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

December 18, 1979

MEMORANDUM FOR: Chairman Ahearne
Commissioner Gilinsky
Commissioner Kennedy
Commissioner Hendrie
Commissioner Bradford

FROM: Edward J. Hanrahan, Director
Office of Policy Evaluation *[Signature]*

SUBJECT: COMPARISON OF PRESIDENT'S AND NRC'S RESPONSES
TO KEMENY COMMISSION RECOMMENDATIONS

As requested, we and the staff have developed a comparison (Enclosure 1) of NRC's plans for responding to the Kemeny Commission recommendations with the President's actions of December 7. Both the President and NRC broadly endorsed the Kemeny Commission recommendations for change by the government and the nuclear power industry. While the staff's December 11 draft action plan for NRC's response to those recommendations is generally consistent with the President's response, as reflected in Enclosure 1, the NRC plan will have to be amended to make it fully consistent with and reinforcing of the President's actions. Enclosure 2 notes in outline form the principal areas where amending will be needed. These include the President's establishment of an oversight committee, and his directives to FEMA and DOE. Enclosure 3 is a tentative assessment of resource impacts.

I would like to highlight a central matter that the Commission will have to address in discussing NRC's response in the light of the President's actions, and that is the matter of what will constitute a sufficient basis for the resumption of licensing. The President, while endorsing NRC's pause in licensing in order to "put its house in order," noted the urgency of the task, pointing out NRC's authority to license on a case-by-case basis during the transition and urging "NRC to complete its work" in six months. There are a number of ways of defining the conditions under which the Commission would end the pause. The staff describes one such definition in its comparison (Enclosure 1, page 4). We and OGC intend to work closely with the staff over the next several days to better define the options for determining that set of circumstances under which the pause would end and normal licensing resume.

Enclosures:
As Stated

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ENCLOSURE 1

NRC STAFF REVIEW OF PRESIDENT'S DECEMBER 7, 1979 RESPONSE TO THE KEMENY COMMISSION RECOMMENDATIONS

The NRC staff has reviewed the White House Fact Sheet of December 7, 1979 which contained the President's response to the recommendations of the Kemeny Commission on the Accident at Three Mile Island. The following provides an appraisal of how closely NRC's response matches the President's and where we need to do more.

The format of this material follows that of the report of the President's Commission, the NRC's November 9 response to Dr. Press (NUREG-0632) and the White House Fact Sheet. For convenience each of the 46 proposals is quoted, and we have indicated what we have done, are doing, or plan to do.

A. THE NUCLEAR REGULATORY COMMISSION

The President's Proposal: The President agrees that improvements in NRC's organization and management are essential. Because of the value of diversity of views that a commission can bring to decision-making, and the protection from political intervention that independence can provide, the President will retain the NRC as an independent commission. The President has directed, however, that several concrete actions be taken to address the deficiencies that have been identified:

- o The Office of Management and Budget will prepare a reorganization plan to remedy the ambiguity and confusion as to the respective roles of the Chairman, the Commissioners and the Executive Director for Operations. The plan will strengthen the Chairman's ability as Chief Executive Officer to provide forceful management control over the operating functions of the NRC and to lead the Commission in the development of a unified nuclear safety program. It will give the Chairman greater power to make key personnel decisions, as well as authority to act on behalf of the Commission during an emergency. This plan will be submitted to Congress early in the next session.

- o The President will appoint a new Chairman of the NRC from outside the agency. In the meantime, Commissioner John Ahearne, now a member of the NRC, will serve as Chairman. Dr. Ahearne will stress both safety and the prompt implementation of needed reforms.

- o The General Services Administration is directed to prepare a plan for consolidating the commissioners and their staff with the major staff components of the agency in the same building or a group of buildings in close proximity with each other.

NRC Response

The TMI accident revealed significant weaknesses in the regulatory structure and process. Some of these had been recognized previously, and at the time of the accident efforts were underway to eliminate them. Actions are described here that will address these weaknesses and lead to a more effective regulatory structure and improved regulatory processes. Although the dominant objective is to assure greater protection of the public from the radiological hazards of nuclear facilities and materials, implementation of some organizational improvements will increase the capabilities of NRC to achieve all its statutory objectives in a more efficient and effective manner.

Some of the organizational matters involve the Commission alone; others involve its interaction with the NRC staff. Organizational rearrangements, as well as changes or clarification of functions, may be necessary. NRC will assist in obtaining the statutory authority which will be needed in a few instances to clarify and strengthen the authority of the Chairman and the Executive Director for Operations. In other cases, it may be found necessary to constitute new organizational units or consolidate existing units to, for example, provide greater prominence to the role of human factors in nuclear regulation, or to improve the regulation of operating reactors, and, in one important instance, achieve a single location of NRC and its major headquarters staff. Effective interaction with the General Services Administration and Congress will be required.

The President's Proposal: Retention of the commission form for the NRC alleviates much of the need for a permanent oversight group. However, there is significant merit to the establishment of a small advisory committee of experts to report to the President and the public on the progress of the NRC, other Federal agencies, the States, and the utilities in improving the safety of nuclear power and in implementing the Kemeny Commission recommendations. An oversight Committee will be established shortly.

NRC Response

NRC supports the President's decision to appoint an expert committee to advise him on, among other things, NRC and industry progress in improving nuclear safety. We will fully cooperate with that body. In addition, we are studying the desirability of establishing additional NRC advisory committees.

