UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
2443 WARRENVILLE ROAD, SUITE 210
LISLE, IL 60532-4352

May 6, 2013

Mr. Joseph Plona
Senior Vice President and
Chief Nuclear Officer
DTE Electric Company
Fermi 2 - 210 NOC
6400 North Dixie Highway
Newport, MI 48166

SUBJECT: FERMI POWER PLANT, UNIT 2, NRC INTEGRATED INSPECTION REPORT 05000341/2013002

Dear Mr. Plona:

On March 31, 2013, the U.S. Nuclear Regulatory Commission (NRC) completed an integrated inspection at your Fermi Power Plant, Unit 2. The enclosed inspection report documents the inspection results which were discussed on April 11, 2013, with Mr. T. Conner, Site Vice-President, and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

No NRC-identified or self-revealed findings were identified during this inspection. However, one licensee-identified violation, which was determined to be of very low safety significance, is listed in Section 4OA7 of this report. The NRC is treating this issue as a non-cited violation (NCV) in accordance with Section 2.3.2 of the NRC Enforcement Policy.

If you contest this non-cited violation, 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 a copy to the Regional Administrator, U.S. Nuclear Regulatory Commission - Region III, 2443 Warrenville Road, Suite 210, Lisle, IL 60532-4352; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the Resident Inspector Office at the Fermi Power Plant.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records System (PARS) component of NRC's Agencywide Document Access and Management System (ADAMS). ADAMS is accessible from the NRC Website at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Michael A. Kunowski, Chief
Branch 5
Division of Reactor Projects

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

Enclosure: Inspection Report 05000341/2013002
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:	05000341/2013002
Licensee:	DTE Electric Company
Facility:	Fermi Power Plant, Unit 2
Location:	Newport, MI
Dates:	January 1 through March 31, 2013
Inspectors:	R. Morris, Senior Resident Inspector R. Jones, Resident Inspector S. Bell, Health Physicist B. Kemker, Senior Resident Inspector, Clinton
Approved by:	M. Kunowski, Chief Branch 5 Division of Reactor Projects

Enclosure

TABLE OF CONTENTS

SUMMARY OF FINDINGS

Inspection Report 05000341/2013002; 01/01/2013 – 03/31/2013; Fermi Power Plant, Unit 2

This report covers a 3-month period of inspection by the resident inspectors and announced baseline inspections by regional inspectors. The significance of inspection findings is indicated by their color (i.e., greater than Green, or Green, White, Yellow, Red) and determined using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" dated June 2, 2011. Cross-cutting aspects are determined using IMC 0310, "Components Within the Cross-cutting Areas," dated October 28, 2011. All violations of NRC requirements are dispositioned in accordance with the NRC's Enforcement Policy, dated January 28, 2013. 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.

A. NRC-Identified and Self-Revealed Findings

No NRC-identified or self-revealed findings were identified during this inspection.

B. Licensee-Identified Violations

One violation of very low safety significance that was identified by the licensee has been reviewed by inspectors. Corrective actions planned or taken by the licensee have been entered into the licensee's corrective action program. This violation and corrective action tracking number are listed in Section 4OA7 of this report.

REPORT DETAILS

Summary of Plant Status

Fermi Unit 2 entered the inspection period in mode 2, in the process of heating up the plant following forced outage 12-04, off-line at 5 percent power. On January 1, 2013, the plant entered mode 1 at 0150 and was synchronized to the electrical grid at 1457. Startup continued and power was raised to 68 percent, remaining there until the end of the inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, and Emergency Preparedness

1R01 Adverse Weather Protection (71111.01)

.1 Readiness for Impending Adverse Weather Condition – High Winds, Ice, Snow, and Cold Conditions

a. Inspection Scope

During the first quarter of 2013, the plant experienced periods of high winds, ice and snow fall, and cold conditions. The inspectors reviewed the licensee's overall preparations/protection for the expected weather conditions. During the week of February 16, 2013, the inspectors walked down the switchyard, outside storage areas, and other areas close to vital equipment because their safety-related functions could be affected or required as a result of the high wind conditions forecast for the facility. The inspectors observed material storage conditions and looked for unsecured items. During the weeks of February 23 and March 2, 2013, the inspectors walked down the auxiliary boiler, reactor building and turbine building ventilation systems, and residual heat removal (RHR)/emergency diesel generator (EDG) building heating system. The inspectors observed insulation, heat trace circuits, space heater operation, and weatherized enclosures to ensure operability of affected systems. The inspectors reviewed licensee procedures and discussed potential compensatory measures with control room personnel. The inspectors focused on plant management's actions for implementing the station's procedures for ensuring adequate personnel for safe plant operation and emergency response would be available. Specific documents reviewed during this inspection are listed in the Attachment to this report.

This inspection constituted one readiness for impending adverse weather condition sample as defined in Inspection Procedure (IP) 71111.01-05.

b. Findings

No findings were identified.

1R04 Equipment Alignment (71111.04)

.1 Quarterly Partial System Walkdowns

a. Inspection Scope

The inspectors performed partial system walkdowns of the following risk-significant systems:

- Division 1 emergency equipment cooling water;
- Fire protection system;
- Standby feed water while protected per Operational Decision Making Issue (ODMI) 12-05;
- Division 2 core spray; and
- Division 1 core spray.

The inspectors selected these systems based on their risk significance relative to the Reactor Safety Cornerstones at the time they were inspected. The inspectors attempted to identify any discrepancies that could impact the function of the system and, therefore, potentially increase risk. The inspectors reviewed applicable operating procedures, system diagrams, Updated Final Safety Analysis Report (UFSAR), Technical Specification (TS) requirements, outstanding work orders (WOs), condition reports, and the impact of ongoing work activities on redundant trains of equipment in order to identify conditions that could have rendered the systems incapable of performing their intended functions. The inspectors also walked down accessible portions of the systems to verify system components and support equipment were aligned correctly and operable. The inspectors examined the material condition of the components and observed operating parameters of equipment to verify there were no obvious deficiencies. The inspectors also verified the licensee had properly identified and resolved equipment alignment problems that could cause initiating events or impact the capability of mitigating systems or barriers and entered them into the corrective action program with the appropriate significance characterization. Documents reviewed are listed in the Attachment to this report.

These activities constituted five partial system walkdown samples as defined in IP 71111.04-05.

b. Findings

No findings were identified.

.2 Semi-Annual Complete System Walkdown

a. Inspection Scope

During the week of March 17, 2013, the inspectors performed a complete system alignment inspection of the non-interruptible air supply (NIAS) system to verify the functional capability of the system. This system was selected because it was considered both safety significant and risk significant in the licensee's probabilistic risk assessment. The inspectors walked down the system to review mechanical and electrical equipment lineups; electrical power availability; system pressure and temperature indications, as

appropriate; component labeling; component lubrication; component and equipment cooling; hangers and supports; operability of support systems; and to ensure ancillary equipment or debris did not interfere with equipment operation. A review of a sample of past and outstanding WOs was performed to determine whether any deficiencies significantly affected the system function. In addition, the inspectors reviewed the corrective action program database to ensure system equipment alignment problems were being identified and appropriately resolved. Documents reviewed are listed in the Attachment to this report.

These activities constituted one complete system walkdown sample as defined in IP 71111.04-05.

b. Findings

No findings were identified.

1R05 Fire Protection (71111.05)

.1 Routine Resident Inspector Tours (71111.05Q)

a. Inspection Scope

The inspectors conducted fire protection walkdowns which were focused on availability, accessibility, and the condition of firefighting equipment in the following risk-significant plant areas:

- Auxiliary building, fifth floor, standby gas treatment room, division 1 and 2;
- Reactor building, second floor, reactor water cleanup phase separator and pump room;
- Auxiliary building, sub-basement, NIAS room;
- Radiation waste building, second floor, balance of plant switchgear room, and balance of plant battery room; and
- Turbine building, second floor, zone 20, main generator exciter and stator water cooling area.

The inspectors reviewed areas to assess if the licensee had implemented a fire protection program that adequately controlled combustibles and ignition sources within the plant, effectively maintained fire detection and suppression capability, maintained passive fire protection features in good material condition, and implemented adequate compensatory measures for out-of-service, degraded or inoperable fire protection equipment, systems, or features in accordance with the licensee's fire plan.
The inspectors selected fire areas based on their overall contribution to internal fire risk as documented in the plant's Individual Plant Examination of External Events with later additional insights, their potential to impact equipment which could initiate or mitigate a plant transient, or their impact on the plant's ability to respond to a security event.
Using the documents listed in the Attachment to this report, the inspectors verified fire hoses and extinguishers were in their designated locations and available for immediate use; fire detectors and sprinklers were unobstructed; transient material loading was within the analyzed limits; and fire doors, dampers, and penetration seals appeared to be in satisfactory condition. The inspectors also verified minor issues identified during

the inspection were entered into the licensee's corrective action program. Documents reviewed are listed in the Attachment to this report.

These activities constituted five quarterly fire protection inspection samples as defined in IP 71111.05-05.

b. Findings

No findings were identified.

1R06 Flooding (71111.06)

.1 Underground Vaults

a. Inspection Scope

The inspectors selected underground bunkers/manholes subject to flooding that contained cables whose failure could disable risk-significant equipment. The inspectors determined the cables were not submerged, splices were intact, and appropriate cable support structures were in place. In those areas where dewatering devices were used, such as a sump pump, the device was operable and level alarm circuits were set appropriately to ensure the cables would not be submerged. In those areas without dewatering devices, the inspectors verified drainage of the area was available, or the cables were qualified for submergence conditions. The inspectors also reviewed the licensee's corrective action documents with respect to past submerged cable issues identified in the corrective action program to verify the adequacy of the corrective actions. The inspectors performed a walkdown of the following underground bunkers/manholes subject to flooding:

- Pumping manholes and cable vaults.

Specific documents reviewed during this inspection are listed in the Attachment to this report.

This inspection constituted one underground vaults sample as defined in IP 71111.06-05.

b. Findings

No findings were identified.

