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November 7, 1989

Mr. A. Bert Davis
Regional Administrator
U.S. Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, IL 60137

**Subject: Dresden Nuclear Power Station Unit 3
Request for Discretionary Enforcement
During RPS Electric Protection Assembly
(EPA) Surveillance Testing
NRC Docket No. 50-249**

Mr. Davis:

Commonwealth Edison Company (CECo) requests that Discretionary Enforcement be applied during the Unit 3 functional testing of the Reactor Protection System (RPS) Electric Protection Assemblies (EPAs) which is scheduled to be performed on or before November 15, 1989. To reduce the risk of a reactor scram, Discretionary Enforcement is needed in order to partially bypass the Main Steam Line Radiation Monitor (MSLRM) inputs to RPS and Primary Containment Isolation System (PCIS) for the brief period of time needed to complete the EPA functional testing. More specifically, CECo requests this relief from the MSLRM LCO requirements of Technical Specification (TS) 3.1.A.1 for the reactor scram function and TS 3.2.A for the PCIS function for a period of time not to exceed two (2) hours. During such period of time, Procedure DTS 500-2 "Functional Testing of the RPS MG Sets and Reserve Power Supply (EPAs)" will be performed.

Attachment A provides the background on why the MSLRMs currently present a greater than usual risk of a reactor scram during this surveillance. Please note that reactor scrams have occurred during the most recent EPA surveillances on both Unit 2 and Unit 3. Attachment B describes the bases for CECo's conclusion that the short duration for which two of the four MSLRMs would be bypassed does not represent a significant safety concern. Instead, the proposed surveillance method reduces the risk of an unnecessary reactor scram and plant perturbation from a Group I isolation.

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The EPA testing must be completed on Unit 3 by November 15, 1989 in order to comply with the six month surveillance interval (including the allowed extension time of 25%) required by TS 4.1.A.3.a. The scheduled shutdown for the End-of-Cycle 11 Refueling Outage is December 2, 1989.

To avoid a similar problem on Unit 2 (due date of January 12, 1990) the schedule for its EPA surveillance is being advanced to coincide with the dual unit outage currently scheduled to start December 10, 1989. Attachment C describes the actions to be taken on a longer term basis to eliminate this concern prior to future EPA surveillances on either unit.

Should your staff find that the requested approach is not acceptable, an alternative would be to grant schedular relief which would allow deferral of the EPA surveillance for the interval of approximately seventeen (17) days between the critical due date (November 15, 1989) and the start of the refueling outage (December 2, 1989).

Your timely attention to this matter is greatly appreciated. Additional information can be furnished as needed. This request has previously been discussed with the Resident Inspectors and NRR (B.L. Siegel and P.C. Shemanski).

Please contact this office should further information be required.

Very truly yours,



J.A. Silady
Nuclear Licensing Administrator

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Attachments (3)

cc: W.D. Shafer - Projects Branch Chief, Region III
S.G. DuPont - Senior Resident Inspector, Dresden
P.C. Shemanski - Acting PD III-2 Director, NRR
B.L. Siegel - Project Manager, NRR

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ATTACHMENT A

MSLRM EFFECT ON THE EPA SURVEILLANCE

Each RPS MG set is equipped with a pair of EPAs located between the MG set and the RPS Bus. The reserve power supply is also equipped with a pair of EPAs. To functionally test the EPAs for an MG set, the corresponding RPS bus is placed on the reserve power supply. The transfer of power is a "dead bus transfer" which causes a loss of power to the affected RPS bus and a subsequent half scram by design. RPS Bus A supplies power to the MSLRMs "A" and "C". Loss of power to the MSLRMs will cause not only a half scram but a half Group I primary containment isolation. MSLRMs "B" or "D" are not affected by the EPA surveillance since they are powered from the Essential Service bus via an uninterruptable power supply.

Dresden has encountered problems with resetting the half scram after the transfer of power to the reserve RPS Bus has been completed. The MSLRMs experience a "mode unknown" status when power is restored in a rapid manner. The unknown mode will not allow the half scram nor the Group I isolation signal to be reset. On March 30, 1989, Unit 3 experienced a full scram due to a spurious EPA actuation while efforts were in progress to clear the unknown mode of MSLRM "A".

