

THE WHITE HOUSE

UNCLASSIFIED WITH
CONFIDENTIAL ATTACHMENT

WASHINGTON

Exhibit #1

ACTION

March 30, 1979

MEMORANDUM FOR:

ZBIGNIEW BRZEZINSKI

FROM:

WILLIAM E. ODOM *WO*

SUBJECT:

Report to the President on Ad Hoc
Meeting on Nuclear Reactor Accident

Attached is the Summary of Conclusions of the meeting today (Tab I). You can sign it and forward it to the President, or you can send in the following short summary of the meeting:

An Ad Hoc meeting convened in the White House today to plan the Federal response to the Three Mile Island reactor crisis. The NRC, FDAA, DCPA, FPA, Defense, and Energy attended. The White House was represented by Dr. Brzezinski as Chairman, Jack Watson, and Jody Powell.

The NRC briefing indicated potential leakage of radioactive material that might contaminate as much as a 20-mile downwind area.

Decisions:

- (a) All information about the situation at the plant will come from or through Harold Denton (NRC) who is on the scene and who will have direct communications with Governor Thornburgh, the NRC, and the White House. The main objective is prevent confusing and contradictory reporting.
- (b) Jody Powell will coordinate all press releases in Washington and, to the extent possible, in Pennsylvania.
- (c) Jack Watson has designated FDAA as the lead agency for contingency planning for evacuation.
- (d) The NSC is yielding the lead to Jack Watson. Colonel Odom and Jessica Matthews will provide any further assistance he needs.

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D R A F T

SUBJECT: Long-Term Environmental Radiation Monitoring at
Three Mile Island

FROM: Jack Watson

TO: Secretary of Health, Education, and Welfare
Secretary of Energy
Commissioner, Nuclear Regulatory Commission
Administrator, Environmental Protection Agency

It is clear that the Federal agencies must continue to play a role in assuring the citizens around the Three Mile Island station of their safety during the final stages of the plant's shutdown and initiation of cleanup. I believe it is essential that the involved Federal agencies work closely together to provide the most credible environmental radiation monitoring data. Therefore, pursuant to the President's direction that I coordinate the assistance efforts of the Federal agencies for the Three Mile Island accident, I am designating the Environmental Protection Agency as the lead agency for these monitoring efforts. In addition, I am asking each of the agencies named below to continue to meet the responsibilities indicated and to provide adequate resources for these tasks.

Environmental Protection Agency

As the lead agency, EPA should assume responsibility for collecting and documenting the environmental radiation data obtained by all of the Federal agencies involved since the accident occurred on March 28, 1979. The Agency should continue

in the vicinity of Three Mile Island to facilitate data collection and to inform the public, through the Nuclear Regulatory Commission, of off-site radiation levels. The Agency should also continue to operate at an adequate level its environmental monitoring network for air and water-borne radioactivity. Finally, EPA should prepare a report of such environmental radioactivity for the newly established commission to investigate the accident.

Health, Education, and Welfare

The Food and Drug Administration should continue to conduct radioanalyses of milk and food in the vicinity of Three Mile Island at appropriate intervals. These, and all previous analyses, should be promptly submitted to the operations center. Other environmental data collected by FDA, such as dosimeter readings, should also be included in the combined Federal report.

The Center for Disease Control and the National Institute of Occupational Safety and Health should keep the EPA operations center informed of their activities, either at the reactor site or off-site. Any environmental data gathered by CDC or NIOSH should be submitted to the operations center for inclusion in the report.

Department of Energy

The Department of Energy should continue to sample and conduct radioanalyses of soil and vegetation in the vicinity of Three Mile Island at appropriate intervals. These, and all previous analyses, should be promptly submitted to the operations center. Other environmental data collected by DOE, or its contractors, such as radiation intensity measurements from helicopter flights and dosimeter readings, should also be included in the combined Federal report. The Department should also continue to provide meteorological support at the operations center, as needed.

I am very pleased with the reports I have received of the excellent cooperation among the Federal agencies assisting in the Pennsylvania area. I trust that this spirit of cooperation will continue and that all of the participants will maintain their vigilance until the risks of radiation releases are reduced to a minimum.

