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EBS Ltr.#582-74

Dresden Nuclear Power Station  
R. R. #1  
Morris, Illinois 60450  
August 14, 1974

Mr. James G. Keppler, Regional Director  
Directorate of Regulatory Operations-Region III  
U. S. Atomic Energy Commission  
799 Roosevelt Road  
Glen Ellyn, Illinois 60137



SUBJECT: REPORT OF ABNORMAL OCCURRENCE PER SECTION 6.6.B OF THE TECHNICAL SPECIFICATIONS.  
TORUS WATER LEVEL IN EXCESS OF TECHNICAL SPECIFICATION LIMITS.

References: 1) Regulatory Guide 1.16 Rev.1 Appendix A

- 2) Notification of Region III of AEC Regulatory Operations  
Telephone: Mr. F. Maura, 1615 hours on August 6, 1974  
Telegram: Mr. J. Keppler, 0820 hours on August 7, 1974

3) Drawing Number M-25

Report Number: 50-237/1974-38

Report Date: August 14, 1974

Occurrence Date: August 5, 1974

Facility: Dresden Nuclear Power Station, Morris, Illinois

#### IDENTIFICATION OF OCCURRENCE

Dresden Unit 2 torus level was found to be at -6.5 inches, which is one inch below the -5.5 inch limit as described in the Technical Specifications.

#### CONDITIONS PRIOR TO OCCURRENCE

Unit 2 was operating at a steady load of 636 MWe. No testing or surveillance was in progress.

#### DESCRIPTION OF OCCURRENCE

At 1337 hours on August 5, 1974 a "torus hi/lo level" alarm was sounded on Dresden Unit 2. The operator of Unit 2 read the torus level indicator in the control room and estimated the level at -2.2 inches. The

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indicator has a range of 50 inches, with the smallest division being one inch. The alarm is set to sound at approximately -2 inches. The characteristics of the alarm contacts are such that an exact number cannot be obtained. The shift supervisor then requested that an instrument mechanic verify actual torus level by connecting transparent tubing to the torus level sensing lines. The instrument mechanic failed to reference the top of the tubing to the torus pressure, and therefore received an erroneous level reading. The reading of +1.6 inches was reported to the shift engineer, and a decision was made to begin pumping down the torus. At 0255 hours on August 6, 1974, the torus had been pumped down to a level of -4 inches, as erroneously indicated by using the transparent tubing vented to atmosphere. At approximately 1300 hours on August 6, 1974, the error was discovered by an instrument supervisor. Work was immediately initiated to properly install the transparent tubing. The task was completed at 1702 hours on August 6, 1974 and the actual level of -6.5 inches was observed. The shift immediately began to add water to the torus and level was again within specifications (-2 inch) at 2000 hours on August 6, 1974.

#### DESIGNATION OF APPARENT CAUSE OF OCCURRENCE

##### Operator Error

The cause of this error was failure of instrument mechanic to properly measure the torus water level. All instruments functioned properly until improperly adjusted to match erroneous torus level reading.

#### ANALYSIS OF OCCURRENCE

The level of the Unit 2 torus was below the Technical Specification by only one inch, for a period of approximately twelve hours. The torus diameter is 30 feet, and the normal level is between 1.5 and 5.5 inches below the center line. Therefore, the loss of one inch in 14 feet 6 inches is a small percentage. Adequate water was available in storage tanks at all times and could have been added to the torus if needed. Therefore, it is concluded that the public and plant safety was in no way compromised during this abnormal occurrence.

#### CORRECTIVE ACTION

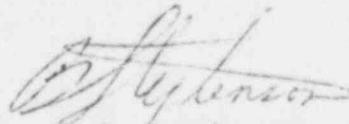
Prior to this occurrence, a modification had been initiated and approved to install sight glasses for verifying torus level on both Dresden Unit 2 and 3. The modification will be installed as soon as the material is received from purchasing. The procedure which outlines the action to be taken when a torus hi/lo level annunciator is sounded is approved and will be followed upon completion of the sight glass modification. In addition, another modification has been proposed to provide another alarm circuit independent of the present level transmitter. This would prevent a calibration error from invalidating all level and alarm indication available.

August 14, 1974

FAILURE DATA

This occurrence was not a result of equipment failure, but one of operator error and lack of redundant instrumentation.

Sincerely,

A handwritten signature in cursive script, appearing to read "B. B. Stephenson".

B. B. Stephenson  
Superintendent

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