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Docket Number 50-346

License Number NPF-3

Serial Number 2201

February 11, 1994

Mr. L. J. Callan
Acting Associate Director for Projects
Office of Nuclear Reactor Regulation
United States Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Subject: Response to 10CFR50.54(f) Request for Additional Information Regarding Generic Letter 92-08, "Thermo-Lag 330-1 Fire Barriers" (TAC No. M85542)

Dear Mr. Callan:

Toledo Edison (TE) received the Nuclear Regulatory Commission's (NRC) request for additional information regarding Generic Letter (GL) 92-08, "Thermo-Lag 330-1 Fire Barriers," on December 28, 1993 (TE Log Number 4125). This letter provides TE's response to the request as applicable to the Davis-Besse Nuclear Power Station (DBNPS).

As noted in the request, TE is participating in the ongoing industry test program being coordinated by the Nuclear Management and Resources Council (NUMARC) for addressing the Thermo-Lag 330-1 issues. Toledo Edison witnessed a portion of the NUMARC Phase I testing and is planning on witnessing a portion of the upcoming NUMARC Phase II testing.

Toledo Edison's previously submitted response to GL 92-08 (TE Serial Number 2132 dated April 16, 1993) discussed that, as an interim measure, TE has established hourly fire watch patrols as compensatory measures in the rooms where the Thermo-Lag 330-1 fire barrier system is used as a 1-hour or 3-hour fire barrier for the protection and separation of safe shutdown capability.

Under the industry test program, NUMARC is developing an Application Guide that will summarize test results and address what types of installed configurations would be bounded by a given test. Toledo Edison will provide a comprehensive update of its response, including any schedule updates, within 90 days of issuance of the NUMARC Application Guide.

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As noted in the Attachment to this letter, a 10CFR50 Appendix R exemption request was previously submitted (TE Serial Number 1809 dated May 18, 1990) which is based, in part, on the existence of radiant energy shields which separate redundant trains of safe shutdown circuits within the containment annulus. These shields are made in part of Thermo-Lag 330-1 fire barrier material. As stated in its letter dated November 30, 1993, (TE Serial Number 2188), TE planned to provide additional information in support of the exemption request by March 31, 1994. Since radiant energy shields are included in the overall program described in the Attachment, they will be addressed under the schedule described in Section VI of the Attachment. Hence, additional information in support of the exemption request will be submitted by the end of December 1994.

Toledo Edison shares the NRC's concern with the progress of efforts being made to resolve the Thermo-Lag 330-1 issues. Toledo Edison has been actively pursuing potential alternative solutions to Thermo-Lag upgrades in order to ensure regulatory compliance. More specific details are described in Section V of the Attachment to this letter. Toledo Edison would be pleased to discuss these potential alternatives in further detail with the NRC at your convenience.

If you have any questions, please contact Mr. W. T. O'Connor, Manager - Regulatory Affairs, at (419) 249-2366.

Sincerely yours,

John K Wood
for LF Storz

MKL/amb

Attachment

cc: J. B. Martin, Regional Administrator, NRC Region III
R. J. Stransky Jr., NRC/NRR DB-1 Project Manager
S. Stasek, NRC Region III, DB-1 Senior Resident Inspector
USNRC Document Control Desk
Utility Radiological Safety Board

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

REGARDING GENERIC LETTER 92-08

FOR

DAVIS-BESSE NUCLEAR POWER STATION

UNIT NUMBER 1

This letter is submitted pursuant to 10CFR50.54(f). Attached is Toledo Edison's response (letter Serial Number 2201) to the NRC letter dated December 21, 1993, received by Toledo Edison on December 28, 1993, requesting additional information regarding Generic Letter 92-08, "Thermo-Lag 330-1 Fire Barriers".

For: L. F. Storz, Vice President,
Nuclear - Davis-Besse

By: John K. Wood
J. K. Wood, Plant Manager,
Nuclear - Davis-Besse

Sworn and Subscribed before me this 11th day of February, 1994.

