



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

50-293

August 5, 1983

MEMORANDUM FOR: Richard C. DeYoung, Director  
Office of Inspection and Enforcement

FROM: Stephen G. Burns, Deputy Director and Chief Counsel  
Regional Operations and Enforcement Division  
Office of Executive Legal Director

SUBJECT: PETITION OF MASSPIRG FOR EMERGENCY AND REMEDIAL ACTION  
WITH RESPECT TO THE EMERGENCY RESPONSE PLANS FOR THE  
PILGRIM NUCLEAR POWER STATION

By a petition dated July 20, 1983, Michael D. Ernst, Esq., on behalf of the Massachusetts Public Interest Research Group (MASSPIRG), requested that the Director of Nuclear Reactor Regulation take immediate action to remedy serious deficiencies in the offsite emergency response plans for the Pilgrim Nuclear Power Station in Plymouth, Massachusetts. The petition further requested (1) that the Director of Nuclear Reactor Regulation immediately start the four-month time period for correction of all deficiencies in the Pilgrim emergency plans and preparedness, and (2) that the Director of Nuclear Reactor Regulation determine whether the state of emergency preparedness in conjunction with the poor safety record at Pilgrim and the high summer population in the area warrant immediate shutdown or operation at reduced power.

Although the petition was directed to the Office of Nuclear Reactor Regulation, as the Office of Inspection and Enforcement has primary responsibility for emergency preparedness issues, the petition is being forwarded to your office for preparation of a substantive reply. This office will work with your staff to develop an appropriate response. Enclosed for your use are drafts of:

1. A letter of acknowledgement to Mr. Ernst. Please note that this letter requires substantive input from your staff with respect to the justification to be given for the denial of any immediate relief should you determine that a denial is appropriate.
2. A notice of receipt of the petition under 10 C.F.R. 2.206 for publication in the Federal Register.
3. The original petition submitted by MASSPIRG. You should note that the CHACS II report supposedly attached to the petition is missing. A copy has been requested from MASSPIRG and will be forwarded to your office upon receipt.

Please inform my office of the technical staff contact who will be involved in preparing a response to this petition and provide us with copies of all documents related to the petition. Also, please place our office on concurrence for all correspondence initiated by the staff and related to this petition.

Stephen G. Burns  
Deputy Director and Chief Counsel  
Regional Operations and Enforcement  
Division

Enclosures: a/s

cc: (w/enclosures)  
H. Denton, NRR  
E. Christenbury, OELD  
T. Murley, RI

Distribution

EDO # 13362  
G. Cunningham/J. Murray  
E. Chan, OELD  
L. Chandler, OELD  
J. Gutierrez, RI  
2.206 chron  
ROED Subject (DP-83-21)  
ROED Rdg  
S. Burns chron  
R. Hoefling chron  
L. Cuoco info  
ARC Central  
ELD Rdg

DESIGNATED ORIGINAL

Certified By PS06  
OB

CONTACT:  
Richard Hoefling, OELD  
x27013

OFC	:OELD	lmc	:OELD	SB	:	:	:	:
NAME	:L Cuoco/cb	:	:Burns	:	:	:	:	:
DATE	:8/5/83	:	:8/ /83	:	:	:	:	:

Docket No. 50-293

Michael D. Ernst, Esq.  
Massachusetts Public Interest  
Research Group  
37 Temple Place  
Boston, Mass. 02111

Dear Mr. Ernst:

This letter is sent to acknowledge receipt of the petition of the Massachusetts Public Interest Research Group (MASSPIRG) dated July 20, 1983 requesting that the Director of Nuclear Reactor Regulation take immediate action to remedy alleged serious deficiencies in the offsite emergency response plans for the Pilgrim Nuclear Power Station in Plymouth, Massachusetts. Although the petition was directed to the Office of Nuclear Reactor Regulation, responsibilities in the area of emergency preparedness lie primarily with the Office of Inspection and Enforcement and accordingly your petition has been referred to me for a response.

Your petition is being treated under 10 C.F.R. 2.206 of the Commission's regulations and appropriate action will be taken on your petition within a reasonable time.

