



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

August 19, 1976

Docket Nos. 50-3  
50-247  
50-286

Mr. Louis J. Sirico, Jr.  
Public Interest Research Group  
1832 M Street, NW, Suite 101  
Washington, D. C. 20036

Dear Mr. Sirico:

Reference is made to the petition filed by you on behalf of the Public Interest Research Group and the New York Public Interest Research Group pursuant to 10 CFR §2.206 dated February 6, 1976. The petition alleged numerous deficiencies in the Indian Point Station emergency plans and requested that the Commission require that the licensees show cause why the licenses for Indian Point Units 1, 2, and 3 should not be suspended until such deficiencies are corrected and why civil penalties should not be imposed for alleged misrepresentations to the Commission.

Our response to the petition is provided in the enclosed report entitled, "Response by the NRC Staff to Petition for Order to Show Cause Filed by the Public Interest Research Group and the New York Public Interest Research Group Related to Emergency Planning at Indian Point Nuclear Generating Station."

As indicated in the report, we have concluded that one of the petitioners' specific allegations regarding emergency drills (at page 9 of the petition) has merit. Accordingly, we have requested that the licensees provide information, pursuant to 10 CFR §50.54(f) of the Commission's regulations, sufficient to demonstrate full compliance with Section IV(I) of Appendix E to 10 CFR Part 50 (see Section 2.4 of the enclosed report and enclosed letter to licensees).

Insofar as this action requests the licensees to demonstrate compliance with Section IV(I) of Appendix E to 10 CFR Part 50, the petitioners' request is granted. However, those portions of the petition that request actions other than that action described above should be considered to be denied. The basis for this denial is provided in the enclosed report.

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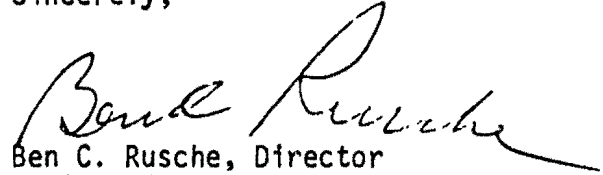
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Mr. Louis J. Sirico, Jr.

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We will keep you informed of the results of our evaluation of the licensees' response to our request and of any significant NRC decisions or actions related to our evaluation.

Sincerely,



Ben C. Rusche, Director  
Office of Nuclear Reactor Regulation

Enclosures:  
As stated

RESPONSE BY THE NRC STAFF  
TO  
PETITION FOR ORDER TO SHOW CAUSE  
FILED BY  
THE PUBLIC INTEREST RESEARCH GROUP  
AND  
THE NEW YORK PUBLIC INTEREST RESEARCH GROUP  
RELATED TO  
EMERGENCY PLANNING  
AT  
INDIAN POINT NUCLEAR GENERATING STATION

1.0 INTRODUCTION

1.1 Background

On February 6, 1976, the Public Interest Research Group (PIRG) and the New York Public Interest Research Group (NYPIRG) submitted a petition requesting the Nuclear Regulatory Commission (the Commission) to issue a show cause order to the Consolidated Edison Company of New York, Inc. and the Power Authority of the State of New York (hereafter referred to as the licensees). PIRG and NYPIRG (hereafter referred to as the petitioners) requested that the licensees be required to show cause:

- (1) "Why the licenses of the Indian Point nuclear facilities should not be suspended until all State and licensee plans provide reasonable assurance that appropriate measures can and will be taken in the event of an emergency to protect public health and safety and prevent damage to property and the requirements of Part 50, Appendix E, Sections III and IV of the Commission's regulations are fully satisfied.
- (2) "Why the licensees should not be fined for failing to comply with Part 50, Appendix E, Sections III and IV of the

Commission's regulations and for misrepresenting to the Commission that all emergency plans relating to their plants provide reasonable assurance that appropriate measures can and will be taken to protect public health and safety and prevent damage to property."

