

Enclosure 1

SALP 9

APPENDIX

SALP BOARD REPORT

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

SYSTEMATIC ASSESSMENT OF LICENSEE PERFORMANCE

50 341/88001
Inspection Report No.

Detroit Edison Company
Name of Licensee

Fermi 2
Name of Facility

April 1, 1987 through March 31, 1988
Assessment Period

8809070310 880830
PDR ADOCK 05000341
Q PNU

Fermi 2

A. Summary of Meeting with Detroit Edison on July 22, 1988

The findings and conclusions of the SALP Board are documented in Report No. 50-341/88001 and were discussed with the licensee on July 22, 1988, at Monroe Community College.

While the meeting was primarily a discussion between the licensee and NRC, it was open to members of the public as observers.

The following licensee and NRC personnel were in attendance, as well as the noted observers.

Detroit Edison

W. J. McCarthy, CEO and Chairman of the Board
B. R. Sylvia, Senior Vice President
W. S. Orser, Vice President, Nuclear Operations
S. G. Catola, Vice President, Nuclear Engineering and Services

Nuclear Regulatory Commission

A. B. Davis, Regional Administrator
E. G. Greenman, Director, Division of Reactor Projects
W. G. Rogers, Senior Resident Inspector
R. W. Cooper, II, Chief, Section 3B
M. J. Virgilio, Director, Projects Directorate III-I, NRR
J. H. Sniezek, Deputy Director, NRR
R. L. Spessard, Director, Division of Operational Assessment, NRR
T. R. Quay, Project Manager, NRR
L. Kelly, Backup Project Manager, NRR
J. W. Clifford, Region III Coordinator, EDO
N. B. Le, Performance Evaluation Branch, NRR

B. Comments Received from Licensee

Detroit Edison's response to the Fermi SALP 9 Board Report dated August 17, 1988, had no comments addressing the specific content of the report. Because there are no comments, this Appendix contains no changes to the SALP Report.

C. Regional Administrator's Conclusions Based on Consideration of Licensee Comments

I have concluded that the overall ratings in the affected areas have not changed.

B. Ralph Sylvia
Senior Vice President

**Detroit
Edison**

6400 North Dixie Highway
Newport, Michigan 48166
(313) 586-4150

August 17, 1988
NRC-88-0198

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

- References:
- 1) Fermi 2
NRC Docket No. 50-341
NRC License No. NPF-43
 - 2) NRC Region III Letter to Detroit Edison, SALP 9
Board Report No. 50-341/88001 (DRP), July 11, 1988

Subject: Response to SALP 9 Board Report

Detroit Edison has reviewed the NRC SALP 9 Board Report and has provided our response to the report in the enclosure. As was requested in your transmittal letter, we have provided the specific corrective actions and completion dates to improve our performance in the five areas assigned Category 3 ratings. All areas rated Category 2 or 3 have been individually addressed in the response.

We believe that many of the corrective actions and management initiatives put in place, particularly during the second half of the assessment period, will improve our performance not only in the Category 3 areas but in the entire Fermi 2 organization.

As was noted in the SALP 9 report, our performance during the second half of the assessment period did improve. However, we agree that additional effort is needed if we are to achieve and sustain a high level of performance in all areas.

We acknowledge that the NRC intends to shorten the current SALP 10 assessment period to nine months, which will conclude on December 31, 1988. We want to assure you that Detroit Edison is committed to take the necessary actions and provide the dedicated resources to ensure a better rating at the conclusion of the SALP 10 period.

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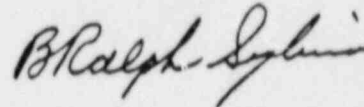
August 17, 1988

NRC-88-0198

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We are prepared to discuss this SALP 9 Board Report response with you at your earliest convenience.

Sincerely,

A handwritten signature in cursive script, appearing to read "B. Ralph Lyman".

Enclosure

cc: Mr. A. B. Davis
Mr. R. C. Knop
Mr. T. R. Quay
Mr. W. G. Rogers
✓ USNRC Region III

A. PLANT OPERATIONS

As noted in the SALP report the following were identified as key areas needing improvement:

1. Operations personnel errors need to be reduced.
2. Improvements are needed in removing and restoring equipment from service.
3. Operations personnel understanding of Technical Specifications needs to be improved in actions required in a given condition and in the treatment of support equipment.
4. Improvements in the area of operations administrative controls need to be made.

