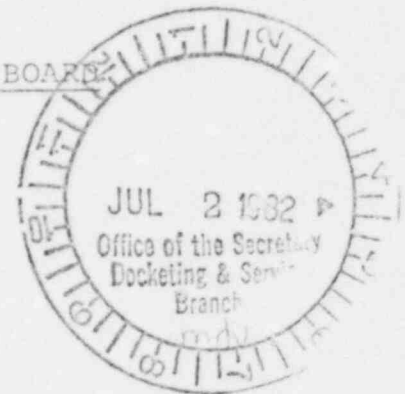


UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

Administrative Judges:
Louis J. Carter, Chairman
Frederick J. Shon
Dr. Oscar H. Paris



In the Matter of

CONSOLIDATED EDISON COMPANY OF NEW YORK
(Indian Point Unit 2)

Docket Nos. 50-247SP
50-286SP

POWER AUTHORITY OF THE STATE OF NEW YORK
(Indian Point Unit 3)

1 July 1982

UCS/NYPIRG SUPPLEMENTAL RESPONSE TO
LICENSEES' INTERROGATORIES DATED 3 MAY 1982

At the evidentiary session on June 22, 1982, the Board ruled that the interrogatories from the Licensees to UCS/NYPIRG, PARENTS, and FOE/Audubon which had not yet been responded to must be answered. With a few exceptions, UCS/NYPIRG has no interrogatory responses which fall into this category. In these limited cases a response is provided below.

However, over and above the requirements of the Board's ruling, UCS/NYPIRG hereby supplements a number of its previous responses. In addition, certain errors which have been discovered in the original responses are corrected below. UCS/NYPIRG notes as a preliminary matter that since the prefiled

written testimony relating to Board Questions under Commission Order Questions 3 and 4 has already been filed and in Licensees' possession since early June, the need to supplement many of the responses is greatly mitigated by the availability of the written testimony.

UCS/NYPIRG is not attempting to respond to the vague and unfocused complaints contained in the Licensees' joint motion to compel and/or impose sanctions (dated 3 June 1982). In nearly every case, the objections raised in that motion are impossibly vague such that it is impossible to ascertain specifically what the Licensees believe is lacking. UCS/NYPIRG has nonetheless attempted where possible to provide additional information as appropriate.

Supplemental Response to Interrogatories Raising Non-Radiological
Emergencies and Emergency Planning Practices at Other Reactors

A considerable number of Licensees' interrogatories raise matters related to response to non-radiological emergencies and emergency planning practices at other reactors. UCS/NYPIRG has not responded to these interrogatories because they are not applicable to this proceeding, i.e., they are irrelevant. This proceeding is concerned with, in relevant part, well-established requirements for response to radiological emergencies occasioned by accidents at commercial nuclear power plants. The issues in many cases are concerned with whether those specific requirements are or are not met. As such, response to non-radiological emergencies

is totally irrelevant to this case.

It is apparent that the Licensees will attempt to make a case that response to non-radiological emergencies is relevant to the issues in this proceeding. Until and unless such a showing is made and accepted by the Board, parties are under no obligation to respond to broadly worded, hypothetical questions dealing with matters which are plainly irrelevant to the issues at hand. Nothing prevents the Licensees from attempting to make a showing that these matters are relevant to radiological emergency response planning, but it is equally clear that there is no burden placed on the intervenors to assist in this attempt by responding to interrogatories which are on their face utterly and plainly irrelevant to the matters at issue in this proceeding.

Similar comments can also be made with respect to emergency planning practices at other nuclear plant sites and environs. Such matters are irrelevant to what is necessary and sufficient at the Indian Point site and environs. Intervenors are under no obligation under the NRC's regulations or applicable precedent to undertake an exhaustive review of emergency planning practices at other nuclear plant sites in order to respond to interrogatories. Of course, if the Licensees wish to attempt to make a case based on what has been done or not done elsewhere, that is their prerogative, but the other parties to the proceeding are not obliged to assist. Thus, no response will be made to such interrogatories.