General Electric, the Original Equipment Manufacturer (OEM) for Dresden MSLRMs, recommended that a delay time of approximately 5 seconds be instituted before restoring power to a de-energized MSLRM. This down time would allow the monitor to completely re-initialize. This corrective action was implemented and proved temporarily successful during the Unit 2 EPA surveillance conducted on July 12, 1989. After normal power was removed from RPS Bus A, a delay of 5 seconds was used before the reserve power supply was connected. There was momentary difficulty with resetting the MSLRMs at this time. This condition was cleared by pulling the power supply fuse for the monitor per GE recommendation. After restoring RPS Bus A to its normal power supply per the GE recommendation, MSLRM A would not reset, leaving a half scram and half Group I isolation signal present. While attempting to reset MSLRM A, a spurious Group I isolation on Steam Tunnel High Temperature occurred on the B PCIS channel resulting in a full Group I isolation, MSIV closure, and a subsequent full reactor scram.

Additional measures have been identified to eliminate the delays in resetting the MSLRM half scram and half Group I isolation. These are described in Attachment C but cannot be fully implemented prior to the upcoming Unit 3 surveillance.

ATTACHMENT B

SAFETY SIGNIFICANCE

The proposed Discretionary Enforcement has negligible safety significance for several reasons:

- (a) Only two of the four MSLRMs will be affected.
- (b) The two MSLRM channels will be affected for less than 2 hours.
- (c) The reactor state conditions during the proposed testing will preclude, or render extremely unlikely, any event which could approach the MSLRM design basis.

The limiting event which establishes the MSLRM design basis is the Control Rod Drop Accident (CRDA). The CRDA analysis for Dresden Unit 3 Cycle 11 resulted in a peak fuel enthalpy of 187 cal/gm which is well below the 280 cal/gm limit. The reload analysis is based on the most limiting state conditions and control rod patterns (e.g., very low power and appreciable rod inventory). In contrast, Unit 3 is presently at a high power condition and effectively an "All Rods Out" (ARO) condition. At the current steady-state, high flow control line conditions, the only control rods which are not fully withdrawn are four rods at position 46 (i.e., only inserted six inches) and one out-of-service rod which is fully inserted but electrically disarmed and valved out.

Since there is essentially no control rod inventory available for a postulated RDA during the proposed test condition and since the high power condition assures minimal rod worths compared to the reload licensing analysis, any conceivable RDA would result in a very low peak fuel enthalpy and minimal fuel failure, if any. When coupled with the very short test period (less than 2 hours) and the two remaining MSLRM channels, CECO concludes that the proposed test does not present a safety concern for any credible RDA scenario.

Other potential scenarios (less than design basis) involving gross fuel failures are also not of significant concern, given steady-state operation with no planned reactor maneuvers or control rod motion which would significantly deviate from the essentially ARO, high power test condition during the brief period for the EPA surveillance.

Prior to the performance of this surveillance, CECO must obtain NRC concurrence via Discretionary Enforcement. In addition, CECO will document On-Site and Off-Site Reviews of the temporary alteration used in the proposed test method, with the associated safety evaluation per 10 CFR 50.59, before conducting the surveillance.

ATTACHMENT C

CORRECTIVE ACTIONS

Several corrective actions have been undertaken to preclude any future concerns with this surveillance, i.e., to assure that the need for similar Discretionary Enforcement does not reoccur.

1. Following the difficulties with resetting the MSLRM half scram and half isolation during the earlier surveillances, CECO pursued this aspect of the problem with General Electric (GE), the OEM for the MSLRMs. GE has recommended upgrading the power supplies of all of the MSLRMs. This upgrade must be performed by the OEM offsite. One monitor on each unit has been outfitted with the upgraded power supply. A second monitor on Unit 3 will be replaced with an upgraded spare before the upcoming surveillance, if possible. CECO's plan is to install two upgraded monitors in the Unit 2 MSLRM channels A and C during the upcoming dual unit outage. Any monitors requiring upgrade will be sent to the manufacturer at this time.
2. The schedule for the Unit 2 EPA functional test (which is due on January 12, 1990) has been advanced to the week of December 10, 1989 when both units will be in cold shutdown. The risk of a unit scram from power will therefore be avoided by this CECO schedule revision for the next Unit 2 surveillance.
3. CECO also plans to submit a Technical Specification amendment request to change the surveillance interval for EPA functional testing. This submittal will propose to change the surveillance interval from "every six months" to "every cold shutdown, if not performed in the previous six months". This interval is consistent with the LaSalle County Station Units 1 and 2 EPA functional testing surveillance interval as well as the corresponding provision of the proposed BWROG Improved Standard Technical Specifications now under review by NRR.

The earliest date for the subsequent EPA surveillances on either unit would be approximately May 10, 1990, with the critical due date being in late June 1990. With the upgrade of the MSLRMs, the risk of a reactor scram during subsequent EPA surveillances will be greatly reduced and considered acceptably low to perform the test at power. In addition, a proposed amendment may have been approved by that time which would allow the testing to be performed when the unit is shutdown for other reasons.