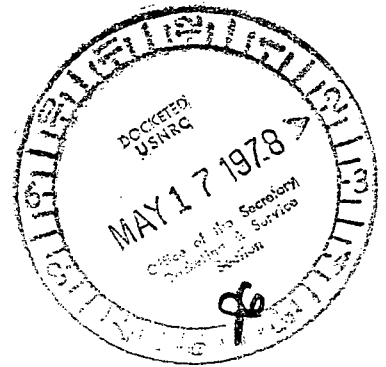


5/11/78

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board



In the Matter of

PUBLIC SERVICE ELECTRIC &
GAS COMPANY

(Salem Nuclear Generating
Station, Unit No. 1)

Docket No. 50-272
Proposed Issuance
of Amendment to
Facility Operating
License No. DPR-70.

AMENDED PETITION TO INTERVENE

INTRODUCTION

Alfred and Eleanor Coleman, ("the Colemans") who reside within ten miles of the Salem Station (See attached affidavit), filed two mailgrams on March 9, 1978 in order to assert their right to intervene in this proceeding. Two days later, they filed a full petition to intervene, captioned Petition [to] the U.S. NRC for leave to intervene [and] to hold a public hearing in the County of Salem, New Jersey, City of Salem, which set forth twenty (20) numbered contentions, which were prepared by the Coleman's without legal counsel (pro se). The Colemans also attached an affidavit, which they hoped would satisfy the requirements of 10 C.F.R. 2.714(a), together with a narrative of their actions leading up to this proceeding, including a description of their efforts to acquire legal assistance.

On April 27, 1978, the Department of the Public Advocate of the State

of New Jersey, through the Division of Public Interest Advocacy, responded to their requests by filing a Notice of Appearance, which was served upon the members of this Atomic Safety and Licensing Board ("Board"), and all prospective parties. The Notice was filed on behalf of the Colemans in order to assist in representing the public interest before the Board.¹ The same day, April 27, 1978, the Board handed down its Memorandum and Order ("Order") which in relevant part granted the petition of the Township of Lower Alloways Creek ("Township, or "LAC") to intervene, accepted the petition of the State of New Jersey as an "interested State" under 10 C.F.R. 2.715(c), and denied provisionally the petitions of the Colemans and Ruth Fisher, trustee for "The Sun People: Alternative Energy Advocates." The Board authorized them to cure the defects described in the Board's Order within ten days.

Accordingly, the Public Advocate submits this Amended Petition to Intervene.

Contentions

1. The licensee, Public Service Electric and Gas Co. ("PSE&G" or "licensee") has given inadequate consideration to protection against missiles from external sources. These include missiles generated and propelled by extreme

1. The Public Advocate is an independent, cabinet level department of the executive branch of State government of New Jersey. Stanley C. Van Ness, the duly appointed Public Advocate, has been delegated exclusive discretion to "represent the public interest" through the Division of Public Interest Advocacy, N.J.S.A. 52:27E-29. (The Public Advocate was characterized in Policy Issues Raised by Intervenor Requests for Financial Assistance in NRC Proceedings ("Boasberg Report"), NUREG-75/071 (July 18, 1975) at 148, as "the most extensive state public counsel's office in the nation.") One of the most frequent methods for exercising his discretion is by representing persons who appear pro se in federal or state proceedings and seek to raise issues of broad public concern. See, Delaney v. Penza, 151 N.J. Super 455, 376 A.2d 1334 (App. Div., 1977).

meteorological conditions, such as tornadoes and hurricanes, as well as turbine missiles from the Salem Station, and neighboring nuclear facilities. Since the licensee proposes to greatly increase the number of spent fuel assemblies, these present an enlarged target or impact area, thereby requiring additional consideration.

2. The licensee has given inadequate consideration to the occurrence of accidental criticality due to the increased density or compaction of the spent fuel assemblies. Additional consideration of criticality is required due to the following:

- A. deterioration of the neutron absorption material provided by the Boral plates located between the spent fuel bundles;
- B. deterioration of the rack structure leading to failure of the rack and consequent dislodging of spent fuel bundles;
- C. unexpected seismological events leading to the dislodging of spent fuel bundles or loss of coolant; and
- D. combinations of the above.

3. The licensee has given inadequate consideration to protection against the threat of terrorism, and industrial sabotage to the spent fuel housing, coolant system, and racks. Increasing storage at individual reactor sites, increasingly invites willful hostile action by desperate, unstable or politically motivated individuals and groups.

4. The licensee has given inadequate consideration to protection of

the storage facility (structure) against extreme meteorological events, such as tornadoes, and hurricanes, which could lead to collapse or destruction of the spent fuel housing, with attendant disruption of the coolant system, monitoring devices, and safety systems.

5. The licensee has given inadequate consideration to protection against gradual coolant leakage caused by metal or structural defects and deterioration. In particular, the licensee has not given adequate consideration to plans for coping with leakage while the spent fuel is stored. Such planning would take into account the need for effective monitoring, quality controls, access to shipping casks, for temporary holding during repairs, draining of coolant, storage at other reactors, and the like.

