

11/3/80

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
METROPOLITAN EDISON COMPANY,	)	Docket No. 50-289
<u>ET AL.</u>	)	(Restart)
(Three Mile Island Nuclear	)	
Station, Unit 1)	)	

NRC STAFF'S RESPONSES TO COMMONWEALTH  
OF PENNSYLVANIA'S FIRST SET  
OF INTERROGATORIES TO NRC STAFF

Attached hereto are the NRC Staff's (Staff) responses to the Commonwealth of Pennsylvania's First Set of Interrogatories to the NRC Staff and the affidavit of Joseph Himes of the NRC's Office of Inspection and Enforcement who prepared the responses.

Included in the responses is a list of the following references:

1. "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," USNRC and FEMA joint Report NUREG-0654/FEMA-REP-1, January 1980.
2. "Report to Congress: NRC Incident Response Plan," USNRC Report NUREG-0728, September 1980.
3. "Report to Congress on NRC Emergency Communications," USNRC Report NUREG-0729, September 1980.
4. "Report to Congress on the Acquisition of Reactor Data for the NRC Operations Center," USNRC Report NUREG-0730, September 1980.

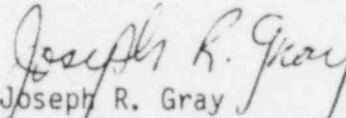
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5. Special Inquiry Group, M. Rogovin, Director, "Three Mile Island -- A Report to the Commissioners and to the Public," USNRC Report/CR-1250, 2 Volumes, January 1980 (Vol. I) and May 1980 (Vol. II).
6. "NRC Action Plan Developed as a Result of the TMI-2 Accident," USNRC Report NUREG-0660, 2 volumes, May 1980 (revised August 1980).
7. "Operational Implications of Alternative NRC Roles in Incidents," The MITRE Corporation Report MTR-80W00120, May 1980.
8. Memorandum of Understanding between the Federal Emergency Management Agency and the Nuclear Regulatory Commission for Incident Response, October 22, 1980.

References 1, 5 and 6 were previously distributed by the Staff to the Licensing Board and parties in the restart proceeding and, therefore, additional copies are not being transmitted with the instant response. References 2, 3, 4, 7 and 8 were not previously distributed. These references are enclosed in the copies of the Staff's responses being sent to the Commonwealth and the Licensing Board and additional copies of these references are being placed in the Local Public Document Room and the NRC's Public Document Room in Washington, DC for the use of the other parties.

Respectfully submitted,

  
Joseph R. Gray  
Counsel for NRC Staff

Dated at Bethesda, Maryland  
this 3rd day of November, 1980

RESPONSES TO COMMONWEALTH OF PENNSYLVANIA'S  
FIRST SET OF INTERROGATORIES TO NRC STAFF

All of the following interrogatories are based on the Letter of Agreement from Boyce H. Grier, Director, U.S. Nuclear Regulatory Commission Region I, to J. G. Herbein, Vice-President, Metropolitan Edison Company, dated January 28, 1980, included in Appendix C to Licensee's Revision Number 2 to its Emergency Plan. Those interrogatories consisting of multiple questions have been subdivided with each subdivision given a letter designation to facilitate the response.

Interrogatory 1

Identify and provide all documents developed to plan for and implement the assistance described in the above-referenced Letter of Agreement. Particular attention should be given to documents that involve "advisory assistance to State and local agencies concerning investigating and assessing hazards to the public."

Response to Interrogatory 1

See the attached List of References for titles of the pertinent documents. References 1, 2, 3 and 4 may be of particular interest in regard to advisory assistance to State and local agencies. There are no documents that specifically focus on such assistance as it concerns investigating and assessing hazards to the public.

Reference 1 contains guidance for use by State and local governments and by licensees in developing emergency response plans. Reference 2 assigns tasks

within NRC to assure that agency responsibilities are met. Among the assigned tasks are those that provide for advising or directing licensees and for recommending actions to protect the public and the environment. Reference 2 also provides for the transfer of NRC response management from NRC headquarters to a senior NRC official at the site of an incident. Reference 3 summarizes the status of actions taken to correct communications problems experienced during the accident at Three Mile Island-Unit 2 and describes NRC plans for further communications improvements. Reference 4 describes current concepts for providing NRC (and other) personnel with timely and accurate data from operating nuclear plants to permit them to better perform the essential tasks in meeting agency responsibilities, especially in the early phases of an incident.

