

October 31, 2002

Ms. Aubrey Lees
Chair, Community Board No. 2
City of New York
3 Washington Square Village
New York, NY 10012-1899

Dear Ms. Lees:

I am responding to your letter of June 28, 2002, to the U.S. Nuclear Regulatory Commission (NRC) in which you forwarded a resolution by Community Board No. 2, Manhattan, asking the NRC, the Federal Aviation Administration (FAA), and Entergy Nuclear Operations, Inc. to establish a permanent 10-mile no-fly zone over the Indian Point Nuclear Plant. As its basis, the Board stated that: (1) the NRC made prior statements that nuclear plants weren't designed to withstand crashes by large aircraft, (2) the NRC did not distribute potassium iodide (KI) pills to those individuals within the 50-mile radius of the plant, (3) there is a high population density within the 50-mile radius, and (4) there are estimates of significant environmental and health impact from an attack on Indian Point.

The NRC continues to ensure that, in the post-September 11 environment, nuclear power plants provide adequate protection of public health and safety. The protection of public health and safety does not rely solely upon the ability of a reactor containment to fully withstand an attack of a commercial jetliner. Nuclear power plants have multiple layers of physical protection, as well as redundant safety systems and components along with features such as robust containment buildings and highly trained operators. They are among the most hardened structures in the Nation and are designed to withstand extreme events, such as hurricanes, tornadoes and earthquakes. In addition, all NRC licensees with significant radiological material have emergency response plans which are exercised routinely and can be initiated if an event were to occur to mitigate the impact on the public.

In response to the terrorist attacks of September 11, 2001, NRC Chairman Richard Meserve, with the full support of the Commission, directed the NRC staff to undertake a comprehensive re-evaluation of NRC's security and safeguards programs. This review involves coordination with other Federal agencies, including the FAA, to address the potential for a deliberate aircraft attack. As a result of these efforts, the FAA and the Department of Defense (DoD) have acted on various specific occasions to protect the airspace above nuclear power plants. Furthermore, the Aviation and Transportation Security Act of 2001 provides additional protection against air attacks on all industrial and infrastructure facilities, both nuclear and non-nuclear. On September 23, 2001, representatives from the FAA, DoD, and NRC met to discuss aviation security and determined that an FAA Notice to Airmen (NOTAM) was the appropriate vehicle to advise pilots about the need to avoid air space above sensitive sites, such as nuclear power plants. The NOTAM was subsequently issued on September 26, 2001, and has been updated by later NOTAMs, strongly urging pilots to not circle or loiter over nuclear power plants and other facilities, unless otherwise authorized by air traffic control or as required to land or depart at towered/non-towered airports. This notice is still in effect. On October 30, 2001, the FAA issued another NOTAM which established a 10-mile no-fly zone around certain sensitive areas, such as nuclear power plants. Although this NOTAM has expired, pilots are still being

cautioned to not loiter near nuclear power plants per the September 26 NOTAM. Should additional restrictions be deemed necessary as a result of more specific threats, the NRC will coordinate an appropriate response with the other Federal agencies.

The NRC believes that the Nation's efforts to provide protection against terrorist attacks by air should be directed toward enhancing security at airports and within airplanes instead of defending all potential targets. Nevertheless, licensees have implemented certain actions as a result of the NRC advisories and Orders to mitigate the effects of a September 11-type aircraft attack and we have initiated a detailed engineering study to determine plant vulnerability to aircraft attack as well as the effectiveness of mitigation management strategies. Variables considered in the analyses include aircraft size and speed, as well as the amount of fuel on board the airplane. NRC is working with the National Laboratories to perform this in-depth analysis that will provide valuable information upon completion. Final results from that analysis are estimated to be completed by fall 2003. If warranted by the analyses, the NRC will consider changes to the requirements for affected licensees to ensure the protection of the public health and safety. However, the study will not be made publicly available since the specific assumptions, methods, and conclusions are classified.

