



Commonwealth Edison
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April 23, 1991

Dr. Thomas E. Murley, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Attn: Document Control Desk

Subject: Byron Station Units 1 and 2
Information regarding an Application for Amendment
To Facility Operating Licenses NPF-37/66
Appendix A, Technical Specifications
TAC# 79080/79081
NRC Docket Nos. 50-454/455

- References: a) April 12, 1991 Teleconference regarding an operability assessment and design basis review for the Byron Station Essential Service Water Cooling Towers (Ultimate Heat Sink)
- b) April 23, 1991 letter from T. Schuster to Dr. T. Murley requesting withdrawal of the August 16, 1990 Application for Amendment.

Dear Dr. Murley:

This letter documents the teleconference of Reference (a) which occurred between Messrs T. Schuster and J. Langan of Commonwealth Edison Company (CECo) and Mr. A. Hsia of your staff, Project Manager for Byron Station. The purpose of the teleconference was to provide a brief historical review of events leading up to an operability assessment and Design Basis Reconstitution effort for the Byron Station Ultimate Heat Sink (UHS) also known as the Essential Service Water (SX) Cooling Towers.

Another purpose of the teleconference was to convey a summary of an interim operability assessment being performed for the UHS and a schedule of future assessments regarding the same. By the separate letter of Reference (b) CECo is requesting withdrawal of the proposed "Application for Amendment to Facility Operating Licenses" for the UHS until CECo has completed its Design Basis Reconstitution effort for the UHS and related inputs.

The following chronology of events was communicated during the teleconference of April 12, 1991. An internal CECo meeting was held on March 11, 1991 to prepare for a presentation of a pending UHS Amendment Application to NRR the following Monday, March 18, 1991. During the review of March 11 it appeared there may be two assumptions that were used in the calculations of the SX Cooling Tower heat removal capability that did not reflect actual conditions in certain

accident scenarios. Because a number of questions remained unanswered regarding the UHS design bases and related analyses, it was also the group's perception that enough time did not remain to adequately prepare for an NRC presentation by the following Monday. As a result CECo requested a delay of the March 18, 1991 presentation the following day and the CECo Nuclear Engineering Department (NED) began drafting an action plan to re-examine the design bases of the UHS and all assumptions of calculations supporting its heat removal capability. The next CECo meeting took place at Byron Station on March 27, 1991 where the draft action plan prepared by NED was discussed. One of the key points of discussion during this meeting was the following. If there were inaccurate assumptions, the effect on the calculations would be bounded by the then present seasonal weather conditions, i.e. the significantly lower wet bulb temperature conditions of spring relative to the assumed 78°F worst case calculation assumption. The other major point of discussion was to identify the individual tasks of the NED action plan which might be used as a more definitive operability assessment. The meeting concluded that a detailed design bases and action plan review for operability should occur on April 4, 1991, based on personnel availability, so that a schedule and cost estimate may be developed. The conclusion of the April 4th meeting was that execution of the complete operability action plan would take until October 1, 1991 and require significant expenditure.

On April 12, 1991 a three step UHS Operability Action Plan was decided upon to ensure safe and conservative operation of the SX cooling towers for the spring and summer of 1991 while the design bases reconstitution effort and final operability assessment were underway. Two interim operability assessments were to be performed using the NED operability determination procedure ENC-QE-40.1.

The first ENC-QE-40.1 assessment which was being processed by NED on April 12th addressed the two known non-conservative assumptions in the original analysis. The first assumption was that the flow generated by two Essential Service Water Pumps running on a given unit was 48,000 gpm. An assumption of 33,000 gpm would be a more accurate estimate. The second assumption was that the heat input from the non-LOCA unit's heat loads was not 24 million-BTU/hour but rather 75 million BTU/hour. Although this new value was triple the old one, it was a relatively small increase in heat load when compared to the peak heat inputs of the LOCA/non-LOCA units of approximately 580 million - BTU/hour. The primary argument for this first operability assessment is that the resultant increase in peak SX Cooling Tower Basin temperatures is no more than 2°F and that the current and near term wet bulb temperatures are significantly lower than the design basis input value of 78°F. The resultant basin temperatures under LOCA conditions are expected to be 8-10°F below the design maximum value of 98°F, due to the lower wet bulb temperatures experienced in April and May.

A second interim operability assessment will be performed using ENC-QE-40.1, by June 1, 1991. This assessment will include a reperformance of the original analyses calculations using all available assumptions that have been validated by the date of the calculation. This assessment will provide a basis for summer operation of the cooling towers. Engineering will issue further guidance or administrative restrictions as necessary as a part of the assessment to assure conservative operation of the SX system during the time of year which presents the greatest challenge to its heat removal capability. The period of applicability of this assessment will be from June 1 through September 30th or until the final operability assessment has been completed.

April 23, 1991

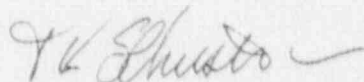
The final operability assessment, as stated earlier, will be completed by October 1, 1991. It involves a complete reconstitution of the inputs, assumptions and applicable design bases for the UHS. Based on the existence of the two known non-conservative assumptions in the original UHS analyses CECo elected to perform a comprehensive design bases and operability review. The results of this final assessment will determine long term administrative requirements to be imposed on the system and will provide the bases for a resubmittal of the amendment being withdrawn in the letter of Reference (b). The UHS is currently under administrative controls imposed to limit operation of the basins below an initial temperature of 88°F and specifies the minimum number of operable fans as six, at all times. CECo will periodically provide verbal updates on the progress of our efforts to NRR and the Senior Resident Inspector.

Commonwealth Edison is notifying the State of Illinois of this information relative to an application for amendment by transmitting a copy of this letter to the designated State Official.

To the best of my knowledge and belief the statements contained herein are true and correct. In some respects, these statements are not based on my personal knowledge but upon information received from other Commonwealth Edison and contractor employees. Such information has been reviewed in accordance with Company practice and I believe it to be reliable.

Please direct any questions you may have concerning this matter to this office.

Respectfully,



T.K. Schuster
Nuclear Licensing Administrator

cc: W. Kropp - Byron
A. Hsia - NRR
W. Shafer - RIII
Office of Nuclear Facility Safety - IDNS