

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In The Matter of )  
 )  
 )  
COMMONWEALTH EDISON COMPANY ) Docket Nos. 50-454 0L  
 ) 50-455 0L  
 )  
(Byron Nuclear Power Station, )  
Units 1 & 2) )

AFFIDAVIT OF TOM TRAMM

The attached questions and answers constitute my testimony in the above-captioned proceeding. The testimony is true and accurate to the best of my knowledge, information and belief.

*Tom Tramm*

\_\_\_\_\_  
Tom Tramm

Subscribed and sworn to  
before me this 7<sup>th</sup> day  
of June, 1982.

*Thomas J. Smith*  
\_\_\_\_\_  
Notary Public

TESTIMONY OF TOM TRAMM

ON DAARE/SAFE CONTENTION 7

Q. Please state your name, present occupation and present position.

A. My name is Tom Tramm, I am a Nuclear Licensing Administrator for Commonwealth Edison.

Q. Briefly state your educational and professional background.

A. I received a Bachelors degree in Engineering Science from Purdue University in 1968 and a Masters degree in Nuclear Engineering from Northwestern University in 1973. Since 1968 I have been employed by Commonwealth Edison in various capacities relating to the design and operation of its generating stations.

From 1968 to 1972 I performed reactor physics calculations and economic analyses required for re-loading of the Dresden 1 core. From 1972 to 1973 I was a staff assistant to the President of Commonwealth Edison and was involved in the activities of obtaining and maintaining permits and licenses for the Company's nuclear generating stations. From 1973 to 1975 I worked at Zion Station as an engineer responsible for trouble-shooting, special test supervision, and modification of the primary coolant systems and the associated safety equipment. From 1975 to 1976 I was assigned

to the Fuel Department where I coordinated the purchase of uranium, conversion services, separative work, and fabrication of fuel for Commonwealth Edison's reactors. In 1976 I was assigned to the Station Nuclear Engineering Department to work on modifications and engineering studies for Zion Station. From 1977 to 1980 I was the head of the group of engineers responsible for that work. In 1980 I became the Nuclear Licensing Administrator for Commonwealth Edison's pressurized water reactors.

- Q. Describe your duties and responsibilities in connection with the Byron/Braidwood project.
- A. I am responsible for coordinating communications between the Company and the NRC regarding the licensing of Byron and Braidwood Stations. I provide guidance to Company personnel regarding the implementation of NRC requirements. I respond on behalf of the Company to all NRC requests regarding these plants. When new rules are issued by the NRC I assure that they are reviewed by the appropriate Company departments and that all necessary steps are taken to assure compliance.
- Q. To which contention is this testimony addressed?
- A. DAARE/SAFE Contention 7. The text of the contention is as follows:

The Intervenor contends that the FSAR and Applicant offer insufficient safeguards against hydrogen explosions, such as are alleged to have occurred at Three Mile Island Reactor 2. There

is no evidence that the recombiners for taking up hydrogen would be adequate if circumstances similar to those at TMI 2 should occur at Byron.

Q. Please describe the Byron Station containments.

A. There are two Westinghouse pressurized water reactors at Byron. Each reactor is located in a separate containment structure. These structures are designed to contain the bulk of the fission products which would be released if the fuel cladding and the primary coolant system were both breached. These are characterized as large dry containments because they do not rely on water or ice to immediately absorb energy released in a LOCA or secondary side pipe break.

Q. Are you aware that the NRC has proposed new rules on hydrogen control which would apply to Byron?

A. Yes. On December 23, 1981 the NRC published a proposed interim rule which would require analysis of reactors such as Byron to demonstrate that they could "withstand an accident with the concomitant generation of large amounts of hydrogen such as the type which occurred at ... TMI-2."

Q. Will Edison comply with new regulatory requirements pertaining to hydrogen control/generation matters applicable to the Byron Station.

A. Yes, that is Edison's present intent.

DAARE/SAFE CONTENTIONS 8 AND 9(e)

CONTENTION 8

Intervenors contend that Applicant does not meet the requirements of 10 C.F.R. Part 51.21 and 51.20(a), (1 and 2); (b), (c) because no consideration is given the environmental impact of primary coolant system chemical decontamination and steam generator chemical cleaning which the Department of Energy has determined will occur twice during the lifetime of a nuclear power plant. Recent data raise the possibility of serious adverse consequences of the decontamination process. Chelating agents, intended for the removal of highly radioactive corrosion products adherent to the coolant system surfaces, sharply increase the rate of migration of these same radioactive products through the environment and into the food chain. No analysis or discussion is given possible biological consequences to the accidental spillage during decontamination, waste storage, transportation or disposal (on or off-site).