## 1.2 Petitioner's Allegations

The thrust of the petitioner's allegations regarding the emergency plans for the Indian Point Station is as follows:

- (1) The New York State emergency plans for coping with nuclear accidents are totally inadequate.
- (2) Since the licensees' emergency plans make explicit reference to the New York State plans, (a) the licensees' plans do not meet Sections III and IV of Appendix E to 10 CFR Part 50 and (b) the licensees have engaged in a misrepresentation to the Commission in that they have represented to the Commission that the New York State emergency plans provide the required "reasonable assurance" of appropriate measures.

- (3) The licensees' emergency plans do not contain adequate "Procedures for notifying, and agreements reached with local, State, and Federal officials and agencies..." as required by Section IV (D) of Appendix E to 10 CFR Part 50.
- (4) The licensees' emergency plans do not contain adequate procedures for emergency drills as required by Section IV (I) of Appendix E to 10 CFR Part 50.
- (5) The licensees' emergency plans contain numerous other failings which render the plan inadequate to provide the "reasonable assurance" of appropriate emergency measures required by Section III of Appendix E to 10 CFR Part 50.

The petitioners' allegations are based upon an interpretation by them of regulations found in Appendix E to 10 CFR Part 50 - Emergency Plans for Production and Utilization Facilities, specifically Sections III and IV of Appendix E relating to plans for coping with emergencies to be described in the Final Safety Analysis Report and the contents of such plans. Section III requires that "The details of these plans and the details of their implementation need not be included, but the plans submitted must include a description of the elements set out in Section IV to an extent sufficient to demonstrate that the plans provide reasonable

assurance that appropriate measures can and will be taken in the event of an emergency to protect public health and safety and prevent damage to property." It is clear therefore, that the Commission's rules contemplate that a finding of "reasonable assurance" can be made based solely upon a description of emergency planning elements as set forth in Section IV of Appendix E, and that neither details of plans nor details of their implementation have to be provided in order to make this finding.\*

### 1.3 Processing of Petitioners' Request for a Show Cause Order

In response to the petitioners' request for a show cause, the Office of Nuclear Reactor Regulation has conducted a re-review of the Indian Point Station Emergency Plan with respect to the specific inadequacies alleged by the petitioners. This re-review covered the documents referenced in Section 4.0 of this report.

A number of the petitioners' allegations are based on the petitioners' review of the New York State emergency plans as described

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\*The NRC currently has under active consideration a petition for rulemaking from PIRG, dated August 6, 1975, which requests, among other things, that 10 CFR 50, Appendix E, Section III be modified to require that Final Safety Analysis Reports include detailed emergency plans and implementation procedures.

in the "New York State Emergency Plan for Major Radiation Accidents Involving Nuclear Facilities," dated August 2, 1972 (the State plan) and the New York State "Specific Operating Procedures (SOP), Indian Point Station," dated June 30, 1971. Both of these documents were incorporated in the Indian Point Unit 3 Final Safety Analysis Report (FSAR) as Appendix C to the Radiation Contingency Plan (Section 12.6) in Supplement 17 dated April 1973.

Our review of the Indian Point Station emergency plans in conjunction with the Indian Point 3 operating license application (reported in our Safety Evaluation - Indian Point Nuclear Generating Unit No. 3 dated September 21, 1973) also included a review of these two documents to determine if the Indian Point plan was properly coordinated with the State planning documents. In our Safety Evaluation Report, we concluded (1) that the emergency plan for Indian Point met the criteria of Appendix E to 10 CFR Part 50, (2) that adequate arrangements had been made to cope with the possible consequences of accidents at the site, and (3) "that there is reasonable assurance that such arrangements will be satisfactorily implemented in the unlikely event that they are needed."

The State planning documents currently in use are revisions to the two documents referred to above. The latest revision to the State emergency plan is dated September 1975 and the latest revision to the SOP is also dated September 1975. These two documents are included in this report as Appendices A and B. Our responses to the petitioners' specific allegations are based on both the earlier and the revised documents. The revisions to these documents do not significantly alter the overall response of the State emergency organizations, even though some of the details of the planning documents have been modified. Accordingly, even though the documents have been revised, our responses to the petitioners' specific allegations would not have been substantially different had they been based solely on the versions of the documents utilized by the petitioners in preparing their petition.