Evelyn L. Dress
Notary Public, State of Ohio

EVELYN L. DRESS
NOTARY PUBLIC, STATE OF OHIO
My Commission Expires July 28, 1994

TOLEDO EDISON RESPONSE TO REQUEST
FOR ADDITIONAL INFORMATION
REGARDING GENERIC LETTER 92-08

NRC Request for Information Section I:

I. Thermo-Lag Fire Barrier Configurations and Amounts

A. Discussion

Generic Letter (GL) 92-08,"Thermo-Lag 330-1 Fire Barriers," applied to all 1-hour and all 3-hour Thermo-Lag 330-1 materials and barrier systems constructed by any assembly method, such as by joining preformed panels and conduit preshapes, and trowel, spray, and brush-on applications. This includes all fire barriers, all barriers to achieve physical independence of electrical systems, radiant energy heat shields, and barriers installed to enclose intervening combustibles.

B. Required Information

1. Describe the Thermo-Lag 330-1 barriers installed in the plant to

a. meet 10 CFR 50.48 or Appendix R to 10 CFR Part 50,
b. support an exemption from Appendix R,
c. achieve physical independence of electrical systems,
d. meet a condition of the plant operating license,
e. satisfy licensing commitments.

The descriptions should include the following information: the intended purpose and fire rating of the barrier (for example, 3-hour fire barrier, 1-hour fire barrier, radiant energy heat shield), and the type and dimension of the barrier (for example, 8-ft by 10-ft wall, 4-ft by 3-ft by 2-ft equipment enclosure, 36-inch-wide cable tray, or 3-inch-diameter conduit).

2. For the total population of Thermo-Lag fire barriers described under Item I.B.1, submit an approximation of:

a. For cable tray barriers: the total linear feet and square feet of 1-hour barriers and the total linear feet and square feet of 3-hour barriers.

b. For conduit barriers: the total linear feet of 1-hour barriers and the total linear feet of 3-hour barriers.

c. For all other fire barriers: the total square feet of 1-hour barriers and the total square feet of 3-hour barriers.

d. For all other barriers and radiant energy heat shields: the total linear or square feet of 1-hour barriers and the total linear or square feet of 3-hour barriers, as appropriate for the barrier configuration or type.

Toledo Edison Response to Section I:
Thermo-Lag Fire Barrier Configurations and Amounts

Toledo Edison has Thermo-Lag 330-1 Fire Barrier systems (Thermo-Lag) installed at the Davis-Besse Nuclear Power Station (DBNPS):

- Thermo-Lag is installed to meet the requirements of 10 CFR 50 Appendix R, "Fire Protection Program for Nuclear Power Plants Operating Prior to January 1, 1979".

- Fire barriers are installed to support commitments made in several exemptions from Appendix R. Although the specific fire barrier material utilized is not explicitly referenced in the exemptions, Thermo-Lag is typically utilized.

- Thermo-Lag is not installed to achieve physical independence of electrical systems.

- The DBNPS Operating License, License Condition 2.C.(4), references fire protection program requirements in general. Although this License Condition does not explicitly refer to Thermo-Lag installations, Thermo-Lag installations are used to satisfy fire protection program requirements.

- Thermo-Lag is installed to satisfy commitments made in the DBNPS Fire Hazard Analysis Report (FHAR) to provide protection for specific safe shutdown circuits.

The Thermo-Lag applications at DBNPS can be categorized as follows:

1. One hour Appendix R fire barriers:

   a. About 740 linear feet on conduits from 0.75 to 3.0 inches in diameter.

   b. About 1000 square feet of boxes (around condulets, flow transmitters, multiple conduits, etc.) with the largest being 14 by 46 by 43 inches.

2. Three hour Appendix R fire barriers:

   a. About 170 linear feet on conduits from 0.75 to 4.0 inches in diameter.

   b. About 860 square feet of boxes (around condulets, multiple conduits, fire dampers, etc.) with the largest being 17 by 21 by 98 inches.

