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June 3, 1985
NE-85-0711

Director of Nuclear Reactor Regulation
Attention: Mr. B. J. Youngblood, Chief
Licensing Branch No. 1
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Youngblood:

Reference: Fermi 2
NRC Docket No. 50-341

Subject: Comments on SSER 5

Detroit Edison recently completed a review of Supplement 5 to the Fermi 2 Safety Evaluation Report - NUREG 0798 (SSER 5). The review was conducted to: 1) identify differences in fact between SSER 5 and the Fermi 2 Final Safety Analysis Report, Technical Specifications and correspondence, and 2) provide an update on select commitments and actions addressed as future activities in SSER 5, which are the responsibility of Detroit Edison to complete.

Differences in fact plus miscellaneous other comments are included in Attachment 1. The update on select activities is provided in Attachment 2.

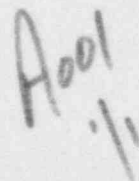
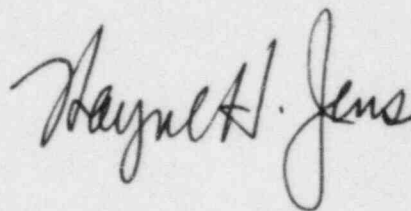
The comments provided in the attachments complement previous comments on the SER and its supplements 1 through 4.

Please direct any questions to Mr. O. K. Earle at
(313) 586-4211.

Sincerely,

Attachments

cc: Mr. P. M. Byron
Mr. M. D. Lynch
Mr. T. H. Novak
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Washington, D.C. 20555



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ATTACHMENT 1

Pages attached:	2-2	E-4
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	3-9	E-6
	3-11	E-9
	3-13	E-10
	3-14	E-11 (V.C)
	6-5	E-11 (V.D)
	6-6/7	E-15
	7-4	E-17
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	A-1/4	Q-1
	E-2	Q-2/3
	E-3	Q-3

Current SSER 5 Discussion:

SSER 5, Section 2.4.2.5.A(3) states:

"Determine the alignment and top elevation of the sheet pile wall at the toe of the shore barrier, if possible."

DETROIT EDISON COMMENTS:

The alignment and elevation of several points along the sheet pile wall were surveyed in December 1984. The procedure for surveying the sheet pile wall will check the alignment and elevation of several visible points. Subsequent surveys are not a strict measurement program because the same wall points may not be available for survey due to the varying lake conditions; however, the surveys will provide an indication of the alignment of the sheet pile wall. For similar reasons, the Fermi 2 Technical Specifications, Table 3.7.3-1, include survey points for the shore barrier, but not the sheet pile wall.

Current SSER 5 Discussion:

Figure 2-1 indicates for shore barrier location N7529/E5948 that the elevation is 587.04'.

Detroit Edison Comments:

The elevation for location N7529/E5948 of the shore barrier is 583.04'.

Current SSER 5 Discussion:

SSER 5, Section 3.10(a) and (c) state:

- (a) "The capability of the valve to withstand the accelerations calculated in the as-built piping analysis is less than the generic values of acceleration contained in the purchase specification."
- (c) "A modification was initiated for the one valve (V11-2006) whose acceleration calculated in the as-built piping analysis exceeds the valve's capability to withstand that acceleration. This modification has been completed and the as-built acceleration capability has been reduced to a value less than the valve's acceleration capability."

Detroit Edison Comments:

For clarity, to eliminate potential confusion between the calculated design acceleration a valve must withstand and the actual capability of the valve, the following revised wording is proposed:

- (a) "The requirement for the valve to withstand the accelerations calculated in the as-built piping analysis is less severe than the generic values of acceleration contained in the purchase specification."
- (c) "A modification was initiated for the one valve (V11-2006) whose acceleration calculated in the as-built piping analysis exceeded the valve's capability to withstand that acceleration. This modification has been completed and the calculated as-built acceleration is now less than the valve's acceleration capability."

Current SSER 5 Discussion:

SSER 5, Section 3.11.4.1, third paragraph, includes a reference error, specifically:

"In addition, we have reviewed the separation criteria and concluded that these criteria are acceptable and are equivalent to those in IEEE Std 384-194 with possible..."

Detroit Edison Comments:

The reference should be to IEEE Std. 384-1974.

Current SSER 5 Discussion:

SSER 5, Section 3.11.5, states:

"The applicant's revised environmental qualification submitted in its letter dated July 19, 1983, adequately addresses equipment aging requirements and plant maintenance and surveillance program. In Supplement 2 to the SER, we required that surveillance and maintenance program procedures be implemented before operation at full-power. In its revised program submittal, the applicant states that individual sets of procedures will be complete and the program in place prior to fuel load. Subject to confirmation by Region III, we find that this item is resolved acceptably."

Detroit Edison Comments:

To assure a clear understanding of Detroit Edison's commitment (EF2-63957, dated July 19, 1983) relative to Equipment Qualification and maintenance/surveillance procedures and related programs, the following comments are made:

- o Equipment Qualification related maintenance and surveillance procedures were in place at fuel load.
- o Gathering of related information, transmitting this information to the plant and their full implementation of the specific requirements into the Maintenance and Surveillance Program is scheduled for completion by full-power operation as noted in SSER 2.

Current SSER 5 Discussion:

SSER 5, Section 3.11.5.1 (a), states:

"The applicant must confirm that the demonstrated instrument accuracy resulting from a harsh environment envelops the plant requirements specific to Fermi-2. Since this issue is part of an ongoing generic staff review, we consider the applicant's position to be acceptable pending final resolution."

