Consumers Power Company

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July 16, 1981

Mr J G Keppler, Regional Director
Office of Inspection and Enforcement
US Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, IL 60137

MIDLAND NUCLEAR PLANT -
INSPECTION REPORT NO 50-329/81-11 AND 50-330/81-11
FILE: 0.4.2 SERIAL: 12046

Reference: 1. NRC Letter, C E Norelius to J W Cook, dated June 16, 1981

This letter, including all attachments, provides Consumers Power Company's response to Reference 1 which transmitted the subject Inspection Report and which requested our written statement regarding four items of noncompliance described in Appendix A of Reference 1.

Consumers Power Company

By James W. Cook
James W Cook

Sworn and subscribed to before me on this 16th day of July, 1981.

Beverly A. Avery
Beverly A. Avery
Notary Public, Jackson County, Michigan
My commission expires January 16, 1985

MJS/lr

CC: RJCook, USNRC Resident Inspector
Midland Nuclear Plant (1)

CONSUMERS POWER COMPANY'S RESPONSE
TO NOTICE OF VIOLATIONS
DESCRIBED IN NRC INSPECTION REPORT
NO 50-329/81-11 AND 50-330/81-11

1) Items 1(a) and 1(b) from Appendix A (Item of Noncompliance 329/81-11-02; 330/81-11-02 and 329/81-11-06; 330/81-11-05) provide:

"10CFR50 Appendix B, Criterion V, states in part: 'Activities affecting quality shall be prescribed by documented instructions, procedures or drawings of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures or drawings.'

Consumers Power Company's Quality Assurance Program Policy No 5, Revision 9, Paragraph 1.0, states in part: 'Instructions for controlling and performing activities affecting quality of equipment or operations during the design, construction and operation phases of nuclear power plants, such as . . . construction, installation . . . are documented in instructions, procedures, specifications, checklists and other forms of documents.'

Contrary to the above, as of May 1, 1981, the following instances of failure to develop appropriate procedures were identified:

a. Appropriate procedures had not been developed for temporarily supporting cable and cable coils in that Bechtel Power Corporation Procedure FPE-4.000, Installation of Electrical Cable, Revision 3, dated March 13, 1979, did not require that care be exercised to assure that the method of support of pulled or partially pulled cables would not result in damage to the cable jacket or exceeding the minimum bend radius criteria (Paragraph 6.7 of FPE-4.000). As a result, four cable jackets were damaged by the single coil of rope from which they were supported, and two cables were supported such that the minimum bend radii were exceeded.

b. Appropriate procedures had not been developed for the routing of cables into the equipment to which they are terminated in that Bechtel Power Corporation Procedure FPE-7.000, Cable Terminations, Revision 7, dated December 26, 1979, did not establish measures to assure that the bend radius criteria (Paragraph 6.7 of FPE-4.000) were not exceeded. As a result, cable 1BB6404A was observed to be routed into Motor Control Center (MCC) 1B64 such that a minimum bend radius was exceeded."

Consumers Power Company's Response to Item 1(a)

The corrective action of Bechtel NCR 3418 was to repair the four damaged cable jackets with Raychem WCSF-N Shrink Tube per vendor print 7220-E-26-19-4. This was accomplished on July 6, 1981.

Bechtel NCRs 3417 and 3404 were written as a result of the NRC inspector's identification of two cables supported such that the minimum bend radii were exceeded. Project Engineering is scheduled to provide dispositions of NCR 3417 and NCR 3404 by July 17, 1981.

Process corrective action was to revise FPE-4.000, "Installation of Electrical Cable," to include requirements that coiled cables are properly supported, protected from damage and do not violate the minimum bend radius. Inter-office memorandum O-3885 was issued on May 15, 1981, to field construction to provide interim instructions for coiling of cable until FPE-4.000, which is presently in the review cycle, is approved.

Consumers Power Company's Response to Item 1(b)

Bechtel NCR 3405 was written on the violation of minimum bend radius of cable 1BB6404A terminated in MCC 1B64. Field Engineering evaluated the discrepancy and determined that the portion of these cables of indeterminate quality could be cut off and the remaining cable reterminated to meet design requirements. The Field Engineering disposition is presently in the approval cycle.

