



**Commonwealth Edison**  
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August 24, 1989

Dr. Thomas E. Murley, Director  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

Subject: Dresden Nuclear Power Station Units 2 and 3  
Status of Long Term Plans to Address the  
DC Control Power Deficiency Related to SBTG  
NRC Docket Nos. 50-237 and 50-249

Reference: Letter from J.A. Silady to T.E. Murley dated  
May 3, 1989.

Dr. Murley:

As indicated in the referenced letter, Commonwealth Edison contracted Sargent & Lundy to perform an evaluation of the effects of a postulated DC power failure upon non-ECCS equipment shared between the Dresden Units.

The results of the study indicate that the only dual train safety related system, other than the previously identified Standby Gas Treatment System (SBGT), which is susceptible to a single DC power (battery) failure is the Atmospheric Containment Atmosphere Dilution (ACAD) System and its associated hydrogen monitors. The configuration of this system and its DC failure susceptibility is discussed further in Attachment A.

The ACAD System currently has no operability requirements at Dresden, and its status is under consideration in ongoing discussions with your staff regarding combustible gas control. CECO has implemented temporary procedural changes at both Dresden and Quad Cities to alert operators to the ACAD design deficiency, pending ultimate resolution of this issue.

As discussed in the referenced submittal, the long term modification for the Dresden SBTG System involves addition of a spare MCC section to MCC 29-4, and subsequent reroute of certain Unit 2 power feeds. Due to the

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Dr. T.E. Murley

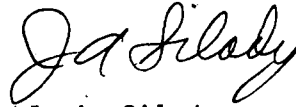
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complexity of this modification design and the lead times needed under the upgraded CECO modification program, the current schedule for installation is the Fall 1990 Unit 2 refueling outage.

Please contact this office should further information regarding this letter be required.

Very truly yours,



J. A. Silady  
Nuclear Licensing Administrator

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Attachment

cc: A.B. Davis - Regional Administrator, Region III  
S.G. DuPont - Senior Resident Inspector, Dresden  
B.L. Siegel - Project Manager, NRR

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## ATTACHMENT A

### DRESDEN NUCLEAR POWER STATION

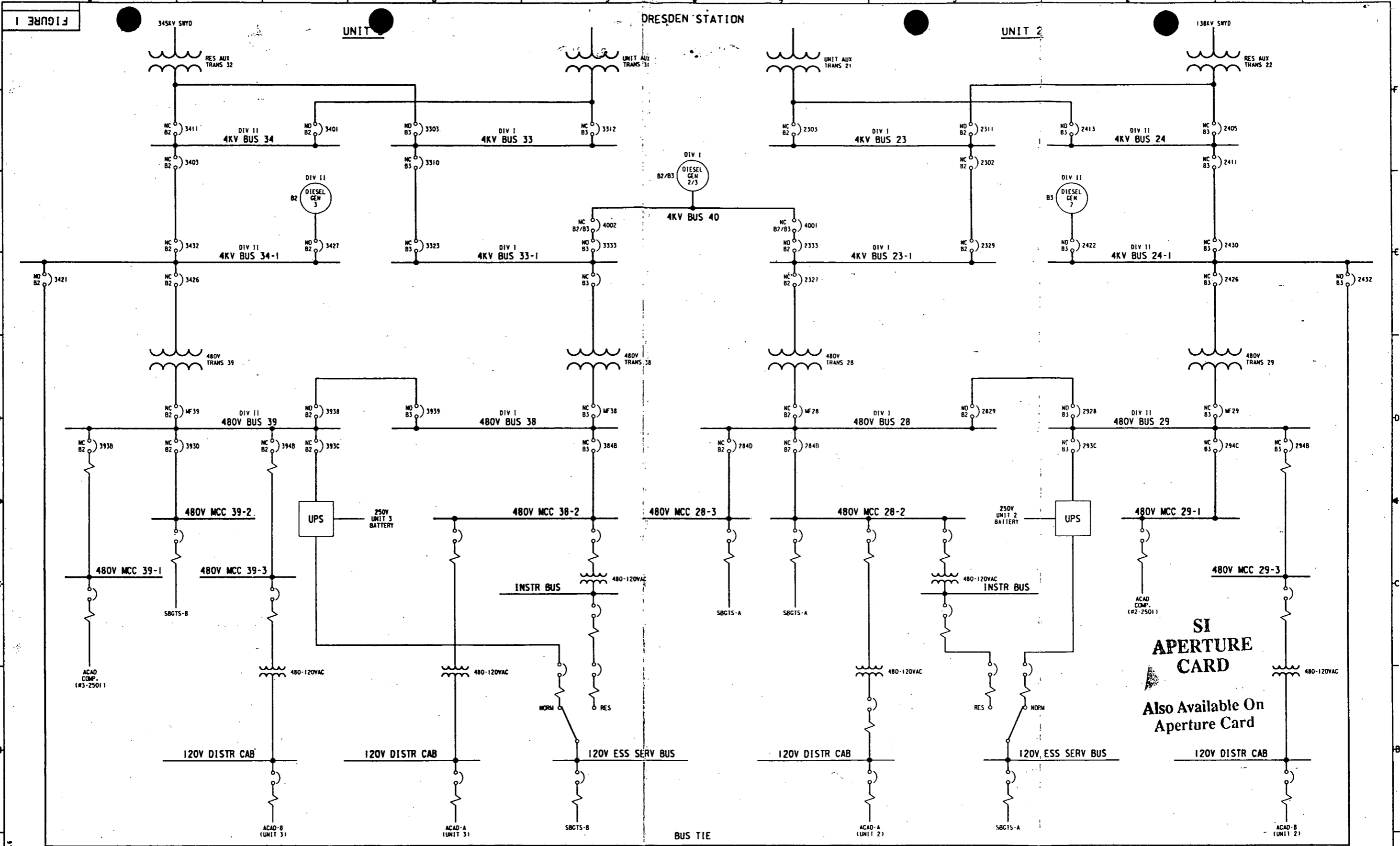
#### ATMOSPHERIC CONTAINMENT ATMOSPHERE DILUTION (ACAD)

