

Docket No. 50-346

License No. NPF-3

Serial No. 1-514

May 9, 1985



RICHARD P. CROUSE
Vice President
Nuclear
(419) 249-5221

Mr. James G. Keppler, Director
United States Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, Illinois 60137

PRIORITY ROUTING

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Dear Mr. Keppler:

The Toledo Edison Company submitted to you on September 13, 1983, (Serial No. 986) a detailed plan for resolution of findings identified during the July 25-29, 1983 Fire Protection Audit. The audit was conducted by members of your staff at the Davis-Besse Nuclear Power Station, Unit 1 (DB-1).

Since that time Toledo Edison has acted aggressively to systematically identify the full extent of the Fire Protection deficiencies with regard to our commitments and to implement activities aimed at resolving them.

Toledo Edison's aggressive program has consisted of short and long term actions to resolve specific, as well as generic, fire protection program deficiencies. A significant expenditure of resources has been committed to implement such a program.

This resource allocation, and the need for Toledo Edison to assure it's resources were being applied appropriately, necessitated reviewing certain identified tasks with the findings identified in the Fire Protection Inspection Report. This review was required prior to final task implementation.

The status and/or results of these tasks were then identified to be submitted to the NRC with the Toledo Edison response to the inspection report, Toledo Edison letter, Serial No. 1042, dated April 16, 1984.

On September 5, 1984, the Toledo Edison Company received the Nuclear Regulatory Commission's (NRC) Inspection Report (Log No. 1-1024) documenting the results of the special safety inspections conducted at DB-1 on July 11-13 and July 25-29, 1983. Toledo Edison was not required to respond to that inspection report, therefore, we are providing the status of those tasks categorized above with this submittal.

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Attachment 1 identifies and references each commitment. Attachment 2 provides the status of each task. Attachments 3 and 4 provide specific technical information.

It is our intent to utilize allocated resources wisely to satisfactorily address this and all issues currently facing Toledo Edison.

Very truly yours,

R P Crouse / for

RPC:JSH:sm/nlf
encl.

cc: Director of Inspection and Enforcement
United States Nuclear Regulatory Commission
Washington, DC 20555
DB-1 NRC Resident Inspector - w/o attachments

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COMMITMENT REFERENCE

TASK SUMMARY

<u>Item</u>	<u>Commitment Reference</u>	<u>Task Summary</u>
1.	Toledo Edison letter Serial No. 986, dated September 13, 1983 Task No. 3	A review will be performed to ensure commitment compatibility between the Fire Hazards Analysis Report (FHAR), NFPA Code, Updated Safety Analysis Report (USAR), and the technical specifications.
2.	Serial No. 986, dated September 13, 1983 Task No. 7	A review will be performed of com- pliance with previous commitments made to BTP APCS 9.5-1 Appendix A and appropriate NRC Submittal Documents for Fire Protection.
3.	Serial No. 986, dated September 13, 1983 Page 23	An engineering analysis on fire dampers will be initiated to ascertain locations, maintenance and modifications activity re- quired, schedule for completion and program for continued damper opera- bility.
4.	Serial No. 986, dated September 13, 1983 Page 43	Further clarification of personnel responsibilities will be provided in our response to the inspection report.
5.	Serial No. 986, dated September 13, 1983 Task No. 6	An additional review of the adequacy of test report documentation will be performed to verify the accepta- bility of Kaowool fire barrier wraps on cable trays and conduit in accordance with ASTM E-119.

SPECIFIC FIRE PROTECTION TASK STATUS

<u>Item</u>	<u>Commitment Reference</u>	<u>Task Summary</u>
1.	Toledo Edison letter Serial No. 986, dated September 13, 1983 Task No. 3	A review will be performed to ensure commitment compatibility between the Fire Hazards Analysis Report (FHAR), NFPA Code, Updated Safety Analysis Report (USAR), and the technical specifications.

The intent of this task was to document and clarify as necessary the Fire Protection commitments made within the referenced documents, and to develop the checklists required to perform any field verification walkdowns that may be required.

Toledo Edison has completed this task. The task was initiated through the performance of a review of Fire Protection commitment documents to ascertain the extent of the NFPA Code commitments. The results of this review were then verified against purchase and design specifications to identify the codes and the appropriate year to each applicable code. A summary listing of the NFPA codes with the year of the codes identified is included as Attachment 3.

The commitment review effort also identified commitments in other existing docketed information. The results of this review were utilized together with the NFPA Codes to perform a review of the FHAR, USAR and Technical Specifications for inconsistencies and/or inaccuracies in the documents.

The FHAR is currently undergoing a major revision. This revision will correct inconsistencies identified as a result of the commitment assessment effort. Additionally, this revision will:

- Incorporate revisions and update the FHA with regard to impacting Fire Hazards Change Notices and update combustible loading data.
- Provide a documented technical review of the planned FHAR revision against the DB-1 SER (NUREG-0136) and the Fire Protection Program SER (Log No. 409), to ensure compatibility.

