

UNITED STATES OF AMERICA
 NUCLEAR REGULATORY COMMISSION
 OFFICE OF NUCLEAR REACTOR REGULATION
 Thomas E. Murley, Director

In the Matter of)	Docket Nos. 50-250, 50-251
)	
FLORIDA POWER AND LIGHT COMPANY)	License Nos. DPR-31, DPR-41
)	
(Turkey Point Nuclear)	(10 CFR § 2.206)
Units 3 and 4))	

DIRECTOR'S DECISION UNDER 10 CFR 2.206

INTRODUCTION

By letter of October 23, 1992, James P. Riccio, on behalf of Public Citizen, Greenpeace, Nuclear Information & Resource Service, and the Safe Energy Communication Council (petitioners), submitted a petition pursuant to 10 CFR 2.206 to the Executive Director for Operations of the U.S. Nuclear Regulatory Commission (NRC or the staff). The petitioners requested that the NRC issue an order to Florida Power and Light Company (FPL or licensee) to show cause as to why Turkey Point Nuclear Units 3 and 4 should not remain shut down or have their operating licenses suspended by the NRC unless and until such time as the licensee demonstrates full compliance with the NRC's emergency planning regulations.

The petition alleged a number of deficiencies in emergency planning at Turkey Point because of the effects of Hurricane Andrew. The petitioners alleged deficiencies in the areas of notification during an accident, notification of persons with special needs, and the evacuation plans for the Turkey Point plume exposure pathway emergency planning zone (10-mile EPZ or EPZ). In alleging these deficiencies, petitioners relied, in part, on a preliminary status report prepared by the Federal Emergency Management Agency (FEMA) and forwarded to the NRC in a letter dated October 16, 1992. On the

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basis of circumstances surrounding the initial restart of Turkey Point Unit 4 following Hurricane Andrew, the petitioners also alleged deficiencies in the coordination between the licensee, Federal, State, and local agencies responsible for radiological emergency response planning. The petitioners also alleged that the NRC allowed the licensee to restart Unit 4 without any coordination, advance notice, or request that FEMA confirm offsite emergency preparedness capabilities.

By letter of November 13, 1992, to Mr. Riccio, the staff acknowledged receipt of the petition and denied the petitioners' request for immediate action based on a FEMA disaster-initiated assessment of offsite preparedness and compensatory actions, as reported by FEMA to the NRC on October 23, 1992, in a report entitled "Interim Turkey Point Nuclear Power Plant Offsite Emergency Preparedness Assessment Report in the Aftermath of Hurricane Andrew," and on the staff's safety assessment of plant conditions. The November 13, 1992, letter further informed the petitioners that, as provided by 10 CFR 2.206, the NRC would take appropriate action on the specific issues raised in the petition within a reasonable time.

BACKGROUND

On August 24, 1992, Turkey Point Units 3 and 4 were shut down in preparation for landfall of Hurricane Andrew. Extensive onsite and offsite damage occurred at Turkey Point as a result of the storm. FPL and the NRC conducted comprehensive onsite damage assessments and inspections following the storm. FPL identified, and the NRC concurred in, the equipment and other items to be repaired, restored, retested, or otherwise addressed as a prerequisite to plant restart. Following substantial effort on the part of

FPL to repair storm-related damage, Unit 4 was ready for restart by late September. Unit 3 remained shut down for a previously planned refueling outage. On September 28, 1992, the NRC staff agreed that the licensee was ready to restart Unit 4. Subsequently, the plant commenced startup and attained 30-percent power by October 1, 1992.

On October 1, 1992, the licensee agreed to an NRC request to shut down Turkey Point Unit 4 because of FEMA concerns regarding the status of offsite emergency preparedness, based on the unique conditions existing in the EPZ in the wake of Hurricane Andrew as opposed to conditions prior to the hurricane.

Hurricane Andrew had an unprecedented impact upon the emergency preparedness infrastructure and population in the EPZ, necessitating a special reassessment of the affected aspects of offsite emergency preparedness and compensatory actions needed to reestablish impaired State and local emergency response capabilities. The purpose of the FEMA review was to reaffirm that affected offsite jurisdictions were capable of responding adequately to a radiological emergency at the Turkey Point site. The reevaluation was not intended to be a comprehensive review of offsite plans and preparedness. FEMA had already conducted a comprehensive review of the planning and preparedness capabilities of the State of Florida and Dade and Monroe Counties, as part of its process for approving the plans in accordance with 44 CFR Part 350. FEMA has evaluated seven offsite emergency preparedness exercises at Turkey Point through February 1993. The next offsite emergency exercise is scheduled for December 15, 1993. Nevertheless, in its post-storm assessment, FEMA considered all of the principal areas of concern raised by the petitioners.