FPE-7.000, "Cable Terminations," Revision 8, was implemented on May 21, 1981, to include the requirement that "bend radius for training cable/conductor shall be per vendor's requirements." This will establish measures to assure that the bend radius criteria will not be exceeded.

2) Item 2 from Appendix A (Item of Noncompliance 329/81-11-03) provides:

> "10CFR50 Appendix B, Criterion X, states in part: 'A program for inspection of activities affecting quality shall be established and executed by or for the organization performing the activity to verify conformance with the documented instructions, procedures and drawings for accomplishing the activity.'
>
> Consumers Power Company's Quality Assurance Program Policy No 10, Revision 8, Paragraph 1.0, states in part: 'Inspection and surveillance are performed to assure that activities affecting quality comply with documented instructions, design documents and applicable codes and standards.'
>
> Contrary to the above, the electrical contractor's QC inspection of cable termination activities on September 25, 1980, failed to verify conformance to Paragraph 3.1 of Project Quality Control Instruction

E-5.0 which states in part: 'Verify that the cables . . . are routed within the equipment without violation of minimum separation requirements . ' As a result, the violation of the six-inch minimum separation requirement between class 1E cable 1AY001C and non-class 1E cables 1NB1705A and 1NA05001A was not identified."

Consumers Power Company's Response to Item 2

Consumers Power Company's NCR M-01-9-1-041 was written to address the non-conformance. As a result, the corrective action taken was to provide the required separation between the class 1E and non-class 1E cables and verify that the separation requirements of Drawing E-47 had been met. The cables were independently verified by CPCo inspection to be re-arranged to meet the requirements on May 18, 1981.

Process corrective action to prevent recurrence was: 1) provide instruction to termination crews on the need to meet the separation requirements of Drawing E-47 in equipment, and 2) reinstruct all termination Quality Control Engineers (QCEs) on separation requirements for class 1E cables, internal wiring of control panels and equipment.

The lead electrical superintendent confirmed that electrical termination superintendents and craft personnel were instructed on the need to meet the separation requirements on Drawing E-47 in equipment. Instructions were documented on an inter-office memorandum dated May 28, 1981. Furthermore, a plastic coated criteria card with do's and don't's referencing color coding and separation distance between channels is given to each termination electrician on the jobsite.

The QCE involved was reinstructed in the requirements stated in Drawing E-47 for cable separation.

3) Item 3 of Appendix A (Item of Noncompliance 329/81-11-05 and 330/81-11-04) provides:

"10CFR50 Appendix B, Criterion XV, states in part: 'Measures shall be established to control materials, parts or components which do not conform to requirements in order to prevent their inadvertent use or installation. These measures shall include, as appropriate, procedures for identification, documentation . . . disposition and notification to affected organizations.'

Consumers Power Company's Quality Assurance Program Policy No 15, Revision 9, Paragraph 3.2, states in part: 'When a nonconforming item or activity is discovered or observed during design and construction for the Midland Project . . . the responsible . . . Consumers Power organization assures that the condition is documented and that nonconforming items are tagged, marked, segregated or controlled to prevent inadvertent use or installation . . .'

Contrary to the above, on April 28, 1981, the inspectors identified 14 instances in which cable tray in the upper and lower cable spreading areas were not installed in accordance with the separation

requirements delineated in the Midland FSAR and which had not been identified and controlled to prevent inadvertent use or installation. Furthermore, documentation, disposition and notification to all affected organizations of these nonconformances was not in accordance with the established Quality Assurance Program requirements even though similar significant discrepancies had been identified 16 months earlier."

Consumers Power Company's Response to Item 3

As noted in the body of the NRC report, Consumers Power Company documented the nonconforming condition on a Nonconformance Report (NCR) in May 1979. Part corrective action on the two trays specifically covered by the NCR was initiated in July 1979 by physically moving one of the trays to provide space for barrier installation. The NCR has remained open to track completion of the part corrective action and the process corrective action. Late in 1979, the project determined that Marinite barriers were not the most suitable design approach for the present plant configuration. This resulted in removing from the drawings the barrier requirement in January 1980.

