

July 13, 2000

Mr. John K. Wood
Vice President - Nuclear
FirstEnergy Nuclear Operating Company
P. O. Box 97, A200
Perry, OH 44081

SUBJECT: PERRY - NRC INSPECTION REPORT 50-440/2000005(DRS)

Dear Mr. Wood:

On June 29, 2000, the NRC completed the baseline annual inspection of evaluations of changes, tests, or experiments (10 CFR 50.59) and the biennial permanent plant modifications inspection at your Perry Nuclear Power Plant, Unit 1 reactor facility. The enclosed report presents the results of that inspection. The results of this inspection were discussed on June 29, 2000, with Mr. R. Schrauder and other members of your staff.

The inspection was an examination of activities conducted under your license as they relate to changes to facility structures, systems, and components, normal and emergency procedures, and the Updated Safety Analysis Report in accordance with the requirements of 10 CFR 50.59. The inspection also evaluated changes made to the facility via permanent plant modifications to verify compliance with the Commission's rules and regulations and with the conditions of your license. Within these areas, the inspection consisted of a selected examination of procedures and representative records, observations of activities, and interviews with personnel.

There were no findings identified during this inspection.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available **electronically** for public inspection in the NRC Public Document Room **or** from the *Publicly Available Records (PARS) component of NRC's document system (ADAMS)*. *ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/NRC/ADAMS/index.html> (the Public Electronic Reading Room).*

Sincerely,

/RA/

John M. Jacobson, Chief
Mechanical Engineering Branch
Division of Reactor Safety

Docket No. 50-440
License No. NPF-58

Enclosure: Inspection Report 50-440/2000005(DRS)

See Attached Distribution

J. Woods

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cc w/encl: B. Saunders, President - FENOC
G. Dunn, Manager, Regulatory Affairs
R. Schrauder, Director, Nuclear
Engineering Department
W. Kanda, General Manager
Nuclear Power Plant Department
N. Bonner, Director, Nuclear
Maintenance Department
H. Bergendahl, Director
Nuclear Services Department
State Liaison Officer, State of Ohio
R. Owen, Ohio Department of Health
C. Glazer, State of Ohio Public
Utilities Commission

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NAME	ADunlop:jb		TKozak		JJacobson		
DATE	07/12/00		07/12/00		07/13/00		

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cc w/encl: B. Saunders, President - FENOC
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W. Kanda, General Manager
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N. Bonner, Director, Nuclear
Maintenance Department
H. Bergendahl, Director
Nuclear Services Department
State Liaison Officer, State of Ohio
R. Owen, Ohio Department of Health
C. Glazer, State of Ohio Public
Utilities Commission

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U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No: 50-440
License No: NPF-58

Report No: 50-440/2000005(DRS)

Licensee: FirstEnergy Nuclear Operating Company (FENOC)

Facility: Perry Nuclear Power Plant, Unit 1

Location: P.O. Box 97 A200
Perry, OH 44081

Dates: June 26-29, 2000

Inspectors: A. Dunlop, Reactor Engineer, Team Leader
N. Shah, Reactor Engineer
D. Jones, Reactor Engineer
R. Winter, Reactor Engineer

Approved by: John M. Jacobson, Chief
Mechanical Engineering Branch
Division of Reactor Safety

NRC's REVISED REACTOR OVERSIGHT PROCESS

The federal Nuclear Regulatory Commission (NRC) recently revamped its inspection, assessment, and enforcement programs for commercial nuclear power plants. The new process takes into account improvements in the performance of the nuclear industry over the past 25 years and improved approaches of inspecting and assessing safety performance at NRC licensed plants.

The new process monitors licensee performance in three broad areas (called strategic performance areas) reactor safety (avoiding accidents and reducing the consequences of accidents if they occur), radiation safety (protecting plant employees and the public during routine operations), and safeguards (protecting the plant against sabotage or other security threats). The process focuses on licensee performance within each of seven cornerstones of safety in the three areas:

Reactor Safety

- Initiating Events
- Mitigating Systems
- Barrier Integrity
- Emergency Preparedness

Radiation Safety

- Occupational
- Public

Safeguards

- Physical Protection

To monitor these seven cornerstones of safety, the NRC uses two processes that generate information about the safety significance of plant operations: inspections and performance indicators. Inspection findings will be evaluated according to their potential significance for safety, using the Significance Determination Process, and assigned colors of GREEN, WHITE, YELLOW or RED. GREEN findings are indicative of issues that, while they may not be desirable, represent very low safety significance. WHITE findings indicate issues that are of low to moderate safety significance. YELLOW findings are issues that are of substantial safety significance. RED findings represent issues that are of high safety significance with a significant reduction in safety margin.