Supplemental Response to Interrogatory #24

Licensees are referred to the FEMA "Post Exercise Assessment" of the Indian Point Unit 3 exercise (report dated 27 May 1982, and attached to FEMA's testimony in this proceeding as Attachment C). Deficiencies in the siren alerting system are noted in the FEMA report at pages 11, 13, 15, 16, 18, 30-31, 42, 51, and 59-60. These deficiencies include siren failures, inability to hear sirens that did function properly, and deficiencies in the ability to adequately notify transients.

Licensees are also referred to three reports on siren alerting systems recently released under the Freedom of Information Act upon a request by UCS. These documents, described below, are available at the NRC's Public Document Room in Washington, D.C.:

- a. D.A. Towers, G.S. Anderson, & D.N. Keast, "Evaluation of the Prompt Alerting System for the Indian Point Nuclear Power Station," a memorandum report prepared by Bolt, Beranek, & Newman, Inc., for Pacific Northwest Laboratory under Subcontract No. B-A2740-A-V.
- b. D.N. Keast, D.A. Towers, G.S. Anderson, J.L. Kenoyer, & A.E. Desrosiers, "Procedures for Analyzing the Effectiveness of Siren Systems for Alerting the Public," NUREG/CR-2654, PNL-4227, prepared for Division of Emergency Preparedness, Office of Inspection and Enforcement, USNRC.
- c. D.A. Towers, G.S. Anderson, D.N. Keast, J.L. Kenoyer, & A.E. Desrosiers, "Evaluation of the Prompt Alerting Systems at Four Nuclear Power Stations," NUREG/CR-2655, PNL-4226, prepared for Division of Emergency Preparedness, Office of Inspection and Enforcement, USNRC.

These three reports contain a methodology and site-specific evaluation of the Indian Point siren alerting system as designed

under a variety of conditions. The "chance of alert" as defined in the reports for Indian Point ranged from 57% to 95%, as contrasted with NRC requirements to "essentially complete the initial notification of the public within the plume exposure pathway EPZ within about 15 minutes" [10 CFR Part 50, Appendix E, D.3]. It should be noted that the studies premise the results on a four-minute siren duration; to the best of UCS/NYPIRG's knowledge, the sirens at Indian Point are designed to sound for three minutes. This would result in slightly lower "chance of alert" results than described above. Full technical details and results are contained in the reports.

Finally, to the best of UCS/NYPIRG's knowledge and belief, the siren alerting system installed in the Indian Point plume exposure pathway EPZ has no provision for backup or alternate power source. Thus, if prompt notification of the public becomes necessary during a power failure (which is, of course, a principal risk contributor itself), the sirens will be useless. Very little route alerting capability was demonstrated during the 3/3/82 Indian Point 3 emergency plan exercise, and it is clear that alerting the public via such route alerting would take substantially longer than utilizing the sirens.

Supplemental Response to Interrogatory #25

Licensees are directed to the FEMA "Post Exercise Assessment" report (dated 27 May 1982) which discusses deficiencies in the

EBS messages at pages 30-31, 42, 51, and 60.

Supplemental Response to Interrogatory #26

It should also be noted that the public education brochures ("Indian Point, emergency planning, and you") which were distributed by the "Four County Nuclear Safety Committee" are printed only in English. These brochures are, in part, aimed at identifying to the residents of the plume exposure pathway EPZ what their actions should be upon hearing the siren alerting system. In addition, it is clear from the FEMA "Post Exercise Assessment" (dated 27 May 1982) of the Indian Point Unit 3 3/3/82 emergency plan exercise that even English-speaking residents of the plume exposure pathway EPZ had difficulty understanding the brochures, did not receive them, did not know what to do upon hearing the sirens, did not understand the EPZ or ERPA concepts, or were generally unaware of the instructions in the brochures (see FEMA report at pages 4, 8, 15, 31, 32, 42-43, 59, and 60).

