CCNPP3COLA PEmails

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Sent: Friday, June 20, 2008 5:26 PM
To: John Rycyna
Cc: OWENS Martin J; SLOAN Sandra M (AREVA NP INC); Close, Scott; Murphy, David (Bechtel); Brown, Maureen E; Dempsey, Mary E; Gilbert, David M; Johansen, Bonnie L; Lundberg, Lisa; Mathey, Chris; Fleming, Carey W.; Vidil, Lori A; Wallace, Michael J; West, Jean-Pierre; sgray@dnr.state.md.us; Callahan, Joellen; Colbert, Christopher J; Cook, Rodney; Day, Stanley; Hughes, Shawn; McGough, Michael; Mihalcik, Joseph; Poche, Robert; Price, John (UniStar); Turnage, Joe; Wrobel, George; Repka, Dave; Smith, Tyson
Subject: UN#08-021_Ground Water Dewatering Plan Question_062008
Attachments: UN#08-021_Dewatering Plan Question_062008.pdf

Attached is the subject correspondence dated June 20, 2008.

Barbie Perdue
UniStar Nuclear Energy
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Recipients Received:

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UniStar
NUCLEAR ENERGY

10 CFR 50.4

June 20, 2008

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

UN#08-021

Subject: UniStar Nuclear Energy, NRC Docket No. 52-016
Submittal of Supplemental Information for the
Calvert Cliffs Nuclear Power Plant, Unit 3
Combined License Application, Detailed Ground Water Dewatering Plan

Reference: Letter from John Rycyna (U.S. NRC) to George Vanderheyden (UniStar Nuclear Energy), "Acceptance Review for Combined License Applications for Calvert Cliffs Nuclear Power Plant, Unit 3," dated June 3, 2008.

In a letter dated June 3, 2008, the U.S. Nuclear Regulatory Commission (U.S. NRC) identified several schedule issues associated with the Calvert Cliffs Nuclear Power Plant (CCNPP) Unit 3 Combined Operating License (COL) Application. The letter identified that UniStar Nuclear Energy would submit a detailed ground water dewatering plan by June 20, 2008. The enclosure provides the detailed ground water plan. It will be incorporated into Revision 3 of the CCNPP Unit 3 COL Application.

If you have any questions or need additional information, contact John Price at 410.470.5531.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on June 20, 2008

Jean-Pierre West

Enclosure: Response to NRC Question Regarding Detailed Ground Water Dewatering Plan

cc: U.S. NRC Region 1
U.S. NRC Resident Inspector, CCNPP, Units 1 and 2
U.S. NRC Project Manager, U.S. EPR Combined License Application
U.S. NRC Project Manager, U.S. EPR Design Certification Application

ENCLOSURE

RESPONSE TO NRC QUESTION REGARDING DETAILED GROUND WATER DEWATERING PLAN

NRC Question Regarding Seismic Catalog

The applicant should provide a detailed dewatering plan.

UniStar Nuclear Energy Response

Section 2.5.4.6.2 of the Calvert Cliffs Nuclear Power Plant (CCNPP) Unit 3 Final Safety Analysis Report (FSAR) will be revised to state the following.

Temporary dewatering is required for ground water management during construction. Analysis of the ground water conditions at the site is presented in Section 2.4.12. On the basis of defined ground water conditions, ground water control/construction dewatering is needed at the site during excavations for CCNPP Unit 3 foundations. Ground water associated with seepage in the shallow (upper) zones (Surficial aquifer) is controlled through site grading and/or a system of drains and ditches, as previously discussed. This may also consist of more positive control, including a series of sumps and pumps strategically located in the excavation area to effectively collect and discharge the seepage that enters the excavation, in addition to ditches, drains, or other conveyance systems.

The drainage ditches are installed below grade level, at the peripheries, as the excavation progresses. These ditches are oriented in approximately north-south and east-west directions, in concert with the final excavation orientation, connected to sumps at strategic locations, e.g., at excavation corners or more frequently as warranted during construction. Once at the final subgrade, stone-filled drains are installed in the excavation interior for control of upward seepage, if any. These drains are in turn connected to exterior ditches and sumps. Each sump is equipped with a pump of sufficient capacity for efficient ground water removal. Based on the estimated lateral ground water flow rate of 44 to 64 gpm (167 to 242 lpm) derived in Section 2.4.12.5, a total of four pumps with a capacity of 100 gpm (379 lpm) each are used for the dewatering.

Temporary dewatering is required for the excavation of the Ultimate Heat Sink Makeup Water Intake Structure. A sheetpile cofferdam is designed to aid with the dewatering needs by extending it into low permeability soils; however, some level of ground water control is still required to maintain a relatively "dry" excavation during construction. As a minimum, sumps are installed to control and/or lower the ground water level inside the cofferdam. Given the limited excavation size, one 100 gpm (379 lpm) pump is sufficient for control of ground water in this excavation.

Additional auxiliary pumps are available for removal of water from excavations during periods of unexpected storm events. The ground water level in excavations shall be maintained a minimum of 3 ft (0.9 m) below the final excavation level.