Douglas R. Gipson
Senior Vice President
Nuclear Generation

Detroit Edison

Fermi 2
6400 North Dixie Highway
Newport, Michigan 48166
(313) 586-5249

June 9, 1994
NRC-94-0048

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

References: 1) Fermi 2
NRC Docket No. 50-341
NRC License No. NPF-43

2) Detroit Edison letter to NRC
NRC 91-0005, dated February 5, 1991

Subject: Quality Assurance Program Change and Revision to Commitment in Regards to Violation 83-011-05

In accordance with 10CFR50.54(a), Detroit Edison requests NRC review and approval of a change to the Fermi 2 Quality Assurance Program as contained in Section 17.2 of the Updated Final Safety Analysis Report.

This proposed change would revise the closure process of corrective action documents. Currently Safety Engineering or Nuclear Quality Assurance reviews all corrective action documents prior to closure. This revision proposes that Safety Engineering or Nuclear Quality Assurance continue to review corrective action documents for significant conditions adverse to quality or safety (SCAQ), but only some corrective action documents for other conditions adverse to quality. This change is a reduction in commitment, but the program will continue to meet regulatory requirements and guidance as discussed later in this submittal.

The reason for this change is to improve the Corrective Action Program at Fermi 2. The need for this specific improvement was identified during the spring 1993 Corrective Action Program audit and an NRC inspection of Engineering and Technical Support. To help determine the causes of program weaknesses, a survey was performed and meetings were held to listen to the personnel implementing the program who are responsible for determining causes and corrective actions of Deviation Event Reports (DERs), the corrective action document used at Fermi 2. A problem was identified that because the same closure process is used for all DERs, including an independent review by Safety Engineering or Nuclear Quality Assurance, the people evaluating DERs perceived the same value for all problems. This perceived value is different from the intended value, which is that SCAQ DERs should receive greater attention.

9406150255 940609
PDR ADOCK 05000341
P PDR

Q004

This proposed revision to the Quality Assurance Program will serve to prioritize SCAQ DERs above other less significant conditions. Focusing attention and independent reviews on SCAQ issues will improve the resolution of important technical and quality problems.

Feedback to the line organization management on the results of the independent reviews is now being given. Improvement in the quality of DER responses has been demonstrated as a result.

Some DERs covering non-significant conditions will also be reviewed. These may be selected based on origin or priority, rather than being a random sample of non-SCAQ DERs.

Other benefits of the proposed revision are expected to occur within the Safety Engineering group. Since fewer DERs will be reviewed prior to closure, more timely reviews will be performed and more attention concentrated on the SCAQ DERs which are being reviewed for adequacy of root cause and corrective action determination. Also, most of the Safety Engineering personnel recently received training on equipment and personnel root cause analysis provided by Failure Prevention, Inc. Better use could be made of resources by assigning Safety Engineering personnel to help with the root cause analysis on selected problems. Based on their training and experience they could be of more benefit being active in helping solve problems rather than only reviewing the solutions.

The affected sections of the QA Program contained in the Updated Final Safety Analysis (UFSAR) are 17.2.16, 17.2.18.3 and 17.2.1.5. The revision to Section 17.2.16 revises the statement that "Nuclear QA or Safety Engineering reviews all corrective action documents to determine, when appropriate, that the root cause of the problem is identified and corrective action is adequate" to: "Nuclear QA or Safety Engineering reviews all corrective action documents which delineate significant conditions adverse to quality or safety and some corrective action documents for other conditions adverse to quality to determine, when appropriate, that the root cause of the problem is identified and corrective action is adequate." The reasons for this change, which is the major revision to the program have been discussed earlier.

Section 17.2.18.3 is modified to state that significant conditions adverse to quality and selected non-significant conditions adverse to quality are followed up by Nuclear Quality Assurance to determine that they are effectively corrected and corrective action precludes repetitive occurrences. Currently the section states this follow-up is made for conditions adverse to quality. This change coordinates with the change to Section 17.2.16. More importance should be given to significant conditions adverse to quality regardless of whether they are identified by the line organization or Nuclear Quality Assurance. To ensure all audit identified conditions adverse to

quality receive follow-up this section has been clarified to state that other non-significant conditions adverse to quality identified during audits will receive follow-up during the next audit of the activity.

Reference 2 contained a revised commitment in response to Violation 86-011-05. The letter mentioned that audit team leaders will follow-up on audit findings until they are closed as well as follow-up on previous audit findings related to current audits. This is to ensure no finding resolution will "fall in the crack". This commitment will be modified by the proposed QA program change, as discussed above. Specific follow-up will be conducted on findings involving significant conditions adverse to quality and selected non-significant conditions adverse to quality. Follow-up on other findings will only be performed during the follow-up of previous audit findings during an audit. This will focus attention on significant problems, while still ensuring no findings "fall in the crack" permanently.

