

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of

APPLICATION OF WESTINGHOUSE  
ELECTRICAL CORPORATION FOR A  
SPECIAL NUCLEAR MATERIAL  
LICENSE FOR THE ALABAMA  
NUCLEAR FUEL FABRICATION  
PLANT (ANNFFP) TO BE LOCATED  
NEAR PRATTVILLE, ALABAMA

DOCKET NO. 70-2909



THIRD SUPPLEMENT TO PETITION OF CATHALYNN DONELSON FOR  
LEAVE TO INTERVENE

Comes now Cathalynn Donelson and states, in response to request by the Atomic Safety and Licensing Board, that she would seek to preserve the following proposed contentions upon being granted intervenor status.

CONTENTIONS TO BE PRESERVED

Those contentions contained in the Additional Proposed Contentions of Intervenor David L. Allred which are enumerated in the Appendix.

Respectfully submitted,

*Cathalynn Donelson*

Cathalynn Donelson  
855 Park Avenue  
Montgomery, Alabama 36106

on this, the 30th day of  
January, 1981



*Add: L Tyson - Sec  
NMSS LA - 104*

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## APPENDIX

I. Title 10 C.F.R. 70.23(a)(7) provides that before commencement of construction of a fuel fabrication facility the director of Nuclear Material Safety and Safeguards must conclude that the issuance of a license is appropriate "after weighing the environmental, economic, technical and other benefits against environmental costs and considering available alternatives." Moreover, such evaluation and conclusion must be based upon "information filed" and the Environmental Impact Statement. Title 10 C.F.R. Part 51 requires Westinghouse to file an Environmental Report discussing alternatives to the proposed action. The Environmental Report filed by Westinghouse contains a section titled "Alternatives to the Proposed Action" purporting to deal with "the applicant's choice of a particular plant design and site selection." That section also claims that the site selection is supported "through discussions of alternatives considered."

A. Westinghouse has failed to provide sufficient information for the Director of Nuclear Material Safety and Safeguards to adequately weigh the environmental, economic, technical, and other benefits against environmental costs, in that:

1. (WITHDRAWN)
2. (WITHDRAWN)

3. The Environmental Report states that "the current (1979) industry fuel fabrication capacity will be exceeded by 350 MTU's (or 11 percent) by 1983. In 1984, demand for fuel fabrication capacity is exceeded by 32 percent, and this increases linearly throughout the 1980's and 1990's." Westinghouse admitted at the pre-hearing conference that the above statement and justification for the proposed facility is based on the worldwide nuclear industry. Environmental costs, however, will be primarily restricted to the United States and Prattville, Alabama, in particular. Westinghouse has failed to disclose the extent to which the proposed facility is designed to serve Westinghouse and other interests outside the United States. Westinghouse cannot use "environmental, economic, technical and other benefits" accruing on account of extra-United States activities to offset environmental costs within the United States, yet such is precisely what Westinghouse seeks to do.

4. Not only has Westinghouse improperly considered benefits accruing outside the United States in balancing environmental costs within the United States, Westinghouse has over-stated such extra-territorial benefits. The recent narrow Senate approval to ship nuclear fuel to India with the proviso that such shipments may be curtailed in the future shows the tenuousness of the Westinghouse projection.

B. Westinghouse has also failed to provide sufficient information concerning "available alternatives."

1. Westinghouse summarily states in Section 7-1.2 of its Environmental Report that "Westinghouse has decided it would be most prudent to install its additional nuclear fuel fabrication capacity at some location other than the Columbia facility. The risk of loss to the country's energy resources due to an unscheduled shutdown would be minimized in this case, since the nation's utilities would be assured of a second source of fuel from Westinghouse."

a. Westinghouse has failed to show that the environmental and other costs of building the proposed facility outweigh the costs of expanding its present facility. There is no information concerning the costs of expanding the South Carolina facility either in terms of environment or money.

b. Westinghouse has failed to show that a second source of fuel from Westinghouse would be necessary for the United States nuclear industry. Other suppliers could provide sufficient fuel in an emergency.

In short Westinghouse has merely named the alternative of expanding its South Carolina facility without providing any data whatsoever to show that such an alternative is less desirable than building the proposed facility.

2. (WITHDRAWN)

3. (WITHDRAWN)

C. Neither in its Environmental Report nor in any other material has Westinghouse examined the alternative of not increasing its fuel fabrication facilities on account of alternative energy sources. The United States is embarking on a large synthetic fuels program and is funding research in the areas of thermal, wind, and solar energy. Westinghouse has



completely ignored the implications and possibilities of such programs. Current and probable near-future technologies in these areas are much safer and less costly in every respect than nuclear energy. Alternative energy sources which are only now being given government support will make the risks of nuclear energy production unacceptable before the need for or production of nuclear fuel at the proposed facility.

