

Reg. Files
11-7-75



UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)
METROPOLITAN EDISON COMPANY, ET AL)
(Three Mile Island Nuclear Station,)
Unit 2))

Docket No. 50-320

ORDER

The Licensing Board makes the following determinations on the matters set forth below.

I.

The petition to intervene of Gertrude and Frederick Hellrich, et al., is granted. The contention asserted by these intervenors and hereby accepted as an issue in controversy is as follows:

1. The proposed transmission line connected with the operation of Unit 2, with respect to that sector in Berks County, Pennsylvania, is neither necessary nor proper for the service, accommodation, convenience, or safety of the public, and cannot be properly constructed under the National Environmental Policy Act since:

- a. There is no need for an additional transmission line as proposed since the Applicants can supply the electrical services within its service area without the proposed line.
- b. The reliability of the present and reasonably foreseeable future service of the Applicant would not

82-044

7904270300

11-20

G

be so increased by the proposed transmission line, when the costs and benefits, alternative routes, and environmental impacts are considered, as to justify construction of the proposed line.

c. The projected growth in the population within the service area is not sufficiently large to justify the proposed line on a cost/benefit basis.

d. The present and foreseeable economic conditions that the load forecast use to justify the proposed line are not accurate. Land use patterns and economic conditions in the area are such that a compound load growth rate of two to four percent in the area of service can be anticipated. This growth can be adequately served by existing transmission lines or by a future line other than that presently proposed.

e. The requirements of the PJM Power Pool can be adequately served without the proposed line. The proposed 500 KV line does not come under the extra high voltage transmission (EHV) agreement.

f. The requirements of the National Environmental Policy Act have not been complied with since there has not been an independent determination by the Nuclear

Regulatory Commission of the need for the proposed line, analysis of alternative locations, or the alternative of no action.

g. Considering the environmental impacts and the results of any necessary cost/benefit analysis, the proposed transmission line is not justified, especially since its construction will have a permanent and irreversible impact on the environment by taking away needed agricultural lands and woodlands, and will have adverse aesthetic effects.

h. The proposed transmission line will adversely affect the land use both directly and indirectly, and the costs relating to loss of production, land values, and loss of natural resources have not been properly considered and reviewed. It is contended that the cumulative environmental impacts do not justify the proposed transmission line.

In accordance with the "Stipulation Concerning Intervention Petition of Hellrich, Et Al.," which was served upon the Board and parties on July 16, 1975, the Board will endeavor to conduct an evidentiary hearing first on the aforementioned contention. It is anticipated that such hearing will commence approximately 30 days after issuance of a final environmental impact statement supplement

by the Regulatory Staff. Upon completion of this hearing, the Board will issue a separate decision on this contention.

II.

Contentions asserted by the intervenors Citizens for a Safe Environment/York Committee for a Safe Environment are hereby accepted as issues in controversy, as follows:

1. Applicants have failed to consider the environmental impact on the atmosphere and weather of the combined thermal releases of the generation facilities on the lower Susquehanna River. These releases will add a significant amount of energy to the local area to be dissipated by radiation and convection with possible alterations in the local climate. No operating license should be granted until such effects are discussed.

2. The biological survey performed by the Applicants' consultant (as amended by Supplement II of the Environmental Report) is inadequate, in that it consists of little more than a listing of species which may be in the area. A more thorough survey is necessary, including population estimates on a year round basis, to positively assess any possible impact of Unit 2 on the environment. No operating license should be granted until such a study is made.

3. The design for the cooling towers is inadequate to withstand the earthquake or tornado that the rest of the plant is built to withstand. As a result, if this earthquake or tornado does occur

and the main plant does withstand it, it is highly probable that the cooling towers will not. Then, either the plant will shut down for two or three years while the towers are rebuilt or repaired, or the plant will continue to operate without cooling towers using once-through cooling. In this latter event, it is highly likely that state water quality criteria would be violated and severe environmental impacts would ensue. Therefore, no operating license should be granted until the entire plant is rendered capable of withstanding the maximum anticipated earthquake or tornado or until an adequate cost/benefit analysis pursuant to NEPA is conducted taking into account the impact of possible loss of the cooling towers.

4. The cost/benefit figures used by the Applicants are fallacious. In particular, the assumption that the unit will operate over its lifetime at a capacity factor of 0.8 is totally unjustified in the operating history of U. S. nuclear reactors. Through 1973, no U. S. nuclear reactor had a lifetime average capacity of 0.8, and only two of thirty-seven licensed through 1973 exceeded 0.7. The average capacity factor for all licensed reactors in 1973 was 0.55. No operating license should be granted until the Applicants can justify in a factual manner their capacity factor assumptions.

5. The containment structure and other buildings designed to withstand certain aircraft impact events are of inadequate strength to withstand the impact of airplanes which can reasonably be expected to frequent Harrisburg International Airport. Both the Boeing 747 and the Lockheed C-5A are reasonably expected to frequent Harrisburg International Airport and greatly exceed the kinetic energy set for the design considerations.

