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

ComEd

November 25, 1996
JSPLTR #96-0222

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

Subject: Dresden Nuclear Power Station Unit 2 -
Hydrogen Water Chemistry Fuel Surveillance
NRC Docket No. 50-237

References:
(a) D. Crutchfield letter to D. Farrar, dated April 7, 1983.
(b) J. Silady letter to T. Murley, dated November 30, 1987.
(c) J. Silady letter to T. Murley, dated May 22, 1989.
(d) M. Richter letter to T. Murley, dated February 7, 1991.
(e) P. Piet letter to NRR, dated January 17, 1995.
(f) J.F. Stang letter to I. Johnson, dated August 30, 1996.

Reference (a) transmitted Amendment No. 75 to Provisional Operating License DPR-19 in support of Dresden Unit 2 Cycle 9 operation and authorized operation with hydrogen addition to the primary coolant. Section 2.1.6 of the Safety Evaluation that supported Amendment No. 75 requested that Commonwealth Edison Company (ComEd) provide the results of hydrogen uptake measurements on the General Electric lead test assemblies (LTAs) exposed to the hydrogen environment. The results of the hydrogen uptake measurements following one, two and three cycles of hydrogen addition were presented in References (b), (c), and (d), respectively. The data from the first three cycles of hydrogen water chemistry at Dresden Unit 2 indicated that there were no deleterious effects on the zircaloy components.

Reference (e) discussed in-reactor fuel performance information following the fourth cycle of irradiation. There was no evidence of fuel performance problems based on coolant activity levels, pool-side fuel exams, and crud sampling.

A001
1/0

L:\wk_proc\sitevplt\jsp96\0222.96

Reference (e) also informed the NRC that completion of hot cell exams, including hydrogen uptake measurements, was uncertain because of re-prioritization of projects and financial constraints experienced by General Electric and EPRI.

In Reference (f), the NRC requested that ComEd inform the staff when a firm examination schedule has been established with General Electric.

This letter is to inform the NRC that ComEd has been working closely with both General Electric and EPRI on this project, and that an agreement between GE and EPRI was executed on September 26, 1996, to perform "Hot Cell Post-Irradiation Examinations (PIE) of Dresden-2 Fuel and Water Rods After Four Cycles of Hydrogen Water Chemistry." These studies, which will include hydrogen uptake measurements, are in progress and are scheduled to be completed by mid-1997. Initial Hotcell examinations completed to date have not included hydrogen uptake measurements but the observations indicate acceptable fuel performance. A final report on this work is expected early in the fourth quarter of 1997. ComEd will provide the NRC with the results of the hydrogen uptake measurements when they are published by EPRI. Submittal of these measurements will complete our commitment with respect to hydrogen uptake measurements on the LTAs and should close out this issue.

Based on previous fuel examinations performed by ComEd and GE after one, two, three, and four cycles of operation in Dresden Unit 2, it is ComEd's continued expectation that the examination results will show that the hydrogen water chemistry at Dresden Unit 2 does not have an adverse effect on the zircaloy fuel components.

If there are any questions concerning this issue, please contact Ed Armstrong, ComEd's Fuel Reliability Engineer, at (630) 663-3025.

Sincerely,

Stephen Perry
Site Vice President
Dresden Station

cc: A. Bill Beach, Regional Administrator, Region III
J.F. Stang, Project Manager, NRR (Unit 2/3)
C. Vanderniet, NRC Senior Resident Inspector - Dresden
Illinois Department of Nuclear Safety