Detroit Edison Comments:

Detroit Edison's interpretation of the subject paragraph is that resolution of the generic instrument accuracy issue is separate from and may occur after the November 30, 1985, date per 10CFR50.49. Refer to SSER 5, Section 3.11.6.

It is Detroit Edison's understanding that this generic issue will not be resolved by the LRG Instrument Setpoint Methodology Group's program until December 1985 at the earliest. The current projection for resolution of this issue within Detroit Edison, which includes submittals to the NRC, is first quarter 1986.

Current SSER 5 Discussion:

SSER 5, Section 6.4.1, third paragraph, states:

"In this report, we expressed our concern that contrary to the guidelines in Regulatory Guide 1.52, silicone sealants were used to seal leaks found during leakage acceptance tests on the control room filter system ducts and housings."

Detroit Edison Comments:

Silicone sealant was not used on the housings other than at the duct-to-housing connection. This clarification has bearing due to applicable ANSI requirements.

Current SSER 5 Discussion:

SSER 5, Section 6.4.1, states:

"In its letter dated January 8, 1985, the applicant committed to provide reasonable assurance of radiological protection for the control room operators by providing either: (1) periodic leakage tests on the external portion of the air-conditioning duct; (2) replacement of the external portion of this duct with a welded duct; or (3) a demonstration that the design of that portion of this duct which is external to the control room will provide adequate protection over the life of the plant. We will place a condition in the license incorporating the applicant's commitment on this matter. On this basis, we find that the design of the Fermi-2 control room will still meet the requirements of GDC 19 of Appendix A to 10 CFR Part 50."

Detroit Edison Comments:

The condition in the license, 2.C(7), referred to above was stated to require resolution before exceeding 5% of full power. Further discussion between the NRC and Detroit Edison confirmed that the appropriate date for resolution is before startup after the first refueling outage. It is Detroit Edison's understanding that this condition will be modified in the Fermi 2 full power license. (Refer to Detroit Edison letter NE-85-0706, dated May 7, 1985, for more information.)

Current SSER 5 Discussion:

SSER 5, Section 7.5.2, states:

"Regulatory Guide 1.97

In the SER we issued in July 1981, we addressed the acceptability of the post-accident monitoring instrumentation. We provide guidance in Regulatory Guide 1.97, "Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant and Environs Conditions During and Following an Accident," for instrumentation used to monitor plant variables and systems during and following an accident. In response to our request, the applicant is currently performing a review to determine the level of its conformance to the provisions of Regulatory Guide 1.97. In its letter dated April 15, 1983, the applicant provided a status of its review and committed to provide by June 1985, a final report on Regulatory Guide 1.97. We find this approach and schedule acceptable."

Detroit Edison Comments:

Based on a recent review of Detroit Edison's activities leading to the Fermi 2 full power license, the power ascension testing program and critical manpower needs, Detroit Edison requested that submittal of the final report on conformance to Regulatory Guide 1.97 be revised to September 30, 1985. (Refer to Detroit Edison letter NE-85-0705, dated May 21, 1985, for more details.)

Current SSER 5 Discussion:

SSER 5, Section 7.7.2, states:

"...must have a standby liquid control system capable of injecting 86 gallons per minute of a solution containing sodium pentaborate at a concentration of 13 percent by weight."

Detroit Edison Comments:

Section 50.62 to 10CFR50 allows the SLCS to have the above sodium pentaborate injection capability or its equivalent, i.e., different injection rate and concentration, as long as the reactivity control is the same.

Current SSER 5 Discussion:

SSER 5, Section 9.5.7, second paragraph, states:

"...These units are Model 3800 T6 8-1/8, manufactured by the Fairbanks-Morse Engine Division of Colt Industries."

Detroit Edison Comments:

The correct model reference is Model 38 TD 8-1/8.

Current SSER 5 Discussion:

SSER 5, Section 9.5.7, page 9-4, last paragraph, states:

"...They concluded that the upper crankline component failures of EDG Nos. 11 and 12 were the result of inadequate lubrication resulting from not using the installed manual prelubrication system."

Detroit Edison Comments:

For clarity, the words "during repeated fast starts" should be incorporated at the end of the sentence shown above, i.e.,

"They concluded...using the installed manual prelubrication system during repeated fast starts."

Current SSER 5 Discussion:

SSER 5, Sections 9.5.7(a) and (b) state respectively:

- (a) "...The applicant will then step load the EDG to full load over a period of time and maintain full load for one hour. The applicant will then step unload the machine over a reasonable time period and shut down the EDG. This will be done in accordance with the vendor's instructions.
- (b) Visually inspect and replace the oil filter once per calendar quarter. If bearing material is found in the filter, the bearing to crankshaft clearance will be checked on each upper crankshaft bearing. The clearances will also be checked either every 18 months or after 20 starts without prelubrication (i.e., an unplanned start), whichever occurs first."

Detroit Edison Comments:

To provide operating flexibility, the words "at least" should be incorporated as shown below.

"The applicant will then...and maintain full load for at least one hour."

Bearing-to-crankshaft clearances will be checked if material found on the oil filter exceeds the acceptance criteria, refer to Detroit Edison letter NE-85-0459, dated March 14, 1985. The SSER 5 statement should be revised as follows:

"...If the quantity of bearing material found in the filter exceeds the acceptance criteria, the bearing-to-crankshaft clearance will be checked on each upper crankshaft bearing."