#### Interrogatory 2

With reference to the documents described in interrogatory #1, are any of these plans or procedures site-specific to TMI? If yes, please identify these documents or portions of documents separately. If no, describe in detail how the NRC response to an accident at TMI-1 would vary from the general emergency response plans and procedures.

#### Response to Interrogatory 2

None of the above-referenced documents is site-specific to Three Mile Island (TMI). However, an NRC response to an incident at TMI-1 could be expected to vary from responses at other sites in two important respects:

1. A special NRC team remains at TMI to oversee TMI-2 activities.

In the event of an incident at TMI-1, this team would be available

quickly to monitor licensee activities and to provide pertinent information to NRC headquarters and the regional office at King of Prussia.

2. The NRC team is more familiar with details of the TMI area than of some other areas near operating reactors, thereby enabling NRC and other response organizations to make earlier, more comprehensive recommendations for protecting the neighboring population.

#### Interrogatory 3

Does the Letter of Agreement mean that all NRC responses will be conducted from the Region I Office, from NRC Headquarters in Bethesda, or both? What specific actions will be coordinated from each of the two offices? How will the activities of the two offices be coordinated with each other and with the actions of NRC personnel on-site and in the field?

#### Response to Interrogatory 3

As noted in Section 2 of Reference 2, the initial NRC response to a significant incident will be coordinated at headquarters under the direct leadership of the NRC Chairman or his designee (the response "Director"). At the same time, a response team will be dispatched to the site from the NRC regional office; additional personnel may also be sent from headquarters. After a senior NRC official arrives at the site of an incident, assesses the situation, and is appointed by the response Director to be the NRC Director of Site Operations, NRC response activities will be coordinated from the site, consistent with specific authority to be delegated by the Director and announced to other response organizations, specifically including the State.

One or more of the following authorities may be delegated to the Director of Site Operations:

1. Authority to recommend actions to the licensee.
2. Authority to direct the licensee to take specified actions.
3. Authority to recommend actions offsite, including protective measures for the public.

Authority not delegated to the Director of Site Operations will remain with the NRC response Director (i.e., the Chairman of the Commission or his designee). Regional office personnel who are not sent to the site will support headquarters or the site team as appropriate. NRC activities at the three locations -headquarters, regional office, and site -- will be coordinated by the persons responsible for each incident response function, as indicated by the charts included in Section 3 of Reference 2.

#### Interrogatory 4

- (a) Describe in detail the nature of "advisory assistance to State and local agencies."
- (b) Identify each NRC source, by name, office or position, authorized to make any assessment, recommendation or statement regarding the severity of the accident and recommended radiological emergency responses.
- (c) Identify with specificity the state, local, licensee, news media, or other source, also by name, office, agency, or position, to which each such assessment, recommendation, or statement is authorized to be addressed.
- (d) Identify the precise nature of each such assessment, recommendation, or statement, and the degree of weight or authority to which the NRC believes these communications are entitled.

- (e) Describe the methods and procedures developed to ensure that no assessments, recommendations, and statements by NRC personnel other than those identified above will be communicated to any other source. Pay particular attention to communications to elements of the news media and other potential pathways of information to the general public.

Response to Interrogatory 4

- (a) The most important advice to be offered State and local agencies will be comments on licensee-recommended actions to protect the public supplemented by independent NRC recommendations as necessary. The NRC is now improving and formalizing its procedures in this regard. In addition, the NRC will provide any other incident information requested by the State to the best of the agency's ability to do so.
- (b) NRC recommendations to the State will be authorized only by the Director unless the State is notified otherwise. The Governor (and others) will be notified when an NRC Director of Site Operations is appointed and given authority to recommend protective actions. No other NRC officials will have that authority.
- (c) NRC recommendations for protective actions will be coordinated with FEMA (except when time does not allow) and will be transmitted to the Governor or other State official designated by the Governor.
- (d) NRC recommendations for protective actions will be based on existing and projected conditions in the plant, on meteorological conditions, and on onsite and offsite measurements. FEMA may add other information

and join NRC in a joint recommendation. The precise nature of each such recommendation, assessment and statement is highly dependent upon the specific incident and upon plant and local conditions and cannot be identified in the abstract without knowledge of the precise nature of the incident.

