



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

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

November 10, 2009

Mr. Jack M. Davis
Senior Vice President and
Chief Nuclear Officer
Detroit Edison Company
Fermi 2 - 210 NOC
6400 North Dixie Highway
Newport, MI 48166

**SUBJECT: FERMIL POWER PLANT, UNIT 2, NRC BIENNIAL PROBLEM IDENTIFICATION
AND RESOLUTION INSPECTION REPORT 05000341/2009007**

Dear Mr. Davis:

On October 5, 2009, the U.S. Nuclear Regulatory Commission (NRC) completed a biennial team inspection of problem identification and resolution at your Fermi Power Plant, Unit 2. The enclosed inspection report documents the inspection findings which were discussed on October 5, 2009, with Mr. J. Plona and other members of your staff.

This inspection was an examination of activities conducted under your license as they relate to the identification and resolution of problems, compliance with the Commission's rules and regulations, and with the conditions of your operating license. Within these areas, the inspection involved selected examination of procedures and representative records, observations of activities, and interviews with personnel.

Based on the results of this inspection, no findings of significance were identified. The inspection team concluded that on the basis of the sample selected for review, in general, problems were properly identified, evaluated, and corrected. The team noted that the licensee reviewed operating experience for applicability to station activities. Audits and self-assessments were determined to be performed at an appropriate level to identify deficiencies. During interviews conducted during the inspection, workers at the site expressed freedom to raise nuclear safety concerns.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document

J. Davis

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Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

John B. Giessner, Chief
Branch 4
Division of Reactor Projects

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

Enclosure: Inspection Report 05000341/2009007
w/Attachment: Supplemental Information

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U. S. NUCLEAR REGULATORY COMMISSION

REGION III

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

Report No: 05000341/2009007

Licensee: Detroit Edison Company

Facility: Fermi Power Plant, Unit 2

Location: Newport, MI

Dates: September 21 through October 5, 2009

Team Lead: J. Rutkowski, Senior Resident Inspector, Davis-Besse

Inspectors: J. Gilliam, Reactor Inspector
R. Jones, Resident Inspector
T. Steadham, Resident Inspector
G. Wright, Project Engineer

Approved by: J. Giessner, Chief
Branch 4
Division of Reactor Projects

Enclosure

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SUMMARY OF FINDINGS

IR 05000341/2009007; 09/21/2009 – 10/5/2009; Fermi Power Plant, Unit 2; Routine Biennial Problem Identification and Resolution Inspection.

This inspection was performed by three NRC regional inspectors and two resident inspectors. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

Problem Identification and Resolution

On the basis of the sample selected for review, the team concluded that implementation of the corrective action program (CAP) at Fermi was generally good. The licensee had a low threshold for identifying problems and entering them in the CAP, however there was less than licensee-expected use of the system by site employees in some departments. Items entered into the CAP were screened and prioritized in a timely manner using established criteria and were properly evaluated commensurate with their safety significance. In general, causes for issues were adequately determined and corrective actions were generally implemented in a timely manner, commensurate with the safety significance. Some issues required reanalysis due to recurrence of the issues, in part, because of less than desired thoroughness of the original analysis and less than desired effectiveness of original corrective actions. The team noted that the licensee reviewed operating experience for applicability to station activities. Audits and self-assessments were determined to be performed at an appropriate level to identify deficiencies. On the basis of interviews conducted during the inspection, workers at the site expressed freedom to raise safety concerns through their supervisors, through the employee concerns program, or by use of the CAP. Some interviewees stated that the CAP was less than effective for resolving issues of low significance.

A. NRC-Identified and Self-Revealed Findings

No items of significance were identified.

B. Licensee-Identified Violations

No violations of significance were identified.

REPORT DETAILS

4. OTHER ACTIVITIES

4OA2 Problem Identification and Resolution (71152B)

The activities documented in Sections .1 through .4 constituted one biennial sample of problem identification and resolution as defined in IP 71152.

.1 Assessment of the Corrective Action Program Effectiveness

a. Inspection Scope

The inspector reviewed the licensee's corrective action program (CAP) implementing procedures and attended CAP meetings to assess the implementation of the CAP by site personnel.

The inspectors reviewed risk and safety significant issues in the licensee's CAP since the last NRC biennial Problem Identification and Resolution (PI&R) inspection in September 2007. The selection of issues ensured an adequate review of issues across NRC cornerstones. The inspectors used issues identified through NRC generic communications, department self-assessments, licensee audits, operating experience reports, and NRC documented findings, including NRC observations from the last biennial PI&R, as sources to select issues. Additionally, the inspectors reviewed condition assessment resolution documents (CARDs) generated as a result of facility personnel's performance in daily plant activities. The inspectors reviewed a selection of completed investigations from the licensee's various investigation methods, which included root cause, apparent cause, equipment apparent cause, and quick human performance investigations.

The inspectors selected three high-risk systems, which included feedwater check valves, division 2 emergency diesel generators, and residual heat removal service water to review in detail. The inspectors' review was to determine whether the licensee staff were properly monitoring and evaluating the performance of these systems through effective implementation of station monitoring programs. A 5 year review on the licensee's check valve testing program was also undertaken to assess the licensee staff efforts in monitoring for system degradation due to aging aspects. The inspectors also performed partial system walkdowns of division 2 emergency diesel generators and division 2 residual heat removal service water system.