Current SSER 5 Discussion:

SSER 5, Section 11.2.1, states:

"The applicant recently submitted additional information regarding this portable liquid radwaste system in its letters dated February 18 and February 27, 1985. We have evaluated this additional information against our acceptance criteria in Section 11.2 of the Standard Review Plan (NUREG-0800). Based on this review, we find the proposed portable system to be acceptable with two exceptions. These are that the applicant has not performed a detailed cost-benefit analysis of this portable system as required by Section II.D of Appendix 1 of 10 CFR Part 50 nor has the applicant demonstrated that the design of the proposed portable system satisfies the design objective doses specified in the option provided by the Commission's Annex to Appendix I, dated September 4, 1985. However, we conclude that for reactor operation at power levels up to five percent of full power, the design of the portable liquid radwaste system satisfies the design objectives specified in the option cited above. Moreover, the applicant has committed to make its permanent liquid radwaste treatment system operable prior to exceeding five percent of full power and has agreed to a license condition which reflects this commitment.

We find that the incorporation of this condition into the Fermi-2 operating license will provide reasonable assurance that public health and safety will not be endangered since the permanent liquid radwaste system will be operable before any significant quantity of liquid radwaste can be generated. On this basis, we find that the use of the portable liquid radwaste system prior to exceeding five percent of full power, is acceptable."

Detroit Edison Comments:

The capability to use a portable liquid radwaste system will be retained after the permanent liquid radwaste system becomes operational. A portable system may be used on occasion during periods of maintenance on the permanent system.

The inputs (both quantity of water and radioactivity concentration) to the portable or permanent system during batch processing would be the same. Similarly, in either case the processed liquid is transferred to the Waste Sample Tanks for sampling and analyses before release to the environs or being returned to the Condensate Storage Tanks. During use of the portable system, the liquid after clean-up is processed through the same normal, controlled, monitored route as with the permanent system as described in the FSAR.

Before exceeding 5% of full power, the quantities and radioactive concentrations of liquid radwaste are very small. This fact, and recognizing that a portable system will be used in the future on a limited basis, does not constitute a condition under which a cost-benefit analysis

per Appendix I would be meaningful for the portable system. In addition, Appendix I addresses design objectives for annual doses and annual quantities of released radioactive material. Thereby, these objectives, committed to by Detroit Edison, will be almost totally influenced by the use of the permanent system.

Based on sample analyses of the liquid radwaste processed by the portable system, the radioactive concentrations in liquid releases to the environs may be lowered by more frequent resin replacement, the addition of a demineralizer vessel or reprocessing. In consideration of the analysis and the latter processing options (as required), the Appendix I design objectives will be met, notwithstanding the Fermi 2 Technical Specifications which govern radioactive releases to the environs.

NOTE: Error in referenced date for Commission's Annex to Appendix I.

Current SSER 5 Discussion:

SSER 5, Section 13.1.C states:

"The applicant has also provided an outline of its Shift Advisor Training Program which was conducted over a 17-week period and included all the elements contained in Generic Letter 84-16. Since these Shift Advisors are now licensed personnel, they are required to participate in the applicant's Requalification Program. This exceeds the training and evaluation guidelines for Shift Advisors."

Detroit Edison Comments:

The Shift Operations Advisors (Shift Advisors) were licensed to demonstrate to the NRC their knowledge level and to assure they meet the requirements for their position. There has not been an intent on Detroit Edison's part to have the Shift Operations Advisors (SOAs) participate in a requalification program. In addition, there is no requirement to license the SOAs. Their licenses are being de-activated. As a prudent measure, the SOAs will attend the Operating Experience Review portion of the requalification program.

Current SSER 5 Discussion:

SSER 5, Section II.B.3, third paragraph, states:

"Our review included the letters submitted by the applicant on December 18, 1971;...."

Detroit Edison Comments:

Reference to applicant letter should be to December 18, 1981.

Current SSER 5 Discussion:

SSER 5, Section II.E.4.2, third paragraph, states:

"...The last item regarding handwheels on the purge and vent valves has been resolved by implementing written procedures."

Detroit Edison Comments:

As stated in Detroit Edison letter EF2-57430, dated May 12, 1982, and EF2-72272, dated October 11, 1984, the valves operate automatically even in the manual handwheel mode. The handwheel clutch is disengaged when this occurs. No administrative procedure requirements were necessary to resolve this concern.

Current SSER 5 Discussion:

SSER 5, Section II.F.1, Attachment 2 (Sampling and Analysis of Plant Effluents), states:

"In the SER we issued in July 1981, we concluded that the applicant's proposed design features for sampling and analysis of plant effluents was acceptable. However, in Report No. 50-341/84-27 cited in the preceding section of this supplement, we stated that the applicant had not yet developed correction factors for sample line losses due to iodine plateout and particulate depositions so as to assure the collection of representative samples. In response to our concern on this matter, the applicant suggested in its letter dated January 8, 1985, that a license condition might be imposed which would require the applicant to verify, prior to startup after the first refueling outage, that the sampling system performs its intended function. It is the applicant's position that the noble gas monitor can be used to project the magnitude of radioiodine and particulate releases in the event that an accident occurs during the first fuel cycle. We find that incorporating such a condition in the Fermi-2 operating license would provide adequate protection, will not endanger life or property, or the common defense and security, and is otherwise in the public interest. On this basis, we conclude that this issue is closed pending verification that the sampling system performs its intended function prior to startup after the first refueling outage."

Detroit Edison Comments:

Comments on the subject SSER 5 section are provided in Detroit Edison letter NE-85-0708, dated May 16, 1985.