II. Title 10 C.F.R. Part 51 requires that Westinghouse prepare an Environmental Report for the proposed facility. The map and other materials provided by Westinghouse show that the Prattville Experiment Station is located directly across County Road 4 from the proposed site (See Westinghouse response to NRC staff questions). Approximately 50 acres of the Experiment Station are cultivated and various crops are grown. Agriculture is one of Alabama's largest industries and much of the technology available to Alabama farmers is developed through Auburn University experiment stations such as the one located in Prattville. Westinghouse has failed to evaluate the effect of its operations on the Prattville Experiment Station. Environmental effects of the proposed facility will adversely effect the reliability and utility of the Prattville Experiment Station and the experiments conducted at that facility.

III. (WITHDRAWN)

IV. (WITHDRAWN)

V. (WITHDRAWN)

VI. (WITHDRAWN)

VII. (WITHDRAWN)

VIII. (WITHDRAWN)

IX. (WITHDRAWN)

X. The license application does not meet 10 C.F.R. requirements pertaining to possession of special nuclear materials.

A. The application does not meet the requirements of 10 C.F.R. 70.22(a)(4) in that it does not contain:

1. Chemical and physical forms of enriched uranium and U-233 to be used at the ANFFP;

2. Isotopic content of special nuclear materials, specifically failing to provide isotopic content of uranium at enrichment above 5 percent of U-235.

B. The application does not meet the requirements of 10 C.F.R. 70.23 for approval by the Commission.

1. The Commission cannot determine that the applicant's process equipment and facilities are adequate, per requirements of 10 C.F.R. 70.23(a)(7) due to failure of applicant to provide form and isotopic content of special nuclear materials to be processed;

2. Adequate procedures to protect health and to minimize danger to life or property cannot be ascertained by the Commission due to the omission of information pertaining to form and isotopic content of materials to be processed under the license.

XI. The license application does not meet 10 C.F.R. licensing requirements pertaining to use of special nuclear materials.

A. The license application does not meet 10 C.F.R. requirements pertaining to contents of application in that:

1. It does not meet requirements of 10 C.F.R. 70.27(a)(2) in that it does not contain all activity for use of special nuclear material nor general plan for carrying out unspecified activities. Application specifically omits:

a. The activity and plan for conversion of unspecified uranium compounds into other unspecified uranium compounds;

b. The plans pertaining to recovery of off-site radioactive scrap and waste;

c. The activity and plan for use of highly enriched U-235 and U-233.

2. The license application does not meet the requirements of 10 C.F.R. 70.22(a)(b) in that it fails to describe the training and experience of applicant to engage in proposed activities in that:

a. All proposed activities are not specified;

b. Specified activity of converting uranium hexafluoride to uranium oxide powder by the "dry" process is an experimental process in which applicant has no training or experience.

3. The license application does not meet the requirements of 10 C.F.R. 70.22(a)(7) in that it fails to describe the equipment and facilities to protect the health and life and minimize danger to property in carrying out unspecified activities. The application omits:

a. Equipment and facilities for unspecified activity of converting uranium compounds into other unspecified uranium compounds;

b. Handling devices, shields, disposal devices, etc., for U-233. Minute quantities of U-233 can cause serious biological damage and its use requires special facilities;

4. The license application does not meet the requirements of 10 C.F.R. 70.22(a)(8) in that procedures to protect health and minimize danger to life and property are not included for the unspecified activities;

5. The license application does not meet the requirements of 10 C.F.R. 70.23(3) in that it does not contain complete and accurate disclosure as to all matters and things required to be disclosed.

B. The application does not meet 10 C.F.R. requirements for Commission approval of application, specifically:

1. The application does not meet the requirements of 10 C.F.R. 70.23(a)(2) in that the Commission cannot determine that applicant is qualified by reason of training and experience to use material for the purpose requested because:

a. Westinghouse does not provide specific use for special nuclear materials;

b. Westinghouse does not have training and experience in material used in "dry" conversion process.

C. Issuance of license for unspecified activities would be a threat to the national defense, in violation of 10 C.F.R. 70.23(d) in that Westinghouse would be licensed to supply potential weapons-grade uranium compounds internationally.

XII. The license application does not meet 10 C.F.R. requirements pertaining to training and experience of applicant.

A. The license application does not state the technical qualifications, training and experience of the applicant.



Further and specifically, the application does not contain the technical qualifications, training and experience of:

1. (WITHDRAWN)
2. (WITHDRAWN)
- 3.a. and b. (WITHDRAWN)

c. The health physics engineer, though application states that he shall establish and evaluate ALARA radiation protection program. The application also demonstrates that the engineer, the only staff member acquainted with radiation protection, will:

- (1) have no authority;
- (2) not serve as a member of the Regulatory

Compliance Review Committee.

