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John G. Cook
Vice President

ILLINOIS POWER

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Docket No. 50-461

Document Control Desk
Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: Illinois Power's Response to Bulletin 93-02, Supplement 1, "Debris Plugging of Emergency Cooling Suction Strainers"

Dear Sir:

The Nuclear Regulatory Commission's (NRC) Bulletin 93-02, Supplement 1, requested that Illinois Power (IP) take actions to enhance the capability of Clinton Power Station (CPS) to prevent or mitigate loss of the Emergency Core Cooling System (ECCS) following a loss-of-coolant accident (LOCA). The actions requested were in the following areas: conducting operator and emergency response personnel training and briefings, ensuring that Emergency Operating Procedures (EOPs) heighten operator awareness of this condition, and instituting procedures that would mitigate a loss of available net positive suction head under LOCA conditions. The actions taken at CPS in response to the NRC's request are described below.

1) Training and briefings: During cycle 94.2 of Operations Continuing Training, operations personnel were briefed and trained on debris plugging of ECCS suction strainers. The presentation included discussion of possible causes, indications and appropriate operator actions described in CPS Procedure 3312.01, "Residual Heat Removal." This training cycle was completed April 15, 1994. Training and briefings concerning debris plugging of ECCS suction strainers were also conducted for appropriate emergency response personnel.

2) EOPs for operator awareness and guidance: CPS ECCS Operating Procedures are EOP support procedures used in conjunction with CPS EOPs. These procedures list possible indications of ECCS suction strainer blockage and actions to take to mitigate the effects of suction strainer blockage. EOP-1, "RPV Control," gives guidance to take suction from the RCIC storage tank, if possible, when using Reactor Core Isolation Cooling (RCIC)/High Pressure Core Spray (HPCS). EOP-1 also instructs personnel

to maintain level above the top of active fuel if they cannot maintain it above level 3, using alternate injection systems if needed (i.e., systems not taking suction from the suppression pool). The EOP grants permission for the operator to throttle ECCS injection. EOP-1A, "ATWS RPV Control," gives the same guidance as EOP-1 except that the level is allowed to decrease to -193 inches before using alternate injection systems. The RCIC storage tank is still preferred when using HPCS/RCIC. CPS Procedure 4411.03, "EOP Injection/ Flooding Sources," provides a detailed list of injection sources and system alignment instructions. CPS Procedure 4411.04, "Throttling ECCS Flows," instructs how to modify ECCS valves for throttling.

3) Procedures and other measures to assure sufficient core and containment cooling:

3a) Reduction of flow: EOP-1, "RPV Control," grants permission for the operator to throttle ECCS injection. CPS Procedure 4411.04, "Throttling ECCS Flows," instructs how to modify ECCS valves for throttling.

3b) Backflushing of clogged strainers: Due to the CPS design, sufficient flow for effective backflushing of clogged strainers is presently unachievable. However, evaluation to identify a possible backflush method, which could unclog one or more strainers without the use of plant modifications, continues.

3c) Inject from other sources: EOP-1, "RPV Control," gives guidance to take suction from the RCIC storage tank, if possible, when using RCIC/HPCS. EOP-1 also gives guidance to maintain level above the top of active fuel if they cannot maintain it above level 3, using alternate injection systems if needed (i.e., those not taking suction from the suppression pool). EOP-1A, "ATWS RPV Control," gives the same guidance as EOP-1 except that the level is allowed to decrease to -193 inches before using alternate injection systems. The RCIC storage tank is still preferred source of water when using HPCS/RCIC. CPS Procedure 4411.03, "EOP Injection/Flooding Sources," provides a detailed list of injection sources and the alignment instructions.

3d) Intermittent containment spray: CPS has a Mark III containment which does not have containment spray in the drywell. Therefore, this is not applicable to CPS.

3e) Other core and containment cooling measures: CPS has an installed suppression pool cleanup system that provides continuous cleanup of the suppression pool water. In addition, CPS Procedure 1019.01, "Housekeeping," requires that supervisors/assistant supervisors should

make monthly tours of areas under their jurisdiction, which includes containment, and that any housekeeping discrepancies noted should be corrected. Finally, CPS uses reflective mirror insulation that contains no fibrous material.

The above actions assure that sufficient core and containment cooling may be achieved and maintained.

Based on the actions taken above, CPS has fulfilled the enhancements requested in NRC Bulletin 93-02, Supplement 1.

Attachment 1 provides an affidavit supporting the facts set forth in this letter.

Sincerely yours,

J. G. Cook
Vice President

JSP/csm

Attachment

cc: NRC Clinton Licensing Project Manager
NRC Resident Office, V-690
Regional Administrator, Region III, USNRC
Illinois Department of Nuclear Safety

Attachment 1
to U-602279

J. G. Cook, being first duly sworn, deposes and says: That he is Vice President of the Nuclear Program at Illinois Power; that this letter supplying the response to Bulletin 93-02, Supplement 1, has been prepared under his supervision and direction; that he knows the contents thereof; and that to the best of his knowledge and belief said letter and the facts contained therein are true and correct.

Date: This 19 day of April 1994.

Signed: J. G. Cook

STATE OF ILLINOIS } SS. 351-58-0497
DeWitt COUNTY }

Subscribed and sworn to before me this 19 day of April 1994.

"OFFICIAL SEAL"
Jacqueline S. Matthias
Notary Public, State of Illinois
My Commission Expires 11/24/97

Jacqueline S. Matthias
(Notary Public)