The President's Proposal: The ACRS plays a valuable role and should be strengthened. The President is:

- o Asking the NRC to direct the ACRS to focus its attention on a priority basis on the major outstanding safety issues. NRC should augment the analytical capability of the ACRS.

- o Pledging to work with the Congress to review the wisdom of the current statutory requirement that the ACRS review every license application.
- o Requesting that the chairman of the NRC, in cooperation with the ACRS, assess these recommendations and advise the Oversight Committee of steps that might be taken to expand the ACRS capability to provide an independent safety check.

NRC Response

We agree that the ACRS role should be strengthened. NRC programs have been reoriented to focus more strongly on unresolved safety issues, and with a change in statutory function, ACRS could be freer to work on these issues. To that end we continue to support legislation that would eliminate the statutory requirement that ACRS review each reactor license application. We will also develop a dialogue with ACRS on an extension of its analytical capability and arrange for any support that may be needed.

The President's Proposal: Although transfer of the statutory responsibilities of the NRC will not now be pursued, the President urges implementation of the remaining recommendations. In many areas covered by the recommendations, the NRC has already begun to remedy the deficiencies noted by the Kemeny Commission. The Oversight Committee is directed to monitor and report periodically on NRC progress in implementing these recommendations.

NRC Response

NRC is giving priority attention to increasing nuclear safety, including upgrading operator licensing requirements; designating additional systems as safety related; improving control and other plant designs; upgrading licensee organizational and management standards; emphasizing remote siting; and exploring additional ways to mitigate accident consequences. NRC expects to support the President's Oversight Committee by providing periodic reports and analyses. These will include progress on unresolved safety issues; defects in design, construction or operation; commitments in TMI-2 issues (Lessons Learned, etc.); progress in LWR safety research; and other matters.

The President's Proposal: This recommendation provides the Kemeny Commission's guidance on licensing during the transition to an improved nuclear regulating regime. Clearly the NRC has the authority to proceed with the licensing of plants in this transition period on a case-by-case basis, as the Kemeny Commission recommended, and that this authority may be used as circumstances surrounding a plant dictate. The NRC has indicated that it will pause on issuing new licenses and construction permits in order to devote its full attention to putting its house in order. The President endorses the approach the NRC has adopted, but he calls on the NRC to complete its work as quickly as possible, and in any event, no later than six months from today.

NRC Response

NRC intends to approve an action plan in February 1980 that takes into account internal reviews of our Lessons Learned groups and our Special Inquiry and the external reviews of the Kemeny Commission and Congressional Committees. The action plan will specify the actions (utility and NRC) needed prior to granting new operating licenses (OL) or construction permits (CP).

In this plan we expect to specify:

- 1) additional short-term requirements for operating reactors,
- 2) necessary and sufficient requirements for near-term OL's and CP's,
- 3) reforms in NRC procedures and practices,
- 4) plans for resolving all recommendations resulting from the TMI-2 investigations.

In the meantime we will proceed to examine individual operating license applications and may grant fuel-load licenses for purposes of enhances preoperational testing and training at low power.

The President's Proposal: Improvements in procedures are essential for improved regulation of commercial nuclear power. He endorses the Kemeny recommendations to improve rulemaking procedures and to strengthen inspection and enforcement. Moreover, he endorses the intent of the licensing recommendation: licensing reform should focus on improving public confidence in the integrity of the process, as well as assuring the safety of nuclear facilities. But because some of the licensing recommendations (A.10) contain specific provisions which require careful evaluation by the NRC, the appropriate Congressional committees, and concerned public interest groups before final judgment is made on their desirability, the President has decided to withhold his endorsement of the licensing recommendations at this time.

In order to meet the need for procedural reform, the President requests the NRC to undertake the following actions:

- o Proceed with the implementation of the reforms of rulemaking.
- o Perform an open and systematic evaluation of its licensing procedures. They should actively seek and address input from affected outside groups as well as disinterested parties, such as the Administrative Conference.
- o enhance significantly its emphasis on inspection and enforcement. He acknowledges that the NRC's long delay in implementing a systematic assessment of operating reactor experience is being addressed by the establishment of the Office of Analysis and Evaluation of Operational Data.

o In order to permit greater involvement of the commissioners in the development of policy on key safety matters, the Chairman of the NRC is requested to review the ex parte rules governing contact between commissioners and staff.

o Accelerate its program to place a resident Federal inspector at every reactor site. Further, the NRC is requested to evaluate the desirability of a stronger Federal presence in the control room of every operating reactor, such as by added government representatives or on-line monitoring by a government computer facility.

NRC Response

We agree that improvements in the adjudicatory and rulemaking processes are needed. In particular, since the adjudicatory and rulemaking processes are intended to provide the major opportunity for public/NRC/utility interactions, we need to determine how the public can plan a more effective, and visible, role in reactor licensing. Possible mechanisms for improvement include intervenor funding, giving wider notice concerning rulemaking proceedings, and providing improved opportunities for public participation by petitioning. We intend to proceed with a pilot program on intervenor funding in FY81. We also intend to fully comply with Executive Order 12044, which requires a periodic and systematic reevaluation of existing rules. To this end we will publish semiannually an agenda of significant rulemakings.

