



# Safe Energy Coalition

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*"Better active today than radioactive tomorrow"*

January 28, 1985

Mr. Harold Denton  
 Director, Nuclear Reactor Regulation  
 U.S. Nuclear Regulatory Commission  
 Washington, D.C. 20555

Dear Mr. Denton:

Pursuant to the Code of Federal Regulations for Energy (10) under Section 2.206, Requests for Action and Section 2.202, Order to Show Cause, the Safe Energy Coalition of Michigan hereby petitions the U.S. Nuclear Regulatory Commission to institute proceeding on and/or investigative actions into the significant safety matters at Detroit Edison's Fermi 2 nuclear power plant in Monroe County, Michigan.

We are also asking that the office of Nuclear Reactor Regulation along with Region III of the NRC not issue a low power/fuel loading license until these items are successfully resolved and justified. Further, we ask that the activities authorized by the operating license be as such so that they can be conducted without endangering the health and safety of the public. Section 50.57 (5) (b) of the Code states that,

"Each operating license will include appropriate provisions with respect to any uncompleted items of construction and such limitations or conditions as are required to assure that operation during the period of the completion of such items will not endanger public health and safety."

The significant safety allegations and documentation presented henceforth, warrant our concerns and justify our request for thorough and full investigation, show cause, and public hearings on these matters.

## 1). COMPUTER SYSTEMS

Information systems at Fermi 2 are "awful" according to sources we have been in contact with. Consistency in the different data systems and their coding has not been maintained. Further, input into the data base has not been consistent with the codes used for indexing documents. There is difficulty retrieving data and there has not been time to fix these problems. To compound the situation Detroit Edison has reduced personnel that take care of all documentation and vaults. Further allegations by our sources reveal that despite the Construction Team Assessment (CAT) conducted in the Summer of 1984 by Duke Power, the problem of how long it takes to retrieve the documentation has not been addressed at Fermi 2. Retrieval of information for many critical parts of the plant is not readily available, some not available at all and could take days to retrieve.

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In addition to the above information the following documentation is available on this matter:

In an October 6, 1984 letter (EF-72264) Wayne Jens, Detroit Edison's Vice-President, Nuclear Operations, to B.J. Youngblood, Chief of Licensing at the NRC, Branch I, the schedule and problems of the Emergency Information System (ERIS) and the Safety Parameter Display System (SPDS) are described.

ERIS, the automated data acquisition system provides data for the SPDS and for the dose assessment function. The SPDS is a primary function for the control room operations personnel. These systems electronically interface with many plant systems. The schedule for acceptance of critical plant systems has been delayed according to this letter. June, 1985 was the anticipated implementation date. But, a December 12, 1984 letter (EF-72264) from Wayne Jens to T.M. Novak, NRC Assistant Director for Licensing, in Attachment C, it is indicated the ERIS/SPDS completion date has been changed to December, 1985.

The computer systems in our view must be operational and functional in a highly automated nuclear plant. NUREG 0737, Supplement I supports the need for this matter to be thoroughly investigated and resolved before fuel loading.

## 2). AS-BUILT DESIGNS

In the SALP #5 report (Systematic Assessment of Licensee Performance) issued recently, the problems of lack of records for the as-built designs for the electrical and instrumentation systems are raised. Delays in fuel loading at Fermi 2 as of this date are contingent on the correction of this problem.

According to the Michigan Public Service Commission's Staff Investigation into the Enrico Fermi 2 Nuclear Project, February, 1984 Detroit Edison's internal audits showed that there has been serious problems with document control, inadequate paperwork associated with construction, and no adequate control on the design process. Throughout the project several thousand design changes have been made according to the PSC.

These criticisms from the Michigan PSC staff has raised our concerns that other areas in addition to the electrical and instrumentation systems identified by the SALP report could be problematic. Sources at the plant have told us that documentation is not there for many systems that underwent design changes over the last fifteen years. These sources indicate documentation was not recorded or it was lost.