During the reviews, the inspectors determined whether the licensee staff's actions were in compliance with the facility's CAP and 10 CFR Part 50, Appendix B requirements. Specifically, the inspectors determined if licensee personnel were identifying plant issues at the proper threshold, entering the plant issues into the station's CAP in a timely manner, and assigning the appropriate prioritization for resolution of the issues. The inspectors also determined whether the licensee staff assigned the appropriate investigation method to ensure the proper determination of root, apparent, and contributing causes. The inspectors also evaluated the timeliness and effectiveness of corrective actions for selected issue reports, completed investigations, and NRC findings, including non-cited violations.

b. Assessment

(1) Effectiveness of Problem Identification

The inspectors concluded that, generally, concerns were being appropriately identified and captured in the CAP by the use of the CARD process. During the time period sampled, the station initiated approximately eight thousand to nine thousand CARDS per year with the majority of the documents classified as a level 3 (an adverse condition that has or would have minimal affect on the safe or reliable operation of the plant or personnel safety) or a level 4 (a condition that is not adverse to quality or a concern, suggestion, or a question that does not represent a condition adverse to quality, nonconformance, or program deficiency). The inspectors did not identify any concerns with identification of level 1 issues (a significant concern adverse to quality) or level 2 issues (an adverse condition that has potential or actual effect on safe or reliable operation of the plant or personnel safety). The inspectors did find, although it was a station expectation to document all concerns, a reluctance to document some concerns that were perceived by the organization as low-level concerns.

The inspectors determined that the station was generally effective at trending low-level issues to prevent larger issues from developing. The licensee also used the CAP to document instances where previous corrective actions were ineffective or were inappropriately closed.

Observations

General Requirements

Procedure MQA11, "Condition Assessment Resolution Document," stated that it applies to all personnel performing work at Fermi Energy Center. It also defined "condition" as a potential or real situation that may require further review, evaluation, or action for resolution. The situation may be adverse to quality, may not meet Fermi expectations, or may provide opportunities for improvement. Once a "condition" is identified, the condition was to be documented on a CARD. This did not always happen.

Reluctance to Initiate CARDS

The Operations Department identified in self-assessment SA-08-0013 that there were gaps in the tagging process. One of the reasons identified for the gaps was that plant personnel were hesitant to report process flaws; CARD 08-22699 was initiated. CARD investigations concluded that the expectation for when to write CARDS was unclear and that there were some organizational and individual factors. The factors included concerns with "getting others in trouble," lack of confidence in the CARD process to resolve issues, and CARD initiation causing strained working relationships between working groups.

Security Department apparent cause evaluations (ACEs) reviewed by the inspectors documented that prior opportunities to address some concerns were not entered into the CAP. For example, a weapons handling issue on February 6, 2008, was documented in CARD 08-20866. The resulting ACE determined that the event would not have happened if, among other reasons, the stiffener plate in the officer's holster was not broken. As part of the ACE investigation, the licensee identified additional holsters with broken stiffener plates. Because some of the officers used velcro straps to help compensate for the broken stiffener plates, the inspectors concluded that the officers

either knew or should have known that their holster was damaged; however, the inspectors could find no CARDS related to damaged holsters other than CARD 08-20866. This issue did not affect the site's ability to implement the security plan.

In September 2008 the licensee completed an ACE for a quality assurance audit finding on a maintenance work order (WO) not being vaulted in a timely manner (CARD 08-26117). The ACE stated the maintenance department self-identified problems with the information and with the WO tracking and close-out process but had not written a CARD.

Inspection Team Examples

The inspectors conducted a field walkdown of two systems within the residual heat removal complex. The inspectors identified three low-significance conditions that were not previously identified by CARDS. The licensee subsequently wrote CARDS 09-27814, 09-27815, and 09-27862 to document the low-significance conditions.

During interviews with station personnel, the inspectors were told that due to some low-level issues not getting fixed, or not getting fixed in a timely manner, and due to the cumbersome nature of the CARD and work management processes (making it difficult to determine issue status), some individuals felt discouraged from identifying low-level issues in the CAP. If a CARD needs a WO to direct work to correct the identified condition, the CARD may be closed to the WO, however, the condition documented in the CARD may not have been corrected. Interviewees said this makes tracking the actual completion of a particular issue/condition difficult. The licensee initiated CARD 09-28028 to address the concern.

The inspectors also identified that immediate action documentation did not become part of the CARD documents in cases where the immediate actions were to provide "coaching." This was based on some individuals' perception that coaching is the first level of discipline and disciplinary actions are not documented in CARDS. The licensee documented the identified condition in CARD 09-28027.

Findings

No findings of significance were identified.

(2) Effectiveness of Prioritization and Evaluation of Issues

The inspectors concluded that the station was generally effective at prioritizing and evaluating issues commensurate with the safety significance of the identified problem. The inspectors determined that the Corrective Action Review Board and Ownership Screening Committee meetings were generally thorough and maintained a high standard for approving and reviewing CARDS. The timeliness of initial classifications and the level of classification appeared consistent with the licensee's procedures. The inspectors determined that the licensee was generally effective at evaluating equipment functionality requirements after a degraded or non-conforming issue was identified.

While most evaluations were good, some evaluation weaknesses observed by inspectors could be characterized as addressing the symptoms rather than the causes. Several conditions in the inspection period occurred which had been identified earlier,

but were not corrected in time to prevent a recurrence of the condition. These included conditions with scaffolding and with feedwater check valves.

Observations

Comprehensiveness of Evaluations

CARD 08-25796 was issued to document a violation of high radiation area (HRA) entry requirements by two workers. The workers had signed onto the radiological work permit (RWP) under the incorrect task and subsequently entered a HRA without authority. The ACE identified inadequate self-checking as the apparent cause; however, the information provided in the CARD file indicated that the workers were confused and uncertain about the task requirements. A subsequent common cause analysis identified additional causes which better supported the evidence documented.