On February 25, 2002, the NRC issued Orders to all commercial nuclear power plants to implement interim compensatory security measures for the current threat environment. Some of the requirements formalize a series of security measures that NRC licensees had already taken in response to advisories issued by the NRC following the terrorist attacks, and others are security enhancements which have emerged from the Commission's ongoing security review. Entergy Nuclear Operations, Inc., the licensee for the Indian Point facility, has completed the required actions to fully comply with the Orders. In addition, New York State has augmented security at Indian Point with National Guard personnel and State police. Further, the New York State Office of Public Security, working with various Federal and State agencies, including the Federal Bureau of Investigation, has assessed the long-term security needs at Indian Point. The Office of Public Security report made a number of recommendations to enhance security which Entergy has either implemented or is considering. The NRC and the Federal Emergency Management Agency (FEMA) have been working with the Office of Public Security, the New York State Emergency Management Office, and other State and local agencies to enhance coordination involving security and emergency preparedness and planning.

In your letter, you refer to the results of an NRC study regarding the consequences of an accident with a radiological release. The study to which you refer is the 1982 Sandia National Laboratory (SNL) Report "Calculation of Reactor Accident Consequences" (CRAC-2 Report). The studies in the CRAC-2 Report were performed as part of research on the sensitivity of various plant siting parameters. The studies used generic postulated releases of radioactivity from a spectrum of severe (core melt) accidents and were based on no safety equipment or operator actions being taken to mitigate the event. The studies were never intended to be realistic assessments of accident consequences.

Regarding your concerns about the distribution of KI tablets, the NRC, in coordination with FEMA and the Food and Drug Administration (FDA), has established policy with respect to KI distribution within the 10-mile emergency planning zone (EPZ) of each nuclear power plant. We are currently shipping KI tablets at Federal expense to those States that have requested KI tablets and have included thyroid prophylaxis as part of their emergency response plans.

In the unlikely event of a significant release of radioactive material from a nuclear power plant, the population closest (within the 10-mile EPZ) to the plant would benefit most from the use of KI. Internal radioactive iodine exposure to the thyroid gland results primarily from ingestion of milk and food contaminated with radioactive iodine, rather than from inhalation of airborne materials. The NRC requires that emergency response plans include a range of protective actions for the 10-mile EPZ (plume exposure pathway), and the 50-mile (ingestion exposure pathway) EPZ. The criteria for these plans include expectations that State and local organizations establish a capability for implementing protective measures. The protective measure for the plume exposure pathway include plans for evacuation, which include maps, traffic control, evacuation areas, and relocation centers located in areas beyond the plume exposure EPZ. State plans also include protective measures to be used for the ingestion pathway EPZ, such as interdiction of contaminated milk and food.

In terms of protective measures, evacuation is the most effective protective measure in the event of a radiological emergency because it protects the whole body (including the thyroid gland and other organs) from all radionuclides and all exposure pathways. In situations where evacuation is not feasible, in-place sheltering is substituted as an effective protective action. Additionally, administering KI is a reasonable, prudent, and inexpensive supplement to both evacuation and sheltering. When the population is evacuated out of the area, and potentially contaminated foodstuffs are interdicted, the risk from further radioactive iodine exposure to the thyroid gland is essentially eliminated. Thus, the distribution of KI beyond the 10-mile EPZ does not provide much benefit.

Additional information on the NRC KI program is posted on the NRC website:
<http://www.nrc.gov/what-we-do/regulatory/emer-resp/emer-prep/potassium-iodide.html>.

Thank you for your interest in these concerns of importance to the Nation and nuclear power plant safety. If you should have any further questions, please feel free to contact me at 301-415-1353 or Patrick Milano at 301-415-1457.

Sincerely,

/RA/

Stuart A. Richards, Director
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Copy to:
Ms. Arlene B. Feldman
Regional Administrator, Eastern Region
Federal Aviation Administration
John F. Kennedy International Airport, Building 11
Jamaica, NY 11430

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Sincerely,

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 Stuart A. Richards, Director
 Project Directorate I
 Division of Licensing Project Management
 Office of Nuclear Reactor Regulation

Copy to:
 Ms. Arlene B. Feldman
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 Federal Aviation Administration
 John F. Kennedy International Airport, Building 11
 Jamaica, NY 11430

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 PACKAGE: ML022900157 *See previous concurrence

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DISTRIBUTION: for letter to A. Lees dated October 31, 2002

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