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(49 FR 8445)

Wisconsin's Environmental Decade

114 North Carroll Street, Suite 208, Madison, Wisconsin 53703 (608) 251-7020

DOCKETED
USNR

230 W. Wells St., Suite 309, Milwaukee, WI 53203 (414) 272-1607
324 W. Wisconsin Ave., Suite 1, Appleton, WI 54911 (414) 734-5403

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TO: ~~OFFICE OF SECRETARY~~
Secretary of the Commission vs. Nuclear Regulatory
Commission, Washington, DC 20555
Attention: Docketing and Service Branch

FROM: Stephen Proudman
Wisconsin Environmental Decade, Inc.
Environmental Qualification Standards Commenter

DATE: August 10, 1984

RE: Comments on the sufficiency of the Justification for
Continued Operation for Wisconsin Electric Power
Company's Point Beach Nuclear Plant I & II
49 Fed. Reg. 8445 (March 7, 1984)

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Education Drive
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Assistant

DSIO //
add: William L. Shields
9604 MNBB
8408210349 840810
PDR PR
50 49FR8445 PDR

Acknowledged by card...

8/17/84 pd

INTRODUCTION:

In the wake of the accident at TMI II, the Nuclear Regulatory Commission ordered all reactors to comply with environmental qualification standards by June 30, 1982. This ruling was incorporated into all reactor licenses to assure that safety and quality control measures would be upgraded and rigorously maintained to prevent any future accidents. In 1982 the NRC changed the rules which amended the licenses of all 72 operating nuclear power plants to suspend that deadline.

In extending the compliance deadline, the NRC made a finding that each plant could be operated safely pending completion of environmental qualification. According to NRC records this finding was based upon utility filings called "justification for continued operation" (JCO's). According to the Union of Concerned Scientists findings, most of the reactor equipment associated with cooling and emergency cooling systems did not meet environmental qualification standards. The purpose of the JCO's was to demonstrate that a plant was safe enough to operate despite the difficulties in equipment.

In an oversight of democratic principles the NRC provided no opportunity to comment on the sufficiency of the JCOs. UCS sued the NRC and won a decision which ordered the NRC to provide an opportunity for public comment on this procedure.

I am grateful to the UCS in their efforts to allow for independent review of this most critical process which directly concerns the health and welfare of the general public and surrounding ecosystems near each operating reactor.

COMMENTS:

The comments I will make are based on my review of the Technical Evaluation Report (TER) prepared for the NRC by the Franklin Research Center (FRC); the Safety Evaluation Report (SER) by the NRC staff that addresses the TER; and later qualification documents. Due to geographical limitations I was unable to trace many key documents made available to the public by the NRC in their Document Reading Room in Washington, D.C.

The most common problem I had in my review was that some information was withheld from the FRC report because the licensee (in this case Wisconsin Electric Power Co.-WEPCO), claimed the information was "proprietary" in nature, which I assume means that the information contained trade secrets of some sort. This made it difficult, if not impossible, to comment on the adequacy of the qualification review. In an industry which is at this point in time struggling to survive even under immense subsidizations from the federal government I fail to understand how the NRC can allow any utility to withhold information in a critical review of safety requirements. The review of each component in question remains incomplete, in my opinion, until

equitable access to information is provided.

The order and organization of the records was poor in many instances making the job of reading and following the presented logic a very difficult task. In many cases I could not even read the licensee's response to NRC evaluations thus making my commentary impossible.

I must make a comment on the scope of the TER review. The NRC asked WEPCO to submit a list of all safety related components including documentation to show that they were qualified. "SCEW sheets" were provided which contained information on the condition for which equipment was qualified as well as the conditions to which the equipment could be exposed during an accident. According to UCS, the NRC's evaluation never questioned the licensee's assertions or examined the basis for the assertions. They only looked at areas where equipment qualifications did not appear to meet the requirements of an accident condition. This means that WEPCO's statements in 1981 that equipment was qualified due to whatever justification were never reviewed by the NRC or FRC. The review only covered equipment that WEPCO identified as deficient. This is a gross assertion and makes the scope of the TER review gravely deficient at best.

As I understand the role of the NRC, it is to regulate and license the reactors of the nuclear industry. It's role has been reevaluated after the seriousness of the accident at TMI II was realized through new and continued research findings by engineering experts. Unfortunately the type of gross experiment is not an adequate learning lesson for a technology which can have serious and undetermined (the debate continues) biological effects in forms of life.