In a letter dated October 16, 1992, FEMA forwarded to the NRC a preliminary status report and on October 23, 1992, FEMA provided the NRC an interim report of its review of offsite emergency preparedness capabilities in the 10-mile EPZ around Turkey Point in the aftermath of Hurricane Andrew. On the basis of its assessment and the compensatory measures taken, FEMA reaffirmed, in the October 23, 1992 letter, that there is reasonable assurance that the public health and safety can be protected in the event of a radiological emergency at the Turkey Point site. The NRC reviewed the October 23, 1992, interim FEMA report and concluded that the issues which led to the NRC's request that the Turkey Point nuclear units not be operated until FEMA had the opportunity to review offsite emergency preparedness had been satisfactorily resolved.

The NRC informed FPL on October 23, 1992, that there was no reason, from the standpoint of nuclear safety, that the Turkey Point units could not resume operation. Turkey Point Unit 4 was returned to service on October 24, 1992. Unit 3 was returned to service on November 28, 1992, following completion of its refueling outage.

For the reasons discussed below, the NRC has concluded that the concerns raised in the petition do not provide a basis for the action requested by the petitioners and denies the petition.

DISCUSSION

The petitioners identify four alleged deficiencies in offsite emergency preparedness on and around the Turkey Point site following Hurricane Andrew.

Three of the alleged deficiencies are based primarily upon FEMA's preliminary status report to the NRC contained in a letter dated October 16, 1992, on the status of the radiological emergency preparedness capabilities in the 10-mile EPZ surrounding the plant. The three alleged deficiencies identified by the petitioners, which arose from their reading of the preliminary report, are:

(1) the licensee's offsite emergency response plan fails to meet the requirement for notification of "all segments" of the population; (2) the "special needs" community within the Turkey Point EPZ is largely unreachable and, thus, the requirement for notification of "all segments" of the population cannot be met; and (3) the original evacuation plans for the plume exposure pathway EPZ and the ingestion pathway EPZ are based upon assumptions that are no longer valid, and restart of the plant absent a fully revised and tested radiological emergency response plan constitutes a violation of 10 CFR Part 50, Appendix E, and NRC regulations requiring that FEMA make "findings and determinations as to whether State and local emergency plans are adequate and whether there is reasonable assurance that they can be implemented...."

The petitioners also alleged deficiencies in the coordination among the licensee, Federal, State, and local agencies responsible for radiological emergency response planning, specifically, that the NRC allowed the licensee to restart Unit 4 without any coordination, advance notice, or request that FEMA confirm offsite capabilities. The petitioners asserted that the premature restart of Turkey Point, Unit 4, raises serious questions as to the ability and commitment of FPL and the NRC to abide by regulations requiring "that there is reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency." The petitioners

argued that this is "yet another instance" in which the NRC has "failed to maintain a proper regulatory relationship with the nuclear industry."

Notification of the Population in the EPZ

Regarding the first issue raised by the petitioners concerning deficiencies in notification, the petitioners cited the following statement from the FEMA letter of October 16, 1992, as the basis for their concern:

Due to extensive electric power disruption, it must be assumed that a number of EPZ residents do not have access to the EBS [emergency broadcast system] messages which provide specific instructions relative to the emergency. There is also good reason to believe that most of those residents are living in structures which are or will be condemned and that these structures are spread throughout the EPZ with no identifiable concentrations. Also, as a result of Hurricane Andrew there are residents living in Life Support Centers (tent cities) who may not have access to radio or television.

The petitioners also stated that to address the above concern, FPL planned to use the siren system in the public address mode; however, according to the petitioners, FEMA acknowledged that the audibility of such a system had not been verified and would not be verified until full-cycle testing of the system was conducted in November.

