

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the matter of)

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.)
(Indian Point, Unit No. 2))

Docket Nos.
50-247 SP
50-286 SP

POWER AUTHORITY OF THE STATE OF NEW YORK)
(Indian Point, Unit No. 3))

COMMENTS OF THE UNION OF CONCERNED SCIENTISTS
ON ORDER ESTABLISHING PROCEDURES FOR DECISION
ON ENFORCEMENT ACTION CLI-83-11.

On May 5, 1983, the Commission issued an order announcing that FEMA had concluded that it could not find reasonable assurance that the health and safety of the public within 10 miles of the Indian Point Plants would be protected in the event of a serious accident. The Commission gave the licensees an opportunity to demonstrate both in writing and through oral argument that the plants should not be shut down because the deficiencies in emergency planning are not significant, there are adequate interim compensating actions, or there are other compelling reasons why the plants should not be ordered to cease operation unless and until emergency planning is adequate. 10 CFR 50.54(s)(2)(ii). State, local and federal governmental entities were also invited to comment both in writing and orally.

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UCS is a party in and initiated the on-going NRC investigation of risk associated with operation of the Indian Point plants, which investigation has dealt in depth with the status of emergency planning and the economic consequences of shutdown. UCS filed a motion with the Commission requesting equal treatment with the licensees and sought opportunity to comment in writing and orally. The Commission first rejected the request. It gave UCS and the other parties to the investigation an opportunity to present written comments by May 23, 1983, but refused to allow our participation in the oral argument scheduled for May 26, 1983. UCS then received notice on Monday, May 23, that parties submitting written comment would be permitted to make an oral presentation of 10 minutes.

I. THE DEFICIENCIES IN EMERGENCY PLANNING FOR INDIAN POINT ARE FUNDAMENTAL.

There has been an effort to portray the deficiencies in emergency planning as insignificant. The Westchester problem has been characterized as a technical failure to provide contracts between the bus companies and the county. It has further been implied that the Rockland County problem is a political one; that the State personnel "substituted" for Rockland County and that the deficiency was merely that this substitution was at variance with the plan, which called instead for supplementation. Such characterizations of the state of emergency planning for these plants betray a remarkable ignorance of the facts which caused FEMA to make its extraordinary findings. Those facts are outlined as follows:

1. In both Westchester and Rockland Counties, persons interviewed on the day of the exercises generally did not know what the sirens meant nor even that they should turn on their radio to the Emergency Broadcast System (EBS) station in order to receive instructions on what to do.

See Post Exercise Assessment for the Indian Point Nuclear Station, April 14, 1983, Federal Emergency Management Agency, Region II, (hereinafter FEMA Report), §2.4.4, §2.5.5. There is clearly no basis for a finding that the public either understands what they should do in the event of an accident or will take the steps necessary to find out. Id. § 2.4.5. FEMA found that this "limits the effectiveness of the prompt alert and notification system." Id. § 2.4.5. This observation is, if anything, an understatement. Considering that Westchester County has not yet decided how to effect evacuation of school children, that there is no comprehensive plan for transporting children and other public transportation dependent persons from Westchester and that there is no approved or effective emergency plan at all for Rockland, it is critical that the public at least understand that the sirens denote a nuclear emergency and require them to tune in to EBS.

2. The Westchester bus drivers had little or no idea what to do, were not trained and are not prepared.

The non-existence of contracts between the bus company and the county is the smallest part of the problem. For the April 9 exercise, five bus routes in Westchester were preselected and the companies and drivers notified in advance. Id. § 2.4.7.

Putting aside for the moment the obvious question of whether such prior notification defeats the purpose of the drill, the fact is that even under these ideal conditions, 4 out of 5 bus drivers did not know what to do. Id. §2.4.7. FEMA found:

" . . . despite the guidance that was given prior to the exercise, it was evident that additional training is necessary to insure that the bus dispatchers and drivers are properly acquainted with the evacuation procedures, the routes they should follow to pick up evacuees, and the location of reception centers. Therefore, the capability to implement an evacuation of the general population in Westchester County remains questionable. Id. §2.4.7.

If even prenotified and preselected bus drivers do not know the routes to follow, who to pick up, or where to take them, a rational decision maker could only find that there is no basis for concluding that an evacuation could be effected.