6. The licensee has given inadequate consideration to qualification and testing of Boral material in the environment of protracted association with spent nuclear fuel, in order to validate its continued properties for reactivity control and integrity.

7. The licensee has given inadequate consideration to storage, isolation or decontamination of spent fuel in the event of the need to continue its storage at the reactor site, beyond the duration of the operating license of the facility. In particular, the licensee has inadequately considered the longterm and cumulative effects of spent fuel storage and the prospect for ultimate disposition in the event that away from reactor ("AFR") or permanent disposition are unavailable upon termination of the license. Failure to adequately evaluate (a) the likelihood of the contingency, and (b) methods to alleviate the safety and environmental consequences, may result in an irreversible commitment

of resources at the Salem site, absent suitable assessment or planning.

8. The licensee has given inadequate consideration to the provision of periodic metallurgical testing of sample spent fuel rods in order to validate the results of visual scanning of the inventory. In particular, such testing would be necessary to validate the continued integrity of the zircalloy fuel rods for the duration of storage and until ultimate disposition.

9. The licensee has given inadequate consideration to alternatives to the proposed action. In particular, the licensee has not adequately evaluated alternatives associated with the Nuclear Regulatory Commission adopting the "no action" alternative for licensee's application, which would implicate the following:

- A. expansion of spent fuel storage capacity at reprocessing plants;
- B. licensing of independent spent fuel storage installations;
- C. storage of spent fuel from Salem No. 1 at the storage pools of other reactors;
- D. ordering the generation of spent fuel to be stopped or restricted (leading to the slow-down or termination of nuclear power production until ultimate disposition can be effectuated); and
- E. some combination of the above.

10. The licensee has not yet evaluated the effects of a postulated dropped fuel assembly accident. Failure to perform satisfactorily such an analysis will prevent this Board from making the necessary findings. (Whether this is admitted into controversy as a party's contention or made a matter of Board concern makes little difference. The Public Advocate, regardless of the form or caption for this question, urges the Board to require the production of evidence on this question in light of the need for an adequate record for decision, and the licensee's statements at pp. 36-37 of its application.)

11. The licensee has given inadequate consideration to the economic consequences of increased spent fuel storage to surrounding communities and their residents. While Lower Alloways Creek, the host township, may reap substantial economic benefits in the form of taxes, nearby communities, such as Pennsville in which the Coleman's reside, receive none of the economic benefits to offset in part the adverse consequences of proximity to nuclear installations with greatly expanded inventories of spent fuel. In particular, the licensee has not considered the economic impacts due to public apprehension which can be expected to lead to reduced business opportunities, property values, and well-being. (These can arise without regard to whether the fears of nuclear mishaps are well-founded or misguided.)

12. The licensee has given inadequate consideration to the long-term health and environmental effects of exposure to low levels of radioactive gases associated with increased spent fuel storage. In particular, the licensee has performed an insufficient analysis of the effects of exposure to increased levels of Kr-85, I-131, Tritium, and other gases not yet evaluated by the licensee.

B. The licensee has failed to give adequate consideration to the cumulative impacts of expanding spent fuel storage at Salem Nuclear Generating Station Unit 1 in association with the recently filed proposed amendment to the application for an operating license at the sister unit, Salem Unit 2. (See Amendment No. 42, Docket No. 50-311, filed April 12, 1978 which proposes modifications of spent fuel storage which the intervenor believes are similar in scope to the Salem Unit 1 application.) For example, the licensee assumes an increase in releases of Kr-85 by a factor of 4.5 -- due to the factor of 4.5 increase in spent fuel (licensee's application, at 10). A similar increase, absent exceptional controls, can be expected at Salem No. 2, resulting in a cumulative increase in Kr-85 emissions by a factor of 9 -- almost a full order of magnitude increase. (If similar spent fuel increases are postulated for the companion units, Hope Creek 1 and 2, now under construction, the cumulative increase could rise by a factor of 18, or almost two full orders of magnitude.)

WHEREFORE the Public Advocate respectfully requests the Board to admit the Colemans as intervenors and direct that evidence be taken on the above contentions.

Respectfully submitted,

STANLEY C. VAN NESS, PUBLIC ADVOCATE

By: 

R. WILLIAM POTTER
DEPUTY DIRECTOR

Date: 5-11-78

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AFFIDAVIT IN SUPPORT OF AMENDED PETITION TO INTERVENE

1. I am fully familiar with all the statements contained in the attached Amended Petition to Intervene, prepared by the Public Advocate of the State of New Jersey, as counsel, on behalf of myself and my wife, Eleanor. To the best of my knowledge, information and belief, the statements contained therein are true and accurate, submitted in good faith and not interposed for purpose of delay. Accordingly, I hereby adopt these statements as my own.

2. My wife and I, together with our three children (ages 10, 13, and 17), live at 35 'K' Drive, Pennsville, New Jersey 08070, in a one story ranch style house, which we own. Our home is located about ten miles north of the Salem Station, near the Delaware River. We have lived here for about five years, and have no present intention of moving.