If there are any questions on these assignments, please call me or Gene Eidenberg (456-6537).

THE WHITE HOUSE
WASHINGTON

March 30, 1979

MEMORANDUM FOR THE PRESIDENT

FROM: JACK WATSON *Jack*
SUBJECT: Federal Contingency Plans -
Three Mile Nuclear Facility

At the meeting this afternoon in the Situation Room the following decisions were made:

- ° I will assume the chair of the interagency task force to coordinate Federal assistance to Pennsylvania as needed and approved;
- ° In this role, I will serve as the federal link to the Governor, local authorities and all relevant federal officials in the field who may be called upon to assist.

All that follows is focused on the operations and support by federal agencies of state and local government in coping with the effects of the accident. Separate lines of control and communication are in place for handling the technical and scientific issues via NRC's man in the field, Dr. Harold Denton.

I have convened the appropriate agencies to begin coordinating the extant federal presence and to initiate necessary advance planning. I have done the following:

- ° Called Governor Thornburgh and advised him of my actions (detailed below). He was most appreciative. We will keep in continuing contact with each other as the situation unfolds.
- ° Directed the Regional Director of the Federal Disaster Assistance Administration (FDAA) in Philadelphia to proceed to Harrisburg to assume lead responsibility for the Federal government in planning operations and support to meet the needs of the people in the area.

- ° Sent the Assistant Director of the Defense Civil Preparedness Agency (DCPA) to Harrisburg to coordinate Federal consultation with state and local officials on existing evacuation plans. If evacuation is called for, the system would be operated by the four affected county governments. Currently evacuation plans exist to move people up to ten miles from the site. I have asked that plans be set if evacuation must extend to 15 and 20 miles from the site.
- ° Asked that DoD's Director of Military Support prepare plans to provide temporary housing and feeding of people if evacuation occurs.
- ° Asked Frank's office to brief the Pennsylvania delegation on our activities and staff coordination lines.
- ° Asked HEW and its Center for Disease Control to prepare plans to provide necessary medical screening and services in the event of (a) a worsening of the exposure and/or (b) an evacuation decision.
- ° Asked that FDAA work with the Governor's office to prepare necessary emergency and/or disaster declaration requests so that a minimum of time is taken in processing them if the Governor decides to make such requests.

There is no question that we are operating on a contingency and stand-by basis. We want to be ready to act if called upon, but there is agreement at every level that the lead remains with the state officials.



THE SECRETARY OF HEALTH, EDUCATION, AND WELFARE
WASHINGTON, D. C. 20201

Noon, March 31, 1979

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MEMORANDUM FOR THE HONORABLE JACK WATSON

SUBJECT: Three Mile Island Nuclear Power Plant Accident

At my request, the top public health officials of the Department, including the Surgeon General, the Director of the Center for Disease Control, the Director of the National Cancer Institute, the Director of the National Institutes of Health, the Commissioner of Food and Drugs, and the Director of the FDA's Bureau of Radiological Health, have reviewed the information available late yesterday afternoon on the accident at the Three Mile Island Nuclear Power Plant in Pennsylvania.

We met late Friday afternoon with the Administrator of the Environmental Protection Agency and his staff as well as with two Commissioners of the Nuclear Regulatory Commission and staff from the National Security Council.

We have examined the information the NRC has provided on the status of the reactor and on the amount of radioactivity released from the plant so far. We have also received the results of the first samples of river water and fish collected by the Food and Drug Administration in the vicinity of the plant -- all of which showed no detectable increase in radioactive materials.

Based on this review, the Public Health Service scientists concluded:

- o First, based on the data provided by NRC, the current level of releases of radioactive materials from the plant and of radioactivity around the plant -- while a matter of concern -- would not justify an evacuation, if the reactor were cooling safely and there were no threat of increased releases in the future.