3. There is no effective transportation plan for Westchester County.

Westchester County refused, for good and sufficient reasons, to accept a transportation plan written for it by licensees which, inter alia, provided for bus drivers to take one wave of school children to reception areas, return for a second and in some cases a third before all children could be removed. Parents, in the meantime, were expected to leave their children. Any significant movement of parents to go to school to pick up their children would have hopelessly snarled the movement of persons out from the 10 mile radius. Westchester is in the process of developing a realistic

transportation plan which is "expected to be completed in December, 1983." Id. § 2.4.7. If there were an accident today, Westchester would either have to try to use an inadequate plan or to improvise. Neither alternative is acceptable. The state of preparedness is clearly not adequate.

4. Ambulance personnel in Westchester did not know their responsibilities, were not trained in evacuation procedures for a radiological emergency and did not have the necessary dosimetry equipment. FEMA Report §2.4.7.
5. A report by FEMA's consultant, Argonne National Laboratory, shows the state of preparedness at Indian Point to be far worse than indicated by Post-Exercise Assessment.

FEMA hired Argonne National Laboratory prior to the April 1983 exercise to attempt to "verify the information" contained in the Indian Point emergency plans. Argonne surveyed, inter alia, bus companies, reception centers, schools, and hospitals to determine whether these facilities which are assigned critical roles by the written plans, knew of their roles and could, in fact, perform them. Argonne's findings are contained in a document entitled "Indian Point Plans Verification Analysis," unpublished report prepared by Energy and Environmental Systems Division, Argonne National Laboratory for FEMA, Region II, April 1983: (hereinafter "Argonne Report"). This remarkable report shows that the actual state of preparedness around Indian Point is far worse than even the limited exercise demonstrated.

Argonne could not verify the Rockland plan at all because "there was no listing of facilities in Rockland County that would participate in a radiological emergency response." Argonne Report, §1.1.

A sampling of Argonne's findings for the other counties follows:

a. Seven bus companies in Westchester are included in the plan. Only five could be surveyed. One driver in one company had been trained. Id. §2.1

b. Orange County has three bus companies designated to effect an evacuation. One company is responsible for contacting the other two; that company "was not aware of this system." None of its drivers had received any training. Argonne was unable to contact the other two companies. Id.

c. Five bus companies are designated in Putnam. Three could be contacted. No drivers had received training. Id. Thus, of the three counties surveyed, Argonne could find only one driver in one company who had received any training in emergency response.

d. Only two out of 9 public schools surveyed within the EPZ had received any training in evacuation procedures. Argonne Report, §2.4. This included none of the four schools surveyed in Westchester or the two in Putnam. Id.

e. Eight of the 13 school districts within the EPZ were surveyed. Six of eight had received no training in evacuation procedures. Id. §2.6.

f. Fourteen of the 89 ambulance companies listed in the plan were surveyed. Three no longer exist; one was not operating, and one could not be contacted. Four out of the remaining nine were unaware that they were designated to respond to radiological emergencies Id. §2.9

It is obvious from the Argonne survey that the Indian Point plans bear little if any relationship to reality; the persons and groups critical to implementing the plans are generally unprepared to perform their designated tasks. Standing on its own, the Argonne survey compels the conclusion that the state of preparedness is abysmal.

II. ADEQUATE INTERIM COMPENSATING MEASURES HAVE NOT BEEN AND CANNOT BE PUT INTO PLACE IN A REASONABLE PERIOD OF TIME.

We have discussed above the fundamental nature of the deficiencies in preparedness. It is inconceivable that these could be cured or even substantially addressed in a month. The total absence of an adequate plan in Rockland, the absence of an effective transportation plan in Westchester, the pervasive lack of training on preparedness of critical persons in all counties, the near total lack of understanding on the part of

the public -- these are broad and deep deficiencies which preclude a finding of preparedness.

A great deal of attention has been focused on whether the state demonstrated its ability to substitute for Rockland County. It did not.

The State of New York has designated a total of six supervisory people to Rockland County. This scarcely constitutes a showing that the state is capable of substituting for the range of functions which the county must perform, or that it is prepared to do so.

Despite the fact that these 6 people knew well in advance that April 9 was the drill date, it took them 60-90 minutes to appear on site from the locations around the state where they reside. FEMA Report. §2.5.2. One must expect that the delay would be longer in an actual emergency where the participants were not prenotified. Delays of this magnitude preclude a finding that prompt action could be taken to protect the public. Moreover, the evacuation of the transit dependent population, including school children, is not covered in the state "compensating measures." Id. §2.5.7. The notification and mobilization of evacuation bus drivers were not demonstrated. Id. § 2.5.2. Many of the emergency response personnel "lacked either radiological exposure-control equipment, training, or both." Id. § 2.5.8.