The following actions have been taken, are underway, or are planned to improve operations performance in these key areas:

Operator error reduction:

1. In conjunction with Deviation Event Reporting, key events are investigated using the "Human Performance Evaluation System" to insure that in-depth corrective action is taken.
2. Selected personnel errors result in accountability meetings which are held by the Plant Manager with those responsible for the event to ensure that they fully understand the seriousness of the event and their personal responsibility. The meetings provide feedback to all affected groups.
3. A series of Operations Practice Standards have been issued providing guidance to operations personnel on the framework with which they must carry out key activities. These standards emphasize principles required of a successful operation such as attention to detail, communications and understanding of operating activities.
4. A major procedure rewrite effort is currently under way to improve operating procedures. This project includes a priority system to ensure that operator comments are incorporated into appropriate procedures in a manner consistent with their importance. Details of the procedure upgrade effort have been communicated to the NRC in previous correspondence. We will complete this effort by December 31, 1988.

5. Recent articles in the plant paper "The Moderator" and a video presentation by the Senior Vice President, Mr. Sylvia, emphasized the principles of attention to detail, and stressed the importance management places on employee performance and reducing personnel error.

Operator understanding and implementation of Technical Specifications:

1. A guideline is currently being developed to assist operators in assessing equipment operability requirements particularly in the area of dependance on support systems. This will be completed by September 1, 1988.
2. A method has been developed to provide operators with Technical Specification clarifications as necessary. These clarifications are intended to eliminate ambiguity, provide background material on specification intent and ensure that operations actions are taken in a conservative manner. In some cases Technical Specification changes may be initiated through the Technical Specification Improvement program that is described in the section on Surveillance in this response.
3. A library of Technical Specification case histories has been developed to support licensed operator training activities. The case histories provide real or hypothetical plant situations that the student is asked to assess and determine required reports, applicable Technical Specification sections and required actions. The student is then provided with a detailed answer to the problem. These case histories are being used by training, and it is our intent to continue to add to this library as experience dictates.
4. Technical Specifications require a rapid response to some instrument failures. Therefore, preplanned instructions for placing such instruments in a tripped condition or taking other actions are currently being developed and will be issued by September 30, 1988.

Removal and restoration of equipment from service:

1. During outage periods turnover of Tagging Center personnel will be minimized to insure continuity of activities associated with removal and restoration of plant equipment and improve communications with maintenance personnel.
2. Improved communications between Operations and Maintenance have been implemented to plan equipment outages a week in advance thus assuring better coordination of activities. Additionally, a morning and afternoon meeting is held each

day with representatives of each Production organization and others as needed to review activities.

3. An ongoing effort to produce a library of preplanned tagging schemes is in place. This will ensure more thorough tagging research and eliminate the need to research tagging schemes each time a piece of equipment is removed from service.
4. Procedures for removing key electrical equipment from service are currently being developed. Those necessary to support planned activities during the first refueling outage will be complete before the start of that outage.

Administrative Controls:

1. Operations administrative procedures are currently being rewritten. A key objective of this effort is to reduce the number of procedures and consolidate information for ease of use. This effort will be completed by October 31, 1988. As procedures are revised, training will be provided to ensure greater understanding of the revised procedures.
2. The Operations Engineer is currently working closely with members of the shift organization in an effort to review and audit each administrative system. Where appropriate, action is being taken to correct problems that are found. This review should be completed by December 31, 1988.
3. Control room reference materials have been reviewed for need and status. Unnecessary material has been removed and the remainder relabelled and updated as appropriate.

Management involvement in Operations activities:

1. Both the Operations Engineer and Operations Superintendent have moved to offices located adjacent to the control room complex to provide easier access to the control room and ensure greater management involvement in ongoing operations activities.
2. On a weekly basis the Plant Manager tours various plant areas with the Operations Superintendent or other members of the operations staff. Tours include discussion with various personnel about activities in progress.
3. The Operations Engineer holds special meetings with each shift as the need arises to talk about operator performance with regard to SALP, and NRC violations.

