EMERGENCY OFFSITE PLANNING AND NUCLEAR POWER PLANTS: THE OPPOSITION AND THE FEDERAL RESPONSE

Federal law requires a state, local or utility emergency offsite preparedness plan before licensing a nuclear power plant.[1] Some state and local governments that are located in an emergency planning zone (EPZ)[2] must prepare emergency offsite plans.[3] EPZs are areas within either a ten or fifty mile radius of a nuclear power plant.[4] The emergency plans delegate responsibility for their implementation to various

1. 42 U.S.C. § 2011 (1982) *as amended by* Act of June 30, 1980, Pub. L. No. 96-295, 94 Stat. 781, 783-84.

2. The EPZ consists of a plume exposure pathway 10 miles in radius and an ingestion pathway 50 miles in radius. Domestic Licensing of Production and Utilization Facilities, 10 C.F.R. § 50.47(c)(2) (1989). However, the exact size depends on local emergency response needs and capabilities and such conditions as topography, demographics, land characteristics, access routes and jurisdictional boundaries. *Id. See In re* Long Island Lighting Co., 26 N.R.C. 393, 395 (1987) (Nuclear Regulatory Commission held that adjustments to the 10 mile plume exposure pathway are justifiable to prevent EPZ boundaries from cutting schools or hospitals in half or arbitrarily carving out small portions of governmental jurisdiction); *In re* Boston Edison Co., 19 N.R.C. 542, 551-52 (1984) (Director of the Office of Inspection and Enforcement denied petitioner's request to enlarge the plume exposure pathway based on projected radiation doses exceeding the EPA Protective Action Guide outside the ten mile plume exposure pathway).

3. Sylves, *Nuclear Power Plants and Emergency Planning: An Intergovernmental Nightmare*, 44 PUB. ADMIN. REV. 393, 397 (1984) (local governments within the Emergency Planning Zone (EPZ) must prepare emergency plans unless they are in an adjacent state where the adjacent state's plan overlaying the local government is deemed sufficient).

4. *Id.* at 395.

agencies and political bodies.[5] These plans contain lists of available resources,[6] duties of individuals or groups,[7] and schedules and procedures[8] for mass evacuation. Responsibility for the review and approval of emergency plans lies with the Nuclear Regulatory Commission (NRC)[9] and the Federal Emergency Management Agency (FEMA).[10]

This Note will focus on state and local governments' refusal to participate in offsite emergency planning, which interferes with the licensing of nuclear power plants. Part I summarizes the history of offsite emergency preparedness plans. Part II examines the substantive re-

5. *Id.*

6. Resources include equipment, personnel and facilities. Emergency Planning and Preparedness for Production and Utilization Facilities, 10 C.F.R. Part 50, Appendix E § IV.E-F (1989).

7. Emergency plans designate those who will take charge in an emergency, plant staff assignments and expectations of state, local or federal agencies. *Id.*

8. These procedures include description of the means to notify the public in an emergency and to disseminate information concerning the emergency plans. *Id.*

9. The NRC is responsible for the evaluation and approval of onsite and offsite emergency plans. Specifically, they are:

To assess licensee emergency plans for adequacy.

To verify that the licensee emergency plans are adequately implemented; e.g., adequacy and maintenance of procedures, training, resources, staffing levels and qualifications, and equipment.

To review the FEMA findings and determinations on the adequacy and capability of implementation of state and local plans.

To make decisions with regard to the overall state of emergency preparedness — i.e., integration of the licensee's emergency preparedness and the state and local governments', as determined by FEMA and reviewed by NRC — and the issuance of operating licenses or shutdown of operating reactors.

Perry, *Off-site Preparedness and Nuclear Power Plant Licensing*, 111 PUB. UTIL. FORT. 27, 28-29 (April 28, 1983).

10. FEMA's sole responsibility concerns the adequacy of offsite emergency preparedness plans. Specifically, the agency's responsibilities are:

To make findings and determinations as to whether state and local emergency plans are adequate.

To verify that the state and local emergency plans are capable of being implemented; e.g., adequacy and maintenance of procedures, training, resources, staffing levels and qualifications, and equipment.

To assume responsibility for emergency preparedness training of state and local officials.

To develop, issue, and update interagency assignments that delineate respective agency capabilities and responsibilities, and define procedures for coordination and direction for emergency planning and response.

Id. A final finding on the adequacy of the emergency plans is not required for low power licensing. Instead, interim findings on a plan's adequacy satisfy the NRC's regulations. *In re* Pac. Gas and Elec. Co., 19 N.R.C. 1373, 1381-82 (1984).

quirements of offsite plans. Part III identifies the complications that state and local governments present to the licensing process. Part IV proposes remedies for the offsite emergency preparedness plan problem. Finally, this Note concludes that recent federal intervention could effectively prevent anti-nuclear groups from using offsite emergency planning to prevent or delay the licensing of nuclear power plants.

I. HISTORY OF OFFSITE EMERGENCY PREPAREDNESS PLANS

Prior to the Three Mile Island accident, states voluntarily submitted emergency plans.[11] Congress feared that requiring state approval of emergency plans would allow anti-nuclear state legislatures or agencies to block licensing of nuclear facilities.[12] The federal government and the nuclear industry believed that the combination of plant safeguards and NRC regulations would greatly reduce the likelihood of an accident.[13] The federal government used this projected low accident probability to justify its lax regulation of commercial nuclear power.[14]

The Three Mile Island incident changed perceptions of the probability of an accident for both the nuclear industry and governments.[15] Federal law has required states, local governments or utilities to develop and implement an emergency preparedness plan prior to licensing each nuclear facility.[16] The NRC also promulgated regula-

11. Sylves, *supra* note 3, at 394. Prior to the Three Mile Island accident, only 11 of 43 states with nuclear facilities had emergency offsite preparedness plans that met NRC specifications. *Id.*

12. *Id.* at 395. Legislatures or agencies could refuse to prepare emergency plans for nuclear facilities. *Id.*

13. *Id.* at 394. Proponents of nuclear power believe that emergency planning needlessly alarms the public because massive evacuation is not feasible. *Id.*

14. *Id.*

15. The accident led to a law requiring utilities with nuclear power plants to submit upgraded emergency plans. The utilities also needed to supply evidence that notification and instruction to the public would occur within the 10 mile emergency planning zone. *Id.* at 396. The evacuation of the area surrounding Three Mile Island was not accomplished effectively. Conseqently, residents were unnecessarily exposed to radiation. This led to the federal investigation which determined the need for offsite emergency planning and new standards in approving such plans. *Id. See also* Note, *Federalism and Offsite Emergency Planning for Nuclear Reactors: The Shoreham Impasse*, 66 B.U.L. REV. 229, 233-34 (1986) (Three Mile Island accident prompted changes in the licensing of nuclear power plants by requiring offsite planning).

16. 42 U.S.C. § 2011 (1954) *as amended by* Act of June 30, 1980, Pub. L. No. 96-295, 94 Stat. 781 (1981). The plan must provide for responses to accidents at the facility and comply with NRC guidelines. In the absence of a plan developed by the state or

tions[17] which specify guidelines for offsite emergency plans. These regulations provide standards to assess the adequacy[18] and content[19] of emergency plans.

Several states have effectively blocked the licensing of nuclear power plants by not cooperating with the utilities in developing offsite emergency plans.[20] The absence of state assistance has reduced the effectiveness of such planning and has made implementation difficult.[21]

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local governments, a utility plan that reasonably assures the health and safety of the public inside the 10 mile EPZ is acceptable. *Id.* at 781-82.

17. *See infra* notes 158-70 and accompanying text (discussing two regulations aimed at remedying the licensing problem).

18. Domestic Licensing of Production and Utilization Facilities, 10 C.F.R. § 50.47(a)(1) (1989). "Adequate" means sufficient for a specific requirement. WEBSTER'S NINTH NEW COLLEGIATE DICTIONARY 56 (1986).

