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February 7, 1992

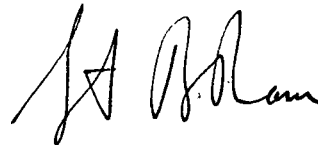
Re: Indian Point Unit No. 2
Docket No. 50-247

Document Control Desk
US Nuclear Regulatory Commission
Mail Station P1-137
Washington, DC 20555

SUBJECT: Response to Generic Letter 91-11; Resolution of
Generic Issues 48, "LCOs for Class 1E Vital
Instrument Buses," and 49, "Interlocks and LCOs
for Class 1E Tie Breakers"

This submittal provides Consolidated Edison's written
response to the subject generic letter. Should you have any
questions, please contact Mr. Charles W. Jackson, Manager,
Nuclear Safety and Licensing.

Very truly yours,



Subscribed and sworn to
before me this 7th day
of February, 1992.

Karen L. Lancaster
Notary Public

Attachment

KAREN L. LANCASTER
Notary Public, State of New York
No. 60-4643659
Qualified in Westchester County
Term Expires 9/30/93

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ATTACHMENT 1

GENERIC LETTER 91-11

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
INDIAN POINT UNIT NO. 2
DOCKET NO. 50-247
FEBRUARY, 1992

ATTACHMENT 1

The following guidance was provided in the enclosure to Generic Letter 91-11:

Ensure that your plant has procedures that include time limitations and surveillance requirements for:

1. Vital instrument buses (typically 120V ac buses),
2. Inverters or other onsite power sources to the vital instrument buses, and
3. Tie breakers that can connect redundant Class 1E buses (ac or dc) at one unit or that can connect Class 1E buses between units at the same site.

Implementation of appropriate procedures conforming to Generic Letter 91-11's guidance for our tie breakers and justification for not having time limitations or restrictions on using our alternate vital instrument bus supplies are as follows:

There are tie breakers between 480V buses 2A & 5A, 2A & 3A and 3A & 6A. Administrative controls with monthly verification provide for these breakers being racked out (fuses out) whenever RCS temperature exceeds 350°F. This issue was addressed during the Electrical Distribution System Functional Inspection (EDSFI) and was accepted in NRC Inspection Report 91-81 (pg. 17-18).

There are two tie breakers (in series) between 125VDC Power Panels 21 & 22. Administrative controls with monthly verification provide for these breakers being locked open whenever RCS temperature exceeds 350°F. The second DC breaker had been added during the 1991 refueling outage so that any inadvertent breaker operation or failure of a breaker will impact no more than one DC bus.

There are no limitations or restrictions on the number of instrument buses that can be on alternate supplies or for how long. Administrative controls provide for the instrument buses to be supplied by their respective inverters (normal supply) unless this supply is unavailable (the inverter or its 125 VDC supply may be unavailable). Inverter parameters are monitored twice per shift during the Nuclear Plant Operator (NPO) tour, so that the operator is aware whenever an instrument bus is manually placed on an alternate supply. On an automatic transfer to an alternate supply, there is an alarm. This arrangement is justified since the alternate supplies for three instrument buses (22, 23 and 24) are supplied by sources which are connected to the emergency diesels in approximately 10 minutes following loss of AC power. The remaining instrument bus (21) is supplied by a source that is automatically connected to its respective emergency diesel in approximately 10 seconds.

In addition, during the 1991 refueling outage our configuration of instrument bus supplies was modified so that a single failure of an emergency diesel (even with the assumption that the diesel or offsite power including any one of three gas turbines is not restored within two hours) will result in the unavailability of no more than one instrument bus. This was done by reconnecting the alternate supply for one instrument bus so that the alternate and normal supplies were on separate emergency diesels. The normal and alternate supplies for the remaining instrument buses remained on their respective emergency diesels (we have three emergency diesels and four instrument buses), and the independence of the four instrument buses was maintained.

Except for Containment Spray, all engineered safety feature and reactor protection instrumentation channels will trip on loss of AC power. Containment Spray consists of three channels which require AC power to trip. Two of the three channels are required to trip for Containment Spray initiation. There are two instrument loops on each channel, and two out of three for both sets is required for Containment Spray initiation. One channel has its own inverter and is not supplied by an instrument bus. Another channel is normally supplied by an instrument bus and placed on a separate inverter whenever the instrument bus is on an alternate supply. The third channel is solely supplied by an instrument bus.

The original plant design had only two instrument buses supplied by inverters. Of the remaining two instrument buses, one was by design stripped on loss of offsite power, and the other was automatically placed on an emergency diesel in approximately 10 seconds. Since then we have greatly enhanced our design by adding inverters for the remaining two instrument buses. While we have no specific restriction on using alternate instrument supplies, our experience has shown that the inverters are very reliable and that the amount of time that instrument buses were on alternate supplies has been minimal. Our procedures provide for the highest priority to be given to an inverter problem, so that the instrument bus will be restored to the inverter in the shortest possible time (loss of the 125 VDC input to the inverter which is due to battery charger or battery unavailability is a 24 hour LCO in our Technical Specifications). The inverters are the preferred source of power for the instrument buses. The capability to power the instrument buses from an alternate source without restrictions allows the instrument buses to remain powered during inverter unavailability while maintaining the plant at power and avoiding unnecessary plant transients.