4. Senior management meets with each shift while the shift is in training. The meetings provide a forum to discuss shift performance and operator and management concerns.
5. An Operations Evolution program has been implemented and will be continued through completion of the startup test program. Evaluations are performed frequently by Operations management. Results of these evaluations are used to direct specific corrective action and are closely monitored by Operations management and the Plant Manager.
6. An individual with SRO experience at another BWR has been assigned to assist the Operations Engineer in reviewing operations activities and in assisting in implementation of corrective action where necessary.
7. During periods of retraining on the simulator a member of Operations management and senior management monitors and evaluates shift performance in the simulator on a weekly basis. Their comments and observations are fed back to the shift during instructor critiques.

The above activities represent the key operations improvement activities in place and being pursued at this time. Operations management will continue to emphasize attention to detail and consistency of safe operations with emphasis on Technical Specification compliance and the elimination of personnel errors.

B. RADIOLOGICAL CONTROLS

Four general areas of concern in the radiological controls area were noted in the SALP 9 Board Report.

1. Improvements to in-line chemistry instrumentation
2. Commitment to the BWR Owners Group Water Chemistry Guidelines
3. Radiological confirmatory analytical measurements
4. Nonradiological confirmatory analytical measurements

Regarding improvements to the on-line analyzers, an extensive detailed scope to upgrade the sample panels and monitors to state of the art equipment is currently in design. All engineering is anticipated to be complete by March, 1989. Equipment needed to implement the first and most important

design package is in procurement (feedwater corrosion product sample station).

Although no formal commitment was made to the BWR Owner's Group Guidelines, Detroit Edison believes Fermi 2 Plant Order EFP-1094, "Water Chemistry Guidelines", meets or exceeds the Owners Group Guidelines.

Regarding non-radiological confirmatory measurements, analysis methods were adjusted to correct the problems noted during an inspection visit. Evaluation criteria for in-house comparison data has been changed to allow earlier detection of similar discrepancies.

Actions have been taken by the Chemistry group to correct high biases observed in interlaboratory comparisons of sodium, low level boron and copper.

To enhance the Quality Verification Program, a new evaluation method that is similar to the NRC method was implemented. This method will help us identify our problems quickly.

Discrepancies with radiological confirmatory measurements were caused principally by software problems which had been observed sporadically in the weeks prior to an NRC inspection. The problem was corrected within a week after the inspection and within 2 months additional controls were implemented to provide early detection of similar problems.

C. MAINTENANCE

Significant management attention continues to be placed on the Preventive Maintenance Program. Preventive maintenance tasks for safety-related equipment must be completed on schedule. Any deviations are documented utilizing a Deviation Event Report (DER) which results in an Engineering Evaluation and management review. A consultant knowledgeable in electrical circuit breakers and protective relaying is currently upgrading the preventive maintenance requirements for these components in preparation for the first refueling outage. We are currently pursuing further improvements to our Preventive Maintenance Program.

Planning for outages has been enhanced. The Maintenance Department has developed a Forced Outage Schedule. Update and revision of this schedule is an ongoing effort. Planning for the first refueling outage has begun and an initial schedule has been prepared.

We have revised the tracking and reporting system for the corrective maintenance backlog to provide a better management tool and to conform to INPO guidelines. Annunciators continue to receive a high level of management attention in order to minimize the number of nuisance alarms.

As part of the procedure update program, the effort to rewrite Maintenance and I&C procedures continues with completion expected by December 31, 1988.

I&C is establishing a supervisors surveillance program to provide for performance evaluations of surveillance procedures and testing personnel. This program will be in place by September 30, 1988.

Test boxes to facilitate obtaining required measurements from test plugs will be constructed by August 31, 1988. Continuing training is providing reviews of proper test methods including the use of test equipment and working inside energized cabinets.

Prior to startup from the 1988 LLRT outage, I&C developed instrument valve lineup sheets for Technical Specification instruments and performed a dual verification of instrument valve position. I&C is expanding this lineup to include other safety-related instruments. The lineup will become a procedure for use during the first refueling outage. As an interim measure, instrument lineup sheets requiring independent verification are being added to all work packages with the potential to reposition valves not documented in existing procedures.

Our efforts to improve are continuing. Significant managerial and organizational changes have been made in order to increase our effectiveness in maintaining a safe, reliable plant.

D. SURVEILLANCE

The SALP 9 analysis based on eleven violations in the functional area of Surveillance indicated (1) inadequate technical procedure content, (2) deficiencies associated with the control of surveillance activities, and (3) implementation breakdowns. Midway through the SALP 9 assessment period, previous efforts to improve the Surveillance Program had not been successful in that deficiencies and violations were continuing. A Surveillance Procedure Upgrade Program was developed which was later incorporated into a more comprehensive Technical Specification Improvement Program. This program was described in our November 23, 1987 letter (NRC-87-0252). Our April 6, 1988 letter (NRC-88-0101) provided an update and status of this program. As

stated in the April 6 letter, this program will be completed by December 31, 1988.