At a nuclear-fuel-cycle conference held in Atlanta in April 7, 1984, NRC member Frederick Beinhart was optimistic in assertions that "the NRC in the 1990's could retreat into something like a Federal Aviation Administration for nuclear power plants." According to Beinhart the problem with the industry is simply stated, "the technology of nuclear power is proven, but the institutions that generate and regulate the power need fixing." I would say this may be only partly true. After reviewing this TER I am of the opinion that if the technology were proven then this would not be evidence of such a large number of unqualified components in reactors such as the Point Beach plants. If the confidence is then for justification then why is this evaluation process full of discrepancies and misleading information? On the human side of the industry, if the confidence exists for demonstrating sound competent management then why is the industry in such financial trouble and why does it take a lawsuit to allow the general public to become involved in process concerning the public's safety?

I realize after completing this review that the bureaucratic entanglements are enormous, however, streamlining the NRC's

licensing and regulatory roles is not an adequate answer to eliminating problems involving individual components governing the mechanics of a reactor's safety systems. This is a technical problem needing straightforward attention and adequate documentation for proof of sufficiency.

The following list is an item by item description of safety-related components which were found to not be qualified by the FRC. For these components many justifications for continued operation were submitted after the TER was filed. Comments are included for each item.

Item 24: Electric Motor located in Auxiliary Building

FUNCTION: Safety injection pump motor.

CATEGORY:

- .Qualification for deficiency improvement not established.
- .No adequate documentation of qualification.
- .Aging degradation evaluated inadequately.
- .Qualified life or replacement schedule not established.

COMMENT:

- .Unable to read licensee response to NRC SER.
- .FRC comments on licensee response:
 - .WCAP-8754 was cited by licensee as evidence of qualification. FRC says this is not an adequate analysis that determines an actual in plant service life for the safety injection motor pump.

Item 25: Electric Motor located in the Auxiliary Building.

FUNCTION: Containment spray pump motor

CATEGORY--Qualification Not Established

- .Documentation evidence of qualification inadequate.
- .Inadequate agency degradation evaluation
- .Qualified life or replacement schedule not established.
- .Criteria regarding radiation not satisfied.

COMMENT:

In the licensee's response concerning the motor's qualifications for performing under high humidity, the rationale used was based on an assumption that the location of the motor is such that high humidity is not expected in that part of the auxiliary building. This is not an acceptable scientific judgment.

Item 26: Electric Motor located in the Auxiliary Building

FUNCTION: Component Cooling Water Pump Motor

CATEGORY: Qualification for deficiency improvements not established.

- .No adequate documentation of qualification.
- .Aging degradation evaluated inadequately.
- .Qualified life or replacement schedule not established.
- .Criteria regarding radiation not satisfied.

COMMENT:

The laboratory test report of this vital component in the reactor's cooling system(s) was not used in full in the qualification process. Reasons for receiving only parts of the research report are the size of the report and the "proprietary" classification of the reports. This does not allow for a thorough review by outside reviewers.

Item 27: Electric Motor in the Auxiliary Building

FUNCTION: Residual Heat Removal-Pump Motor

CATEGORY: Qualification not established.

- .Documentation of evidence inadequate.
- .Aging degradation evaluated inadequately.
- .Qualified life or replacement schedule not established.
- .Program not established to identify aging degradation.
- .Criteria regarding radiation not satisfied.

COMMENT:

The reference report WCAP-8754 includes unacceptable test data which establishes a qualified life (running hours) under an assumed radiation level (temperature) for this motor. There is no analysis, according to the FRC that determines the actual in-plant service life.

There was no maintenance schedule submitted, for the record, for the bearings/lubricant.

Item 28: Electric Motor in Containment

FUNCTION: Containment air accident from cooler motor.

CATEGORY: Qualification not established.

- .Aging degradation evaluated inadequately.
- .Qualified life or replacement schedule not established.
- .Criteria regarding aging simulation not satisfied.
- .Criteria regarding radiation not satisfied.

COMMENT:

For Items 28,29,53 [Containment Emergency Fan Cooler Motor, Splices, and Bearing Lubricants] deficiencies were found in a combination of eight areas of qualification. The proposed resolution by WEPCO (November 23, 1983) is for additional analysis and documentation. No other record is available to document what action was taken, therefore the component remains unqualified.

Item 29: Electrical Cable Splice in Containment.

FUNCTION: Electrical splice for containment air accident fan coolers.

CATEGORY: Qualification not established.
.Documentation of evidence is inadequate.

COMMENT:

Licensee is siting a document for a similar motor (which cable splice is connected to) as the evidence for qualification. No tests were done directly involving this component.