- o Second, if, on the other hand, the reactor is not cooling safely, a number of events are possible -- ranging from significant releases of radioactive iodine through the worst case of extensive destruction of the core. The more serious of these events could result in unacceptably high exposures of the population within ten miles of the plant. Unless the NRC can provide assurances that the reactor is cooling safely and that the occurrence of these events can be ruled out, adequate protection of the public health requires -- at a minimum -- that full scale preparations for an evacuation of the population within ten miles of the plant be undertaken on an urgent basis and that the population in that area be officially warned immediately to make all necessary preparations to leave on short notice.

On Friday afternoon, at our meeting here, the NRC could not provide firm assurances that the reactor was cooling safely. It is my understanding that assurances were still not forthcoming early this morning.

I recommend that you seek those assurances from NRC and that, if NRC cannot provide them, you consider recommending to the Governor immediate evacuation; at a minimum, the following actions should be taken, if they have not been taken already. This is particularly important in view of the statements to us of the two NRC Commissioners that notice of a meltdown could be as brief as six hours.

- o The population within 20 miles of the plant should be notified publicly and officially to be prepared to evacuate on short notice -- as short as six hours -- and to listen to radio or TV for status reports. The Director of the National Cancer Institute, who is probably the Nation's leading radiation biologist, feels strongly that the warning should extend to people within 20 miles -- even though an evacuation at that distance may prove unnecessary.

- o Both public (federal and state) and private institutions should immediately take all preparatory action necessary to carry out an evacuation. These preparations should include careful review of the special needs and problems involving (a) hard-to-move individuals such as the handicapped, the sick, and those without cars; (b) special institutions such as hospitals, nursing homes, and prisons, and (c) the critical public health concerns (sanitation, food, emergency shelter, etc.) incident to any large scale evacuation.

- o Your coordinating units should work with HEW on supplying potassium iodide -- a chemical that individuals should ingest as a precautionary health measure in the event substantial amounts of radioactive iodine are released to the environment -- as well as providing instructions to pharmacists and the public on the preparation and use of this material.

Decisions About Interventions

The information that has been made available to us indicates that the interventions being considered to ease the problems with the reactor core carry a significant degree of risk to the population in the surrounding area. It is critical that public health experts from HEW and EPA participate in assessing the seriousness of the public health risks associated with alternative interventions, in deciding which public health risks to take, and in deciding what precautionary steps, including evacuation, are needed to protect the public health when a particular intervention is selected. That is not the case now. I strongly recommend that you make certain NRC closely consults with HEW and EPA public health experts on proposed courses of intervention.

HEW Activities

We have undertaken a number of activities at HEW which I list below. In two other areas, we are prepared to assist -- but we need to know what you expect us to do.

- o First, we will be prepared to provide either you, the NRC, and/or the Governor's office with our assessment of the public health implications of the environmental monitoring data.
- o Second, we are prepared to provide assistance in the event of an evacuation - such as infectious disease specialists, and food and drug officials -- to whatever extent you request.

But we need to know what responsibilities you expect us to shoulder so that we can be prepared to respond fully and effectively.

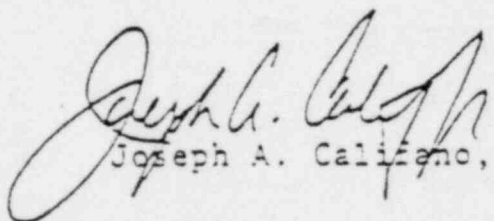
To assist you in your coordinating efforts, I summarize briefly the activities that we have undertaken with respect to the Harrisburg accident:

- FDA personnel are in the area and are taking daily samples of water, fish and other food within a ten-mile radius of the plant to detect any radioactive contamination of the food or water supply. The result of these analyses of these samples are being provided to NRC.
- The FDA has identified all food processing plants in the area under its jurisdiction and will sample their raw materials and finished products, as necessary to detect any contamination.
- HEW is providing personnel, on a 24-hour basis, to the NRC's control center to assist in reviewing NRC, EPA, HEW and DCE data from environmental monitoring as well as to provide that data to an HEW panel of public health scientists for review. They

will make recommendations to me with respect to questions about the public health and safety in the area.