1R11 Licensed Operator Requalification Program (71111.11)

.1 Resident Inspector Quarterly Review of Licensed Operator Requalification (71111.11Q)

a. Inspection Scope

On February 19, 2013, the inspectors observed a crew of licensed operators in the plant's simulator during licensed operator requalification training to verify operator performance was adequate, evaluators were identifying and documenting crew performance problems, and training was being conducted in accordance with licensee procedures. The inspectors evaluated the following areas:

- licensed operator performance;
- crew's clarity and formality of communications;
- ability to take timely actions in the conservative direction;
- prioritization, interpretation, and verification of annunciator alarms;
- correct use and implementation of abnormal and emergency procedures;
- control board manipulations;
- oversight and direction from supervisors; and
- ability to identify and implement appropriate TS actions and Emergency Plan actions and notifications.

The crew's performance in these areas was compared to pre-established operator action expectations and successful critical task completion requirements. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one quarterly licensed operator requalification program simulator sample as defined in IP 71111.11.

b. Findings

No findings were identified.

.2 Resident Inspector Quarterly Observation of Heightened Activity or Risk (71111.11Q)

a. Inspection Scope

On March 2, 2013, the inspectors observed operators in the control room during execution of WO 33402969, "Rod Drift Alarm Test"; WO 33402946, "Control Rod Drive Withdrawal Stall Flow Measurement"; and WO 33402971, "Control Rod Drive Operability for Fully Withdrawn Rods." These were activities that required heightened awareness or were related to increased risk. The inspectors evaluated the following areas:

- licensed operator performance;
- crew's clarity and formality of communications;
- ability to take timely actions in the conservative direction;
- prioritization, interpretation, and verification of annunciator alarms;
- correct use and implementation of procedures;
- control board manipulations;
- oversight and direction from supervisors; and
- ability to identify and implement appropriate TS actions and Emergency Plan actions and notifications.

The performance in these areas was compared to pre-established operator action expectations, procedural compliance, and task completion requirements. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one quarterly licensed operator heightened activity/risk sample as defined in IP 71111.11.

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness (71111.12)

.1 Routine Quarterly Evaluations (71111.12Q)

a. Inspection Scope

The inspectors evaluated degraded performance issues involving the following risk-significant systems:

- C9600, Integrated Plant Computer System (IPCS); and
- C5111, Intermediate Range Monitor.

The inspectors reviewed events such as where ineffective equipment maintenance had resulted in valid or invalid automatic actuations of engineered safeguards systems and independently verified the licensee's actions to address system performance or condition problems in terms of the following:

- implementing appropriate work practices;
- identifying and addressing common cause failures;
- scoping of systems in accordance with 10 CFR 50.65(b) of the maintenance rule;
- characterizing system reliability issues for performance;
- charging unavailability for performance;
- trending key parameters for condition monitoring;
- ensuring 10 CFR 50.65(a)(1) or (a)(2) classification or re-classification; and
- verifying appropriate performance criteria for structures, systems, and components/functions classified as (a)(2), or appropriate and adequate goals and corrective actions for systems classified as (a)(1).

The inspectors assessed performance issues with respect to the reliability, availability, and condition monitoring of the system. In addition, the inspectors verified maintenance effectiveness issues were entered into the corrective action program with the appropriate significance characterization. Documents reviewed are listed in the Attachment to this report.

This inspection constituted two quarterly maintenance effectiveness samples as defined in IP 71111.12-05.

b. Findings

No findings were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13)

.1 Maintenance Risk Assessments and Emergent Work Control

a. Inspection Scope

The inspectors reviewed the licensee's evaluation and management of plant risk for the maintenance and emergent work activities affecting risk-significant and safety-related equipment listed below to verify the appropriate risk assessments were performed prior to removing equipment for work:

- Risk during emergency core cooling system (ECCS) reactor water level 2, division 1 anticipated transient without scram (ATWS)-recirculation pump trip (RPT) functional; Brownstown (offsite power) line 3 relaying issue and 345-kiloVolt (kV) breaker BM open; division 1 bus 64B 4160-V undervoltage relays calibration/functional;
- Risk during division 2 bus 65E 4160-V undervoltage relays calibration/functional; EDG 13 fast start surveillance, ECCS reactor water level 2, division 2 ATWS-RPT functional and high pressure coolant injection planned maintenance; and increase in on-line risk during sustained winds greater than 40 miles per hour;
- Risk during division 2 NIAS outage; EDG 14 slow start surveillance, division 2 emergency equipment cooling water (EECW) makeup tank/pump calibration; reactor protection system Agastat relay replacements;
- Risk during high winds causing schedule changes for EDG 11 and reactor core isolation cooling surveillances;
- Risk during combustion turbine generator 11-1 outage; EDG 11 slow start surveillance, ECCS reactor water level 2, division 1 ATWS-RPT functional; ECCS reactor steam dome pressure (RHR-core spray system injection) division 1, channel C.

These activities were selected based on their potential risk significance relative to the Reactor Safety Cornerstones. As applicable for each activity, the inspectors verified risk assessments were performed as required by 10 CFR 50.65(a)(4) and were accurate and complete. When emergent work was performed, the inspectors verified the plant risk was promptly reassessed and managed. The inspectors reviewed the scope of maintenance work, discussed the results of the assessment with the licensee's probabilistic risk analyst or shift technical advisor, and verified plant conditions were consistent with the risk assessment. The inspectors also reviewed TS requirements and walked down portions of redundant safety systems, when applicable, to verify risk analysis assumptions were valid and applicable requirements were met. Specific documents reviewed during this inspection are listed in the Attachment to this report.

These maintenance risk assessments and emergent work control activities constituted five samples as defined in IP 71111.13-05.

b. Findings

No findings were identified.

1R15 Operability Determinations and Functional Assessments (71111.15)

.1 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the following issues:

- Condition assessment resolution document (CARD) 13-20020, “FW DCS [feedwater digital control system] Steam Flow Signals Indicate Failed for MSL [main steam lines] A & C”;
- CARD 13-10051, “IPCS Data Diode ‘A’ Stopped Forwarding Plant Data Required for ERDS”;

- CARD 12-25847, “MUT [main unit transformer] 2B Oil Leak”;
- Several switchgear UV [undervoltage] relays out of tolerance (CARDs 13-20909, 13-20915, 13-20916, 13-20917, 13-20918, and 13-20919);
- CARD 13-21044, “Added Air Conditioning to the 345kV Relay House May Impact Long-Term Loading on EDG 11 or 13”; and
- CARD 13-21729, “No. 3 HPSV [high pressure stop valve] had Improper Indication in the MCR [main control room] and Did Not Indicate Closed When Tripped.”

The inspectors selected these potential operability issues based on the risk significance of the associated components and systems. The inspectors evaluated the technical adequacy of the evaluations to ensure TS operability was properly justified and the subject component or system remained available such that no unrecognized increase in risk occurred. The inspectors compared the operability and design criteria in the appropriate sections of the TS and UFSAR to the licensee’s evaluations to determine whether the components or systems were operable. Where compensatory measures were required to maintain operability, the inspectors determined whether the measures in place would function as intended and were properly controlled. The inspectors determined, where appropriate, compliance with bounding limitations associated with the evaluations. Additionally, the inspectors reviewed a sampling of corrective action documents to verify the licensee was identifying and correcting any deficiencies associated with operability evaluations. Documents reviewed are listed in the Attachment to this report.

This operability inspection constituted six samples as defined in IP 71111.15-05.

b. Findings

No findings were identified.

1R18 Plant Modifications (71111.18)

.1 Plant Modifications

a. Inspection Scope

The inspectors reviewed the following modifications:

- Restoration of the abandoned south reactor feed pump and turbine (Electrical and Instrumentation and Control); and
- Engineering Design Package EDP 37014, “Restoration of the South Reactor Feed Pump/Turbine Mechanical Isolations.”

The inspectors reviewed the configuration changes and associated 10 CFR 50.59 safety evaluation screening against the design basis, the UFSAR, and the TS, as applicable, to verify the modification did not affect the operability or availability of the affected systems. The inspectors, as applicable, observed ongoing and completed work activities to ensure the modifications were installed as directed and consistent with the design control documents; the modifications operated as expected; post-modification testing adequately demonstrated continued system operability, availability, and reliability; and operation of the modifications did not impact the operability of any interfacing systems.

As applicable, the inspectors verified relevant procedure, design, and licensing documents were properly updated. Lastly, the inspectors discussed the plant modification with operations, engineering, and training personnel to ensure the individuals were aware of how the operation with the plant modification in place could impact overall plant performance. Documents reviewed are listed in the Attachment to this report. These modifications will be continued in the next quarter.

This inspection constituted two permanent plant modification samples as defined in IP 71111.18-05.

b. Findings

No findings were identified.

1R19 Post-Maintenance Testing (71111.19)

.1 Post-Maintenance Testing

a. Inspection Scope

The inspectors reviewed the following post-maintenance activities to verify procedures and test activities were adequate to ensure system operability and functional capability:

- WO 32986331, “Lubrication of Division 1 EECW Makeup Pump and Motor,” WO 31032098, “Division 1 EECW Room Cooler Maintenance,” and WO 32991438, “Division 1 EECW Room Cooler Maintenance”;
- WO 33277049, “Perform 74.000.19, Attachment 8, SLC [standby liquid control] Chemistry”;
- WO 33686796, “Replace Solenoid Valve Required by NE-6.6- EQMS 031 (Secondary Containment Isolation Valve)”;
- WO 32189298, “Replace Reactor Protection System Channel B2 Low Steam Line Pressure Agastat Relay”;
- WO 33573784, “Division 2 EECW Room Cooler Planned Maintenance”; and
- WO 33447059, “Annual Inspection of Combustion Turbine Generator 11-1.”

These activities were selected based upon the structure, system, or component's ability to impact risk. The inspectors evaluated these activities for the following (as applicable): the effect of testing on the plant had been adequately addressed; testing was adequate for the maintenance performed; acceptance criteria were clear and demonstrated operational readiness; test instrumentation was appropriate; tests were performed as written in accordance with properly reviewed and approved procedures; equipment was returned to its operational status following testing (temporary modifications or jumpers required for test performance were properly removed after test completion); and test documentation was properly evaluated. The inspectors evaluated the activities against TSs, the UFSAR, 10 CFR Part 50 requirements, licensee procedures, and various NRC generic communications to ensure the test results adequately ensured the equipment met the licensing basis and design requirements. In addition, the inspectors reviewed corrective action documents associated with post-maintenance tests to determine whether the licensee was identifying problems and entering them in the corrective action program and that the problems were being corrected commensurate

with their importance to safety. Documents reviewed are listed in the Attachment to this report.