The recommendations given will carry the full support of the agencies and will be intended to be given commensurate weight accordingly. NRC expects the Governor (or other responsible official designated in the emergency plans) to make final decisions on offsite protective actions and to direct such protective actions. The NRC response Director or Director of Site Operations will be prepared to confer with the Governor or his designee to discuss licensee and Federal recommendations and to coordinate plans and information. The NRC plans to include FEMA in any such conference.

- (e) Detailed and continual liaison with State response personnel will be provided by NRC liaison teams at NRC headquarters and at either the regional office or the site. To the extent possible, NRC will coordinate such liaison with FEMA. The liaison teams will provide periodic status reports; assure that information exchange is adequate, accurate, timely and consistent; and convey State and local concerns to other NRC personnel. Space will also be made available for State and local representatives to meet face-to-face with representatives of other agencies in the licensee's Emergency Operations Facility. Public



affairs officers will be designated to provide liaison with the media and the general public. One such officer will be a member of each regional office team that will be dispatched immediately to an incident site. All NRC news releases will be discussed with FEMA and coordinated among site, regional office, and headquarters public affairs officers as provided for in Reference 2. NRC liaison teams (in coordination with FEMA) will keep the State informed whenever the State is not directly involved in preparation of a news release.

However, only the NRC response Director, the Director of Site Operations, or other persons specifically designated by them and announced to other response organizations (specifically including the State) will be authorized to present NRC positions on any issue. As previously mentioned, NRC recommendations will be authorized only by the Director unless the State is notified otherwise. The Governor (and others) will be notified when an NRC Director of Site Operations is appointed and given authority to recommend protective actions. No other NRC officials will have that authority. All other contacts will be for the sole purpose of enhancing the exchange of information and ideas.

#### Interrogatory 5

The Letter of Agreement provides that "the NRC will also assist in coordination of Federal response resources..." To the extent feasible, repeat interrogatory #4 with respect to all federal agencies which will be included in the federal response services. If the NRC is not in possession of this information, explain how the NRC will ensure that all federal emergency response activities are properly coordinated. Pay particular attention to the effect of federal emergency responses on state and local emergency response efforts.

Response to Interrogatory 5

By the provisions of Section 304 of Public Law 96-295 and of Executive Order 12241, dated September 29, 1980, FEMA is responsible for planning for "expeditious, efficient and coordinated action by appropriate Federal agencies to protect the public health and safety in the case of accidents" at commercial nuclear power plants. Consequently, FEMA, rather than the NRC, is responsible for the coordination of emergency response actions of Federal agencies. To this end, FEMA is currently preparing a coordination plan. NRC is not in possession of the information needed to answer the full extent of Interrogatory 5. However, NRC has taken several steps to assure coordination of activities pending and following completion of the FEMA plan:

1. A Memorandum of Understanding between NRC and FEMA (Reference 8) on response to incidents was signed on October 22, 1980.
2. NRC will notify FEMA of an incident. The headquarters of the two agencies will exchange representatives when the NRC emergency organization is activated; the Operations Centers of the two agencies are also linked with a dedicated telephone line.
3. Space will be available for face-to-face coordination among response participants (including the State) in the licensee's Emergency Operations Facility.
4. NRC is assisting in the preparation of a Federal Radiological Response Plan by the Department of Energy. The plan will coordinate offsite radiological monitoring activities by Federal agencies,

a responsibility delegated to the Department of Energy by FEMA. State and local interests are also addressed in the plan, which is expected to be published for comment soon in the Federal Register.

Interrogatory 6

The Letter of Agreement states that "Various task forces, study groups and other ad hoc organizations are reviewing the NRC's role and a different expression may evolve."

- (a) Describe the results of these studies and their effects on the activities described in interrogatories #4 and 5.
- (b) For those task forces, study groups and other ad hoc organizations which have not yet completed their activities, describe the type of document (e.g., report, proposed regulation, NUREG document) expected to result from the activity and the approximate date (if known) on which such document is expected to be completed.
- (c) Describe in detail the impact on NRC emergency response procedures of the Reorganization Plan No. 1 of 1980 (45 Fed. Reg. 40561 (June 16, 1980)) and other changes in NRC rules or organization since the TMI-2 accident.