Although your petition asks that certain immediate actions be taken, including an immediate initiation of the four-month time period for correction of alleged deficiencies in the Pilgrim emergency plans and preparedness and a determination as to whether the state of emergency preparedness in

conjunction with the poor safety record at the Pilgrim facility and the high summer population in the area warrant the immediate shutdown or operation at reduced power, I decline to take such action until the staff has evaluated your petition and other relevant information to determine whether any such remedies are appropriate [Office of Inspection and Enforcement to provide justification as to why immediate action is not required.]

The staff will continue to review your petition, and I will issue a decision with regard to it in the reasonably near future. A copy of the notice that is being filed for publication with the Office of the Federal Register is enclosed here for your information.

Sincerely

Richard C. DeYoung  
Director  
Office of Inspection and Enforcement

Enclosure: As stated above

cc: Boston Edison Co.

NUCLEAR REGULATORY COMMISSION

[Docket No. 50-293]

BOSTON EDISON COMPANY

(PILGRIM NUCLEAR POWER STATION)

Request for Action Under 10 C.F.R. 2.206

Notice is hereby given that, by petition dated July 20, 1983, the Massachusetts Public Interest Research Group filed a petition seeking immediate action to remedy alleged serious deficiencies in the offsite emergency response plans for the Pilgrim Nuclear Power Station in Plymouth, Massachusetts. The petition requested immediate initiation of the four-month time period for correction of alleged emergency planning deficiencies and also sought a determination as to whether the alleged lack of emergency preparedness at the Pilgrim facility in conjunction with that facility's poor safety record and the high summer population in the area warranted an immediate shutdown or operation of the Pilgrim facility at reduced power. The request is being treated pursuant to 10 C.F.R. 2.206 of the Commission's regulations and, accordingly, appropriate action will be taken on this request within a reasonable time.

A copy of the petition is available for inspection in the Commission's Public Document Room, 1717 H Street, N.W., Washington, D.C. 20555 and at the local Public Document Room for the Pilgrim Nuclear Power Station at the Pilgrim Public Library, North Street, Plymouth, Massachusetts, 02360.

Dated at Bethesda, Maryland, this        day of August, 1983.

FOR THE NUCLEAR REGULATORY COMMISSION

Richard C. DeYoung, Director  
Office of Inspection and Enforcement

# MASSPIRG

THE MASSACHUSETTS PUBLIC INTEREST RESEARCH GROUP

37 Temple Place Boston, MA 02111 (617)423-1796

July 20, 1983

Director of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Dear Sir/Madam:

Enclosed for filing pursuant to 10CFR §2.206(a), please find a copy of the "Petition of the Massachusetts Public Interest Research Group for Emergency and Remedial Action" and supporting documents.

Thank you for your prompt attention to this serious matter.

Sincerely,

*Michael D. Ernst*

Michael D. Ernst, Esq.  
MASSPIRG  
37 Temple Place  
Boston, MA 02111  
(617) 423-1796

ME:NRG

Enclosures

8307260573 830720  
PDR ADOCK 05000293  
G PDR

YE03  
111



UNITED STATES OF AMERICA

BEFORE THE NUCLEAR REGULATORY COMMISSION

PETITION OF THE MASSACHUSETTS PUBLIC INTEREST  
RESEARCH GROUP FOR EMERGENCY AND REMEDIAL ACTION

INTRODUCTION

1. This petition to the Director of Nuclear Reactor Regulation (NRR) of the Nuclear Regulatory Commission (NRC) is brought by the Massachusetts Public Interest Research Group (MASSPIRG). The petition seeks immediate action to remedy serious deficiencies in the offsite emergency response plans for the Pilgrim Nuclear Power Station in Plymouth, Mass.

DESCRIPTION OF THE PETITIONER

2. MASSPIRG is a non-profit citizens group concerned with safe energy, environmental issues and consumer protection. MASSPIRG has over 50,000 citizen members and over 40,000 student members across Massachusetts. 836 citizen members live in the plume exposure Emergency Planning Zone for Pilgrim and another 1,809 live on Cape Cod. In 1977, MASSPIRG published a study of emergency response plans in Massachusetts entitled "Nuclear Evacuation Planning: Blueprint for Chaos." MASSPIRG has just completed a follow-up report to the first study entitled "Blueprint for Chaos II: Pilgrim Disaster Plans Still a Disaster" (copy attached). This second report, based on a year-long investigation of the plans and telephone interviews with residents and institutions within the Pilgrim plume exposure Emergency Planning Zone (EPZ), forms the basis for this petition.