The inspectors concluded that the licensee missed opportunities to identify and correct underlying human performance issues that contributed to additional events within the Security Department because an initial evaluation of a condition was narrowly focused. The licensee discovered a weapon in an unsafe configuration on August 8, 2008, documented the issue in CARD 08-25081, and performed an ACE. The licensee concluded the apparent cause was an inadequate use of human performance tools to ensure the weapon was configured properly. Over the next 4 months, four additional weapons-related human performance errors occurred. The licensee identified an emerging trend, initiated CARD 08-28155, and performed a common cause analysis. The licensee concluded that an inadequate use of human performance tools contributed to each of those events and developed corrective actions to address the trend. The licensee missed the opportunity to evaluate why corrective actions from the prior ACE were not effective in improving the use of human performance tools. CARDS 09-27693 and 09-27695 were issued to document the NRC observations. This issue did not affect the site's ability to implement the security plan.

During refueling outage 13 in April 2009, the inboard isolation check valve for the "B" feedwater line, B2100F010B, failed its as-found local leak rate test (LLRT). The licensee documented the failure in CARD 09-22205 and performed a root cause evaluation (RCE). The root cause charter included the requirement to "review the effectiveness of prior corrective actions." The inspectors concluded that the licensee's efforts in completing this charter item were less than adequate. Specifically, the section of the RCE that discussed prior evaluations only provided a list of deficiencies but offered no conclusions as to why two previous RCEs and 11 CARDS failed to identify and correct the cause of repeated LLRT failures. Additionally the action to review effectiveness of prior actions, which was captured in the CARD as action item number 11, was assigned a due date of November 13, 2009. The inspectors concluded that the licensee could not have adequately addressed the charter item to review the effectiveness of prior corrective actions as part of the RCE since the RCE was completed prior to the action item scheduled date. The licensee initiated CARD 09-27863 to document the NRC observation.

Extent of Condition

CARD 09-25098 documented an adverse trend associated with the storage of scaffolding. The licensee's scaffolding review identified 22 scaffold CARDS issued from January 2008 through July 2009. Of these, 17 were identified by outside agencies; NRC identified 16 of the documented conditions. One deficiency identified as part of the

investigation was that there was a lack of understanding of and questioning attitudes for the requirement to maintain plant configuration control.

CARDs 08-20866, 08-20866, and 08-26117 previously discussed in this report each identified concerns with identification of low-significance items. Additionally CARD 08-25436 documented a safety culture assessment team concern with identification of low-level issues. The inspectors did not identify a document for determining the extent of each condition and if there were any common factors. CARDs 09-28027, 09-28032, and 09-28028 were written during this inspection to address identified concerns with documenting low-level concerns.

Findings

No findings of significance were identified.

(3) Effectiveness of Corrective Actions

The inspectors concluded that corrective actions for identified deficiencies were generally timely and adequately implemented, commensurate with their safety significance. Problems identified using root or apparent cause methodologies were resolved in accordance with licensee program and NRC requirements. The inspectors also sampled corrective actions assignments for selected NRC documented violations and findings and determined that the actions were generally effective and timely. However the inspectors did notice a number of untimely and ineffective corrective actions as described below. The inspectors concluded that identified untimely and particularly ineffective corrective actions were, in part, due to lack of effective evaluation of the original issues.

Observations

During refueling outage 13 (RF13) in April 2009, the inboard isolation check valve for the "B" feedwater line, B2100F010B, failed its as-found LLRT. CARD 09-22205 documented the failure and the licensee performed a root cause evaluation (RCE). The RCE identified deficiencies with prior evaluations on feedwater check valve LLRT failures dating back to the late 1980s. The licensee determined that corrective actions from two previous RCEs were not effective in preventing the LLRT failure in RF13. Because of the long history of LLRT failures on these valves and inadequate root cause evaluations, the inspectors documented a Non-Cited Violation (NCV) of Criterion XVI in inspection report 05000341/2007004 for the failure to identify the cause and take appropriate corrective actions. The inspectors concluded that the B2100F010B LLRT failure in RF13 did not constitute a violation of regulatory requirements because the corrective actions taken in RF12 to improve LLRT performance were effective in preventing a repeat penetration failure. Specifically, the outboard isolation check valve for the "B" feedwater line, B2100F076B, passed its as-found LLRT thereby preserving the integrity of the penetration within Technical Specification limits.

Operator distraction 2006-050 for waste collector tank (WCT) sample line being plugged was a long-standing issue. Multiple CARDs and WOs were initiated to resolve the distraction; however, initial efforts to correct this distraction failed and subsequent additional troubleshooting and investigations were required. Following several internal meetings, a comprehensive WO was planned to consolidate the corrective action implementation activities. The implementation plan did not address all operational and technical specification requirements, and was not performed. The work was later

restructured to be performed in two major portions; all work outside the WCT was scheduled for November 2009 and all work inside the tank was scheduled for the next refueling outage.

CARD 09-25098, discussed in the previous section of this report, documented an adverse trend associated with the storage of scaffolding. The licensee's review of the trend identified 22 scaffold CARDS issued from January 2008 through July 2009. The adverse trend investigation documented that ineffective corrective actions in the response to identified scaffold concerns led to nine repeat scaffold storage CARDS.