In the spring of 1980, a study was initiated as to the approach that should be taken to provide barriers when the required physical separation is not possible. A Bechtel inter-office memorandum (IOM) dated March 14, 1980, documents the implementation of the study and acknowledges the hold placed on the use of the Marinite barriers. The same IOM recognized that the barrier installation would best be accomplished after cable pulling was complete. In eliminating the Marinite approach, Project Engineering was confident that there was no serious risk in having to rework cable tray in order to install the barriers under evaluation. It was known that physical conditions were being created that would require barriers. A SAR Change Notice was originated on August 21, 1980, which reflects the results of the study and the project's decision to use Kaowool or Cerablanket as a barrier or to utilize completely enclosed raceways. The lengthy time to obtain approval and incorporation of the SAR change was due to the further extensive reviews by Consumers and Bechtel Engineering. Specifically, this change affected the design approach to be used to meet new requirements on fire protection separation (twenty (20)-foot requirement). Revision 33 of the FSAR, dated April 1981, now reflects in Section 8.3.3.3.1 the design approach to be used where the physical separation distances specified in the SAR are unattainable.

On June 11, 1981, Bechtel's Project Engineering issued a Drawing Change Notice against Drawing E-641, Sheet 7, Revision 1, to indicate proper barriers for cable trays 2AGC05 and 2NHL01 which are identified on Consumers Power NCR M-01-4-9-048. Engineering is presently in the process of generating a set of drawings to be issued for construction showing areas of the plant where separation barriers are required to be installed. It is anticipated that the subject drawings will be issued for construction by September 1, 1981.

The inspection for incorporation of barriers will be incorporated in PQCI E-3.0 (Final Electrical Area Completion Activities). This is consistent with installing barriers at the completion of cable pulling activities. As stated to various members of the Region III staff on May 14, 1981, we feel

there are no significant constructability problems anticipated with the installation of the separation barriers.

Consumers Power Company will close out NCR M-01-49-048 when all of the part corrective action is complete on the two specific trays covered by the NCR and when we have assured the effectiveness of the process corrective action. This will be accomplished by the drawings showing the required barriers and overinspection of the PQCI E-3.0 inspection requirements.

4) Item 4 of Appendix A (Item of Noncompliance 329/81-11-07 and 330/81-11-06) provides:

> "10CFR50 Appendix B, Criterion III, states in part: 'Measures shall be established to assure that applicable regulatory requirements and the design basis, as defined in 50.2 and as specified in the license application . . , are correctly translated into specifications, drawings, procedures and instructions.'
>
> Consumers Power Company's Quality Assurance Program Policy No 3, Revision 9, Paragraph 3.3, states in part: 'Each group or organization performing detailed design translates the applicable regulatory requirements, design bases, codes, standards and design criteria into design documents such as: specifications, drawings . . .'
>
> The FSAR in Paragraph 8.3.1.3 states in part: 'All class 1E equipment, with the exception of the main and local control boards, are marked with an adhesive-backed color coded symbol.' IEEE 279-1971, Criteria for Protection Systems for Nuclear Power Generating Stations, in Section 4.22 states in part: 'In order to provide assurance that the requirements given in this document can be applied during the design, construction, maintenance and operation of the plant, the protection system equipment . . . shall be identified distinctively as being in the protection system. This identification shall distinguish between redundant portions of the protection system.'
>
> Contrary to the above, as of May 1, 1981, the above commitments had not been translated into specifications, drawings, procedures and instructions pertaining to the installation of field-mounted class 1E instrumentation."

Consumers Power Company's Response to Item 4

Bechtel Project Engineering will revise Specification 7220-J-218(Q) to reference the requirements for color coding class 1E instruments per 7220-E-47(Q) on or about July 31, 1981. These requirements are currently specified in FSAR, Volume 14, Section 8.3.1.3, per class 1E terminal equipment. This requirement does not apply to instrument process lines.

In addition, Specification 7220-J-218(Q), Section 5.3.7, states that the instrument Installation Summary (7220-J-705(Q)) is used to identify all

redundant safety-related instruments and their impulse lines. The summary lists the "Q" status of the instrument. This specification provides the criteria for channel separation, however, it does not require any specific marking of the impulse lines.

MJS/lr
7/16/81