3. Radiant energy shields: About 170 linear feet of radiant energy shields located in the containment and the containment annulus, protecting conduit ranging in size from 0.75 to 3.0 inches in diameter, with the largest enclosure being 48 by 48 by 54 inches. As noted in the cover letter to this attachment, an Appendix R exemption request has been submitted which is based, in part, on the existence of radiant energy shields which separate redundant trains of safe shutdown circuits within the containment annulus. This exemption request is pending. In addition, there are previously granted exemptions which are based, in part, on the existence of radiant energy shields.

4. Structural steel fireproofing: About 2200 square feet, with the largest steel member being 18 inches by 24 inches in cross-section.

Thermo-Lag is not installed in cable tray fire barrier applications.

The above estimates do not include any peripheral supports and intervening items which may be enclosed by Thermo-Lag due to being in proximity.

NRC Request for Information Section II:

II. Important Barrier Parameters

A. Discussion

In a letter of July 29, 1993, from A. Marion, NUMARC, to C. McCracken, NRC, NUMARC stated: "Relative to bounded configurations, ... [i]t will be the utilities' responsibility to verify their baseline installations are bounded." Furthermore, NUMARC stated that the parameters of importance for utility use of data from the industry Thermo-Lag fire barrier test program are:

1. Raceway orientation (horizontal, vertical, radial bends)
2. Conduit
3. Junction boxes and lateral bends
4. Ladder-back cable tray with single layer cable fill
5. Cable tray with T-Section
6. Raceway material (aluminum, steel)
7. Support protection, thermal shorts (penetrating elements)
8. Air drops
9. Baseline fire barrier panel thickness
10. Preformed conduit panels
11. Panel rib orientation (parallel or perpendicular to the raceway)
12. Unsupported spans
13. Stress skin orientation (inside or outside)
14. Stress skin over joints or no stress skin over joints
15. Stress skin ties or no stress skin ties
16. Dry-fit, post-buttered joints or prebuttered joints

17. Joint gap width
18. Butt joints or grooved and scored joints
19. Steel bands or tie wires
20. Band/wire spacing
21. Band/wire distance to joints
22. No internal bands in trays
23. No additional trowel material over sections and joints or additional trowel material applied
24. No edge guards or edge guards

Each NUMARC cable tray fire test specimen includes 15 percent cable fills (i.e., a single layer of cables uniformly distributed across the bottom of the cable tray). This approach requires consideration of plant-specific cable information during the assessments of tested configurations and test results in relation to plant-specific Thermo-Lag configurations; for example, cable trays with less thermal mass (cable fill) than the NUMARC test specimens, different cable types, and the proximity of the cables to the Thermo-Lag (e.g., cables may be installed in contact with the unexposed surface of the Thermo-Lag or may come into contact during a fire if the Thermo-Lag material sags). In its letter of July 29, 1993, NUMARC stated: "Utilities using the results of the NUMARC testing will need to evaluate their installed cable fill and ensure that it is bounded by the tested cable fill." NUMARC is not conducting any cable functionality tests or evaluations and stated that cable functionality evaluations will be performed by utilities using data from the generic program.

The parameters of importance concerning cables protected by fire barriers are:

1. Cable size and type (power, control, or instrumentation).
2. Cable jacket type (thermoplastic, thermoset) and materials.
3. Cable conductor insulation type (thermoplastic, thermoset plastic) and materials.
4. Cable fill and distribution of cables within the protected conduit or cable tray.
5. Proximity of cables to the unexposed (inside) surfaces of the fire barrier.
6. Presence of materials between the cables and the unexposed side of the fire barrier material (for example, Sealtemp cloth, which is used in the NUMARC test specimens).
7. Cable operating temperature.
8. Temperatures at which the cables can no longer perform their intended function when energized at rated voltage and current.