- The PHS has purchased supplies of potassium iodide and is getting these to the area so that they can be made available for the public should radioactive iodine be released into the atmosphere. We are also printing "patient" instructions on use.
- In keeping with our responsibilities under the Interagency Radiological Assistance Plan, we are preparing our resources to assist in the event of any evacuation of the area.
- We will be prepared, if necessary, to provide training to hospital personnel in the area to treat radiation injuries.
- The Center for Disease Control is reviewing the extent to which environmental data are being collected and will make recommendations to me if additional data should be collected to provide an adequate basis for evaluating the near- and long-term public health consequences of exposures resulting from this incident.

I will keep you informed of our activities and of any further recommendations for action we believe necessary to protect the public health.


Joseph A. Califano, Jr.

THE WHITE HOUSE
WASHINGTON

March 31 1979

MEMORANDUM FOR THE PRESIDENT

FROM:

JACK WATSON *Jack*

SUBJECT:

Status Report -- Three Mile Nuclear Facility
Report #2

Since talking with you, I have talked with Governor Thornburg, Harold Denton, Joe Califano and Doug Costle.

- o I advised Joe that no meeting with you is required at this time. Neither do I believe it necessary for me to convene the high level meeting Joe suggested. I will continue to work with the appropriate agency people, and will convene necessary working meetings.

If a higher level session is indicated, I will convene it.

- o The Governor continues to share my view that there is no current need to make a formal request of you that a state of emergency be declared. While there are minor bureaucratic obstacles to getting the contingency planning and support work accomplished, we are coping with the situation. There is nothing to be gained by a formal declaration, and the request would significantly escalate public anxiety.
- o Harold Denton reports the situation at the reactor site is stable. It will be several days before a decision is made about the nature of the intervention that will be made to cool the core. Circumstances could change, but if this timetable holds, we will have time to get the military and civilian support systems in a ready condition before any intervention begins.

The major decision will be whether to evacuate as a precaution before intervention.

o Following your conversation with Harold, I spoke with William C. Coker, President of General Public Utilities. Senior technical people are now being mobilized from all over the nuclear energy industry to go to the reactor site. Once there, they will provide the necessary advance contingency planning capability that Harold properly wants in place.

o I will be meeting later this afternoon to get a detailed report on the status of contingency planning. The briefing will deal with evacuation, health, safety and clean-up issues.

o Pursuant to your delegation of authority you should know that Gene Eidenberg and I have authorized the following military support operations through the National Military Command Center:

1. At the request of HEW, helicopter service will be provided to move food and water samples to laboratories for radiological testing. Local traffic conditions made land movement highly unreliable.
2. At the request of the Nuclear Regulatory Commission, C-131 transport of lead bricks from several stockpiles to the facility was authorized. They are needed for "packing" at various points of the facility.
3. At the request of HEW, Air Force transport will be provided to move three tons of Potassium Iodide tablets to the Harrisburg area. It may become desirable to distribute these tablets to the population as a prophylactic to minimize the negative effects of exposure to certain radioactive materials. No decision regarding distribution will be made without further prior consultation with all appropriate state and federal health authorization. The availability of the tablets was recommended by FDA as a precaution.

o I am receiving continuous reports from the area and will provide you with reports of this nature as developments warrant.

March 31, 1979

Three Mile Island Nuclear Accident

Situation Room

The White House

Attendees:

John Austin
Peter Bradford
Rick Cotton
Gene Eidenberg
MG J.C. Faith
Steven Gage
Victor Galinsky
Jessica Matthews
Clifford McLain

Frank Press
Jim Purks
Col Arch Rider
Anthony Robbins
Marcia Thomas
Hugh Thompson
Arthur Upton
Robert Vesey
Bill Wilcox
Jack Watson

Jack Watson began the meeting at 5:26 p.m. by commenting on the good communications among the Task Force Members. He noted that he had regular and good communication with the Governor's office and the Governor as necessary.

HEW voiced concern about a lack of interaction/contact between agency public affairs' offices and the site. HEW feels the agencies need more guidance on how to handle inquiries coming directly to them.

Gene Eidenberg said that all inquiries of this nature should be referred to the White House Press Office. If there is need for direction, the agencies should call Pat Bario or Rex Granum.