Please view this interrogatory as imposing on the NRC staff a continuing duty to inform the Commonwealth of any changes in the information contained herein.

Response to Interrogatory 6

- (a) Three additional reports published at about the time of the Grier letter and since are pertinent; they are the report of the NRC Special Inquiry Group (Reference 5), the NRC Action Plan (Reference 6), and a report by the U.S. Senate Subcommittee on Nuclear Regulation (Subcommittee on Nuclear Regulation, G. Hart, Chairman, "Report to the United States Senate -- Nuclear Accident and Recovery at Three Mile Island,"

June 1980). The recommendations in the report of the NRC Special Inquiry Group, as well as those of earlier investigative reports, are incorporated in the NRC Action Plan. References 2, 3 and 4 describe some of the results of those actions. (The recommendations of the Senate subcommittee, though published after the Action Plan, are also incorporated in References 2, 3 and 4.)

The recommendations of the review groups, in general, caused a greatly heightened interest in the details and breadth of emergency planning and preparedness. For example, all of the major review groups cited problems during the TMI-2 accident with diffuse management and occasionally chaotic information flow, both of which could adversely affect the ability of NRC to develop timely comments on, and any necessary supplements to, licensee recommendations for protective actions for the public. The References describe a clearer NRC role, stronger emergency management, more attention to the complementary roles of other organizations, and provisions for more orderly information flow. The Appendix in Reference 3 lists many of the specific problems cited by major review groups and the corrective actions already taken or in progress. While the outlines of the NRC role in a future accident seem clear, there remain operational questions related to the kind and quantity of information needed by NRC to respond within those outlines. Reference 4 discusses this question as it relates to detailed reactor data; Reference 7 is a report by The MITRE Corporation which discusses the operational implications of alternative NRC roles.

It is difficult to speculate on the precise nature of the effects of the various studies and investigations on the actions of other Federal agencies, but it is likely that the FEMA coordination plan and DOE's Federal Radiological Response Plan now in development will be affected to some extent.

- (b) One review remains incomplete. NRC is continuing an intensive investigation into certain deficiencies in the flow of pertinent information during the early phases of the TMI accident. One of the products of the investigation is expected to be the identification of people-related communication deficiencies. A completion date is not yet known for the formal NRC report expected to issue from this investigation.
  
- (c) The major pertinent effect of Reorganization Plan No. 1 of 1980 was to strengthen and clarify the management of NRC response operations under a single Director, as reflected in Reference 2. Relatively minor procedural changes have also been made to accommodate the new management structure.

Changes in NRC regulations have primarily affected the licensee and the NRC interfaces with other organizations. Secondary effects on NRC and the effects of changes in the organization of response activities are incorporated in Reference 2. Examples of such effects are the all-hours manning of direct, emergency telephone lines to TMI (and other sites);

the establishment of a response Director, Deputy Director, and Director of Site Operations during emergencies; and the designation of response teams listed on the charts in Section 3 of Reference 2.

It is expected that more changes will result from further coordination of NRC, FEMA, Pennsylvania, and TMI emergency plans and from future exercises. Any changes which render the above responses substantially inaccurate will be brought to your attention.

## LIST OF REFERENCES

1. "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," USNRC and FEMA joint Report NUREG-0654/ FEMA-REP-1, January 1980.
2. "Report to Congress: NRC Incident Response Plan," USNRC Report NUREG-0728, September 1980.
3. "Report to Congress on NRC Emergency Communications," USNRC Report NUREG-0729, September 1980.
4. "Report to Congress on the Acquisition of Reactor Data for the NRC Operations Center," USNRC Report NUREG-0730, September 1980.
5. Special Inquiry Group, M. Rogovin, Director, "Three Mile Island -- A Report to the Commissioners and to the Public," USNRC Report NUREG/CR-1250, 2 Volumes, January 1980 (Vol. I) and May 1980 (Vol. II).
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7. "Operational Implications of Alternative NRC Roles in Incidents," The MITRE Corporation Report MTR-80W00120, May 1980.

8. Memorandum of Understanding between the Federal Emergency Management Agency and the Nuclear Regulatory Commission for Incident Response, October 22, 1980.