CONTENTION 9(e)

Intervenors contend that there are many unresolved safety problems with clear health and safety implications and which are demonstrably applicable to the Byron Station design, but are not dealt with adequately in the FSAR. These issues include but are not limited to:

- e. The process of chemical decontamination may exacerbate safety problems through a degradation of the integrity of the primary coolant system boundary. Such degradation may occur during the process of decontamination or during subsequent operation of the reactor. Also, chemical solution decontamination may add to the deposition of radioactive corrosive products, according to an NRC official. Decontamination is not discussed in Applicant's FSAR or EROL.

MATERIAL FACTS AS TO WHICH THERE IS NO  
GENUINE ISSUE TO BE HEARD

1. No particular method of decontamination has been proposed for the Byron Station. (Blomgren Affidavit, p. 5.)
2. No significant liquid or gaseous radioactive effluents are expected to be released to the environment in the event of chemical decontamination of the Byron Station. (Blomgren Affidavit, p. 4-5.)
3. The amount of solid low level radioactive wastes generated during chemical decontamination would be small compared to the amount of solid waste generated during routine operation of the Byron Station. (Blomgren Affidavit, p. 10.)
4. Reported instances of chelating agents increasing the rate at which radioactive wastes have migrated from waste disposal sites involved radioactive wastes containing chelants disposed of as a liquid. (Blomgren Affidavit, p. 6.)
5. Radioactive wastes containing chelants can be solidified in steel drums with polymers and buried at an arid site to eliminate the potential problem of rapid migration through ground water. (Blomgren Affidavit, p. 7-8.)
6. Chelating agents themselves pose no threat to the environment. (Blomgren Affidavit, p. 9.)
7. The presence of chelants in low level wastes pose no special problem during chemical cleaning or the processing and shipping of wastes for disposal. (Blomgren

Affidavit, p. 9-11.)

8. The total impacts associated with chemical decontamination would be a very small fraction of radiological impact of routine operation of the Byron Station. (Blomgren Affidavit, p. 5.)
9. There are currently available methods of chemical decontamination which would effectively clean the Byron system without adversely affecting the integrity of the system. (Blomgren Affidavit, p. 13.)
10. Prior to any chemical decontamination of the Byron primary coolant system, testing would be performed to verify that the method selected would be effective to clean the system and would not be detrimental to the integrity of the system. (Blomgren Affidavit, p. 13.)
11. The act of decontamination would not increase the deposition of radioactive corrosion products in the Byron Station primary coolant system. (Blomgren Affidavit, p. 14-15.)

#### DISCUSSION

In Contentions 8 and 9(e) DAARE and SAFE purport to raise issues regarding the environmental effects of chemical decontamination of the Byron Station primary coolant system, and Applicant's ability to perform such chemical decontamination without degrading the integrity of the system. These Contentions are related and the material facts necessary to their disposition overlap. Consequently, we address both Contentions in this discussion.

The Byron primary coolant system may not even require chemical cleaning. If decontamination is required, techniques currently exist for which the total environmental impact of chemical decontamination would be a small fraction of the radiological environmental impact of routine operation of the Byron Station. According to the NRC Staff, the radiological impact of routine operation of the Byron Station itself is so small that it does not warrant detailed investigation or consideration of mitigative actions. (SER Table 6.1 and footnote 3 thereto.) DAARE and SAFE have indicated they do not intend to sponsor an expert witness on Contention 8 and therefore the insignificant environmental impacts of chemical decontamination, in the event it is ever needed at Byron, can be weighed by the Board based on the information available in the attached affidavit without any need for evidentiary hearings.

The affidavit of Mr. Blomgren also establishes that existing technology could be utilized to chemically clean the Byron primary coolant system effectively and without adversely affecting the integrity of the system. These uncontroverted facts provide reasonable assurance that if chemical cleaning is required for the Byron Station, it can be performed without adversely affecting the health and safety of the public. The above-listed and adequately supported facts are not disputed and demonstrate that Applicant is entitled as a matter of law to a favorable decision on these Contentions.