FEMA addressed public alert and notification concerns in its October 23, 1992, interim report to the NRC. FEMA reported that the primary alerting and notification system in Dade County, comprising sirens and EBS, was fully operational. However, FEMA believed that many residents and transients in the area might not have ready access to radios for hearing EBS messages due to the lack of electrical power. Therefore, there was a need to compensate for this degradation of notification capability by greater reliance on other means of

backup notification, such as route alerting and utilizing the public address capability of the outdoor warning sirens.

The FEMA interim report stated that the State of Florida, Dade County, and FEMA agreed that certain compensatory measures, including the following, would be taken to alleviate the concerns for public alert and notification. Until the status of condemned structures and the number of persons living in them could be determined, the county would employ route alerting, using patrol cars equipped with public address systems to inform residents of protective actions. In addition, the public address capability that is part of the existing siren system would be used to inform residents of the meaning of sirens and appropriate protective actions. Residents of the Life Support Centers (tent cities), or other people incapable of viewing TV or listening to the radio, could be notified of an emergency at Turkey Point through route alerting and the use of the public address capability on the outdoor siren system.

Regarding the public address capability of the siren system, FEMA reported that FPL indicated that the voice coverage of the public address system on the sirens could adequately cover the major devastation areas and the tent cities located within the EPZ. FEMA stated that the audibility of the public address system would be checked in conjunction with the full-cycle test of the system which was originally scheduled in November 1992, but was actually conducted on December 4, 1992. The results of the test will be included in FEMA's final report on the disaster-initiated review.

The FEMA interim report also stated that FPL was making additional efforts to inform transients and displaced residents of actions they should



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take in the event of an emergency. These efforts included the installation of outdoor warning signs at exits off of major highways, Red Cross Service Centers, tent cities, and other locations in the EPZ, and the development and distribution of handouts and flyers in Spanish and English, throughout the EPZ. FPL also placed copies of its public information brochure at the FEMA trailer sites located within the EPZ.

The impact of the hurricane on the alert and notification capabilities in Monroe County was much less severe than in Dade County. FEMA determined that no specific compensatory measures were necessary to alert and notify people in Monroe County.

Notification of Persons With Special Needs

As the basis for their concern regarding deficiencies in notification of persons with special needs, the petitioners cite the following statement from FEMA's October 16, 1992, letter:

FEMA attempted to call 42 special facilities; 14 calls were successfully completed, 13 yielded no answer after 10 rings, 7 yielded constant busy signals, 6 were intercepted by a phone company message that the call would not be completed, and 2 yielded only static on the line. FP&L attempted to call 134 PSNs (persons with special needs); only 6 calls were successfully completed.

FEMA addressed this issue in its interim report to the NRC on October 23, 1992. FEMA reported that on October 20-22, 1992, Federal observers conducted an independent onsite assessment of the special facilities identified by the Dade County Office of Emergency Management (OEM). FEMA staff visited each nursing home, adult congregatè living facility, and daycare

center within the EPZ to verify the operational status of the facility and its emergency notification and commercial telephone capability.

As of October 22, 1992, there were 95 special facilities identified by Dade County OEM, of which 15 were co-located with other facilities. Therefore, a total of 80 sites were visited, of which 31 were operating. Of those operating, 24 had commercial telephone capability on the premises and 7 were operating without telephone access. The seven operating without telephones all had access to either a radio or a television on the premises. Information regarding these facilities was provided to Dade County.

Although sirens and EBS are the primary means of alerting and notifying the public, commercial telephones and other means are also used to provide additional notification capability to special facilities and persons with special needs. To address the problem of disrupted telephone service in the impacted area, and to improve the current tone alert radio system capability (all schools are equipped with tone alert radios), Dade County is working on plans to replace the existing tone alert radio system with a better system. FPL has agreed to purchase up to 100 improved tone alert radio models, to be installed by March 31, 1993 at facilities identified by the County. The County has indicated to FEMA that the improved tone alert radios would be placed in all schools, hospitals, nursing homes, police departments, fire departments, and government buildings.

Dade County's registry of persons having special needs (PSN) is maintained on a computer with automatic "call out" capability via commercial telephones. County staff was aware that the needs and locations of PSNs might have changed because of the hurricane. During the week of October 5-9, 1992,

FPL surveyed all 134 names on the PSN list by telephone. Only six calls were successfully completed. FPL has mailed a flyer to all residents of the 10-mile EPZ. In addition to general information for all residents, the flyer contained instructions and a telephone number for persons with special needs to call to identify themselves and their needs. In addition to the flyer, FPL distributed the 1992-93 Turkey Point Safety Planning Brochure on December 28, 1992, to all residents of the 10-mile EPZ. The brochure includes a postpaid reply card for registry of PSNs.