- d. (WITHDRAWN)

XIII. The license application does not meet federal requirements pertaining to equipment and facilities which will be used to protect health and minimize danger to life and property.

A. The application does not meet the requirements of 10 C.F.R. 70.22(a)(7) in that it does not contain a description of equipment and facilities, such as:

1. Handling devices;
2. Working areas;
3. Shields;
4. Measuring and monitoring instruments;
5. Devices for the disposal of radioactive effluents and wastes;
6. Storage facilities;
7. Criticality accident alarms, etc.

B. The application does not meet the requirements of 10 C.F.R. 70.23(a)(3).

1. Installation, modification or relocation of special nuclear material handling, processing or storage equipment will not be adequate because:

a. It will be approved only by the regulatory compliance component and this component lacks expertise in this area;

b. All special nuclear material handling, processing and storage equipment will not be included in the review.

2. Equipment tests will not be adequate.

a. According to the license application, tests will be limited to emergency evacuation signals and permanently mounted air sampling equipment.

b. Once-a-year test of air sampling equipment is not adequate for the protection of health.

3. Engineered safety of the ANFFP Special Nuclear Materials Building will not be adequate to protect health or minimize danger to life and property.

a. (WITHDRAWN)

b. (WITHDRAWN)

c. (WITHDRAWN)

d. The walls will be used for shielding, based on Westinghouse's assumption of normal incidence, while most accidents are not normal incidents.

4. Storage racks and neutron isolation structures important to nuclear criticality safety are not adequate and will be designed only for credible loads, without unforeseen mishaps taken into consideration.

5. HVAC systems will not be adequate since:

a. The application states HVAC systems will be permitted design variance, without specifying the nature of proposed variances;

b. (WITHDRAWN)

c. (WITHDRAWN)

d. Confinement will not be adequate since:

(1) Effluents may pass through only one HEPA filtration before release to the environment;

(2) Containment can be achieved only when provision is made to retain collected radioactive material.

e. The application states ventilation pickups may be used for airborne radioactivity control. This will affect public safety and health since:

(1) (WITHDRAWN)

(2) A local ventilation shutdown should be used to isolate radioactivity in the building, rather than distributing it to the environment.



f. Provision for continuous representative air sampling of gaseous effluents discharged from recirculating air systems of stacks and vents is inadequate, for:

(1) Westinghouse has not shown that stack and other releases will not be returned to the buildings;

(2) Recirculating air systems do not include filter units capable of effectively reducing concentrations of radioactive materials in effluent;

(3) Air sampling is not adequate as Westinghouse does not show how it will be representative of concentrations inhaled by exposed personnel;

(4) Periods of analysis of air sampling are not indicated, thereby rendering air sampling equipment inadequate.

6. Confinement system is inadequate, in that:

a. The application states only that system will consider use of fire-resistant materials, minimization of accumulation of special nuclear material and ease of decontamination. Such statements are ambiguous and do not provide adequate assurance;

b. The application does not discuss placement of ventilation hoods;

c. Hoods for chemical effluents are exempted in application, while the hazards of chemical toxicity are as great as fire and criticality hazards;

d. The license application states that all confinement precautions may be permitted design variances. Without further specification as to the nature of such variances, true safety cannot be evaluated.

7. Radiological waste handling system equipment and facilities are not described in the license application and the application also states that the unspecified systems are subject to variance.

8. Toxic waste handling is not described in the license application, which omits equipment and facilities for handling toxic wastes.

9. Gaseous radiological waste handling will not be

adequate to protect health and minimize danger to life and property because:

a. (WITHDRAWN)

b. Westinghouse will not be able to ascertain quality of the released gaseous radiological wastes as air sampling equipment will be tested only annually.

10. The process and service waste equipment and facilities will not be adequate.

a. The application states only that provision may be made for degrading uranium as special nuclear material to source material as part of waste treatment;

b. The application states that provision shall be made for measuring volumes of treated process and service wastes released from plant, but:

(1) Page 5-50 of the license application demonstrates that volumes of effluents released at each liquid sampling station are not applicable;

(2) The "provisions" are not specifically set forth.

11. Solid radiological waste handling is not adequate.

a. The application does not specify equipment for handling or determining radioactive levels of waste;

b. The application states radioactive solid waste may be sent to a non-licensed disposal facility.

12. Emergency power equipment is not adequate in that it does not provide for safe and automatic shutdown of process equipment.