#### 1.4 Summary of Conclusions

As a result of our reevaluation of the Indian Point Station emergency plan with respect to the petitioners' specific allegations, we have found that one of the petitioners' allegations regarding emergency drills has merit. We have taken action to rectify this situation as described in Section 2.4 of this report.

Insofar as this action requests the licensees to demonstrate compliance with Section IV(I) of Appendix E to 10 CFR Part 50, the petitioners' request is granted. However, those portions of the petition that request actions not required by the attached letter to the licensees (see Section 2.4) are denied.



## 2.0 RESPONSES TO PETITIONERS SPECIFIC ALLEGATIONS

### 2.1 Adequacy of New York State Emergency Plans

The petitioners allege that the State plan and the SOP are "so inadequate that they fail to meet the Commission's minimum requirements for such plans and seriously jeopardize the safety of citizens living and working near the [Indian Point] reactors" (at page 1). Specifically, petitioners allege (at page 1) that the State plan "is designed to respond to an accident only 10% of the design basis accident used in setting 10 CFR Part 100 siting criteria." We have not found this to be the case. The plan is designed for "Major Radiation Accidents" as clearly stated and defined in Section II of the plan, and the definition in Section III of a major radiation accident quite clearly puts no upper bound on its seriousness. The SOP for Indian Point identifies three primary categories of potential major radiation accidents. One of these is associated with a "Major Release of Fission Products to Containment." Within this category, three alternative states of initial assessment of the magnitude of such a situation are recognized.

These states are defined by the information which would be transmitted to the State Natural Disaster Warning Point by the nuclear facility operator. One of these three alternative states of initial assessment recognizes the possibility that the initial notification by the

nuclear facility operator may not contain projected thyroid exposure information, notwithstanding the fact that the Indian Point emergency plans have provisions for supplying this information. The "Base Case" (10% of the design basis accident) defined in the version of the SOP utilized by the petitioners, represented a rational emergency planning assumption used to determine the emergency measures that would be taken promptly (i.e., initiate Alert A). Although this approach is very conservative, it is not inconsistent with the context in which it would be employed (i.e., major failure in primary system and engineered safeguards appear to be working).

The revised version of the SOP does not define a "Base Case" accident to be assumed. However, the response by the State organizations (i.e., initiate Alert A) is essentially identical in both documents for the situation of a major rupture of the primary system, engineered safeguards appear to be working, and no estimates of thyroid dose at the site boundary available (SOP Section III.C.). Accordingly, the assumptions used on which prompt actions are based are essentially the same, though not specifically called out in the revised SOP. The other two alternative states of initial assessment reflect differences in the nature of the information that might be received from the nuclear facility operator, which, in turn, call for different implementation schemes for emergency measures. One of these, in particular, recognizes potentially more serious situations leading to Alert C. Accordingly,

we find no basis in fact that the State Plan and SOP are "designed to respond to an accident only 10% of the design basis accident used in setting 10 CFR Part 100 siting criteria" as petitioners allege.

Petitioners have attached copies of correspondence between a member of the NRC staff of the Office of International and State Programs and the Director of the State of New York Bureau of Radiological Health. This correspondence is evidence of a programmatic effort on the part of the NRC, apart from its statutory responsibilities for licensing and regulation, and in concert with other Federal agencies, to stimulate vigorous State and local participation in emergency preparedness measures. This program is being conducted pursuant to Executive Orders 11051 and 11490 under the general monitorship of the Federal Preparedness Agency, General Services Administration (Reference 3). The fact that NRC staff members have recommended changes and additions to New York State planning documents (and in fact the New York State planning documents have been revised subsequent to the correspondence attached in the petition) should not be construed as evidence of their being "absolutely inadequate," as alleged by the petition.