The petitioners stated that FEMA's recommended compensatory measures did not address the problem of notifying the special needs population. The FEMA interim report makes it clear that considerable effort had been directed toward identifying and arranging for the notification of special facilities and PSNs. The primary means of alerting and notifying the population in the EPZ, sirens and EBS, was fully operational. The installation of tone alert radios in special facilities, the use of the public address capability of the siren system, and the use of route alerting as a secondary means of notification, along with the efforts undertaken to update the PSN registry, provided additional assurance that the special needs population in the EPZ would be notified in a timely manner in the event of an emergency at Turkey Point.

The petitioners also stated that the special needs population, as well as those populations that are unable to evacuate, cannot depend on being sheltered, given the widespread devastation in southern Dade County. Sheltering is a protective measure which, if available, can be used by emergency response officials at the time of an emergency depending on the

circumstances of the accident. The information from the FEMA survey of special facilities, the results of which were provided to Dade County officials, along with the general knowledge of the situation concerning residential and other structures in the EPZ, would be factored into any decision by State and local officials concerning the use of sheltering as a protective measure. Moreover, for severe reactor accidents, evacuation of the close-in population is the preferred protective action, rather than sheltering. There is no regulatory requirement that sheltering be available at all times and at all places within the EPZ.

Deficiencies in Evacuation Plans

The petitioners alleged that the original evacuation plans for the Turkey Point plume exposure pathway EPZ and the ingestion pathway EPZ were based upon assumptions that are no longer valid. They cite several areas in the emergency plans which they believe are deficient.

The petitioners stated that the original plan calls for residents within the EPZ to use their own vehicles to evacuate. They noted that in its preliminary status report in a letter dated October 16, 1992, FEMA stated: "It is evident that there was considerable loss of personal vehicles caused by Hurricane Andrew. Those residents suffering vehicle loss may have difficulty evacuating the EPZ after being notified."

FEMA addressed this issue in its October 23, 1992, interim report and identified the following compensatory measures:

- (1) The number of evacuee pickup points was increased to include new pickup points at each tent city. The additional pickup points would be modified as the need arose.
- (2) EBS messages have been modified to include the location of the new pickup points.
- (3) Arrangements for additional buses and more pickup points have been documented in a memorandum of understanding between the Dade County Office of Emergency Management (OEM) and Metro-Dade Transit Authority (MDTA).
- (4) Training would be provided to new school bus drivers who could be called on to assist with an evacuation. This training has been completed.
- (5) Each patrol car engaged in route alerting would be followed by an MDTA bus to pick up transportation-dependent evacuees who cannot be advised of regular pickup points.

These measures were considered adequate to compensate for the loss of personal vehicles.

The petitioners stated that the original plan calls for the sheltering of those populations that are unable to evacuate. As support for their concern that the assumption that sheltering would be available is no longer valid, the petitioners quoted from the FEMA October 16, 1992, letter that "residents are living in structures which are or will be condemned and...these structures are spread throughout the EPZ with no identifiable concentrations.



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Also, as a result of Hurricane Andrew, there are residents living in Life Support Centers (tent cities)...."

The use of sheltering as a protective measure is discussed above in connection with the sheltering of persons with special needs (see discussion of Notification of Persons with Special Needs). In summary, State and local emergency response officials would decide at the time of an accident on sheltering or evacuation as a protective measure, based on the severity of the accident, their knowledge of the status of the structures in the EPZ, and other factors concerning the accident.

The petitioners stated that the original plan assumes that residents have electricity and telephone service and thus can be notified of a radiological emergency in a timely manner. The petitioners again noted, in support of their concern, that in its October 16, 1992, letter FEMA stated "due to extensive electric power disruption, it must be assumed that a number of residents do not have access to the EBS messages which provide specific instructions relative to the emergency." This issue is discussed above in connection with the notification of the population in the EPZ (see discussion of Notification of the Population in the EPZ).