Current SSER 5 Discussion:

SSER 5, Section II.K.3.18, states:

"Subsequently, the applicant adopted by reference in its letter dated July 31, 1985,..."

Detroit Edison Comments:

Reference to applicant letter should be to July 31, 1984.

Current SSER 5 Discussion:

SSER 5, Section III.D.1.1 states:

"...We have reviewed the proposed leakage reduction program and find it to be in compliance with the requirements of Item III.D.1.1 of NUREG-0737 and, therefore, acceptable, with the following exceptions:

- (a) The applicant has stated that inspecting for leaks using the helium leak detection method may be considered for some gaseous systems whereas we require in NUREG-0737 that testing of gaseous systems should include helium leak detection or equivalent methods.
- (b) The applicant has not described, as we require in NUREG-0737, a program to reduce potential paths due to design and/or operator deficiencies as discussed in our generic letter dated October 17, 1979, to all operating nuclear power plants regarding the North Anna and other related incidents.
- (c) The applicant has stated that a report will be submitted to the NRC staff about the time when full power will be achieved in the Fermi-2 facility, of the recorded leakage and the preventive/corrective maintenance performed as a direct result of the applicant's evaluation of this leakage, whereas we require in NUREG-0737 that this matter be implemented by applicants for an operating license prior to issuance of a full power license.

Accordingly, we will require these open items to be resolved by the applicant prior to issuance of a full power license for the Fermi-2 facility."

Detroit Edison Comments:

Comments on the subject SSER 5 section and additional information are provided in Detroit Edison letter NE-85-0391, dated June 3, 1985.

Current SSER 5 Discussion:

SSER 5, App. A, lists a continuing chronology of correspondence between the NRC and Detroit Edison.

Detroit Edison Comments:

Provided below are Detroit Edison letters transmitted to the NRC (NRR) during the applicable time frame for inclusion in SSER 5 which are not listed in Appendix A.

August 28, 1984	Letter from applicant concerning coatings inside containment.
September 7, 1984	Letter from applicant concerning open items identified in NRC Environmental Qualification Audit dated July 16-18, 1984.
September 12, 1984	Letter from applicant concerning FSAR changes relative to the Nuclear Safety Review Group.
September 20, 1984	Letter from applicant concerning recommendations from Duke Power Report on Final Assessment of Construction.
September 27, 1984	Letter from applicant concerning Control Room Design Review status.
September 27, 1984	Letter from applicant concerning "cross-over" cable, fire stops and use of vinyl tile in the Control Center.
October 3, 1984	Letter from applicant transmitting Certificate of Service for Amendment 59.
October 5, 1984	Letter from applicant concerning Physical Security Plan.
October 11, 1984	Letter from applicant concerning revised Offsite Dose Calculation Manual.

October 19, 1984	Letter from applicant transmitting revised FSAR figures.
October 22, 1984	Letter from applicant concerning qualification of 3M fire wrap.
October 22, 1984	Letter from applicant concerning implementation of alternate shutdown.
November 6, 1984	Letter from applicant concerning determination of MCPR limit for Technical Specifications.
November 15, 1984	Letter from applicant concerning resolution of Generic Letter 84-23.
November 20, 1984	Letter from applicant concerning seismic qualification of equipment.
November 29, 1984	Letter from applicant concerning resolution of Generic Letter 83-28.
December 7, 1984	Letter from applicant concerning 3L panel implementation.
December 17, 1984	Letter from applicant concerning 10CFR71, Subpart H Quality Assurance Program.
December 18, 1984	Letter from applicant concerning user registration for GE-1500 radioactive materials shipping cask.
December 20, 1984	Letter from applicant concerning certification of Shift Advisors.
January 23, 1985	Letter from applicant concerning qualification of fire doors.
February 1, 1985	Letter from applicant concerning additional basis for 40-year license.
February 4, 1985	Letter from applicant concerning additional fire protection information.
February 4, 1985	Letter from applicant concerning closure of NRC Equipment Qualification Audit items.
February 12, 1985	Letter from applicant concerning revisions to the draft Fermi-2 Technical Specifications.
February 18, 1985	Letter from applicant transmitting description of portable radwaste system.
February 19, 1985	Letter from applicant transmitting Primary Containment Integrated Leak Rate Test Report.

February 21, 1985	Letter from applicant transmitting fire detector drawings.
February 22, 1985	Letter from applicant concerning Safe Energy Condition letter.
February 22, 1985	Letter from applicant concerning Generic Letter 85-04.
February 27, 1985	Letter from applicant transmitting additional portable liquid radwaste system information.

Current SSER 5 Discussion:

SSER 5, App. E, Sections I.B and II.A respectively state:

"We reviewed the Fermi-2 fire protection program for conformance with Section 9.5.1, "Fire Protection," of the Standard Review Plan (NUREG-0800). This document contains, in BTP CMEB 9.5-1, the technical requirements of Appendix A to BTP ASB 9.5-1 and Appendix R to 10 CFR 50. Since the applicant has compared its program to these guidelines, this appendix also references these guidelines."

"The pumps take suction from the general service water pump header which is supplied from Lake Erie."

Detroit Edison Comments:

For clarity, Detroit Edison originally compared its fire protection program to Appendix A to BTP ASB 9.5-1 and Sections G, J, L and O of Appendix R to 10CFR50. BTP CMEB 9.5-1 was not used.

The fire protection water supply system pumps take suction from the general service water pump pit, not the pump header.