19. Emergency Planning and Preparedness for Production and Utilization Facilities, *supra* note 6, at Appendix E § IV (1989). The content of a plan consists of organization (*see infra* note 25 and accompanying text), assessment actions, activation of emergency organization (*see infra* notes 38-43 and accompanying text), notification procedures (*see infra* notes 60-69 and accompanying text), emergency facilities and equipment (*see infra* notes 74-86 and accompanying text), training (*see infra* notes 105-113 and accompanying text) and recovery. Assessment actions consist of predetermined levels used to monitor radioactive releases including emergency action levels used to determine the type of protective measures necessary to protect the public. Emergency Planning and Preparedness for Production and Utilization Facilities, *supra* note 6, at Appendix E § IV.B. Recovery involves reentering the nuclear facility following an accident or when operations could resume, using certain criteria to determine the appropriate time. *Id.* at IV.H.

20. *See* N.Y. Times, Feb. 7, 1987, § 1, at 50, col. 1 (state and local officials refuse to cooperate in developing emergency plans for nuclear power plants). The states which blocked or are blocking nuclear facilities include Massachusetts, New York and Ohio. *NRC Tentatively Approves Proposal to Permit Licensing of Shoreham and Seabrook Nuclear Facilities Without State-approved Emergency Evacuation Plans*, 119 PUB. UTIL. FORT. 28, 28-29 (Mar. 19, 1987).

21. *See* MASS. GEN. LAWS ANN. ch. 164, § 3-3 (WEST 1989) (state requires majority vote to allow construction or operation of nuclear facilities). *But see* FLA. STAT. ANN. § 252.60 (West 1975 & Supp. 1989) (state will assist in developing and implementing offsite emergency plans); ILL. REV. STAT. ch. 111½, para. 4308 (1988) (state program will develop emergency plans to mitigate the effects of an accident); LA. REV. STAT. ANN. § 30:1104(14) (West 1989) (state requires development and implementation of a statewide emergency preparedness plan); ME. REV. STAT. ANN. tit. 37-B, § 954 (1989) (state committee must prepare and review annually an emergency preparedness plan); MD. ANN. CODE art. 16A, § 7 (1957) (each local organization whose jurisdiction is within the plume or ingestation zone or will host evacuees from another jurisdiction within a plume or ingestation zone shall submit an emergency preparedness plan to the state director); MINN. STAT. § 12.13 (1988) (state agencies must develop an emergency response plan); N.H. REV. STAT. ANN. § 107-B:1 (1978 & Supp. 1988) (state emergency management agency shall assist in developing and imple-

II. EMERGENCY OFFSITE PLAN REQUIREMENTS

The difficulty in offsite plan implementation arises from the complexity of the plan.[22] Government regulations require adequate notification to the public of emergency planning procedures.[23] An adequate notification plan requires yearly dissemination of planned protective measures to carry out fast evacuations.[24] Job descriptions and responsibilities for government agencies and utilities include numerous complex functions performed under an emergency plan.[25] Training to

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menting an emergency response plan); N.J. STAT. ANN. § 26:2D-40 (West 1987 & Supp. 1989) (state department must prepare, adopt, and continually revise a radiation emergency response plan); N.J. STAT. ANN. § 26:2D-41 (West 1987) (local government where a nuclear facility is located must submit a local radiation emergency response plan); PA. STAT. ANN. tit. 35, § 7110.502 (Purdon 1977 & Supp. 1989) (state agency must develop an emergency response plan and participate in emergency exercises); R.I. GEN. LAWS § 23-1.3-2 (1985) (state agency will implement an emergency response plan and act as governor's principal advisor); VT. STAT. ANN. tit 20, § 43 (1987 & Supp. 1988) (the state emergency response plan includes provisions for personnel and equipment to maintain the effectiveness of the plan). *But cf.* CAL. HEALTH & SAFETY CODE § 25880.4 (West 1984) (nuclear power plant does not need to meet California code requirements until NRC determines adequacy of seismic safety criteria).

22. Sylves, *supra* note 3, at 399.

23. Emergency Planning and Preparedness for Production and Utilization Facilities, *supra* note 6, at Appendix E § IV.D.

24. *Id.* at Appendix E § IV.D.2. The notification must disclose information such as methods and times for public notification and protection actions planned in the event of an accident. *Id.*

25. These descriptions and responsibilities include:

1. A description of the normal plant operating organization.
2. A description of the onsite emergency response organization with a detailed discussion of:
a. Authorities, responsibilities, and duties of the individual(s) who will take charge during an emergency;
b. Plant staff emergency assignments;
c. Authorities, responsibilities, and duties of an onsite emergency coordinator who shall be in charge of the exchange of information with offsite authorities responsible for coordinating and implementing offsite emergency measures.
3. A description, by position and function to be performed, of the licensee's headquarters personnel who will be sent to the plant site to augment the onsite emergency organization.
4. Identification, by position and function to be performed, of persons within the licensee organization who will be responsible for making offsite dose projections, and a description of how these projections will be made and the results transmitted to State and local authorities, NRC, and other appropriate government entities.
5. Identification, by position and function to be performed, of other employees of the licensee with special qualifications for coping with emergency conditions that may arise. Other persons with special qualifications, such as consultants, who are not employees of the licensee and who may be called upon for assistance for emer-

carry out appropriate emergency responses involves hours of drills and exercises. The NRC and FEMA use the previous emergency planning requirements as part of the review and evaluation criteria.

Federal regulations provide sixteen criteria that NRC and FEMA use to evaluate offsite plans.[26] They include:

1. Notification to state and local response organizations, emergency personnel and the public;[27]
2. Prompt communication to emergency personnel and the public;[28]
3. Dissemination of information periodically to the public;[29]
4. Provision and maintenance of adequate facilities and equipment to support emergency responses;[30]
5. Protection guidelines for plume exposure pathway EPZ[31] for workers and the public;[32]

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gencies shall also be identified. The special qualifications of these persons shall be described.

6. A description of the local offsite services to be provided in support of the licensee's emergency organization.

7. Identification of, and assistance expected from, appropriate State, local and Federal agencies with responsibilities for coping with emergencies.

8. Identification of the State and/or local officials responsible for planning for, ordering, and controlling appropriate protective actions, including evacuations when necessary.

Id. at Appendix E § IV.A.

26. Domestic Licensing of Production and Utilization Facilities, 10 C.F.R. § 50.47(b) (1989). When compliance with each of the sixteen standards is absent, the Commissioner can issue a license if any of the following conditions are met:

1. The applicant must demonstrate the deficiencies are not significant for the plant in question.
2. Compensating actions will occur promptly.
3. There are other compelling reasons to permit licensing.

In re Long Island Lighting Co., 24 N.R.C. 412, 429 *aff'd*, N.R.C. 561 (1986).

27. 10 C.F.R. § 50.47(b)(5). Utilization of established initial and follow-up messages accomplishes the notification criteria. The licensee must have already established the means of disseminating such information with clear instructions to the populace within the 10 mile plume exposure pathway EPZ. *Id.*

28. *See infra* notes 60-69 and accompanying text for a discussion of the notification requirements.

29. 10 C.F.R. § 50.47(b)(7). Periodic notification to the public of initial action in an emergency is required. Advance planning is also needed for dissemination of information to the media and the public concerning emergency plans. *Id.*

30. *See infra* notes 74-86 and accompanying text (discussing the facilities and equipment requirement).

31. Contents of Applications; General Information, 10 C.F.R. § 50.33(g) (1989). The plume exposure pathway is the 10 mile radius from the nuclear power plant. *Id.*

32. 10 C.F.R. § 50.47(b)(10). The plan requires guidelines for choice of protective

6. Arrangements for medical services for contaminated or injured individuals;[33]
7. Periodic exercises and drills;[34] and
8. Radiological emergency response training.[35]

Further discussion of the remaining criteria is not necessary because they have not received as much criticism.[36] The enumerated criteria are controversial[37] and require intense FEMA and NRC study in order to determine their adequacy in an emergency plan.

Another controversial standard is the methods and procedures for notifying response organizations. The standards for notification of off-

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actions, consistent with federal guidance, and protection for the ingestion exposure pathway. *Id.*

33. *Id.* at § 50.47(b)(12). This includes treatment of individuals at the nuclear facility and offsite transportation to a medical facility. Emergency Planning and Preparedness and Utilization Facilities, *supra* note 6, at Appendix E § IV.E.

