Detroit Edison

UNITED STATES OF AMERICA
ATOMIC ENERGY COMMISSION

In the Matter of)
THE DETROIT EDISON COMPANY) Docket nos 50-452 ,50-453
Greenwood Energy Center,)
Units 2 and 3)

AMENDED PETITION FOR INTERVENTION
BY CROSWELL-LEXINGTON ALLIANCE TO STOP POLLUTION (CLASP)

Pursuant to the order of the board on January 17. 1974, CLASP hereby submits its amended petition for intervention.

IDENTIFICATION OF PETITIONER

The petitioner is an unincorporated association organized for the purpose of taking appropriate action to protect the environment against any pollution produced by modern technology. Its members reside and/or work within a 25 mile radius of the proposed Greenwood Energy Center. CLASP believes it is the only environmental group in the Thumb district of Michigan that has conducted educational public discussions of nuclear energy. In a series of public meetings the nature of nuclear reactors was explained by a CLASP member; upon an invitation the Saginaw Valley Nuclear Study explained their reasons for opposing nuclear power; and upon invitation the Applicant, Detroit Edison, presented their case for nuclear power at a third meeting.
THEREFORE it is CLASP's contention that the challenge of section 2 of Applicant's answer of January 16, 1974 is unwarrented. Agents of the Applicant know that CLASP exists, know many of the officers of CLASP, know these officers reside closer than 17 miles to the Greenwood Energy Center, and know the members of CLASP are concerned as shown by the attendance at the meeting mentioned above.

INTERESTS OF THE PETITIONER

1. CLASP, through its members, is concerned about the imposition of a nuclear power plant in the community, not only because of the radiological safety of its members, but also because of the larger worldwide problem of nuclear waste disposal. Quoting Hannes Alfven, Nobel Laureate of Physics, "...the fission reactor produces both energy and radioactive waste. We want to use the energy now and leave the waste for our children and grandchildren to take care of.. This is against the ecological imperative: Thou shalt not leave a polluted and poisoned world to future generations." (Bulletin of Atomic Scientists, Jan, 74).

2. CLASP, through its members, is concerned that construction and operation of this plant will result in an irreversible commitment of natural resources which- including the alleged need for this electrical power- would not be advantageous.

3. CLASP, through its members, is concerned that construction of this plant will cause overlap with Consumers Power's nuclear plant at Midland, Michigan- only 75 airline miles away. Further overlap will occur if Consumers Power constructs another nuclear plant east of Saginaw - as public announcements indicate they intend to do.

4. CLASP, through its members, is concerned about safety for it appears the Applicant is not adequately prepared for the complex task of constructing and operating a nuclear power plant.

DEFICIENCIES IN THE APPLICANTS ENVIRONMENTAL AND CONSTRUCTION REPORTS

THEREFORE CLASP contends that the commission should not issue a construction permit to the Applicant for the following reasons..

A. The routine discharge of radioactive effluvium (in particular the isotopes of Kr, Xe, and I) may endanger the health, safety, and property of members of CLASP and the public generally and will endanger wildlife in the area for the following reasons;

1, Should the contentions of Sternglass regarding the Dresden, Illinois plant be substantuated (they have not been disproved as yet), then the effluvium will endanger the health of the small children whose parents belong to CLASP.

2. The routine discharge from Consumers Power plant at Midland can overlap Greenwoods. Thus a northwest wind (common here) with a temperature inversion, plus snow or rain (also common here) could deposit its highest permissible level and superimpose them on the highest level of Greenwood. Since it would be difficult to pinpoint the extra fallout in time, it is doubtful any remedial action would be taken at Midland or at Greenwood. Applicants reports have not allowed for this.

3. Temperature inversions with heavy ground fogs are common here. Applicants routine dischage calculations apparently have not allowed for this.

4. It is a matter of public record that the nuclear reactor at Humbolt Bay, Oregon under what they thought were "routine" conditions released excessive quantities of radioactive gaseous effluviums. In view of B, 1 and 2 following, the Applicant may do no better.

B. Construction and operation of the proposed facility will involve the possibility of a catastrophic accident and would endanger the lives of the members of CLASP. (A fossil fueled plant would pose no such a threat). This possibility is indeed probable for the following reasons;

1. It is a matter of public record that there was an accident to a reactor at the Fermi Center near Monroe, Michigan, - apparently caused by faulty design and construction. Thus the Applicant has already demonstrated that some of its personnel are incompetent to build and operate a reactor. Had this "improbable" accident occured with Greenwood's far bigger reactors, the effect could have been catastrophic.

2. It is also a matter of public record (see exhibit 1) that the Applicant has personnel unprepared for the complex problems of constructing and operating a nuclear reactor. The technology of concrete is an ancient one (the Romans used concrete extensively and many of their structures exist today), yet the Appliaant was unable to use this ancient technology and build a floor for a reactor without the floor

cracking. If personnel of the Applicant do not understand the "complex phenomenon of concrete cracking" as admitted in exhibit 1, it is doubtful they understand the far more complex problem of constructing and operating a nuclear reactor.