Further investigation into other areas besides electrical and instrumentation for confirmation that all records and documentation of design changes has been completed properly and fully. Because of the alleged problems mentioned earlier in Matter no. 1, that is with the coding, indexing, and retrieval of information from the plant's data base systems, the Safe Energy Coalition would like your office to investigate how safety issues in no. 1 and 2 interface. The total picture must be looked at.

## 3). RADWASTE PROCESSING SYSTEM

The Radwaste Processing System will not be tested and functional

at the time of fuel load according to two letters from Wayne Jens to B.J. Youngblood, Chief of the NRC Licensing Branch No. 1, dated October 11, 1984 (EF-71992) and December 18, 1984 (EF-72035). Detroit Edison plans to use the NUS Corporation's portable radwaste system for liquid and solid radioactive waste. Portions of the permanent facility as indicated in a December 12, 1984 letter (Wayne Jens to T.M. Novak) (EF2-72028-Attachment C) necessary to support the vendor radwaste system are to be completed before initial criticality and the complete system by "warranty run." In addition, Edison has no program for disposal of potentially radioactive oil.

In 1979, Detroit Edison engineers found serious design flaws with almost every subsystem of the Radwaste Processing Facility at Fermi 2. In an April, 1980 study by the NUS Corporation, "Report of Evaluations: Enrico Fermi 2, Solid and Liquid Radwaste Systems," confirmed that "the system as designed and installed was inoperable, inefficient, unsafe, and uneconomic." Edison engineers were further criticized by the Michigan Public Service Commission staff investigation in February, 1984 for ignoring "numerous elementary design consideration and basic laws of physics." Some of these included: extremely poor piping arrangements, locations of valves and motors, disregard for radiation exposure levels, unnecessary and excessive person power, etc.

The report further states that "modifications to the Radwaste facility have been extensive including the rip out of large components, piping, and relocation of equipment, etc. Inherent features of the original design will continue to inhibit efficient operation of the radwaste system."

The Safe Energy Coalition believes it is the responsibility under the Atomic Energy Act and Code of Federal Regulations to ensure the safe operation of this facility. This, in our opinion is not the case at this time. We request further investigation into this matter and insist on making public the NUS Corporation's proprietary portable radwaste system. The public has the right to know what systems are being used to protect their environment, health and safety.

#### 4). FIRE PROTECTION

The Safe Energy Coalition is still not satisfied with the NRC's discretionary decision to allow Detroit Edison to fuel load and operate Fermi 2 without an alternate shutdown system in place. Portions of the NRC staff, including Region III fire inspectors and the Director, Mr. James Keppler, in mid-1984 had been very critical of NRC's new interpretation of the 1980 fire protection rule. In a June 11, 1984 issue of Inside NRC, Charles Ramsey, a Region III inspector stated that Region III management and other staffers were protesting "because the new interpretation compromises Appendix R (Code of Federal Regs.-Fire Protection) and safe shutdown capability." NRC staff protesters claimed without implementing alternate shutdown systems at Detroit Edison's Fermi 2 plant, that "there is no way to bring the plant to a safe shutdown if a fire hits the control room."

The problems with fire protection in the cable spreading room

and relay room the NRC identified in the June 5, 1984 and July 11, 1984 meeting summaries by M.D. Lynch, Project Manager, have been addressed by your staff and Detroit Edison.

Better fire wrap, cleaner facilities, more sprinklers, more personnel are surely only the first steps to your policy of defense in depth. To allow Detroit Edison the option to delay installing an alternate shutdown system until the first fuel outage (1986) is inexcusable with the length of time Edison has had to reroute cables and design and implement an alternate shutdown capability elsewhere in the plant. In the January-February, 1980 issue of Nuclear Safety, an article entitled "Fire Hazard and Consequences of Fire in Nuclear Power Plants," states "Fires can damage safety related control or signal cables or equipment, which may interfere with safe shutdown of the nuclear reactor." It further reports that "Redundant safety-related systems could be lost or rendered inoperable because of a relatively small localized fire."