CARD 08-25436 documented that the Nuclear Safety Culture Assessment team found the reluctance of personnel to document low-level concerns. An action plan to address the concern was formulated and documented as complete on February 20, 2009. The inspectors determined the original concern still exists. CARDS 09-28027, 09-28032, and 09-28028 were written during this inspection to address NRC-identified issues with documenting low-level concerns.

Findings

No findings of significance were identified.

.2 Assessment of the Use of Operating Experience

a. Inspection Scope

The inspectors reviewed the licensee's implementation of the facility's Operating Experience (OE) program. Specifically, the inspectors reviewed implementing OE program procedures, attended CAP meetings to observe the use of OE information, completed evaluations of OE issues and events, and selected monthly assessments of the OE composite performance indicators. The inspectors' review was to determine whether the licensee was effectively integrating OE experience into the performance of daily activities, whether evaluations of issues were proper and conducted by qualified personnel, whether the licensee's program was sufficient to prevent future occurrences of previous industry events, and whether the licensee effectively used the information in developing departmental assessments and facility audits. The inspectors also assessed if corrective actions, as a result of OE experience, were identified and effectively and timely implemented.

b. Assessment

Operating experience was reviewed by the licensee and evaluated for applicability to Fermi. Necessary corrective actions and program enhancements from the licensee OE evaluations were placed into the CAP.

Observations

The inspectors reviewed root cause evaluations (RCEs) associated with two local leak rate testing (LLRT) failures as documented in CARDS 07-25836 and 09-22205. The inspectors noted that each RCE included detailed discussions of both external and internal OE. Notably, the OE discussion contained in both was a significant improvement when compared to the RCE completed as a result of the April 1, 2006, LLRT failure as documented in CARD 06-21751. Specifically, the 06-21751 RCE failed to review the licensee's own internal operating experience which showed that the

proposed corrective actions were not consistent with the operating experience of the feedwater check valves. In the 09-22205 RCE, the licensee sought to understand the relevant internal and external operating experience and how that information affected the proposed corrective actions.

Findings

No findings of significance were identified.

.3 Assessment of Self-Assessments and Audits

a. Inspection Scope

The inspectors assessed the licensee staff's ability to identify and enter issues into the corrective action program, prioritize and evaluate issues, and implement effective corrective actions, through efforts from departmental assessments and audits.

b. Assessment

The inspectors concluded that self-assessments and audits were typically accurate, thorough, and effective at identifying issues and enhancement opportunities at an appropriate threshold level. The inspectors concluded that these audits and self-assessments were completed by personnel knowledgeable in the subject area. In many cases, these self-assessments and audits had identified concerns that were not previously recognized by the station in formal documents. Those concerns were entered in the CAP. The inspectors found that identified concerns were further evaluated as required by the CAP.

Findings

No findings of significance were identified.

.4 Assessment of Safety Conscious Work Environment

a. Inspection Scope

The inspectors assessed the licensee's safety conscious work environment through the reviews of the facility's employee concern program implementing procedures, discussions with coordinators of the employee concern program, interviews with personnel from various departments, and reviews of issue reports. The inspectors also reviewed the results from a safety culture assessment which included survey results.

b. Assessment

The licensee had a safety culture assessment performed by Utilities Service Alliance (USA) in July of 2008. The USA team was comprised of 12 individuals with 7 being from sites other than Fermi. The methodology included a site survey, documentation reviews, site observations, and interviews. While the assessment had a number of observations/recommendations, the inspectors identified a number of issues with the report. From the data provided, the inspectors were not able to determine if the overall conclusion in the report was appropriate. Additionally, by design, the documented assessment was not able to show if certain groups in the station were outside the

established and expected norm. Also, the report did not provide the licensee information on how their culture compared to industry norms.

The inspector's interviews with licensee personnel indicated that personnel were free to raise issues either directly with their supervisors, by use of the CAP, or through the Employee Concerns Program. However, some of the interviewed personnel felt the CAP was ineffective in addressing low-level issues.

Observations

Safety Culture Assessment

The report indicated that approximately 49 percent of the 1000+ individuals available to take the survey responded. The report, however, did not address whether this was a sufficient number of individuals upon which to draw reasonable conclusions. By design, the survey did not collect demographic information from the individuals answering the survey. Without this information, the inspectors were not able to determine whether specific organizations were under-represented in the survey, whether there were significant differences between organizations, or if the survey results were being skewed by high participation organizations.

The licensee's assessment team interviewed approximately 60 individuals, out of a population of 1000+, from across the site organizations. Without the demographic information, the selection of individuals might not be an informed selection and the ability of the NRC inspection team to confirm/validate the survey's results was hampered. At the conclusion of the inspection, the licensee did provide a list of individuals interviewed and their respective departments but this listing did not correlate departments to interview responses.

The assessment concluded that "Fermi 2 nuclear station has a strong Nuclear Safety Culture..." However, there was no discussion on how this conclusion was reached, especially compared to the survey results. For example, the survey results indicated that only 55 percent of the respondents agreed with Principle 1 "Everyone is personally responsible for nuclear safety," only 48 percent of the respondents agreed with Principle 2 "Leaders demonstrate commitment to safety," and only 51 percent of the respondents agreed with Principle 3 "Trust permeates the organization." While the inspectors did not disagree with the conclusion, it was not obvious how it was reached given the lack of positive survey results.

The results from the interviews and observations, as seen in the survey, were not broken down by functional organization and therefore it was not possible to identify specific issues within organizations. In the case of the interviews, the USA team would have been aware of the interviewee's organizational affiliation; however, that information was not presented in the report. In addition, the number of individuals from each organization was not provided in the report and no discussion regarding whether the sample size was representative was provided. The assessment team did identify some concerns that were documented in CARDS 08-25422, 08-25424, 08-25434, and 08-25436. Those concerns were not identified as specific to any organization, although some examples within the CARDS did list specific departments.