The Technical Specification Improvement Program is identifying and correcting the types of problems that have been occurring in regards to (1) and (2) above - inadequate technical procedure content and scheduling errors. We have found and corrected over thirty deficiencies as a part of this program. We are currently over 65% complete and would expect to find more deficiencies during the remainder of the program. Most of these deficiencies were found during the initial review step to assure that our procedures fully comply with testing requirements to meet the Technical Specification surveillance articles. At this time, it appears that this part of our Improvement Program may be completed by November 1, 1988.

Other elements of the Technical Specification Improvement Program should reduce personnel errors in both scheduling and performing the surveillance tests. This includes clarifying the intent and meaning of Technical Specifications and, in some cases, requesting changes in Technical Specifications. The effort to refine the administrative process for proper scheduling and documentation of surveillance tests and the generation of cross reference lists are administrative tools to improve compliance and reduce personnel errors and surveillance test implementation breakdowns. The special Technical Specification training, case study training, and feedback training are also elements of our Technical Specification Improvement Program that will reduce personnel errors and surveillance test implementation breakdowns. Other measures to reduce personnel errors are addressed in Sections A and C of this response.

The rewrite of the I&C surveillance procedures (44. series) which was completed during the assessment period appears to have been a successful effort that has reduced the number of reportable events such as ESF actuations during conduct of these surveillances. The setpoint calculation and verification effort completed by our Nuclear Engineering organization has also provided us more confidence in the technical adequacy of these procedures.

In regards to the statement in the SALP 9 report about our scheduler commitments not being met for our Technical Specification Improvement Program, we informed you in our March 31, 1988 Updated Response to SALP 8 Board Report (NRC-88-0076) that we were planning to extend the procedure review effort because we considered it more appropriate to correct the problems as they were found. Thus, we actually increased the scope of the

Improvement Program. We also want to clarify in this response that certain actions in the Technical Specification Improvement Program such as actual UFSAR changes, changes to the Technical Specifications, and required procedure changes following approval of Technical Specification changes will not be completed by the above mentioned December 31, 1988 date.

E. FIRE PROTECTION

The Category 2 rating indicates a satisfactory performance in the implementation of the fire protection program.

Continuing to provide adequate training for fire brigade personnel is one aspect of this program commitment. One of the 2 violations noted in this SALP period was due to the improper scheduling of periodic classroom instruction. The schedule has been revised to ensure quarterly instructions are provided in accordance with Detroit Edison commitment to regulatory guidelines.

The second violation was due to a valve not being maintained locked, although it was in the correct position. In response to this occurrence, the Functional Operating Sketch (FOS) drawings for fire protection were revised to specifically identify those valves that are required to be locked. This action provides an additional source document to determine locked valves in addition to the procedures.

The two minor issues from 1984 have since been addressed. The two pressure gauges for the Reactor Building standpipes have been installed, and the emergency lighting procedure revised.

The revised emergency lighting procedure calls for a full 8 hour battery discharge test of all lighting units required for fire protection. At present, approximately 90% of these units have been tested. The testing completed to date exceeds the minimum number (20% per year) to be tested to meet a previous commitment.

Housekeeping practices will continue to receive a high level of attention. In place procedures and work practices help to minimize the time transient combustible materials are stored and to expedite waste removal. Periodic inspections conducted by Plant Safety, ISEG, NSRG, the Plant Manager and other management help to ensure housekeeping practices are maintained.

II. OUTAGES

We intend to improve our performance during outages by better defining the outage scope. For scheduled outages this will be accomplished by limiting the number of items to be worked and freezing the outage scope three months before the start of an outage. Having a fixed outage scope will allow detailed outage schedules to be developed early in the process which in turn will allow more time to plan the work, prepare work packages and identify activities that have the potential to cause ESF actuations. With these activities identified, the work groups can factor appropriate cautions into their plans and conduct pre-job briefings with all required support groups.

For forced outages, a forced outage schedule has been developed and is updated on an ongoing basis. Having a preplanned scope for forced outages has the same advantages as noted above.