We also intend to reevaluate our rulemaking process to assure that it is properly focused on the more important safety issues, and that more direct consideration is given to the need for backfitting at operating plants.

We have already formed several organizational units within NRC for review of operational safety experience, including the referenced Office of Analysis and Evaluation of Operational Data, and individual units in the Office of Inspection and Enforcement and Nuclear Reactor Regulation, and we expect to have such units within each of the major program offices.

We plan to review the ex parte rule by 1) studying the roles of the Commission (legislative, judicial, and executive); 2) determining whether current ex parte rules exceed the requirements of the Administrative Procedures Act and case law; 3) studying ex parte in other agencies; 4) studying the ex parte rule effect on isolating the commission from the staff in policy-making, and 5) making changes and recommending legislation if needed.

NRC is proceeding to provide at least two resident inspectors at sites where there are one or two operating units, and an additional resident inspector for each additional unit at sites with three or more operating units. This is expected to be accomplished late in 1980. In addition a resident inspector will be assigned to each power plant construction site after construction is approximately 15% complete. A program to provide a resident inspector on all shifts (24 hours/day, 7 days/week) will be developed and proposed early in 1981.

In addition we are planning for a nuclear data link from each operating reactor to the NRC Operations Center in Bethesda, Md. Such direct monitoring of reactor and radiological sensors will supplement the knowledge gained from NRC's inspection program and will enable better NRC support and oversight in response to emergencies.

B. THE UTILITY AND ITS SUPPLIERS

The President's Proposal: The President endorses these recommendations [Kemeny Commission Recommendations B.1 through B.6]. Safety of nuclear reactors can be significantly improved through a pervasive and knowledgeable involvement by utility top management in seeking safe and reliable plant operation. Indeed, the primary reform must come from within the utility industry and its suppliers. Industry initiatives since the accident to improve safety, such as the establishment of the Institute of Nuclear Power Operations (INPO) and the Nuclear Safety Analysis Center (NSAC) should be pursued and augmented. An industry-sponsored central technical organization should address the deficiencies revealed by the accident at Three Mile Island. In addition, NRC is establishing upgraded requirements for management competence, operating procedures, independent review and system safety evaluation. These steps represent important initiatives, but they are only a start. The President, therefore, calls for the following actions:

- o The management of nuclear utilities must follow through on the safety improvement programs that have been announced, add to and strengthen these programs, and demonstrate a commitment to safety that goes beyond mere compliance with regulation.

NRC Response

NRC agrees that the nuclear utilities must dramatically change their attitudes toward safety and regulations, as well as set their own standards of excellence and police them to ensure the effective management and safe operation of nuclear power plants. NRC encourages the formation of the Institute of Nuclear Power Operations (INPO) and the systematic review of operating experiences.

NRC agrees that the improvement and maintenance of operational safety is a fundamental responsibility of licensees. NRC will adopt the role that provides acceptance criteria, detailed guidance where necessary, and any additional incentives necessary to attain the goals for operational safety.

- o A concept of personal responsibility must be applied; a competent and well-trained decision-maker must always be in charge at the corporate level and at the plant site. Primary responsibility for safety must rest with the utility companies that operate and maintain nuclear power plants.

NRC Response

NRC is developing criteria that will establish the requirements for onsite and offsite personnel, both management and technical support, to provide improved assurance of safe operation of the plant during normal and abnormal conditions and provide the capability necessary to respond to accident situations. The overall objective is to improve the ability of the licensee to fulfill his responsibilities for operating the plant safely and for responding to accidents.

- o INPO and NSAC are asked periodically to inform the Chairman of the NRC and the Oversight Committee of their objectives, milestones for implementation, progress in meeting these milestones, and the results of their independent evaluation of utility performance.

NRC Response

As discussed in NUREG-0632, NRC established, in July 1979, an agency-wide Office for Analysis and Evaluation of Operational Data which has the lead responsibility for coordination with industry evaluation programs such as those of INPO and NSAC. Staffing of this office and its operating procedures are scheduled to be completed early in 1980. Included in these procedures will be the formal lines of communication between NRC and the industry groups that are evaluating licensee performance.

- o NSAC should direct early attention to evaluating readiness and assisting in the safety upgrading of those utilities with nuclear generating stations under construction which would have a major impact on the displacement of foreign oil. NRC is encouraged to do likewise, making use of the NSAC efforts as appropriate.

NRC Response

NRC's understanding of the industry's charter to NSAC is somewhat narrower than that implied by this recommendation. NSAC will systematically review reactor operating experience, including reports from suppliers, constructors, vendors and operators, to identify precursor events, trends and problem areas; and will perform failure analyses and will follow up with nuclear utilities on identified problems. These efforts are intended to improve both safety and availability of operating plants and feedback operating experience to plants under construction earlier than is presently the case. The resulting higher availability of operating plants and more efficient construction of new plants will have a positive effect upon the displacement of foreign oil.

As a parallel effort, NRC has established an integrated program for the analysis of operating experience that involves participation by licensees, NSSS vendors, NSAC, and INPO and includes foreign experience. The program includes the systematic collection, review, analysis, and feedback of operating experience to all NRC-licensed activities (i.e., design, construction, and operation).

o The Oversight Committee is directed to monitor industry progress, identify opportunities for accelerating and strengthening the improvements which have been initiated, and identify potential opportunities for Federal assistance in these efforts.