The changes to Section 17.2.1.5 coordinate with the changes in 17.2.16 and clarify that Nuclear Quality Assurance recommends solutions to quality problems, rather than actually dictating or implementing the solutions. The current wording could be misinterpreted to imply that Nuclear Quality Assurance (NQA) does the latter. Additionally, the revised wording clarifies that Nuclear Quality Assurance makes recommendations and verifies implementation of solutions for NQA identified problems. As discussed elsewhere in Section 17.2.1.5 and in Section 17.2.16, Safety Engineering and Nuclear Quality Assurance share the review responsibility for corrective action documents. By this proposed revision, this responsibility is for significant conditions adverse to quality or safety and selected non-significant conditions adverse to quality.

The compliance of Detroit Edison with the requirements of 10CFR50, Appendix B is not adversely affected by the proposed Quality Assurance Program revision, since conditions adverse to quality will still be identified and corrected and the program will still require determination of the cause and corrective action to prevent recurrence for significant conditions adverse to quality. The commitment to Regulatory Guide 1.33, "Quality Assurance Program Requirements (Operation)", Revision 2, February 1978 also will be unaffected. Regulatory Guide 1.33 endorses, with some unrelated exceptions, ANS-3.2/ANSI N18.7-1976, "Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants." Per section 5.2.11, "Corrective Actions", of ANS 3.2/ANSI N18.7-1976, independent reviews are to be performed for significant conditions adverse to safety. The proposed change maintains review by Safety Engineering or Nuclear Quality Assurance of corrective action documents for significant conditions adverse to quality or safety.

Thus, this QA program revision continues to meet the industry standard for Corrective Action Programs.

The proposed change also continues to meet the guidance of Regulatory Guide 1.144, "Auditing of Quality Assurance Programs for Nuclear Power Plants." Regulatory Guide 1.144 endorses, with some unrelated clarifications, ANSI/ASME N45.2.12-1977, which requires follow-up actions to be performed by the auditing organization when necessary. It states that follow-up action can be accomplished through written communication, re-audit or other appropriate means. Follow-up is still required by the proposed QA program change, with follow-up on some non-significant conditions adverse to quality being performed at the next audit of the activity. Therefore, industry standards for the audit program and the corrective action program are still being met.

The marked up pages of Section 17.2 of the UFSAR are attached. The changes covered by this revision request are marked with an asterisk. Other changes on the pages reflect Quality Assurance program changes implemented since Revision 6 of the UFSAR was submitted.

In implementing this revision, the Detroit Edison process for review of internal operating experiences will also change. The description of the program provided to the NRC and covered in Section 13.4.3.4 of the UFSAR included Safety Engineering's review of internal operating experience report evaluations for appropriate evaluation and resolution. As discussed in this letter, mainly significant conditions adverse to quality will receive an independent review following approval of this QA program revision. The Fermi 2 Operating Experience program was based on NUREG 0737, Item I.C.5, "Procedures for Feedback of Operating Experience to Plant Staff." Item I.C.5 in NUREG 0737 does not contain a requirement for an independent group to review actions being taken for operating experience. Therefore, Fermi 2 will still be meeting NUREG 0737, Item I.C.5 requirements regardless of whether an independent review of actions being taken for internal operating experience is performed. The specific change to Section 13.4.3.4 has been evaluated under 10CFR50.59 since it is not part of the QA program. The responsibilities of the Independent Safety Engineering Group discussed in the UFSAR Section 13.4.3.3 and in Technical Specification Section 6.2.3 are not being revised by this revision.

Please contact Lynne S. Goodman at (313) 586-4097 with any questions. Prompt review and approval of this request will be appreciated, since

it will permit more focused attention on more significant problems and help achieve improvement in the Corrective Action Program at Fermi 2.