Performance indicator data will be compared to established criteria for measuring licensee performance in terms of potential safety. Based on prescribed thresholds, the indicators will be classified by color representing varying levels of performance and incremental degradation in safety: GREEN, WHITE, YELLOW, and RED. GREEN indicators represent performance at a level requiring no additional NRC oversight beyond the baseline inspections. WHITE corresponds to performance that may result in increased NRC oversight. YELLOW represents performance that minimally reduces safety margin and requires even more NRC oversight. And RED indicates performance that represents a significant reduction in safety margin but still provides adequate protection to public health and safety.

The assessment process integrates performance indicators and inspection so the agency can reach objective conclusions regarding overall plant performance. The agency will use an Action Matrix to determine in a systematic, predictable manner which regulatory actions should be taken based on a licensee's performance. The NRC's actions in response to the significance (as represented by the color) of issues will be the same for performance indicators as for inspection findings. As a licensee's safety performance degrades, the NRC will take more and increasingly significant action, which can include shutting down a plant, as described in the Action Matrix.

More information can be found at: <http://www.nrc.gov/NRR/OVERSIGHT/index.html>.

SUMMARY OF FINDINGS

Perry Nuclear Power Plant, Unit 1
NRC Inspection Report 50-440/2000005(DRS)

The report covers a one week period of regional inspection on evaluations of changes, tests, or experiments (10 CFR 50.59 screenings and evaluations) and permanent plant modifications. The inspection also assessed the corrective action process relating to 10 CFR 50.59 and permanent plant modification discrepancies. There were no findings identified during this inspection.

Report Details

Summary of Plant Status: The plant was at 100 percent power this inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R02 Evaluations of Changes, Tests, or Experiments (Inspection Procedure 71111.2)

.1 Review of Evaluations of Changes, Tests, or Experiments

a. Inspection Scope

The inspectors reviewed 15 evaluations performed pursuant to 10 CFR 50.59. The evaluations related to permanent plant modifications, setpoint changes, procedure changes, conditions adverse to quality, and changes to the updated final safety analysis report. The inspectors confirmed that the evaluations were thorough and that prior NRC approval was obtained as appropriate. The inspectors also reviewed 27 evaluation applicability checks where the licensee had determined that a 10 CFR 50.59 evaluation was not necessary. In regard to the changes reviewed where no 10 CFR 50.59 evaluation was performed, the inspectors verified that the changes were minor and did not require a 10 CFR 50.59 evaluation. These evaluations and applicability checks were chosen based on risk significance of samples from the different cornerstones.

The inspectors also reviewed condition reports/problem identification forms concerning evaluation and applicability check issues to verify that the licensee had an appropriate threshold for identifying issues. The inspectors evaluated the effectiveness of the corrective actions for the identified issues. These condition reports were selected based on the inspection procedure guidance. The selected condition reports have been specified in the attached list of documents reviewed.

b. Findings

No findings were identified in this area.

1R17 Permanent Plant Modifications (Inspection Procedure 71111.17)

.1 Review of Permanent Plant Modifications

a. Inspection Scope

The inspectors reviewed a number of permanent plant modifications, which included three design change packages, three equivalent change packages, six setpoint changes, and five commercial grade dedications. The permanent plant modifications were chosen based upon their being a part of systems that had high Maintenance Rule safety significance or high risk significance in the licensee's probabilistic safety assessment. Four of the modifications involved changes to mitigating systems, while the last two

affected barrier integrity. The inspectors reviewed the modifications to confirm that the changes did not affect any systems' safety function. Design and testing aspects were verified to ensure the functionality of the modification, its associated system, and any support systems. Walkdowns were conducted for several modifications to verify proper installation.