Supplemental Response to Interrogatory #28

In addition, the discussion in the brochure of "Radiation from nature and man" by Dr. Roger Linnemann utterly fails to address radiation exposure due to accidents in a way that will be meaningful to the public. The Environmental Protection Agency's "Protective Action Guides" for whole-body and thyroid exposure are not even mentioned in the report, much less discussed to make them comprehensible to the public. In addition, there is no discussion of the doses which may result from exposures due to serious accidents (i.e., PWR-2 release category or SST-1, "Siting Source Term", as used by

be included in the public education materials distributed to the residents of the plume exposure pathway EPZ. In addition, this information should be appropriately provided to transients so that they may improve on the protection afforded them in their hotel rooms and other locations where they may seek shelter. Such information should also be made prominently available in all public shelter locations.

In addition, the pamphlet is misleading in that it builds an expectation that large releases are not likely. Such releases are precisely those releases for which public protective actions will be most urgently required. It is grossly misleading to state that a release would "most likely be a relatively small amount" without also placing this into context by describing the characteristics of a large release (see page 5 of the brochure).

Further, the pamphlet is misleading in that it suggests, without foundation, that in "most cases malfunctions would allow hours or even days before they resulted in a significant release of radiation" (see brochure at page 4). There are many accidents in which this advice would be untrue, and it is in precisely these accidents where prompt notice to the public and prompt compliance of the public with protective action recommendations will be most urgently required to avoid unacceptable consequences. It is to invite a slow response to instill in the public an expectation that they will "in most cases" have a significant advance warning of a radiation hazard occasioned by an accident at Indian Point.

Supplemental Response to Interrogatory #31

Licensees are directed to the FEMA "Post Exercise Assessment" report dated 27 May 1982 at pages 30 and 59. In addition, general siren alerting capability was evaluated in that report as "weak" for all four counties; moreover, the three NRC-sponsored reports described in Supplemental Response to Interrogatory #24 above indicate that the siren alerting system as installed is incapable of providing adequate notice to transients and residents alike.

Further, for transients located in large state park areas such as are present in Rockland County, notification significantly in advance of plume arrival would be necessary for either sheltering or evacuating scenarios. Even for sheltering, due to the general lack of suitable shelter structures for the thousands of persons who are in the parks at any given time, such persons would have to reach their vehicles and drive to a suitable shelter location. There has been no demonstration of which UCS/NYPIRG is aware that adequate shelter is available sufficiently close to these state park areas to permit timely sheltering by all transients who may be in those facilities at the time of an accident at Indian Point.

Supplemental Response to Interrogatory #32

It is UCS/NYPIRG's understanding that such information is available in the County Radiological Emergency Response Plans for Rockland (which has been withdrawn), Westchester, Orange, and Putnam. UCS/NYPIRG has not had an opportunity to verify the accuracy of the information contained therein. See also Supplemental Response

to Interrogatory #31, immediately above.

Supplemental Response to Interrogatory #35

UCS/NYPIRG refers the Licensees to the FEMA "Post Exercise Assessment" report of the 3/3/82 emergency plan exercise for Indian Point 3 which addresses deficiencies in the ability of the state to implement field monitoring of any type (page 22), deficiencies in the ability of the counties to monitor for radioiodines (pages 33, 44, 53, 54, and 62). In addition, field data reported to the state by the counties were insufficient for the state to confirm dose projections (page 22).

The number of offsite radiation readings possible for teams fielded by Westchester and Putnam were limited by the length of transit time between stations (pages 33 and 63). For overall assessment capabilities, Rockland County was evaluated as "weak" (page 44), failing to demonstrate adequate plume-tracking capability. The field teams for Orange County failed to carry high-range instruments during the exercise (page 53). Further, the Civil Defense and Radiological Defense Officers for Putnam County do not have adequate backup personnel (page 17).

Supplemental Response to Interrogatory #36

In addition, MIDAS is at least partially dependent upon radiation readings from the Reuter-Stoke Centri 1101 dose monitoring system. To the extent that this is true, the system is incapable of rendering accurate dose projections for releases which are buoyant or which have a high sensible heat content or

which are released in the form of a "jet" from a small break in the containment when the containment is under high pressure. This is because such releases will tend to rise and "skip over" the detectors that are located within one mile of the facility. This is also true for certain meteorological conditions (FEMA-REP-2, "Guidance on Offsite Emergency Radiation Measurement Systems", Phase 1, Airborne Release, September 1980, Federal Emergency Management Agency and the Federal Interagency Task Force on Offsite Emergency Instrumentation for Nuclear Incidents, page A-2, available from FEMA).