This inspection constituted six post-maintenance testing samples as defined in IP 71111.19-05.

b. Findings

No findings were identified.

1R22 Surveillance Testing (71111.22)

.1 Surveillance Testing

a. Inspection Scope

The inspectors reviewed the test results for the following activities to determine whether risk-significant systems and equipment were capable of performing their intended safety function and to verify testing was conducted in accordance with applicable procedural and TS requirements:

- Procedures 24.202.01, Section 5.1, and 24.202.02, "HPCI [High Pressure Coolant Injection] Pump/Flow Test and Valve Stroke at 150 and 1025 psig" (IST);
- Procedure 24.206.01, "RCIC [Reactor Core Isolation Cooling] System Pump Operability and Valve Test at 1000 PSIG" (inservice testing--IST);
- WO 33761965, "Perform 24.321.07 480V Swing Bus 72CF Automatic Throwover Scheme Operability" (routine);
- WO 35304758, "Perform 24.307.16, EDG 13 – Start and Load Test" (routine);
- WO 33270838, Perform 24.307.17 EDG 14 – Start and Load Test" (routine);
- Procedure 44.010.025, "RPS-NS4 Main Steam Line Radiation Trip System A Channel Functional" (primary containment isolation valve--PCIV);
- CARD 13-21995, "Division 1 Core Spray Comp Minimum Flow Valve Failed to Open on Low Flow during 24.203.02, Section 5.1" (routine); and
- Procedure 24.203.03, "Division 2 CSS [Core Spray System] Pump and Valve Operability, Section 5.1" and Procedure 47.000.88, "Infrared Inspection" (routine).

The inspectors observed in-plant activities and reviewed procedures and associated records to determine the following:

- did preconditioning occur;
- the effects of the testing were adequately addressed by control room personnel or engineers prior to the commencement of the testing;
- acceptance criteria were clearly stated, demonstrated operational readiness, and were consistent with the system design basis;
- plant equipment calibration was correct, accurate, and properly documented;
- as-left setpoints were within required ranges; and the calibration frequency was in accordance with TSs, the UFSAR, procedures, and applicable commitments;
- measuring and test equipment calibration was current;

- test equipment was used within the required range and accuracy; applicable prerequisites described in the test procedures were satisfied;
- test frequencies met TS requirements to demonstrate operability and reliability; tests were performed in accordance with the test procedures and other applicable procedures; jumpers and lifted leads were controlled and restored where used;
- test data and results were accurate, complete, within limits, and valid;
- test equipment was removed after testing;
- where applicable for inservice testing activities, testing was performed in accordance with the applicable version of Section XI, American Society of Mechanical Engineers code, and reference values were consistent with the system design basis;
- where applicable, test results not meeting acceptance criteria were addressed with an adequate operability evaluation or the system or component was declared inoperable;
- where applicable for safety-related instrument control surveillance tests, reference setting data were accurately incorporated in the test procedure;
- where applicable, actual conditions encountering high resistance electrical contacts were such that the intended safety function could still be accomplished;
- prior procedure changes had not provided an opportunity to identify problems encountered during the performance of the surveillance or calibration test;
- equipment was returned to a position or status required to support the performance of its safety functions; and
- all problems identified during the testing were appropriately documented and dispositioned in the corrective action program.

Documents reviewed are listed in the Attachment to this report.

This inspection constituted five routine surveillance testing samples, two inservice testing samples, and one containment isolation valve sample as defined in IP 71111.22, Sections -02 and -05.

b. Findings

No findings were identified.

1EP6 Drill Evaluation (71114.06)

.1 Emergency Preparedness Drill Observation

a. Inspection Scope

The inspectors evaluated the conduct of a routine licensee emergency drill on January 29, 2013, to identify any weaknesses and deficiencies in classification, notification, and protective action recommendation development activities. The inspectors observed emergency response operations in the simulator control room and technical support center to determine whether the event classification, notifications, and protective action recommendations were performed in accordance with procedures. The inspectors also attended the licensee drill critique to compare any inspector-observed weakness with those identified by the licensee staff in order to evaluate the critique and

to verify whether the licensee staff was properly identifying weaknesses and entering them into the corrective action program. As part of the inspection, the inspectors reviewed the drill package and other documents listed in the Attachment to this report.

This emergency preparedness drill inspection constituted one sample as defined in IP 71114.06-05.

b. Findings

No findings were identified.

2. RADIATION SAFETY

Cornerstones: Occupational and Public Radiation Safety

2RS1 Radiological Hazard Assessment and Exposure Controls (71124.01)

This inspection constituted a partial sample as defined in IP 71124.01-05.

.1 Inspection Planning (02.01)

a. Inspection Scope

The inspectors reviewed all licensee performance indicators for the occupational exposure cornerstone for follow-up. The inspectors reviewed the results of radiation protection program audits (e.g., licensee's quality assurance audits or other independent audits). The inspectors reviewed any reports of operational occurrences related to occupational radiation safety since the last inspection. The inspectors reviewed the results of the audit and operational report reviews to gain insights into overall licensee performance.

b. Findings

No findings were identified.

.2 Radiological Hazard Assessment (02.02)

a. Inspection Scope

The inspectors determined if there have been changes to plant operations since the last inspection that may result in a significant new radiological hazard for onsite workers or members of the public. The inspectors evaluated whether the licensee assessed the potential impact of these changes and has implemented periodic monitoring, as appropriate, to detect and quantify the radiological hazard.

The inspectors conducted walk-down of the facility, including radioactive waste processing, storage, and handling areas to evaluate material conditions and performed independent radiation measurements to verify conditions.

The inspectors observed work in potential airborne areas and evaluated whether the air samples were representative of the breathing air zone. The inspectors evaluated whether continuous air monitors were located in areas with low background to minimize false alarms and were representative of actual work areas. The inspectors evaluated

the licensee's program for monitoring levels of loose surface contamination in areas of the plant with the potential for the contamination to become airborne.

b. Findings

No findings were identified.

.3 Instructions to Workers (02.03)

a. Inspection Scope

The inspectors selected various containers holding non-exempt licensed radioactive materials that may cause unplanned or inadvertent exposure of workers, and assessed whether the containers were labeled and controlled in accordance with 10 CFR 20.1904, "Labeling Containers," or met the requirements of 10 CFR 20.1905(g), "Exemptions To Labeling Requirements."

The inspectors reviewed the following radiation work permits (RWPs) used to access high radiation areas and evaluated the specified work control instructions or control barriers.

- RWP 12-1045, "High Radiation Material Transfer within the Protected Area";
- RWP 12-1064, "Rebuild CRDs [Control Rod Drives], Including Disassemble and Reassemble CRDs, Pre-installation Testing, Set Up Breathing Air and Transport Drives in the RRA [radiologically restricted area]"; and
- RWP 12-4031, "Remove Torus Filters from Inside Torus, Transport and Disposal."

For these RWPs, the inspectors assessed whether allowable stay times or permissible dose (including from the intake of radioactive material) for radiologically significant work under each RWP were clearly identified. The inspectors evaluated whether electronic personal dosimeter alarm setpoints were in conformance with survey indications and plant policy.

The inspectors reviewed selected occurrences where a worker's electronic personal dosimeter noticeably malfunctioned or alarmed. The inspectors evaluated whether workers responded appropriately to the off-normal condition. The inspectors assessed whether the issue was included in the corrective action program and dose evaluations were conducted as appropriate.

For work activities that could suddenly and severely increase radiological conditions, the inspectors assessed the licensee's means to inform workers of changes that could significantly impact their occupational dose.

b. Findings

No findings were identified.

.4 Contamination and Radioactive Material Control (02.04)

a. Inspection Scope

The inspectors observed locations where the licensee monitors potentially contaminated material leaving the radiological control area and inspected the methods used for control, survey, and release from these areas. The inspectors observed the performance of personnel surveying and releasing material for unrestricted use and evaluated whether the work was performed in accordance with plant procedures and whether the procedures were sufficient to control the spread of contamination and prevent unintended release of radioactive materials from the site. The inspectors assessed whether the radiation monitoring instrumentation had appropriate sensitivity for the type(s) of radiation present.

The inspectors reviewed the licensee's criteria for the survey and release of potentially contaminated material. The inspectors evaluated whether there was guidance on how to respond to an alarm that indicates the presence of licensed radioactive material.

The inspectors reviewed the licensee's procedures and records to verify the radiation detection instrumentation was used at its typical sensitivity level based on appropriate counting parameters. The inspectors assessed whether or not the licensee has established a de facto "release limit" by altering the instrument's typical sensitivity through such methods as raising the energy discriminator level or locating the instrument in a high-radiation background area.

The inspectors selected several sealed sources from the licensee's inventory records and assessed whether the sources were accounted for and verified to be intact.

The inspectors evaluated whether any transactions, since the last inspection, involving nationally tracked sources were reported in accordance with 10 CFR 20.2207.

b. Findings

No findings were identified.

.5 Radiological Hazards Control and Work Coverage (02.05)

a. Inspection Scope

The inspectors evaluated ambient radiological conditions (e.g., radiation levels or potential radiation levels) during tours of the facility. The inspectors assessed whether the conditions were consistent with applicable posted surveys, RWPs, and worker briefings.

The inspectors evaluated the adequacy of radiological controls, such as required surveys, radiation protection job coverage (including audio and visual surveillance for remote job coverage), and contamination controls. The inspectors evaluated the licensee's use of electronic personal dosimeters in high noise areas as high radiation area monitoring devices.

The inspectors assessed whether radiation monitoring devices were placed on the individual's body consistent with licensee procedures. The inspectors assessed whether

the dosimeter was placed in the location of highest expected dose or that the licensee properly employed an NRC-approved method of determining effective dose equivalent.

The inspectors reviewed the application of dosimetry to effectively monitor exposure to personnel in high-radiation work areas with significant dose rate gradients.

The inspectors reviewed the following RWPs for work within airborne radioactivity areas with the potential for individual worker internal exposures.

