DCS

TOLEDO EDISON

Docket No. 50-346

License No. NPF-3

Serial No. 1-614

Log No. KA86-49
File: RR 2 (NP-43-86-01)

January 28, 1986

Mr. James G. Keppler, Regional Administrator
United States Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, Illinois 60317

Dear Mr. Keppler:

Subject: Potential 10CFR Part 21 Report
Consolidated Controls Corporation Field Wire Wrap Practice

This letter is to serve as the written notification of a potential 10CFR Part 21 defect which was identified by the Toledo Edison Company on January 23, 1986. This letter confirms a telephone conversation between your Mr. Nick Jackiw and Toledo Edison's Mr. Rod Cook on January 24, 1986.

Toledo Edison (TED) was observing a Consolidated Controls Corporation (CCC) field engineer performing modifications in the Steam and Feedwater Rupture Control System (SFRCS) cabinets. TED noted that the field engineer had the practice of sliding existing wire wrap connections down the terminal posts to make room for additional wires. This practice was questioned, but TED was assured by CCC that this was an acceptable practice.

The TED work package instructions did not have specific criteria to prohibit or authorize this practice. The related criteria in the Military Standards MIL-STD-1130B and Consolidated Controls QCI-110 procedure refer to a minimum pull force to prevent the wire from being stripped from the terminal, 2 pounds strip force for AWG #30 wire.

Subsequently, TED performed pull testing on some wire wraps and determined that wraps that had not been moved would not fail until 8 to 12 pounds of strip force was applied, which is well above the acceptance criteria. However, when the test was conducted on four wire wraps that had been applied to terminal posts and then pushed down further, the strip force required was sharply reduced. One wrap pulled with 2½ pounds, one with 2 pounds, and two with 1 pound of strip force applied. Two of these four would not have met the minimum strip force criteria.

Therefore, TED has identified that moving a wire wrapped connection will

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require retermination to ensure the minimum pull force criteria is satisfied.

TED has written a procedure, IC 2701.20, Instruction for Installation and Removal of Wire Wrap Connections. Training has already begun.

All wire wrap connections for the logic modules and card racks in the SFRCS cabinets will be stripped and reterminated. SFRCS is the only Nuclear Safety related system in which CCC performed wire wrapping.

Although TED does not know of other specific utilities where wire wrapping is used, it would appear to be an item of interest for all utilities who may have wire wrap terminations.

This report satisfies the requirement for written notification within five days of determination of a defect. Additional information will be provided in a 30 day Licensee Event Report (LER), per 10 CFR 50.73.

Very truly yours,

J. Williams, Jr./WCR

JW:JCS:syc

cc: Walt Rogers
DB-1 NRC Resident Inspector

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