Other parameters that are unique to particular barriers, such as interfaces between Thermo-Lag materials and other fire barrier materials or building features (walls, etc.) and internal supports, are also important. In addition, because of questions about the uniformity of the Thermo-Lag fire barrier materials produced over time, NUMARC stated in its letter of July 29, 1993, that "chemical analysis of Thermo-Lag materials

provided for the program, as well as samples from utility stock, will be performed, and a test report prepared comparing the chemical composition of the respective samples." The results of the chemical analyses may indicate that variations in the chemical properties of Thermo-Lag are significant and may require additional plant-specific information in the future.

B. Required Information

1. State whether or not you have obtained and verified each of the aforementioned parameters for each Thermo-Lag barrier installed in the plant. If not, discuss the parameters you have not obtained or verified. Retain detailed information on site for NRC audit where the aforementioned parameters are known.

2. For any parameter that is not known or has not been verified, describe how you will evaluate the in-plant barrier for acceptability.

3. To evaluate NUMARC's application guidance, an understanding of the types and extent of the unknown parameters is needed. Describe the type and extent of the unknown parameters at your plant in this context.

Toledo Edison Response to Section II:
Important Barrier Parameters

Toledo Edison has been performing numerous field walkdowns and design verifications of its Thermo-Lag installations. A current review status for each of the requested barrier and cable parameters is provided below. Parameters which are not applicable to DBNPS are indicated. As also indicated, several parameters have not yet been verified but are expected to be verifiable and will be verified during the Application Guide evaluation process if confirmed to be a critical parameter. As also indicated, several parameters are statused based upon a review of the purchase order specification or installation guide. Thermo-Lag installation was verified, at the time of installation, to be done in accordance with applicable design requirements under normal Quality Control and work practices.

A. Barrier Parameters

1. Raceway Orientation (horizontal, vertical, radial bends): has been verified from design drawings and/or walkdowns.

2. Conduit: has been verified from design drawings and/or walkdowns.

3. Junction boxes and lateral bends: have been verified from design drawings and/or walkdowns.

4. Ladder-back cable tray with single layer cable fill: is not applicable (no cable tray barrier applications are installed).

5. Cable tray with T-section: is not applicable (no cable tray barrier applications are installed).

6. Raceway material (aluminum, steel): has been verified from design drawings.

7. Support protection, thermal shorts (penetrating elements): have been verified from design drawings and/or walkdowns.

8. Air drops: have been verified from design drawings.

9. Baseline fire barrier panel thickness: the required minimum thickness was specified in the purchase order and was verified in a sample of Quality Control installation inspections.

10. Preformed conduit panels: use of preformed panels, such as "clamshells", has been verified from design drawings.

11. Panel rib orientation (parallel or perpendicular to the raceway): is not applicable (only non-ribbed panels are used).

12. Unsupported spans: have been verified from design drawings and/or walkdowns.

13. Stress skin orientation (inside or outside): has been verified during installation to be in accordance with design drawings.

14. Stress skin over joints or no stress skin over joints: based on the installation guide, there is no stress skin over joints.

15. Stress skin ties or no stress skin ties: based on the installation guide, there are no stress skin ties.

16. Dry-fit, post-buttered, or pre-buttered joints: based on the installation guide, pre-buttered joints are used.

17. Joint gap width: has been verified to be less than 0.25 inch per the installation guide and/or design drawings.

18. Butt joints or grooved and scored joints: not verifiable (both methods are allowed per design).

19. Steel bands or tie wires: verifiable by walkdowns (both steel bands and tie wires are alloved per design).

20. Band/wire spacing: has been verified from design drawings and walkdowns.

21. Band/wire distance to joints: has been verified from design drawings.

22. No internal bands in trays: not verifiable (although no cable tray barrier applications are installed, internal bands are allowed, but not required, for use in structural steel applications).

23. No additional trowel grade material over sections and joints or additional trowel material applied: no appreciable additional trowel grade material applied.