Petitioners also allege (at page 6) that there is a badly confused division of responsibilities among State agencies. On the contrary, we find that the State plan and the SOP are reasonably clear in the matter of responsibilities of the State agencies having the most important roles, viz the Department of Health and its Commissioner who has the authority to direct the implementation of protective actions (State Plan, Section IV), and the New York State Division of Military and Naval Affairs, having the assigned responsibility for statewide warning and communications [ibid, Section VI]).

In addition, petitioners allege (at page 7) that the role of the State Department of Transportation is defined in vague and confusing terms (the responsibilities of the State Department of Transportation as described in the version of the State plan utilized by the petitioners are now encompassed within the responsibilities of the State Division of Military and Naval Affairs as the State's natural and man-made disaster coordination agency). Petitioners apparently fail to realize that the State plan and the SOP provide for the possibility of taking protective measures for accident situations which do not qualify as disasters. As we understand the New York State planning documents, the coordinating function assigned to the Office of Disaster Preparedness within the Division of Military and Naval Affairs is not activated other than to issue an alert in a major radiation accident situation, unless the Commissioner of Health directs the implementation of

Alert C and specifically requests (Section VI.B at 2) the activation of the coordinating function which is assigned as a matter of law to the Division of Military and Naval Affairs. Petitioner fails, therefore, to distinguish between the designation of an operational emergency function on the one hand, and its activation in a particular situation, on the other.

Petitioners allege (at page 8) that "there is an obvious gap... between Alert A and Alert C" in the SOP emergency classification system, in that Alert C covers "substantially more than 30 rad" (30 Rem in the revised SOP) which, according to a footnote in the SOP means "some multiple of 30." While admittedly the language used here could be clarified, we understand that the intent of the language is to recognize the technical fact that dose projections made at the time of an accident may not be more accurate than a factor of two and are very likely to be over-estimated. We consider that any acceptable plan for coping with radiological emergencies must recognize that decisions to implement protective measures in the public domain cannot be based exclusively upon predesignated projected dose action levels, but must also give due consideration to any inherent risks that may accompany the taking of protective measures. The so called gap referred to here provides a necessary degree of flexibility to New York State officials in the exercise of their decision making responsibilities.

In conclusion, we find no compelling evidence of inadequacies in the New York State planning documents. Further, we have no evidence that would indicate either an unwillingness or an inability on the part of New York State authorities to carry out the objectives of their emergency planning.

## 2.2 Adequacy of Indian Point Station Emergency Plan

The petitioners' interpretation of the Commission's regulations is that reference to State plans and appropriate State officials is inadequate to meet the requirements of Section IV (D) of Appendix E to 10 CFR Part 50 unless the State plans and the agreements reached with officials provide reasonable assurance for the protection of public health and safety and the prevention of property damage required by Section III of Appendix E. The petitioners allege that the State plans (see Section 2.1 of this report) and the associated agreements (see Section 2.3 of this report) reached do not provide the required reasonable assurance.

We do not wholly agree that the State plans and State-licensee agreements must, in themselves, provide the reasonable assurance of appropriate emergency measures the Commission requires. This is not the sole factor, but rather, a contributing factor. There are important elements of the licensees' plans, e.g., the notification procedures (see Section 2.3) which also contribute to this judgement.

It was, and is, the staff's judgement that the Indian Point emergency plans, including the letter of agreement with the State authorities and supported by the additional evidence of the State plan and the SOP for Indian Point are adequate to conclude, pursuant to the requirements of Appendix E to 10 CFR 50, that there is reasonable assurance that appropriate measures can and will be taken in the event of an emergency, not only by the licensee and his personnel, but by State authorities to whom relevant responsibilities are assigned.

2.3 Adequacy of Licensees' Procedures for Notifying and Agreements Reached with Local, State and Federal Officials and Agencies

With respect to the requirements of Section IV D of Appendix E to 10 CFR Part 50, the Indian Point emergency plans address procedures for notifying local, State and Federal officials and agencies, and identify officials and agencies at the following places in their Radiation Contingency Plan (Reference 1).