- RWP 12-1064, "Rebuild CRDs, Including Disassemble and Reassemble CRDs, Pre-installation Testing, Set Up Breathing Air and Transport Drives in the RRA"; and
- RWP 12-4031, "Remove Torus Filters from Inside Torus, Transport and Disposal."

For these RWPs, the inspectors evaluated airborne radioactive controls and monitoring, including potential for significant airborne levels (e.g., grinding, grit blasting, system breaches, entry into tanks, cubicles, and reactor cavities). The inspectors assessed barrier (e.g., tent or glove box) integrity and temporary high-efficiency particulate air ventilation system operation.

The inspectors examined the licensee's physical and programmatic controls for highly activated or contaminated materials (nonfuel) stored within spent fuel and other storage pools. The inspectors assessed whether appropriate controls (i.e., administrative and physical controls) were in place to preclude inadvertent removal of these materials from the pool.

The inspectors examined the posting and physical controls for selected high radiation areas and very high radiation areas to verify conformance with the occupational performance indicator.

b. Findings

No findings were identified.

.6 Risk-Significant High Radiation Area and Very High Radiation Area Controls (02.06)

a. Inspection Scope

The inspectors discussed with the radiation protection manager the controls and procedures for high-risk high radiation areas and very high radiation areas. The inspectors discussed methods employed by the licensee to provide stricter control of very high radiation area access as specified in 10 CFR 20.1602, "Control of Access to Very High Radiation Areas," and Regulatory Guide 8.38, "Control of Access to High and Very High Radiation Areas of Nuclear Plants." The inspectors assessed whether any changes to licensee procedures substantially reduce the effectiveness and level of worker protection.

The inspectors discussed the controls in place for special areas that have the potential to become very high radiation areas during certain plant operations with first-line health physics supervisors (or equivalent positions having backshift health physics oversight authority). The inspectors assessed whether these plant operations require

communication beforehand with the health physics group, so as to allow corresponding timely actions to properly post, control, and monitor the radiation hazards including re-access authorization.

The inspectors evaluated licensee controls for very high radiation areas and areas with the potential to become very high radiation areas to ensure an individual was not able to gain unauthorized access to the very high radiation area.

b. Findings

No findings were identified.

.7 Problem Identification and Resolution (02.09)

a. Inspection Scope

The inspectors evaluated whether problems associated with radiation monitoring and exposure control were being identified by the licensee at an appropriate threshold and were properly addressed for resolution in the licensee's corrective action program. The inspectors assessed the appropriateness of the corrective actions for a selected sample of problems documented by the licensee that involve radiation monitoring and exposure controls. The inspectors assessed the licensee's process for applying operating experience to their plant.

b. Findings

No findings were identified.

2RS2 Occupational As-Low-As-Is-Reasonably-Achievable (ALARA) Planning and Controls (71124.02)

These inspection activities supplement those documented in NRC Inspection Reports 05000341/2012003 and 05000341/2012004, and constitute one complete sample as defined in IP 71124.02-05.

.1 Source Term Reduction and Control (02.04)

a. Inspection Scope

The inspectors used licensee records to determine the historical trends and current status of significant tracked plant source terms known to contribute to elevated facility aggregate exposure. The inspectors assessed whether the licensee had made allowances or developed contingency plans for expected changes in the source term as the result of changes in plant fuel performance issues or changes in plant primary chemistry.

b. Findings

No findings were identified.

2RS5 Radiation Monitoring Instrumentation (71124.05)

This inspection constituted one complete sample as defined in IP 71124.05-05.

.1 Inspection Planning (02.01)

a. Inspection Scope

The inspectors reviewed the plant UFSAR to identify radiation instruments associated with monitoring area radiological conditions including airborne radioactivity, process streams, effluents, materials/articles, and workers. Additionally, the inspectors reviewed the instrumentation and the associated TS requirements for post-accident monitoring instrumentation including instruments used for remote emergency assessment.

The inspectors reviewed a listing of in-service survey instrumentation including air samplers and small article monitors, along with instruments used to detect and analyze workers' external contamination. Additionally, the inspectors reviewed personnel contamination monitors and portal monitors, including whole-body counters, to detect workers' internal contamination. The inspectors reviewed this list to assess whether an adequate number and type of instruments were available to support operations.

The inspectors reviewed licensee and third-party evaluation reports of the radiation monitoring program since the last inspection. These reports were reviewed for insights into the licensee's program and to aid in selecting areas for review ("smart sampling").

The inspectors reviewed procedures that govern instrument source checks and calibrations, focusing on instruments used for monitoring transient high radiological conditions, including instruments used for underwater surveys. The inspectors reviewed the calibration and source check procedures for adequacy and as an aid to smart sampling.

The inspectors reviewed the area radiation monitor alarm setpoint values and setpoint bases as provided in the TSs and the UFSAR.

The inspectors reviewed effluent monitor alarm setpoint bases and the calculational methods provided in the offsite dose calculation manual.

b. Findings

No findings were identified.

.2 Walkdowns and Observations (02.02)

a. Inspection Scope

The inspectors walked down effluent radiation monitoring systems, including at least one liquid and one airborne system. Focus was placed on flow measurement devices and all accessible point-of-discharge liquid and gaseous effluent monitors of the selected systems. The inspectors assessed whether the effluent/process monitor configurations aligned with Offsite Dose Calculation Manual descriptions and observed monitors for degradation and out-of-service tags.

The inspectors selected portable survey instruments that were in use or available for issuance and assessed calibration and source check stickers for currency as well as instrument material condition and operability.

The inspectors observed licensee staff performance as the staff demonstrated source checks for various types of portable survey instruments. The inspectors assessed whether high-range instruments were source checked on all appropriate scales.

The inspectors walked down area radiation monitors and continuous air monitors to determine whether they were appropriately positioned relative to the radiation sources or areas they were intended to monitor. Selectively, the inspectors compared monitor response (via local or remote control room indications) with actual area conditions for consistency.

The inspectors selected personnel contamination monitors, portal monitors, and small article monitors and evaluated whether the periodic source checks were performed in accordance with the manufacturer's recommendations and licensee procedures.

b. Findings

No findings were identified.

.3 Calibration and Testing Program (02.03)

Process and Effluent Monitors

a. Inspection Scope

The inspectors selected effluent monitor instruments (such as gaseous and liquid) and evaluated whether channel calibration and functional tests were performed consistent with radiological effluent TSs/Offsite Dose Calculation Manual. The inspectors assessed whether (a) the licensee calibrated its monitors with National Institute of Standards and Technology traceable sources; (b) the primary calibrations adequately represented the plant nuclide mix; (c) when secondary calibration sources were used, the sources were verified by the primary calibration; and (d) the licensee's channel calibrations encompassed the instrument's alarm setpoints.

The inspectors assessed whether the effluent monitor alarm setpoints were established as provided in the Offsite Dose Calculation Manual and station procedures.

For changes to effluent monitor setpoints, the inspectors evaluated the basis for changes to ensure that an adequate justification existed.

b. Findings

No findings were identified.

Laboratory Instrumentation

a. Inspection Scope

The inspectors assessed laboratory analytical instruments used for radiological analyses to determine whether daily performance checks and calibration data indicated the frequency of the calibrations was adequate and there were no indications of degraded instrument performance.

The inspectors assessed whether appropriate corrective actions were implemented in response to indications of degraded instrument performance.

b. Findings

No findings were identified.

Whole Body Counter

a. Inspection Scope

The inspectors reviewed the methods and sources used to perform whole body count functional checks before daily use of the instrument and assessed whether check sources were appropriate and aligned with the plant's isotopic mix.

The inspectors reviewed whole body count calibration records since the last inspection and evaluated whether calibration sources were representative of the plant source term and that appropriate calibration phantoms were used. The inspectors looked for anomalous results or other indications of instrument performance problems.

b. Findings

No findings were identified.

Post-Accident Monitoring Instrumentation

a. Inspection Scope

Inspectors selected containment high-range monitors and reviewed the calibration documentation since the last inspection.

The inspectors assessed whether an electronic calibration was completed for all range decades above 10 rem/hour and whether at least one decade at or below 10 rem/hour was calibrated using an appropriate radiation source.

The inspectors assessed whether calibration acceptance criteria were reasonable, accounted for the large measuring range and the intended purpose of the instruments.

The inspectors selected two effluent/process monitors that were relied on by the licensee in its emergency operating procedures as a basis for triggering emergency action levels and subsequent emergency classifications, or to make protective action recommendations during an accident. The inspectors evaluated the calibration and availability of these instruments.

The inspectors reviewed the licensee's capability to collect high-range, post-accident iodine effluent samples.

As available, the inspectors observed electronic and radiation calibration of these instruments to assess conformity with the licensee's calibration and test protocols.

b. Findings

No findings were identified.

Portal Monitors, Personnel Contamination Monitors, and Small Article Monitors

a. Inspection Scope

For each type of these instruments used onsite, the inspectors assessed whether the alarm setpoint values were reasonable under the circumstances to ensure licensed material was not released from the site.

The inspectors reviewed the calibration documentation for each instrument selected and discussed the calibration methods with the licensee to determine consistency with the manufacturer's recommendations.

b. Findings

No findings were identified.

Portable Survey Instruments, Area Radiation Monitors, Electronic Dosimetry, and Air Samplers/Continuous Air Monitors

a. Inspection Scope

The inspectors reviewed calibration documentation for at least one of each type of instrument. For portable survey instruments and area radiation monitors, the inspectors reviewed detector measurement geometry and calibration methods and had the licensee demonstrate use of its instrument calibrator as applicable. The inspectors compared instrument readings with those of an NRC survey instrument if problems were suspected.

As available, the inspectors selected portable survey instruments that did not meet acceptance criteria during calibration or source checks to assess whether the licensee had taken appropriate corrective action for instruments found significantly out of calibration (greater than 50 percent). The inspectors evaluated whether the licensee had evaluated the possible consequences of instrument use since the last successful calibration or source check.

b. Findings

No findings were identified.

Instrument Calibrator

a. Inspection Scope

As applicable, the inspectors reviewed the current output values for the licensee's portable survey and area radiation monitor instrument calibrator unit(s). The inspectors assessed whether the licensee periodically measured calibrator output over the range of the instruments used through measurements by ion chamber/electrometer.