NRC Response

We expect to assist the Oversight Committee as needed. This may include conditioning licensees to provide needed reports or analyses. We also anticipate supporting the Oversight Committee by describing our long-range light-water reactor safety research plans and showing how they relate to goals of actual and perceived safety.

o The Secretary of Energy is directed to provide appropriate assistance to the industry and the Oversight Committee. NRC is requested to evaluate and accredit industry efforts to assure that prompt and effective attention is being given to needed safety reforms.

NRC Response

NRC will review and evaluate the nuclear industry efforts to develop needed safety reforms. NRC will accredit industry efforts when a determination of acceptability relative to safety requirements can be made.

C. TRAINING OF OPERATING PERSONNEL

The President's Proposal: The President is particularly concerned with the Commission's findings that neither the industry nor the NRC gave adequate attention to the competence of operator and supervisory personnel. Instead, the safety of commercial nuclear power was equated with engineered equipment to the neglect of the human element.

Of special concern is the lack of attention and devotion of resources to the training of operators which the Kemeny investigation revealed. It is clear that site managers must consider themselves responsible for operator training. The training organization in each utility must be staffed by motivated, educationally qualified instructors. There must be training for engineers and managers at a level higher than control room operators. Throughout all this training, the basic principles of science and engineering which govern nuclear plant safety and reliability must be emphasized. Finally, a rigorous requalification program is absolutely necessary to assure that plant operations are improved and skills once developed are not lost.

The President strongly supports the Commission recommendations for improved training of operator and supervisory personnel. In response to the TMI accident, the NRC is revising its requirements with respect to operator training and qualifications. INPO will also be directing its early attention to this area. Because of the importance of meaningful

and timely improvement in knowledge and capabilities of personnel involved in nuclear plant management, operation, and maintenance, the President is:

- o Requesting that NRC inform the Oversight Committee within four months of its progress in implementing the Commission recommendations for a) more rigorous criteria for operator and supervisor qualifications, b) expanded and improved use of simulators in training, c) NRC examination and recertification of licensed operators, and criteria for accreditation of training institutions.

NRC Response

To effect immediate upgrading, our plans call for a directive to all nuclear power plant licensees to be issued by February 1, 1980, requiring specific improvements in training and qualifications for all operating personnel, including auxiliary operators and shift supervisors. For the longer term, a revision of 10 CFR 55 (Operators' Licenses) and a supporting revision of Regulatory Guide 1.8 are planned that will further upgrade operating staff quality and will specify mandatory simulator training. The rule change will be effective by September 1981. A short-term study will be made to identify weaknesses of training simulators. These weaknesses will then be required to be corrected within a year.

Our plan also calls for supplementing simulator training through in-plant safety drills to be conducted by licensees on a regularly scheduled basis.

For greater assurance of improved operating staff competence, our plans include more stringent criteria for licensing exams, new criteria for certifying shift supervisors and shift technical advisors, and the development of a regulatory approach to assure the psychological fitness of operators.

Currently NRC does not accredit training institutions but does specify the general content of the training course. INPO, an industry group, does plan to accredit training programs. By mid-1980, NRC plans to complete a study of the pros and cons of accreditation and decide whether to accredit training institutions.

- o Asking INPO, with assistance as needed from DOE, to make an assessment of the total manpower and training requirements of nuclear utilities and to develop a program for upgrading and accrediting training institutions.

NRC Response

NRC has instituted studies that will result in upgraded training programs for nuclear plant operators and possibly in the accrediting of these training programs. We will consult with INPO and DOE in the development of our requirements.

- o Urging utilities to work together to review and improve their internal training programs in accordance with the criteria discussed above.

NRC Response

All our plans include provisions for having utilities work together in these areas through established organizations, such as the American Nuclear Society Standards Committee, Edison Electric Institute and Regional Training Manager Committees. Considerable progress has been made by the ANS-3 Subcommittee in revising the standards that address selection and training of personnel, simulators and quality assurance. We are monitoring their progress closely to assure that our concerns are factored into the standards.

- o Directing Federal agencies which have significant experience in the training of technical personnel analogous to nuclear utility operations, such as DOD, NASA, FAA, and DOE to cooperate with NRC and INPO in identifying areas where assistance might be provided.

NRC Response

DOE has been requested to furnish us with information regarding training programs, as indicated above, and we have several programs under way that will result in revised regulatory guides and regulations. The proposed regulatory guides and regulations changes will be submitted to appropriate Federal agencies. The agencies should review the submittal and inform NRC of the areas in which they believe they can be of assistance.

- o Directing the Oversight Committee to review utility training programs, drawing on DOE assistance as appropriate, to evaluate NRC's progress on upgrading regulatory requirements, and to report to the President within six months.

NRC Response

There is no specific action required by NRC. However, we will cooperate with the Oversight Committee to the fullest.

D. TECHNICAL ASSESSMENT

The President's Proposal: The President supports these recommendations and notes that NRC and its licensees are beginning to apply many of the technical lessons learned from TMI. As the industry and the NRC carry out their programs of technology improvement, the President has urged that special emphasis be placed in the following areas:

- o Plant designs, equipment, control rooms, training, etc., should be standardized insofar as practicable. For example, it makes no sense that the control room for Unit 1 at Three Mile Island is designed much differently than the control room at Unit 2, even

though both reactor plants were designed by the same manufacturer. This apparently resulted from the utility using different architect engineers for the two units.