Supplemental Response to Interrogatory #38

See Supplemental Response to Interrogatory #35 regarding radioiodine monitoring deficiencies and related monitoring deficiencies. The radioiodine monitoring deficiencies are particularly important since the Federal Interagency Task Force on Offsite Emergency Instrumentation for Nuclear Incidents considers it "essential that a field system be developed for rapid measurement of the airborne radioiodine concentration" (FEMA-REP-2, page D-4, cited above). In addition, it is essential to have prompt and accurate radioiodine readings available to confirm the choice of protective actions; the presence or absence of radioiodines in appreciable concentrations will heavily influence the choice of sheltering or evacuation; see, EPA 520/1-78-001B, "Protective Action Evaluation, Part II, Evacuation and Sheltering as Protective Actions Against Nuclear

Accidents Involving Gaseous Releases," prepared for the U.S. Environmental Protection Agency by George H. Anno and Michael A. Dore, Revised August 1978, pages 35-51).

Supplemental Response to Interrogatory #39

A possible methodology is set forth in EPA 520/1-78-001A and EPA 520/1-78-001B, "Protective Action Evaluation, Part 1, The Effectiveness of Sheltering as a Protective Action Against Nuclear Accidents Involving Gaseous Releases," and "Protective Action Evaluation, Part II, Evacuation and Sheltering as Protective Actions Against Nuclear Accidents Involving Gaseous Releases," prepared for the U.S. Environmental Protection Agency by George H. Anno and Michael A. Dore, 1978. The methodology is addressed in detail in Part II of the above; UCS has not evaluated the efficacy of the methodology set forth therein, but it remains as a possibility, especially given the lack of any such procedure in the plans.

Supplemental Response to Interrogatory #41

Instructions should be added to the public education brochure and made available for transients relating to expedient methods of respiratory protection in order to increase the effectiveness of sheltering in avoiding or decreasing inhalation dose. See Supplemental Response to Interrogatory #28, above. In addition, information on the effectiveness of potassium iodide as a protective action alternative is available in the following references:

- a. David C. Aldrich and Roger M. Blond, "Examination of the Use of Potassium Iodide (KI) as an Emergency Protective Measure for Nuclear Reactor Accidents," NUREG/CR-1433, SAND80-0981, March 1980, prepared for Probabilistic Analysis Staff, Office of Nuclear Regulatory Research, USNRC by Sandia Laboratory.
- b. Ad Hoc Committee on Thyroid Blocking, "Protection of the Thyroid Gland in the Event of Releases of Radioiodine," NCRP Report No. 55, August 1977, Reprinted October 1979, available from the National Council on Radiation Protection and Measurements, 7910 Woodmont Avenue, Washington, D.C. 20014.
- c. Dr. Gordon Thompson, UCS, "Suggested Policy of the Food and Drug Administration on the use of Potassium Iodide by the General Public in a Radiation Emergency", August 1981, submitted to the Food and Drug Administration, 3 September 1981 in response to Federal Register public comment notice; available from UCS.
- d. Dr. Gordon Thompson, UCS, "Deployment Strategies for Potassium Iodide," Submission for the Record, Hearing on Potassium Iodide as a Thyroid-Blocking Agent in a Radiation Emergency, before the House Committee on Interior and Insular Affairs, Subcommittee on Investigation and Oversight, 5 March 1982; available from UCS.
- e. Dr. Frank von Hippel, "The NRC and Thyroid Protection-- One Excuse After Another," Bulletin of the Atomic Scientists, October 1980, pp. 44-46.
- f. Dr. Frank von Hippel, "Available Thyroid Protection," letter to Science, June 5, 1979, p. 1032.
- g. FEMA, "Report to the President: State Radiological Emergency Planning and Preparedness in Support of Commercial Nuclear Power Plants," June 1980, pp. III-28 through III-32; available from FEMA.
- h. FDA, "Accidental Radioactive Contamination of Human and Animal Feeds and Potassium Iodide as a Thyroid-Blocking Agent in a Radiation Emergency," 43 F.R. 58798, December 15, 1978.
- i. Memorandum from Dr. Frank von Hippel to NRC Commissioners Ahearne, Bradford, Gilinsky, Hendrie, and Kennedy, dated November 13, 1980, available in the NRC Public Document Room in Washington, D.C.

