

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In The Matter of )  
COMMONWEALTH EDISON COMPANY )  
(Byron Nuclear Power Station, )  
Units 1 & 2) )

Docket No. 84 50-454-OL  
50-455-OL:08

DOCKETED  
USNRC

OFFICE OF SECRETARY  
DOCKETING & SERVICE  
BRANCH

REBUTTAL TESTIMONY OF ROBERT W. HOOKS

Q.1. Please state your full name and place of employment for the record.

A.1. Robert W. Hooks, Assistant Division Head, Structural Engineering Division, Sargent & Lundy, 55 East Monroe Street, Chicago, Illinois, 60603.

Q.2. Please describe your job responsibilities.

A.2. As an Assistant Division Head, I manage and coordinate the work performed by the Structural Engineering Division for the projects assigned to me. Currently, these include Byron and Braidwood. Personnel from the Structural Engineering Division are responsible for preparation, review and approval of nearly all structural design engineering calculations.

Q.3. Please describe your educational background and work experience.

A.3. I graduated from the Ohio State University with a B.S. in civil engineering in 1971. I have thirteen years of experience in structural engineering and design of fossil and nuclear power plants. I am a Registered Structural Engineer in Illinois. I am a member of the American Concrete Institute. I began my career as a Structural Engineer at Sargent & Lundy in 1971. I worked on several fossil projects and on the Clinton Nuclear Station. In 1973, I was promoted to Senior Structural Engineer and continued to work on Clinton, where I was responsible for design of several of the structures. In 1977, I was promoted to Supervising Design Engineer. In that position I was responsible for the structural design activities for Carroll County and then for Marble Hill. In 1982, I was promoted to my current position and became responsible for Byron, Braidwood, and Marble Hill.

Q.4. Are you familiar with the Byron Reinspection Program?

A.4. Yes. I directed the preparation of some of the engineering calculations for the evaluation of discrepancies.

Q.5. Were you involved in the preparation of the report?

A.5. Yes, I provided input to the final report.

Q.6. What is the purpose of your rebuttal testimony?

A.6. My rebuttal testimony addresses the validity of the information contained in Attachment 7 of Mr. Stokes' testimony.

Q.7. Mr. Stokes, based upon Attachment 7 to his testimony, suggests that Sargent & Lundy may have used a design assumption of  $R=2T$  which may not be valid. Would you describe Attachment 7 and the applicability of that document to the Byron plant?

A.7. Attachment 7 is a series of pages extracted from a voided section of calculation book No. 12.2.94BR, "Braidwood Non-Conformance Reports". The information contained in Attachment 7 is neither applicable to Byron nor Braidwood.

Q.8. Can you explain why not?

A.8. Prior to the start of weld discrepancy evaluations for the work covered by this calculation book, one of the engineers involved began preparation of the design control summary for this work. In the course of his preparation, he prepared several pages of instructions and methods for weld discrepancy evaluation and made copies of several pages of a presentation concerning welding which were presented at an internal Sargent & Lundy technical meeting. These pages included Gayley-stamped pages 39 to 41 concerning flare-bevel groove welding. Some of the instructions and methods

for weld discrepancy evaluations that were prepared by the engineer were approved and included in the operative sections of the Calculation Book No. 12.2.94BR. The remaining pages, including all those in Attachment 7, were not approved for use. These were voided and placed in the "Void" section of the calculation book.

Q.8. What is the genesis of the page in Attachment 7 entitled "Flare Bevel Groove Welds"?

A.8. That page is one of several visual aids prepared by me in preparation for a technical information meeting for the structural engineering supervisors. At that meeting, I discussed the subject of flare-bevel groove welds and tube steel radii. The statements on that page reflect preliminary information concerning tube steel radius measurements that I had received from the Marble Hill site. As I indicated in A.8., this information was gathered by one of the engineers for possible use in connection with the evaluation contemplated in connection with the work on Braidwood. However, it was discarded because effective throat size was specified on the drawings.

Q.9. Was the voided flare-bevel groove weld information in Attachment 7 included in any calculation book provided to Intervenors during discovery other than No. 12.2.94BR?

A.9. No. It was only included in the voided section of Calculation Book No. 12.2.94BR. I am certain of this

statement because it ordinarily would have been discarded rather than maintained in the void section of the calculation book. Moreover, I checked this matter with my engineers and they assured me that this information was not included in any calculation book involving Byron.