

Nozzle Dam Observations

Observed installation of nozzle dams in "A" & "B" steam generators on the mid-shift 04/09/04. Significant issues which occurred during the evolution included:

* The first two jumpers on the "B" generator cold leg had to exit the bowl early and be cut out of their plastic hoods due to lack of air.

The first jumper had to exit the generator due to lack of air and had to be cut out of his plastic hood. After he was cut out, it appeared that a second jumper was going in without resolving the first jumper's problem. The NRC rep. observing the job (Higgins) asked the utility rep. in charge of the job (Harald Erdman) if he knew why the first jumper lost air. He said "no" and asked the Sciencetech member coordinating this generator if the problem was solved. The Sciencetech member said "yes", although it did not appear to me that this answer was completely thought out. At this point in time, in my opinion, the job should have stopped and air supply condition/practices should have been reviewed and briefed with the workers. The second jumper went in to the bowl and had to exit the generator promptly due to lack of air and had to be cut out of his plastic hood.

Concurrent with, but slightly behind, this activity, the "A" generator cold leg dam was being installed by a second Sciencetech coordinator. Higgins asked Erdman if the team on the "A" generator was aware of the air problems occurring on the "B" generator. Erdman then went over and told the "A" generator Sciencetech coordinator to check the air supplies for everyone going in to the generators.

The dams on the "A" & "B" cold legs were completed without any more air problems.

The first jumper on the "A" generator hot leg had to exit the generator due to his air line "coming off". I do not believe he had to be cut out of his hood. The dam on this leg experienced problems with one of the bolt engagements. During this problem, the air line "tore off" one of the workers involved in trying to resolve the problem.

The entire nozzle dam job was placed on hold sometime around 6:00 A.M. due to a concern with a vent path for the RCS. Several different conflicting directions were given to Sciencetech regarding continuing with the job. Somewhere along the line, permission was apparently given to install the "B" generator hot leg and it was installed.

KEY QUESTION: Was there any time that the 2 hot leg dams were installed simultaneously prior to the establishment of another vent path. This is dependent on the time line for activity on the "A" & "B" hot leg dams. As it was not identified as an issue until after much activity had taken place on the dams and resulted in several conflicting directions were given on what to do with the hot leg dams, I can't be sure.

I left the coordination room about 0730.

Patrick C Higgins
USNRC

During the 0600 OCC meeting the Site Director of Operations asked if there was a vent path established prior to and during the installation of the nozzle dams. Someone in the meeting answered, "Yes, there was a vent path established." During the rest of the discussion about the work on the nozzle dams it was stated that there had been only one incident involving the air supply to the bubble suits. When Pat Higgins returned and informed me (Mike Morris) of his observation as stated above. A call was placed to inform the branch chief (Pat Loudon) and the decision was made to present the information to plant management (Jim Shaw and Jim McCarthy). They had not been informed of the other three incidents and did not know that a call came from the OCC to stop the work until a vent path was established. The residents informed plant management of the facts and the concern that work had not been stopped to determine the extent of the loss of a vent path and the industrial safety issues. Work was stopped on the nozzle dams by plant

71-21

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management and the situation was reviewed by several groups on site including NOS, Safety, Operations, OCC and management. During various discussions during the day the events as described above were substantiated and at 1900 engineering determined that the hot leg nozzles had been installed in both steam generators for 9 minutes. An NMC team is being formed to investigate the incident and perform a root cause.

R. Michael Morris (4/9/2004)