The inspectors assessed whether the measuring devices had been calibrated by a facility using National Institute of Standards and Technology traceable sources and whether corrective factors for these measuring devices were properly applied by the licensee in its output verification.

b. Findings

No findings were identified.

Calibration and Check Sources

a. Inspection Scope

The inspectors reviewed the licensee's 10 CFR Part 61, "Licensing Requirements for Land Disposal of Radioactive Waste," source term to assess whether calibration sources used were representative of the types and energies of radiation encountered in the plant.

b. Findings

No findings were identified.

.4 Problem Identification and Resolution (02.04)

a. Inspection Scope

The inspectors evaluated whether problems associated with radiation monitoring instrumentation were being identified by the licensee at an appropriate threshold and were properly addressed for resolution in the licensee corrective action program. The inspectors assessed the appropriateness of the corrective actions for a selected sample of problems documented by the licensee that involve radiation monitoring instrumentation.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, Emergency Preparedness, Public Radiation Safety, Occupational Radiation Safety, and Security

4OA1 Performance Indicator Verification (71151)

.1 Unplanned Scrams per 7000 Critical Hours (IE01)

a. Inspection Scope

The inspectors sampled licensee submittals for the Unplanned Scrams per 7000 Critical Hours performance indicator for the first quarter 2012 through the fourth quarter 2012. To determine the accuracy of the performance indicator data, performance indicator definitions and guidance contained in Nuclear Energy Institute Document 99-02,

"Regulatory Assessment Performance Indicator Guideline," Revision 6, dated October 2009, was used. The inspectors reviewed the licensee's operator narrative logs, issue reports, event reports, and NRC integrated inspection reports to validate the accuracy of the submittals. The inspectors also reviewed the licensee's issue report database to determine if any problems had been identified with the performance indicator data collected or transmitted for this indicator and none were identified. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one unplanned scrams per 7000 critical hours sample as defined in IP 71151-05.

b. Findings

No findings were identified.

.2 Unplanned Transients per 7000 Critical Hours (IE03)

a. Inspection Scope

The inspectors sampled licensee submittals for the Unplanned Transients per 7000 Critical Hours performance indicator for first quarter 2012 through the fourth quarter 2012. To determine the accuracy of the performance indicator data, performance indicator definitions and guidance contained in Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6, dated October 2009, was used. The inspectors reviewed the licensee's operator narrative logs, issue reports, maintenance rule records, event reports, and NRC integrated inspection reports to validate the accuracy of the submittals. The inspectors also reviewed the licensee's issue report database to determine if any problems had been identified with the performance indicator data collected or transmitted for this indicator and none were identified. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one unplanned transients per 7000 critical hours sample as defined in IP 71151-05.

b. Findings

No findings were identified.

.3 Unplanned Scrams with Complications (IE04)

a. Inspection Scope

The inspectors sampled licensee submittals for the Unplanned Scrams with Complications performance indicator for the first quarter 2012 through the fourth quarter 2012. To determine the accuracy of the performance indicator data, performance indicator definitions and guidance contained in Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6, dated October 2009, was used. The inspectors reviewed the licensee's operator narrative logs, issue reports, event reports, and NRC integrated inspection reports to validate the accuracy of the submittals. The inspectors also reviewed the licensee's issue report database to determine if any problems had been identified with the performance

indicator data collected or transmitted for this indicator and none were identified. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one unplanned scrams with complications sample as defined in IP 71151-05.

b. Findings

No findings were identified.

4OA2 Identification and Resolution of Problems (71152)

.1 Routine Review of Items Entered into the Corrective Action Program

a. Inspection Scope

As part of the various baseline inspection procedures discussed in previous sections of this report, the inspectors routinely reviewed issues during baseline inspection activities and plant status reviews to verify they were being entered into the licensee's corrective action program at an appropriate threshold, adequate attention was being given to timely corrective actions, and adverse trends were identified and addressed. Attributes reviewed included: identification of the problem was complete and accurate; timeliness was commensurate with the safety significance; evaluation and disposition of performance issues, generic implications, common causes, contributing factors, root causes, extent-of-condition reviews, and previous occurrences reviews were proper and adequate; and the classification, prioritization, focus, and timeliness of corrective actions were commensurate with safety and sufficient to prevent recurrence of the issue. Minor issues entered into the licensee's corrective action program as a result of the inspectors' observations are included in the Attachment to this report.

These routine reviews for the identification and resolution of problems did not constitute any additional inspection samples. Instead, by procedure they were considered an integral part of the inspections performed during the quarter and documented in Section 1 of this report.

b. Findings

No findings were identified.

.2 Daily Corrective Action Program Reviews

a. Inspection Scope

In order to assist with the identification of repetitive equipment failures and specific human performance issues for follow-up, the inspectors performed a daily screening of items entered into the licensee's corrective action program. This review was accomplished through inspection of the station's daily condition report packages.

These daily reviews were performed by procedure as part of the inspectors' daily plant status monitoring activities and, as such, did not constitute any separate inspection samples.

b. Findings

No findings were identified.

.3 Selected Issue Follow-Up Inspection: CARD 13-21371, "3D36 Division 1 Reactor Building Vent Exhaust Radiation Monitor Upscale Trip"

a. Inspection Scope

During a review of items entered in the licensee's corrective action program, the inspectors recognized a corrective action item documenting a 3D36 division 1 reactor building vent exhaust radiation monitor upscale trip on February 23, 2013. The inspectors noted the radiation monitor had been declared inoperable due to previous erratic readings on February 17 (CARD 13-21371).

b. Observations

The inspectors reviewed the actions of the operations crew during the period in which sporadic alarms were being received because of invalid upscale conditions. The crew reset the alarm and instrument several times. This condition was assessed by the crew and the instrument was declared inoperable on February 17, 2013. Following the declaration of inoperability, the operations crew failed to remove the monitor from service. The instrument condition continued to degrade and on February 23, another upscale condition occurred. This upscale trip did cause an automatic actuation of the division 1 standby gas treatment system, causing a control room ventilation shift to recirculation, and the reactor building group 14 and 16 isolation signal actuation. No safety-related functions were performed by the upscale trip. The operating crew failed to take positive control of the degraded component to prevent the automatic actions. Even though the instrument was not required to be removed from service by procedures, the conservative action for an inoperable instrument was to remove it from service until the issue was corrected. The licensee has entered this in to the corrective action program, performed training, and made procedure changes to correct the crew response.

This review constituted one in-depth problem identification and resolution sample as defined in IP 71152-05.

c. Findings

No findings were identified.

.4 Selected Issue Follow-Up Inspection: Observation of CARD Review Board Meeting

a. Inspection Scope

As part of a review of items entered in the licensee's corrective action program, the inspectors attended the CARD Review Board (CRB) meeting held on March 4, 2013, at which corrective action documents related to the security department were reviewed. Follow-up interviews were conducted by the inspectors with various CRB members and observations were provided to plant management.

This review constituted one in-depth problem identification and resolution sample as defined in IP 71152-05.

b. Observations

Background. The Fermi 2 Quality Assurance Conduct Manual, Chapter 11, Condition assessment resolution document, establishes the corrective action process for Fermi 2. Oversight of the process is provided by station management through the CRB, which meets daily (i.e., Monday through Thursday), and typically selects one or two days each week to review and disposition corrective action program documents (products) such as root cause evaluations, apparent cause evaluations (ACEs), common cause analyses, and effectiveness reviews, in addition to other daily program requirements. The products are provided electronically at least one business day prior to the review date to allow CRB members to review and prepare for discussion at the meeting. When there are significant issues identified during review, the CRB member will typically contact the product owner and discuss the issues prior to the meeting whenever possible.

Discussion. On March 4, 2013, the CRB reviewed and discussed an effectiveness review for a specific CARD and an ACE completed for another CARD. Both CARDs pertained to the security department. The latter CARD had been issued after 4 security department clock resets had occurred within a 21-day timeframe.

The inspectors had no significant observations on the CRB's disposition of the effectiveness review for the first CARD but had several related to the ACE for the second CARD. When the ACE was discussed, numerous comments were provided by several of the CRB members. These comments were all specific to details included in the ACE, such as applicability of conclusions, timeliness of corrective actions, and wording enhancements. The last CRB member to comment, however, provided a fundamental challenge to the analysis tools used in the ACE. This member was an alternate on the CRB and had performed his evaluation on the weekend, finishing late the night prior to the CRB meeting. After mentioning he had not been able to provide feedback to the other members and the originator of the ACE prior to the meeting, he proceeded to provide his comments. While he was doing so, the inspectors noted that other board members made comments that the board member should "hurry" and provide "the bottom line" to his evaluation, or through their body language conveyed impatience with the board member presenting his views. The member replied he had to go through everything. Subsequently, he stated that some of his comments were not presented.

Following the completion of the board member's presentation, there were some discussion and comments from other CRB members but no further review of the analysis tools used in the ACE was done and the ACE was approved by the CRB, with comments. This meant that the originator of the ACE would need to resolve the comments and then return to the CRB Chairman (not the whole board) to obtain the final approval signature.

Conclusions. The CRB's overall handling of the one board member's views was poor; the environment created at the meeting by other board members with their comments and body language was not conducive to concerns being freely raised. After the review of this issue, the inspectors provided their observations to the Director, Production (i.e., plant manager). The Director, who typically chairs the CRB but was not present during this particular meeting, subsequently met with CRB members and re-emphasized the licensee's policy of maintaining an environment where all employees can freely raise concerns without being criticized or inhibited.

c. Findings.

No findings were identified.

4OA3 Follow-Up of Events and Notices of Enforcement Discretion (71153)

.1 (Open) Licensee Event Report (LER) 05000341/2012-006: Manual Reactor Scram Due to Hydrogen Leakage into the Stator Water Cooling System

a. Inspection Scope

On November 7, 2012, the reactor mode switch was taken to shutdown and the main turbine generator was manually tripped in response to excessive hydrogen gas leakage into the stator water cooling system from the main turbine generator. The scram was uncomplicated. Two control rods did not respond as expected. One control rod stopped at position 02 and was manually inserted by the operator. The second stopped at position 02 and then fully inserted into the core within the next two minutes with no additional operator action. Other plant systems responded as designed. The leak in the stator water cooling system was located and repaired. Three control rod mechanisms were replaced. The inspectors are still reviewing the plant's response regarding this LER. Documents reviewed in this inspection are listed in the Attachment to this report. This LER will remain open.