3. I am employed by the DuPont Corp. of Wilmington, Delaware, as a Distributor and Customer Service Supervisor with responsibilities for the sale and distribution of DuPont paint products for international sales. I am a

graduate of Rutgers University, where I majored in economics. Also, I am a licensed real estate broker in the State of New Jersey. I engage in real estate on a part-time basis, mostly in the Salem County area.

4. Our interests, together with the interests of others similarly situated, potentially are affected by the licensee's application due to the prospect, as yet undetermined, of increased daily exposure to radiation releases from the facility, together with the risk of exposure to significantly higher levels in the event of design, construction, or operational errors in the proposed expansion. These interests also extend to our children, prospective grandchildren, together with friends and relatives who might be expected to visit with us.

5. Additionally, our interests, together with the interests of others similarly situated, potentially are affected by public recognition of hazards, real or suspected, regarding nuclear fuel storage at the Salem installation, which reasonably could be expected to affect property values and business activity within the vicinity. In this regard, nearby residents, such as ourselves, receive none of the enormous tax benefits, which accrue to residents of Lower Alloways Creek, ("LAC") the host township for Artificial Island and its enclave of nuclear facilities.

6. Finally, our interests, together with that of others similarly situated, cannot feasibly be protected in any reasonable manner, other than by our own active intervention and participation - - through the Department of the Public Advocate - - in these proceedings. The other parties to this proceeding do not have our exclusive interests, and cannot be expected to adequately represent them. For example, the State of New Jersey intervenes as a matter of

right, pursuant to 10 C.F.R. 2.715(c), which authorizes an interested State "reasonable opportunity to participate and to introduce evidence. . .[without taking] a position with respect to the issues." (emphasis added). Since we intend to raise contentions and "take a position with respect to the issues," the State's participation does not adequately substitute for our own. Similarly, the intervention by the host community, LAC, does not significantly care for our interests. LAC, as alleged in its petition to intervene and as found by the Board in its Memorandum and Order of April 27, 1978, at 3, "is charged with the preservation of the health, safety and welfare of its inhabitants." (emphasis added). As non-residents of LAC, we cannot be confident that LAC's representation will fully and adequately protect our own.

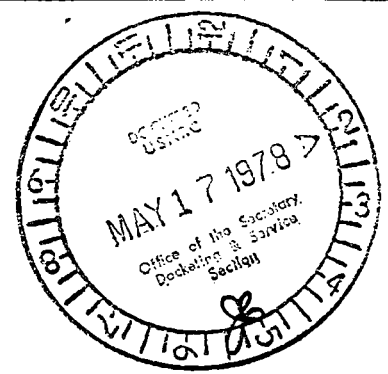
7. In conclusion, due to our close proximity to the facility, the potential hazards of normal or accidental releases of radiation to ourselves, our children, and friends, and the concurrent risk of adverse economic impacts, our health, safety, and welfare are affected by the licensee's application which is the subject of this proceeding.

Dated: _____, 1978

ALFRED G. COLEMAN

Sworn and Subscribed to before

me this _____ day of _____, 1978



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Amendment to Facility
Operating License No. DPR-70.

CERTIFICATE OF SERVICE

I hereby certify that copies of Affidavit in Support of Amended
Petition to Intervene and Amended Petition to Intervene were either
mailed or hand-delivered to persons listed on attached service list
as described therein.

R. WILLIAM POTTER
Deputy Director

Date: 5-11-78

SERVICE LIST

** Gary L. Milkollin, Esquire
Chairman, Atomic Safety and
Licensing Board
1815 Jefferson Street
Madison, Wisconsin 53711

** Barry Smith, Esquire
Office of the Executive
Legal Director
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

** Mr. Glenn O. Bright
Member, Atomic Safety and
Licensing Board Panel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Mark L. First, Esquire
Deputy Attorney General
Department of Law and
Public Safety
36 W. State Street
Trenton, New Jersey 08625

** Dr. James C. Lamb, III
Member, Atomic Safety and
Licensing Board Panel
313 Woodhaven Road
Chapel Hill, N.C. 27514

Richard Fryling, Jr., Esquire
Assistant General Solicitor
Public Service Electric
and Gas Company
80 Park Place
Newark, New Jersey 07101

Chairman, Atomic Safety and
Licensing Appeal Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Eleanor G. Coleman
Alfred C. Coleman
35 "K" Drive
Pennsville, New Jersey 08070

Chairman, Atomic Safety and
Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Office of the Secretary
Docketing and Service Section
U.S. Nuclear Regulatory
Commission
Washington, D.C. 20555

* Troy B. Conner, Jr., Esquire
Suite 1050
17 Pennsylvania Ave., N.W.
Washington, D.C. 20006

William C. Horner, Esquire
67 Market Street
Salem, New Jersey 08079

Ruth Fisher
The Sun People - Alternate Energy Advocates
South Dennis, New Jersey 08245

* A copy was hand-delivered on May 12, 1978.

** Copies were hand-delivered to the NRC headquarters on May 12, 1978. All hand-delivered copies contained the signed affidavit of Mr. Coleman. All others who received mailed copies do not contain personally signed affidavits since these were mailed on May 11, 1978 and Mr. Coleman did not personally sign the affidavit until May 12, 1978.