The inspectors also reviewed condition reports/problem identification forms concerning permanent plant modification issues to verify that the licensee had an appropriate threshold for identifying issues. The inspectors evaluated the effectiveness of the corrective actions for the identified issues. These condition reports were selected based on the inspection procedure guidance. The selected condition reports have been specified in the attached list of documents reviewed.

b. Findings

There were several condition reports reviewed concerning the procurement of the wrong part, which was not identified until issued for installation in the plant. The examples noted, however, were for nonsafety-related systems. These problems did not appear to affect the procurement of safety-related components, however, due to other checks and balances within the licensee's procurement process. The inspectors did note two issues concerning the corrective actions for these condition reports. First, all of the corrective actions for condition report 99-1196 did not appear to be performed. The condition report stated the procurement process would be reviewed for potential weaknesses. This action was then assigned to be accomplished by condition report 99-1171. The corrective actions for this second condition report, however, did not address this action. Second, although the procurement problem did not affect safety-related parts, there was a potential to procure and install the wrong part in a nonsafety-related, but maintenance rule risk significant system. If this occurred, it could affect the operability of an interfacing, safety-related system. Both of these concerns were subsequently entered into the licensee's corrective action program as condition report 00-2020.

No findings were identified in this area.

4. **OTHER ACTIVITIES**

4OA5 Management Meetings

The inspectors presented the inspection results to Mr. R. Schrauder, Director, Nuclear Engineering Department, and other members of licensee management at the exit meeting held on June 29, 2000. The licensee acknowledged the findings presented. No proprietary information was identified.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

H. Bergendahl, Director, Nuclear Services Department
B. Boles, Manager, Plant Engineering
N. Bonner, Director, Nuclear Maintenance Department
G. Dunn, Manager, Regulatory Affairs
D. Gudger, Supervisor, Compliance
W. Kanda, General Manager, Nuclear Power Plant Department
T. Lentz, Manager, Design Engineering
T. Rausch, Operations Manager
S. Sanford, Senior Compliance Engineer
R. Schrauder, Director, Nuclear Engineering Department
J. Wood, Vice President, Nuclear

NRC

C. Lipa, Senior Resident Inspector

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Closed

None

Discussed

None

LIST OF DOCUMENTS REVIEWED

The following is a list of licensee documents reviewed during the inspection, including documents prepared by others for the licensee. Inclusion on this list does not imply that NRC inspectors reviewed the documents in their entirety, but, rather that selected sections or portions of the documents were evaluated as part of the overall inspection effort.

Calculations

N62T01	Condenser Air Removal Low Flow Alarm & Trip Interlock 1N62N0102A(B), 7/1/98
R43-C02	Revision 2 R43 Diesel Generator Time Delay Relays Changed from 15 to 10 Seconds, 3/21/00
CL-MOV-1E12-7 E12-92	1E12-F073 A/B and F074 A/B Maximum Differential Pressure, Revision 1 Calculation of Temperature and Steam Quality Distribution of RHR Shutdown Cooling Header, Revision 0

Condition Reports/Problem Identification Forms

PIF 96-1169, PIF 97-0416, CR 98-0264, CR 99-1171, CR 99-1196, CR 99-1562, CR 99-1626, CR 99-1735, CR 99-1740, CR 99-1747, CR 99-1804, CR 99-1848, CR 99-2262, CR 99-2652, CR 00-2010*, CR 00-2017*, CR 00-2018*, CR 00-2020*

* Condition reports initiated during inspection

Drawings

D302-0632-00000	Reactor Core Isolation Cooling
D209-208-00370	Electrical Interconnection Wiring Diagram
D302-642-00000	RHR System Diagram, E12

Miscellaneous Documents

PY-CEI/NRR-2440L	Revision 10 Updated Safety Analysis Report Submittal, 10/27/99
PY-CEI/NRR-2441L	Annual Report of 10 CFR 50.59 Safety Evaluations for 1997-1999 Submittal, 10/28/99
AFP 1E12F0073B-000	MOV Test Report (ref. RFO6 test package no. AFP 1E12F0073B), Revision 0
GE-NE-E5100188-6-1	RCIC System Turbine Exhaust Drain Line Assessment for Perry Nuclear Power Plant, Revision 1
GE-NE-E1200145-19GE-NE	Interface Review and Evaluation for Modifications Identified in DCP 98-0013 and SMRF 98-5010, 5/14/98