Additionally, the planned outage process will be revised to incorporate "lessons learned" in the area of operating shift work dynamics.

I. QUALITY PROGRAMS AND ADMINISTRATIVE CONTROLS AFFECTING QUALITY

The SALP 9 Board Report noted that management involvement and controls in assuring quality appeared to be minimal during the first part of the assessment period particularly in the area of audits and safety evaluations.

Management reviews were recognized as being weak and several changes have been made to strengthen this weakness. The Nuclear Safety Review Group (NSRG) has increased its involvement in the Nuclear Quality Assurance audit process by participating in some parts of the audits themselves, and by reviewing all audits upon completion. After review of the audit report, an evaluation is fed back to the audit group via NSRG Meeting Minutes. The audit group uses the input to make adjustments to the audit process.

The number of audit findings open longer than 180 days has been reduced to zero from a high of 150 in June 1985. In an effort to be even more aggressive, management changed the Fermi 2 Business Plan goal to be no findings open more than 90 days. At the present time there are only 15 audit generated DERs older than 90 days.

The audit program has undergone a number of changes. The most significant was the change to be more performance based in the

audit process. More time is now spent preparing for the audit by developing better checklists which have fewer items with more thought being given on how to conduct the verification in the field. More time is being spent by audit supervision on coaching. A performance based seminar has been held to improve the auditors' understanding of performance based auditing practices.

The checklist process has undergone several revisions during the last year. In brief, the audit team leader now signs off on the completed checklist indicating that all checklist items have been accounted for and are complete or an explanation is given for not completing the item. Checklist items are now prioritized, high priority items must be completed during the audit. Checklist items are now more performance based. These checklists generally consist of a series of summary statements extracted from the program document rather than a cut and paste from a procedure. Because of the effort to write more performance based audit questions, the auditors are identifying more deficiencies that have real substance to them.

The DER system is now used to document QA audit findings. As a result, there are fewer requests for extensions to address findings, and the extensions that are submitted are for shorter periods. The bottom line is that the deficiencies identified during audits are being resolved much more rapidly than in 1987.

To address weaknesses in the safety evaluation review and approval process, a consultant was hired to conduct additional classes in safety evaluations. The consultant was to continue until management was satisfied as to the quality of safety evaluations. He is still under contract to conduct training, but no longer reviews safety evaluations.

Since the previous SALP report a number of management changes have taken place. Some of these changes include the Vice President Nuclear Operations who was formerly the engineering Vice President, a new Plant Manager, Maintenance and Technical Superintendents, I&C Supervisor, QA and Licensing Directors and Vice President Engineering & Services (who is also NSRG chairman). All of these personnel have previous nuclear experience and many have previous BWR experience. With the addition of these new and experienced management personnel there has been renewed emphasis on more direct management involvement in the day-to-day operations of the plant.

In August 1988, an incentive program was put in place to improve personnel performance. The Nuclear Generation Management Performance Program provides monetary awards for the achievement of specified levels of performance and is designed to motivate and stimulate employes to achieve continued improvement in individual performance and overall operation. The program provides awards based on achievement of performance measures. These measures are the Fermi Business Plan goals, Organizational Unit Business Plan goals, and individual Annual Work Plan goals. The program is directed at supervisory and management personnel.

Accountability is also emphasized up and down the line with "accountability meetings" being held within Nuclear Operations and Nuclear Engineering for personnel errors and the use of Annual Work Plans and Performance Appraisals for across-the-board accountability of management and supervisory personnel.

Other efforts underway include the issuance of Fermi Management Directives (FMDs) and the rewriting of all procedures on site to simplify, consolidate and make them more user friendly. A similar effort is also underway with the surveillance procedures utilized to verify compliance with the Technical Specifications, which is being coordinated with the Technical Specification Improvement Program.

A new process using the Deviation Event Reporting (DER) system has also been initiated to provide a single means to document, assign, evaluate, correct, verify, status, track and maintain all internally and externally identified deficiencies and industry issues including NRC, INPO, ANI, GE and others. This process, not only allows all of these deficiencies to be identified on one document, but also establishes priorities for the evaluations and corrective measures as determined by the Plant Manager. Additionally, the program substantially lowers the threshold upon which deficiencies are written. Long term this process should help to assure better documentation and timely completion of corrective actions.