Current SSER 5 Discussion:

SSER 5, App. E, Section II.A states:

"A total of 11 yard hydrants are provided at intervals not exceeding 300 feet. A fire hose is provided for each hydrant. Sufficient hose will be provided to cover all areas between hydrants with adequate capacity and pressure.

All valves in the fire protection water supply system are locked open and are under administrative controls. All valves in the fire protection system will be periodically checked to verify position. The water supply valves meet the requirements of Section C.3.b of Appendix A and are, therefore, acceptable."

Detroit Edison Comments:

The subject paragraph should be revised as follows:

"A total of 13 yard hydrants are provided at intervals not exceeding 300 feet. Selected hydrants are provided with hose houses. Sufficient hose... capacity and pressure."

Based on a request from NRC, Region III, a fire protection water supply system boundary valve is locked closed. The SSER 5 statement should be revised to:

"All valves in the fire protection water supply system are locked in their appropriate position and are under administrative controls."

Current SSER 5 Discussion:

SSER 5, App. E, Section II.B, lists the plant areas equipped with sprinkler or spray systems as a result of the fire hazards analysis. Several corrections should be made. Refer to Detroit Edison Comments below.

Detroit Edison Comments:

Under Auxiliary Building, revise third entry to "Ventilation equipment (charcoal filters), Zone 15, elevation 677' (manual water spray)".

Under Residual Heat Removal Complex, revise entry to "Fuel oil storage tank rooms (4)".

Under Radwaste Building, delete first entry (Baled waste storage area).

Under Turbine Building, revise second entry to "RFPT oil reservoir".

Current SSER 5 Discussion:

SSER 5, App. E, Section II.C, provides a listing which states:

"The areas which have been equipped with a low-pressure carbon dioxide system include the following:

RHR Building

Emergency diesel-generators
Miscellaneous room, Zone 11, elevation 643'-6"
Cable tunnel, Zone 5, elevation 613'-6"
Cable tray area, Zone 8, elevation 631'

The areas which have been equipped with an automatic, total flooding Halon system include the following:

Auxiliary Building

SGTS, Zone 14, elevation 677'-6"
Cable spreading room
Computer room
Under computer room floor
Relay Room 11"

In addition, for the Halon 1301 system used in the nonsafety-related computer room underfloor spaces, it is stated:

"The system is activated by both ionization and photoelectric detectors on a Class A fire alarm circuit."

Detroit Edison Comments:

The list should be revised as follows:

"The areas which have been equipped with a low-pressure carbon dioxide system include the following:

RHR Building

Emergency diesel-generators

Auxiliary Building

Miscellaneous room, Zone 11, elevation 643'-6"
Cable tunnel, Zone 5, elevation 613'-6"
Cable tray area, Zone 8, elevation 631'
SGTS, Zone 14, elevation 677'-6"

The areas which have been equipped with an automatic, total flooding Halon system include the following:

Auxiliary Building

Cable spreading room, Zone 7
Computer room, Zone 9
Under computer room floor, Zone 9
Relay room, Zone 3"

The Halon 1301 system used in the nonsafety-related computer room underfloor spaces is activated only by ionization detectors.

Current SSER 5 Discussion:

SSER 5, App. E, Section II.D states:

"The fire detection systems consist of the detectors, the associated electrical power supplies, and the annunciation panels. The types of detectors used are: ionization devices which are activated by products of combustion; thermal; and photoelectric devices; and heat sensing cable."

Detroit Edison Comments:

Heat sensing cables are not used as fire detectors at Fermi 2.

Current SSER 5 Discussion:

SSER 5, App. E, Section III.B, provides a listing of two 1 1/2-hour fire rated dampers in series at various locations. The listing states:

<u>"Damper No.</u>	<u>Location</u>
FO 81 A,B	Wall separating the auxiliary building and the control room
FO 92 A,B	Wall separating the auxiliary building and the control room
FO 83 A,B	Wall separating the auxiliary building and the control room
FO 84 A,B	Wall separating the auxiliary building and the control room"

Detroit Edison Comments:

FO 92 A,B should be FO 82 A,B.

Current SSER 5 Discussion:

SSER 5, App. E, Section IV, states:

"The applicant has installed self-contained eight-hour battery pack emergency lighting in all areas of the plant which could be manned by operators to bring the plant to a safe cold shutdown and in access and egress routes to and from all fire areas."

Detroit Edison Comments:

This sentence should be revised to:

"The applicant has installed self-contained eight-hour battery pack emergency lighting in all areas of the plant which would be manned by operators to bring the plant to a safe cold shutdown and in access and egress routes to and from all safety-related fire areas."

Current SSER 5 Discussion:

SSER 5, App. E, Section V.C states:

"The drywell atmosphere of the containment will be inerted with a 97-percent concentration of nitrogen, thereby eliminating any potential fire hazard from lubricating oil or hydraulic fluid systems during operation. Containment and reactor building fire protection features include hose stations, fire detectors, fire extinguishers, automatic sprinklers, and fire control barriers. Ionization smoke detectors are distributed throughout the drywell and provide an alarm and annunciation in the control room. Since the containment is inerted, the provisions of III.0 of Appendix R to 10 CFR Part 50 are met."

Detroit Edison Comments:

Ionization smoke detectors are not located in the Fermi 2 drywell since the drywell is inerted. This item was similarly addressed as a comment on SSER 2 (refer to Detroit Edison letter EF2-56767, dated August 2, 1982).

