



**CENTERIOR
ENERGY**

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U. S. Nuclear Regulatory Commission
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Washington, D.C. 20555

Perry Nuclear Power Plant
Docket No. 50-440
Response to Notice of Violation

Gentlemen:

By correspondence dated April 25, 1994 the Nuclear Regulatory Commission (NRC) transmitted Inspection Report 50-440/94004 and an associated Notice of Violation (NOV). The Inspection Report documented the results of the special team inspection conducted by the resident inspectors and others on January 30 through March 9, 1994. The April 25, 1994 correspondence required a response to the NOV and requested certain information regarding specified weaknesses. The requested information included actions taken and planned to address the specified weaknesses.

The response to the NOV and the specified weaknesses is provided by the attachment. A change in schedule for the submittal of this response was discussed with the appropriate Region III branch head on May 25, 1994.

If you have questions or require additional information, please contact Mr. J. D. Kloosterman, Manager - Regulatory Affairs, at (216) 280-5833.

Very truly yours,

RAS:TEC

Attachments

cc: NRC Project Manager
NRC Resident Inspector
NRC Region III

090106

Operating Companies
Cleveland Electric Illuminating
Toledo Edison

9406100002 940603
PDR ADDCK 05000440
PDR

Response to Notice of Violation
and Specified Weaknesses

Introduction

Violation 94004-01 includes four separate examples of which two examples involve deficiencies in the content of instructions and two examples involve failure to adhere to the procedural requirements. Due to the diversity in the circumstances associated with each of the examples described in the Notice of Violation under sections 1.a, 1.b, 1.c and 1.d, a separate response to each example is provided. Although a separate response is provided for each example, the implications of the violation as a whole are clearly recognized. In addition to the specific corrective actions delineated in the response to each of the examples, the following activities are planned to improve overall performance in the areas of procedural adherence and procedural deficiencies:

The Vice-President, Nuclear will issue a policy statement that clarifies and reinforces the requirement for procedural adherence by July 1, 1994.

During employee meetings to be held with the Vice-President, Nuclear and site employees and between department directors and employees, the issue of procedural adherence will be reviewed and discussed. These discussions will emphasize management expectations regarding adherence to procedures. These meetings will be complete by August 31, 1994.

A study of the process which governs procedure development, review, approval and revision has been completed. The recommendations from this study include activities which can improve the quality of the process and the resultant procedures. A task force will be formed to assess and develop an implementation strategy based on the recommendations. This task force will be formed by August 1, 1994.

Additionally, a procedure review checklist has been developed to improve the quality of procedures and is currently under evaluation. The use of this checklist will be implemented for new and revised procedures by July 15, 1994.

Responses to Violations

50-440/94004-01.a

Restatement of the Violation

10 CFR Part 50, Appendix B, Criterion V, requires, in part, that activities affecting quality be prescribed by and accomplished in accordance with, documented instructions, procedures or drawings of a type appropriate to the circumstances. These instructions, procedures, or drawings shall include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily completed.

Contrary to the above, on February 2, 1994, after a water hammer occurred, the shift supervisor failed to log the occurrence of the water hammer in the plant log and failed to inform plant management, as required by Procedure PAP-0201, "Conduct of Operations".

Reason for the Violation

This violation was the result of inappropriate judgment by the shift supervisor in failing to recognize the condition should have been logged in accordance with PAP-0201. Contributing to the violation was a procedural weakness which failed to provide clear instructions regarding the broader category of piping/system thermal transients, in addition to a classical water hammer, which should be identified and appropriately documented.

Corrective Action Taken and Results Achieved

The incident has been reviewed with the involved shift supervisor, including a discussion of the sensitivity to be applied to piping/system thermal transients and the expected actions regarding logging and initiation of corrective actions including condition reports.

A copy of Inspection Report 50-440/94004, including the associated NOV, has been provided to each shift supervisor for review and to share this information with each shift's personnel including discussion of the failures and how improvements can be achieved. This will be completed by July 1, 1994.

