

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION  
ATOMIC SAFETY AND LICENSING BOARD

DOCKETED  
USNRC

'01 AUG 20 A10:46

Before Administrative Judges:

Thomas S. Moore, Chairman

Dr. Charles N. Kelber

Dr. Peter S. Lam

OFFICE OF THE SECRETARY  
REGULATORY AND  
ADJUDICATIONS STAFF

Ex Parte:  
Environmentalists, Inc.,

Docket No. 070-03098-ML

ASLBP No. 01-790-01-ML

August 13, 2001

Petitioner,

In the matter of  
Duke-COGEMA-Stone & Webster (DCS)  
Construction Authorization Request (CAR)  
Mixed-Oxide (MOX) Fuel Fabrication Facility  
Savannah River Site (SRS), South Carolina  
Applicants

---

AMENDMENT

To

PETITION TO INTERVENE

The purpose of this amendment is to provide additional contentions for use with Environmentalists, Inc.'s (E.I.) Petition to Intervene, filed on May 18, 2001, in relation to the Construction Authorization Request (CAR) of Duke, COGEMA, Stone & Webster regarding the proposal to build a MOX Fuel Fabrication Facility at the SRS.

Reserving its right to further amend its Petition to Intervene, prior to close of this licensing proceeding, in order to set before the presiding Atomic Safety and Licensing Board Panel any issue with respect to environmental, health and safety protection which reasonably comes to E.I.'s attention, the Petitioner sets forth the following contentions for consideration in this proceeding:

- G. (A-F are supplied in E.I.'s May 18, 2001 Petition to Intervene)  
The Applicant's evaluation of the health effect to the local population from routine operation of the MOX Facility is invalid due to the lack of attention being given to relevant evidence contained in the transcripts of Allied General's proposed uranium and plutonium recovery facility (docket 50-332) and in other sources of information which have been tested by cross-examination and are thereby capable of resolving some of the confusion over what information is factual and what is not.
- H. The Applicants' evaluation of the health effects to local populations, including E.I. members, is invalid because the assumptions made in regard to the use of HEPA filters in Appendix F, Section F.5 and F.6 do not meet the guidelines of the NRC.
- I. The Applicants', in their CAR and Environmental Report (ER), fail to adequately consider the long-term effects of the MOX Facility. For example the impacts of decontamination and decommissioning of the MOX Facility are omitted.(See Section 5.6.1 of CAR)
- J. The Applicants' evaluation of the detrimental impact on the health of local residents, including E.I. members, is invalid due to inadequate consideration being given to the cumulative effect of nuclear operations having taken place at the SRS since the 1950's.

Note: the failure to collect the data, evidence and records needed to perform a full scale health study does not mean that an adverse effect to local residents from exposure to routine and accidental releases over the years has not caused harm to people's health and lives. Although a Dose Reconstruction Project has been going on for some time, money for this study has been cut.

- K. The piece-meal approach taken in the overall project of disposing of excess weapons plutonium by removing the pits from nuclear bombs to recover some of the plutonium to fabricate into mixed oxide fuel has resulted in one of the numerous examples of the Applicants failing to comply with the National Environmental Policy Act (NEPA).

- L. The NRC staff has pointed out a number of examples of the Applicant's failure to comply with NEPA. Some relate to leaving out consideration of alternatives, others address the Applicants not including adequate information, such as those related to the SRS site and the problems presented in terms of cumulative effects.
- M. The Applicants' evaluation of the possible and actual detrimental effects to South Carolina residents from the proposed MOX Facility, in terms of environmental harm, damaged health, safety problems, financial and business losses, is invalid because full consideration has not been given to South Carolina's unique situation of having all of the fresh MOX fuel shipments taking place within its border. (except for the few miles between the S.C. State line and the McGuire nuclear plant) This defect in both the CAR and the ER is of particular significance in relation to the terrorist issue. Depending on the outcome of any terrorist activities, the results could be catastrophic. In addition, there would always be the on-going condition of attracting terrorist groups to South Carolina. This in itself would have an adverse impact on business interests, particularly tourism.

The National Academy of Sciences (NAC), in its study Management and Disposition of Excess Weapons Plutonium (1995), warns that "If significant quantities of fresh fuel could be mobilized so as to become airborne as particulate matter, the resulting public health risks would be substantial." (Page 340)

- N. The Applicants' evaluation of the health effect to the local population from routine operation of the MOX Facility is invalid because its ER fails to give adequate attention to the pathways by which groundwater could become contaminated due to such unsuitable geological conditions of the SRS area as having a shallow water table or as a result of SRS activities in the past. Neither the Applicants' ER or their CAR discuss U.S. Department of Interior's 1967 study, Geology and Ground Water of the SRP and Vicinity, SC or the NAC report by the Committee on

Geologic Aspects of Radioactive Waste Disposal (May 1966). Both were prepared for the Atomic Energy Commission. Neither the DOE nor DCS have complied with NEPA in regard to fully considering alternatives to locating the MOX Facility at the SRS or the alternatives that offer more benefits and fewer costs for disposing of excess weapons plutonium.

