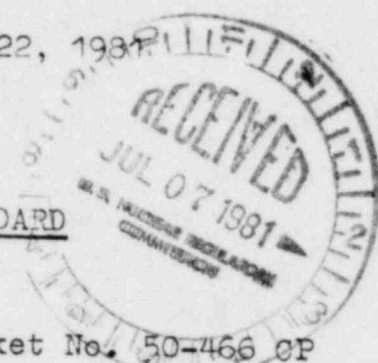


June 22, 1981



UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY & LICENSING BOARD

In the Matter of:

HOUSTON LIGHTING & POWER CO.
(Allens Creek Nuclear Generating Station,
Unit 1)

Docket No. 50-466 OP

INTERVENOR DOHERTY'S REQUEST FOR LEAVE TO FILE CONTENTION 57,
AND CONTENTION 57, Titled: VULNERABILITY OF CONTROL SYSTEMS
TO ELECTROMAGNETIC PULSES.

Request for leave to file.

John F. Doherty, J. D., of Houston, Texas, Intervenor pro se in the above construction permit proceedings now files the above motion and contention. Leave to file is requested because even though the hearings may terminate in late September, the subject matter of the contention is very significant to the operation of the plant, particularly with regard to public safety under emergency conditions as described below. In addition, the issue of electro-magnetic pulses (EMP) has not been made public until recently.

Contention 57

Intervenor contends there is vulnerability of control systems of the ACNGS to electro-magnetic pulses which should be eliminating by use of shielding or other measures planned prior to beginning of construction and installed concurrent with construction. The control systems at issue here are those with microwave diodes, integrated circuits, medium and high power transistors, and low voltage tantalum containing. Examples of reactor systems include process computers, control room instruments, computer power supplies, alarm systems, transistorized power supplies and any semiconductor devices terminating in long cable runs.

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Further Information

Electro-magnetic pulses (EMP) are induced currents or voltage surges through electrical conductors. The pulses are known to be produced by the detonation of conventional explosives, but nuclear weapons exploded at high altitude have become the chief source of concern. In 1962, a Pacific Islands atomic "test" blast effected street lighting and intrusion alarms 800 miles away at Oahu, Hawaii.

(Note: the contention does not specify a hit by an atomic bomb on the plant, but rather that a major blast above ground and several hundred miles distant may effect safe operation of the plant. The blast may be either nuclear or not.)

The Federal Emergency Management Administration (FEMA) has shielded between 150 and 200 of the 600 radio stations that make up its voluntary emergency broadcast network, (according to Science News of May 16, 1981 (vol. 219), to protect against pulses induced in the manner described above. However, because the EMP issue is related to military preparedness, it has been treated somewhat secretly. This Intervenor has found no NRC research or evaluations on plant safety with regard to EMP.

Timeliness under 10 CFR 2.714 Commission Rules of Practice

Subpart (a): Cause for this late filing is unavailable information until the Science News article cited above, which indicates the issue had been kept somewhat quiet due to military purposes. The issue of EMP has not be revealed as a concern of the NRC or vendors to the public.

Subpart (b): This Intervenor knows of no rulemaking, standard setting or regulatory guidance being developed on the effect of EMP on safe operation of nuclear plants. Hence, no other way appears to protect his interests.

Subpart (c): There is no doubt the described pulses do occur. Inclusion of such pulses, where they effect many systems of the plant will improve the record, because of the significance of the issue.

Subpart (d): No other party has raised the issue. The SER and PSAR do not mention the effects of EMP on control systems.

Subpart (e): An eleventh hour issue is obviously not welcomed, but balancing the need to hear the issue against the need to proceed with no additional hours or days of hearing results in a favorable reading for the contention. Where applicant has indicated two more years will be needed for construction of the ACNGS because there is insufficient capital to proceed on a faster construction schedule, an issue of multiple control system failure is worthy of consideration.

Therefore on consideration of the five segments of 10 CFR 2.714, the issue should be a part of the construction permit hearings, although filed lately.

Intervenor urges the Board to include this Contention in its deliberation of the Construction Permit for the Allens Creek Nuclear Generating Station.

Respectfully Submitted,

John F. Doherty J.D.
John F. Doherty, J. D.

Certificate of Service

Copies of "INTERVENOR DOHERTY'S REQUEST FOR LEAVE TO FILE CONTENTION 57, AND CONTENTION 57, Titled: VULNERABILITY OF CONTROL SYSTEMS TO ELECTROMAGNETIC PULSES." were served by First Class U. S. Postal Service, this 22nd of June, 1981 from Houston, Texas, on the parties below:

Sheldon Wolfe, Esq. ASLB
Gustave A. Linenberger, ASLB
Dr. E. Leonard Cheatum, ASLB
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Jack R. Newman, Esq. Applicant
Atomic Safety & Licensing Appeal Board
Docketing & Service Branch
The Several Intervening Parties,

at their previously filed addresses

John F. Doherty J.D.
John F. Doherty, J.D.