This event follow-up review did not constitute a sample as defined in IP 71153-05.

.2 (Open) LER 05000341/2013-001: Loss of Secondary Containment Function

a. Inspection Scope

On January 22, 2013, during startup of the reactor building heating ventilation and air conditioning system, with the standby gas treatment system operating, secondary containment pressure went positive for 27 seconds, reaching approximately +0.15 inches of water column.

Documents reviewed in this inspection are listed in the Attachment to this report. This LER will remain open.

This event follow-up review did not constitute a sample as defined in IP 71153-05.

4OA6 Management Meetings

.1 Exit Meeting Summary

On April 11, 2013, the inspectors presented the inspection results to Mr. T. Conner, Site Vice-President, and other members of the licensee staff. The licensee acknowledged the issues presented. The inspectors confirmed none of the potential report input discussed was considered proprietary.

.2 Interim Exit Meetings

Interim exits were conducted for:

- The inspection results for the areas of radiological hazard assessment and exposure controls, and occupational ALARA planning and controls with Mr. K. Scott, Director, Production, on February 1, 2013.

- The inspection results for the areas of radiological hazard assessment and exposure controls, and radiation monitoring instrumentation with Mr. K. Scott, Director, Production, on March 22, 2013.

The inspectors confirmed none of the potential report input discussed was considered proprietary.

4OA7 Licensee-Identified Violations

The following violation of very low significance (Green) was identified by the licensee and is a violation of NRC requirements which meets the criteria of the NRC Enforcement Policy for being dispositioned as an NCV.

- Title 10 CFR 50.65, Maintenance Rule, section (b)(2)(i), states, in part, that the scope of the monitoring program…shall include…nonsafety-related structures, systems, and components…that are…used in the plant emergency operating procedures. Contrary to the above, system C9600, the integrated plant computer system (IPCS), was not incorporated into the scope of the Maintenance Rule until CARD 11-31237 identified the need to perform maintenance rule scoping for the system. The IPCS provides safety parameter display system (SPDS) information to the operators in the main control room and the emergency response facilities, including the technical support center, emergency operations facility, operations support center, and the virtual private network appliance which transmits a subset of the SPDS information to the NRC. On January 30, 2012, system C9600, IPCS had been re-scoped as a nonsafety-related system that was explicitly utilized in the emergency operating procedures, and therefore, C9600 was incorporated into the Fermi maintenance rule program.

  The inspectors determined this finding was more than minor because it was associated with the equipment performance attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). This finding was determined to be of very low safety significance because all the screening questions in IMC 0609, Attachment 04, Table 4a, for the Mitigating Systems Cornerstone were answered “no.”

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

T. Conner, Site Vice-President
K. Scott, Director, Production
J. Davis, Manager, Nuclear Training
B. Ford, Manager, Nuclear Maintenance
R. LaBurn, Manager, Radiation Protection
Z. Rad, Manager, Licensing
G. Strobel, Manager, Operations

Nuclear Regulatory Commission

M. A. Kunowski, Chief, Reactor Projects Branch 5

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Opened

05000341/2012-006	LER	Manual Reactor Scram Due to Hydrogen Leakage into the Stator Water Cooling System (Section 4OA3.1)
05000341/2013-001	LER	Loss of Secondary Containment Function (Section 4OA3.2)

Closed

None.

Discussed

None.

LIST OF DOCUMENTS REVIEWED

The following is a list of documents reviewed during the inspection. Inclusion on this list does not imply the NRC inspectors reviewed the documents in their entirety, but rather, that selected sections of 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.

1R01 – Adverse Weather Protection

- CARD 13-21260; Shift 4 CLR – Evaluation of weather forecast; 02/20/2013

1R04 – Equipment Alignment

- Drawing 6M721-5707; Core Spray System Functional Operating Sketch; Revision AD
- Drawing 6M721-5715-3; Standby Feedwater System Functional Operating Sketch; Revision N
- Drawing 6M721-5730-3; Non-Interruptible Control Air System Division I and II; Revision AI
- Drawing 6M721-5733-1; Fire Protection Functional Operating Sketch; Revision BE
- Fermi 2 UFSAR 6.3; Emergency Core Cooling Systems; Revision 17
- Procedure 23.107.01; Standby Feedwater System; Revision 37
- Procedure 23.129; Station and Control Air System; Revision 100
- Procedure 23.203, Attachment 2B; Core Spray System Division 2 Electrical Lineup
- System Health Fermi 2, System N2103; Standby Feedwater System; Fourth Quarter 2012, First Quarter and RF15 2012, and RF15 Through Third Quarter 2012
- System P5000; Compressed Air Systems; Fourth Quarter 2012

1R05 – Fire Protection

- Drawing 6A721-2402; Fire Protection Evaluation Reactor and Auxiliary Buildings – Basement, Elevation 562’-0”; Revision P
- Drawing 6A721-2405; Fire Protection Evaluation Reactor and Auxiliary Buildings - Second Floor, Elevation 613’6”; Revision Y
- Drawing 6A721-2414; Fire Protection Evaluation Turbine House – Second Floor Plan, Elevation 613’6”; Revision G
- Drawing 6A721-2421; Fire Protection Evaluation Radwaste Building - Second Floor, Elevation 613’-6”; Revision G
- Drawing 6I721-2878-26; Installation Fire Detection System - South Half Second Floor, Elevation 613’6”, Turbine Building Zone 20; Revision B
- Drawing 6M721-5729-1; Emergency Equipment Cooling Water (Division 1); Revision BB
- Procedure FP-AB-5-16a; Auxiliary Building North Standby Gas Treatment Room, Zone 16, Elevation 677’6”; Revision 3
- Procedure FP-AB-5-16b; Auxiliary Building, South Standby Gas Treatment System Room, Zone 16, Elevation 677’6”; Revision 3
- UFSAR Figure 9A-10; Fire Protection Evaluation Reactor and Auxiliary Buildings - Fifth Floor Plan; Revision 14
- WO 32954155; Perform 28.508.01 Monthly Portable Fire Extinguisher Inspection; 12/04/2012

1R06 – Flood Protection

- WO 33275664; Perform Weekly Manhole Water Level Monitoring; 01/14/2013
- WO 33294375; Perform Weekly Manhole Water Level Monitoring; 02/14/2013

1R11 – Licensed Operator Requalification Program

- Fermi 2 Evaluation Scenario SS-OP-904-1211; 02/15/2013
- WO 33402946; Perform 27.106.03 CRD Withdrawal Stall Flow Measurement; 03/02/2013
- WO 33402969; Perform 23.623 Section 6.2 Rod Drift Alarm Test for One Rod Per JMC Set; 03/02/2013
- WO 33402971; Perform 24.106.01 Sec-5.1 CRD Operability for Fully Withdrawn Rods; 03/02/2012
- WO 33402973; Perform 24.106.01 Sec-5.2 for Partially Withdrawn Control Rods; 03/02/2013

1R12 – Maintenance Effectiveness

- CARD 11-31237; Perform Maintenance Rule Scoping for C9600 (IPCS); 12/28/2011
- CARD 12-26356; IRM E Fails Downscale in Range 10; 07/28/2012
- CARD 12-26690; IRM Failed Calibration; 08/09/2012
- CARD 12-27736; MRFF Evaluations Needed for IRM F and G Declared Inoperable (12-26710) Following M & TE Failure; 09/19/2012
- CARD 12-29992; IRM B Drive Motor Fuses Found Blown; 12/15/2012
- CARD 12-29992-01; Complete MRFF Review and Attach Copy; 12/18/2012
- CARD 13-20405; Maintenance Rule Expert Panel Placed C5111 System in a(1) Status; 01/16/2013
- CARD 13-20546; Quality of Maintenance Rule Functional Failure Evaluations; 01/22/2013
- CARD 13-20877; Concerns with C9600 MRFF Evaluations; 02/05/2013
- CARD 13-21401; Maintenance Rule Program Position Documents; 02/25/2013
- Common Cause Analysis Report; CARD 13-20405; 02/19/2013
- Maintenance Rule Performance Criteria C9600; IPCS; 03/13/2012
- Functional Failure Evaluation Checklist 120728-01; 08/03/2012
- Functional Failure Evaluation Checklist 120807-01; 08/27/2012
- Functional Failure Evaluation Checklist 120919-01; 10/03/2012
- Functional Failure Evaluation 1375002; IPCS; Version 5
- Functional Failure Evaluation 1375005; IPCS; Version 3
- Functional Failure Evaluation 1375012; IPCS; Version 2
- Functional Failure Evaluation 1375015; IPCS; Version 6
- Functional Failure Evaluation 1375019; IPCS; Version 2
- Functional Failure Evaluation 1375027; IPCS; Version 2
- Functional Failure Evaluation 1375033; IPCS; Version 3
- Functional Failure Evaluation 1375037; IPCS; Version 3
- Functional Failure Evaluation 1375134; C5111; Version 1
- Get Well Plan (a) (1) SSC: C5111 – Intermediate Range Monitoring; Revisions 0 and 1
- IPCS C9600; First and Third Quarters 2012
- Maintenance Rule Expert Panel Presentation – Near a(1) Systems; E4100 HPCI; 03/06/2013
- Maintenance Rule Scope Determination for SSCs C9600; IPCS; 01/30/2012
- Management Challenge Board Gap Summary / Engineering
- Maintenance Rule Scope Determination for SSCs; SSC PIS No. C9600; IPCS; 01/30/2012
- Monitoring Plan; C5111 Intermediate Range Neutron Monitoring (IRM) System; 11/11/2011
- Operator Log; 12/01/2011 to 01/18/2012
- Operator Log; 01/01/2012 to 01/18/2013
- Program Health Report Fermi 2 – Maintenance Rule; Third Quarter, 2012
- SSC Performance Criteria, SSC PIS No. C9600; IPCS; 03/13/2012
- Specific SSC Functions C9600; IPCS; 01/30/2012
- System Health Fermi 2; Intermediate Range Monitors C5111; Third and Fourth Quarters 2012