The petitioners stated that FEMA failed to address the disruption of traffic patterns caused by Hurricane Andrew and that failure to address this issue would result in unrealistically low evacuation time estimates (ETE). Petitioners argued that the disruption in traffic patterns within the EPZ was so significant that FPL's analysis of evacuation time was essentially meaningless.

FEMA addressed the issue of evacuation routes in its October 23, 1992, interim report. FEMA stated that all of the Dade County evacuation routes within the 10-mile EPZ were open and usable for evacuation. The routes were verified as being open by a FEMA assessment team member who drove the routes on October 5-6, 1992. FEMA reported that, through interviews with the State Division of Emergency Management, it was determined that road signs on most of the major road arteries in Dade County have been replaced. Many of the signs on the local streets have also been replaced; however, this was considered a low-priority item at the time of the assessment. FEMA reported that the assessment team was assured that local or State law enforcement personnel, or both, would be stationed at street corners directing traffic to facilitate any required evacuation.

Regarding the ETE analysis, the primary purpose of the analysis is to identify potential traffic bottlenecks during the planning process which could impede an evacuation. Appropriate measures can then be taken to control the traffic at these points. The commitment to station local or State law enforcement personnel, or both, at street corners to direct traffic in the event of an evacuation fulfills this objective of an ETE analysis. Furthermore, all the evacuation routes in the EPZ were open. Information obtained during the assessment from State and local officials indicated that the total EPZ population was about the same as it was before the hurricane (140,000). The number of residents who left the area was balanced by the number of transients who arrived after the storm. Given that the evacuation routes are all open and the EPZ population is about the same, the ETEs would not be expected to change significantly. Licensees are expected to reexamine

their ETE studies if there are significant changes in the demography surrounding a site.

FEMA has performed a thorough, in-depth assessment of the offsite emergency preparedness capabilities of the jurisdictions located in the 10-mile EPZ for Turkey Point in the aftermath of Hurricane Andrew. On the basis of that assessment and compensatory measures taken, FEMA reaffirmed in its interim report of October 23, 1992, that there is reasonable assurance that the public health and safety could be protected in the event of a radiological emergency at the Turkey Point Nuclear Power Plant. The NRC concurred in this determination.

Deficiencies in Coordination Between the Licensee, Federal, State, and Local Agencies Responsible for Radiological Emergency Response Planning

The petitioners asserted that in view of the confusion surrounding the premature restart of the Turkey Point Nuclear Units, serious questions have been raised as to the ability and commitment of FPL and the NRC to abide by regulations requiring "that there is reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency." The petitioners stated that there was, as yet, no explanation as to why the licensee was allowed to attempt a restart of Turkey Point, nor any indication from the NRC as to why it allegedly failed to enforce its own regulations. Petitioners argued that this is yet another instance in which the agency has "failed to maintain a proper regulatory relationship with nuclear industry." The petitioners indicated that neither Dade County nor FEMA were informed of the licensee's decision to restart Turkey Point Unit 4



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until the reactor was in power ascension. The petitioners noted that in an October 15, 1992, letter to Senator Graham, FEMA stated that the NRC had indicated that "no restart of Turkey Point was contemplated prior to mid-November at the earliest," and that the NRC allowed FPL to restart the reactor "(w)ithout any coordination, advance notice, or request that FEMA confirm offsite capabilities . . ." as, the petitioners allege, is required by the April 1985 FEMA/NRC Memorandum of Understanding (MOU).

The unprecedented devastation resulting from Hurricane Andrew in the Turkey Point EPZ caused FEMA to be concerned about the possible impact upon the emergency preparedness infrastructure and population in the EPZ. FEMA could not conduct an immediate reassessment of offsite emergency preparedness, however, because the first priority of FEMA and State and local agencies was immediate disaster relief activities, which demanded their full attention. Moreover, based upon the licensee's and NRC's initial post-storm estimates, FEMA expected to have more time to address the question of offsite emergency preparedness before the Turkey Point plant was ready for restart. FPL site cleanup and restart preparations were actually completed much earlier than originally estimated, so that Unit 4 was ready for restart before FEMA could conduct a special disaster-initiated review of offsite emergency preparedness. The NRC did not give FEMA a revised restart schedule and the restart date was not coordinated with FEMA. Accordingly, on October 1, 1992, the NRC requested the utility to suspend Unit 4 restart activities pending further assessment by FEMA of the status of offsite emergency preparedness in the area near the plant. Neither the NRC nor FEMA had made any new findings or determinations regarding the state of offsite emergency preparedness up to that point.

