Commonwealth Edison Company
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Downers Grove, IL 60515

ComEd

September 8, 1995

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

Subject: Dresden Nuclear Power Station Units 2 and 3
Core Shroud Repair Evaluation - ComEd Response to NRC Staff
Request for Additional Information (RAI)
NRC Docket Nos. 50-237 and 50-249

Reference: J. Stang letter to D. Farrar, dated July 26, 1995.

The purpose of this letter is to provide ComEd's response to the NRC staff's RAI on the Dresden Station Units 2 and 3 Core Shroud Repair. The attachment to this letter contains the NRC staff's question and ComEd's response. It should be noted that this submittal does not contain any proprietary information.

To the best of my knowledge and belief, the statements contained in this response are true and correct. In some respects, these statements are not based on my personal knowledge, but obtained information furnished by other ComEd employees, contractor employees, and consultants. Such information has been reviewed in accordance with company practice, and I believe it to be reliable.

If there are any questions, please contact this office.

Sincerely,

Peter L. Piet
Nuclear Licensing Administrator

Attachment

cc: H. J. Miller, Regional Administrator - RIII
J. F. Stang, Project Manager - NRR
M. N. Leach, Senior Resident Inspector - Dresden
Office of Nuclear Facility Safety - IDNS

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ATTACHMENT

REQUEST FOR ADDITIONAL INFORMATION
CORE SHROUD REPAIR
DRESDEN UNITS 2 AND 3

Question:

In order to compare the plan footprint area of the shroud repair hardware with that of other projects, what is the flow area using this plan footprint area at the elevation where most of the shroud repair hardware is located. Also, what associated pressure drop effects would occur.

Response:

The smallest flow area between the H1 and H2 welds, making the conservative assumption that all of the shroud repair hardware is lumped at one elevation, i.e., using the plan footprint area of all of the hardware, is given below. Because almost all of the shroud repair hardware is located well below the shroud head flange, the shroud head bolts and lug sets, the new shroud head and separators legs, as well as the guide rod brackets need not be included in the flow area calculation. This leaves only the shroud repair hardware and the core spray piping to block the flow in the annulus at this lower elevation. The flow restrictions at the H1 weld elevation due to the shroud head bolts and lug sets, the guide rod brackets and the core spray line riser pipe and couplings still exist.

The flow area at the location of most of the shroud repair hardware is:

Gross as-built annulus area (252 in. Vessel ID, 220 in. shroud OD)	11862 sq. in.
4 - 6.625 in. OD core spray line riser pipes and couplings	326 sq. in.
Pre-repair - net annulus flow area	11536 sq. in.
4 - sets shroud repair hardware	1227 sq. in.
Post-repair net annulus flow area	10309 sq. in.

The four added sets of shroud repair hardware will block 10.64 percent of the pre-repair minimum downcomer area. The impact of the additional flow blockage on the recirculation system loop hydraulic resistance, loop pressure drop, reactor coolant level, and the coolant flow rate is determined to be negligible.