1R13 – Maintenance Risk Assessments and Emergent Work Control

- Fermi 2 Plan of the Day; 01/14-17, 22, 25, 28-31/2013; 02/01, 04, 11/2013; 03/08, 11-15/2013
- Fermi Control Room Log, Unit 2; 01/31/2013
- Scheduler's Evaluation for Fermi 2; 01/14-22/2013; 01/28 – 02/04/2013; 02/01-02/20/2013; 03/11-20/2013
- T+1 Performance Analysis Review, Work Week 1307; 02/11/2013 – 02/17/2013

1R15 – Operability Evaluations

- 50.59 Screen 13-0032; CARD 13-21044, Address ITC 345-kV Relay House Air Conditioning Addition; 02/14/2013
- 50.59 Screen 13-0037; CARD 13-21044, Address ITC 120-kV Relay House Air Conditioning Addition; 02/25/2013
- Apparent Cause Evaluation Template; CARD 07-24714, INPO TSG Review Visit Recommendation 1 for Time Delay Relays; 09/14/2007
- Apparent Cause Evaluation Template; CARD 13-20405, C5111 (IRM) System Exceeds MR Performance Criteria; 02/28/2013
- Applicability Determination; CARD 13-21044; Address ITC 345-kV Relay House Air Conditioning Addition; 02/14/2013 and 02/25/2013
- CARD 07-24714; INPO TSG Review Visit Recommendation 1 for Time Delay Relays; 08/23/2007
- CARD 12-25847; Oil Leak on MUT 2B; 07/10/2012
- CARD 13-10051; IPCS Data Diode 'A' Stopped Forwarding Plant Data Required for ERDS; 01/25/2013
- CARD 13-20020; FW DCS Steam Flow Signals Indicate Failed for MSL A and C; 01/01/2013
- CARD 13-20020 - Trouble Shooting Datasheet; FW DCS Steam Flow Signals Indicate Failed for MSL A and C; 01/02/2013
- CARD 13-20909; 65F, YZ-27A Undervoltage Relay Did Not Meet Pick-up As-Found Tolerance; 02/07/2013
- CARD 13-20915; Tap Setting Change Required to Meet As-Left Tolerance of UV Relay YZ-27A; 02/07/2013
- CARD 13-20916; Tap Setting Change Required to Meet As-Left Tolerance of UV Relay YN-27C; 02/07/2013
- CARD 13-20917; Tap Setting Change Required to Meet As-Left Tolerance of UV Relay XN-27C; 02/07/2013
- CARD 13-20918; 65F Undervoltage Relay XN-27C Did Not Meet Voltage As-Found Tolerance; 02/07/2013
- CARD 13-20919; 65F Undervoltage Relay YN-27C Did Not Meet Voltage As-Found Tolerance; 02-07-2013
- CARD 13-21035; Reactor Power Lowered to Maintain ODMI 12-005 HPCV Open Limits; 02/12/2013
- CARD 13-21044; Added Air Conditioning to the 345kV Relay House May Impact Long-Term Loading on EDG 11 or 13; 02/12/2013
- CARD 13-21118; Undervoltage Relay Drift; 02/13/2013
- CARD 13-21301; 64C, XY-27A Undervoltage Relay Did Not Meet Pick-Up Voltage As-Found Tolerance; 02/21/2013
- CARD 13-21727; Valve Position Indication for No. 2 HPSV Indicated 18 Percent When It Should be at 10 Percent; 03/09/2013
- CARD 13-21728; N30R653A No. 1 HPSV Edge-wise Indication Incorrect; 03/09/2013

- CARD 13-21729; No. 3 HPSV Had Improper Indication in the MCR and Did Not Indicate Closed when Tripped; 03/09/2013
- Drawing 6SD721-2500-02; One Line Diagram 13.8KV; Revision AJ
- Fermi 2 UFSAR 8.4.2.1; SBO Coping Duration
- Fermi Control Room Log, Unit 2; 01/25/2012
- ODMI-12-009; MUT 2B Oil Leak; Revision 0
- ODMI 13-001 DRAFT; HPCV Drift and No.3 High Pressure Stop Valve Failure to Close; Revision 0
- Procedure 20.300.SBO; Loss of Offsite and Onsite Power; Revision 18
- Technical Evaluation TE-N21-12-062; Power Generation System Review for Extended Time at Reduced Power; Revision 0
- WO 34776204; 21-Oil Leak on MUT 2B; 02/10/2014

1R18 – Plant Modifications

- 50.59 Screen 12-0244; Restoration of the South Reactor Feed Pump/Turbine; Revision A
- EDP 37014; Restoration of the South Reactor Feed Pump/Turbine Mechanical Isolations

1R19 – Post-Maintenance Testing

- CARD 13-21903; CTG 11-1 Failed to Start; 03/14/2013
- CARD 13-22164; Crew Level Reset – Shift 5; 03/26/2013
- Crew Clock Reset Briefing Sheet, CARD 13-22164; Restoration of CTG 11-1; 03/26/2013
- Fermi Control Room Log, Unit 2; 01/16/2013, 03/15/2013
- Procedure 23.324; Supervisory Control – 120-kV Switchyard and CTG 11 Generators; Revision 80
- Procedure 73.713.02; Plant Process System – Sampling of Satellite Sample Sinks and Miscellaneous Sample Points; Revision 14
- Procedure 74.000.19; Chemistry Routine Surveillances; Revision 24
- WO 25995950; Replace CTG-11-1 Fuel Oil Integrator; 03/12/2013
- WO 27889530; 74.000.18 Attachment 3; Situation: Anytime Water or Boron Is Added to Standby Liquid Control Tank or SLC Tank, Temperature Drops Below 48^{o}F, Modes 1, 2, and 3; 02/06/2013
- WO 27889530; 74.000.19 Attachment 3; Situation: Anytime Water or Boron Is Added to Standby Liquid Control Tank or SLC Tank, Temperature Drops Below 48^{o}F; 02/06/2013
- WO 31032098; Replace Cogged Belts Per EQ Letter NE-6.6 EQMS.086; 01/16/2013
- WO 31412506; Recalculate CTG 11-1 Instruments (Pressure and Temperature Switches); 03/12/2013
- WO 32189298; Functional Test for As-Lefts- 44.020.024, Replace RPS Chan B2 Low Steam Line Press Agastat Relay; 02/28/2013
- WO 32986331; Perform Lubrication of Motor and Pump; 01/16/2013
- WO 32991438; Power Wash Air Side of Cooling Coil; 01/16/2013
- WO 33277049; Perform 74.000.19, Attachment 8, SLC Chemistry
- WO 33407168; Perform 24.324.01 CTG 11-1 Monthly Operability and Meter CH Check
- WO 33447059; Annual Inspection of CTG 11-1; 03/12/2012
- WO 33573784; Power Wash Air Side of T4100B035 Cooling Coil; 02/28/2013
- WO 33686796; Replace Solenoid Valve Required by NE-6.6-EQMS.031; 07/13/2013
- WO 33876315; Change Lube Oil in CTG 11-1; 03/12/2013

1R22 – Surveillance Testing

- CARD 13-21995; Division 1 CS Comp Minimum Flow Valve Failed to Open on Low Flow During 24.203.02, Section 5.1; 03/19/2013
- CARD 13-21995, Troubleshooting Plan; WO 36261162, 36262604, 36265413, System E2100
- CARD 12-22077; Division 1 CSS Minimum Flow Valve Failure to Open During 24.203.02; 03/18/2012
- CARD 12-22077, Apparent Cause Evaluation; Division 1 Core Spray Minimum Flow Valve E2150F031A Failure to Close; 05/17/2012
- DTE Memo, C. Arndt to M. Rivard B. Leimkuehler; Engineering Support Organization Report 12J075-0017; 04/03/2012
- E2150F031A CS Minimum Flow Valve and E21N006A CS Minimum Flow Switch; 03/21/2013
- Procedure 24.202.01, Section 5.1; HPCI Pump/Flow Test and Valve Stroke at 150 and 1025 psig
- Procedure 24.206.01; RCIC System Pump Operability and Valve Test at 1000 PSIG
- Procedure 24.307.17; Emergency Diesel Generator 14 – Start and Load Test; Revision 50
- Procedure 24.321.07; Operability of 480V Swing Bus 72CF Automatic Throwover Scheme; Revision 10
- Procedure 44.010.025; RPS-NS4 Main Steam Line Radiation Trip System A Channel Functional
- Procedure 44.020.001; NSSSS – Division 1, Logic System Functional Test; Revision 42
- Procedure 44.020.002; NSSSS – Division 2, Logic System Functional Test; Revision 45
- Temporary Change Notice T12182; Procedure 24.206.01, Revision 70, RCIC System Pump and Valve Operability Test; 02/22/2011
- WO 32807742; Perform 24.202.01 Sec-5.1, HPCI Pump / Flow Test and Valve Stroke at 1025 psig; 01/01/2013
- WO 32863123; Perform 24.206.01 RCIC System Pump Operability and Valve Test @ 1000 PSIG; 01/01/2013
- WO 33270838; Perform 24.307.17 Sec-5.1, EDG 14 Start and Load Test – Slow Start; 02/04/2012
- WO 33453907; Perform 44.010.025 RPS-NS4 Main Steam Line Rad, Trip System A, Channel A1/A, Funct; 03/11/2013
- WO 33453909; Perform 44.010.027 RPS-NS4 Main Steam Line Rad, Trip System A, Channel A2/C, Funct; 03/11/2013
- WO 33453926; Perform 44.020.023 NS4 Main Steam Line Pres. Division 1, Channel Functional Test; 03/11/2013
- WO 33761965; Perform 24.321.07 480V Swing Bus 72 CF Automatic Throwover Scheme Operability; 01/14/2013
- WO 34393678; Perform 24.202.02, HPCI Flow Rate Fast at 165 psig; 12/31/2012
- WO 35304758; Perform 24.307.16 Sec-5.2, EDG 13 Start and Load Test – Fast Start; 01/28/2012
- WO 36256566; Procedure 24.203.02, Section 5.1 – Partial; 03/21/2013

1EP6 – Drill Evaluation

- Scenario 51

2RS1 – Radiological Hazard Assessment and Exposure Controls

- 2012 Electronic Dosimetry Dose and Dose Rate Alarm Logs; 02/01/2013
- 2012 Personnel Contamination Logs; 02/01/2013