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- Incorporate information from existing Safety Evaluation Reports.

With regard to the USAR and the Technical Specifications, efforts have been initiated to update these documents, to resolve identified inconsistencies and/or contradictions. Fire Protection Technical Specifications will be updated subsequent to Toledo Edison's receipt and review of Generic Letter 85-01.

Finally to ensure that the as-built plant condition adequately reflects the Toledo Edison Fire Protection commitments, a series of field verification activities are underway. These field verifications will document the plant Fire Protection system modification consistency with regard to our Fire Protection commitments.

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<u>Item</u>	<u>Commitment Reference</u>	<u>Task Summary</u>
2.	Serial No. 986, dated September 13, 1983 Task No. 7	A review will be performed of compliance with previous commitments made to BTP APCSB 9.5-1 Appendix A and appropriate NRC Submittal Documents for Fire Protection.

Concurrent with Item 1 (Serial No. 986, Task No. 3), this task was initiated to document Fire Protection commitments made to comply with BTP 9.5-1 Appendix A and other appropriate supplemental guideline documents.

The results of this review are currently being factored into the revision of the Fire Hazards Analysis Report.

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<u>Item</u>	<u>Commitment Reference</u>	<u>Task Summary</u>
3.	Serial No. 986, dated September 13, 1983 Page 23	An engineering analysis on fire dampers will be initiated to ascertain locations, maintenance and modifications activity re- quired, schedule for completion and program for continued damper operability.

Toledo Edison acted aggressively to determine the extent of problems to the operability, maintainability and testability of fire dampers required for fire area separation.

Attachment 4 is included to summarize the Fire Dampers Improvement Program initiated at DE-1.

Currently, accessible dampers capable of being maintained which affect safety related areas have been tested and are operable. Re-testing of these dampers has been initiated in order to obtain a normal testing frequency. Testing has been completed on 88 of 128 safety related fire dampers. Modifications are being performed on the remaining fire dampers to allow adequate testability and maintainability.

Additionally, a special Safety Inspection was conducted on June 7, 8, 1984 by your Mr. Joseph Ulie. This inspection was documented in NRC letter dated July 5, 1984, (Log No. 1-988). During that inspection, the Fire Damper Program, summarized as Attachment 4, was reviewed. No items of noncompliance or deviations were identified.

<u>Item</u>	<u>Commitment Reference</u>	<u>Task Summary</u>
4.	Serial No. 986, dated September 13, 1983 Page 43	Further clarification of personnel responsibilities will be provided in our response to the inspection report.

After the 1983 NRC audit, several recommendations were made to upgrade fire protection staffing. As a result, several changes have been made, with others still under review.

An evaluation was completed in March, 1984, to assess the adequacy of the Fire Protection staff at DB-1 against existing fire protection commitments. The report recommendations relating to staffing, with the actions taken by Toledo Edison, are listed below.

1. ADD AN ASSISTANT FIRE PROTECTION COORDINATOR.
In July, 1984 a new assistant Fire Protection Coordinator was added to the Station's staff to help reduce the Fire Protection Coordinator's workload.
2. TRANSFER TRAINING AND TESTING TO TRAINING DEPARTMENT.
This item has not been carried out. Both training and testing are part of a Fire Protection Performance Enhancement Program (PEP) action plan (D/FP-1, "Development of a Fire Protection Program"). The action plan provides for a review of the needs of fire protection training and testing and the staffing necessary to carry them out.
3. ADD A FIRE PROTECTION ENGINEER.
Two fire protection engineers are on staff in the Nuclear Facility Engineering Department. Both of these engineers are full members in the Society of Fire Protection Engineers and work full time on fire protection.
4. REDUCE THE WORKLOAD OF THE FIRE PROTECTION COORDINATOR.
This has been done by the addition of an assistant fire protection coordinator (see Item 1 above).

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Additionally, a special Safety Inspection was conducted on June 7, 8, 1984 by your Mr. Joseph Ulie. This inspection was documented in NRC letter dated July 5, 1984 (Log No. 1-988). During that inspection the qualifications of Toledo Edison Fire Protection Engineers were reverified and no items of noncompliance or deviations were identified.

As shown above, Toledo Edison has taken positive steps to improve staffing.

<u>Item</u>	<u>Commitment Reference</u>	<u>Task Summary</u>
5.	Serial No. 986, dated September 13, 1983 Task No. 6	An additional review of the adequacy of test report docu- mentation will be performed to verify the acceptability of Kaowool fire barrier wraps on cable trays and conduit in accordance with ASTM E119.

The evaluation performed to justify the use of Kaowool as a one hour barrier in certain configurations has been completed.