HEW said they were very concerned about the lack of input from a health/medical HEW professional in the NRC Emergency Operations Center. They feel they are able to get specific data into/out of the State but not to/from NRC.

Watson noted that regular reports are being sent to the President from him and that one will be submitted to the President upon his return tonight. Watson stressed the fact that the federal posture is one of maximum support and assistance to the state.

The FDAA reported that the six counties involved are in good shape for evacuation. Within the 10-mile radius, 5 counties could evacuate in three hours, 1 county would need 4 hours. Within the 20-mile radius, evacuation could be done in approximately 5 hours.

The number of people involved are approximately 175,000 within the 10-mile radius and 745,000 within the 20-mile zone.

A question was posed about the likelihood of a hydrogen explosion. NRC reported that the preliminary calculations indicate that this is not a problem today, but could be a potential problem in the next few days. In a worst case situation, the lead time for evacuation could be 0 - 1/2 hour.

DCPA noted that evacuation planning depends heavily on wind direction. This type of data is not readily available, but what data is available would be helpful for prioritizing evacuation plans.

Watson stressed the confidential nature of this, and any future meetings, and directed that repetition of any part of their discussion be based on a clear need-to-know situation only.

Watson again emphasized the federal profile must remain low; (1) because the State and local governments have the lead, and (2) because public anxiety could increase by federal officials expounding on the situation. Watson asked that press statements not be made by the agencies, but by the White House or the State officials only.

Watson illustrated this point by saying that some DoD officials had made press statements regarding the movement of lead bricks which led to speculation as to their purpose.

NSC suggested another round of press office calls be made to the agencies' public affairs office to give them updated information. The White House press office said they would do this.

Eidenberg reported on a conversation with State officials he had just completed.

-- The 20-mile plan is in working order. Lesser radii are being considered, but the focus is presently on the 20-mile zone. The population numbers from the State are 25,-30,000 in a 5-mile radius, 6,-700 000 in a 20-mile radius. However, it is unclear how many people have left already voluntarily.

(FDAA expressed concern about a possible "telescoping" effect. If evacuation occurs, should one general radius be picked? A 2-3 stage plan would be difficult to implement.)

- Inventories of institutions are being taken. There are 12 hospitals and one prison facility in the evacuation area. Each hospital has been notified to prepare its own evacuation plan. An allocation plan will not be ready until midnight.

(HEW suggested that cancelling elective admissions might be helpful).
- There has been great difficulty in determining the number of nursing homes in the evacuation area. No reliable count is available on the number of homes or persons in them. HEW said they would check out figures they have that might help the State in their assessment.
- If National Guard troops are called in, the Guard would need 2-4 hours lead time. The State Police already have transportation plans in process. County placement plans are also in process.
- Public notice is being carried by radio/TV. The insurance company covering the plan is offering a \$500 immediate "advance" for persons within the five-mile radius who want to voluntarily leave the area and who are determined by the Red Cross to need this financial assistance in order to do so. This is being offered solely under the authority of the company and requires no action or intervention by federal, state, or local governments.
- The Governor is standing firm on his decision regarding the evacuation of pregnant women and children under school age within the five-mile zone.
- The State Disaster Coordinator reported that there seems to be a sense of comfort within the 20-mile radius regarding evacuation planning, although he is still getting reports from the counties of unmet needs. He will prepare and transmit an itemized report of these needs by midnight.

-- The State Disaster Coordinator indicated he was unclear about the type of evacuation being considered for recommendation from Washington and needs clarification as soon as possible. Mr. Hendrie's public statement regarding a precautionary evacuation is receiving widespread play and is causing some confusion.

(The FDAA urged the Task Force to confront the issue of whether we plan a circumference or a "plume" evacuation. NRC agreed to provide a detailed analysis for the group of the reactor situation and possible events to assist in prioritizing the evacuation plans being readied.)

Watson stressed that what the Task Force was doing was presenting to the State the best options and recommendations regarding evacuation plans. The final decisions and implementation is up to the Governor and his officials.

