

From: <Joseph_Hegner@dom.com>
To: <mls3@nrc.gov>
Date: Wed, Jul 9, 2003 4:19 PM
Subject: Response to NRC Inquiry during recent North Anna ESP Site Visit

Mike,

During the June 26, 2003 environmental site visit by Andy Kugler and three PNNL contractors, Lance Vail of PNNL inquired about dewatering the Unit 3/4 site. We weren't in a position to respond at the time, so I promised Andy we would get back with a response. Here it is.

Question 1

Will a temporary dewatering system be necessary to lower groundwater levels during construction of the reactor building foundation?

Response to Question 1

Temporary dewatering of the reactor building excavation for new Units 3 and 4 is likely to be necessary during foundation construction. However, due to the generally low permeability of the soil and rock strata at the site, this dewatering is expected to consist of a relatively simple system of collection ditches and sump pumping. Portions of the existing foundation area for abandoned Units 3 and 4 will be used for any new units; dewatering in this area may be more significant at first in order to remove ground water that has collected in the backfill in this area. However, once this "bathtub" effect has been removed, ground water inflow to the excavation is expected to be relatively limited and removed by sump pumps placed at appropriate locations within the excavation. During excavation of the reactor building foundation area for abandoned Units 3 and 4, relief drains were installed in the excavation walls to prevent the buildup of hydrostatic pressure behind the rock faces. Water from these drains, which was reported to be relatively minor except in occasional localized areas, was directed to sumps for removal from the excavation. A similar drainage/dewatering system will likely be used in the reactor building excavations for any new units at the North Anna site.

Dewatering could also be expected for construction activities associated with the lake intake structure and possibly for installation of circulating water discharge piping from the new units to the discharge canal.

Any dewatering operations would be reviewed prior to implementation in accordance with existing station procedures to ensure no adverse impacts on existing Units 1 and 2.

Question 2

Will a permanent dewatering system be necessary?

Response to Question 2

No permanent dewatering system is anticipated to be necessary for additional units at the North Anna site.

Hopefully, this is responsive to Lance's concern. If you need additional information, please let me know.

Joe H.

CC: <Tony_Banks@dom.com>, "Hickerson, Wayne" <wthicker@bechtel.com>

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