UNITED STATES OF AMERICA  
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BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

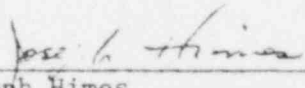
In the Matter of )  
 )  
METROPOLITAN EDISON COMPANY, ET AL. ) Docket No. 50-289  
 ) (Restart)  
(Three Mile Island Nuclear Station, )  
Unit 1) )

AFFIDAVIT OF JOSEPH HIMES

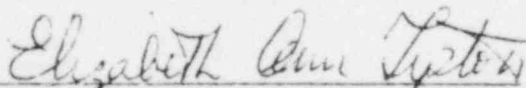
STATE OF MARYLAND )  
COUNTY OF MONTGOMERY ) SS

I, Joseph Himes, being duly sworn, depose and state:

1. I am an Incident Response Planning Specialist in the Executive Office for Operations Support, Office of Inspection and Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555.
2. I have prepared the statement of Professional Qualifications attached hereto, and, if called upon, would testify as set forth therein.
3. I have answered interrogatories 1 through 6 of the Commonwealth of Pennsylvania's First Set of Interrogatories to NRC Staff and I hereby certify that the answers given are true and correct to the best of my knowledge.

  
\_\_\_\_\_  
Joseph Himes

Subscribed and sworn to before me  
this 28th day of October, 1980

  
\_\_\_\_\_  
Notary Public

My Commission expires: July 1, 1982

JOSEPH E. HIMES

OFFICE OF INSPECTION AND ENFORCEMENT

U. S. NUCLEAR REGULATORY COMMISSION

PROFESSIONAL QUALIFICATIONS

I am an Incident Response Planning Specialist in the Office of Inspection and Enforcement. In that position I take the lead in the development, coordination, and continuing programmatic review and evaluation of the NRC Incident Response Program. I am responsible for specifying functional requirements for organization, information, communications, and logistical support; for coordinating planning activities with counterparts responsible for operations; and for coordinating incident response planning both within NRC and with other Federal, State, and local agencies, licensees, and private industry.

I hold Bachelor of Science and Master of Philosophy degrees in physics from The George Washington University. The latter degree recognizes completion of all coursework and the comprehensive examinations for a doctorate.

From 1961 to 1972 I was employed by Analytic Services Inc., a Federal Contract Research Center. Following an early concentration on nuclear weapons effects and survivability analysis techniques, I analyzed various ballistic missile defense concepts while participating in a series of interservice study groups. These experiences led directly to my involvement in the evolution of two surveillance systems and the command, control, and communications (C<sup>3</sup>) needed to tie the other systems together. Ultimately, I related C<sup>3</sup> and surveillance requirements to strategic decision options, then analyzed the human and technical factors involved in interpreting, evaluating, and presenting the information.

From 1972 to 1980 I was employed by The MITRE Corporation, another Federal Contract Research Center. After first continuing design analyses for the President's Airborne Command Post and for other components of the National Military Command System, I began to apply my military C<sup>3</sup> experience to civil problems. I led a two-year program for the Justice Department and, beginning in 1977, led a MITRE project in support of the NRC Incident Response Program. The project team successively developed concepts and plans for the communications and control needed by the NRC to respond to accidents and hostile acts against its licensees; planned, monitored, and evaluated a series of staff and field exercises; monitored the NRC response to the real problem at Three Mile Island which interrupted the exercise series; and developed plans for modifying the NRC program to incorporate lessons learned at Three Mile Island.

I joined the NRC in May, 1980, to continue this work.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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METROPOLITAN EDISON COMPANY, ET AL. ) Docket No. 50-289  
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CERTIFICATE OF SERVICE

I hereby certify that copies of "NRC STAFF'S RESPONSES TO COMMONWEALTH OF PENNSYLVANIA'S FIRST SET OF INTERROGATORIES TO NRC STAFF" in the above-captioned proceeding have been served on the following by deposit in the United States mail, first class, or, as indicated by an asterisk, through deposit in the Nuclear Regulatory Commission's internal mail system, this 3rd day of November, 1980:

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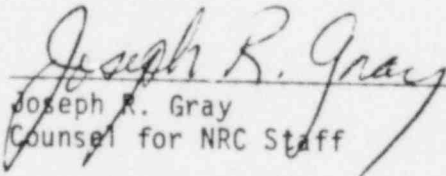
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