

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of

PENNSYLVANIA POWER & LIGHT COMPANY
AND
ALLEGHENY ELECTRIC COOPERATIVE INC.

(Susquehanna Steam Electric Station,
Units 1 and 2)

Docket Nos. 50-387
50-388

AFFIDAVIT OF HOWARD B. HOLZ

I, Howard B. Holz, being duly sworn, dispose and state:

Q: By whom are you employed, and describe the work you perform?

A: I am employed by the Auxiliary Systems Branch, Division of Systems Integration, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission. A copy of my professional qualifications is attached to this affidavit.

Q: Have you read "Applicants' Motion for Summary Disposition of Contention 16 (Cooling Tower Discharge)", filed October 27, 1980, and the documents attached thereto, including the affidavit of Walter J. Rhoades?

A: Yes.

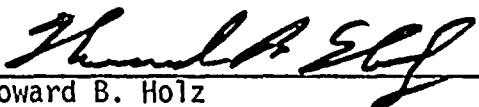
Q: Would you describe the scope of the subject matter addressed in your affidavit?

A: I have been asked to identify the sources of water for the cooling towers at the Susquehanna Steam Electric Station.

Q: What are those sources?

A: The sources of water from the cooling towers are (1) the return flow from the circulating water (condenser), (2) the return flow from the service water system, and (3) the make-up water to the tower itself. During normal plant operating conditions the first two sources of water are protected by either physical barriers or operating pressures which exceed the pressure(s) in the system(s) being cooled. The third source of water is from the Susquehanna River. Consequently, these sources of water are non-radioactive and there is no radioactivity released from the cooling towers in normal operation.

I hereby certify that the above statements are true and correct to the best of my knowledge and belief.


Howard B. Holz

Subscribed and sworn to before me
this 4th day of December, 1980


Notary Public

My Commission expires: July 1, 1982

HOWARD B. HOLZ

Senior Reviewer - Auxiliary Systems Branch
Division of Systems Integration
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission

Education

Formal

University of Southern California, B.E.M.E. (1947)

Continuing Education

Applied Differential Equations
Process Heat Transfer
Working Statistics
G.E. Simulator Training
CE Systems 80 Course 1
Business Economics
Industrial Supervision
Contemporary Moral Issues
M.I.T. Reactor Safety Seminar

Registration

Mechanical and Nuclear Engineer, State of California

Work Experience

March, 1980 - Present

Senior Reviewer, Auxiliary Systems Branch. Review, evaluate, and prepare sections of Safety Evaluation Report when applicant has complied with NRC regulations within area of Auxiliary Systems Branch responsibility.

1971 - 1980

Senior Project Manager, Fast Reactor Projects Branch, Directorate of Licensing. Safety Review and analysis of fast reactor applications. Current activities primarily devoted to review of FFTF and establishment of base technology.

1966-1971

Supervisor, Fast Breeder Reactors Group, Process and Plant Engineering Unit, Atomics International. The Process and Plant Engineering Unit has the responsibility for plant arrangement, equipment sizing and location, process and instrument diagram

preparation with supporting analysis, plant energy balance preparation and calculation. This unit has the system engineering responsibility and prepares trade studies to evaluate or compare alternatives and to establish requirements for systems and components. It also prepares system descriptions, specifications, and test plans for components.

1962 - 1966

Design Specialist, Atomics International. Special studies on Advanced Liquid Metal Cooled Reactors including Proposal for plants in the 200 to 300 MWe size to Electric Utilities.

Project Engineer on the AI Preliminary Design and Cost Study for FARAT Fast Reactor Test Facility under sub-contract to Argonne National Laboratories FARAT Program, later cancelled.

1960 - 1962

Resident Engineer, Atomics International. Hallam, Nebraska - Resident Field Engineer responsible for technical approval of field changes relating to Civil Work - structural and biological shielding. Responsibility also included Mechanical Work relating to reactor coolant system piping vessels and equipment.

1955 - 1962

Responsible Engineer, Atomics International. Process, piping, and equipment design for SRE and Hallam power plants. Responsible for plant arrangement and piping design. Design of Cold Traps, Freeze Traps, plugging indicators. Responsible for engineering liaison with A&E - Bechtel.

1954 - 1955

Mechanical Engineer, Ralph M. Parsons, Los Angeles. Lead mechanical design engineer for Petrochemical Plant Design and Layout of Sulphur recovery plants in Canada and Texas.

1948 - 1954

Mechanical Engineer, Bechtel Corporation, Los Angeles, Industrial Division 1952 to 1954, Power Division 1948 to 1952. Industrial Division work involved petrochemical design work on refineries and packaging plants. Power Division work related to design of Big Creek No. 4 Hydro-plant. Tunnel, intake gate, and penstock design.

1950 - 1952

Mechanical Designer, Fluor Corporation, Los Angeles.
Fossil power plant design for American Arabian Oil Co., 80 MW electric. Plant to drive compressors for oil well injection. High pressure piping design for compressor plant (3,000 psi).

1946 to 1949

Mechanical Engineer, Stone & Webster Corporation, Los Angeles. Mechanical Engineer responsible for determining changes to machinery and equipment for frequency change project of S. California Edison in changing from 50 to 60 cycles.

Memberships

American Society of Mechanical Engineers
American Nuclear Society

Patents

Toroidal Heat Exchanger

Publications

NAA-SR-MEMO-11753 SCTI Evaluation Study
AI-8040 FARET - Fast Reactor Test Facility Preliminary Design and Cost Study
NAA-SR-12060 1000 MWe FBR Parametric Study of Secondary Sodium - Steam System

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CERTIFICATE OF SERVICE

I hereby certify that copies of "NRC STAFF ANSWER IN SUPPORT OF APPLICANTS' MOTION FOR SUMMARY DISPOSITION OF CONTENTION 16 (COOLING TOWER DISCHARGE)" dated December 5, 1980, in the above-captioned proceeding, have been served on the following by deposit in the United States mail, first class, or, as indicated by an asterisk through deposit in the Nuclear Regulatory Commission's internal mail system, this 5th day of December, 1980:

*Charles Bechhoefer, Esq., Chairman
Atomic Safety & Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

*Mr. Glenn O. Bright, Member
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The Citizens Against Nuclear
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P. O. Box 377
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Berwick, Pennsylvania 18503

*Richard S. Salzman, Esq., Chairman
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*Mr. Thomas S. Moore, Member
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*Atomic Safety & Licensing Board Panel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

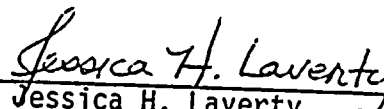
*Atomic Safety & Licensing Appeal Board
Panel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

*Secretary
U.S. Nuclear Regulatory Commission
ATTN: Chief, Docketing & Service Branch
Washington, D.C. 20555

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Wilkes-Barre, PA 18703

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P. O. Box 52
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Jessica H. Lavery
Counsel for NRC Staff