Current SSER 5 Discussion:

SSER 5, App. E, Section V.D states:

"The residual heat removal (RHR) complex is located in a separate, detached building and contains the emergency diesel-generators, the diesel oil storage tanks, and the RHR service water pumps, as well as other safety-related equipment and cables. Train I is separated from Train II by a blank, three-hour fire-rated concrete wall. The diesel fuel-oil storage tanks are separated from the other areas by three-hour fire-rated walls and protected by an automatic sprinkler system."

Detroit Edison Comments:

Train I is separated from Train II by a three-hour fire-rated concrete wall. The work "blank" should be deleted.

Current SSER 5 Discussion:

SSER 5, App. E, Section VI (5), states:

"(5) Reactor Building, Fire Zone 7, Elevation 641'-6"

This area contains only division one components. However, it is not separated from the next floor level by three-hour fire-rated barriers. Division two equipment on the next floor up is separated by greater than 50 feet with no intervening combustibles and the combustible loading in this area is low. In its letter dated August 3, 1984, the applicant committed to provide a metal cover on all vertical cable trays near column lines F-13. Based on this commitment, we conclude that the wide separation distances and low combustible loading provides reasonable assurance that a fire will not spread between redundant divisions. On this basis, we find this deviation acceptable."

Detroit Edison Comments:

For clarity, the following paragraph revision is recommended at the beginning:

"The Reactor Building third floor contains division two components. However, the third floor is not separated from the second floor by three-hour fire-rated barriers. Division one equipment on the second floor is separated by greater than 50 feet from the third floor division two components with no..."

Current SSER 5 Discussion:

SSER 5, App. E, Section VI (10), states:

"(10) Cable Tunnel, Auxiliary Building, Elevation 613'-6", Fire Zone 5

The applicant previously committed to provide one-hour fire barriers and an automatic suppression system for the protection of redundant cables in this area. In its letter dated August 3, 1984, the applicant revised this prior commitment. The applicant now proposes to provide a three-hour barrier between redundant divisions and to provide a manually operated sprinkler system. This commitment meets the intent of Section III.G of Appendix R to 10 CFR Part 50. On this basis, we find this deviation acceptable."

Detroit Edison Comments:

The cable tunnel has a manually operated low-pressure carbon dioxide system, not a sprinkler system.

Current SSER 5 Discussion:

SSER 5, App. E, Section VII.B.1, states:

o Beginning of first paragraph

"The alternate shutdown system now proposed by the applicant is designed to provide a safe shutdown capability which is separate and remote from the control center complex (i.e., the control room, the relay room and the cable spreading room) and five other fire zones (zones 1, 2, 8, 11, and 13 of the auxiliary building)."

o End of second paragraph

"The 3L panel, the switches and the associated instrumentation will be electrically and physically isolated from the fire zones cited above."

Detroit Edison Comments:

For clarity, these statements should be revised as follows:

"The alternate shutdown system now proposed by the applicant is designed to provide a safe shutdown capability which is electrically separate after transfer switch operation and remote ... auxiliary building)."

"The 3L panel, the switches and the associated instrumentation will be electrically separated upon transfer switch operation and physically isolated from the fire zones cited above."

Current SSER 5 Discussion:

SSER 5, App. E, Sections VII.B.1 and 3 state respectively:

"This independent alternate shutdown capability would be activated in the event of a fire in the control center complex or the other zones cited above, which damaged equipment and/or cables in these areas to the extent that redundant divisions of shutdown equipment were affected. If only one division of shutdown equipment were to be damaged, a safe shutdown may be accomplished either from the control room or from the division one or two Class 1E remote shutdown panels. (Our evaluation of the post-fire shutdown capability of these two Class 1E remote shutdown panels was provided on Page E-15 of Appendix E of Supplement No. 2 to the SER.)"

"The 3L panel is provided solely to achieve an independent alternate shutdown capability in the event of a fire and is, therefore, not designed to Class 1E requirements. The existing divisional remote shutdown panels provide the Class 1E remote shutdown capability. (These are the remote shutdown panels cited in Section VII.B.1 of this appendix and described on Page E-15 of Appendix E to Supplement No. 2 to the SER.)"

Detroit Edison Comments:

The division one and two remote shutdown panels are not fully Class 1E. The division one remote shutdown panel, however, is seismically qualified. It has been determined that the vintage of Fermi 2 design which includes the control center complex, the division one and two remote shutdown panels and the 3L panel collectively satisfy the requirements of General Design Criteria 19 and applicable portions of Appendix R to 10CFR50.

Current SSER 5 Discussion:

SSER 5, App. E, Section VII.B.2, states:

"One automatic depressurization system (ADS) valve is provided with isolated controls at the 3L panel to provide a path for the transfer of decay heat from the reactor vessel to the suppression pool."

Detroit Edison Comments:

For clarity, this statement should be revised to:

"One safety relief valve (SRV) is provided with isolated controls at the 3L panel to provide a path for the transfer of decay heat from the reactor vessel to the suppression pool."

This comment, replacement of ADS with SRV, also applies to Section VII.B.3 in two places and to Section VII.C in the second paragraph. In the top paragraph on Page E-22, "SRV" should be replaced with the word "manual".

Current SSER 5 Discussion:

SSER 5, App. E, Section VII.C, top paragraph of page E-22, states:

"Local verification that the RHR suction divisional cross-connect valves are closed will be required. If they have spuriously opened, dc power can be restored for valve operation. Their position is of no consequence when the RHR system is operating in the torus cooling mode since they are isolated from the pump suction during that mode."

Section VII.C also states:

"The applicant has indicated that the emergency lighting has been evaluated and modified as necessary to provide adequate lighting for access to and egress from the local alternate shutdown locations."