34. 10 C.F.R. § 50.47(b)(14). These drills are required to evaluate any deficiencies in the plan. Additionally, the drills develop and maintain key skills in emergency workers. *Id.*

35. *Id.* at § 50.47(b)(15). All emergency workers who will respond to an accident require this training. *Id.* The group are fire teams, first-aid and rescue teams, onsite personnel, and local service personnel. Emergency Planning and Preparedness for Production and Utilization Facilities, *supra* note 6, at Appendix E § IV.F.

36. Domestic Licensing of Production and Utilization Facilities, 10 C.F.R. § 50.47(b) (1989). The remaining standards include:

1. Assignment of primary responsibilities to state and local organizations within the EPZ and the licensee are required. The state and local organizations and the licensee each need staff that can respond immediately to an accident on a continuous basis.
2. Onsite staff responsibilities in the event of an emergency are defined as adequate staffing in key areas at all times. The onsite and offsite response activities require interfacing which is delineated in an emergency plan.
3. The ability to use assistance resources and accommodate state and local governments at a near-site Emergency Operations Facility. These requests are made in advance along with the identification of other organizations capable of assisting in an emergency.
4. The licensee is using an emergency classification and action level scheme that includes the facility system and effluent parameters. State and local response plans call for reliance on such information provided by the licensee.
5. The plan has adequate methods, systems and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency.
6. Means to control radiation exposure exist. This applies to emergency workers and is consistent with Environmental Protection Agency guidelines.
7. General recovery and re-entry plans are developed.
8. Plan development and training of planners exist. This includes the development, review and distribution of emergency plans. *Id.*

37. *See infra* notes 38-113 and accompanying text for a discussion of each controversial criteria.

site response organizations[38] require dedicated telephone switches[39] and a telephone list delineating personnel in the order of notification.[40] Licensing opponents argue that heavy commercial telephone traffic, bad weather and other factors[41] could create ineffective communication among response organizations.[42] They also contend that without emergency telephone numbers, the plans could not be effectively implemented in an emergency.[43] For some controversial nuclear facilities the NRC decisions dismissed these claims by denying their validity.[44]

The most litigated standard is the protective response. The protective response includes traffic control,[45] where traffic congestion could affect evacuation time estimates.[46] This standard also addresses evacu-

38. *In re* Philadelphia Elec. Co., 19 N.R.C. 1020, 1063 (1984). The organizations include municipal police, fire and medical personnel as well as counties, municipalities and state agencies. *Id. See In re* Philadelphia Elec. Co., 21 N.R.C. 1219, 1352-54 (1985) (utility provided reasonable assurance that a computer dialing system would notify emergency response organizations).

39. 19 N.R.C. at 1063. Dedicated telephone switches are direct links which permit conference calling and do not depend on the commercial telephone system. *Id. See In re* Public Serv. Co. of N.H., 28 N.R.C. 667, 728 (1988) (Atomic Safety and Licensing Board (Licensing Board) determined that the emergency plan contained provisions for adequate telephone communications).

40. 19 N.R.C. at 1031. The telephone list consists of offsite managers who can assist in an emergency. These numbers are confidential to prevent the public from jamming telephone lines, thereby frustrating an emergency response. *Id.*

41. *Id.* at 1063. These factors include blackouts, jammed telephone lines, spontaneous evacuation inside and outside the plume EPZ and volunteers who will not risk radiation injury. Opponents also argue that direct telephone links cannot remain functioning 24 hours daily. *Id.*

42. *Id. But see* Limerick Ecology Action, Inc. v. United States Nuclear Regulatory Comm'n, 869 F.2d 719, 752-54 (3d Cir. 1989) (notification to off-duty staff at the Graterford prison will function successfully).

43. 19 N.R.C. at 1031. This contention relates to the absence of a notification system that list numbers in the order of notification. *Id.*

44. *See supra* notes 38-39 and accompanying text, noting specific NRC decisions.

45. The opponents of one nuclear power plant contended that several traffic points outside the 10 mile EPZ needed incorporation into the zone. The Licensing Board held that additional traffic control was needed in the EPZ to maintain continually moving traffic. Although affirming the decision, the Atomic Safety and Licensing Appeals Board (Licensing Appeals Board) required more traffic control. *In re* Philadelphia Elec. Co., 23 N.R.C. 479, 495-97 (1986). *See In re* Detroit Edison Co., 19 N.R.C. 1108, 1122 (1984) (utility planned for evacuation routes sufficient to withstand NRC standards); *In re* Philadelphia Elec. Co., 21 N.R.C. 1219, 1269 (1985) (traffic control in the 10 mile EPZ adequately met evacuation time estimates required by the NRC); *In re* Boston Edison Co., 20 N.R.C. 157 (1984) (Office of Inspection and Enforcement found traffic management adequate for the Pilgrim facility).

46. Evacuation time estimates provide information on evacuation efficiency to emer-

ation of the population within the plume EPZ,[47] a ten mile EPZ surrounding a nuclear facility.[48] Emergency shelters, used to protect evacuees from within the plume EPZ, require FEMA and NRC approval.[49] Siting for these shelters must be located outside the 10-mile zone and must accommodate all evacuees.[50] Moreover, the shelters must be equipped to decontaminate[51] or monitor[52] evacuees. In many cases, opponents criticize evacuation plans and shelters as inadequate to house all evacuees.[53]

Evacuation of handicapped residents within the plume EPZ poses another problem for emergency planners. In *Massachusetts Coalition of Citizens with Disabilities v. Civil Defense Agency, et al.*,[54] handi-

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gency coordinators. Coordinators use this information in deciding what protective actions to implement. 23 N.R.C. at 485-86. Opponents to the Limerick Station plant claimed that transportation of transport dependent residents would create additional bus trips. Consequently, traffic congestion would undermine the accuracy of the time estimates. *Id.* *See* 21 N.R.C. at 1245-50 (Licensing Board found adequate emergency time estimates for transport dependent population).

47. *See in re* Philadelphia Elec. Co., 25 N.R.C. 273, 283-84 (1987) (notification to off-duty prison guards considered adequate because notification occurs prior to declaration of an emergency when telephone lines remain open).

48. Sylves, *supra* note 3, at 395.

49. *In re* Long Island Lighting Co., 24 N.R.C. 792, 799 (1986). The NRC regulations require a relocation center capable of registering and monitoring all residents in the EPZ. *Id.* *See In re* Pub. Serv. Co. of N.H., 28 N.R.C. 667, 775-76 (1988) (Licensing Board found sheltering for beach population adequate even though the state did not choose to shelter that population).

50. *In re* Long Island Lighting Co., 28 N.R.C. 515 (1988). The utility designated three reception centers approximately forty miles from the plant. *Id.* at 517. The Licensing Appeals Board found that the utility must monitor for radiation the planned percentage of the population seeking shelter. *Id.* at 522-23. The American Red Cross is responsible for finding and maintaining these shelters. *In re* Long Island Lighting Co., 25 N.R.C. 884, 888-89 (1987). *See In re* Detroit Edison Co., 19 N.R.C. 1108, 1122-23 (1984) (evacuation shelters are adequate and should contain enough staff); *In re* Pub. Serv. Co. of N.H., 28 N.R.C. 667, 724 (1988) (Licensing Board determined that emergency plan contained provisions for adequate sheltering).

51. Decontamination of evacuees is necessary at the emergency shelters. 24 N.R.C. at 799. *See* 19 N.R.C. at 1125-26 (methods to decontaminate are adequate and provide for collection and disposal of radioactive materials).

52. The utility must have monitoring equipment at the shelters. 28 N.R.C. at 529. *See* 19 N.R.C. at 1124-25 (utility monitoring systems meet regulatory criteria and guidance); ILL. REV. STAT. ch. 111½, para. 4308 (1988) (state must develop a monitoring system to identify radioactive components).

53. *See supra* notes 45-47, 49-52 and accompanying text for a discussion of evacuation plans and emergency shelters.