Duties of the Station Manager	Section 2.2.1
Notification Roster	Section 5.2 and Appendix A
Notification (criteria)	Section 5.8
Communications Equipment	Section 6.3
Protective Measures	Section 7.0

The last of these, at Section 7.3.1 identifies the notification for a major radiation accident and this was properly coordinated with Section 6 of the version of the State plan utilized by the petitioners. It has been verified by the Commission's Office of Inspection and Enforcement that Section VII of the revised State plan regarding notification for a major radiation accident is properly coordinated with the emergency plan implementing procedures currently in effect at the Indian Point site.

Further the petitioners allege (at page 9) that there are inadequate agreements with certain State and local agencies as required by Section IV (D) of Appendix E to 10 CFR Part 50. As evidence of the inadequacies, the petitioners give three examples. Specifically, petitioners allege that although the Indian Point Station emergency plans call for notification of the Westchester County Department of Health and the police departments and fire departments in Verplanck and Buchanan, there are no letters of agreement with these agencies and their functions are left unclear.

We do not find that this situation represents a deficiency in the planning documents. The governing letter of agreement is with the State Department of Health. As indicated in the State plan (at A-4) when an alert is issued, local disaster coordinators alert, in accordance with their plans, local health officers and appropriate county, city, town, and village officials, sheriffs,



police and fire officials. The status of response capabilities of the local agencies is relayed to the Commissioner of Health (at A-5) upon request. Subsequently, the Commissioner of Health determines the protective actions required and, after receiving authorization from the Governor, directs that protective actions be taken. The Commissioner of Health, through the Office of Disaster Preparedness, assures continuing coordination of Federal, State, and local agency staffs and resources to implement the protective actions. Accordingly, it is our conclusion that the letter of agreement with the State Department of Health encompasses agreements with local police and fire departments and agreements with each of the individual local officials and agencies involved in carrying out the State and local plans are not necessary.

Further, petitioners allege that a similar situation exists with the State Police. There is no letter of agreement with the State Police; however, as discussed above the governing letter of agreement is with the Department of Health. The actions of the State Police are carried out as directed by the Commissioner of Health in accordance with the State planning documents.

Petitioners indicate that the licensees' plan and the State plan call for the nuclear facilities officer to notify the State Police in the event of a major radiation accident, while the SOP calls for notifying the Emergency Operations Center. All of

these documents now call for initial notification to be made to the State Natural Disaster Warning Point, which is manned by the Office of Disaster Preparedness during working hours and by the State Police during non-working hours. Accordingly, this apparent inconsistency in the planning documents has been remedied.

We find no basis for the petitioners' allegations that letters of agreement with local and State agencies are lacking.

#### 2.4 Adequacy of Licensees' Procedures for Emergency Drills

Petitioners state that there are inadequate procedures for emergency drills. In our prior review of the emergency planning information submitted by Consolidated Edison, we accepted the provisions made for the conduct of emergency exercises as described in the Indian Point 3 FSAR. Upon re-evaluation of these provisions, we agree that they do not adequately demonstrate conformance with the requirements of Section IV(I) of Appendix E to 10 CFR Part 50 in that they do not clearly contain "provisions for participation in the drills by other persons." The Indian Point emergency plan does currently provide for quarterly telephone contacts with non-licensee agencies and individuals listed on the Emergency Notification Roster, and NRC Inspection and Enforcement personnel have noted (Reference 5) that during an emergency training exercise held on November 12, 1975, the Indian Point Emergency Director

did communicate with offsite agencies. Nonetheless, we have transmitted the attached letter to the licensees requesting that they provide information to demonstrate full compliance with Section IV(I) of Appendix E to 10 CFR Part 50.

