Commonwealth Edison
1400 Opus Place
Downers Grove, Illinois 60515

December 14, 1990

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

Subject: Byron Station Units 1 and 2
Braidwood Station Units 1 and 2
Supplemental Response to NRC Generic Letter 88-14
NRC Docket Nos. 50-454/455 and 50-456/457

References: (a) NRC Generic Letter 88-14, dated August 8, 1988.

(b) M. Richter letter to U.S. NRC, dated February 6, 1989.

Dear Sir:

Reference (a) requested that all holders of operating licenses or construction permits for nuclear power reactors review NUREG-1275, Volume 2, and perform a design and operations verification of the instrument air system. Reference (b), which presented Commonwealth Edison Company's (CECo) initial response to Reference (a), indicated that a response would be provided upon completion of the design verification for Byron and Braidwood Stations. This letter presents the results of the design verification for Byron and Braidwood Stations.

As indicated in Reference (b), the four outstanding items for completion of the design verification were:

- review the manufacturer's air quality recommendations for the safety related equipment identified,
- assess the potential for common mode failures (i.e., due to poor air quality),
- assess the failure of non-safety-related or reliability related systems on the performance of safety-related equipment using instrument air, and
- review the Braidwood Station loss of instrument air event for applicability.

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CECo was assisted in the design verification by the original design architect engineer for Byron and Braidwood Stations. The actions taken in addressing the four outstanding items of the design verification are summarized below.

- The Byron/Braidwood UFSAR Section 9.3 specifies the following air quality standards.
  - Moisture.: Equivalent to or exceeds ANSI MC 11.1-1975.
  - Oil: Equivalent to or exceeds ANSI MC 11.1-1975.
  - Particulate: Equivalent to or exceeds ANSI N45.2.1-1973.

- Manufacturers were contacted to obtain air quality recommendations on safety-related components the supplied to Byron and Braidwood Stations. From those manufacturers that responded, approximately 50 percent indicated that air quality specified in the Byron/Braidwood UFSAR was acceptable, and the other 50 percent indicated that the more stringent air quality guidelines specified in ANSI/ISA-S7.3 were acceptable. The air quality monitoring program implemented by Edison utilizes the ISA standard as a guideline.

- Potential common mode failures, such as those described in NUREG 1275 (Volume 2), were evaluated for applicability to Byron and Braidwood Stations. The failure of safety-related valves due to poor air quality was investigated. The potential for such a failure does exit, but is not likely to occur, because the station dries and filters its instrument air. The station instrument air quality monitoring program and the preventative maintenance program ensure that consistently high quality instrument air is supplied. The ongoing in-service testing program and operational surveillance testing provide the assurance that safety-related air users will fail safe during design basis events.

- The potential for failures in non-safety related or reliability-related instrument air users was reviewed. The postulated worst case scenario would be one that will cause a total loss of instrument air due to a failure of a non-safety-related or reliability-related system. Total loss of instrument air would cause a forced power reduction or plant shutdown, but all safety-related instrument air users would perform as designed.

- CECo has reviewed the Braidwood Station Event for applicability to Byron Station and determined that no further action is required.

As indicated in Reference (b), an instrument air quality monitoring program was implemented at Byron and Braidwood Stations on a quarterly basis. This program was found to be effective in monitoring air quality and will provide assurance that acceptable air quality is maintained. It has been determined that this program should continue to be implemented on a quarterly basis.

This letter completes the reporting and action requirements of Generic Letter 88-14 for Byron and Braidwood Stations.

Please address any questions concerning this response to this office.

Respectfully,

Darrell Taylor
Nuclear Licensing Administrator

DT:lmw
ZNLD166-11

cc: A.B. Davis - Regional Administrator, RIII
T. Shia - Project Manager, NRR
R. Pulsifer - Project Manager, NRR
Resident Inspector - BY, BWD

Subscribed and Sworn to
before me this 14th day
of December, 1990

Lynn M. Wlodarski
Notary Public

" OFFICIAL SEAL "
LYNN M. WLODARSKI
NOTARY PUBLIC, STATE OF ILLINOIS
MY COMMISSION EXPIRES 6/25/94