NRC Response

The NRC policy on standardization of nuclear power plants was first articulated by the Atomic Energy Commission (AEC) in 1973 and involved both duplicate plant and reference system concepts. Later in 1974 the AEC approved the replicate plant concept. In August 1978 the NRC issued a policy statement on standardization of nuclear power plants to (1) improve the effectiveness and efficiency of the licensing process and (2) enhance plant safety and reduce costs.

The NRC policy on standardization has not been reviewed in light of the accident at Three Mile Island. However, several specific generic tasks are being conducted through owners groups and are expected to result in standard designs. NRC is also considering accreditation of training institutions, such as INPO, which would tend to standardize training. The entire effort toward standardization had been aimed toward new plants (that is, construction permit holders), and the effort toward operating plants had been on an ad hoc basis. The NRC will, as part of its Action Plan for Implementing Recommendations of the President's Commission and other studies of the TMI-2 Accident, reevaluate the positive effect of standardization on plant safety and will specifically consider standardization of improved control room designs, license Technical Specifications, and hardware and software requirements.

o Control rooms should be simplified in display and control. The data gathered by the Commission show that at TMI-2 during normal operation there were at least 50 alarms activated in the control room, and after the reactor trip there were over 100. Operators cannot be expected to take effective action under such circumstances.

NRC Response

As discussed in NUREG-0632 on the basis of the NRC review of the accident, some actions have already been taken to improve the information provided to operators in the control room. Licensees have been required to install by the end of 1980, additional instrumentation to measure the level and subcooling of the water in the core, and a wider range of the conditions in the containment structure. Training in the interpretation of these instruments and procedures are also required.

In addition to these immediate improvements, all control rooms are to have installed within 18 months a concise display of critical plant parameters. In conjunction with this requirement is a year-long review of each control room using current human factors principles and engineering expertise. Significant deficiencies in design and violations of human factors principles will be corrected.

In the longer term, NRC is encouraging industry to develop comprehensive guidance for control room design. NRC will conduct research directed toward developing better means of man-machine interaction and better diagnosis and display of plant data and status.

- o NRC is asked to provide its plan for the implementation of safety improvements and utilities are requested to respond in a timely fashion. To assist the NRC in this effort, the President has requested a supplemental appropriation of \$32.6 million in FY 1980.

NRC Response

Our action plan is expected to be available in February 1980. It will be a projection of requirements, for the next several years, for NRC, utilities, and other government agencies. Our plan will state the resources needed to achieve the objectives. It will also state when and how licensees should comply.

- o DOE is directed to coordinate with NRC the prompt and effective diffusion and use by the utilities of the data on operating experience gathered by NRC, DOE and the industry itself.

NRC Response

As previously discussed, the recently established Office for Analysis and Evaluation of Operational Data within the NRC is charged with the responsibility of coordinating the collecting, evaluation and dissemination of operating experience between the NRC, the licensees, the industry and others.

- o NRC is asked to expand the scope of LWR safety research activities to focus on developments which will reduce the likelihood of future accidents.

NRC Response

NRC agrees with this recommendation and is already expanding the scope of certain ongoing reactor safety research programs and initiating new efforts. The NRC program to evaluate concepts which may improve the safety of LWRs and reduce the consequence of reactor accidents will also be significantly expanded in FY80 and 81, as outlined in the FY80 supplement for additional research and discussed in NUREG-0438. Research has been expanded to address degraded core and melted core accidents in order to address core cooling, system function and reliability. Radioactivity transport and leakage and selected approaches to mitigating the consequences of severe accidents. Several research programs have also been reoriented to experimentally evaluate small-break loss-of-coolant accidents similar to TMI, and system transients. These programs will assist the development and testing of fast-running computer codes used to predict realistic system behavior. A major research effort has been initiated to assess the safety of currently operating plants. This program is the Integrated Reliability Evaluation Program (IREP). IREP will use risk assessment methodology to evaluate particularly high-risk accident sequences at

individual plants and will recommend improvements to reduce these high-risk sequences. The methodology for this program is being developed and demonstrated on a pilot basis for Crystal River Unit 3. The pilot program, followed by a six-plant demonstration program, will be complete by July 1980. The program for the remaining operating reactors will be completed by January 1983.

- o NASA, FAA, and ODE are directed to assist NRC and the nuclear industry by identifying appropriate technologies that could improve the operational safety and reliability of nuclear power plants. Such technology would include: control and instrumentation system design, information display techniques, and advanced training methods.

NRC Response

NRC will investigate the feasibility of applying other technologies to nuclear power plant design and operation. Currently NRC and the Institute of Electronics and Electrical Engineering are jointly sponsoring a conference which will consider the practicality of applying the advanced technologies of aerospace, defense, computers and other industries to reactor safety.

- o The President endorses the joint NRC/EPRI/DOE effort to obtain data during the TMI cleanup. In addition, NRC is asked to assure that the cleanup is conducted in a manner consistent with adequate protection for the environment and public health and safety. The Administration has requested a \$7 million supplemental appropriation for 1980 to accomplish this.