FEMA concluded, as it had to, that "the actions that were performed during the exercise do not show that the public could be protected in an actual radiological emergency at the Indian Point Nuclear Power Station." FEMA Report S 2.5.7.

FEMA has further informed the NRC that there is "no evidence" that New York State has dedicated the resources necessary to go beyond the limited capability demonstrated on April 9. Richard W. Krimm, Assistant Associate Director, Office of Natural and Technological Hazards, FEMA, to Samuel J. Chilk, Secretary of the Commission, NRC, May 4, 1983. (hereinafter "Krimm letter"). p.5. Moreover, the licensees' have attempted to portray the FEMA findings as a bureaucratic quirk by an agency overly devoted to detail. Nothing could be further from the truth. FEMA has reaffirmed that:

the overriding concern is the resource base to support an actual emergency in a timely manner. FEMA's finding is that the state of New York has not demonstrated that adequate personnel and resources exist and could be provided to support an actual emergency in Rockland County or that the personnel can be mobilized, dispatched, and in place in a timely manner. Krimm letter, p. 5.

The plain fact is that by any rational measure, neither Rockland County nor the state is prepared to deal with an accident at Indian Point. The plan for Rockland County developed by the licensees has been found by Rockland County to be unworkable and unrealistic, a finding which the licensees have not disproven. Under these circumstances, even if the

state could send enough trained people to stand in for Rockland personnel, the fundamental inadequacy of the licensees' plan itself would not thereby be corrected.

III. THERE ARE NO COMPELLING REASONS JUSTIFYING THE CONTINUED OPERATION OF THE INDIAN POINT PLANTS.

It is not seriously contended by any party that a temporary shutdown of the Indian Point plants would cause power shortages; there is a substantial excess of electric power available to the grid serving New York. There have been, however, misleading and vastly overstated claims about the economic consequences of a temporary shutdown. A PASNY spokesman claimed on CBS news that shutdown of Indian Point would "mean the end of New York City as we know it."

The facts are far less dire. Unit 3, which is supposed to supply power to the New York subway and other municipal services, has in fact been shutdown for the past 14 months to repair its steam generators. New York still survives. Unit 2 is also not a very reliable source of energy. In 1981, it operated on the average of 11 days per month. The sad fact is that even under "normal" circumstances, the Indian Point plants are closed down a great deal of the time. Although a temporary shutdown of the plants until a reasonable level of emergency planning exists will have some economic consequences, the evidence simply does not allow a conclusion that it would be incrementally substantial.

Indeed, when questioned on ABC's Good Morning America on Friday May 6, J.P. Bayne, Executive Vice President of Nuclear Generation, PASNY, offered only one quantified estimate of the cost associated with shutdown: a 6¢ rise in subway fares. Mr. Bayne did not make it clear whether this would be a result of permanent or temporary shutdown; we suspect the former. In any case, even if one were to accept this figure as accurate without dispute, it surely does not rise to the level of "compelling circumstances."

The question of the cost of a permanent shutdown of the plants has been addressed in detail in the Indian Point investigative hearings. While a permanent shutdown would of course have economic consequences vastly greater than a temporary shutdown, the evidence presented places this issue in rational perspective.

The most comprehensive, realistic estimate of the cost of permanent shutdown was provided at the hearings by the Energy Systems Research Group ("ESRG", Testimony of Richard Rosen). ESRG calculated the total net cost as cost of replacement capacity minus savings in plant capital and operating and maintenance costs. The net cost of permanent shutdown was found to be \$746 million spread over 15 years, or a 1.9% increase in electric rates. ESRG made a series of conservative assumptions tending to maximize consumer costs: no shift of the burden to Con Ed Stockholders, no disproportionate cost shared

by PASNY customers and no spreading of costs beyond the Con Ed service territory. Moreover, the \$746 million/1.9% increase figure was calculated before the recent decline in worldwide oil prices. If that decline is taken into account and other assumptions unchanged, the projected increase in electric rates drops to less than 0.5%. We believe that this is the best estimate of permanent shutdown costs.