3. It is a matter of public record that ~~missile~~ damage occured, October 21, 1973, at San Onofre, California nuclear plant, (Environment, Jan 74). In this accident a turbine blade failed and apparently knocked out both the normal and emergency cooling systems. Had the San Onofre reactor been as big as those proposed for Greenwood, meltdown of the core would have occured. This is shown in the calculations of exhibit 2. The Applicant has not shown that his design of Greenwood is such as to preclude this type of accident and that if such had occured, no meltdown of the core would have occured.

4. It is a matter of public record that the Applicant has had to seek a rate increase from the state of Michigan because of financial difficulties. Hence it is doubtful the Applicant - in case of a serious reactor accident- could weather the double expense of loss of generating plant plus high cost of repairs to radioactive equipment.

C. Operation of the proposed reactors will generate large quantities of radioactive wastes (some 200 different ones). Among these are the isotopes of Kr, Xe, I, Sr, and Cs. Also quantities of isotopes of Plutonium are produced. The Environmental Protection Act requires the Applicant to set forth in detail the effect of operation of the plant on the human environment. This the Applicant has not done, for his report traces these wastes only to his property line. The Applicant will be leaving his poisons "for our children and grandchildren to take care of".

DEFICIENCIES IN TRANSMISSION LINES

CLASP further amends its petition to include the transmission lines from the Greenwood center, as described in the environmental report, Volume 2, appendix 3B. This section was not in the report as studied by CLASP representatives in November, 1973. In reviewing this section of the report, the following defects are evident to CLASP personnel.

1. Refering to page 40 and figure 19, the following defects are noted;
   a. The data covers fair weather only; it does not show the effect of inclement weather nor of fog.
   b. It does not show which of the TV frequencies the curve covers; that is, is it channels 2 through 6, or the higher ones?
   c. The curve fails to show the more common measure of uv/meter as well as the db scale used.

2. On pages 40, 41, and figure 20, the following defects are noted;
   a. on figure 20 no "permissible" level is given.
   b. If one uses 20 db (100 uv/m)- a level often used by broadcast stations (see exhibit 3) to show their outer service boundary- then RI would extend over 400 ft from the outermost conductor.
   c. At 1 mv/m (30 db) RI would extend at least 250 feet.
   d. Table 9 is incomplete; since several 765 kv lines are in operation, data from them should have been used- not data from lower voltage lines.
   e. The RI column of table 9 has little meaning; the width of right of way and height of lines is not given and these affect the levels quoted.
   f. Footnote 2 is misleading; it refers to a lower voltage line. Complaints have been registered against 765 kv lines (see the book "Power over People" by Louise Young; Oxford Press 1973)..
   g. No data is given on the effects of RI in the range between AM broadcast and TV. Short wave listening and amateur bands should also be considered.

3. On page 42 and figure 21 the following defects are noted;
   a. Audible noise during inclement weather- in particular fog- is not shown.
   b. Curves showing actual noise from existing 765 kv lines are not shown.
   c. If the proposed line is an improvement over existing ones, there is no discussion of the reasons.
   d. The reference level should be stated. CLASP personnel assume 0 db to be 20 un/m^2.
   e. The number and nature of complaints on existing 765 kv lines is not given.
   f.

4. The discussion on page 43 and figure 22 is incomplete; (the effect is not electrostatic for it has a frequency of 60 times a second or 60 hertz).
   a. There are no curves showing actual fields from existing 765 kv lines.
   b. It is not stated where along the line the fields of figure 22 will be found. Is it near a tower- where the field is low- or where the line is closest to the ground?

c. Footnote 2 is misleading; it refers to lower potential lines. 765 kv lines are operating and have caused problems.
d. The Applicant has not shown the preception level quoted on page 43 is indeed a "safe" level.

5. The discussion on page 44 and figure 23 is incomplete;
a. No actual data from existing 765 kv lines is given.
b. The agency setting the maximum level of 100 parts per billion is not given.
c. The effect of continous exposure to lower concentrations is not shown nor discussed.
d. The results of the 18 month field envestigation were quoted for a 345 kv line but were not given for the 765 kv line also investigated. The proposed line is a 765 kv one; what are the results of the study for 765 kv lines?
e. What are the EPA recommended standards which the applicant claims to have met?
f. There is no evidence presented on the efffect of continuous exposure to ozone on wild life and on vegetation living on or near the right of way.

6. Corona also produces nitrogen oxides and free radicals of oxygen. The applicant has not prepared an environmental study of these.

7. The applicant states the need for power as self evident but gives no data to support this contention; - in particular the need for electric steel furnaces.

The name and address of the person on whom service may be made is Arthur Robertson, 6065 E. Gardner Line, Croswell, Mich. 48422.

RESERVATIONS

Petitioner has prepared this petition with a dearth of information regarding the San Onofre accident. Thus this statement of contentions may be incomplete, and the petitioner reserves the right to amend the petitioner after discovery.

CONCLUSIONS

WHEREFORE, Petitioner respectfully requests the Commission to issue an order permitting its intervention as a party in this proceeding.

CROSWELL-LEXINGTON ALLIANCE
TO STOP POLLUTION

By _____
Arthur Robertson
Science Adviser