##### SYSTEM CONFIGURATION

There are two redundant ACAD trains (A and B) per unit. The common aspect is that the dilution air portion of ACAD relies on shared air compressors. That is, air compressor #2-2501 feeds Trains A for both units and air compressor #3-2501 feeds Train B for both units. Air compressor #2-2501 is powered from 480V MCC 29-1 and air compressor #3-2501 is powered from 480V MCC 39-1. The Unit 2(3) Train A valves are powered from the 120V distribution panel of 480V MCC 28-2(38-2) and the Unit 2(3) Train B valves are powered from the 120V distribution panel of 480V MCC 29-3(39-3). Refer to the attached electrical schematic, Figure 1.

If a LOCA should occur on Unit 2 concurrently with a Loss of Offsite Power (LOOP) and a specific failure occurs (e.g., the loss of the Unit 2 125V DC battery system), then Train A and Train B dilution air subsystem of ACAD could be inoperable. This is because the Unit 2 Division I electrically operated switchgear breakers, the Unit 3 Division II electrically operated switchgear breakers, and Diesel Generator #3 start circuits relay on the Unit 2 125V DC battery. Thus, both Unit 2 trains of the ACAD system are lost. From the attached Figure 1, it can be seen that the Unit 2 ACAD system is vulnerable if either battery system (Unit 2 or 3) would fail. The Unit 3 ACAD system would function (when needed) irregardless of a single DC system failure.

It should also be noted that a similar configuration exists at Quad Cities which would affect the Unit 2 ACAD system under a LOCA plus LOOP plus DC power failure scenario, but would not affect the Unit 1 system. Both stations made voluntary ENS notifications on August 11, 1989, and are preparing related 30-day Licensee Event Reports which describe the ACAD design deficiency as well as its impact on one train of the associated hydrogen monitoring function (Dresden only).



**SYMBOLS**

125V DC ELECTRICALLY OPERATED ACB  
 MAN MANUALLY OPERATED ACB  
 MOLD MOLDED CASE ACB  
 NC BREAKER CLOSED DURING NORMAL OPERATION  
 NO BREAKER OPEN DURING NORMAL OPERATION  
 B2 OPERATED FROM UNIT 2 BATTERY POWER (125V)  
 B3 OPERATED FROM UNIT 3 BATTERY POWER (125V)  
 COMP COMPRESSOR

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| REV.                   | DATE REL'D | PREPARED | REVIEWED | APPROVED | PURPOSE                | FILM | REV. | DATE REL'D | PREPARED | REVIEWED | APPROVED | PURPOSE | FILM |
| 0                      | 02-20-89   |          |          |          | REFERENCE              |      |      |            |          |          |          |         |      |
| 1                      | 02-22-89   |          |          |          | REFERENCE              |      |      |            |          |          |          |         |      |

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SARGENT & LUNDY  
 DRESDEN NUCLEAR POWER STATION  
 UNITS 2&3  
 COMMONWEALTH EDISON CO.  
 CHICAGO, ILLINOIS

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