JURISDICTION

3. This petition is brought before the Commission pursuant to the authority

830720  
8307260576 830720  
PDR ADOCK 05000293  
G PDR



granted to it in 42 USC§2233(d), 2236(a), 2237 and 10 CFR §§ 2.204, 2.206(c)(1), 50.54, 50.100 and 50.109.

STATEMENT OF THE FACTS

4. The facts summarized in this petition are detailed in the attached MASSPIRG report, entitled "Blueprint for Chaos II: Pilgrim Disaster Plans Still A Disaster" ("Chaos II").

A. Advance Information for Residents and Tourists

5. Advance public education of the emergency plans is necessary to avoid panic and mass chaos when an accident occurs and the sirens are activated. The only method of public education utilized within the Pilgrim Emergency Planning Zone (EPZ) has been the distribution of pamphlets by mail. A MASSPIRG telephone survey of 100 residents in the EPZ discovered that only two-thirds had received the pamphlet and just one-sixth still had it available [Chaos II, Appendix A, #23, #28]. Only 9% knew that when the sirens sounded they were supposed to tune in to an Emergency Broadcast System station [Chaos II, Appendix A, #16].

6. The Emergency Public Information pamphlets contain no information on where to find public shelters or public transportation or how to make ad hoc breathing filters which can substantially reduce the inhalation of radionuclides [Chaos II, p.12].

7. The Emergency Public Information pamphlet also contains inaccurate telephone numbers for four of the five local Civil Defense Directors in the EPZ [Chaos II, p. 13]. The pamphlet says evacuation transportation will be provided for nursing home residents, but the official plans say private automobiles will be used [Chaos II, p.12].

8. There is no effort to educate tourists about the plans.

9. FEMA identified the failure to educate tourists and to update telephone numbers quarterly as "significant deficiencies." ["Interim Findings: Joint State and Local Radiological Emergency Response Capabilities for the Pilgrim Nuclear Power Station" ("Interim Findings"), FEMA, September 1982, p.6]

10. The failure to provide adequate public information on the emergency response plans to residents and tourists in the EPZ is a violation of 10 CFR § 50.47(b)(7), 10 CFR Part 50, Appendix E, IV.D.2, and evaluation criteria G.1, G.2, and P.10. of the "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants" ("Evaluation Criteria"), NUREG-0654, Rev.1., November 1980 [these evaluation criteria are incorporated by reference into 10 CFR § 50.47(b)].

B. Notification During an Accident

11. The Pilgrim warning siren system is inadequate to alert the public within the EPZ. Half the FEMA observers of the last siren test reported that the sirens were either not loud enough or could not be heard at all. ["Report on the Pilgrim Nuclear Power Station Siren Test, June 19, 1982" ("FEMA Siren Report"), FEMA, January 1983, p. 6] Over 90% of MASSPIRG survey respondents who can hear the sirens complained of false alarms. [Chaos II, Appendix A, #19]

12. There are insufficient sirens and inadequate back-up measures to complete initial notification of the public within the EPZ within about 15 minutes. [Chaos II, pp. 17-19]

13. There are no measures for alerting the deaf or those people within the EPZ with hearing impairments. [Chaos II, pp. 20-21]

14. FEMA has concluded that the siren system does not meet "minimum federal standards." FEMA considers the inoperability of some sirens and lack of siren activation training as a "significant deficiency." [FEMA Interim Findings, p. 15]

15. The failure to maintain the "capability to essentially complete the initial notification of the public within the plume exposure pathway EPZ within about 15 minutes" is a violation of 10 CFR Part 50, Appendix E, IV.D.3., 10 CFR § 50.47(b)(5) and Evaluation Criterion E.6.

C. Evacuation Plans

16. If there is inadequate time to evacuate a downwind area from the reactor before a major release of radioactivity, sheltering in basements or large buildings provides greater protection than a car on the road. The decision of whether to evacuate the population or order sheltering, therefore, requires accurate estimates of the time of a radiation release from the reactor and of the time necessary to evacuate downwind sectors.