Safety Culture Work Environment Interviews

The inspectors interviewed personnel from across the station organization. Most of the people interviewed were first line supervision or below in the organizational structure. Interviewees were Detroit Edison employees and long-term contractors. All but one of the interviewed personnel stated that they felt free to raise issues either with their supervisor, through the CAP, or through the Employee Concerns Program and that there were no adverse personal consequences from raising concerns.

Some Detroit Edison craft personnel stated that the CAP was effective for significant concerns but not for resolving issues that were perceived as low-significance. Thus they expressed reluctance to document low-level issues in the CAP. It was viewed that low-significance items would not be resolved, or not resolved to their satisfaction, and/or would take an inordinate period of time to resolve. Several of the interviewees said they seldom, if ever, wrote CARDS.

Most interviewees stated they were comfortable in bringing concerns to the attention of their supervisors. Several interviewees stated, however, that their supervisors also expressed the belief that conditions associated with low-level concerns would either not be addressed or not addressed in a timely manner.

The licensee initiated CARD 09-28028 to document the inspectors' observations.

Findings

No findings of significance were identified.

40A6 Management Meetings - Exit Meeting Summary

On October 9, 2009, the inspectors presented the inspection results to Mr. J. Plona, Site Vice President, and other members of the licensee staff. The licensee acknowledged the issues presented. The inspectors confirmed that none of the potential report input discussed was considered proprietary.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

M. Clements, Trending Coordinator-Corrective Action Program
R. Eberhardt, Performance Improvement Manager
R. Johnson, Licensing Manager
J. Pendergast, Principal Engineer-Licensing
D. Sadowyj, Senior Engineer-Corrective Action Program
T. Thomas, Ombudsman-Employee Concerns Program

Nuclear Regulatory Commission

R. Morris, Senior Resident Inspector

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

None

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.

PLANT PROCEDURES

<u>Number</u>	<u>Description or Title</u>	<u>Revision</u>
23.307	System Operating Procedure- Emergency Diesel Generator System	106
43.000.010	ISI Check Valve Inspection Procedure	34
43.401.100	Integrated Leak Rate Test Type A General	30
47.000.13	PEP Check Valve Inspection Procedure	39
EP-101	Classification of Emergencies	35
MES 27	Verification of System Operability	13
MGA12	Fermi 2 Ombudsman	2
MLS04	Operating Experience Program	21
MMA20	Work Execution and Closure	7
MQA11	Condition Assessment Resolution Document	29
MQA12	Root Cause Evaluations	14
MQA15	Apparent Cause Evaluations	8
MQA16	Self-Assessment	3
SOP 23.208	RHR Complex Service Water Systems	96

CORRECTIVE ACTION PROGRAM DOCUMENTS REVIEWED

<u>Number</u>	<u>Description or Title</u>	<u>Date</u>
04-22968	NFPA 72D and 72E Non-Compliances for Fire Detection System (Closed February 15, 2008)	7/1/2004
07-20510	Maintenance Performed on Wrong Equipment	1/29/2007
07-22831	WANO / INPO AFI ER.2-1 Weaknesses in Preventative Maintenance (PM) Program	5/22/2007
07-24971	NRC concern, Potential inadequacy in self-assessments	9/5/2007
07-24976	Unauthorized operation of plant equipment that resulted in unexpected system response	9/6/2007
07-25131	NQA surveillance: Chemistry technician did not have continuous use procedure in hand during daily/shiftly calibration checks of lab instruments	9/13/2007
07-25174	PI&R Inspection Observation - Tolerance of Inadequate Work Instructions	9/14/2007
07-25346	Effectiveness Review Results for Level 1 Card 06-20974	9/27/2007

CORRECTIVE ACTION PROGRAM DOCUMENTS REVIEWED

<u>Number</u>	<u>Description or Title</u>	<u>Date</u>
07-25378	NRC Information Notice 2007-28 potential common cause vulnerabilities in essential service water systems due to inadequate chemistry controls	9/25/2007
07-25385	NQA recommendation for chemistry organization to evaluate the use of more focused self assessments and benchmarking to improve overall performance	9/25/2007
07-25796	High Radiation Area entry on incorrect task	10/6/2007
07-25836	LLRT Failure of B2100F076B Exceeds La	10/7/2007
07-26040	Evaluate the EALs contained in EP-101, Emergency Classifications	10/11/2007
07-26246	HU4 declaration timeliness	10/16/2007
07-26315	NRC Special Inspection: Inadequate implementation of Emergency Plan Revision 17	10/17/2007
07-26354	NRC identified: Recommendation for improvements to EALs	10/18/2007
07-26386	NRC Finding – Untimely Declaration of Event 9	10/19/2007
07-26423	Work released to maintenance with Temp Power Installed	10/20/2007
07-26608	Revise EP-101 as a minimum to adopt NEI 99-01 Revision 5 EALs and basis	10/24/2007
07-27395	Low level scram as a result of ref leg perturbation	11/15/2007
07-28210	Audit Finding – Radiation Protection and Station Management Have Not Been Timely in Addressing Management and Programmatic RP Issues	12/21/2007
08-20373	Degraded water quality in demineralized water storage tank (DST) due to failure of vendor supplied makeup system	1/21/2008
08-20621	During the RWCU outage 1/14-18/2008 chlorides were higher than expected	1/30/2008
08-20694	Fuel Reliability Zero by 2010 Initiative: Chemistry Gap Analysis	1/31/2008
08-20822	NC Concern: Review MMA10 Criteria for Control of Materials/Equipment on Refueling Floor	2/5/2008
08-20866	Contraband Discovered in Protected Area	2/6/2008
08-22362	Relay locking straps (two) do not appear fully engaged	4/9/2008
08-22697	Self Assessment/ Gap Analysis of Work Order Preparation and Tagging Issue #8-A	4/23/2008
08-22699	Self Assessment/ Gap Analysis of Work Order Preparation and Tagging Process Issue #8	4/23/2008