Supplemental Response to Interrogatory #44

See Supplemental Response to Interrogatory #31, above.

Supplemental Response to Interrogatory #45

Licensees are referred to FEMA "Post Exercise Assessment" report dated 27 May 1982, in which the lack of TLD monitoring capability for emergency workers is addressed at pages 17, 19, 44, 46, and 65.

Supplemental Response to Interrogatory #46

Licensees are referred to FEMA "Post Exercise Assessment" report dated 27 May 1982, in which this issue is discussed at pages 14, 19, 29, 32, 35, 37, and 64.

Supplemental Response to Interrogatory #52

In addition, there was no effective demonstration of reentry and recovery plans during the 3/3/82 Indian Point Unit 3 emergency plan exercise. See FEMA "Post Exercise Assessment" report dated 27 May 1982, at pages 14, 15, 17, 19, 23, 26, 37-38, 46, 54-55, and 66.

Supplemental Response to Interrogatory #54

The 3/3/82 Indian Point Unit 3 exercise did not adequately test reentry and recovery procedures. Further, the rapid speed of the exercise was criticized by the FEMA observers (FEMA "Post Exercise Assessment" report dated 27 May 1982, page 23). Only 17 minutes were available to "simulate" reentry and recovery (pages 20 and 54). In addition, the scenario used in the exercise allowed an hour to elapse between the time emergency workers were mobilized

and the time the EBS messages were broadcast (page 20). There is no basis for assuming that this delay is realistic.

Supplemental Response to Interrogatory #58

Licensees are referred to the FEMA "Post Exercise Assessment" report dated 27 May 1982, wherein this issue is discussed at pages 34, 49, 15, 22, and many others.

Supplemental Response to Interrogatory #62

Licensees are referred to the principal finding of the NRC Special Inquiry Group on emergency planning problems during the TMI-2 accident, wherein the SIG concluded that "the root cause of most of the inadequacies in governmental emergency response, and a contributory cause of all of the inadequacies, was the NRC's failure to promote an awareness that nuclear powerplant accidents with substantial offsite consequences are possible and must be planned for." [SIG Report, NUREG/CR-1250, Vol. II, Part 3, page 1046] This attitude has been carried over extensively through the Licensees' programs, as most distinctly reflected in the Licensees' prefiled testimony on onsite emergency planning, where the fundamental argument is that if onsite planning is adequate, little offsite response is needed and inadequacies in offsite response are not significant. This attitude is also reflected in the introductions to the County Radiological Emergency Response Plans, prepared by the Licensees' consultants. Unless and until this attitude is changed, and the Licensees begin to consistently express a

view both in public and in their dealings with local and state emergency response personnel, there cannot be adequate assurance that an adequate and appropriate level of preparedness will be maintained for as long as the Indian Point units operate. The present and continuing attitude will lead to a relaxation of effort as soon as the "heat" engendered by this proceeding and the consequent NRC focus on Indian Point Units 2 and 3 have abated.

Supplemental Response to Interrogatory #77

The correct assumptions are as follows:

- a. Parents will be reluctant to evacuate without their children, and cannot be counted upon to do so.
- b. Emergency response personnel will be reluctant to re-enter a contaminated area after having left such an area, and cannot be counted upon to do so.
- c. Panic may occur if large numbers of persons are stalled in traffic during an evacuation (voluntary or otherwise) and susceptible to radiation exposure.
- d. Emergency response personnel cannot be counted upon to perform their functions unless (at the very least) they have specifically assented to doing so under conditions involving a potential or actual radiological hazard or have a fixed legal obligation to so respond.