A condition report was generated on March 9, 1994 to document and investigate the specific transient condition.

Actions to Be Taken to Avoid Further Violations

PAP-0201 will be revised to clearly provide instructions regarding the broad category of piping/system thermal transients which require elevated levels of attention. This revision will be complete by August 15, 1994.

Date When Full Compliance Will Be Achieved

Full compliance for this example has been achieved. The initiation of the condition report and subsequent follow-up meets the intent of PAP-0201. An entry to the plant log was made to document the event on May 27, 1994.

50-440/94004-01.b

Restatement of the Violation

10 CFR Part 50, Appendix B, Criterion V, requires, in part, that activities affecting quality be prescribed by and accomplished in accordance with, documented instructions, procedures or drawings of a type appropriate to the circumstances. These instructions, procedures, or drawings shall include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily completed.

Contrary to the above, Surveillance Test Procedures SVI-B21-T9124, T9416, T9122, and T9415, and Periodic Test Instructions PTI-B21-P001, 2, 3, and 4, used on February 14 and 15, 1994, during leak rate testing of the main steam lines were inappropriate to the circumstances in that they failed to contain a qualitative acceptance criteria for instrument air for the main steam isolation valve actuators.

Reason for the Violation

The preparation and review of the local leak rate test (LLRT) procedures for the main steam isolation valves (MSIV) did not properly consider the need to establish procedural control for the utilization of air in assisting closure of the MSIVs for testing.

Corrective Action Taken and Results Achieved

The Surveillance Instructions (SVI) used for testing the MSIVs and the Periodic Test Instructions (PTIs) used to troubleshoot MSIV leakage have been revised to provide appropriate prerequisites to control the availability of the air supply to the MSIVs.

Actions to Be Taken to Avoid Further Violations

The activities identified in the introductory section of this response address corrective actions regarding procedure/instruction adequacy. No further actions specific to this example are deemed necessary.

Date When Full Compliance Will Be Achieved

Full compliance relative to this example has been achieved by the revisions to the SVIs and PTIs.

50-440/94004-01.c

Restatement of the Violation

10 CFR Part 50, Appendix B, Criterion V, requires, in part, that activities affecting quality be prescribed by and accomplished in accordance with, documented instructions, procedures or drawings of a type appropriate to the circumstances. These instructions, procedures, or drawings shall include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily completed.

Contrary to the above, on February 25 and 26, 1994, surveillance testing of the safety relief valve (SRV) logic was not accomplished in accordance with procedures appropriate to the circumstances. Surveillance Procedures SVI B21-T0370A, "SRV Pressure Actuation Channel Calibration for B21-N068A and B21-N068E," and SVI-T0370B, "SRV Pressure Actuation Channel Calibration for B21-N068B and B21-N068F" both had an error which unintentionally caused an SRV to open. Also, on February 25, 1994, during the conduct of the SVIs, the Lead Test Performer did not stop the test when unexpected plant behavior was experienced, as required by Procedure PAP-1105, "Surveillance Test Control".

Reasons for the Violation

The cause for the deficiency in the Surveillance Instruction (SVI) was an inadequacy in the preparation and review of the last revision of the affected SVIs, which was not effective in assuring the seal in logic was reset to preclude the opening of the SRVs. The involved SVIs had been revised since their last performance. During this revision, sequencing of the calibration checks had been changed and steps to reset the seal in logic had been inadvertently omitted.

The lead test performer did not stop the test when unexpected plant behavior was experienced since the lead test performer was unaware the annunciator ("SRV OPEN SIGNAL RECEIVED") had been received in the control room. Initially, the control room operators incorrectly believed the annunciator was an expected result of the SVI and that it did not indicate an actual SRV opening. The control room operator on the next shift recognized the opening of the SRV and identified it was not an expected result of the SVI. At that time the lead test performer was notified and the SVI was terminated.