At the request of the NRC, Unit 4 was shut down, and remained shut down until FEMA completed its disaster-initiated assessment and issued its interim report on October 23, 1992. FEMA noted that the report was the product of extensive coordination among FEMA, NRC, the State of Florida, Dade and Monroe County emergency management officials, and FPL.

Circumstances surrounding the restart of the Turkey Point nuclear units following Hurricane Andrew were unprecedented. In the October 23, 1992, letter transmitting its findings and interim report to the NRC, FEMA characterized its effort as "the first time that such a review has been necessitated or conducted as a result of natural disaster impacts on an emergency preparedness infrastructure and population located within the 10-mile EPZ of a commercial nuclear power plant." The FEMA/NRC MOU does not address actions to be taken after such a disaster. However, the NRC and FEMA staffs are planning to expand their MOU to clarify FEMA's responsibility to assess offsite emergency preparedness and the NRC's responsibility for considering such an assessment in the decisions it makes after a disaster regarding the restart or continued operation of an affected operating power reactor. The MOU revisions will also describe FEMA and NRC commitments to inform each other of related plans, schedules, and actions. The NRC staff is also carefully reviewing all aspects of the Turkey Point post-storm recovery and restart process to ensure that the NRC and all licensees duly consider the possible impact of disasters on offsite emergency preparedness, and consult fully with FEMA and offsite authorities if such rare and unusual circumstances should ever arise again.



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The petitioners alleged that any attempt to restart the Turkey Point nuclear units absent a fully revised and tested radiological emergency response plan would constitute a violation of NRC regulations as well as an abrogation of the Commission's duty to ensure the public health and safety. However, as stated above, FEMA had previously approved offsite emergency plans for the Turkey Point plant and they had been satisfactorily tested in December 1991, consistent with NRC and FEMA regulations. After assessing the effects of Hurricane Andrew on emergency preparedness for Turkey Point and the compensatory measures taken and ongoing, FEMA concluded that there is "reasonable assurance that the public health and safety can be protected in the event of a radiological emergency at the Turkey Point Nuclear Power Plant."

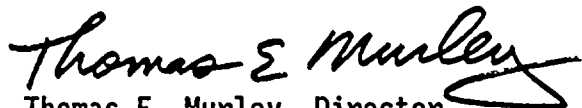
By letter to Mr. Riccio dated November 13, 1992, the NRC informed the petitioners that it had concluded, upon reviewing the FEMA letter and interim report of October 23, 1992, that the offsite conditions that delayed restart pending satisfactory completion of a disaster-initiated review have now been rectified. The NRC had previously concluded that plant conditions at Turkey Point Nuclear Units 3 and 4 were such that there is reasonable assurance they could be operated safely. Therefore, on October 23, 1992, the NRC informed the licensee that, based on FEMA's assessment of offsite emergency preparedness and the NRC's safety assessment, there was no nuclear safety reason that would prohibit the nuclear units at Turkey Point from resuming full-power operation. On October 24, 1992, the licensee returned Unit 4 to service and on November 28, 1992, following completion of its refueling outage, Unit 3 was also returned to service.

CONCLUSION

The concerns raised by the petitioners have been addressed by FEMA and the NRC. For the reasons discussed above, the NRC has concluded that the emergency response plans continue to be adequate and there is reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency at Turkey Point. The petitioners have not provided a basis that would warrant the action requested. The institution of proceedings pursuant to 10 CFR § 2.202 is appropriate only if substantial health and safety issues have been raised (see Consolidated Edison Company of New York (Indian Point Units 1, 2, and 3), CLI-75-8, 2 NRC 173, 175 (1975); Washington Public Power Supply System (WPPSS Nuclear Project No. 2), DD-84-7, 19 NRC 899, 924 (1984)). This is the standard that has been applied to the concerns raised by the petitioners to determine if enforcement action is warranted. Consequently, the petitioner's request is denied.

A copy of this decision will be filed with the Secretary for the Commission to review as provided in 10 CFR 2.206(c).

FOR THE NUCLEAR REGULATORY COMMISSION


Thomas E. Murley, Director
Office of Nuclear Reactor Regulation

Dated at Rockville, Maryland,
this 23rd day of March

1993.