Most of the Licensee response is illegible, which makes commenting difficult.

Item 30: Resistance Temperature Detector in Auxiliary Building.

FUNCTION: Measures RHR Suction and Discharge Line Temperature Conversion.

CATEGORY: Qualification not established.
.Aging degradation evaluated inadequately.

COMMENT:

The licensee has not satisfactorily stated that the installed model is equivalent to currently manufactured models. It is also not clear whether any environmental qualification tests have been done for this item.

Item 34: Motor control center located in the Auxiliary Building.

FUNCTION: 480 Volt Electrical Power distribution.

CATEGORY: Qualification not established.

COMMENT:

Unable to read licensee's response to the NRC's SER.

Item 27: Electrical Thermocouple Cable located in containment.

FUNCTION: Reactor core thermocouple cable connection.

CATEGORY: Qualification not established.

COMMENT:

Licensee states the item is not environmentally qualified even though the TMI Action Plan requires it to be. The licensee then says it intends on qualifying the item, if possible, by the environmental qualification deadline but there is no record of this action.

Item 38: Electrical instrument cable in containment building.

FUNCTION: Conducts acoustic signal transmission.

CATEGORY: Qualification not established.

COMMENT:

The licensee has referenced a report for RSS-6 coaxial cable. However, the manufacturer has stated that although the cable passed the test it is not suitable for the application because the signal alterations and temperature resistance capability are not adequate.

Item 39: Electrical Control Cable located inside and outside containment.

FUNCTION: Electrical distribution.

CATEGORY: Qualification not established.

COMMENT:

No test report was submitted by the licensee to be reviewed by an independent reviewer. According to the FRC evaluation the licensee stated that the PORV block values which the cable supplies power to are not safety related equipment and therefore the cable does not require qualification. However, according to NUREG 0737, Item II.7.1 indicates that power supplies require upgrading to maintain the ability to either open or close the PORV block values. The licensee should insure that the cable is also qualified.

Item 42: Electrical instrument cable located inside and outside containment.

FUNCTION: Instrumentation Cable.

CATEGORY: Equipment not qualified. Adequate similarity between equipment and test specimen not established.

COMMENT:

Neither SCEW sheet nor the licensee's provide

sufficient information to establish that the installed equipment is the same as the equipment tested. It is not safe to assume that one piece of equipment which is similar to another can have test results which apply to both.

Item 50: Lubricant located in the Auxiliary Building - safety injection pump area.

FUNCTION: Safety injection pump motor bearing lubricant.

CATEGORY: Qualification not established.

- .Documented evidence of qualification inadequate.
- .Adequate similarity between equipment and test specimen not established.
- .Aging degradation evaluated inadequately.
- .Program is not established to identify aging degradation.
- .Criteria regarding aging simulation not satisfied.
- .Criteria regarding peak temperature exposure not adequate.
- .Criteria regarding radiation not satisfied.

COMMENT:

Based on the FRC report very little documentation exists on the lubricant, particularly it's function under high temperature and radiation conditions. No further documentation was provided.

Item 51: Lubricant located in the Auxiliary Building component cooling pump area.

FUNCTION: Component cooling water pump bearing lubricant.

CATEGORY: Equipment qualification not established.

- .Documented evidence of qualification inadequate.
- .Adequate similarity between equipment and test specimen not established.
- .Aging degradation evaluated inadequately.
- .Program to identify aging degradation not established.
- .Criteria regarding aging simulation not satisfied.
- .Criteria regarding peak temperature exposure inadequate.

COMMENT:

The manufacturer of the grease has never subjected their products to tests involving exposure to radiation.

ADDITIONAL COMMENTS:

Major inadequacies in all of the above-mentioned evaluation categories. There is no real documented evidence of necessary tests according to the FRC's report. How then, can another JCO approval be given?

Item 52: Lubricant located outside containment.

FUNCTION: Pump and motor bearing lubricant.

CATEGORY: Equipment qualification not established. Same as for Item 50.

Item 53: Lubricant located in containment.

FUNCTION: Fan cooler motor bearing lubricant.

CATEGORY: Equipment qualification not established.

.Adequate similarity between equipment and test specimen not established.

.Qualified life or replacement schedule not established.

.Criteria regarding peak temperature exposure inadequate.

Item 54: Lubricant located in containment.

FUNCTION: Valve motor operator lubricant

CATEGORY: Equipment qualification not established.

.Documented evidence of qualification is inadequate.

.Adequate similarity between equipment and test specimen not established.

.Aging degradation evaluated inadequately.

.Qualified life or replacement schedule not established.