- O. The Applicants fail to explain fully what equipment is required in terms of overcoming the accidents, leaks, worker exposures or exposure to the public, etc., such as those that have happened at facilities where plutonium and uranium are present. (Nuclear Fuel Services in West Valley, New York, SRS, Westinghouse plant on Bluff Road in Columbia, SC and facilities in other countries, including COGEMA facilities in France, etc.)
- P. The Applicants do not explain the extent to which existing evidence from COGEMA's experience with operations similar to those proposed for the MOX Facility at the SRS has been factored into their evaluation of health effects to local populations as a result of normal operation conditions or during accidents. The presentations in the ER and CAR and listings of the references used support the conclusion that it is assumptions and theoretical modeling which are the major basis for the Applicants' predictions regarding health effect and other impacts from the MOX facility.

Q. The Applicants, in Section 4.4 Hydrology of the ER, have failed to demonstrate that radionuclides leaked from the MOX Facility or some related operation could not migrate downward to the aquifers. The Applicants are depending on the liquid effluent system of the Department of Energy's (DOE). This system has not been through the NRC's licensing process.

R. There is no section in either the ER or CAR which identifies the specific benefits and costs of fabricating MOX fuel nor of the overall plan of disposing of excess weapons plutonium by means of the MOX proposal. Consideration of alternatives in terms of how each compares to the MOX fuel option is therefore impossible. This defect and the lack of consideration of what happens before the MOX fabrication operation and what happens following are among the numerous examples of the Applicants disregarding the intent and provisions of the NEPA.

S. The Applicants in their ER do not take into consideration that children and babies suffer more damage from exposure to radiation than do adults (See 5.2.10.1 Radioactive doses to the public). This along with numerous other defects in the Applicants reports make their evaluations of health impacts from the MOX facility invalid.

T. The Applicants in their ER (Section 5.2.10.2) fail to take into consideration that there are members of the public who spend time/or travel within the SRS boundaries, including persons who belong to E.I.

U. The lack of coverage on the subject of fires and their potential for spreading radioactive particulate matter is a flaw which makes the Applicants' evaluations of safety and health impacts invalid. This ties in with the


deficiencies regarding emergency planning and considerations of such local concerns as those associated with residents not being informed or trained about what to do during accidents. Even volunteer firemen may not have the background or equipment to protect those along the fallout route, whether from the MOX Facility or on a highway over which radioactive shipments travel. In the case of transportation accidents, there is the problem of not having monitoring stations and other types of equipment to help in determining the path which a release of gases or radioactive particulate matter may take.

V. The attached map supports E.I.'s Contentions M, O, P, U, W, and the Affidavit of Basil Garzia.

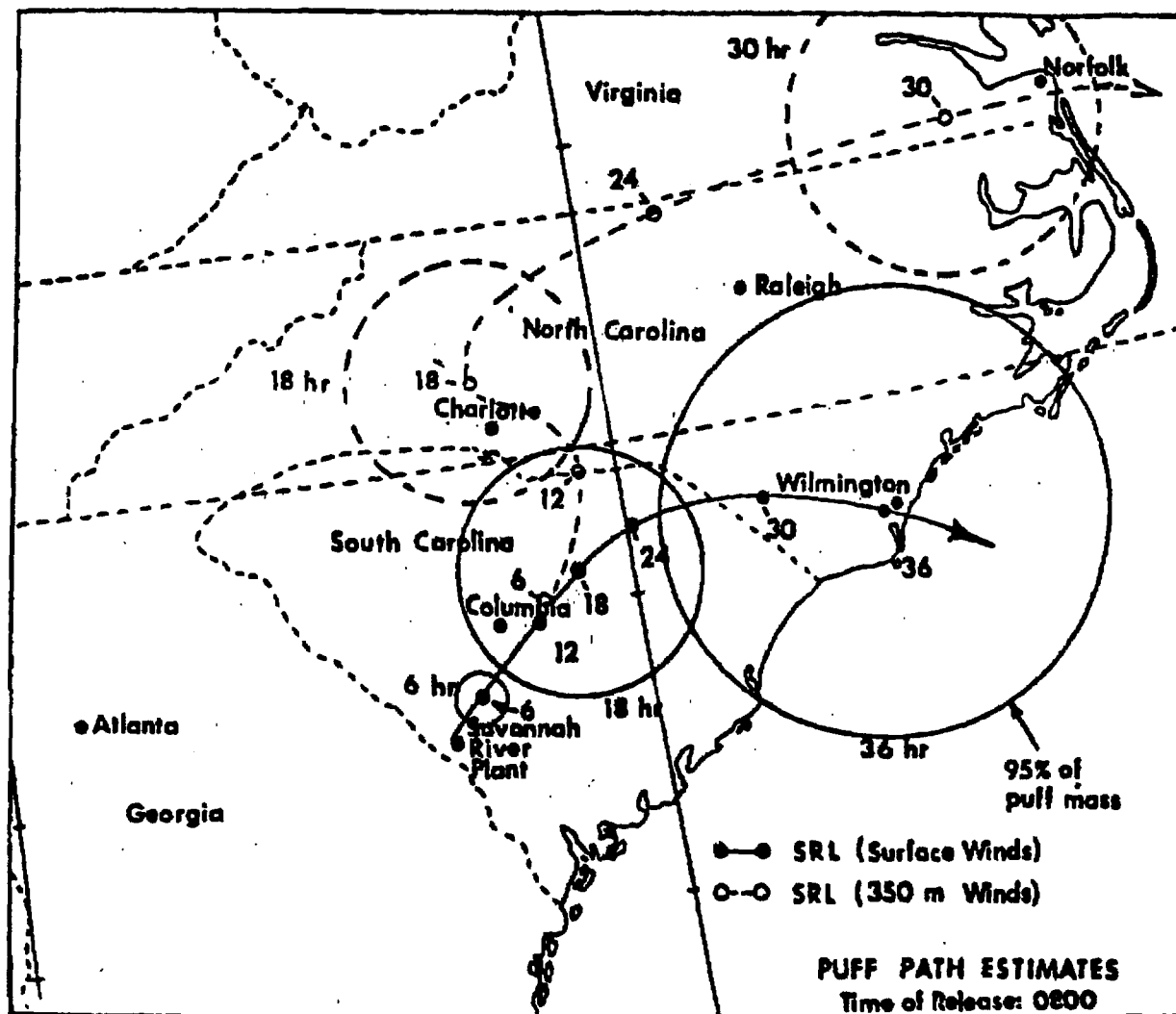
All the Contentions relate to the NEPA while a majority of them also relate to the Atomic Energy Act (AEA) since most of them are concerned with radiation's effect on people.