Additional information regarding this example is contained in LER 94-008-00.

Corrective Action Taken and Results Achieved

Both involved SVIs have been revised to correct the deficiency. On March 3, 1994, the corrected SVI B21-T0379A was successfully completed.

Calibration SVIs revised since the last refueling outage have been reviewed to identify those SVIs which had not been performed. Similar instrumentation and control SVIs revised as a group were examined to ensure at least one of the group had been successfully performed. Seven SVIs were identified that had not been validated by performance. These seven SVIs were subsequently validated/verified.

Control room operations crews were initially informed of this event by a daily instruction. This event was discussed with the licensed operators to highlight this event and the operations policy "Control Room Response to Annunciators."

Actions to Be Taken to Avoid Further Violations

The activities identified in the introductory section of this response address corrective actions regarding procedure/instruction adequacy. No further actions specific to this example are deemed necessary.

Date When Full Compliance Will Be Achieved

Full compliance relative to this example was achieved with the revision of the involved SVIs.

50-440/94004-01.d

Restatement of the Violation

10 CFR Part 50, Appendix B, Criterion V, requires, in part, that activities affecting quality be prescribed by and accomplished in accordance with, documented instructions, procedures or drawings of a type appropriate to the circumstances. These instructions, procedures, or drawings shall include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily completed.

Contrary to the above, on March 1, 1994 during work on Emergency Diesel Generator 1R43C0001A (1A), the measurement of piston ring gap was not accomplished in accordance with the documented instructions in work order (WO)

94-763 in that measurements were not taken as directed by step 5.3.2 and attachment 2 of work Instruction PMI-0053, "Division 1 and 2 Standby Diesel Generator Connecting Rod and Piston Maintenance".

Reason for the Violation

This event was due to personnel error involving failure to comply with procedural requirements. The craftsmen performing the work took the ring gap measurements with the rings at the top of the cylinder based on verbal instructions from their supervisor. The supervisor, based on previous experience with other diesels, believed that the gap measurements should be taken at the top of the cylinders so that the rings would be in a configuration more representative of their normal operating conditions.

Corrective Action Taken and Results Achieved

The gap measurements were re-performed with the rings located 6 inches above the bottom of the cylinder liner as specified by step 5.3.2 and attachment 2 of PMI-0053.

On April 9, 1994 and April 10, 1994, in response to concerns with the procedure compliance issue, meetings were held with craft supervisory and non-supervisory personnel. These meetings stressed the requirement for procedure compliance. These meetings also reviewed the consequences (disciplinary and potential legal action) that could result from willful non-compliance. Additionally, on May 6, 1994, a letter was issued from the maintenance manager to maintenance supervisors emphasizing management's expectation for immediate, verbatim, step-by-step procedural compliance.

Actions to Be Taken to Avoid Further Violations

The activities identified in the introductory section of this response address activities planned regarding the overall issue of procedural adherence. No further actions specific to this example are deemed necessary.

Date When Full Compliance Will Be Achieved

Full compliance has been achieved for this example based upon the correct performance of the ring gap measurement.

50-440/94004-02

Restatement of the Violation

Appendix B of 10 CFR Part 50, Criterion II, requires in part, that activities affecting quality shall be accomplished under suitable controlled conditions. Controlled conditions include the use of appropriate equipment, suitable environmental conditions for accomplishing the activity, such as adequate cleanliness, and assurance that all prerequisites for the given activity have been satisfied.

Contrary to the above, adequate cleanliness was not maintained for the Division 1 emergency diesel generator during corrective maintenance, as evidenced by a rag observed inside following the corrective maintenance.

Reason for the Violation

The work process did not properly control the work and resulted in a loss of material accountability during the involved maintenance activity. Rags were used during the maintenance to block holes in the cylinder head sub cover so items did not fall into the engine. The work orders for placing the rags into the holes had steps for removal with a second party verification. These steps were completed, however, the steps did not account for the number of rags used.