54. 649 F.2d 71 (1st Cir. 1981).

capped individuals filed a class action suit demanding modification of defendant's offsite emergency plan.[55] The petitioners identified three arguments concerning discrimination, irreparable harm and due process.[56] The First Circuit held that the plan did not discriminate or cause irreparable harm to the plaintiffs.[57] The court found that because the plaintiffs did not demonstrate a likelihood for success on the merits, an injunction could not be issued.[58] In addition, the court determined that due process did not guarantee the safety of all residents within the plume EPZ.[59]

Another controversial standard concerns prompt notification to emergency personnel and the public. The standard time for notification of state and local agencies is fifteen minutes after declaration of an emergency.[60] A siren system is one method for promptly notifying the public.[61] Sirens are mounted on poles at various locations inside the 10-mile EPZ. If the sirens fail because of a power failure, local officials would implement a route-alerting system,[62] which consists of emergency vehicles using speakers to inform residents of the emergency.[63]

55. *Id.* at 72. Due to the agency's receipt of federal funds, the coalition brought suit under § 504 of the Rehabilitation Act of 1973. *Id.* at 73. The emergency plan provided for "(1) notice, warning and instruction to officials and the public; (2) evacuation routes; (3) evacuation stations and sheltering facilities; (4) provision and protection of food; and (5) public education about the plan." *Id.*

56. *Id.* at 75-76.

57. *Id.* at 74-76. Petitioners also failed to demonstrate that respondent had a legal duty to include petitioners in the emergency plan. *Id.* at 76.

58. *Id.* Petitioners failed to show that the present emergency plan created any of the injuries alleged. *Id.*

59. *Id.* at 77-78. The utility must show that the emergency response procedures of extensive notice and supplemental public transportation satisfy the needs of the handicapped. *Id.* at 78.

60. Emergency Planning and Preparedness for Production and Utilization Facilities, *supra* note 6, at Appendix E § IV.D.3.

61. 19 N.R.C. at 1070-71. Within the first five miles of the plume EPZ, the utility, in order to comply with the 15-minute standard, must alert at least 95% of the households. The notification requirement for the 5 to 10 mile zone requires at least 90% notification. In one licensing case, the sirens satisfied the 5 to 10 mile zone but not the first five miles. *In re* Carolina Power & Light Co. and N.C. E. Mun. Power Agency, 23 N.R.C. 294, 300-01 (1986), *aff'd*, 24 N.R.C. 532 (1986), *aff'd*, 24 N.R.C. 802 (1986). *Cf. In re* Pub. Serv. Co. of N.H., 26 N.R.C. 410 (1987) (state contention on the inadequacy of sirens in two towns does not merit reopening the record).

62. 19 N.R.C. at 1071. *See In re* Philadelphia Elec. Co., 21 N.R.C. 1219, 1355 (1985) (route-alerting system resources are adequate to carry out notification).

63. 19 N.R.C. at 1071. Police, firemen and other emergency workers would travel planned routes to implement this system. *Id.*

The tone alert radio system,[64] designed primarily to inform households of night emergencies, is another notification method which supplements the siren system.[65] Opponents attack each notification method, based on the utilities' inability to alert the required number of people.[66] However, a combination of sirens, tone alert radios and route-alerting is usually considered adequate for immediate notification of emergency workers and the public.[67]

The Emergency Broadcast System (EBS) is another method for alerting the public.[68] This system, required by the NRC, includes use of radio and television to inform the public quickly of protective response procedures.[69]

The next controversial standard that the NRC requires is public education and information.[70] Local broadcasters, using the EBS, are responsible for disseminating all available information.[71] The NRC will not accept the emergency plans unless licensees retain local broadcasters.[72] Utilities may also need to inform customers periodically about the content of evacuation plans through newspapers or media.[73]

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64. Tone alert radio systems are formed by placing radios in households within a five mile radius of the nuclear plant. The National Weather Service broadcasts a radio signal in the event of a radiological emergency. The signal causes the receivers to sound an alarm tone. *In re* Carolina Power & Light Co. and N.C.E. Mun. Power Agency, 24 N.R.C. 532, 543-44 (1986).

65. 23 N.R.C. at 300. The installation of a tone alert radio system ensures night notification to households within five miles of the plant. The tone alert system would increase the notification rate to 98.5% for the Shearon Harris Plant in North Carolina. *Id.*

66. *See supra* notes 61-64 and accompanying text for a discussion of the notification methods.

67. *In re* Duke Power Co., 22 N.R.C. 59, 77-78 (1985), *aff'd*, 22 N.R.C. 785 (1985).

68. *In re* Philadelphia Elec. Co., 19 N.R.C. 1020, 1035 (1984). The EBS will provide initial and follow up information on procedures to follow in the event of an emergency. *Id.*

69. *Id.*

70. *See supra* note 29 and accompanying text, noting these criteria as part of the federal regulations.

71. 19 N.R.C. at 1035.

72. *In re* Long Island Lighting Co., 28 N.R.C. 311, 325-28 (1988). NRC regulations require that television and radio stations air messages in an emergency. An emergency plan, however, does not require backup stations. The notification process requires that the lead station broadcast the emergency message and EBS attention signal. A two-tone attention signal alerts other stations that follow the same procedures as the lead station. Some of the EBS stations must have their signals reach the EPZ area. *Id.*

73. *See* VA. CODE ANN. § 56-245.1:1 (1986) (utilities within the state operating a

Another controversial standard is that an emergency plan must provide for adequate emergency facilities and equipment.[74] Government regulations[75] provide a list of facilities and equipment needed for an emergency plan.[76] The most controversial requirement is for an adequate number of bus drivers and buses.[77] Buses are necessary to evacuate school children and other transport dependent persons from areas near the nuclear facility.[78] Opponents frequently challenge the number

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nuclear facility must publish in a newspaper the protective actions that will occur in the event of an emergency).

74. *See In re* Philadelphia Elec. Co., 21 N.R.C. 1219, 1362 (1985) (adequate equipment is necessary to keep roads open allowing for a quick evacuation).

75. Emergency Planning and Preparedness for Production and Utilization Facilities, *supra* note 6, at Appendix E § IV.E.

76. *Id.* Equipment and facilities include:

1. personnel monitoring equipment;
2. equipment to monitor radioactive releases;
3. decontamination facilities for onsite personnel;
4. medical facilities for onsite personnel;
5. on-site treatment of radiation emergencies by physicians or other trained personnel;
6. transport of contaminated injured individuals from the site to facilities outside the EPZ;
7. treatment of individuals injured in support of licensee activities on the site at facilities outside the EPZ;
8. an onsite technical support center and a near-site emergency operations facility; and
9. one onsite and one offsite communications system.

Id.

77. *See In re* Long Island Lighting Co., 28 N.R.C. 311, 345 (1988) (Licensing Board held that the Shoreham plan provided reasonable assurance that enough drivers and buses were available in the event of an evacuation); *In re* Philadelphia Elec. Co., 23 N.R.C. 479, 515 (1986) (Licensing Appeals Board held that enough buses were available to evacuate schools in Chester County); *In re* The Detroit Edison Co., 19 N.R.C. 1108, 1116 (1984) (NRC found bus capacity sufficient to accommodate the transport dependent population); *In re* Pub. Serv. Co. of N.H., 28 N.R.C. 667, 699 (1988) (emergency plan provided for an adequate number of buses and drivers); *In re* Philadelphia Elec. Co., 25 N.R.C. 7 (1987) (Licensing Board held, subject to confirmation of other facts, that the emergency plan provided for enough bus drivers to evacuate the population in an emergency); 21 N.R.C. at 1326 (adequate number of buses were available to evacuate private and public school children); 21 N.R.C. at 1325-26 (adequate number of bus drivers were available to evacuate transport dependent population); *In re* Philadelphia Elec. Co., 24 N.R.C. 459 (1986) (Licensing Board determined that enough bus drivers for an evacuation).

78. *In re* Long Island Lighting Co., 28 N.R.C. 311, 334 (1988). LILCO developed a plan which used regular bus drivers for any emergency and employee-drivers to backup the bus drivers. This plan adequately protected against regular driver desertion in the event of an emergency. Additionally, it provided for evacuation of children in a

of buses and trained drivers required for an emergency.[79] The Duke Power Company combined two emergency facilities in an effort to lower the costs of facility requirements.[80] In *Duke Power Company v. United States Nuclear Regulatory Commission*,[81] Duke appealed an NRC decision not to exempt the combination of a near-site emergency operation facility with another facility serving two nuclear power plants.[82] The Fourth Circuit upheld the district court decision rejecting the combination of the emergency facilities.[83] The court found that the Three Mile Island accident revealed a need for close cooperation and coordination with on-site and off-site personnel.[84] The Duke Power proposal would not accomplish this. To preclude a judgment contrary to the NRC's decision, the court deferred to the NRC's expertise and responsibility.[85] The court held that because the NRC ren-

single effort. *Id.* Another utility sent out electric bills with a survey asking individuals to identify transport dependent individuals. If an evacuation occurred, bus drivers could transport them to safety. 23 N.R.C. at 486-87. *See In re* Consol. Edison Co. of N.Y., Inc., 26 N.R.C. 53 (1987) (offsite emergency plans were adequate to evacuate school children); *see also* Op. Kan. Att'y Gen. 297 (1979) (Division of Emergency Preparedness could use school buses to evacuate general population).