Detroit Edison Comments:

The subject valve operation is restored by ac power, not dc power.

Emergency lighting for access to and from the local alternate shutdown locations has been evaluated and design changes have been identified; however, installation of this emergency lighting will occur in conjunction with the installation of the 3L panel.

Current SSER 5 Discussion:

SSER 5, App. E, Section X (Summary of Approved Deviations).

Detroit Edison Comments:

Section X does not include the deviation associated with the Reactor Building, Fire Zone 7, Elevation 641'-6". Refer to SSER 5, App. E, Section VI(5).

Current SSER 5 Discussion:

SSER 5, App. N, Section 2.3.1.a, states:

"...The procedures include definitions of "Safe Load Paths" and prior to refueling will, wherever practical, require floor lines to show the heavy load paths."

Detroit Edison Comments:

Clarification on this issue was provided in Detroit Edison letter EF2-60134, dated October 15, 1982. Specifically, that letter stated:

"Because of the high strength integrity of the fueling floor at all locations and the separation of redundant safety systems located below the fueling floor, deviations from the travel paths shown in Figure 3 through 12 do not notably increase the consequences of any potential accidents as long as these deviations do not traverse over the Reactor, Fuel Storage Pool and Equipment Hatch areas. Therefore, the placement of painted travel path lines for all heavy loads offers very little advantage and could cause confusion. However, painted barrier lines and signs will be established around the Reactor, Fuel Pool, and Equipment Hatch areas. Additionally, painted travel paths will be provided for the five major loads handled over the 5th floor deck. These include the Reactor Shield Plugs, Reactor Vessel Head, Drywell Head, Spent Fuel Cask and the Equipment Storage Pool Slot Plugs."

The SSER 5 statement reflected an earlier Detroit Edison discussion in letter EF2-55382, dated December 3, 1981.

Current SSER 5 Discussion:

SSER 5, App. N, Section 2.3.2.a, states:

"The applicant has committed to complete its written procedures prior to initial criticality. Unanticipated load-handling procedures will be written prior to handling of the load. The procedures will meet the guidelines in NUREG-0612. A table was provided which lists the heavy loads carried by each crane along with its designated lifting devices. In order to control future heavy loads which may be handled over or near spent fuel or required safe shutdown equipment, the procedures governing the operation of the reactor building crane, the monorails, and the portable hoists will require the guidelines of NUREG-0612 be followed either by specific maintenance procedures or by attachment to maintenance orders/work packages prior to movement of heavy loads in these areas."

Detroit Edison Comments:

There seems to be a conflict in the second sentence which requires a specific procedure for each heavy load handling operation and the last sentence which allows heavy load concerns to be incorporated by attachment to a work package.

Currently, unanticipated heavy load handling will be analyzed, approved and attached to work packages per POM procedure 12.000.84. This procedure does not require a specific load handling procedure for each heavy load handling situation.

In addition, Detroit Edison letter EF2-60134, dated October 15, 1982, stated:

"Prior to handling heavy loads over or near spent fuel or safe shutdown equipment, load paths shall be identified in specific maintenance procedures or in an attachment to the maintenance order/work package required to perform the particular maintenance task."

Current SSER 5 Discussion:

SSER 5, App. N, Section 2.3.6.a, states:

"The reactor building crane, main and auxiliary hoists, crane inspection, testing, and maintenance procedures will comply with the guidelines in Chapter 2-2 of ANSI B30.2-1976. Should any deviations from this standard be required, they will be made subject to the requirements of ANSI B30.2-1976. The requirements of this standard will be incorporated into the Reactor Building Crane General Maintenance Procedures No. 35.000.120. This procedure will be written prior to fuel loading."

Detroit Edison Comments:

Testing and inspection of the reactor building crane is performed to Maintenance procedure 37.000.13. Maintenance of the reactor building crane is performed to Maintenance procedure 35.000.120.

Current SSER 5 Discussion:

SSER 5, App. N, Table 3.1 contains several minor editorial errors. Refer to Detroit Edison Comments below.

Detroit Edison Comments:

Revise "HCIC Hoist" to "RCIC Hoist".

Revise "RHR Pumps-Div. B'smt Hoist" to "RHR Pumps - Div. II B'smt Hoist".

Revise "MG Stes" to "MG Sets".

Current SSER 5 Discussion:

SSER 5, App. P; Section 2.3.1a, states:

"The auxiliary hoist supplementing the main crane is rated at 5 tons. It is not a single failure-proof design. In order to comply with this guideline, the auxiliary hoist is limited to handling a maximum load of 1500 pounds over spent fuel; this is less than the defined heavy load. The crane is equipped with a load limiting device which restricts this hoist from handling heavy loads over the spent fuel pool and the reactor pressure vessel when its head is removed. A load limit switch controlled by the operator must set the device into either a normal or a by-pass mode. In the normal position, there is a hoist limit of 2000 pounds due to a load sensing device in the control circuitry."

Detroit Edison Comments:

The limit switch on the auxiliary hoist is set at 1900 (+95 for calibration accuracy) pounds, which is less than the administrative limit of 2000 pounds. The limit switch governs the maximum load on the auxiliary hoist over the spent fuel pool or the reactor pressure vessel when its head is removed. Refer to Detroit Edison letter EF2-67211, dated April 3, 1984, pages 2 and 3.