NRC Response

The objectives of NRC's program for TMI-2 clean up and recovery are (1) to assure the safety of TMI-2 and (2) to obtain and factor into the regulatory program the pertinent safety-related and environmental information. This effort is part of a continuing joint program with DOE, EPRI, and the licensee. Of particular safety significance is information related to obtaining access to the primary system. This information addresses both the survivability of instrumentation and electrical equipment under accident conditions and the environmental conditions inside the auxiliary building and containment structure. A second phase of the program is directed toward evaluation of primary system components and reactor internals and fuel. In addition NRC's program will require that the TMI-2 radioactive wastes be placed in a form that will enhance safety in disposal and transportation of these wastes.

- o The Oversight Committee is directed to evaluate NRC and utility progress in implementing safety improvements and assess the Federal government's program in LWR safety research to assure that it is appropriately focused and adequately funded.

NRC Response

NRC will cooperate with the Oversight Committee. An assessment of the Federal government's program in LWR safety research was initiated by NRC in the preparation of a plan to improve reactor safety (NUREG-0438); however, the approved budget level for this effort in FY79 and FY78 was insufficient for NRC to initiate several planned programs in this area. NRC is cooperating with DOE on programs in improved reactor safety as a followup to NUREG-0438.

E. WORKER AND PUBLIC HEALTH AND SAFETY

The President's Proposal: NRC is requested to submit for review all actions affecting worker and public health and safety to the Radiation Policy Council.

NRC Response

NRC will revise its procedures related to radiation protection rule-making and standards development to provide that all such actions are forwarded to the Radiation Policy Council for review. This review will be scheduled concurrently with the normal public comment period for proposed rules and standards and therefore should not delay the rulemaking process. The comments of the Radiation Policy Council on actions affecting worker and public health and safety will be considered by NRC in the development of the final rule or standard. These new procedures will be in effect as soon as the Radiation Policy Council is established.

It should be noted that there may be instances, such as accidents, that will require prompt action by means other than rules or standards to protect worker and public health and safety. In these situations, it would not be feasible or in the best interests of public safety to delay action to obtain a review by the Radiation Policy Council.

- o Utilities should respond expeditiously to NRC's upgraded requirements for advance preparation for the mitigation of emergencies.

NRC Response

For operating reactors, NRC will establish implementation dates for all its upgraded requirements for emergency preparedness and thereby ensure expeditious response. Operating license applicants will be required to meet these upgraded requirements, either as a prerequisite condition for obtaining an operating license or on a schedule that is consistent with the required dates for operating reactors. All applicants for a construction permit will be required to commit to these upgraded requirements as a prerequisite for obtaining a construction permit.

NRC is planning extensive changes and upgraded requirements in emergency preparedness. First, all nuclear reactor sites will be required to establish special facilities to aid in responding to emergencies. The facilities include a near-site Emergency Operations Center, an on-site Technical Support Center, an Operational Support Center, a Health Physics Center, and a nuclear data link (to the NRC Headquarters Operations Center). Except for the nuclear data link, which is a long-term development project, these facilities are to be temporarily established by June 1980, with upgrading on a more permanent basis by August 1981.

In July 1979 NRC issued an action plan that identified the elements required for promptly improving licensee emergency preparedness and for ensuring the capability of offsite agencies to take appropriate emergency actions. This plan includes requirements for licensees to upgrade their emergency plans, to augment their capability to monitor radioactivity both onsite and offsite, to ensure adequacy of State and local plans, and to conduct test exercises. Most of these requirements are to be met by mid-1980; the remainder are required by January 1, 1981.

For the longer term, NRC has undertaken a rule-making proceeding that will significantly improve emergency preparedness at licensed facilities. The rulemaking will consider methods of implementing emergency planning zones that will significantly expand the geographic areas for which emergency plans must be developed. The rulemaking will also cover Federal concurrence with State and local emergency plans as a condition of operating licenses.

o The Federal Emergency Management Agency (FEMA) is directed to address the need for improved advance preparation for emergencies and public education programs in the context of State emergency response plans.

NRC Response

NRC recognizes the significant responsibilities assigned to the Federal Emergency Management Agency (FEMA) by Executive Order 12148 on July 15, 1979, to coordinate the emergency planning functions of executive agencies. In view of FEMA's new role, NRC has agreed that FEMA should henceforth chair the Federal Interagency Central Coordinating Committee for Radiological Emergency Response Planning and Preparedness (FICCC). NRC and FEMA have agreed to exercise joint responsibility for concurring in State emergency response plans prior to NRC issuance of operating licenses. During the next few months NRC and FEMA will continue to reexamine the intrafederal relationships and responsibilities regarding radiological emergency response planning. In addition, NRC, in conjunction with FEMA, plans to continue three training courses for State and local emergency response personnel that were established in 1975 and 1976. Over 1500 State, local and Federal personnel have been trained in these courses. Between 1975 and 1979, the personnel trained and the budget to support the training have expanded tenfold. The program is updated continually and will be revised especially to account for the lessons learned from TMI-2. Refresher training will now be offered, starting in the Spring of 1980.

o DOE is directed to strengthen its program to develop technologies for reducing the radiation exposure of workers at nuclear power plants.

NRC Response

We agree with this emphasis on technology development by DOE for reducing worker exposures in the nuclear power industry. In particular, we would like to see the following on-going DOE projects strengthened: chemical decontamination, remote surveillance and diagnostic techniques, contamination prevention (water chemistry).