Sincerely,

Attachment

cc: T. G. Colburn
J. B. Martin
M. P. Phillips
K. R. Riemer
NRC Region III

ATTACHMENT

MARKED UP UFSAR
SECTION 17.2 PAGES

17.2.1.4 Nuclear Assurance Manager | 6

The Nuclear Assurance Manager reports to the Senior Vice President - Nuclear Generation and has functional and administrative responsibilities for nuclear assurance. He is supported by the Director - Nuclear Security, the Director - Plant Support, ~~the Radiological Assessor~~, and the ~~Supervisor~~ - ~~Independent~~ Safety Engineering ~~Group~~. The Director - Application Systems coordinates computer services support to Fermi 2 through the Nuclear Assurance Manager. | 4 | 6

17.2.1.4.1 ~~Supervisor~~ - ~~Independent~~ Safety Engineering Group | 6

The ~~Supervisor~~ - ~~Independent~~ Safety Engineering ~~Group~~ and staff are responsible for monitoring plant performance in matters related to plant safety. ~~ISEG~~ is responsible for the implementation of the corrective action trend program and routine monitoring of plant performance to provide early detection of conditions potentially adverse to safety. ~~ISEG~~ supports Nuclear Generation in the review, investigation, and root-cause determination when deviations from acceptable standards of performance occur in matters related to plant safety. ~~ISEG~~ also maintains a corrective action document tracking system. | 6

17.2.1.4.2 Other Functions

The organizational functions reporting to the Nuclear Assurance Manager are described in Subsection 13.1.2. | 6

17.2.1.5 Director - Nuclear Quality Assurance | 6

The Director - Nuclear Quality Assurance is responsible for (1) ensuring the establishment and effective implementation of the Nuclear Generation Quality Assurance Program; (2) monitoring and evaluating the implementation of the Quality Assurance Program within Nuclear Generation by conducting planned and periodic audits; (3) reporting the audit findings to the Senior Vice President - Nuclear Generation; (4) providing direction on Quality Assurance matters to the Plant Manager; (5) recommending, ~~initiating, and providing~~ solutions to identified quality problems and verifying implementation of solutions; and (6) issuing action to stop work when appropriate. This position is supported by the Supervisor - Inspection and Surveillance, the Supervisor - Audits, ~~and the Supervisor - Procurement Quality Assurance~~. | 4 | 6 | *

The following qualifications are prescribed for the position of the Director - Nuclear Quality Assurance in accordance with ANSI/ANSI 3.1-1978: | 5

Experience: 6 years of experience in the field of quality assurance, preferably at an operating nuclear power plant, or an equivalent number of years of operations supervisory experience or a combination of the two. At least 1 year of these 6 years of experience shall | 4

The Director, Nuclear Quality Assurance will meet the following qualifications:

Education: Bachelor Degree in Engineering or related science, or the equivalent in practical experience.

Experience: Four years experience in the field of quality assurance, or equivalent number of years of nuclear plant experience in a supervisory or management position preferably at an operating nuclear plant or a combination of the two. At least 1 year of this 4 years experience shall be nuclear power plant experience in the implementation of the quality assurance program. Six months of the 1 year experience shall be obtained within a quality assurance organization.

An additional year of quality assurance program implementation experience may be substituted for 6 months experience within a quality assurance organization. The equivalent in practical experience to a Bachelor Degree in Engineering or related science is an additional 4 years experience in the fields of quality assurance, engineering or nuclear plant experience.

be nuclear power plant experience in the implementation of the quality assurance program. A minimum of 1 year of these 6 years of experience shall be related technical or academic training. A maximum of 4 years of these 6 years of experience may be fulfilled by related technical or academic training.

The structure of the NQA organization is shown in Figure 17.2-2.

The review of implementing QA procedures and the review of nonconformance and corrective action documents* is performed by the various Nuclear QA organizational units and ~~the Independent~~ Safety Engineering ~~Group~~ within their assigned areas of responsibility.

* covering significant conditions adverse to quality and selected nonsignificant conditions adverse to quality

The NQA organization supports other units within Nuclear Generation to provide the required quality assurance functions.

17.2.1.5.1 Supervisor - Inspection and Surveillance

The Supervisor - Inspection and Surveillance and staff support the Plant Manager in providing the QA functions necessary for plant operational activities. These include surveillances of responsibility areas assigned to the Plant Manager. The supervisor has the authority and the responsibility to initiate action to suspend any activity, except reactor operation, if he discovers or suspects that a deviation from the QA program has occurred or is developing; nonconformances that appear to warrant suspension of reactor operation, including startup or power generation, will be reported to the Plant Manager immediately. The Supervisor - Inspection and Surveillance will meet the qualification requirements described above for the Director - Nuclear Quality Assurance.

The Supervisor - Inspection and Surveillance and staff also support the Nuclear Generation units involved in plant maintenance and modification by providing the required QA functions. Their principal duties include the review of maintenance and modification procedures, the inspection of maintenance and modification work, the performance of nondestructive-testing examinations or review of results, surveillance of maintenance and modification activities, transport of radioactive material, and instrument and controls activities.