## 2.5 Other Alleged Deficiencies

### 2.5.1 Regulatory Guide 1.70.14

Petitioners indicate (at page 10) that the Indian Point Emergency Plan does not contain all of the information requested by Regulatory Guide 1.70.14, "Information for Safety Analysis Reports, Emergency Planning," dated December 1974. Petitioners list several specific types of information requested by Regulatory Guide 1.70.14 which are not contained in the Indian Point planning documents.

Regulatory Guide 1.70.14 was prepared to provide guidance to prospective applicants filing Preliminary Safety Analysis Reports after the date of issuance of the guide (December 1974). The information identified by the petitioners as not being provided in the Indian Point plan is information basically directed at determining the feasibility of developing emergency plans which meet the Commission's requirements for a proposed site location. The feasibility of developing emergency plans for Indian Point had been determined years before and an emergency plan for Indian Point was in effect at the time the guide was issued. We have

found no compelling reason to reevaluate our previous judgement that suitable emergency plans can be developed for Indian Point. In fact, our conclusions (most recently in connection with our review of the Indian Point Unit 3 FSAR) are that emergency plans have been developed which meet the Commission's requirement (with the possible exception noted in Section 2.4).

#### 2.5.2 Provision for Medical Treatment of the Civilian Population

Within the scope of radiological consequences (of 10 CFR Part 100) of the most serious design basis accidents, there is no reason to expect that individual radiation exposures would reach levels that would cause radiation injury and warrant emergency medical treatment for members of the civilian population outside the site boundary. Accordingly, we do not consider the absence of such provisions to represent a deficiency in the Indian Point emergency planning documents.

#### 2.5.3 Environmental Protection Agency (EPA) Protective Actions Guides

Petitioners state (at page 8) that the disparity in action levels for evacuation between the State plan and the EPA recommendations presented in their "Manual of Protective Actions Guides and Protective Actions for Nuclear Incidents" (September 1975) represents a "total failure to deal with reality." While we

consider that the differences in action guidelines are within the uncertainties inherent in predictions of projected dose and therefore are not serious, we agree that New York State should review their planning in light of current EPA recommendations.

### 3.0 CONCLUSIONS

As a result of our reevaluation of the Indian Point emergency plans (and the associated New York State planning documents) with regard to the petitioners' specific allegations, we have found that one of the allegations has merit. Our review of the Indian Point plan indicated that it does not clearly contain provisions for the participation of "other persons" in emergency drills. We have taken action to rectify this situation as noted in Section 2.4 of this report.

In so far as this action requests the licensees to demonstrate compliance with Section IV(I) of Appendix E to 10 CFR Part 50, the petitioners' request is granted. However, those portions of the petition that request actions not required by the attached letter to the licensees (see Section 2.4) are denied.

#### 4.0 REFERENCES

1. Final Safety Analysis Report for Indian Point Unit 3, Section 12.6, "Contingency Plans," through Supplement 31 dated November 1975.
2. Responses to staff requests for additional information
  - (a) Supplement 2, dated March 1972.
  - (b) Supplement 7, dated July 1972.
  - (c) Supplement 9, dated December 1972.
  - (d) Supplement 10, dated January 1973.
  - (e) Supplement 13, dated March 1973.
  - (f) Supplement 16, dated April 1973.
  - (g) Supplement 18, dated May 1973.
  - (h) Supplement 20, dated June 1973.
  - (i) Supplement 21, dated August 1973.
  - (j) Supplement 30, dated May 1975.
3. Federal Register, Volume 40, No. 248, December 24, 1975, p. 59494
4. Manual of Protective Action Guides and Protective Actions for Nuclear Incidents, U.S. Environmental Protection Agency, EPA-520/1-75-001, September 1975.
5. IE Inspection Report No. 50-03/75-09, 50-247/75-15, 50-286/75-30, U.S. Nuclear Regulatory Commission, January 15, 1976.
6. (a) New York State Emergency Plan for Major Radiation Accidents Involving Nuclear Facilities revised September 1975.  
(b) Specific Operating Procedures (SOP) Indian Point Station revised September 1975.