Procedures

IOI-11	Shutdown from Outside Control Room, Revision 6, Change 10
NEI-0331	Design Input, Revision 4, Change 1
NEI-0341	Calculations, Revision 6, Change 2
NEI-0352	Design Drawings, Revision 8, Change 2
NEI-0357	Design Change Packages, Revision 12
NEI-0361	Design Verification, Revision 3
NEI-0362	Engineering Design Guides, Revision 0, Change 1
NEI-0363	Drawing Changes, Revision 8, Change 2
NEI-0373	Initiating, Developing, and Processing Design Modifications, Revision 2, Change 1
NEI-0374	Simple Modification Requests, Revision 2, Change 1
NEI-0375	Equivalent Replacements and Equivalent Changes, Revision 0, Change 3
NEI-0420	Procurement Engineering, Revision 0, Change 1
PAP-0305	Safety Evaluations, Revision 8, Change 4
PAP-0309	Processing Plant Modifications, Revision 3
PAP-0520	Changes To The Updated Safety Analysis Report and Other Licensing Documents, Revision 4, Change 4
PAP-1121	Conduct of Infrequently Performed Tests or Evolutions, Revision 1, Change 1
PAP-1403	Control of Setpoints, Revision 6, Change 2
PAP-1608	Corrective Action Program, Revision 6
SOI-E12	Residual Heat Removal System, Revision 9, Change 9
SOI-E51	Reactor Core Isolation Cooling (RCIC) System, Revision 7, Change 10

Design Change Packages/Equivalent Change Packages

DCP 98-00013	Leakage past valve 1E12-F008 is causing the RHR shutdown cooling header to pressurize, 9/23/99
DCP 98-05049	Removal of check valve, relocation of orifice to a vertical run of piping, and correction of the slope of the piping to reduce RCIC drain line clogging, 9/16/99
DCP 98-05060	Division II Diesel Generator Control Logic, 12/15/99
ECP 98-08029	Install Upgrade Kits into Containment Isolation Valves 1P11F0060, 1P43F0055, 1P43F0140, and 1P43F0215, 4/24/99
ECP 98-08033	Replace Diesel Generator Jacket Water Dwyer Differential Pressure Switch with a Barton Model, 11/8/99
ECP 99-08018	Replace K1 Contactor, 12/15/99

Setpoint Change Request

SCR 1-97-1000	Residual Heat Removal Pump Discharge Pressure, 10/9/97
SCR 1-98-1008	Adjust Volt Taps on Interbus Transformer, 4/27/98
SCR 1-98-1046	Alarm/Trip Setpoint for Steam Jet Air Ejector Steam Flow, 7/29/98
SCR 1-98-1055	Setpoints for Condensate Storage Tank Alarm Unit, 2/23/99
SCR 1-99-1000	Level Switch Setpoint for ECP 98-8033, 4/1/99
SCR 1-99-1001	Level Switch Setpoint for ECP 98-8024, 4/1/99

10 CFR 50.59 Evaluations

99-0002 SCR 1-98-1055, Setpoints for Condensate Storage Tank Alarm Unit, 2/18/99
99-0006 DCP 97-5086, Setpoint Changes to Turbine Vibration and Exhaust Hood
Temperature Monitoring, 3/8/99
99-0026 DCP 98-5060, Division II Diesel Generator Control Logic Alarm Unit, 6/1/99
99-0030 SOI-G41(FPCC), Realignment of ESW [Essential Service Water] Loops to
Provide Parallel Cooling Water to Both FPCC [Fuel Pool Pump Cooling] Heat
Exchangers, 3/29/99
99-0035 SMRF 99-6016, Remove Dampers 1M13F0555 and 1M13F0560 from the
Drywell Cooling System, 4/10/99
99-0053 RCIC Turbine Exhaust Drain Pot Drain Line Improvements (SMRF 98-5049),
Revision 0
99-0056 Partial Closure of MRF 98-0013, Revision 0
98-0065 MRF 98-0013, Revision 0
99-0080 WMI-004, "On-line Scheduling," Revision 2, and Proposed USAR Change
Request, 10/25/99
99-0093 PAP-1914, "Fire Protection System Operability," Revision 5, Change 11,
12/10/99
99-0098 USAR Change Request 99-124, 2/8/00
99-0099 Use As-is Disposition for Cracks in the Concrete Lining of the Intake Water
Tunnels per Condition Report 99-2157, 12/7/99
00-0005 USAR Change Request 00-005, 5/12/00
00-0008 USAR Change Request 00-027, 5/2/00
00-0035 Setpoint Changes for Power Uprate, 6/6/00

