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 RECIP. NAME RECIPIENT AFFILIATION
 DENTON, H. R. Office of Nuclear Reactor Regulation

SUBJECT: Suppl 771222 response which addressed potential Sodium Hydroxide flow paths to reactor coolant sys. Forwards revised schematic diagram of piping arrangements from spray additive tank to discharge points.

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July 20, 1979
AEP:NRC:00156

Donald C. Cook Nuclear Plant Units No. 1 and 2
Docket Nos. 50-315 and 50-316
License Nos. DPR-58 and DPR-74

REGULATORY DOCKET FILE COPY

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Denton:

The purpose of this submittal is to supplement our December 22, 1977 response which addressed potential NaOH flow paths to the Reactor Coolant System. As a result of a subsequent review of the referenced submittal, we have revised the schematic diagram of the piping arrangement from the spray additive tank to its various discharge points. This more complete diagram is enclosed in Attachment 1 of this letter and depicts all potential NaOH flow paths to the Reactor Coolant System. The schematic shows the valving arrangement during cold shutdown with the Residual Heat Removal (RHR) aligned for reactor coolant recirculation. During power operation, the arrangement is the same as that shown on Figure 1 except that the valves which control suction from the RWST 24" header to the S.I. and RHR pumps, shown closed in the figure, are open. The schematic shows that a single valve failure or misposition in any of the potential flow paths will not lead to direct injection of NaOH into the Reactor Coolant System.

In addition to the valve arrangement during this cold shutdown condition, the surveillance test procedure for the spray additive tank motor operated valves (V-2 and V-3) was reviewed. This procedure, which is only performed during cold shutdown, with the RHR system aligned in the recirculation mode, calls for the closure of tank discharge hand valve, V-1, and the eductor supply hand valve, V-4. This results in three closed hand-valves in series, namely, V-1, V-4 and V-5, preventing flow of NaOH to the Reactor Coolant System.

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Mr. Harold R. Denton, Director

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We have also reviewed the various systems connected to the primary system to detect possible dilution paths other than the NaOH addition discussed above. We find that the only other potential dilution path is through the CVCS system from the primary water connection to the Boric Acid Blender System. Inadvertent dilutions through the CVCS system have already been addressed in FSAR sections 9.2.3 and 14.1.5.


Based on this evaluation, it is concluded that it would be extremely unlikely that an incident of the type described in Mr. Davis' letter of September 15, 1977 could occur at the Donald C. Cook Nuclear Plant due to the misposition of a single isolation valve or a single active component failure. Hence, no corrective action is considered necessary to mitigate the concerns of the above-referenced letter.

Very truly yours,

JED:em


John E. Dolan
Vice President

Sworn and subscribed to before me
this 20th day of July, 1979 in
New York County, New York


Notary Public

GREGORY M. GURICAN
Notary Public, State of New York
No. 31-4643431
Qualified in New York County
Commission Expires March 30, 1981

cc: R. C. Callen
G. Charnoff
R. W. Jurgensen
R. S. Hunter
D. V. Shaller-Bridgman

ATTACHMENT 1 TO AEP:NRC:00156