The objective of that report is to demonstrate the adequacy of Kaowool blanket wrap as installed at DB-1 to provide one hour of protection from an engulfing fire as required in Section III.G.2.c of Appendix R to 10 CFR 50.

The report concludes that:

1. Two 1 inch layers of Kaowool blanket wrap as installed at DB-1 will provide 1 hour of protection from an engulfing fire to straight sections, tees, and elbows of cable trays.
2. Two 1 inch layers of Kaowool blanket wrap similarly installed, will provide 1 hour of protection to straight sections, tees, and elbows of conduits of 2 inch or larger diameter.

This report has additionally been revised to address certain concerns raised within the proposed Generic Letter 85-01.

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TED NFPA CODES

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|-----|-------------------|--|
| 1. | NFPA 4 (1971) | Organization for Fire Services |
| 2. | NFPA 4A (1969) | Organization of a Fire Department |
| 3. | NFPA 6 (1974) | Organization of Industrial Fire Loss Prevention |
| 4. | NFPA 7 (1974) | Management Control of Fire Emergencies |
| 5. | NFPA 8 (1975) | General Management Responsibility |
| 6. | NFPA 10 (1975) | Standard for Portable Fire Extinguishers |
| 7. | NFPA 13 (1978) | Standard for the Installation of Sprinkler System |
| 8. | NFPA 13A (1981) | Recommended Practice for the Inspection, Testing and Maintenance of Sprinkler Systems |
| 9. | NFPA 14 (1978) | Standard for the Installation of Standpipe and Hose Stations |
| 10. | NFPA 15 (1977) | Standard for Water Spray Fixed Systems for Fire Protection |
| 11. | NFPA 20 (1974) | Standards for the Installation of Centrifugal Fire Pumps |
| 12. | NFPA 24 (1968/73) | Standard for Outside Protection |
| 13. | NFPA 26 (1976) | Recommended Practices for the Supervision of Valves |
| 14. | NFPA 27 (1975) | Controlling Water Supplies for Fire Protection |
| 15. | NFPA 30 (1973) | Recommendations for Organization, Training and Equipment |
| 16. | NFPA 50A (1973) | Flammable and Combustible Liquids Code |
| 17. | NFPA 51 (1974) | Gaseous Hydrogen System |
| 18. | NFPA 51B (1975) | Standard for the Installation and Operation of Oxygen-Fuel Gas Systems for Welding and Cutting |
| 19. | NFPA 69 (1973) | Fire Prevention in Use of Cutting and Welding Processes |
| 20. | NFPA 72D (1975) | Standard on Explosion Prevention Systems |
| 21. | NFPA 72E (1978) | Standard for the Installation, Maintenance and Use of Proprietary Protective Signaling Systems |
| 22. | NFPA 78 (1975) | Standard on Automatic Fire Detectors |
| 23. | NFPA 80 (1977) | Lightning Protection Code |
| 24. | NFPA 90A (1978) | Standard for Fire Doors and Windows |
| 25. | NFPA 92M (1972) | Standard for Installation of A/C and Ventilating Systems |
| 26. | NFPA 204 (1978) | Water Proofing, Draining of Floors |
| 27. | NFPA 251 (1972) | Guide for Smoke and Heat Venting |
| | | Standard Methods of Fire Tests of Building Construction and Materials |

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FIRE DAMPER PLAN SUMMARY

Within the September 13, 1983 NRC Audit Response Submittal (Serial No. 986) the following commitment was made concerning fire dampers.

The damper testing program currently being performed will be extended to include fire dampers performing required fire barrier functions. Additionally, an engineering analysis will be initiated to ascertain:

- The locations of fire dampers.
- The maintenance and/or modification activity required to enable testing of each fire damper.
- A schedule for which the completion of damper testing can be identified.
- A program enabling the development of the preventive maintenance - surveillance frequency and actions to ensure fire dampers continued operability.

History of Damper Testing

In January of 1982, a NRC Fire Protection Inspection took place at DB-1. The Inspection covered aspects of the Toledo Edison's Fire Protection and Fire Prevention Programs. A review of the Inspection Report identifies that fire dampers were not considered a part of that audit nor were any deficiencies identified with regard to fire dampers. It is understood, however, that discussions concerning fire damper functionability verification were held. Subsequent to that audit, Toledo Edison personnel discussed the issue of verifying the functionability of fire dampers installed at D^r-1. As a result of these discussions, because of the concern placed upon this issue by the Toledo Edison staff, Surveillance Test ST 5016.11, "Fire Protection System Barrier Surveillance Test" was revised to include the functional testing of fire dampers. Damper testing commenced at DB-1 in April, 1983.

Current DB-1 Technical Specifications define the Surveillance Requirements pertaining to fire dampers, as follows:

- 4.7.10 The above required penetration fire barriers shall be verified to be functional:
- a. At least once per 18 months by a visual inspection.
 - b. Prior to returning a penetration fire barrier to functional status following repairs or maintenance by performance of a visual inspection of the affected penetration fire barrier(s).