Other witnesses sponsored by NRC Staff and others provided shutdown cost estimates in the vicinity of \$3-4 billion. The difference is attributable primarily to the fact that ES&RG accounted for economically rational steps to mitigate the impact such as increasing purchases of Canadian hydro power and converting the Ravenswood plant to coal. All the other witnesses assumed that no such cost-mitigating measures would be taken, although the state rate-regulating authority would certainly require rational mitigation.

The licensees' witnesses (Streiter and Meehan) were alone in predicting net cost of shutdown in the vicinity of \$9 billion. In order to reach this greatly inflated figure, they made a series of demonstrably unreasonable input assumptions. These included grossly optimistic capacity factors (63% until very near the end of plant life, as compared with historical capacity factors of 51% and 45% for Units 2 and 3 respectively); over-optimistic assumptions for operating and

maintenance costs (an initial decline followed by a 1% annual increase, while nationwide O & M costs have been increasing since the mid-1970's by close to 20% annually in real terms); and overly pessimistic assumptions regarding oil prices and load growth. When licensees' witnesses corrected only for these unreasonable assumptions, their predictions fell in the \$4 billion range.

Overall, the expected impact of permanent shutdown on electric rates in the New York city area may be realistically estimated at between) and 2%. The outside limit, greatly unrealistic in our view, would be in the vicinity of 8-10% rate increase. The costs of a temporary shutdown would be far less. No case for "compelling circumstances" has been presented.

Conclusion

UCS believes that the NRC has no choice but to shut the Indian Point plants down until there is reasonable assurance that the public can be protected in the event of an accident. NRC's rules in this regard are far from overly restrictive; the fact that Indian Point is still unable to meet them two years after the effective date of the rules is a measure of the difficulty posed by this unique site. The deficiencies are fundamental in nature and broad in scope.

As to Westchester, FEMA summarized the state of preparedness as follows:

. . .the lack of capability to perform evacuations, even to nominal distances, and for a small fraction of the total population of the emergency planning zone, constituted a deficiency in preparedness. Krimm letter, p. 4.

With respect to Rockland County, it concluded:

FEMA believes that a State could, in selective and carefully arranged situations, provide for the shortcomings of local planning and preparedness measures. In the Indian Point March 9, 1983, exercise, for example, it was not that FEMA departed from this principle in regard to Rockland County participation but rather that The State did not demonstrate compensatory measures by dedicating resources that go beyond one-time exercise capability. Id. at 12.

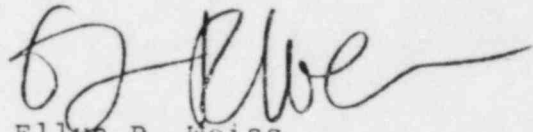
Beyond the FEMA findings, the Argonne survey shows that emergency preparedness is a shambles. This is not a case of local governments unreasonably "vetoing" nuclear plants. It is a case of clear and consistent failure to meet NRC's rules or any reasonable standard for public protection from nuclear accidents.

Nor can this failure be excused on the grounds that an accident is extremely unlikely. Several million dollars has been spent on highly complex probabilistic risk assessment directed to this question. The answer is not comforting. Even if one believes that PRA yields numbers of sufficient precision to be meaningful in this context - which UCS emphatically does not - NRC estimates that the probability of a large radioactive release at Unit 2 alone is between one in 500 and one in 33,000 per year. This means that the chance of such a release during one lifetime of Unit 2 is between 7.7% and 0.2%. Such estimates are not grounds for complacency,

particularly when 17 million people live within 50 miles of the plant. The NRC cannot so quickly forget the lesson of the TMI-2 accident which was also said to be an "incredible" event.

If NRC's rules are to have any meaning, the time for temporizing is long past. Indian Point should be ordered to cease operation.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read 'Ellyn R. Weiss', with a long horizontal flourish extending to the right.

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9th May, 1983

CERTIFICATE OF SERVICE

I hereby certify that copies of the COMMENTS OF THE UNION OF CONCERNED SCIENTISTS ON ORDER ESTABLISHING PROCEDURES FOR DECISION ON ENFORCEMENT ACTION CLI-83-11 were mailed to the following postage pre-paid, first-class mail on the 24th day of May, 1983 and hand delivered where indicated by an asterisk this 23rd day of May, 1983.

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A handwritten signature in dark ink, appearing to read 'Elynn J. Weiss', is written over a horizontal line.

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