6. The environmental radioactivity monitoring program of the Applicants is inadequate to accurately measure the dose delivered to the public during normal and accident conditions. Only active, real-time detectors can determine what the actual dose rate is. Furthermore, an array of off-site active detectors could greatly aid in possible evacuation plans. No operating license should be granted until the Applicants provide a network of active radiation monitors.

7. The flood protection system for Unit 2 is inadequate. This is because the flood data presented and the floods designed against are based on historical data which do not include the intentional efforts of man to effect weather modification. Such efforts at weather modification render the historical data of questionable value. No operating license should be granted until the effects of human efforts at weather modification are understood.

8. The warning and evacuation plans of the Applicants and the Commonwealth of Pennsylvania are inadequate and unworkable. The plans

assume that all local and state officials involved are on 24-hour notice and can be contacted immediately. They further assume that all people notified will promptly react and know how to respond and are trained in what to do. They also assume that the public which has been assured that accidents are "highly unlikely" or "highly improbable," will respond and allow themselves to be evacuated. No operating license should be granted for Unit 2 until emergency and evacuation plans are shown to be workable through live tests.

9. The releases of gaseous radioactivity exceed the "as low as practicable" guidelines of Appendix I to 10 CFR Part 50. Systems exist for significantly reducing the emissions from Unit 2. In a plant of similar design (Rancho Seco), equipment is being utilized to reduce by a factor of 10 the release of radioactive iodine from that expected to be released from Three Mile Island, Unit 2. Also, at the San Onofre, Unit 1 plant a cryogenic system is used to reduce the release of radioactive noble gases. These practicable and workable systems are available at modest cost to reduce by approximately a factor of 10 the emission of gaseous radioactive fission products from Three Mile Island, Unit 2. No operating license should be granted for Unit 2 until such systems, or comparable ones, are installed.

10. The discharge of chlorine from Three Mile Island, Unit 2 will have an adverse effect on water quality and this has not been adequately considered in the NEPA cost/benefit analysis.

11. In its dose calculations the Applicant has ignored the effect of the cooling towers. Interaction between the gaseous releases of

radioactivity (in particular, radioactive iodine isotopes) and the cooling tower plumes can increase the thyroid dose by the cow-milk pathway by up to a factor of 10. Such a possible increase in the dose would exceed that allowed by the "as low as practicable" guidelines of Appendix I of 10 CFR Part 50. No operating license should be granted until the Applicant considers the effect of the cooling towers on the gaseous iodine and reduces the releases as necessary.

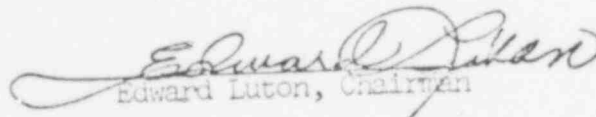
III.

The intervenors Citizens for a Safe Environment/York Committee for a Safe Environment "request financial assistance for legal fees, technical experts, and witnesses, and scientific studies of relevant topics in an amount not less than \$10,000 and not to exceed \$100,000 ... to assure full and complete hearings" in this case. It is our opinion that the Licensing Board is without legal authority to act favorably upon such a request. Absent such legal authority the request must be, and it hereby is, denied.

IV.

The Commonwealth of Pennsylvania shall participate in this proceeding as an interested state pursuant to 10 CFR §2.715(c).

IT IS SO ORDERED.


Edward Luton, Chairman

Dated at Bethesda, Maryland
this 6th day of November, 1975.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)

METROPOLITAN EDISON COMPANY,
ET AL.)

(Three Mile Island Unit No. 2))

Docket No.(s) 50-320

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document(s) upon each person designated on the official service list compiled by the Office of the Secretary of the Commission in this proceeding in accordance with the requirements of Section 2.712 of 10 CFR Part 2 - Rules of Practice, of the Nuclear Regulatory Commission's Rules and Regulations.

Dated at Washington, D.C. this

74 day of Nov. 1975.

Peggy A. Downing
Office of the Secretary of the Commission

82-052

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of

METROPOLITAN EDISON COMPANY, ET AL.

(Three Mile Island Unit No. 2)

)
)
) Docket No. 50-320 -OL
)
)

SERVICE LIST

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

Mr. Gustave A. Linenberger
Atomic Safety and Licensing Board
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dr. Ernest O. Salo
Professor
Fisheries Research Institute, WH-10
College of Fisheries
University of Washington
Seattle, Washington 98195

George F. Trowbridge, Esq.
Shaw, Pittman, Potts, Trowbridge
and Madden
910 17th Street, N. W.
Washington, D. C. 20006

James Tourtellotte, Esq.
Counsel for NRC Staff
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dr. Chauncey R. Kepford
Citizens for a Safe Environment &
York Committee for a Safe Environment
2586 Broad Street
York, Pennsylvania 17404

Honorable Karin W. Carter
Assistant Attorney General
Office of Enforcement
Department of Environmental Resources
709 Health and Welfare Building
Harrisburg, Pennsylvania 17120

Lawrence Sager, Esq.
Sager and Sager Associates
45 High Street
Pottstown, Pennsylvania 19464

Government Publication Section
State Library of Pennsylvania
Education Building, Box 1601
Harrisburg, Pennsylvania 17126