- 2013 Nation Source Tracking System Annual Inventory Reconciliation; 01/15/2013
- Audit Report 12-0112; Quality Assurance Audit of the Radiation Protection Program; 09/2012
- Audit Report 13-20773; NRC Concern – Radioactive Source Leak Tests; 01/31/2013
- CARD 13-30071; Unexpected ED Dose Rate Alarms in 2012 Exceeds RP Metric Threshold; 12/19/2012
- CARD 12-27807; NQA Audit Deficiency – RRA Vacuum Cleaners are not Adequately Controlled; 09/20/2012
- CARD 12-27703; NRC Recommendation: Evaluate Current Controls for VHRA Entry; 09/17/2012
- CARD 12-23121; Purple Painted Tool Found Outside the RRA; 04/11/2012
- CARD 13-20178; Contamination Found Around Floor Drains; 01/08/2013
- Locked High Radiation/High Radiation Area Door Checks; 01/09/2013
- MRP06; Radiation Protection Conduct Manual; Accessing High Radiation, Locked High Radiation and Very High Radiation Areas at Fermi 2; Revision 12
- MRP15; Controlling Radioactive Material Outside the Plant Radiologically Restricted Area (RRA); Revision 11
- MRP18; Radiation Protection Conduct Manual; Release of Potentially Clean Fluids; Revision 14
- MRP25; Radiation Protection Conduct Manual; Release of Potentially Clean Bulk Solids; Revision 6
- Procedure 63.000.100; Radiation Work Permits; Revision 39
- Procedure 65.000.519; Radioactive Material Receipt/Source Control; Revision 30
- Procedure 67.000.101; Performing Surveys and Monitoring Work; Revision 41
- Procedure 67.000.402; Dosimetry Evaluations; Revision 17
- Quick Hit Self Assessment; Alpha Monitoring Effectiveness; 10/26/2012
- Radiological Air Sample Forms, Various Records; 01/2013
- Radioactive Inventory/Leak Test Records; 12/2012
- Radiological Surveys, Various Records; 01/2013
- RWP 12-1045; High Radiation Material Transfer Within the Protected Area; 02/01/2013
- RWP 12-1064; Rebuild CRDs, Including Disassemble and Reassemble CRDs, Pre-Installation Testing, Set Up Breathing Air and Transport Drives in the RRA; 02/01/2013
- RWP 12-4031; Remove Torus Filters From Inside Torus, Transport and Disposal; 02/01/2013
- Small Article Monitor (SAM11) Calibration Records; 09/2012
- Source Inventory/Leak Test Reports; June and December 2012
- Spent Fuel Pool Inventory Logs; 02/01/2013
- WI-RE-013; Work Instruction for National Source Tracking System; Revision 0

2RS2 – Occupational ALARA Planning and Controls

- Fermi 2 Five-Year Dose Reduction Plan Action Items; 02/2013

2RS5 – Radiation Monitoring Instrumentation

- Radioactive Inventory/Leak Test Records; 12/2012
- 64.611.504; Area Radiation Monitoring System Channels 1-5, 7-14 and 18-48 Calibration/Functional Test; Revision 15
- 66.000.220; Calibration of the Radiation Protection/Chemistry Gamma Spectroscopy System; Revision 10
- 66.000.245; Calibration of the NE SAM11 Small Article Monitor; Revision 3
- 66.000.252; Calibration of GEM5 Portal Monitor; Revision 2
- 66.000.423; Calibration of the Eberline AMS-4 Air Monitoring System; Revision 5

- 76.000.70; Operation of the Packard Tri-Carb 2100TR; Revision 7
- Calibration of the Gamma Spectroscopy System#2; April 9, 2012
- Calibration of the Abacos 2000 Fastscan Whole Body Counter; November 14, 2012
- Calibration of the Abacos 2000 Helgeson Whole Body Counter; November 15, 2012
- Calibration of the Abacos 2000 Atlantech Whole Body Counter; November 13, 2012
- Quick Hit Self-Assesment Report – Radiation Monitoring Instrumentation; October 26, 2012
- Scaling Factor Report; January 18, 2013
- GEM5 Calibration Data Form; Serial Number 0512-029; March 14, 2013
- SAM11 Calibration Form; Serial Number 310; October 2, 2012
- IPM9D Calibration Form; Serial Number 298; November 22, 2012
- PCM-1B Calibration Form; Serial Number 338; October 24, 2012
- AMS-4 Calibration Form; Serial Number 440; October 3, 2012
- Gamma Calibrator Dose Rate Verification Form; August 10, 2012
- AMP-100 Calibration Form; Serial Numbers 931047 and 930152; September 14, 2012
- Telepole Calibration Form; Serial Number 6603-131; October 12, 2012
- RO-20 Calibration Form; Serial Number 421; October 4, 2012
- RO-20 Calibration Form; Serial Number 274; September 14, 2012
- Ludlum 177 Calibration Form; Serial Number 47018; March 1, 2013
- F&J L-12P Air Sampler Calibration Form; Serial Number 19, 2012
- E-520 Calibration Form; Serial Number 2479; October 1, 2012
- E-520 Calibration Form; Serial Number 2428; February 7, 2013
- General Service Water Effluent Monitor Calibration; April 2011
- Standby Gas Treatment Exhaust Division 1 Accident Range RMS AXM Calibration/Functional; November 2012
- System Health Report; Area Radiation Monitoring System; Fourth Quarter, 2012
- System Health Report; Process Radiation Monitoring System; Fourth Quarter, 2012
- Standby Gas Treatment Exhaust Process Radiation Monitoring System, Division 1, Functional Test; December 2012
- Standby Gas Treatment Exhaust Division 1 Accident Range Radiation Monitoring System (AXM) Calibration/Functional; October 2012
- Radwaste Building Ventilation Exhaust Process Radiation Monitoring System Functional Test; February 2013
- Containment Area High Range Monitor Division 1 Calibration; February and March 2012
- Radwaste Effluent Rad Monitor Calibration; June 2012
- 13-00038; CARD Swagelok Fitting Used for Offgas Vent Pipe Sampling Is Severely Galled; March 20, 2013
- 12-28508; CARD Portable Neutron Survey Meters Have Limited Calibrations; October 16, 2012
- 11-20910; CARD Revise 44.080.211 to Allow Functional Testing of the RW SPING in Current Plant Configuration; January 27, 2011.
- 64.611.504; Area Radiation Monitoring System Channels 1-5, 7-14 and 18-48 Calibration/Functional Test; Revision 15
- 66.000.220; Calibration of the Radiation Protection/Chemistry Gamma Spectroscopy System; Revision 10
- 66.000.245; Calibration of the NE SAM11 Small Article Monitor; Revision 3
- 66.000.252; Calibration of GEM5 Portal Monitor; Revision 2
- 66.000.423; Calibration of the Eberline AMS-4 Air Monitoring System; Revision 5
- 76.000.70; Operation of the Packard Tri-Carb 2100TR; Revision 7
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- 13-00038; CARD Swagelok Fitting Used for Offgas Vent Pipe Sampling Is Severely Galled; March 20, 2013
- 12-28508; CARD Portable Neutron Survey Meters Have Limited Calibrations; October 16, 2012
- 11-20910; CARD Revise 44.080.211 to Allow Functional Testing of the RW SPING in Current Plant Configuration; January 27, 2011.

4OA1 – Performance Indicator Verification

- CARD 12-29077; Reactor Scram Due to H2 Inleakage to Strator Water; 11/07/2012
- CARD 12-29127; NRC Performance Indicator IE01 Exceeds White Threshold; 11/09/2012
- Engineering Support Conduct Manual MES55; Transient Analysis Program; Revision 6
- PI IE01, Unplanned Scrams per 7000 Critical Hours; Q1/2010 – Q42012
- PI IE03, Unplanned Power Changes per 7000 Critical Hours; Q1/2010 – Q4/2012
- PI IE04, Unplanned Scrams with Complications; Q1/2010 – Q4/2012
- Post-Scram Data and Evaluation, CARD 12-29077

4OA2 – Identification and Resolution of Problems

- CARD 12-23932; 3D32 & 3D36 DIV 1 RB Vent Exh Rad Monitor Upscale and Upscale Trip; 04/29/2012
- CARD 12-23932-01; Complete MRFF Review and Attach Copy; 05/03/2012
- CARD 13-21197; Received 3D32 Div I/II RB Vent Exh Radiation Monitor Upscale; 02/17/2013
- CARD 13-21371; 3D36 Div 1 Rb Vent Exh Rad Monitor Upscale Trip; 02/23/2013
- Crew Monthly Review Meeting
- Fermi 2 Archived Operator Log; 02/17/2013 – 03/01/2013
- Fermi 2 Archived Operator Log; 02/22/2013 – 02/23/2013
- Functional Failure 1365749; System D1100; 04/29/2012
- Functional Failure Evaluation Checklist; CARD 12-23932-01; 05/03/2012
- Procedure 23.601; Instrument Trip Sheets; Revision 35

LIST OF ACRONYMS USED

ACE	Apparent Cause Evaluation
ADAMS	Agencywide Document Access Management System
ALARA	As-Low-As-Is-Reasonably-Achievable
ATWS	Anticipated Transient Without Scram
CARD	Condition Assessment Resolution Document
CFR	Code of Federal Regulations
CRB	CARD Review Board
CRD	Control Rod Drive
DRP	Division of Reactor Projects
ECCS	Emergency Core Cooling System
EECW	Emergency Equipment Cooling Water
EDG	Emergency Diesel Generator
IMC	Inspection Manual Chapter
IP	Inspection Procedure
IPCS	Integrated Plant Computer System
kV	KiloVolt
LER	Licensee Event Report
NCV	Non-Cited Violation
NIAS	Non-Interruptible Air Supply
NRC	U.S. Nuclear Regulatory Commission
ODMI	Operational Decision Making Issue
PARS	Publicly Available Records System
PI&R	Problem Identification and Resolution
RHR	Residual Heat Removal
RPT	Recirculation Pump Trip
RWP	Radiation Work Permit
TS	Technical Specification
UFSAR	Updated Final Safety Analysis Report
UV	Undervoltage
WO	Work Order

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Sincerely,

/RA/

Michael A. Kunowski, Chief
Branch 5
Division of Reactor Projects

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Letter to J. Plona from M. Kunowski dated May 6, 2013

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