79. *See supra* notes 62-3 and accompanying text discussing this necessity.

80. Facilities include a Technical Support Center (TSC), an Emergency Operations Facility (EOF), a Safety Parameter Display System (SPDS) and a Nuclear Data Link (NDL). 1980 N.R.C. ANN. REP. 31-33. The TSC supports control-room personnel during emergencies and conveys radiological and environmental information to the state and local governments until the EOF is activated. *Id.* The EOF is located near the plant, operates the plant during an emergency and is used for plant recovery operations. The EOF also evaluates potential and actual releases of radioactivity from the plant. Further, this facility coordinates an emergency response with local, state and federal emergency response organizations. *Id.* The SPDS displays the plant parameters to assess the safety status of operations. Primarily, the SPDS assists operating personnel in making immediate decisions on plant safety status. *Id.* The NDL is the data transmission system acting "to provide management personnel at NRC headquarters with timely, reliable and accurate plant systems, meteorological and radiological information." *Id.*

81. 770 F.2d 386 (4th Cir. 1985).

82. *Id.* at 388. The location of the existing EOF resided 125 miles from the Oconee Nuclear Plant. *Id.* The requirements under the regulation, however, state that the centers should lie within 20 miles from the facility. NRC regulations mandate two EOFs, one within 10 miles of the plant and the other between 10 and 20 miles from the plant. *Id.* at 389. Duke Power planned to establish one EOF within 10 miles from the plant and another 125 miles away. *Id.*

83. *Id.* at 391. In rejecting Duke Power's arguments, the court upheld the strict construction of the regulation. *Id.*

84. *Id.* at 390. The NRC adopted this view in other proceedings. *Id.*

85. *Id.* at 391. The court stated that absent faulty reasoning and because the com-

dered its decision after considering all of plaintiff's arguments, the decision was not arbitrary, capricious or an abuse of discretion.[86]

The standard medical services for contaminated individuals requires a list of hospitals that will provide radiation treatment services.[87] These hospitals must possess the capability to treat severe radiation injuries.[88] Because evacuations might occur, the list should include hospitals outside the ten mile EPZ.[89] Further, the American Red Cross must provide reasonable assurance that evacuees will receive proper care.[90] Emergency planning critics frequently challenge the quality of care that hospitals will provide for radiation victims.[91]

In *Guard v. United States Nuclear Regulatory Commission*,[92] the District of Columbia Circuit reviewed the adequacy of the medical facilities standard. The NRC had interpreted the standard as requiring only a list of facilities to handle injured victims.[93] The court held that the interpretation of the standard as requiring a simple list was unrea-

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mission gave a reasoned explanation for its position, the court would not overturn the commission. *Id.*

86. *Id.* at 390-91. *See also* Limerick Ecology Action, Inc. v. United States Nuclear Regulatory Comm'n, 869 F.2d 719 (3d Cir. 1989) (NRC did not act arbitrarily in concluding that sabotage risks were not obtainable, did not abuse its discretion in rejecting the contention that guards did not have knowledge about the emergency plan, did not abuse its discretion in finding that the emergency plan provided for successful functioning of the call-up system for off-duty personnel and did not abuse its discretion in determining that a reasonable evacuation time estimate existed for the area surrounding the nuclear facility; the NRC abused its discretion, however, in finding that inmates failed to alert the Licensing Board about the adequate training of emergency personnel pursuant to 10 C.F.R. § 50.47(b)(15)).

87. *In re* Carolina Power & Light Co. and N.C. E. Mun. Power Agency, 20 N.R.C. 389, 403-04 (1984). The hospital list, however, did not indicate whether the hospitals could treat severe radiation exposure per se. *Id.* Instead, the lists were ambiguous, speaking generally of "victims of radiological accidents" or "contaminated patients." *Id.* at 403.

88. *Id.*

89. *Id.* at 403-04. Petitioner called for the use of medical facilities more than 30 miles from the nuclear facility. In rejecting petitioner's request, the board noted that the emergency plan under consideration contained a list of hospitals more than 30 miles away. *Id.*

90. *In re* Long Island Lighting Co., 25 N.R.C. 884, 888 (1987).

91. *See supra* notes 87-90 and accompanying text which discusses the required quality of care.

92. 753 F.2d 1144 (D.C. Cir. 1985).

93. *Id.* at 1147. The treatment of individuals during an emergency necessitates arrangements for such treatment on an as-needed basis. *Id.*

sonable.[94] Rather, hospitals listed must maintain trained personnel and adequate equipment to treat high doses of radiation exposure.[95] Though a simple list of hospitals could not assure adequate treatment for radiation victims, the court found that construction of facilities or other extraordinary measures is not required for compliance with this standard.[96]

Emergency preparedness exercises are required biennially for each nuclear power plant.[97] The NRC requires a full-scale exercise within two years prior to obtaining a full power license.[98] The state must immediately correct any deficiencies discovered in such exercise.[99] In *Union of Concerned Scientists v. Nuclear Regulatory Comm'n*,[100] the District of Columbia Circuit held that the results of such emergency preparedness exercises are not excludable from section 189(a) hearings.[101] Section 189(a) provides for a licensing hearing on any material

94. *Id.* at 1146. If the victims are injured from non-radiation causes, then a list, the court held, is not sufficient. *Id.*

95. *Id.* at 1150, n.7. The court stated that the emphasis is on training people to perform medical services. *Id.*

96. *Id.*

97. Review and Approval of State and Local Radiological Emergency Plans and Preparedness, 44 C.F.R. § 350.9(c)(1) (1988). A state having multiple nuclear power sites shall fully participate "in a joint exercise at some site on a rotational basis at least every two years." *Id.* at § 350.9(c)(2). All agencies and governments in the emergency plan shall participate together with the utility in emergency planning exercises. *Id.*

98. Emergency Planning and Preparedness for Production and Utilization Facilities, 10 C.F.R. Part 50, Appendix E § IV. F.1 (1989). The exercises evaluate the offsite emergency plan. The emergency planning exercise must occur before the emergency plans are forwarded to FEMA. 44 C.F.R. § 350.9(a). In effect, FEMA approval and an NRC license depend upon a proper emergency exercise plan. *Id.* The biennial exercises require full participation by those agencies and governments in the emergency plan. This two year limit alleviates heavy resource and scheduling burdens that exist if exercises are conducted annually. Domestic Licensing of Production and Utilization Facilities, 52 Fed. Reg. 16823, 16824 (1985).

99. 44 C.F.R. § 350.9(a) (1988). *See* County of Rockland v. U.S. Nuclear Regulatory Comm'n, 709 F.2d 766, 777 (2d Cir. 1983) (enforcement action to correct deficiencies unnecessary when corrective action would take place shortly).

100. 735 F.2d 1437 (D.C. Cir. 1984).

101. *Id.* at 1451. Section 189(a) requires a public hearing before issuance of a construction permit. A second pre-licensing hearing is required if an interested party so requests. *Id.* at 1438-39. Petitioners appealed an NRC decision denying their petition to delete a regulation. The regulation required emergency preparedness exercises as close to licensing as possible. Petitioners claim that the regulation would deny a public hearing on a material issue of fact. *Id.* at 1441.

issue, such as emergency planning.[102] The court distinguished emergency preparedness exercises from pre-operational tests, which are usually excluded from section 189(a) hearings.[103] Additionally, the court found that evaluation of emergency exercises require more than one test or one inspection.[104]

The last controversial standard is the training of emergency personnel. The regulations provide a list of personnel who require training.[105] Additionally, local service personnel need to undergo training.[106] Conducted by FEMA, training includes drills and courses at a Nevada test site.[107] FEMA offers courses in response operations,[108] response coordination,[109] response planning,[110] and procedures relating to the handling of radioactive material in transit.[111] The emergency preparedness exercises test the readiness of personnel.[112] Emergency planning opponents criticize the adequacy of emergency workers training.[113]

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102. *Id.* at 1438. The material issue in this case concerned the adequacy of the offsite emergency preparedness plan. *Id.*

103. *Id.* at 1451. Pre-operational testing involves testing of reactor systems to ensure their acceptability for operation. *Id.*

104. *Id.* at 1450.

