2021 |
| | | LCR 20-044-UFS | UFSAR Change Request - Response to CARD 16-26536: Revise UFSAR to Update Discussion of Voltage Dip on EDGs when RHR and CS Pumps Start as It Pertains to RG 1.9 | 0 |
| | | Letter NRC-20-0022 | Submittal of 2019 Safety Relief Valve Challenge Report, Main Steam Bypass Lines Report, and ECCS Cooling Performance Evaluation Model Changes or Errors Report | 04/23/2020 |
| | | Letter NRC-21-0002 | Submittal of Revision 23 to the Fermi 2 Updated Final Safety Analysis Report (UFSAR), 10 CFR 50.59 and 10 CFR 72.48 | 02/02/2021 |

| Inspection Procedure | Type | Designation | Description or Title | Revision or Date |
|----------------------|------------|---|---|------------------|
| | | | Evaluation Summary Reports, Commitment Management Report, Revisions to the Technical Requirements Manual and the Technical Specifications Bases, and a Summary of the Excessive Detail Removed from the UFSAR | |
| | | NEDE-33005P-A | Licensing Topical Report- TRACG Application for Emergency Core Cooling Systems /Loss-of-Coolant-Accident Analyses for BWR/2-6 | 2 |
| | | TMIS-12-0091 | Transmittal of Fermi 2 Deviation Disposition DD-2012-01 for the Reactor Water Clean-Up (RWCU) Bottom Head Drain Inspection | 09/19/2012 |
| | Procedures | 23.205 | Residual Heat Removal System | 148 |
| | | MES02 | Design Configuration Management | 31 |
| | | MES11 | Technical Service Request | 27B |
| | | MES42 | Equivalent Replacement Process | 28 |
| | | MLS APP B | Applicability Determination Manual | 17 |
| | | MLS App C | Appendix C – 50.59 Resource Manual | 7 |
| | | MLS14 | Changes, Tests and Experiments | 14 |
| | | MOP23 | Plant Storage | 6 |
| Work Orders | 47427779 | Replace HPCI Suction Strainer (E4100D002) | 1 | |