.Program to identify aging degradation not established.

.Criteria regarding aging simulation not satisfied.

.Criteria regarding peak temperature exposure inadequate.

.Criteria regarding radiation not satisfied.

COMMENT:

Checksheets 5F through 5I were withheld due to the "proprietary" nature of information they contained. This makes the job of commenting very difficult.

Item 55: Lubricant located outside containment.

FUNCTION: Pump motor bearing lubricant.

CATEGORY: Equipment qualification not established.

.Documented evidence of qualification inadequate.

.Adequate similarity between equipment and test specimen not established.

.Aging degradation evaluated inadequately.

.Program to identify aging degradation not established.

.Criteria regarding aging simulation not established.

.Criteria regarding peak temperature exposure

inadequate.

.Criteria regarding radiation not satisfied.

COMMENT:

Checksheets 5F thru 5L were removed due to proprietary nature of their contents. This makes the task of commenting extremely difficult.

Item 56: Lubricant located in containment.

FUNCTION: Motor operated valve and geared limit switches lubricant.

CATEGORY: Equipment qualification not established.

.Documented evidence of qualification inadequate.

.Adequate similarity between equipment and test specimen not established.

.Aging degradation evaluated inadequately.

.Qualified life or replacement schedule not established.

.Program to identify aging degradation not established.

.Criteria regarding aging simulation not satisfied.

.Criteria regarding peak temperature exposure inadequate.

COMMENT:

Proprietary information withheld making comments difficult.

Item 61: Motorized valve actuator located in containment.

FUNCTION: Actuates pressurizes PORV block valves. Equipment qualification not established.

CATEGORY: Documented evidence of qualification inadequate.

.Adequate similarity between equipment and test specimen not established.

.Aging degradation evaluated inadequately.

.Qualified life or replacement schedule not established.

COMMENT:

Proprietary information withheld. Not enough information to make comments.

Item 62: Motorized valve actuator located in containment.

FUNCTION: Actuates reactor vessel safety injection line valves.

CATEGORY: Equipment qualification not established.

.Documented evidence of qualification inadequate.

.Adequate similarity between equipment and test specimen not established.
.Aging degradation evaluated inadequately.
.Qualified life or replacement schedule not established.

COMMENT:

Proprietary information withheld. Not enough information to make comments.

Item 63: Motorized valve actuator located in containment.

FUNCTION: Actuates RHR injection line valves. Actuaces cold by safety injection line valves.

CATEGORY: Equipment qualification not established.
.Documented evidence of qualifications inadequate.
.Adequate similarity between equipment and test specimen not established.
.Aging degradation evaluated inadequately.
.Qualified life or replacement schedule not established.

COMMENT:

Proprietary information withheld making commentary incomplete.

Item 65: Motorized valve actuator located in the component cooling heat exchanges area.

FUNCTION: Actuates steam-driven auxiliary feedwater turbine steam supply line valves.

CATEGORY: Equipment qualification not established.
.Documented evidence of qualification inadequate.
.Adequate similarity between equipment and test specimen.
.Aging degradation evaluated inadequately.
.Qualified life or replacement schedule not established.

COMMENT:

Proprietary information has been withheld. Comments cannot be made based on available information.

Item 66: Motorized valve actuator located in the Auxiliary Building.

FUNCTION: Actuates component cooling water supply lines to RHR heat exchanges valves.

CATEGORY: Equipment satisfies all requirements except

qualified life or replacement schedule justified.

.Aging degradation evaluated inadequately.

.Qualified life or replacement schedule not established.

COMMENT:

Proprietary information withheld. Not enough information available for which to comment.

Item 24: Electric Motor located in the Auxiliary Building.

FUNCTION: Safety injection pump motor.

CATEGORY: Equipment qualification not established.

.Documented evidence of qualification inadequate.

.Adequate similarity between equipment and test specimen not established.

.Aging degradation evaluated inadequately.

.Program identifying aging degradation not established.

.Criteria regarding radiation not satisfied.

COMMENT:

According to FRC WEPCO has not provided an analysis that determines an actual inplant service life from the data provided in reference report WCAP-8754. WEPCO has not submitted any qualification documentation that would establish a qualified life for the motor to the lead splice and bearing lubrication system.

ADDITIONAL COMMENTS:

There are a total of 22 other components of not qualified status in Project No. 506. They are Item Nos: 25, 26, 27, 28, 29, 30, 32, 36, 39, 42, 50-56, 61, 62, 63, 65. This reviewer did not have ample time to complete a thorough review of these components and their deficiencies.