Technical Evaluation for Parts Procurement/Inspection

TEPPI-1568 Switch, Level; Low Water, Expansion Tank, Jacket Water (PO7029800), 3/20/00
TEPPI-132 Bearing-Ball, Deep Groove, Conrad Type, Unshielded, Single Row,
AFBMA-45BCO3 (PO 7028063), 2/28/00
TEPPI-133 Bearing-Ball, Deep Groove, Conrad Type, Unshielded, Single Row,
AFBMA-45BCO3 (PO 7028063), 2/28/00
TEPPI-1312 Seat-Valve, 2"-600#, Model 5580W Lift Check, A276 Type 410 Condition T
(PO 7019565), 10/13/99
TEPPI-1313 Seat-Valve, 2"-600#, Model 5580W Lift Check, A276 Type 410 Condition T,
(PO 7019565), 10/13/99
TEPPI-1641 Switch, Pressure, Differential, .5 - 80 PSI (PO 7035580), 5/22/00
TEPPI-1642 Switch, Pressure, Differential, .5 - 80 PSI (PO 7035580), 5/22/00

10 CFR 50.59 Screenings

DCP 90-0056	Replace Existing Dresser Valves 1E12F0573, 1E12F0582, 1E12F0520A, and 1E12F0520B with Kerotest Valves, 2/1/91
DCP 98-5060	Division II Diesel Generator Control Logic, 6/10/99
DCP 99-5022	Remove Slot and End Sensors on Control Room Chillers 0P47B001A(B), 6/16/99
ECP 98-8029	Installation of Upgrade Kits into Containment Isolation Valves 1P11F0060, 1P43F0055, 1P43F0140 and 1P43F0215
ECP 99-8030	Remove Tack Weld Nub on Jet Pump Beam Bolt, 3/24/99
ECP 98-8033	Division I & II Jacket Water Level Switch Replacement, 12/14/98
ECP 99-8018	Replace K1 Contactor, 8/10/99
SCR 1-97-1000	Residual Heat Removal Pump Discharge Pressure, 10/9/97
SCR 1-98-1008	Setpoints for Condensate Storage Tank Alarm Unit, 4/27/98
SCR 1-98-1046	N62 Steam Jet Air Ejector Alarm & Trip Setpoint Change Requests, 7/22/98
SCR 1-98-1055	Adjust Volt Taps on Interbus Transformer, 2/23/99
SCR 1-99-1000	Change Setpoint, LAIZ and Reset for New Switch Installation, 4/1/99
SCR 1-99-1001	Change Setpoint, LAIZ and Reset for New Switch Installation, 4/1/99
SCR 1-99-1050	Raise Setpoint of the Turbine Building Main Steam Line Tunnel Temperature Switches, 7/21/99
SMRF 99-6016	Remove Dampers 1M13F0555 and 1M13F0560 from the Drywell Cooling System, 4/10/99
GEI-0057	Battery Charger Maintenance, Calibration and Functional Testing, Revision 3, Change 2, 5/23/00
GMI-0019	Disassembly and Reassembly of CRD-HCU Directional Control Valves, Revision 0, Change 7, 6/5/00
GMI-0177	Henry Pratt 1200 Series 6" to 24" Butterfly Valve Maintenance, Revision 0, Change 1, 5/5/00
IMI-E3-23	Division III HPCS Diesel Generator Woodward Governor Maintenance (E3-23), Revision 1, Change 7, 4/27/00
PAP-1914	Fire Protection System Operability, Revision 5, Change 11, 10/27/99
PDB-R001	Operations Requirement Manual, Revision 0, Change 23, 6/5/00
SOI-E22A	High Pressure Core Spray System (Unit 1), Revision 5, Change 9, 2/15/99
SOI-G41(FPCC)	Realignment of ESW Loops to Provide Parallel Cooling Water for Both FPCC Heat Exchangers
SVI-B21-T2100	Safety Relief Valve (SRV) Set Pressure Testing, Revision 3, Change 1, 4/4/99
SVI-E12-T9407	Type C Local Leak Rate Test of 1E12-Penetration P407, Revision 7, Change 1, 4/6/99
TAI-1120-5	Statistical Summation of Type C Water Leakage Rates, Revision 1, Change 1, 4/6/99
CR 99-2157	Use As-is Disposition for Cracks in the Concrete Lining of the Intake Water Tunnels per Condition Report 99-2157, 11/16/99