Commonwealth Edison Company
Dresden Generating Station
6500 North Dresden Road
Morris, IL 60450
Tel 815-942-2920

ComEd

February 16, 1996

JSP Ltr. #96-0016

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

Subject: Dresden Nuclear Power Station Units 2 and 3
Quad Cities Nuclear Power Station Unit 1 and 2
Nitrogen Containment Atmospheric Dilution (NCAD)
Implementation to comply with 10 CFR 50.44
NRC Docket Nos. 50-237, 50-249, 50-254 and 50-265

References: (a) J. Stang (USNRC) to D. L. Farrar (ComEd) SER dated 07/29/93

(b) P. Piet (ComEd) to T. E. Murley (USNRC) dated 09/02/93

(c) J.L.Schrage (ComEd) to T.E. Murley (USNRC) dated 4/16/93

(d) GE Topical Report GENE-637-004-0993. "Evaluation of Two Combustible Gas Control Strategies Using NCAD"

(e) NEDO - 31331, BWROG Emergency Procedure Guidelines, Revision 4, March 1987.

(f) NRC SER for NEDO - 31331, BWROG Emergency Procedure Guidelines, Revision 4, March 1987. Letter A.C. Thadani (USNRC) to D.N.Grace (BWROG) September 12, 1988.

The purpose of this letter is to clarify Commonwealth Edison's (ComEd's) method for implementation of the facility changes made to comply with 10 CFR 50.44, "Standards for Combustible Gas Control System in Light Water-Cooled Power Reactors." ComEd wishes to clarify that the repressurization/purge (R/P) strategy stated in Reference (a) as the method ComEd would be using to control primary containment oxygen concentration is not as conservative with respect to dose to public when compared to the BWR Owner's Group Emergency Procedure Guideline Revision 4 Purge and Vent (P/V) strategy for primary containment hydrogen control. ComEd has chosen to use the P/V strategy which requires a vent path to be established prior to purging the containment with nitrogen.

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In Reference (a), ComEd received approval from the NRC Staff for facility changes to the Dresden and Quad Cities nitrogen makeup and inerting systems (NM& I) that alleviated the need to install hydrogen recombiners. ComEd proposed in Reference (c) the modifications to remove single failure vulnerabilities within the NM&I system identified by the NRC. ComEd has completed those upgrades for Dresden Unit 2 and Quad Cities Unit 2 and plans to complete modifications for Quad Cities Unit 1 and Dresden Unit 3 in 1996. However, ComEd does not plan to use the R/P strategy as stated within Reference (a) but will use the P/V strategy with the NCAD system providing purge capability as recommended by the BWROG in Reference (d) and approved in Reference (f).

The BWROG provided the NRC staff with a comparison of the R/P and P/V strategies in Reference (d) and recommended the P/V strategy over R/P. The R/P strategy was found to be effective when there was no requirement to vent the primary containment until well after the accident has occurred (approximately 1 month). However, the EPGs provide several steps where venting of the containment is required well before 1 month has expired, thereby rendering the R/P strategy ineffective. Furthermore, the EPG P/V strategy provides a means of maintaining primary containment pressure low, removing the flammable gases from the containment, purging the containment atmosphere while maintaining the capability of making a controlled release to the environs if necessary. ComEd believes the P/V strategy provides a greater assurance of continued containment availability while minimizing the flammability of the containment atmosphere.

In summary, ComEd will use the P/V approach with the NCAD system. ComEd has endorsed the GE analysis which supports utilizing the P/V methodology (Reference (d)) and has performed a safety evaluation per the provisions of 10 CFR 50.59 to support incorporation of the P/V methodology into station procedures. ComEd considers compliance with 10 CFR 50.44 complete once the NCAD modifications for both of the Dresden and Quad Cities units have been authorized for operation. ComEd is planning no further action on this subject matter. Please contact this office if you have any questions.

Sincerely,

FOR
J. Stephen Perry
Vice President
BWR Operations

Attachment

cc: H. J. Miller, Regional Administrator - RIII
J. F. Stang, Project Manager - Dresden - NRR
R.M. Pulsifer, Project Manager - Quad Cities - NRR
C. L. Vanderniet, Senior Resident Inspector - Dresden
C. Miller, Senior Resident Inspector - Quad Cities
Office of Nuclear Facility Safety - IDNS
File: Numerical