105. Emergency Planning and Preparedness for Production and Utilization Facilities, *supra* note 6, at Appendix E, § IV.F. *See In re* The Detroit Edison Co., 19 N.R.C. 1108, 1118 (1984) (NRC found that offsite emergency workers received adequate training). *See also supra* note 35 and accompanying text discussing emergency workers who require training.

106. *See In re* Philadelphia Elec. Co., 21 N.R.C. 1219, 1318 (1985) (bus drivers, teachers and other school personnel received adequate training).

107. 1979 NRC ANN. REP. 177.

108. *Id.* The course is designed for state or local emergency response teams. *Id.*

109. *Id.* at 178. This course assists radiological emergency response coordinators in deciding on necessary protective actions in an accidental release of radioactive material. *Id.*

110. *Id.* The course trains state and local planners. *Id.*

111. *Id.* This course is an eight-hour training session consisting of slides and materials. *Id.*

112. Emergency Planning and Preparedness for Production and Utilization Facilities, *supra* note 6, at Appendix E § IV.F, n.4.

113. *See supra* notes 106-07 and accompanying text for a discussion of emergency worker training.

III. STATE, LOCAL AND GROUP INTERFERENCE

Anti-nuclear groups,[114] and state and local governments, frequently attack the sixteen licensing standards. Recently, the Long Island Lighting Company (LILCO) and the Public Service Company of New Hampshire encountered difficulties in obtaining approved emergency plans.[115] Because the state of New York and local governments refused to participate in the emergency plan, the NRC withheld approval of LILCO's Shoreham nuclear facility.[116] LILCO subsequently abandoned the project and agreed to sell the plant to the state in exchange for one dollar and a series of rate increases.[117]

One area of dispute between local governments and utilities involved the erection of sirens on non-electric transmission poles. In *South Coventry Township and James Ottinger v. Philadelphia Electric Company*,[118] South Coventry Township enforced several zoning ordinances[119] prohibiting the installation of siren towers.[120] The Philadelphia Electric Company (PECO) sued to enjoin the township from

114. The Supreme Court denotes these private groups as obstructionists. Note, *Diablo Canyon Licensing Oversights: Does the NRC Licensing Process Assure Nuclear Safety?*, 21 NEW ENG. L. REV. 77, 84-85 (1985-86). A Department of Energy study characterized those opposed to nuclear power as "phobia inducers infecting the populate with mental illness." *Id.* (quoting The Boston Globe, Oct. 30, 1984, at 4, col. 2).

115. *In re* Long Island Lighting Co., 28 N.R.C. 499 (1988). *See infra* notes 124-34, 139-43 and 179-83 and accompanying text discussing the difficulties encountered.

116. 28 N.R.C. 499. The utility lacked an adequate plan because state and county governments lacked the resources necessary to implement the offsite emergency plan effectively. *Id.* at 507-08. *See In re* Long Island Lighting Co., 26 N.R.C. 425 (1987) (Licensing Board granted summary motion alleging that no state emergency plan existed); *In re* Long Island Lighting Co., 24 N.R.C. 412, 430 (1986), *aff'd*, 24 N.R.C. 561 (1986) (state of New York refused to perform dose projections, sample the ingestation pathway, interdict contaminated food and issue protective action messages via radio and television). *But cf. In re* Philadelphia Elec. Co., 21 N.R.C. 1219, 1407 (1985) (local governments within the 10 mile EPZ maintained adequate emergency plans).

117. N.Y. TIMES, June 17, 1989, at 2B, col. 3. In exchange for the facility, state officials agreed to grant ten years of rate increases at 4.5 to 5% per year. The state would then transfer the plant to the New York Power Authority which would dismantle the $5.5 billion plant and build a 240-megawatt gas turbine. *Id.*

118. 94 Pa. Commw. 289, 504 A.2d 368 (1986).

119. Though the ordinances that the court addresses do not mention siren towers, the court probably refers to the zoning ordinances in order to note the purpose of the towers and their height.

120. *Id.* at 290, 504 A.2d at 369. South Coventry Township informed the utility that it violated the ordinance following the installation of two siren poles. Subsequently, the township issued the utility multiple citations. *Id.* at 291, 504 A.2d at 369.

enforcing its ordinance.[121] The trial court held that the ordinance did not apply to siren towers, which are part of the utility's facilities.[122] Moreover, the court found PECO would be unduly burdened if it had to comply with the numerous municipal ordinances that existed.[123]

Adopting the *South Coventry Township* decision, the New Hampshire Supreme Court, in *Town of Rye v. Public Service Company of New Hampshire*,[124] held that a municipality did not have the right to revoke previously granted licenses to erect siren poles.[125] The state municipal highway statutes[126] allow utilities to erect attachments necessary to conduct business.[127] Finding that sirens constitute attachments under the statute, the court concluded that granting the licenses was within statutory authority.[128]

However, the First Circuit did not defer to the *Town of Rye* decision allowing erection of siren poles. In *Public Service Company of New*

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121. *Id.* at 291, 504 A.2d at 369.

122. *Id.* at 297-98, 504 A.2d at 372. Facilities are:

> All the plant and equipment of a public utility, including all tangible and intangible real and personal property without limitation, and any and all means and instrumentalities in any manner owned, operated, leased, licensed, used, controlled, furnished, or supplied for, by, or in connection with, the business of any public utility.

66 PA. CONS. STAT. ANN. § 102 (Purdon 1979).

123. 94 Pa. Commw. at 296, 504 A.2d at 371. Forty-two municipalities required installation of siren poles. *Id.*

124. 130 N.H. 365, 540 A.2d 1233 (1988).

125. *Id.* at 369, 540 A.2d at 1235. The town proffered no safety based justification to validate revocation of the licenses. *Id.*

126. One statute states:

> Telegraph, television, telephone, electric light and electric power poles and structures and underground conduits and cables, with their respective attachments and appurtenances may be erected, installed and maintained in any public highways and the necessary and proper wires and cables may be supported on such poles and structures or carried across or placed under any such highway by any person, copartnership or corporation as provided in this subdivision and not otherwise.

N.H. REV. STAT. ANN. § 231:160 (1982 & Supp. 1988). Another statute provides in pertinent part:

> "the holder of such a license [to erect poles], shall . . . be entitled . . . to erect . . . poles [and] structures . . . . and to place upon such poles and structures the necessary . . . attachments and appurtenances which are required in the reasonable and proper operation of the business carried on by such licensee . . . ." *Id.* at § 231:161.

127. 130 N.H. at 368-69, 540 A.2d at 1234.

128. *Id.* at 369, 540 A.2d at 1235. The selectmen of Rye cannot revoke siren pole licenses unless the poles endanger the safety of highway travelers. *Id.*

Hampshire v. Town of West Newbury,[129] the court denied the utility's petition for injunctive relief from the town board's decision to remove the poles.[130] The court held that the utility had not suffered irreparable harm.[131] Additionally, the town board of selectmen lacked the power to issue permits.[132] Finally, the court held that removal of the poles did not deprive the utility of due process.[133] Consequently, the First Circuit denied the utility the right to erect siren poles without approval by the town.[134]

Town of West Newbury is distinguishable from *Town of Rye* because the New Hampshire statutes in *Town of Rye* differ in two ways from the Massachusetts statute. First, the New Hampshire statutes refer to poles used to transmit power.[135] Second, there are no Massachusetts statutes which permit "erection of poles required in the reasonable and proper operation of the business."[136] This difference allows siren poles in New Hampshire to remain in their original locations. The New Hampshire statutes allowed the operating purpose to override the prohibition on erecting siren poles. As a result, the utility could implement an emergency preparedness plan. The Massachusetts statute, however, denies the utility the right to erect siren poles unless utilized for power transmission. Hence, the statute seems to inhibit the implementation of an emergency preparedness plan and licensing of the Seabrook facility.