J. LICENSING ACTIVITIES

The Licensing area was rated a Category 2, the same as in the previous period. The SALP analysis recognized improvements during the period, but mentioned additional improvements could still be achieved in the planning, timeliness and quality of submittals.

Fermi 2 management recognizes that not only does the improved performance have to be maintained, but that sustained efforts are

necessary to achieve desired further improvements. The Licensing group's goals include timely NRC submittals and preparation of accurate and thorough License Amendment requests. A reduction in requests for additional information is expected. Greater emphasis is being placed on responsiveness to NRC initiatives and achieving a good working relationship with all NRC representatives.

In order to direct more management attention to licensing activities, the Licensing Group has been reorganized. The Director, Nuclear Licensing now reports directly to the Vice President level of management. This facilitates more immediate upper level management attention to licensing problems. The position of Supervisor Compliance and Special Projects has been added to the licensing organization. This individual will in part act to focus prompt management attention on inspectors' concerns. These organization changes will improve Fermi 2's responsiveness to all NRC issues.

Detroit Edison appreciates the effort NRR has provided in review of proposed Technical Specification changes, especially those resulting from the Technical Specification Improvement Program. Fermi 2 personnel are willing and eager to meet with the NRC to resolve any questions that arise on Technical Specifications or other matters and on a routine basis for discussion of licensing activities.

K. TRAINING AND QUALIFICATION EFFECTIVENESS

Detroit Edison accepts the analysis and conclusions of the SALP 9 Board. During the evaluation period, Detroit Edison's training and qualification programs have improved, building on the corrective actions taken as a result of the previous SALP. The major emphasis has been on tighter administrative controls and implementation of INPO accredited training programs.

The licensed operator requalification program corrective action has been effective. Close management attention and internal program reviews provide assurance that the training program is being implemented as required. In addition, all administrative procedures in this area have been revised to provide standardization and the control mechanism to ensure consistency in performance.

Significant effort has gone into improving the technical quality of operator training programs. The simulator model has been enhanced based on plant events and operators retrained. This form of corrective action has been very effective and well received by

our operators. The operators have been trained on the emergency operating procedures based on revision four of the BWR Owner's Group emergency procedure guidelines. This training has increased the ability and confidence of every operating shift to respond to an emergency, and will enhance their ability to protect the health and safety of the public. Licensed operators have also received training on the licensing and engineering basis behind technical specifications. These improvements have been monitored by plant and senior management during routine simulator performance evaluation. This management overview has provided additional guidance to the operating shifts and instant feedback to the training organization.

Considerable effort is in progress to improve the technical quality of operator training programs. The task list used to develop operator training programs is presently under review, and will be completed by December 31, 1988. The job task analysis associated with this effort will result in some modification to the operator training program. Modifications to the operator training program will be implemented by April 30, 1989. These enhancements should significantly improve the training material. In addition, systems training material is being reviewed and updated as the training material is being reviewed and document index system to control that material. Also, steps have been taken to convert licensed operator testing methods to conform with the new requalification examination process.

The accredited training programs for maintenance personnel are being implemented. In addition, environmental qualification program requirements were added to two courses; "Information and Retrieval", and "Prints, Records and Drawings". Maintenance craft and first line supervisors are enrolled in the Maintenance accredited training.

A supervisory training course has been developed and will be taught beginning in early September. The course teaches supervisory skills but has been tailored to the special needs of personnel working in a nuclear environment. The course is intended to establish a nuclear attitude that is more quality conscious and to increase the awareness of administrative controls that affect quality and safety. Initially, it will be offered to approximately 60 first line supervisors which includes maintenance general and assistant foreman.

M. ENGINEERING/TECHNICAL SUPPORT - CATEGORY 3

A Category 3 rating in this area is unacceptable performance to Detroit Edison. Improvements in the Engineering area have been made and will continue in order to provide effective technical support to the plant.

The SALP Board points out that Detroit Edison management attention is required to further integrate the engineering function into the support of plant operations, to provide consistency in the resolution of technical issues within engineering and to encourage engineering to become more proactive in anticipating plant problems.

The SALP-9 report recognized that staffing was adequate, while approach to resolution of problems, responsiveness to NRC initiatives and management involvement were mixed. Overall technical support to operations also needs further improvement.