Current SSER 5 Discussion:

SSER 5, App. P; Section 2.3.3 states:

o P-8, fifth paragraph

"Additional analyses for specific reactor building loads resulted in a commitment by the applicant to handle them under single failure-proof guidelines. Single failure-proof slings have been purchased for their handling. These loads are: (1) No. 13 fuel pool gates A and B; (2) Nos. 16 and 17 RWCU floor plugs and plugs at column E-1/2-10-1/2 (handling is to be by a portable gantry crane purchased for this purpose); and (3) No. 18 equipment hatch plugs."

o P-9, fifth paragraph

"Load No. 14 (the crane block), being an integral part of the single failure-proof crane, also meets this requirement. The commitment made by the applicant on April 3, 1984, for the reactor building crane main hoist load handling equipment upgrade for Loads No. 13, 16, 17 and 18, is also intended to bring them into compliance with the single failure-proof criteria."

Detroit Edison Comments:

Load Nos. 16 and 17 are being addressed by the use of a dedicated portable gantry crane operated in accordance with the guidelines of NUREG-0612. These loads are not handled under single failure-proof guidelines. Refer to Detroit Edison letter EF2-67211, dated April 3, 1984, pages 4 and 2.3.2-74.

Current SSER 5 Discussion:

SSER 5, App. Q, Part 2, states:

"The three-way solenoid valves used with the Jamesbury and Bettis pneumatic operators are manufactured by ASCO (Model Number NP 8321A6E)."

Detroit Edison Comments:

The correct ASCO model number to reference is NP 8320. (This comment also applies to SSER 3, Figure 22.1, page 22-10.)

Current SSER 5 Discussion:

SSER 5, Appendix Q, Part 3, states:

"Reference A - Detroit Edison letter dated October 11, 1982."

"Reference B - Detroit Edison letter dated January 4, 1982."

"Reference M - Detroit Edison letter dated January 4, 1981 (with attachments: (a) "Combined Loading Stress Analysis on Shaft for Purge Valves"; (b) "Seismic Qualification of 6-inch Purge Valve Based on Report JHA-76-34 (PI-2406).")"

Detroit Edison Comments:

The correct date for Reference A (EF2-72272) is October 11, 1984.

References B and M are the same, specifically Detroit Edison letter EF2-55980, dated January 4, 1981. The letter was transmitted on January 4, 1982, and was incorrectly noted as 1981. Reference M, not identified in the text discussion, should be deleted.

Current SSER 5 Discussion:

SSER 5, App. Q, Part 3, states:

"The applicant's approach to predicting torque loads for their containment purge and vent valves under LOCA conditions is shown in the analysis (Reference A) performed for them by the Multiple Dynamics Corporation (MDC). A constant peak containment pressure of 56 psig was assumed to act across the valve during closure. The drywell LOCA containment pressure ramps up to 48 psig after 5 seconds by which time the valve is closed. The worst case torque coefficient at a 90° valve opening was used irrespective of valve position. Valve closure time is stated to be under 2 seconds including instrumentation delay time."

Detroit Edison Comments:

Detroit Edison has committed to a containment purge and vent valve closure time of less than 5 seconds. This is reflected in Reference A of SSER 5, App. Q and is compatible with the Fermi 2 Technical Specifications (Table 3.6.3-1). No commitment has been made relative to a 2 second closure time.

ATTACHMENT 2

SSER 5 Section: 13.1.C

SSER 5 Page: 13-2

Current SSER 5 Discussion:

SSER 5, Section 13.1.C, states:

"The duties and responsibilities of the Shift Advisors are contained in a draft copy of the applicant's Administrative Operating Procedure 21.000.01, Rev. 8. We have reviewed this Shift Advisor procedure and, with several exceptions, find it acceptable. Specifically, it is our position that the applicant add the following items to the list of duties and responsibilities for the Shift Advisor contained in Enclosure 7 of Procedure 21.000.01:

- a. When necessary, recommended suspension of plant evolutions or activities and, if required, recommend a plant shutdown.
- b. If any disagreement between the operating shift personnel and the Shift Advisor arise, resolution will be made by the Operations Engineer.

These items reflect the Industry Working Group proposal on the responsibilities and duties of Shift Advisors as accepted by the Commission. We will confirm implementation of these two items in a future supplement to the SER."

Detroit Edison Update:

The duties and responsibilities described above for the Shift Advisor have been incorporated in Procedure 21.000.01, Enclosure 6, Revision 11.

Current SSER 5 Discussion:

SSER 5, Section 13.1.C states:

"Prior to achieving criticality, DECO shall certify to the NRC staff the names of the advisors who have been examined and have been determined to be competent to provide advice to the operating shifts. These advisors, or suitably qualified replacements, shall be retained until at least one of the senior operators on each shift has the required experience. The NRC staff shall be notified at least 30 days prior to the release of any special assigned advisor who has been provided in accordance with this license condition."

Detroit Edison Update:

Detroit Edison does not anticipate releasing the subject Shift Operations Advisors (Shift Advisors) until the first quarter of 1986. This item is being tracked within Detroit Edison to assure compliance.

Current SSER 5 Discussion:

SSER 5, Section 13.3.2.8, states:

"The applicant has proposed to continue to study the relationship between onsite meteorological measurements and TIBL in an effort to develop a correlation which could be utilized in its dose projection model. We agree with the applicant's findings in its study and support the applicant's continued assessment of the lake-breeze effect at Fermi-2 site."

Detroit Edison Update:

The subject study has been completed, including an evaluation of the influence of the lake-breeze effect. The site specific equation has been developed. A report addressing the completed study and related activities will be submitted to the NRC by September 1, 1985.