24. No edge guards or edge guards: no edge guards were used.

B. Cable Parameters

1. Cable size and type (power, control, or instrumentation): are verifiable from design documents.

2. Cable jacket type (thermoplastic, thermoset plastic) and materials: are verifiable from design documents and/or walkdowns.

3. Cable conductor insulation type (thermoplastic, thermoset plastic) and materials: are verifiable from design documents and/or walkdowns.

4. Cable fill and distribution of cables within the protected conduit or cable tray: no cable tray barrier applications are installed; Conduit fill is verifiable from design drawings; distribution is believed to be a concern for cable tray but not for conduit.

5. Proximity of cables to the unexposed (inside) surfaces of the fire barrier: no cable tray barrier applications are installed; for conduit, because the cables are inside a round conduit, some cables are in physical contact with the inside of the conduit surface.

6. Presence of materials between the cables and the unexposed side of the fire barrier material (for example, Sealtemp cloth, which was used in the NUMARC test specimens): verified from review of design drawings that no materials are present.

7. Cable operating temperature: has been verified from design documents.

8. Temperatures at which the cables can no longer perform their intended function when energized at rated voltage and current: has been verified from design documents.

C. Application Guidance vs. Unknown Parameters

The industry Application Guide that NUMARC is developing will be used to evaluate the various performance parameters of the fire barrier system. As you are aware, the Application Guide has not been finalized by NUMARC or reviewed by the NRC. Based on further NUMARC testing, additional parameters of importance could be

identified, or several of the above-mentioned parameters, particularly the cable parameters, could be demonstrated to be not significant.

Once these parameters are finalized, Toledo Edison will implement additional actions necessary to verify these parameters, including additional walkdowns or design reviews, or, if necessary, destructive examinations of barriers. Toledo Edison anticipates that all necessary parameters can be conclusively verified.

Thermo-Lag applications believed to be outside the scope of the NUMARC test program are discussed in Section III below.

NRC Request for Information Section III:

III. Thermo-Lag Fire Barriers Outside the Scope of the NUMARC Program

A. Discussion

In your response of [sic] to GL 92-08, you indicated that actions necessary to restore the operability of these barriers would be based on the results of the NUMARC test program. During recent meetings with the NRC staff, the Executive Director for Operations and the Commission, NUMARC described the scope of its Thermo-Lag fire barrier program, the results of the Phase 1 fire tests, and planned Phase 2 tests. The program is limited to certain 1-hour and 3-hour conduit and cable tray fire barrier configurations and the development of guidance for applying the test results to plant-specific fire barrier configurations. However, NUMARC's program is not intended to bound all in-plant Thermo-Lag fire barrier configurations. In view of the scope of the NUMARC program and the limited success of the Phase 1 tests, it is clear that the NUMARC program will not be sufficient to resolve all Thermo-Lag fire barrier issues identified in GL 92-08. Therefore, licensees may need to take additional actions to address fire endurance and ampacity derating concerns with in-plant Thermo-Lag barriers.

B. Required information

1. Describe the barriers discussed under Item I.B.1 that you have determined will not be bounded by the NUMARC test program.

2. Describe the plant-specific corrective action program or plan you expect to use to evaluate the fire barrier configurations particular to the plant. This description should include a discussion of the evaluations and tests being considered to resolve the fire barrier issues identified in GL 92-08 and to demonstrate the adequacy of existing in-plant barriers.

3. If a plant-specific fire endurance test program is anticipated, describe the following:

   a. Anticipated test specimens.

   b. Test methodology and acceptance criteria including cable functionality.

Toledo Edison Response to Section III:
Thermo-Lag Fire Barriers Outside the Scope of the NUMARC Program

Of the applications described in Section I above, the following are currently not directly covered in the NUMARC test program scope. This list may change based on the results of further NUMARC testing and based on review of the industry Application Guide.