13. Fire protection is not adequate to protect health and minimize danger to life and property.

a. The license application states that low combustibility HEPA filters will be considered, with no assurance of their use.

b. Finely divided uranium is pyrophoric in nature. Large concentrations of such small particles in the HEPA filters will constitute a fire hazard.

c. The SNM Building design shall only consider construction which will confine fire and subsequent contamina-

tion as closely as practicable. The criteria for considerations are not set forth.

d. There will be no automatic fire sprinkler system in areas of SNM Building where highly pyphoric uranium dust will accumulate.

e. There will be no other automatic fire suppression system in areas of SNM Building where high pyphoric uranium is stored, processed or handled.

f. The license application states portable fire extinguishers shall be provided for fire protection.

(1) Such equipment is inadequate to control or extinguish fire.

(2) Such method of fire suppression will greatly endanger the lives of individual firefighters.

(3) Type and number of fire extinguishers is not provided.

g. Merely posting of permissible fire-fighting equipment and materials is not adequate without training and drills.

14. (WITHDRAWN)

15. Alarms are not adequate to protect health and minimize danger to life and property.

a. The license application states no provision for separate alarms for fire, criticality or accidental release of radioactivity from confinement. A common alarm for all emergency situations will not alert personnel about specific hazard.

b. The license application states that immediate evacuation alarm will be audible or visible. This is inadequate as an alarm which is not audible and visible to all personnel at all times is not an adequate alarm.

16. Process and service alarms will be inadequate to safeguard facilities, workers and environs.

a. The license application states alarm will not be audible to cognizant personnel responsible for corrective action.



b. There is no provision for testing of process and service alarms other than following installation and major repairs.

17. Equipment design will not be adequate to preclude critical configurations.

a. Failure modes may be based on operational experience.

b. Westinghouse does not have operational experience in "dry" fuel fabrication.

c. The probability of criticality is not subject to reliable quantitative prediction.

d. Double-batching, which is not uncommon in nuclear fuel fabrication, occurs due to human error.

e. Fire hazards are not considered

f. Criticality safety signs are not adequate protection.

g. Low density construction materials such as wood and plastic may be disregarded in determining spacing, according to license application.

18. Air sampling equipment will not be adequate to protect health and to minimize danger to life or property. The application states that air monitors will be used in lieu of fixed-position air samplers.

a. Westinghouse does not state maintenance requirements or sensitivity of air-sampling equipment.

b. (WITHDRAWN)

c. Equipment will not represent the concentrations inhaled by exposed personnel.

(1) Air-sampling equipment will not duplicate inhaling and exhaling rate of an average individual.

(2) The system will not indicate nor segregate materials that will be retained in upper and lower respiratory systems of individuals exposed to high concentrations of radioactivity.

19. (WITHDRAWN)

20. Protective clothing proposed for use by Westinghouse is not adequate. The license application does not provide for:

a. Headcovers;

b. Gloves;

c. Plastic overcovers.

21. Respiratory protection equipment is not adequate.  
The license application does not contain:

- a. The type of respiratory protection equipment proposed for use;
- b. Assurance that respirators will be available to all personnel subjected to high levels of airborne radioactivity;
- c. Monitoring, inspection, decontamination, repair and sterilization equipment for respiratory protection equipment.

22. (WITHDRAWN)

CERTIFICATE OF SERVICE

I hereby certify that I have served a copy of the foregoing upon the following named parties by mailing the same to them on this 30th day of January, 1981.

John F. Wolf, Esq., Chairman  
Atomic Safety and Licensing  
Board  
3409 Shepherd St.  
Chevy Chase, MD 20015

Dr. Harry Foreman, Member  
Atomic Safety and Licensing  
Board  
Box 395, Mayo  
University of Minnesota  
Minneapolis, MN 55455

Dr. Martin J. Steindler, Member  
Atomic Safety and Licensing  
Board  
Argonne National Laboratory  
9700 South Cass Ave.  
Argonne, IL 60439

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

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

Bart Cowan  
Kurt, Seamans, Cherin  
& Mollott  
42nd Floor  
600 Grant St.  
Pittsburgh, PA 15219

Julian McPhillips, Esq.  
616 S. Perry St.  
Montgomery, AL 36104

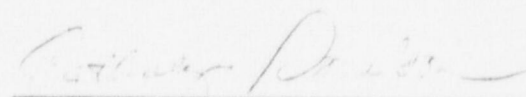
Donald R. Marcucci, Esq.  
Law Department  
Westinghouse Electric Corp.  
P.O. Box 355  
Pittsburgh, PA 15230

Sherwin Turk  
Legal Staff  
U.S. Nuclear Regulatory  
Commission  
Washington, D.C. 20555

Dr. IRL Myers  
State Health Officer  
Department of Public Health  
State Office Building  
Montgomery, AL 36130

Docketing and Service Section (3)  
Office of the Secretary  
U.S. Nuclear Regulatory  
Commission  
Washington, D.C. 20555

David L. Allred, Esq.  
231 Oak Forest Dr.  
Montgomery, AL 36109



Cathalynn Donelson