Radiological threats resemble certain other forms of highly toxic contaminants but differ from threats to public health and safety which are typically present in mass disasters such as earthquakes, hurricanes, flooding, etc.

Supplemental Response to Interrogatory #8

Licensees are referred in addition to C.B. Flynn & J.A. Chalmers, "The Social and Economic Effects of the Accident at

Three Mile Island: Findings to Date," NUREG/CR-1215, January 1980, prepared for the Division of Safeguards, Fuel Cycle and Environmental Research, Office of Nuclear Regulatory Research, USNRC, by Mountain West Research, Inc., and Social Impact Research, Inc. See in particular, page 28 (referencing trips made to banks just prior to and during the evacuation phase of the TMI-2 accident).

Supplemental Response to Interrogatory #95

UCS/NYPIRG, upon failure to obtain relevant information from the NRC from a FOIA request, is attempting to locate National Weather Service data from pertinent stations near Indian Point. It is obvious that the probability of rainfall is from from negligible, and UCS/NYPIRG assumes that the Licensees do not dispute the fact that rainfall has occurred and will continue to do so at various times in the future at locations near Indian Point.

Supplemental Response to Interrogatory #128

UCS/NYPIRG refers the Licensees to NUREG-0396 and NUREG/CR-1131, both of which are available from the NRC at the NRC Public Document Room in Washington, D.C. The consequences will include prompt and early fatalities, early radiation injuries, latent fatalities, non-fatal cancers, non-fatal thyroid nodules, and potential genetic effects occurring in succeeding generations. UCS/NYPIRG does not have responsibility per se for calculating what the requisite area should encompass; however, it is clear

for example from Figure I-10 (page I-46 of NUREG-0396) that a 10-mile radius EPZ is largely meaningless given the occurrence of an "atmospheric" type of accident (i.e., PWR-1 through PWR-5 release categories from WASH-1400). For example, the 5-Rem whole-body PAG dose is exceeded at a 50% probability at roughly 50 miles for PWR atmospheric accidents, and is exceeded at about a 13-15% probability at 100 miles for such accidents.

Supplemental Response to Interrogatory #129

Licensees are referred to Supplemental Response to Interrogatory #41 regarding the use of Potassium Iodide as a protective measure. The following are the references upon which UCS/NYPIRG relies for data and information on sheltering as a protective action:

- a. EPA 520/1-78-001A and 1-78-001B, previously referenced.
- b. SAND77-1725, David C. Aldrich, David M. Ericson, Jr., and Jay D. Johnson, "Public Protection Strategies for Potential Nuclear Reactor Accidents: Sheltering Concepts with Existing Public and Private Structures," February 1973, Sandia Laboratories, prepared for USNRC.
- c. SAND77-1555, David C. Aldrich and David M. Ericson, Jr., "Public Protection Strategies in the Event of a Nuclear Reactor Accident: Multicompartment Ventilation Model for Shelters," January 1978, Sandia Laboratories, prepared for USNRC.
- d. P.E. McGrath, D.N. Ericson, J. & I.B. Wall, "The Reactor Safety Study (WASH-1400) and its Implications for Radiological Emergency Response Planning," International Symposium on the Handling of Radiation Accidents, Vienna, Austria, 28 February 1977, IAEA-SM-215/23, pp. 165-179.

Supplemental Response to Interrogatory #140

UCS/NYPIRG maintains its prior response; however, we note that the provision of additional east-west running roadways would facilitate evacuation from Rockland County. At present, such evacuation is largely limited to a southerly direction, which direction will be in the plume path about one-third of the time based on the wind rose for the Indian Point site. Substantial dose savings could be obtained by radial evacuation away from the plume in Rockland County, but such radial evacuation is limited to the east by the Hudson River. See, PNL-SA-9383, R.I. Scherpelz and A.E. Desrosiers, "Doses Received While Crossing a Plume of Radioactive Material Released During an Accident at a Nuclear Power Plant," October 1981, Pacific Northwest Laboratory sponsored by USNRC; available from the NRC's Public Document Room in Washington, D.C.