1. 1-hour and 3-hour enclosures made of non-ribbed panels: Toledo Edison has requested that NUMARC consider including non-ribbed panels as part of the potential extended Phase 2 test program. If this is not feasible, Toledo Edison may perform additional testing, possibly in conjunction with other utilities, using NUMARC/Impell's test program to qualify those configurations for which no other alternative is viable (e.g. test extrapolation, cable rerouting, suppression installation, exemption request, etc.). Specific details on any additional testing (specimen configuration, acceptance criteria, etc.) will be determined once the need for additional testing has been identified.

2. Radiant energy shields: Toledo Edison plans to perform an evaluation to show that radiant energy shields are adequate based on an extrapolation of the NUMARC testing. This evaluation will utilize information obtained from the baseline tests as well as information expected to be provided in the industry Application Guide.

3. Structural steel fireproofing: Toledo Edison plans to perform an evaluation to show that the structural steel barriers are adequate based on an extrapolation of the NUMARC testing, taking into account the high failure temperature of the steel (over 1000 °F). If this is not feasible, Toledo Edison may perform additional testing, possibly in conjunction with other utilities, using NUMARC/Impell's test program to qualify the configurations. Specific details on any additional testing (specimen configuration, acceptance criteria, etc.) will be determined once the need for additional testing has been identified.

NRC Request for Information Section IV:

IV. Ampacity Derating

A. Discussion

NUMARC has informed the staff that it intends to use the Texas Utilities (TU) Electric Company and Tennessee Valley Authority (TVA) ampacity derating test results to develop an electrical raceway component model for the industry. Additional information is needed to determine whether or not your Thermo-Lag barrier configurations (to protect the safe-shutdown capability from fire or to achieve physical independence of electrical systems) are within the scope of the NUMARC program and, if not, how the in-plant barriers will be evaluated for the ampacity derating concerns identified in GL 92-08.

B. Required Information

1. For the barriers described under Item I.B.1, describe those that you have determined will fall within the scope of the NUMARC program for ampacity derating, those that will not be bounded by the NUMARC program, and those for which ampacity derating does not apply.

2. For the barriers you have determined fall within the scope of the NUMARC program, describe what additional testing or evaluation you will need to perform to derive valid ampacity derating factors.

3. For the barrier configurations that you have determined will not be bounded by the NUMARC test program, describe your plan for evaluating whether or not the ampacity derating tests relied upon for the ampacity derating factors used for those electrical components protected by Thermo-Lag 330-1 (for protecting the safe-shutdown capability from fire or to achieve physical independence of electrical systems) are correct and applicable to the plant design. Describe all corrective actions needed and submit the schedule for completing such actions.

4. In the event that the NUMARC fire barrier tests indicate the need to upgrade existing in-plant barriers or to replace existing Thermo-Lag barriers with another fire barrier system, describe the alternative actions you will take (and the schedule for performing those actions) to confirm that the ampacity derating factors were derived by valid tests and are applicable to the modified plant design.

Your response to Section IV.B may depend on unknown specifics of the NUMARC ampacity derating test program (for example, the final barrier upgrades). However, your response should be as complete as possible. In addition, your response

should be updated as additional information becomes available on the NUMARC program.

Toledo Edison Response to Section IV:
Ampacity Derating

The NUMARC ampacity derating program is expected to provide ampacity derating factors for one and three hour barriers, however this program is not yet complete and the preliminary predictive data is premature for use. Additionally, the TU/TVA data has not yet been released for industry use, and it is our understanding that NRC review of the TU program is ongoing.

As noted in the cover letter, Toledo Edison will provide a comprehensive update of its response, within 90 days of issuance of the NUMARC Application Guide. This update will include Toledo Edison's plans and schedule, as available, for the ampacity derating issue.