The following are important examples of development projects which we believe should be undertaken by DOE:

- Remote maintenance equipment and techniques.
- Design changes to eliminate crud traps.
- High-temperature coolant filtration systems.
- Design changes to prevent formation of radioactive cobalt.
- Training in techniques to reduce worker exposure times.
- Improved neutron dosimeters.
- Improved beta survey instruments and dosimeters.
- Model of a computerized system of in-plant emergency instruments for radiation protection.
- Improved air-sampling and monitoring systems.
- Improved radiation exposure data collection and records system.
- Chemical protective agents, such as potassium iodide, for reducing the internal dose to organs other than the thyroid.

NRC intends to communicate with the Secretary of the Department of Energy to call attention to these needs. We also intend to bring these needs to the attention of the interagency committee on radiation research, which is chaired by the National Institutes of Health.

F. EMERGENCY PLANNING AND RESPONSE

The President's Proposal: The Federal government's ability to deal with emergencies has already been improved by consolidating the widely scattered and uncoordinated programs for emergency preparedness and response under FEMA. Recognizing that the NRC has statutory responsibility for on-site emergency preparedness and response, the President is taking the following action:

o FEMA is directed to: (1) take the lead in off-site emergency planning and response; (2) complete by June 1980 the review of state emergency plans in those states with operating reactors; (3) complete as soon as possible the review of state emergency plans in those states with plants scheduled for operation in the near future; (4) develop and issue an updated series of interagency assignments which would delineate respective agency capabilities and responsibilities

and clearly define procedures for coordination and direction for both emergency planning and response; (5) assure that DOE resources and capabilities for responding to radiological emergencies are made available and augmented as needed to service civilian-related radiological emergencies; and (6) assure the development of programs to address the recommendations for additional research and public education needs.

- o NRC is asked to assist FEMA in these activities.

- o The Director of FEMA will report periodically to the Oversight Committee and the President on progress that has been made.

- o State and local officials are encouraged to work with FEMA to assure the necessary coordination of their respective emergency responsibilities.

- o FEMA is directed to provide the States with technical assistance wherever appropriate.

- o A supplemental appropriation for fiscal year 1980 in the amount of \$13.3 million is being submitted to Congress to improve emergency preparedness. Of this, \$8.9 million will be used by FEMA and \$4.4 million by NRC. The President requests prompt Congressional consideration.

NRC Response

NRC supports the recommendations of the Kemeny Commission in this area and the subsequent actions taken by the President. NRC has been working closely with FEMA and will continue to do so.

NRC and FEMA are developing an arrangement for the review of state emergency plans with the objective of completing that review by June 1980 for States with operating reactors.

NRC efforts to promptly upgrade emergency preparedness capabilities will include a requirement for licensees to keep the public informed on a continuing basis of the nature of hazards in a radiological emergency and of the actions they might be required to take in such an emergency.

G. THE PUBLIC'S RIGHT TO INFORMATION

The President's Proposal: Actions have already been taken by State and local agencies and utilities to implement many of the Kemeny Commission recommendations. In addition, the President is taking the following actions:

- o NRC should continue to make prompt announcements of abnormal radiation measurements.

- o The Radiation Policy Council is directed to work with media representatives to develop a program for improving media coverage of radiological emergencies.
- o Within the context of off-site emergency response planning, FEMA is directed to develop procedures for dissemination of information during an emergency.
- o FEMA is directed to review progress in this area and advise the Oversight Committee on the need for further Federal assistance.
- o The President's reorganization proposal will empower the Chairman to act on behalf of the Commission and be its spokesman during an emergency.

NRC Response

NRC agrees in general with all of the Kemeny Commission recommendations for change in the public information area and supports the subsequent actions taken by the President.

In particular, NRC will, as requested, continue to make prompt announcements of abnormal radiation measurements. In addition, NRC is considering, in the course of expedited rulemaking on emergency planning, the need for requirements to ensure that licensee plans will achieve necessary improvements in the logistics and resources for information distribution, including the need for establishing a predesignated press center for each nuclear site.

NRC plans also to encourage appropriate national professional engineering societies to increase their support for programs for public education on radiation and nuclear power.

NRC agrees with the President's reorganization proposal to empower the Chairman to act on behalf of the Commission and be its spokesman during an emergency. NRC will work closely with the appropriate Congressional committees in the legislative effort.

ENCLOSURE 2

SUMMARY OF THE PRESIDENT'S DECISIONS AND RECOMMENDATIONS
RELATIVE TO ACTION RESPONSIBILITY

<u>Action Responsibility</u>	<u>Number of Actions Required</u>
NRC (in whole or in part)	18
President and/or Congress	6
Other Federal Agencies	13
Utility and/or INPO, NSAC	5
Oversight Committee	4
	<u>46</u>

<u>ACTION ITEM</u>	<u>ACTION RESPONSIBILITY</u>	<u>SECTION IN ACTION PLAN (NUREG-0660)</u>
<hr/>		
1. NRC role		
a. NRC reorganization	OMB	Task IV.A.9
b. New chairman from outside	President and Senate	Not in action plan, nor should it be
c. Consolidate headquarters	GSA	Tasks IV.A.3 and IV.A.4
2. Oversight Advisory Committee	President	Plan must be updated to reflect this
3. Role of ACRS		
a. Unresolved safety issues; analytical capability	NRC Commission	Covered in part by Task IV.C.1; analytical capability not unanimous in eyes of Commission
b. Reconsider role in individual cases	Congress and Executive Department	Covered by Task IV.C.1