The unavailability of a Safety Analysis Report and an Environmental Impact Statement related to the MOX Facility and the MOX project done by the Nuclear Regulatory Commission (NRC) is of concern to E.I.. In its May 18th Petition to Intervene, E.I. called attention to there being a NEED FOR THE NRC to "prepare its own 'detailed statement' of environmental costs, benefits and alternatives", (See paragraphs 6 and 7 of Petition)

Thank you.

  
Ruth Thomas, President  
Environmentalists, Inc.  
1339 Sinkler Road  
Columbia, S. C. 29206  
803-782-3000

MAP 1. Accidental tritium release from SRP. Upper and lower altitude puff path estimates.



SOURCE: S.C. Department of Health and Environmental Control (1974), "Report on Accidental Release of Tritium Gas at the Savannah River Plant, May 2, 1974," p. 6.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

In the Matter of

DUKE COGEMA STONE & WEBSTER

Docket No. 070-03098-ML

Mixed Oxide Fuel Fabrication Facility  
Savannah River Site, South Carolina

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing AMENDMENT DATED Aug. 13, 2001 have been served upon the following persons by U.S. mail, first class and by FAX to Judges Moore, Kellner and Lam.

Office of Commission Appellate  
Adjudication  
U.S. Nuclear Regulatory Commission  
Washington, D. C. 20555-0001

Administrative Judge  
Charles N. Kellner  
Atomic Safety & Licensing Board Panel  
U.S. NRC Mail Stop -7-3 F23  
Washington, D. C. 20555-0001

Administrative Judge  
Thomas S. Moore  
Atomic Safety & Licensing Board Panel  
Mail Stop-7-3-F23  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555-0001

Administrative Judge Peter Lam  
Atomic Safety and Licensing Board Panel  
Mail Stop- 7-3 F23  
U.S. Nuclear Regulatory Commission  
Washington, D. C. 20555-0001

John T. Hull, Esq.  
Office of General Counsel  
Mail Stop-0-15 D21  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555-001



Docket No. 070-03098-ML  
AMENDMENT DATED July 30, 2001


Secretary of the Commission  
Attn: Rulemakings and Adjudications Staff  
U.S. Nuclear Regulatory Commission  
Washington, D. C. 20555-0001

Donald J. Silverman, Esq.  
Marjan Mashhadi, Esq.  
Alex S. Polonsky, Esq.  
Morgan, Lewis & Bockius LLP  
1800 M. Street NW  
Washington, D. C. 20036-5869

Donald J. Moniak  
Blue Ridge Environmental  
Defense League  
P.O. Box 3487  
Aiken, S. C. 29802

Glen Carroll  
Georgians Against  
Nuclear Energy  
P.O. Box 8574  
Atlanta, GA 30306

Edna Foster  
120 Balsam Lane Highlands, N. C. 28741

  
Ruth Thomas, President  
Environmentalists, Inc.

Dated at Columbia, S. C.  
this 13th day of Aug. 2001