HEW again noted the need to have health professionals at the Emergency Operations Center in Bethesda to consult that they had not made any recommendations to the Governor regarding evacuation plans, but had only recommended that he not bring back pregnant women or small children to the five-mile zone. NRC said they would like, and should have, health professionals at the Op Center (only HEW operational people are there now) and Watson asked that HEW send the best people there as soon as possible.

Watson then clarified the "advisory roles" of the Task Force and the NRC. Harold Denton is advising the Governor and will make any on-site decisions/recommendations (i.e., when to evacuate); the Task Force needs to provide the best possible data base to Denton to help in making these decisions as well as readying plans for evacuation with the view of assisting the State and local officials in making decisions on the plan and implementation.

Eidenberg instructed NRC to alert federal and State officials on-site of their analysis as soon as possible.

DCPA said that an evacuation in less than 3 hours was impossible and more time would be needed. NRC said that a 20-mile radius will need to be evacuated in a "bad situation" but that it was hard to determine the amount of time actually needed for an evacuation in Pennsylvania since it was a relatively untested state.

Eisenberg said that Gody Howell had had some information that several officials on-site were making negative remarks about state's evacuation plans.

DOMS said that the 1st Army has joined up with the State Disaster Coordinator in the field. DOMS' crisis response is in place. Indian Gap is on alert. Communication packages and technical packages are on alert and are ready for movement.

DOMS' expressed the view that an emergency declaration would expedite things for the Army. DoD and Watson felt a declaration unnecessary and not worth the risk of increasing public anxiety. Difficulties of coordination and response to the situation within the different branches of Defense should be able to be handled by clear direction from Secretary Brown.

DOMS reported that reaction times for the troops vary. (There are 200 at Indian Gap.) Communication equipment is available and can be in place immediately; food in 2-6 hours; bedding and equipment depends on the relocation sites. Reaction time for everything is estimated at 4-6 hours.

Watson asked if having the preferred plans from the State by midnight would help speed-up the reaction time. DoD said that it might, but that what is really needed is information on the shortfall. The time lag problem is really logistical rather than administrative.

The Red Cross reported that they had 30,000 cots and 31,000 blankets available for shipment. They need to start positioning these supplies near site as soon as possible.

NRC asked what were the major direct costs involved in evacuation. DCPA said that actually they didn't have information that there were major direct costs involved in relocation.

Watson noted that if an immediate evacuation becomes necessary, as much is ready as possible. The harder decision to be made is regarding a precautionary evacuation.

NRC reported that the reactor situation is better today and that several backup systems had been brought up. On the negative side, there is still no fix for whatever to the hydrogen bubble problem. Part of the problem is sized equipment and people. Solutions to deal with the bubble and cold start-down as yet are far too murky.

Only asked who has been doing the technical planning for possible intervention and/or cold shut-down. NRC said that this was being done by the licensee. Watson added that technical assistance was also now being provided on-site by professionals from other power companies and he reported on his conversation with Mr. Dieckamp, President of General Public Utilities.

HEW said that the focus on their concern is on whether there will be a precautionary evacuation and the risk to the public health if intervention becomes necessary. Watson said that he had assumed that HEW health/medical professionals were at the NRC to help evaluate intervention plans and he again told HEW to get the best professionals they have to the Op Center as quickly as possible.

NSC asked if HEW thought there was a health risk in the area now requiring evacuation, and HEW replied they currently did not believe so.

FDA reported that a shipment of potassium iodide needs to be transported to the site area. Watson told them to get in touch with the State officials as soon as possible to arrange deployment to the site once the shipment gets to Harrisburg.

HEW reported that potassium iodide supplies and radiation assessment equipment need to be in place at relocation sites. A suggestion was made that the agencies involved should 'decentralize' in order to get logistical decisions of this nature made and implemented quickly in the field.

HEW stressed the need to have radiation and health monitoring equipment in place at relocation sites so that data will be available for future long-term studies on exposure levels and effects. FDA said dosimeters were in place now.

NRC said that data on radiation levels, etc. were coming in from various sources and that the NRC Emergency Op Center was analyzing it.