ACTION ITEM	ACTION RESPONSIBILITY	SECTION IN ACTION PLAN (NUREG-0660)
c. Expanded role	NRC Chairman, ACRS, Oversight Committee	Not in action plan; should be reflected in new action plan entitled Interface with Oversight Committee
4. Priority on safety matters	Oversight Committee (monitor and report)	Not covered in action plan
5. Licensing pause (complete work no later than 6 months)	NRC	Covered by summary and cover letter
6. Improved licensing procedures		
a. Rulemaking reform	NRC	Tasks IV.E.2 and IV.E.3
b. Systematic evaluation of licensing procedures	NRC plus outside groups	Task IV.D.1-4
c. Emphasize Offices of Inspection and Enforce- ment and Analysis and Evaluation of Operational Data	NRC	Tasks IV.B.2, IB.B.3, IV.B.4 IV.B.5
d. <u>Ex Parte</u> Rule	Chairman, NRC	Task IV.A.5
e. Resident inspector plus stronger Federal presence in control room	NRC	Task I.B.3, items 4, 5. Also stronger Federal presence could be NDL (Task III.A.1 and III.A.2)
7. Utility and supplier role		
a. Utility management	Utility management	Task I.B
b. Decision maker at site	Utility management	Task I.B.2
c. INPO and NSAC roles	INPO, NSAC inform NRC, Oversight Committee	Task I.E

ACTION ITEM	ACTION RESPONSIBILITY	SECTION IN ACTION PLAN (NUREG-0660)
d. NSAC Study of plants under construction;	NSAC, NRC	Action plan as whole
e. Oversight Committee monitor of industry	Oversight Committee	Not in action plan; new one needed
f. DOE assist industry	DOE, NRC	Action plan as a whole
8. Operations		
a. Operator and supervisor qualifications	NRC (inform Oversight Committee)	Tasks I.A.2, I.A.3 and I.A.4
b. Manpower and training requirements	INPO, DOD	Not in action plan, but should be
c. Internal training	Utilities	Task I.A.2
d. Federal role in training	DOD, NASA, FAA, DOE plus NRC, INPO	Not in action plan, but should be
e. Utility training	Oversight Committee monitor with DOE as needed	Not in action plan, except for general coordination with Oversight Committee; not needed
9. Design		
a. Standard designs	NRC and industry	Not in action plan, but should be
b. Control room	NRC and industry	
c. NRC action plan	NRC and utilities	Action plan as a whole
d. Data on Operating	DOE	Task I.E
e. LWR safety research on likelihood of future accidents	NRC	Tasks II.B, II.C.1, II.E.2

ACTION ITEM	ACTION RESPONSIBILITY	SECTION IN ACTION PLAN (NUREG-0660)
f. Operational safety and reliability	NASA, FAA, DOE (assist NRC)	Task I.E
g. TMI-2 data	NRC, EPRI, DOE, GPU	Task II.H
h. Monitor LWR safety improvements and LWR safety research.	Oversight Committee	Not in action plan
10. Radiation Protection		
a. Worker and public health; safety matters	NRC submit to RPC for review	Not in action plan
b. Emergency plans	Utility and NRC	Task III.A.3
c. FEMA role	FEMA	Task III.B.3
d. Technology for reduced worker exposure	DOE	Not in action plan
11. Emergency Plans and Response		
a. Emergency plans coordinated review	FEMA	III.B.3
b. NRC role with FEMA	NRC	III.B.3
c. Periodic reports	FEMA director to Oversight Committee	N/A
d. Coordinate emergency responsibilities	President, FEMA	N/A
e. State assistance	FEMA	N/A
f. Supplemental appropriation	Congress, President	Not in action plan
12. Public Information		
a. Prompt announcement of abnormal condition	NRC	Not in action plan

ACTION ITEM	ACTION RESPONSIBILITY	SECTION IN ACTION PLAN (NUREG-0660)
b. Improved media coverage of emergencies	RPC	Task III.C
c. Dissemination of information	FEMA	Task III.C
d. Periodic review	FEMA to Oversight Committee	N/A
e. Role of NRC Chairman in emergency	OMB	Task IV.A.2

ENCLOSURE 3

RESOURCE IMPACTS

Resource impacts, both staff and funding for technical assistance, are being assessed as part of the development of an agency task action plan to implement the numerous recommendations from the Presidential statement and other sources.

Our initial assessment indicates that the supplemental resources proposed for NRC by the President for FY80 will be adequate to proceed with implementation of the highest priority recommendations.

The NRC request for the FY81 budget included a planning increment to implement many of the short-term lessons learned from TMI. We will be reevaluating that original estimate based on recommendations that have been made by other NRC study groups and the Presidential Commission. Further findings from the NRC-sponsored Rogovin review and from Congressional investigations will also have to be considered. The final resource impacts in FY81, as reflected in the agency action plan, will also have to consider such factors as availability of technical experts in the job market, the relative importance of each recommendation, possible tradeoffs on using NRC staff, contractual assistance and licensee effort, and resources which can be freed by deferring some workload. Our current schedule projects development of a final agency task action plan by late February. At that time we should be in a better position to assess whether the resources requested in the FY81 budget will be adequate.