Entergy

Entergy Operations, Inc.
1448 S.R. 333
Russellville, AR 72802
Tel 501 858 5000

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November 29, 2005

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555-0001

Subject: NRC Bulletin 2003-01 Additional Review
Arkansas Nuclear One – Unit 2
Docket No. 50-368
License No. NPF-6

Dear Sir or Madam:

On September 30, 2005, the NRC held a public meeting with the Nuclear Energy Institute (NEI) and industry regarding the pressurized water reactor (PWR) sump blockage generic safety issue (GSI-191). The purpose of the meeting was to review the results of chemical effects head loss tests conducted at the Argonne National Laboratory (ANL) as described in Information Notice (IN) 2005-26, *Results of Chemical Effects Head Loss Tests in a Simulated PWR Sump Pool Environment*. The ANL test results indicate that a simulated sump pool environment containing phosphate and dissolved calcium can rapidly produce a calcium phosphate precipitate that, if transported to a fiber bed covered sump screen, produces significant head loss.

During the meeting on September 30, 2005, NEI presented industry actions to be undertaken in response to IN 2005-26. Since Arkansas Nuclear One, Unit 2 (ANO-2) utilizes tri-sodium phosphate (TSP) as a sump pool pH buffering agent and calcium-silicate for insulation, IN 2005-26 was entered into the corrective action program and evaluated for ANO-2 (CR-ANO-2-2005-2307).

Entergy has reviewed the compensatory measures taken in response to NRC Bulletin (NRCB) 2003-01, *Potential Impact of Debris Blockage on Emergency Sump Recirculation at PWRs*, in light of IN 2005-06 and concluded that no additional actions are warranted at this time. The compensatory measures taken in response to NRCB 2003-01 are for any situation creating sump screen blockage, regardless of the cause. Certain ANO-2 design features would mitigate possible effects of calcium-silicate/TSP on the sump. The sump is located outside the D-ring (the reinforced concrete cavity which surrounds one of the reactor coolant system (RCS) loops and includes the steam generator, pressurizer, reactor coolant pumps, and RCS piping); therefore, debris must be transported to the sump

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through a torturous path. ANO-2 has very low transport velocities and contains a small amount of calcium-silicate (less than 1% of the amount assumed in IN 2005-26).

As a part of the resolution of GSI-191 in response to generic letter (GL) 2004-02, *Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at PWRs*, Entergy is participating in industry testing in order to further characterize the chemical effects on sump screen head loss. As actions taken in response to GL 2004-02 are addressed, chemical effects on sump screen head loss will be resolved.

There are no new commitments contained in this submittal. Should you have any questions concerning this submittal, please contact Ms. Natalie Mosher at (479) 858-4635.

Sincerely,

Dale E. James
Manager, Licensing

DEJ/nbm

cc: Dr. Bruce S. Mallett
Regional Administrator
U. S. Nuclear Regulatory Commission
Region IV
611 Ryan Plaza Drive, Suite 400
Arlington, TX 76011-8064

NRC Senior Resident Inspector
Arkansas Nuclear One
P.O. Box 310
London, AR 72847

U. S. Nuclear Regulatory Commission
Attn: Mr. Drew Holland
Mail Stop 0-7 D1
Washington, DC 20555-0001