He mentioned that he said that the Governor's press secretary
had said that the Governor's statement regarding the
fact that the evacuation was not necessary; that
the fact that the evacuation had been quoted as saying the
fact is over and the bubble had been reduced by 1/3.
This resulted in great confusion for both the public
and the media.

HEW asked if there was a timetable for decisions
to be made regarding either intervention or precautionary
evacuation. Watson said there was not. NRC explained
that we were several days away from having to make a
decision on intervention; that if the data began to show
signs of a hydrogen explosion, we would have 3-5 days;
and that a spontaneous explosion without warning was a
very remote possibility.

Names and phone numbers were exchanged and the group
agreed to leave phone numbers where they could be reached
at all times with FDAA (634-7800). Everyone was put on-
call status for possible meetings and consultations
tomorrow.

The meeting adjourned informally at 7:10 p.m.

NRC PROCEDURES FOR DECISION TO RECOMMEND EVACUATION

Who Decides

1. Combination of consequences and times require immediate initiation of evacuation: Senior NRC Official on site recommends to Governor.
2. Unplanned event with substantial risk takes place or is imminent or situation judged excessively risky but there is time for consultation. Senior NRC Official notifies Governor and NRC HQ. Chairman makes recommendation to Governor after consulting with Commissioners if possible.
3. Planned event involving significant additional risk. Chairman and Commissioners makes recommendation.

Unplanned Events

EVENT	EXPECTED PLANT RESPONSE	RELEASE AND TIME	WARNING TIME	EVACUATION SCENARIO
1. Loss of vital function or unplanned leaks.	Restore function within 1 hour	No significant change		Possible pre-cautionary evac 2 mi; stay inside 5 mi
<u>Examples</u>	Switch to Alternate Function involving Primary Coolant in Auxiliary Building	Small leak less than 1 gal/hour		possible pre-cautionary evac 2 mi; stay inside 5 mi
Reactor Coolant Pump Trip;				
Loss of offsite power;		Large leak 50 gal/min	2 hour	Evac 2 miles Stay Inside 5 miles
Loss of feed-water;	Serious possibility of failure to restore a vital function			
Depressurization to go on RIR;	See 2			
Leak in Auxiliary Building				

- conservative

These tables include a number of assumptions about activity and weather, chosen realistically. In an actual release, the release rate and weather should be evaluated as they are at the time, and the decision based on those values.

EVENT	EXPECTED PLANT RESPONSE	RELEASE AND TIME	WARNING TIME	EVACUATION SCENARIO
2. Sequence leading to Core Melt	Maintain Containment Integrity (likely) with Containment Cooling	Design Containment Leak Rate	4 hour	Precautionary Evac 2 mi all around and 5 mi, 90° sector stay inside 10 mi
	Containment expected to Breach	Significant release of core fission products	24 hour (time for containment failure)	Evac 5 mi all around and 10 mi, 90° sector, stay inside 15 mi
3. Hydrogen flame or explosion possible inside reactor vessel	Mixture in flammable range			Precautionary 2 mi (?) + 5 mi sec
	Explosion; major damage Core Melt See 2			12 mi st in Precautionary (?)
4. Evacuate or Lose Control Room	Loss of Control Treat like major release			Precautionary Evac 5 mi all around and 10 mi 90° sector, stay inside 15 miles

EVENT	EXPECTED PLANT RESPONSE	RELEASE AND TIME	WARNING TIME	EVACUATION SCENARIO
Planned Manuever	Probability of losing vital function	See releases under loss of vital function	Timing of manuever can be set to provide as much time as necessary	Precautionary evacuation 2 miles, stay inside 5 miles PLUS See outcomes under loss of vital function.

Action Guidelines

- a. Notify evacuation authorities two hours in advance (if possible) to standby for a possible evacuation.
- b. Projected doses of 1 rem whole body or 5 rems thyroid stay inside.
- c. Projected doses of 5 rems whole body or 25 rems thyroid mandatory evacuation of all persons.

Assumes general warning already that some form of evacuation may become necessary.

Weather

The table is based on a realistic prediction of the weather for the next few days, based on the April 1 forecast which would result in high doses at a given distance. At the approach to decision time for evacuation, the appropriate meteorological condition will be factored into the dose estimates to determine the evacuation time, sectors, and distances for the evacuation.