Neither the work order instructions nor the Housekeeping/Cleanliness Control Program (PAP-0204) provided appropriate controls/instructions for material exclusion. The procedural controls in PAP-0204 for internal cleanliness requirements were written specifically to address piping and valve openings and were vague for components such as diesel engine crank case and pump internals.

Corrective Action Taken and Results Achieved

An action plan was developed and implemented for the Division I diesel engine to remove the rag and address the potential that other foreign material may have been inadvertently introduced into the engine. The completion of this action plan did not find any other instance of significant foreign material intrusion.

Work order packages for the diesel engines were reviewed and appropriate controls implemented to preclude further instances of foreign material intrusion into the engine. Plastic zip lock type bags with numbers and lanyards were filled with five rags each and secured closed with duct tape. These bags were used to cover openings during subsequent maintenance on the Division II diesel generator with the work package documentation identifying the location by bag number, date of installation and date of removal. The numbered zip lock bags were not used during the subsequent Division III diesel generator maintenance due to the smaller size of the Division III diesel engine and configuration differences. Material and personnel accountability logs were maintained during the subsequent maintenance on both the Division II and Division III diesel generators during activities which had the potential for introduction of foreign material into open systems or areas of the engines.

Actions to Be Taken to Avoid Further Violations

PAP-0204 will be revised to strengthen material exclusion controls when opening equipment or systems which have areas which will not be accessible to direct visual inspection. This revision will be complete by September 8, 1994.

Date When Full Compliance Will Be Achieved

Full compliance relative to this example was achieved upon completion of the specified diesel generator action plan and the subsequent successful engine testing.

Additional Actions Taken or Planned Regarding Specified Weaknesses

In addition to the response to the NOV, additional information was requested regarding actions taken or planned for weaknesses in cleanliness and material accountability during earlier maintenance activities on the diesel engine and for weaknesses in the ownership in the diesel generator.

Actions which have been taken regarding the weaknesses in housekeeping and material accountability during earlier maintenance activities on the diesel engine include the following:

- This incident was communicated to appropriate work groups to ensure system cleanliness requirements and material accountability are maintained during performance of maintenance activities.
- The action plan for the diesel generator specified in the above response to violation 94004-02 was implemented. This action plan included the following activities:
 - Removal of the rag
 - Removal of the engine sump oil
 - Inspection of affected lube oil sump and strainer
 - Removal of cam shaft galley doors and inspection of the cam shaft galley area
 - Inspection of the engine's internals
 - Cleaning (vacuuming) oil from bottom of engine and inspection
 - Inspection of keep warm lube oil filter
 - Flushing jacket water through the strainer and evaluation of results
 - Removal of the injectors and inspection of the piston area

The completion of this action plan did not identify additional instances of significant foreign material in the diesel engine.

In addition to these actions, the revision to PAP-0204, specified in the above response to the violation, will strengthen material exclusion controls when opening equipment or systems which have areas which are not accessible to direct visual inspection.

Regarding the weakness in ownership of the diesel generator, the issue is considered to include the ownership and accountability for identification and resolution of diesel generator related problems. Similar issues along with objectives and associated action plans have been previously identified in the Perry Course of Action (PCA). The PCA provides the framework for improving the organizational culture at Perry Nuclear Power Plant and for effecting the changes necessary to achieve the appropriate attitudes and actions by personnel.

One specific action of the PCA, Site Policy M&C - 7, Management Meetings, was developed to ensure that senior and middle managers meet with employees on a regular basis to discuss expectations and review both successes and failures of the organization. During the first cycle of employee meetings to be held between the Vice President, Nuclear and site employees and between department directors and employees, the issues of ownership, accountability and management

expectations will be reviewed and discussed. The above incident involving the diesel generator will be used as an example of a failure to meet management expectations. These meetings will be completed by August 31, 1994. This action, as well as other activities described in the PCA is expected to improve performance relative to the ownership issue.