Generally, federal courts do not allow state and local governments or private groups to interfere with licensing decisions through attacks on offsite emergency plans.[137] In *Long Island Lighting Company v.*

129. 835 F.2d 380 (1st Cir. 1987).

130. *Id.* at 383. Because the utility could not prove irreparable damage or a likelihood of success on the merits, the court denied the petition. *Id.*

131. *Id.* The utility submitted no evidence proving that the absence of siren poles would affect an NRC decision. *Id.* at 382.

132. *Id.* at 384. Massachusetts law reserves for towns the right to restrict long term use on real property. *Id. But cf.* Vernet v. Town of Exeter, 129 N.H. 34, 523 A.2d 48 (1986) (town meeting cannot prohibit selectmen, appointed by the state, from implementing an offsite emergency preparedness plan).

133. 835 F.2d at 385. The court stated that a refusal in a local administrative matter was not a deprivation of due process. *Id.*

134. *Id.* at 384.

135. Town of Rye v. Public Serv. Co. of N.H., 130 N.H. 365, 370, 540 A.2d 1233, 1235 (1988).

136. *Id.*

137. *See infra* notes 138-56 and accompanying text exemplifying some federal decisions.

County of Suffolk,[138] for example, the District Court for the Eastern District of New York invalidated a county law[139] which denied the utility the right to hold emergency preparedness exercises.[140] The court found that if it denied preliminary relief the law would cause irreparable harm.[141] The court determined that without the exercises, the utility could not obtain an adequate emergency preparedness plan for Shoreham.[142]

In *State of Ohio v. Nuclear Regulatory Commission*,[143] the Sixth Circuit held that the NRC did not abuse its discretion in failing, after an earthquake, to reopen a previous NRC decision.[144] The state alleged that the earthquake showed that offsite emergency plan was seriously inadequate.[145] The court supported the NRC's original findings that reasonable assurance of the adequacy of the emergency plan existed[146] and that the state can revise the plan to cure any inadequacies.[147]

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138. 628 F. Supp. 654 (E.D.N.Y. 1986).

139. *Id.* at 659. Suffolk County Local Law 2-86 § 2 makes it a crime punishable by fine and imprisonment:

> (a) . . . [F]or any person to conduct or participate in any test or exercise of any response to a natural or man-made emergency situation if that test or exercise includes as part hereof that the roles or governmental functions of any Suffolk County official will be performed or simulated, and if the Suffolk County Legislature, . . . has issued via resolution a notice of disapproval of such performance or simulation of County roles or governmental function [or]
>
> (b) . . . [F]or any person to conduct or participate in any test or exercise of any response to a natural or man-made emergency situation if that test or exercise includes as part thereof that the roles or governmental functions of any Suffolk County official will be performed or simulated, and if the person shall have failed to comply with the procedures set forth in Sections 3(a) and 3(b) of this Local Law.

Id. (citing Local Law 2-86 § 2(a), (b), enacted December 23, 1985, approved Jan. 13, 1986).

140. 628 F. Supp. at 666. *But see* Prospect v. Cohalan, 65 N.Y.2d 867, 868, 482 N.E.2d 1209, 1210, 493 N.Y.S.2d 293, 294 (1985) (county executive order directing personnel to collect information for development of a disaster preparedness program actually commenced plan implementation and thus usurped the legislative function).

141. 628 F. Supp. at 661. The court found that financial losses and the threat of destroying a business constituted irreparable harm to the utility. *Id.*

142. *Id.* at 664-65. The results of the exercises furnish information on the adequacy of the emergency preparedness plan. The exercises are part of NRC procedures that evaluate emergency offsite plans. *Id.* at 665.

143. 814 F.2d 258 (6th Cir. 1987).

144. *Id.* at 260. *Cf. In re* Toledo Edison Co., 24 N.R.C. 753 (1986) (court denied state request for a new hearing based on deficiencies in the emergency plan).

145. 814 F.2d at 264.

146. *Id.*

147. *Id.*

Finding that petitioner failed to show any safety significance,[148] the court concluded that, without such evidence, the NRC did not abuse its discretion.[149]

Recently, in *Commonwealth of Massachusetts v. United States*,[150] the First Circuit addressed the issue of licensing when state or local governments failed to participate in the emergency plan. The plaintiffs challenged the NRC's "realism" doctrine,[151] which assumes that non-cooperating state and local governments will respond to emergencies using the utility's plan.[152] The court held that the NRC's decision was reasonable and defensible.[153] The court also found that the NRC's presumption of state and local response to the utility's plan was also reasonable.[154] Additionally, the court found that economic considerations did not affect the reasoning behind the new rule, though multi-billion dollar plants, if abandoned, would create large losses for utilities and customers.[155]

The above cases demonstrate a common theme of federal court reluctance to override NRC expertise in emergency planning. The courts

148. *Id.* at 262.

149. *Id.* at 263. The NRC must act inconsistently with the language of the regulation for a court to overturn an NRC decision. San Luis Obispo Mothers for Peace v. United States Nuclear Regulatory Comm'n, 789 F.2d 26, 30 (D.C. Cir. 1986), *cert. denied*, 479 U.S. 923 (1986). The language of the regulation requires "reasonable assurance of adequate protective measures" for the population around a nuclear facility. *Id.* at 30-31. The court concluded that the NRC made a finding of adequate protective measures. Ohio v. Nuclear Regulatory Comm'n, 814 F.2d 258, 264 (6th Cir. 1987). Thus, the NRC acted reasonably in denying the state's petition to intervene in the full-power licensing proceedings. *Id. See In re* Three Mile Island Alert, Inc., 771 F.2d 720, 738 (3d Cir. 1985) (NRC did not abuse its discretion in finding emergency plans adequate).

150. 856 F.2d 378 (1st Cir. 1988).

151. *Id.* at 380. The court defines the "realism" doctrine as:

> A doctrine that allows the NRC, in evaluating a utility emergency plan, to make the following pair of presumptions: 1) in the event of an actual radiological emergency state local officials will do their best to protect the affected public; and 2) in such an emergency these officials will look to the utility plan for guidance and will generally follow that plan.

Id.

152. *Id.*

153. *Id.* at 382-83.

154. *Id.* at 383. The NRC can reasonably assume that the state and local governments will follow the only existing emergency plan. *Id.*

155. *Id.* at 384. This rule does not on its face, as petitioners claim, consider economic factors like nuclear power plant construction costs. 52 Fed. Reg. 42078, 42083 (1987).

recognize their inability to determine whether the NRC acted unreasonably in approving emergency plans. Without emergency planning expertise, the courts cannot effectively decide emergency planning disputes between utilities and state and local governments.

IV. REMEDIES TO THE LICENSING PROBLEM

Massachusetts v. United States represents the current efforts within the federal government to discourage state and local governments from barring the opening of nuclear power plants.[156] A proposed rule[157] would allow the utility to submit an emergency offsite plan when approval of the plan would depend on the utility's ability to demonstrate four factors.[158] The four factors are:

> (1) The non-compliance could be remedied, or adequately compensated for, by reasonable State or local governmental cooperation; (2) applicant has made a good faith and sustained effort to obtain the cooperation of the necessary governments; (3) applicants [sic] offsite emergency plan includes effective measures to compensate for the lack of cooperation which are reasonable and achievable under the circumstances and which take into account a likely State or local response to an actual emergency; and (4) applicant has provided copies of the offsite plan to all governments which would have otherwise participated in its preparation or implementation and has assured them that it stands ready to cooperate should they change their position.[159]

If the utility can demonstrate these factors, the NRC may issue a full power license.[160] The proposed rule also excludes mandatory state and local government participation in an emergency plan when the governments refuse to participate.[161]

Another remedial proposal that the federal government recently en-

156. *See State Role in Evacuation Plans for Nuclear Plants Still Uncertain*, 120 PUB. UTIL FORT. 35 (1987) (a Congressman supported utility offsite emergency preparedness plans absent state and local government participation).

157. 52 Fed. Reg. 6980 (1987) (to be codified at 10 C.F.R. § 50.47(e) (proposed March 6, 1987)).