Over the last year, several corrective actions have been taken and progress is being made by Nuclear Engineering in effectively supporting the operation and maintenance of Fermi. Some examples include:

- o In October 1987, the former Plant Manager was made General Director - Nuclear Engineering bringing with him the knowledge of plant operations to Nuclear Engineering. This has been effective in reorienting Engineering thinking toward plant support.
- o Increased the Plant Support Engineering (PSE) function by doubling the size of the PSE group and providing essentially round-the-clock plant coverage since January 1988. The PSEs are located inside the plant and interface closely with the Technical, Operations and Maintenance personnel and provide feedback to appropriate Nuclear Engineering disciplines.
- o Started daily Nuclear Engineering Staff meetings (General Director and all Nuclear Engineering Supervisors) reviewing plant operational problems and ensuring that resolutions are accurate and are completed in a timely manner. These meetings were expanded to include all engineering supervisors in order to transmit management philosophy and desires more readily.
- o Self initiated Safety System Functional Inspection (SSFI) on the High Pressure Coolant Injection (HPCI) system in the

later part of 1987. This proactive initiative confirmed the adequacy of the overall plant design process, operations and management controls of the system. Minor discrepancies were identified and corrected. Current plans are to continue with SSFI's on other systems.

- o Improvements were made in the performance and documentation of safety evaluations ensuring consistent and proper resolution of technical issues. This was done through special training and monitoring.
- o Plant modifications have been designed and installed to assist in reducing ESF actuations and other LER's. For example, a modification to the Emergency Equipment Cooling Water (EECW) system was made which permitted shifting of the Reactor Building Closed Cooling Water (RBCCW) system pumps without actuation of the EECW system. Also, the delay volume of the Reactor Water Cleanup (RWCU) system was removed in order to reduce the RWCU problems being caused during reactor vessel depressurization.
- o Nuclear Engineering is working with Nuclear Production in establishing prioritization of proposed design modifications up to and including the first refueling outage in order to ensure Nuclear Engineering is applying resources where plant management and regulatory commitments will best be served.
- o Increased management attention on plant and industry problems and NRC initiatives. Examples include support of the Technical Specification Improvement Program, and increased effort in dispositioning Significant Operating Experience Report (SOERs), regulatory action items, DERs, Temporary Modifications and Annunciators/CRIS-dots.
- o Administrative procedures and training are being upgraded to encourage engineering personnel to become more proactive in anticipating plant problems. Supervisors and technical personnel are held accountable for up-front interface with Nuclear Production and the on site A/E counterpart on plant problems or concerns and to continue the interfaces while proposed modification packages are developed and implemented. Walkdowns on equipment and systems have been encouraged as well as review of equipment/system performance history to detect degradation.

- o Accountability meetings have been held to review personnel performance problems. Root causes were identified and corrective actions taken.
- o A senior Engineering Supervisor is participating in SRO training program to increase knowledge of plant operation. He will complete training and return to Nuclear Engineering. A Chief Engineer was hired and will begin in September 1988 as General Director. He was in a leadership position in the Engineering organization of an operating plant. He will bring with him the skills to improve timely and consistent resolutions to plant and engineering problems.
- o Consolidation of Material Engineering, Nuclear Procurement and Warehousing into one organization, Nuclear Material Management, to improve the spare and replacement parts/equipment management. This was completed in June 1988. The Director of this group reports directly to the Vice President, Nuclear Engineering and Services.
- o The Technical Engineer position has been filled by an individual with operating experience who had an SRO license.
- o A System Engineering group is being put into effect in the plant Technical Engineering section. This group will provide engineering services to all Fermi organizations in regard to the correct operation of systems. The group is being modeled after INPO guidelines and other plants with successful system engineering groups. A supervisor for the group has been hired with ten years of engineering and operational experience at operating reactors. The size of the group is being approximately doubled. A better definition of workscope and an expansion of duties and responsibilities are also being made. These actions will create a group of experts on Fermi systems who are committed to support all groups in the safe operation and maintenance of the plant, as well as serve as the dedicated interface between Operations, Maintenance, and Nuclear Engineering. The goal is to have the group staffed by December 31, 1988, dependent on the availability of qualified people.
- o In addition, a review of the nuclear material management process and the Nuclear Engineering/Technical Group interface is being made by an outside consultant. The review is intended to help us assess the working interface between the Nuclear Engineering and Technical Group, and to make improvements to the material management programs.

The above corrective actions will continue to improve Engineering and Technical efficiency and effectiveness in supporting Nuclear Production.