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Thus while only a visual inspection of fire dampers is required, Toledo Edison has deemed it necessary to operationally verify the required fire dampers ability to function.

Audit and Post Audit Activities

During the audit, the NRC Audit Team identified that three dampers were inoperable with no fire watch for a period of approximately two to three months due to personnel error and an inadequate test procedure.

The violation of Limiting Condition of Operation (LCO) concerning fire dampers has been reviewed by the Toledo Edison Fire Protection staff. Steps were taken to correct the deficiency and ensure tighter administrative control of fire damper and barrier surveillance testing within procedure ST 5016.11, "Fire Protection System Barrier Surveillance Test."

A revision of the damper testing procedure has been completed and the procedure now reflects tighter administrative controls by the Toledo Edison Fire Protection Staff. The revised procedure now clearly indicates administrative steps to be taken when functionality of a fire barrier, fire door, or fire damper is unsatisfactory. Revision of Section III of the procedure ST 5016.11 clarifies the definition of "operable" and provides explicit guidance in testing and maintenance of fire dampers.

Separate attachments incorporated into ST 5016.11 provide direct and explicit control of fire door and dampers which function unsatisfactorily. The attachments incorporated the following information to aid in control of barrier/separation criteria failure; time and date fire barrier declared inoperable, Maintenance Work Order under which fire barrier was repaired, and time fire barrier was retested and returned to service. Under the guidelines of the revised procedure, maintenance personnel were trained utilizing a program approved by both the Maintenance and Fire Protection Staff.

The NRC Audit Team reviewed this procedure prior to restart and found it acceptable.

Fire dampers inadequately tested were retested utilizing the revised procedure prior to plant startup.

Licensee Event Report (LER) NP-33-83-50 was processed per AD 1804.00, Enclosure 5. The LER included events listed in DVRs 83-092, 83-094, 83-095, 83-096, 83-097 and resolve LCO concerns regarding fire dampers.

Location and Modification Support Incorporation Identification

Soon after plant restart, a walkdown verification program was implemented to:

1. Identify damper locations.
2. Identify and document the damper ratings, serial numbers and UL approvals.
3. Verify wall ratings for comparison to damper ratings.
4. Verify accessibility to fire dampers.
5. Verify testability of fire dampers.
6. Verify maintainability of fire dampers.
7. Obtain preliminary information needed to perform modifications as necessary to enable items 4, 5 and 6 above.
8. Identify drawing deficiencies not reflecting in-plant conditions.

A detailed procedure, MC 7500.57, "Damper Verification Check List Procedure," was implemented in order to accurately collect the necessary information. Walkdown teams were developed utilizing Toledo Edison and contractor personnel, to obtain the information.

Cameras were fully utilized to obtain the as installed information to support Facility Change Request (FCR) generation.

As a result of the field walkdown, the locations have been physically verified for fire dampers in the Auxiliary Building and Turbine Building.

The results were broken down into two types, one being fire dampers acceptable for continued testing and the other being those requiring modification prior to the resumption of testing.

Categorization and Facility Change Request Development

Criteria was developed prior to the walkdown to determine if a fire damper could be tested. This criteria was based on a number of factors; e.g., existence, accessibility, testability and maintainability. In order to resume testing, every fire damper was assessed against this criteria in detail. Maintenance personnel, familiar with damper maintenance and testing, acting as part of the walkdown teams, utilized their experience in the criteria assessment. This effort is complete. The location and information needed to support FCR development was identified.

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The fire dampers were divided into three categories; the first are those fire dampers which are considered safety related (i.e., required for 10 CFR 50, Appendix R and/or Appendix A to BTP9.5-1) as well as being required per NFPA 90A. The second category are fire dampers which are considered non-safety related, but fall under the requirements of NFPA 90A and are not subject to reportability activities. The third category relates to fire dampers not located in designated, required fire barriers or fire partitions not subject to NFPA 90A requirements:

1. Category One (Safety Related)
 - a. Acceptable for Testing - 88
 - b. Physical Modifications Required (Safety Related), FCRs in Progress - 40
2. Category Two (Non-Safety Related, NFPA)
 - a. Acceptable for Testing - 13
 - b. Physical Modifications Required (Non-Safety Related) - 14
3. Category Three (Non-Safety Related, Non-NFPA) - 22

Preventative Maintenance and Surveillance Frequency Development

A Preventive Maintenance Program is being developed within the following guidelines:

Category 1a dampers have been tested per the guidelines within the revised Surveillance Test Procedure, ST 5016.11.

The test data will be reviewed and a test frequency will be identified, scheduled, and incorporated into the appropriate procedures that will best assure required damper operability.