The Supervisor - Inspection and Surveillance and staff also perform surveillances of Plant and Technical Engineering activities; evaluation of inspection and surveillance results; evaluation of existing or emerging issues and problems having safety significance; and special assigned tasks. Their duties include the review of selected engineering-related documents.

When nonconforming items are found or suspected, the items are controlled to preclude further activity pending resolution of the adverse condition. A nonconformance document is originated and processed to the organization responsible for determining cause and recommending corrective action. Nuclear QA is notified of the condition. The nonconformance document has provisions for identifying and describing the nonconforming item, the cause, when appropriate, proposed corrective action, and approval by responsible supervision, actual corrective action taken and acknowledgment by responsible supervisory personnel, and closeout action, including any required inspections or tests and acknowledgment by Nuclear QA.

Corrective action will be proposed by qualified organizations and approved by supervisory personnel having responsibility for dispositioning the nonconforming item.

Copies of completed nonconformance documents are maintained as described in Subsection 17.2.17.

The acceptability of rework, repair, or replacement of materials, parts, components, systems, and structures is verified by inspecting and testing the item for conformance with its original requirements or acceptable alternatives. The inspection and test records are documented and become part of the QA records for the item.

Nuclear QA periodically analyzes quality data obtained from various reports, such as nonconformance documents, inspection reports, and audit reports, to determine what quality trends exist. The analysis is reported to appropriate management and supervisory personnel for their review and assessment.

17.2.16 Corrective Action

Measures are established to ensure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances, are promptly identified and corrected. In the case of a significant condition adverse to quality or safety, procedures require that the cause be determined and corrective action be taken to preclude recurrence, and that the significant condition, its cause, and the corrective action be documented. Significant conditions affecting nuclear safety shall be reported to the Plant Manager and the NSRG Chairman. Nuclear QA or ~~the Independent~~ Safety Engineering ~~Group~~ reviews all corrective action documents to determine, when appropriate, that the root cause of the problem is identified and corrective action is adequate. The Plant Manager is notified when ~~IEBG~~/Nuclear QA Safety Engineering determine the corrective action is inadequate and agreement cannot be reached. The QA requirements in procurement documents or contracts require the vendor or contractor not only to identify material or parts that do not conform to the procurement requirements, but also to determine and correct the causes for the condition adverse to quality. 6

~~For~~ which delineate significant conditions adverse to quality or safety and some corrective action documents for other conditions adverse to quality *

* Evaluation may be performed and documented by another utility provided that an agreement has been established that Detroit Edisons scope of supply will be included. The results of the evaluation will be provided to Detroit Edison

Audits are conducted in accordance with established procedures and by personnel having no direct responsibilities in the areas being audited. Audits, source verifications, and commercial grade surveys performed by other nuclear utilities may be accepted as satisfying Detroit Edison's criteria based on a documented evaluation of the report.* ~~The~~ Audit results are reported to the Director - Nuclear Quality Assurance, the management of the organization audited, and the affected Edison organizations. Edison requires written reports from each organization on the measures taken to correct deficiencies and prevent recurrence. Appropriate follow-up, including reaudits, is made to determine that nonconformances are effectively corrected and that the corrective action precludes repetitive occurrences.

17.2.18.3 Nuclear Generation Audits

Nuclear QA is responsible for independent audits of Nuclear Generation unit activities to verify compliance with the QA program and to assess its effectiveness. The activities audited include those described in the governing procedures that apply to the plant and onsite support organizations.

Copies of the audit report are distributed to appropriate Nuclear Generation management, including the Senior Vice President - Nuclear Generation, the Director - Nuclear Quality Assurance and affected organizations. The NSRG receives a copy of reports of audits for which the NSRG has responsibility to review.

If a condition adverse to quality is discovered that may affect the safe operation of the plant, it will be brought to the attention of the Plant Manager, in accordance with Subsection 17.2.16. After an audit of an organization has been completed, the appropriate Nuclear Generation manager is responsible for a written report of the corrective action taken in response to any nonconforming conditions identified in the audit report. Appropriate follow-up by Nuclear QA, including reaudits, is made to determine that conditions adverse to quality* are effectively corrected and that corrective action precludes repetitive occurrences.*

* Significant

* and selected nonsignificant conditions adverse to quality

Nuclear QA will verify that the correct revisions of procedures, drawings, and other documents are being used when performing an activity affecting quality. This will be accomplisned during inspections, surveillances, and audits.

17.2.18.4 Nuclear Safety Review Group

The NSRG is responsible for review and audit as specified in the Technical Specifications. In addition to these activities, the NSRG will review such other activities as have been established in its charter.

* Other nonsignificant conditions adverse to quality identified during audits are followed up during the next audit of the activity.