17. The evacuation time estimates for the Pilgrim EPZ are unrealistically low, because they ignore the probability of some panic, traffic disorder, traffic obstacles outside the EPZ and the fact that thousands of people outside designated evacuation zones will also evacuate [Chaos II, pp. 23-25]. Evacuation time estimates are not provided for various adverse weather scenarios nor for various special institutions and population groups as required.

19. There are no workable plans for evacuating the physically disabled, nursing home residents, school children, hospital patients, campers, inmates of correctional facilities, or people without 24-hour access to cars. [Chaos II, pp. 28-31]

20. There are no written agreements with bus companies or bus drivers to provide transportation for thousands of people who cannot drive or may not have a car. [Chaos II, pp. 27-28]

21. FEMA considers the failure to identify and provide transportation assistance for the "mobility impaired" and for other special population groups "significant deficiencies." [FEMA Interim Findings, pp. 6,11]

22. The failure to provide for adequate evacuation transportation for the physically disabled, nursing home residents, school children, hospital patients, campers, inmates or people without 24-hour access to cars is a violation of 10 CFR § 50.47(b)(10) and Evaluation Criteria A.3., J.10.d., and J.10.g.

23. The failure to develop accurate evacuation time estimates in accordance with Appendix 4 of NUREG-0654 is a further violation of 10 CFR § 50.47(b)(10) and Evaluation Criteria J.8., J.10.1. and J.10.m.

D. Medical Facilities

24. The only two hospitals listed in the plans for providing treatment for radioactively contaminated injured persons have a total capacity for treating just 8 or 9 such victims. One hospital is within four miles of the reactor and the other has no staff trained for radioactively contaminated patients. [Chaos II, Appendix G]

25. FEMA recommends distribution of a drug to prevent thyroid tumors to persons in institutions who may not be evacuated. [Evaluation Criteria, J.10.e. and J.10.f.] There are no plans for distributing radioprotective drugs to institutionalized persons or anyone else within the Pilgrim EPZ.

26. The failure to provide adequate arrangements for medical care for contaminated injured individuals is a violation of 10 CFR § 50.47(b)(12), 10 CFR Part 50, Appendix E, II.E and IV.E.7., and Evaluation Criteria L.1. and L.3.

E. The Emergency Planning Zone

27. The Emergency Planning Zone (EPZ) is the area around a nuclear power plant for which detailed planning and emergency preparedness is needed to assure that prompt and effective actions can be taken to protect the public at risk from a serious accident. The Environmental Protection Agency recom-

mends protective measures by the public when radiation exposure is likely to exceed the EPA "protective action guide" of one REM. [Manual of Protective Action Guides and Protective Actions for Nuclear Incidents, EPA - 520/1-75-001, EPA, 1975]

28. NRC regulations require the exact size and configuration of each EPZ to be "determined in relation to local emergency response needs and capabilities as they are affected by such conditions as demography, topography, land characteristics, access routes, and jurisdictional boundaries." Generally, the plume exposure EPZ should be about 10 miles in radius. [10 CFR § 50.47(c)(2)]

29. The licensee of Pilgrim, Boston Edison, admits that the only factor used to create the Pilgrim EPZ was jurisdictional boundaries. [Response of Boston Edison to Commonwealth of Massachusetts' First Set of Interrogatories on Emergency Planning, July 20, 1981, p.2]

30. Cape Cod begins just 11 miles from Pilgrim and is connected to the mainland by only two bridges. There is no emergency planning for Cape Cod nor public education of protective measures nor warning sirens. Yet civil defense plans to close the Cape bridges to prevent evacuation if the wind blows toward Cape Cod. [Chaos II, p. 32]

31. On the basis of preliminary CRAC (Calculation of Reactor Accident Consequences) results obtained by the NRC staff for the Pilgrim site, the Attorney General of Massachusetts has concluded that the size of the Pilgrim EPZ is inadequate. [Comments of Attorney General Francis X. Bellotti Relative to Off-Site Emergency Planning for the Pilgrim Nuclear Power Station ("Comments of the Attorney General"), submitted to FEMA, August 1982]

32. The current size of the Pilgrim plume exposure EPZ violates 10 CFR § 50.47(c)(2), 10 CFR § 50.54(q), 10 CFR Part 50, Appendix E, I. and 44 CFR § 350.7(b).

