I.S.E.A.

ILLINOIS SAFE ENERGY ALLIANCE
P.O. Box 469
Antioch, Illinois 60002
Meetings:
407 South Dearborn, Room 370
Chicago, Illinois 60605

September 20, 1979

PETITION FOR HEARINGS ON DECONTAMINATION OF DRESDEN I, Morris, Ill.

Dr. Harold Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Dr. Denton,

Under the provisions of the U.S. Nuclear Regulatory Commission Rules and Regulations, Part 2.206, I, Marilyn Shineflug, with the support of members of the Illinois Safe Energy Alliance, request that public hearings be held on the decontamination of the Dresden I nuclear reactor near Morri , Ill. Since there is no assurance that the N.R.C. will decide to complete a formal Environmental Impact Statement for this experimental project, public hearings are needed to: 1) answer previously unanswered or inadequately answered questions; and 2) investigate the significance of new information regarding possible environmental and health effects of decontamination. Accurate, complete answers are needed to the following questions:

1. What effect(s) will the admittedly corrosive solvent NS-1 have on the reactor's piping system? As stated under Category A Technical Activity No. A-15, "The primary NRC concern related to the decontamination is to assure that the decontamination method does not degrade the integrity of the primary coolant system boundary. This consideration involves both immediate degradation during decontamination and latent effects that could cause degradation during subsequent operation of the reactor." How can all the crucial welds, valves and joints, etc., many of which are inaccessible, be inspected to assure decontamination has not caused damage?

2. What standards or guidelines will be utilized for "'baseline' inspection and appropriate followup inspections to provide a high degree of confidence that no degradation has occurred"? Reliance on existing Technical Specifications and "special inspections" seems inadequate in light of the following NRC admission: "Since this is an area [decontamination] where the NRC staff has limited expertise and experience with commercial nuclear power plants, it will be difficult to establish the necessary meaningful guidance and criteria for the decontamination of operating reactors in advance of these anticipated licensee submittals." (Emphasis added) To my knowledge the NRC has not yet published a NUREG Document

on Decontamination and/or a Regulatory Guide which identifies acceptable methods of decontamination and establishes materials testing criteria that must be satisfied to qualify each decontamination method for licensing approval. Whether or not a Regulatory Guide has been published may be moot if Regulatory Guides are not enforceable. However, since the integrity of the primary coolant system is essential for protection of the public health, decontamination should not proceed until this important unresolved generic safety issue is resolved.

3) Whether or not decontamination wastes can accurately be classified as "low-level" remains unanswered. What radionuclides and in what concentrations are expected besides cobalt 58 & 60, cerium, manganese, zirconium and cesium? According to NRC information, 3000 curies of radioactive material will be removed and eventually placed in 1200 55 gallon drums. If the radioactive material is uniformly distributed throughout the solidification agent, one can conclude each barrel will contain 2½ curies of radioactivity or 12,500 nanocuries per gram. Can waste with this concentration of radionuclides be defined as low-level? What assurances does the public have that significant amounts of transuranics won't be present? According to Mr. Steve Lange of Commonwealth Edison, "transuranics are not expected," but apparently their presence cannot be ruled out. If the waste contains 10 or more "nanocuries of transuranic contaminants per gram of material," where will it be buried? Or will it remain at the Dresden site forever as stated by Mr. Lange?

4. What is the long term environmental impact of combining radioactive waste with chelating agents? As you know, Drs. Means, Crerar and Duguid found chelating agents to be the very agents responsible for radionuclide mobilization at Oak Ridge, Tenn. (See Science, Vol. 200, June 30, 1978) The NRC response that decontamination wastes from Dresden I will be buried in "dry" areas is not adequate in light of man's inability to predict climatic conditions over the long time spans this waste remains dangerous to life. Furthermore, radionuclides can leach out (in a manner similar to the operation of a flea collar) even in dry areas and be carried from original burial sites by scant amounts of rain water. At least one recent study shows radionuclide-chelate complexes are persistent over time and can readily be taken up by plants, etc.

5. How stable will the vinyl ester plastic resin be which is supposed to encapsulate the decontamination wastes? According to NUREG-0471, "There are no current criteria for acceptability of solidification agents." Therefore, what is the basis established by the NRC (and not Dow Chemical or Commonwealth Edison) for concluding this solidification process will be acceptable? What consideration has been given to the fact that organic solvents present in much radioactive waste can dissolve the Dow solidification agent?

6. What are the maximum levels of radiation exposure workers could receive while carrying out decontamination? What are the expected levels of radiation exposure workers may receive? If NS-1 is regarded as corrosive or a "strong chemical decontaminant," (NUREG-0410), how can it be claimed that "it is essentially non-irritating when applied directly to the skin or eyes..."? (Letter from D.O.E.)

6. How many truckloads of waste will have to be shipped and at what risk? This question has not been adequately answered because it is possible NS-1 will have to be flushed through the system more than once. According to Mr. Lange, the absorption capacity of the solvent may be taken up by iron instead of "crud" resulting in the production of twice as much waste.

7. What is the status of the NRC's consideration of the need for an Environmental Impact Statement for the Dresden I decontamination?

An early consideration of this request will be appreciated.

Phone: 312/395-1353

1017 002

Sincerely, Marilyn Shineflug

Marilyn Shineflug, Co-Chrm.

I.S.E.A.

ILLINOIS SAFE ENERGY ALLIANCE
P.O. Box 469
Antioch, Illinois 60002
Meetings:
407 South Dearborn, Room 370
Chicago, Illinois 60605

MEMBER GROUPS

APPLESEED, Braidwood, Ill.

ASSOCIATED CITIZENS FOR PROTECTION OF THE ENVIRONMENT, Sheffield

CITIZENS AGAINST NUCLEAR POWER, Chicago

CITIZENS OPPOSED TO RADIOACTIVE POLLUTION, Highland Park

CHICAGO WOMEN FOR PEACE

DEKALB AREA ALLIANCE FOR RESPONSIBLE ENERGY

ILLINOIS CONSORTIUM ON GOVERNMENTAL CONCERNS, Springfield

ILLINOIS LEGISLATIVE COMMITTEE OF THE NATIONAL COUNCIL OF JEWISH WOMEN

MCHENRY COUNTY DEFENDERS

PEACE AND JUSTICE CENTER, Wheaton

POLLUTION AND ENVIRONMENTAL PROBLEMS, Palatine

PRAIRIE ALLIANCE, Champaign, Bloomington, Charleston, Peoria and Springfield

RELIGIOUS EDUCATION COMMUNITY, Wheaton

SINNISSIPPI ALLIANCE FOR THE ENVIRONMENT, Rockford

WAUKEGAN CITIZENS ACTION PROJECT

8TH DAY CENTER FOR JUSTICE

OUT OF STATE AFFILIATES:

LEAGUE AGAINST NUCLEAR DANGERS, Stevens Pt. Wis.

SAFE HAVEN, Sheboygan, Wis.