Supplemental Response to Interrogatory #148

The following steps, at a minimum, should be undertaken:

- a. The public education brochure should be revised as indicated above to include substantive discussion of the consequences of severe accidents (such as an accident resulting in a release comparable to the PWR-2 release category from WASH-1400).
- b. Local emergency response and planning personnel should receive substantive instruction in the details of failure modes at the Indian Point plants which could result in substantial releases of radioactivity, and should be provided with sufficient information and training to permit them to adequately assess plant conditions and properly weigh protective action alternatives during the stress occasioned by an actual response to an emergency at Indian Point.

- c. The introduction of the County Radiological Emergency Response Plans and the Licensees' emergency plans should be revised to reflect the fact that nuclear power plant accidents with substantial offsite consequences are possible at Indian Point; it is an inadequate response to focus principally on any alleged "extremely low probability" of such accidents.

These steps should be taken by the NRC, the Licensees, and state and local emergency planning officials. The accidents referred to are best identified by the NRC since they are the source of the recommendation; nonetheless, it is clear that the accidents referred to involve core melt with breach of containment. It is UCS/NYPIRG's position that probabilities of such accidents cannot be reliably computed due to inadequate methodology, inadequate data base, a lack of understanding of the physical phenomenology of core melt accidents, inadequate understanding of the role of human error in causing or exacerbating such accidents, and an inadequate understanding of the interaction of components and human operators under severe core damage conditions. A copy of the draft addition to the TMI Action Plan (Draft NUREG-0660, which was attached to a version of the TMI Action Plan submitted to the Commissioners at a 21 December 1979 Public Meeting is attached hereto.

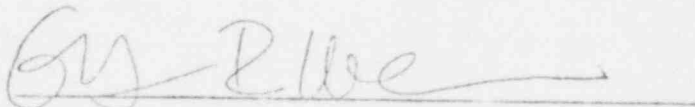
Supplemental Response to Interrogatory #151

- (c) The maximum levels should be the same for all nuclear power facilities.
- (e) These levels are established explicitly with the understanding that the PAAS do not establish acceptable dose levels. Both the original EPA PAG manual and NUREG-0396 (which was co-written and co-published by EPA) are explicit on this point.

Supplemental Response to Interrogatory #180

Inasmuch as Licensees are in receipt of the prefiled written testimony of UCS/NYPIRG's witnesses, no further response to this interrogatory should be necessary.

Affirmed this 1st day of July, 1982:

A handwritten signature in cursive script, appearing to read "Ellyn R. Weiss", is written over a horizontal line.

Ellyn R. Weiss, Esq.
Harmon and Weiss
1725 I Street, N.W., Suite 506
Washington, D.C. 20006

DATED: 1 July 1982

Counsel for UCS

Erratum for Supplemental Responses

28. The following document also contains a brief but substantive discussion of expedient respiratory protection:
- a. EPA 520/1-78-001B, "Protective Action Evaluation, Part II, Evacuation and Sheltering As Protective Actions Against Nuclear Accidents Involving Gaseous Releases," prepared for the U.S. Environmental Protection Agency by George H. Anno and Michael A. Dore, Revised August 1978, page 55.

Errata for Original Interrogatory Responses

- 2.(c) The reference on page 2 to the December 1982 RAC Review should read "December 1981".
43. and 44. The reference in line two of this response on page 17 should read "EPZ" rather than "EPA".
82. The response should refer to basis (2) rather than basis (3).

ORIGINAL

NUCLEAR REGULATORY COMMISSION

IN THE MATTER OF

PUBLIC MEETING

CONTINUATION OF BRIEFING ON ACTION PLAN

Place - Washington, D. C.

Date - Friday, 21 December 1979

Pages 1 - 74

8001160433

(202) 347-3700

Task IV F Attitude

A. OBJECTIVE

To assess whether further fundamental changes in the attitude of the NRC and the nuclear industry are necessary and, if so, to identify measures that will institute the needed changes.

