

January 22, 2003

Mr. John L. Skolds, President
Exelon Nuclear
Exelon Generation Company, LLC
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: LICENSED THERMAL POWER - BYRON STATION, UNIT 1

Dear Mr. Skolds:

As a result of the Nuclear Regulatory Commission (NRC) staff review of technical information regarding the operation of Byron Station, Unit 1 (Byron 1), we are concerned that Byron 1 may be operating above its licensed thermal power level.

This concern is based, in part, on the following information:

Following installation of an ultrasonic feedwater flow instrument at Byron 1, differences appeared in the power levels between Byron 1 and Braidwood 1, its sister unit. This suggests differences in accuracy in the ultrasonic flowmeters. Presently, Byron 1 is producing more electrical power at approximately 98 percent power, than Braidwood 1 is producing at 100 percent power.

Several plant parameters reportedly have values that are consistent with a higher thermal power level than that indicated by the plant calorimetrics based upon the feedwater flow measurements. It has been postulated that these discrepancies may be explained as allowable and expected errors in each parameter within the associated uncertainty bands. It seems unlikely that such errors would all exhibit the same consistent bias: errors due to anticipated instrument measurement uncertainties would be expected to be positive or negative at random, and therefore to produce roughly as many low readings as high ones. The consistently positive direction of the reported errors suggests a consistent bias influenced by some common cause, and suggests that the power level may indeed be higher than the calorimetrics would indicate.

There appears to be evidence of higher fuel burn rate at Byron 1 compared to Braidwood 1.

Following approval of a 5 percent power uprate for the units at Byron and Braidwood, Byron 1 has not been able to fully utilize the power increase due to limitations in the high-pressure turbine or steam control valve capacities. Braidwood 1 has not experienced such limitations.

Mr. J. Skolds

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As a consequence of the above observations, we request that Exelon Generation Company, LLC, expeditiously provide the NRC with assurance that Byron 1 is operating within its licensed thermal power limit or take the necessary and appropriate actions to assure that the unit is within the limit.

Please contact me if there are specific questions.

Sincerely,

/RA by TMarsh for/

John A. Zwolinski, Director
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. STN 50-454

cc w/encl: See next page

Mr. J. Skolds

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Byron Station Units 1 and 2

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