The Safe Energy Coalition vehemently opposes the continued relaxing of NRC strict standards for fire protection knowing the realized hazards that fires pose at nuclear plants, especially with the Fermi 2 plant design without the alternate shutdown system in place.

In the M.D. Lynch summary document of July 11, 1984, Detroit Edison supplied the NRC with a brief fire protection history for Fermi 2. In this summary, Edison's knowledge of the Browns Ferry Fire of March 22, 1975 was well documented, by themselves, with review groups and task forces formed to deal with the issue of fire protection. During this time Detroit Edison had Fermi 2 shut down from 1974-77 for financial reasons and to catch up on their engineering design backlog. Regulatory guides were issued in 1976 and 1977, ANSI Standards were released in 1979, followed by NRC regulations, Appendix R in 1980. Edison has had ample time to implement the needed defense in depth fire protection that includes the most critical component, an alternate shutdown capability.

We request that full implementation, prior to fuel load and low power operation, of the shutdown system be required. Further investigation, explanation, and justification for NRC approval of Edison's fire protection systems is in order. We regard this as a very serious matter and would like public hearings called under Section 2.202 (Show Cause).

5). GENERAL ELECTRIC MARK I BOILING WATER REACTOR AND CONTAINMENT

Serious problems have become apparent with this older, obsolete reactor design, particularly in regards to the constructability, accessibility, and the ability of the containment to hold in a serious accident. Design modifications had to be made at Fermi 2 to the torus and the Drywell steel. The small containment, defects in the pressure-suppression system (torus) and the volumes of possible failures for this type of reactor cannot be, in our view, ignored in licensing this plant. It should not be put in the "generic, unresolved" category of the NRC to be solved sometime in the future.

In the book, the Cult of the Atom by Daniel Ford, as early as 1971, the Atomic Energy Commission (AEC) through its safety analysts, proposed to senior AEC officials the banning of "the pressure-suppression containment scheme" of which Fermi 2 is included. Technical analysis was never challenged and no objections were raised on scientific grounds. The reply by Joseph Hendrie, Senior AEC official, was the following: "the acceptance of pressure-suppression containment concepts by all elements of the nuclear field, including Regulatory and the A.C.R.S., is firmly embedded in the conventional wisdom. Reversal of this hallowed policy, particularly at this time, could well be the end of nuclear power. It would throw into question the continued operation of licensed plants, would make unlicensable the G.E. and Westinghouse ice-condenser plants now in review and would generally create more turmoil than I can stand thinking about."

This matter has been ignored for too long. The Safe Energy Coalition requests resolution of this generic issue and guarantees from the NRC that Fermi 2's reactor design and operation will not either endanger public health and safety, increase worker exposure, or contaminate the surrounding environment. More thorough investigations and hearings are, we feel, warranted. Fuel loading should not be expedited because of lack of solutions.

Compromising the safety of people and the environment because Detroit Edison now faces economic crisis with the huge cost escalations and delays, cannot be tolerated. Expedition of a license is not in order because of the unresolved safety issues we have detailed. The Safe Energy Coalition petitions your office to investigate the aforementioned serious unresolved safety issues with great diligence and thoroughness with public input into these matters. In addition, we ask that the NRC do not issue a fuel load/low power license until these investigations have been completed and the problems successfully resolved.

Sincerely,

*Jennifer E. Punttenney*  
Jennifer E. Punttenney

cc: Attorney General Frank Kelley  
Governor James Blanchard  
Roger Fischer, Chief of Staff, Mich. Public Service Commission  
Senator Carl Levin  
Senator Don Riegle  
Al Ernst, Attorney for Wolverine Power Supply Cooperative  
Representative Sander Levin  
Representative John Dingell  
Monroe County Board of Commissioners