B. NRC ACTIONS

- a. Description: One of the principal findings of the President's Commission was that fundamental changes will be necessary in the attitudes of the NRC and the nuclear industry. The President endorsed that finding.

Several significant actions have been taken, or are underway, that reflect a changing attitude on the part of the NRC and the nuclear industry. The President's actions to appoint a new Chairman from outside of NRC and to propose reorganization legislation are steps that will facilitate or, indeed, will force attitudinal change. This total Action Plan itself is felt by some to be the demonstration of an attitudinal change on the part of the NRC staff. Similarly, the nuclear industry has taken several steps (e.g., creation of INPO and NSAC) that indicate a change in attitude toward reactor safety.

What is needed now is an independent evaluation of the attitude change to determine if it is real (i.e., fundamental vs. cosmetic), permanent, and sufficient. To assure such an evaluation should be done by a group

- (1) NRC explore with GAO whether it could undertake this evaluation.
- (2) NRC establish contract with outside reviewers (perhaps some members of the Kemeny Commission).
- (3) NRC suggest that one or more of its Congressional oversight committees undertake hearings for this purpose.
- (4) NRC determine that evaluation is one appropriate function of the Advisory Committee and that no other action is necessary.
- (5) If (1) through (4) are infeasible, task OIA (NRC) to do the evaluation.

The evaluation should separately consider the NRC and the nuclear industry, and should include specific recommendations to remedy any shortcomings found. Attached is an illustrative list of indicators of inadequate attitude that are representative of the types of area that should be evaluated when considering the NRC. A similar list could be developed for evaluating industry attitude.

b. Schedule: Complete evaluation by June 1980. Schedule for remedial actions cannot be determined now.

c. Resources: FY 80: If GAO or Congress: 0 NRC resource
If Special Commission: 5 MY
If OIA: 5 MY

C. LICENSEE ACTIONS

None, except to cooperate in the evaluation

D. OTHER

GAO conduct evaluation, if feasible.

E. REFERENCES

President's Commission: Principal Finding and Conclusion

Enclosure to Task IV F

Indicators of Inadequate Attitude

1. Abuse of generic issues
2. Failure to follow up on ACRS advice
3. Assuming the SRP was safe enough
4. Failure to backfit enough things
5. Failure to do realistic emergency planning
6. Failure to believe serious accident can happen
7. Inadequate review of operating experience
8. Lack of a well-thought out, integrated system for assuring nuclear safety
9. Inadequate handling of staff dissent
10. Siege mentality with respect to intervention
11. Inattention to petitions
12. Mindset on human beings
 - a. ALARA
 - b. procedures
 - c. training
 - d. staff training & experience
13. Allowing perceived resource limitations to thwart safety improvements
14. Preoccupation with licensing schedules
15. Protecting industry from costly changes
16. Delay in implementing backfit items once decided
17. Allowing interoffice rivalries to preclude full utilization of staff talent
18. Failure to acknowledge, or act upon, the message of WASH 1400 regarding the significance of dominant risk contributors
19. Allowing the ponderous NRC regulatory procedures to inhibit creative safety design improvements by industry
20. Failure to establish a clear nuclear safety objective

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

Administrative Judges:
Louis J. Carter, Chairman
Frederick J. Shon
Dr. Oscar H. Paris

In the Matter of)
)
)

CONSOLIDATED EDISON COMPANY OF NEW YORK)
(Indian Point Unit 2))
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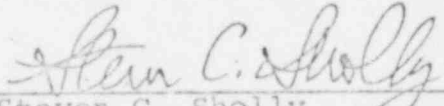
POWER AUTHORITY OF THE STATE OF NEW YORK)
(Indian Point Unit 3))
)

Docket Nos. 50-247SP
50-286SP

1 July 1982

CERTIFICATE OF SERVICE

I hereby certify that single copies of UCS/NYPIRG SUPPLEMENTAL RESPONSE TO LICENSEES' INTERROGATORIES DATED 3 MAY 1982 upon the following persons by placement in the U.S. Mail, postage prepaid, First Class (except as noted below) this 1st Day of July, 1982.


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* Served by Federal Express on July 1, 1982

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