158. *Id.* at 6981. *But see* 28 NUCLEONICS WEEK, March 12, 1987, at 4 (Commissioner Asselstine dissents because he believes the proposed rule focuses on economics).

159. 52 Fed. Reg. 6980, 6981 (1987) (to be codified at 10 C.F.R. § 50.47(e) (proposed March 6, 1987)).

160. *Id.*

161. *Id.*

acted[162] addresses the requirements for issuance of a low power license. This regulation requires adequate onsite emergency planning and some offsite planning reasonably required in an emergency.[163] Several reasons support federal enactment of this proposal. First, the fission product inventory[164] is smaller at low power operations than at high power operations.[165] Second, safety equipment need not have the capacity to prevent accidents that could occur at high power operations.[166] Finally, the reaction time for potential emergencies is longer at low power operations.[167] Thus, offsite emergency plans would require review until after approval of a low power license.[168] The federal government has codified the second proposal and the first proposal should receive NRC approval.[169]

Prior to these proposals, the Public Service Company of New Hampshire petitioned the NRC for an exemption from the ten mile EPZ in *In re Public Service Company of New Hampshire*.[170] When the utility

162. 10 C.F.R. § 50.47(d) (1989).

163. 53 Fed. Reg. 16435, 16437 (1988). Offsite aspects include: arrangements for the effective use of offsite assistance onsite, accommodation of state and local staff, identification of other organizations that could respond to onsite emergencies, initial notification with periodic updates by state and local response organizations, adequate emergency facilities and equipment, arrangements for medical services and available training for offsite response organizations. 10 C.F.R. § 50.47(d) (1989).

164. Fission product inventory is explained as follows: "Short lived isotopes, such as xenon and iodine, quickly reach an equilibrium inventory and total steady state inventory of these fission products is a direct function of power. Inventories of long-lived isotopes, such as strontium and cesium, are functions of total fuel burnup. . ." Emergency Core Cooling Systems; Revisions to Acceptance Criteria, 53 Fed. Reg. 35996, 35997 (1988). In sum, fission product inventory "is a complex function of both time and power . . ." *Id.*

165. 53 Fed. Reg. 16435, 16436 (1988).

166. *Id.*

167. *Id.*

168. *Id.* at 16437. *See* Cuomo v. United States Nuclear Regulatory Comm'r, 772 F.2d 972 (D.C. Cir. 1985) (court denied stay of a low power license even when an adequate emergency plan was unlikely to obtain approval); *see also In re* Pub. Serv. Co. of N.H., 24 N.R.C. 141 (1986) (low power licensing requires reasonable assurance with respect to an adequate onsite emergency plan); *In re* Pub. Serv. Co. of N.H., 28 N.R.C. 419, 421 (1988) (adequate offsite emergency plan is not required for a low power licensing approval).

169. *NRC Tentatively Approves Proposal to Permit Licensing of Shoreham and Seabrook Nuclear Facilities Without State-approved Emergency Evacuation Plans*, 119 PUB. UTIL. FORT. 28, 29 (1987).

170. 25 N.R.C. 324 (1987).

proposed to shrink the ten mile zone to one mile,[171] the NRC held that the utility did not prove the feasibility of a one mile zone.[172] Specifically, the Atomic Safety and Licensing Board found that the utility insufficiently addressed operator reliability,[173] containment strength,[174] source-term behavior[175] and shutdown accidents[176] to justify approval of the petition.[177]

In *In re Long Island Lighting Company*,[178] the petitioning utility requested summary disposition to obtain approval of its offsite emergency preparedness plan.[179] The Licensing Board denied Long Island Lighting Company's (LILCO) motion because LILCO had not demonstrated a workable plan.[180] According to the board, LILCO misconstrued the "best efforts" doctrine (realism doctrine).[181] Consequently, the board noted that the NRC requires examination and acceptance of an adequate offsite emergency plan prior to licensing.[182]

The difficulty in obtaining FEMA and NRC approval continues, despite federal politics that allow utilities to submit an emergency plan in

171. *Id.* at 329. *See In re* S. Cal. Edison Co., 25 N.R.C. 43 (1987) (municipality unsuccessfully petitioned to extend the 10 mile zone in order to include itself).

172. *Id.* at 342.

173. *Id.* at 341. The record must show how well operator training prepares operators to recognize off-normal plant conditions, to follow special procedures and to execute proper actions. *Id.*

174. *Id.* Applicants must heavily consider this factor because the as-built strength must equal the design strength. *Id.*

175. *Id.* The use of "WASH-1400" methodology as a means of accident analysis is not clearly categorically conservative because there have been source-term assessment advances since introduction of the "WASH 1400" methodology. *Id.*

176. *Id.* at 342. The fission product inventory may decay between shutdown and an accident during shutdown, resulting in high level risk. *Id.*

177. *Id.* at 341.

178. 27 N.R.C. 355 (1988).

179. *Id.* at 357. The motion was based on the best efforts assumption. This assumption relies on state and local government adoption of a utility's emergency plan. Consequently, the government officials will exercise their best efforts to protect public health and safety in a radiological emergency. *Id.*

180. *Id.* at 385-86.

181. *Id.* at 378. The definition of realism incorporates the "best efforts" doctrine. *See supra* note 152 and accompanying text (noting "best" to describe the actions of state and local government officials). *See also supra* note 179 (discussion of the "best efforts" doctrine).

182. *Id.* at 378. Hence, an emergency plan is not automatically approved when state and local governments refuse to cooperate. *Id.*

place of state and local plans.[183] However, an executive order,[184] issued by President Reagan, allows federal resources to supplement state, local and utility resources.[185] The order empowers FEMA to assist utilities in implementing an adequate offsite plan that conforms to federal standards.[186] Assistance includes use of FEMA resources to coordinate and manage other available resources and provision for full reimbursement to the extent permitted by law.[187] As a result, non-cooperating state and local governments may be excluded from the preparation of an emergency plan.

V. CONCLUSION

With the emergence of new federal rules and executive intervention, state and local government and private group interference with nuclear power plant licensing should become moot.[188] Offsite emergency planning will no longer represent an obstacle to licensing.[189] Federal intervention will alleviate the burden on utilities for emergency offsite planning when state or local governments refuse to cooperate. In addition, judicial review of NRC decision will not help opponents close

183. PR Newswire, May 4, 1988 (*LEXIS*, Nexis library, PRWire file). The Seabrook facility, for example, cannot obtain a low power license because it cannot comply with the standards for an adequate offsite emergency plan. *Id.*

184. Federal Emergency Management Agency Assistance in Emergency Preparedness Planning at Commercial Nuclear Power Plants, 24 WEEKLY COMP. PRES. DOC. 1540 (Nov. 21, 1988). *See* Commercial Nuclear Power Plants; Emergency Preparedness Planning, 54 Fed. Reg. 31920 (1989) (to be codified at 44 C.F.R. Part 352) (FEMA and NRC promulgated new rules to enforce the executive order).

185. 24 WEEKLY COMP. PRES. DOC. at 1541.

186. *Id.* FEMA will substitute resources to compensate for non-participation by state and local governments. *Id. See* 54 Fed. Reg. at 31927 (federal government will offer technical assistance for developing an offsite emergency response plan, describe the process of federal resource availability for the licensee, describe the principle response functions of federal agencies and the process of allocating responsibilities among federal agencies, and provide for participation of federal agencies).

187. 24 WEEKLY COMP. PRES. DOC. at 1541-42. This includes "advice, technical assistance, and arrangements for facilities and resources as needed." *Id.* at 1541. *See* 54 Fed. Reg. at 31928 (to be codified at 44 C.F.R. Part 352, § 352.28) ("FEMA will coordinate full reimbursement, either jointly or severally, to the agencies performing services or furnishing resources, from any affected licensee and from any affected non participating or inadequately participating State or local government.").

188. *See supra* notes 157-69, 185-88 and accompanying text for a discussion of two federal regulations and an executive order.

189. *See supra* notes 178-82 and accompanying text demonstrating LILCO's obstacle in obtaining licensing approval.

nuclear power plants. Instead, many courts are reluctant to overrule NRC decisions that are based on its expertise.

Utilization of federal resources and facilities will enable utilities to implement aspects of emergency planning that were previously left to state and local governments. Accordingly, opponents will find fewer challenges to the adequacy of emergency planning.

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COMMENTS