CORRECTIVE ACTION PROGRAM DOCUMENTS REVIEWED

<u>Number</u>	<u>Description or Title</u>	<u>Date</u>
08-23323	Absence of Trending Low Level Issues in Corrective Action System	5/15/2008
08-23459	NRC Concern: unshrouded Division 2 EECW piping routed in Division I switchgear room	5/22/2008
08-23659	NRC Concern – Postulated MELB spray on Division I testability panels	6/3/2008
08-24185	Ineffective Action Item - Card 06-22529-05	6/26/2008
08-24341	Unexpected rise in #5 LPIV oil reservoir temp	7/4/2008
08-24390	Follow-up to discovery of elevated TBCCW Dissolved Oxygen was not adequate	7/8/2008
08-24473	Inadequate Questioning Attitude with Depletion of the TTA Corrosion Inhibitor in TBCCW	7/11/2008
08-25081	Contingency Weapon Found in Unsafe Configuration	8/8/2008
08-25107	NRC Question on Fire Detector Coverage in Beam Pocket	8/12/2008
08-25422	Nuclear Safety Culture Assessment Recommendation (for question on workforce numbers)	8/22/2008
08-25424	Nuclear Safety Culture Assessment Recommendation (for consideration of rewards program)	8/22/2008
08-25428	Nuclear Safety Culture Assessment Recommendation (for Enhancement of Change Management Process)	8/22/2008
08-25432	Nuclear Safety Culture Assessment Recommendation (for Lack of Awareness of Excellence Plan and it results)	8/22/2008
08-25434	Nuclear Safety Culture Assessment Recommendation (for Lack of Awareness of Strategic Plan)	8/22/2008
08-25436	Nuclear Safety Culture Assessment Recommendation (for Non-Reporting of Low-Level Issues)	8/22/2008
08-26119	Continued trend of increased reactor water chlorides despite decreased make up water usage	9/18/2008
08-26150	Perform gap analysis against new BWRVIP 190 “BWR Water Chemistry Guidelines”	9/18/2008
08-26161	NRC Concern/Finding: Wood in Switchyard	9/19-2008
08-26168	Biodiesel detected in fuel oil	8/12/2008
08-26503	EDG 13 Engine Room Temperature Controller needs Adjustment	10/2/2008
08-26714	Work Order not in Maximo Location	10/10/2008
08-26899	Near Miss- Technicians Operate Plant Equipment Without Authorization of	10/17/2008

CORRECTIVE ACTION PROGRAM DOCUMENTS REVIEWED

<u>Number</u>	<u>Description or Title</u>	<u>Date</u>
08-27064	Operations Trend CARD- Indeterminate Causes for Mispositioned Components	11/21/2008
08-27425	EDG 13 Generator Outboard Bearing Temperature Drop	11/7/2008
08-27613	Reject new EDG fuel oil shipment	11/14/2008
08-27764	Request for chemistry to reevaluate required controls to prevent acceptance of biodiesel	11/19/2008
08-28155	Emerging Trend – Weapons Handling HU Errors in 2008	12/5/2008
09-05582	Emerging Trend with "Supervisor/ Leadership" Cause Codes	7/29/2009
09-10146	Self-assessment – Nuclear fuel reliability: Reactor Water Chemistry	8/7/2009
09-20145	Emerging Trend - 4th Quarter 2008 Mispositioning	1/1/2009
09-20661	NRC Identified – Chemistry surveillance procedures 74.000.19 enhancements	2/2/2009
09-20722	Common Cause of Maintenance Department Resets	2/4/2009
09-21353	Investigate Two NRC Issues Related to PI&R Cross Cutting Aspect of Corrective Action	3/4/2009
09-22205	B2100F010B Failed Its LLRT	4/3/2009
09-23329	AFI - Controlling Status of Plant Equipment	4/27/2009
09-23333	INPO AFI CY.1-1 – Microbiologically- Induced corrosion (MIC)	4/24/2009
09-23476	RF13 - Cards Flagged as "Human Performance"	5/1/2009
09-23634	Procedure Conflicts with MQA11/MQA12 and Root Cause Evaluations	5/6/2009
09-24609	09-01 Forced Outage Leak Investigation	6/13/2009
09-24916	New EDG fuel oil low out of specification for offsite analysis (Cetane number)	6/24/2009
09-25098	Adverse Trend: Common Cause of Identified Scaffold Deficiencies	6/30/2009
09-25530	Investigate Use of IP8-Use of HU Tools/Techniques from 2nd Quarter Cards	7/16/2009
09-26105	Failed PMT: Fire Detection/Protection Trouble Alarm 16D28	8/7/2009
09-26108	High Radiation Area Boundary Violation	8/7/2009
09-26810	Reactor water conductivity has increased	9/2/2009
09-26991	Numerous Valve Failures During Surveillance Testing	9/10/2009
09-27260	Follow-Up Card 08-26161, Failure to Adequately Control Loose Materials in the 345 KV Switchyard	9/18/2009