NRC Request for Information Section V:

V. Alternatives

A. Discussion

On the basis of testing of Thermo-Lag fire barriers to date, it is not clear that generic upgrades (using additional Thermo-Lag materials) can be developed for many 3-hour barrier configurations or for some 1-hour barriers (for example, 1-hour barriers on wide cable trays, with post-buttered joints and no internal supports). Moreover, some upgrades that rely on additional thicknesses of Thermo-Lag material (or other fire barrier materials) may not be practical due to the effects of ampacity derating or clearance problems.

B. Required Information

Describe the specific alternatives available to you for achieving compliance with NRC fire protection requirements in plant areas that contain Thermo-Lag fire barriers. Examples of possible alternatives to Thermo-Lag-based upgrades include the following:

1. Upgrade existing in-plant barriers using other materials.

2. Replace Thermo-Lag barriers with other fire barrier materials or systems.

3. Reroute cables or relocate other protected components.

4. Qualify 3-hour barriers as 1-hour barriers and install detection and suppression systems to satisfy NRC fire protection requirements.

Toledo Edison Response to Section V:
Alternatives

Toledo Edison is considering several alternatives for achieving compliance with fire protection requirements. These alternatives include (but are not limited to) the following:

1. Exemption requests or site specific engineering evaluations based on evaluation of the existing protection (detection, suppression, and barriers) against the hazards in the room. These evaluations could utilize Fire-Induced Vulnerability Evaluation (FIVE) or Probabilistic Safety Assessment (PSA) techniques. For rooms where insufficient protective margin exists, Toledo Edison will evaluate options to improve the margin, such as the use of a modular water mist suppression system located in a manner which will provide rapid protection against a specific hazard.

2. Replacement of Thermo-Lag barriers with other fire barrier materials, including gypsum panels.

3. Re-routing of cables or replacement of existing cables with higher temperature cables.

4. Qualifying existing 3-hour barriers as 1-hour barriers and installing or upgrading suppression systems.

5. Conduct additional testing, either singly or in concert with other utilities.

NRC Request for Information Section VI:

VI. Schedules

A. Discussion

The staff expects the licensees to resolve the Thermo-Lag fire barrier issues identified in GL 92-08 or to propose alternative fire protection measures to be implemented to bring plants into compliance with NRC fire protection requirements. Specifically, as test data becomes available, licensees should begin upgrades for Thermo-Lag barrier configurations bounded by the test results.

B. Required Information

Submit an integrated schedule that addresses the overall corrective action schedule for the plant. At a minimum, the schedule should address the following aspects for the plant:

1. implementation and completion of corrective actions and fire barrier upgrades for fire barrier configurations within the scope of the NUMARC program,

2. implementation and completion of plant-specific analyses, testing, or alternative actions for fire barriers outside the scope of the NUMARC program.

Toledo Edison Response to Section VI:
Schedules

Toledo Edison's current schedule for resolution of the Thermo-Lag fire barrier concerns is as follows:

April 1994 to May 1994:

- Obtain NUMARC Phase 2 test results and industry Application Guide.

May 1994 to December 1994:

- Review installed configurations using Application Guide (includes performance parameter review)

- For each installed configuration, determine appropriate corrective action (see Section V, Alternatives)

- Prioritize and initiate corrective actions for each installed configuration (note: corrective action initiation may occur for some configurations while other configurations are still being evaluated)

December 1994 to June 1996:

- Complete corrective actions

June 1996:

- All corrective actions completed.

NRC Request for Information Section VII:

VII. Sources and Correctness of Information

Describe the sources of the information provided in response to this request for information (for example, from plant drawings, quality assurance documentation, walk downs or inspections) and how the accuracy and validity of the information was verified.

Toledo Edison Response to Section VII:
Sources and Correctness of Information

The following sources of information were used in the preparation of this response and are accurate and valid for the purposes of responding to this request:

- controlled design drawing reviews
- plant walkdowns by engineering, operations, and quality assurance personnel
- installation modification package review
- vendor documentation review
- NUMARC workshop notes
- Equipment Qualification documentation
- purchase order/specification reviews