STATEMENT OF THE LAW

33. In addition to the regulations discussed previously, the Atomic Energy Act provides, in 42 USC §2236(a), for the revocation, suspension or modification of a license if any information is disclosed from "report, record, inspection or other means which would warrant the Commission to refuse to grant a license on an original application." This provision is incorporated into the Commission's regulations in 10 CFR §50.100 and 10 CFR §50.54(d).

34. When issuing new emergency planning regulations after Three Mile Island, the Commission stated that "adequate emergency preparedness is an essential aspect in the protection of the public health and safety."  
[45 Federal Register 55404, August 19, 1980]

35. 10 CFR §50.54(s)(2)(ii) provides that if,

after April 1, 1981, the NRC finds that the state of emergency preparedness does not provide reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency and if the deficiencies are not corrected within four months of that finding, the Commission will determine whether the reactor shall be shut down until such deficiencies are remedied or whether other enforcement action is appropriate.

36. The facts stated herein establish the existence of substantial violations of NRC emergency planning regulations in the emergency plans and preparedness for Pilgrim Nuclear Power Station. The Federal Emergency Management Agency also detailed 73 deficiencies in the Pilgrim plans and preparedness. [FEMA Interim Findings]

37. Based on the numerous deficiencies in the emergency plans identified by FEMA and detailed in the attached MASSPIRG report, it is obvious that the state of emergency preparedness at Pilgrim does not provide reasonable

assurance that adequate protective measures can and will be taken in the event of a radiological emergency. The Attorney General of Massachusetts concurs with this conclusion. [Comments of the Attorney General, p. 1]

38. Neither license-holders nor operators can avoid compliance with the NRC regulations, either directly or indirectly. The NRC Appeal Board has clearly held that no party, including the Staff, can justify the licensing of a reactor which does not comply with applicable standards. Further, the Appeal Board has stated:

Nor can they avoid compliance by arguing that, although an applicable regulation is not met, the public health and safety will still be protected. For, once a regulation is adopted, the standards it embodies represent the Commission's definition of what is required to protect the public health and safety.

In the Matter of Vermont Yankee Nuclear Power Corp.  
(Vermont Yankee Nuclear Power Station) ALAB-138,  
RAI-73-7, 520, 528.

By virtue of 42 USC §2236(a) and 10 CFR §50.100, this principle applies equally to operating reactors.

39. The commission has held that "public safety is the first, last and a permanent consideration in any decision on the issuance of a construction permit or a license to operate a nuclear facility." Power Reactor Development Corp. v. International Union of Electrical Radio and Machine Workers ("Power Reactor"), 367 U.S. 396, 402, 81 S.Ct. 1529(1961). The Supreme Court, in that case, also emphasized that even after a reactor is licensed for operation, the Commission will retain jurisdiction "to ensure that the highest safety standards are maintained." [Power Reactor, supra, 367 U.S. at 402, 81 S.Ct. at 1532]

40. When violations of emergency planning regulations essential to the protection of the public health and safety continue to exist more than two years after the NRC deadline, the Commission has the duty and responsibility to take immediate corrective action.

RELIEF REQUESTED

41. For the reasons enumerated above, petitioners state that the following relief is required:

a. The Director of Nuclear Reactor Regulation should immediately issue a finding that the state of emergency preparedness at Pilgrim does not provide reasonable assurance that protective measures can and will be taken in the event of a radiological emergency.

b. The Director of Nuclear Reactor Regulation should immediately start the four-month time period for correction of all deficiencies in Pilgrim emergency plans and preparedness.

c. The Director of Nuclear Reactor Regulation should determine whether the lack of emergency preparedness in conjunction with the poor safety record at Pilgrim and the high summer population in the EPZ and on Cape Cod warrants the immediate shut down or operation of Pilgrim at reduced power until the emergency plans and preparedness meet minimum federal standards. [Union of Concerned Scientists' Petition for Emergency and Remedial Action, CLI-78-6, 7 NRC 400 (April 1978)]



By the Massachusetts Public Interest  
Research Group,

By their Attorney,

*Michael D Ernst*

---

Michael D. Ernst  
MASSPIRG  
37 Temple Place  
Boston, MA 02111  
(617) 423-1796

I hereby affirm that the facts alleged are true and correct to the best  
of my knowledge and belief.

*Michael D Ernst*

---

Michael D. Ernst

Dated: July 20, 1983