OPERATING EXPERIENCE

<u>Number</u>	<u>Description or Title</u>	<u>Date</u>
CARD 07-22582	Potential Industry Trend- Controller/ Power Supply Issues Result in Shutdowns	5/10/2007
CARD 07-25236	Revise EDG Maint procedure due to OE	9/18/2007
CARD 08-21771	Evaluate OE26183 Point Beach Cable Failure Event for Fermi Applicability	3/13/2008
CARD 08-21774	OE26183 Point Beach Significant Event	3/13/2008
CARD 08-22364	NRC Information Notice 2008-06: Instrument Air System Failure Resulting in Manual Trip	4/21/08
CARD 08-22635	NRC Information Notice 2008-05: Fire Involving Emergency Diesel Generator Exhaust Manifold	4/21/2008
	OE Effectiveness CA Metric	August 2009
	OE Implementation CA Metric	August 2009

AUDITS, ASSESSMENTS AND SELF-ASSESSMENTS

<u>Number</u>	<u>Description or Title</u>	<u>Date</u>
CARD 08-26117	Audit Finding – Maintenance Work Order are not being properly tracked, nor vaulted in a timely manner	9/18/2008
NANL-09-0045	Focused Self-Assessment, Ombudsman Employee Concerns Program	6/25/2009
NANT-09-0035	Operations Training Corrective Action Effectiveness- Focused Self- Assessment- Revised	9/8/2009
NAPI 09-002	Corrective Action Program	7/2/2009
NAQA 08-0104	Evaluation & Corrective Action	March 20008
NAQA 09-0105	Evaluation & Corrective Action	April 2009
NAQA-09-0030	Quick Hit Self-Assessment of NOA's continued effective resolution of issues	6/23/2009
NPOP-08-0013	Focused Self Assessment/ Gap Analysis of Work Order Preparation and Tagging and Protective Barrier Processes	4/25/2008
NPOP-08-0028	Safety Tagging Problem Identification	6/25/2008
NPRP-09-0031	Self-Assessment of RP Corrective Action Process	1/31/2009
NPRP-09-0169	ALARA Planning & Access Control for Radiologically Significant Areas, Occupational Exposure Control Effectiveness	8/6/2009
NQA Report 09-05	May - June 2009: Assessments and Oversight, Audits, Inspection and Surveillance	7/28/2009
OMB-09-0002	2009 First Quarter Report - Ombudsman Program	4/17/2009
TMTE-08-0107	Quick Hit Self-Assessment of INPO Key 2007-2008 Operating Experience	10/17/2008
	1st Quarter 2009 Performance Improvement	5/29/2009

AUDITS, ASSESSMENTS AND SELF-ASSESSMENTS

<u>Number</u>	<u>Description or Title</u>	<u>Date</u>
	Report 2nd Quarter 2009 Performance Improvement Report	8/6/2009
	August 2009 DSEM Performance Improvement Data	September 2009
	Corrective Action Program Self Assessment Report	2009
	Fermi NQA Report 09-05	2 nd Quarter 2009
	Nuclear Safety Culture Assessment by Utilities Service Alliance	July 2008
	Operating Experience Review Programs Program Health Report – Check Valves	2 nd Quarter 2009
	Program Health Report – Check Valves	4 th Quarter 2008
	Program Health Report – Check Valves	3 rd Quarter 2008

DRAWINGS

<u>Number</u>	<u>Description or Title</u>	<u>Revision</u>
6M721-5706-3	RHR Service Water Make Up Decant and Overflow Systems	U
6M721-5734	Emer Diesel Generator Sys FOS	AM

CONDITION REPORTS GENERATED DURING INSPECTION

<u>Number</u>	<u>Description or Title</u>	<u>Date</u>
09-27693	NRC PI&R inspection observations: Effective problem identification in security Organization	10/2/2009
09-27695	NRC PI&R inspection observations: Effective issue prioritization and evaluation in the security organization	10/2/2009
09-27814	NRC PI&R Inspection Observation on Card Reader and Door (HRD-01)	10/6/2009
09-27815	NRC PI&R Observation Roped Area with Worn Sign	10/6/2009
09-27862	Div II RHRSW Insulation Tag	10/8/2009
09-27863	NRC Observation: PI&R for B2100F010B Failing its LLRT	10/8/2009
09-28015	2009 NRC PI&R Inspection Observation - NSC Assessment Report does not Provide Demographics	10/13/2009
09-28023	2009 NRC PI&R Inspection Observation - Could not be concluded from CARD documentation that issue resolution was communicated to all individuals	10/13/2009
09-28025	2009 NRC PI&R Inspection Observation - Missed Opportunity to Resolve Underlying	10/13/2009

CONDITION REPORTS GENERATED DURING INSPECTION

<u>Number</u>	<u>Description or Title</u>	<u>Date</u>
09-28027	2009 NRC PI&R Inspection Observation - Need clarification of "coaching" actions	10/13/2009
09-28028	2009 NRC PI&R Inspection Observation - CARD Initiation for Low Level Issues	10/13/2009
09-28029	2009 NRC PI&R Inspection Observation - CARD Evaluations and Corrective Actions	10/13/2009
09-28032	2009 NRC PI&R Inspection Observation - Missed Opportunity to evaluate EOC	10/13/2009
09-28060	NRC PI&R Observation Safety Culture Assessment Results	10/14/2009

