



**Commonwealth Edison**

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April 24, 1981



Mr. A. Schwencer, Chief  
Licensing Branch 2  
Division of Licensing  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

Subject: LaSalle County Station Units 1 and 2  
Thermal Recombiner Effectiveness  
NRC Docket Nos. 50-373/374

Dear Mr. Schwencer:

Pursuant to a request made by the Containment Systems Branch (Mr. F. Eltawila) on April 20, 1981, the following information is submitted.

1. Inerting the primary containment has no effect on the efficiency of the LSCS thermal recombiners. These recombiners are guaranteed to recombine all available oxygen and hydrogen present down to one-tenth of one percent by volume of the minority gas available, irrespective of other constituent gases inside containment.
2. The design capacity of the thermal recombiners is based upon combining 6 SCFM of hydrogen with 3 SCFM of oxygen. This basis uses an inflow of 150 SCFM total gas composed of up to 4 percent hydrogen and unlimited oxygen (150 SCFM times 4% hydrogen yields 6 SCFM hydrogen). In the inerted atmosphere, the inlet gas mixture is assumed to have up to 5 percent oxygen and unlimited hydrogen. To limit the total recombination to 3 SCFM oxygen with 6 SCFM hydrogen, the inlet gas flow is reduced to 60 SCFM (60 SCFM times 5 percent oxygen yields 3 SCFM oxygen). This reduction to 60 SCFM flow is accomplished remotely from the control room. The design flow of 150 SCFM through the blower-preheater-and reaction chamber is maintained simply by opening a recirculation valve (from the control room) whenever the inlet flow is reduced to 60 SCFM rate. This recirculation mode of operation is discussed in the manufacturer's report AI-77-55, which the NRC Staff has previously been provided.

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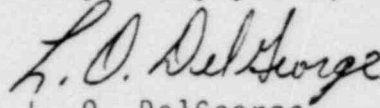
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In the event your Staff should have any further questions in this regard, please direct them to this office.

Very truly yours,

A handwritten signature in cursive script, reading "L. O. DelGeorge".

L. O. DelGeorge  
Nuclear Licensing Administrator

cc: NRC Resident Inspector - LSCS

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