WORK ORDERS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
26005392	Perform 43.000.010 ISI Check Valve – Next Cycle Scope Verification	2/4/2008
960041228	Perform 43.000.010 ISI Check Valve – Next Cycle Scope Verification	2/7/2005
28861739	02-EDG 13 Engine room Temperature Controller Needs Adjustment	10/6/2008
29048639	02-EDG 13 Generator Outboard Bearing Temperature drop	11/11/2008
A140010100	Disassemble/Inspect Check Valve Internals Per 43.000.010 For Degradation	10/29/2001
A140070100	Disassemble/Inspect Check Valve Internals Per 43.000.010 For Degradation	10/3/2007
A352060100	Disassemble/Inspect Check Valve Internals Per 43.000.010 For Degradation	4/3/2006
A353030100	Disassemble/Inspect Check Valve Internals Per 43.000.010 For Degradation	4/8/2003
A353090100	Disassemble/Inspect Check Valve Internals Per 43.000.010 For Degradation	3/30/2009
A362070100	Disassemble/ Insect Check Vlv Internals Per 47.000.13 for Degradation	3/31/2007
E559040100	Disassemble/Inspect Check Valve Internals Per 43.000.010 For Degradation	11/8/2004

Other

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
Corrective Action Metric 1	Root Cause Evaluation Timeliness	Through August 2009
Corrective Action Metric 2	Apparent Cause Timeliness	Through August 2009
Corrective Action Metric 3	Root Cause Evaluation Quality	Through August 2009
Corrective Action Metric 4	Apparent Cause Evaluation Quality	Through August 2009

Other

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
Corrective Action Metric 6	Number of CAQ Actions > 180 Days Old	Through August 2009
Corrective Action Metric 8	Corrective Action Program Repeat Issues	Through August 2009
Equipment Reliability Metric 9	On-Line Elective Work Order Backlog	Through August 2009
Equipment Reliability Metric 10	On-Line Corrective Maintenance Work Order Backlog	Through August 2009
Equipment Reliability Metric 12	Benchmarking Program Health	Through August 2009
EDP - 34819	Replacement - MSR Reheat Steam Air Operated Warmup Valves, N30F006 and N30F007	12/1/2006
General Management Policy Statement	Maintaining a Safety Conscious Work Environment	6/9-10/2008
LER 2007-001	Feedwater Check Valve at Containment Penetration	12/6/2007
LER 2008-004	Relay Locking Straps Not Full Engaged	5/30/2008
LER 2009-01	Manual Reactor Scram In Response to High Turbine Vibration	5/22/2009
LP-OP-213-0116	Nuclear Operator Continuing Training- NOR CRD Scram	0
Request Item 6	Open Level 1 through 3 Cards	9/9/2009
Request Item 11	Ineffective/Inadequate Corrective Actions For CARDS Initiated Between 9/15/2007 and 9/4/2009	September 2009
Request Item 17	2008 and 2009 NRC Inspection Findings and Associated CARDS	September 2009
RERP System E1151	ERO Communications Residual Heat Removal - System Health Report	0 2nd Quarter 2009
System N3018	Turbine Reheat and Moisture Extraction - System Health Report	2nd Quarter 2009
	Cards Awaiting Ownership Committee	9/22/2009
	Card Ownership/Screening Committee Handout	9/16/2009
	Card Review Board Meeting Minutes March 19, 2008	5/28/2008
	Fermi WM Health Indicator	February 2008 and August 2009
	How to Speak Out - Employee Concerns Program	Undated
	List of all self-assessments and audits (including QA) completed after September 14, 2007	September 2009

Other

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
	Listing of Open Work Orders for RHR Complex Service Water	September, 2009
	Listing of RHR Complex Service Water Completed Since January 1, 2009	September, 2009
	Nuclear Culture Safety Assessment by Utilities Service Alliance	July 2008
	Nuclear Safety Management Policy Statement	2/9-10/2008
	Number Summary of Open Cards	10/7/2009
	Numbers of Cards Opened and Closed by Year from 2007	October 2009
	Operator Challenges	2009
	RHR Complex Service Water Cards Since July 1, 2008	September 2009
	SCWE Follow-up Evaluation Report by Kestrel Group	3/7/2007
	System Health Report for EDGs	2009
	Trend: Operator Workarounds	2009
	Trend: Operator Burdens	2009
	Trend: Operator Distractions	2009
	2008, 2009 Self-Assessment Schedule	September 2009

LIST OF ACRONYMS USED

ACE	Apparent Cause Evaluation
ADAMS	Agency Wide Documents Access and Management System
CAP	Corrective Action Program
CARD	Condition Assessment Resolution Document
CFR	Code of Federal Regulations
EDG	Emergency Diesel Generator
HRA	Hig Radiation Area
IP	Inspection Procedure
LLRT	Local Leak Rate Test
NCV	Non-Cited Violation
NRC	Nuclear Regulatory Commission
OE	Operating Experience
PARS	Publicly Available Documents
PI&R	Problem Identification and Resolution
RCE	Root Cause Evaluation
RF13	Refueling Outage 13
RHR	Residual Heat Removal
RWP	Radiological Work Permit
SCWE	Safety-Conscious Work Environment
USA	Utilities Service Alliance
WCT	Waste Collector Tank

J. Davis

-2-

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Sincerely,

/RA/

John B. Giessner, Chief
Branch 4
Division of Reactor Projects

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SUBJECT: FERMI POWER PLANT, UNIT 2, NRC BIENNIAL PROBLEM IDENTIFICATION
AND RESOLUTION INSPECTION REPORT 05000341/2009007

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