NRC is predicting the dispersion characteristics of the region for the currently measured meteorology as the incident progresses. Rain could lead to higher local radioactivity levels.

Heat-Generation

The reactor core is now quite cool compared to the conventional design-basis calculations.

1. The reactor is new, so no fuel has more than 3 months equivalent operation, compared to 1-2 years average for other plants.
2. The neutron chain reaction has been shut down for over 4 days.

It should also be noted that the concrete basemat of this plant is unusually thick.

As a result of the above differences, calculations for this plant at this time predict that the core will not melt its way through the containment.

THE WHITE HOUSE
WASHINGTON

April 3, 1979

1979 APR 3 PM 2 28

MEMORANDUM FOR GOVERNOR THORNBURG

FROM: JACK WATSON 

I am sending you the attached memorandum from Secretary Califano for your information and guidance. We stand ready to assist you in any manner needed.

FOR IMMEDIATE TRANSMITTAL TO THE GOVERNOR.



THE SECRETARY OF HEALTH, EDUCATION, AND WELFARE
WASHINGTON, D. C. 20201

April 3, 1979

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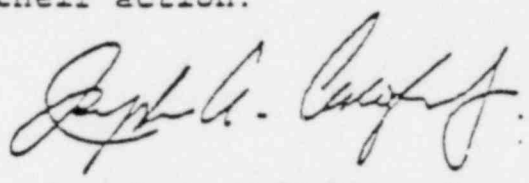
MEMORANDUM FOR THE HONORABLE JACK WATSON

Enclosed are recommendations of the Surgeon General with respect to thyroid blocking. Both the Director of the National Institutes of Health, and the Director of the National Cancer Institute, and the Commissioner of the Food and Drug Administration support these recommendations. These recommendations are:

- 1) Have workers in the plant and others on the island begin taking blocking doses now.
- 2) Have potassium iodide now personally available to all persons whose proximity to the site is such (perhaps up to ten miles distant) that they will not have as much as 30 minutes advance warning of I131 exposure.
- 3) Have potassium iodide available at convenient distribution points for distribution to other persons who may be exposed, such that they can have the medication at least 30 to 60 minutes in advance of possible exposure.
- 4) Accompany all distribution with notification to the effect that: All persons may take potassium iodide safely for a short time. All persons who: a) have goiter or known thyroid disease, or b) are pregnant or c) are breast-feeding a child should notify their physician when they start taking iodide and after they have stopped.

- 5) Preparations must be made for reducing the toxic dose after two weeks of administration of the amount on the labels. We will help you devise instructions for this if you wish.
- 6) Those in immediate touch with the local situation should assess these recommendations in light of knowledge about current risks and about the likelihood of advance warning of releases.

I also concur in these recommendations and urge that you provide this information to the state authorities as the basis for their action.



Joseph A. Califano, Jr.

Enclosure

MEMORANDUM

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
FOOD AND DRUG ADMINISTRATION

TO : The Secretary
Thru: ES _____

DATE: APR 3 1979

FROM : Assistant Secretary for Health
and Surgeon General

SUBJECT: Request for a Federal Advice on Thyroid Blocking

On April 2 we were asked by Gene Eidenberg to provide guidance from Federal health officials for the Governor's staff in Pennsylvania on the advisability of providing precautionary iodine blocking for residents of the Three Mile Island area. The following is based upon consultation with Dr. Donald Frederickson, Director, NIH, and three of his staff (Drs. Rall, Robbins, and Wolff, NIDDD) and Commissioner, FDA, his staff (Dr. Richard Crout, Dr. Jerome Halperin and Dr. Paula Botstein, Bureau of Drugs) and Dr. Arthur Upton, Director, NCI. Dr. Frederickson had already consulted with his own advisory group on the morning of April 2.

The recommendation of the group is that workers in the plant and others on the island begin receiving blocking doses now. Persons farther from the facility, perhaps up to 10 miles distant, should have the solution made personally accessible and be given instructions for its use, but should not receive precautionary doses as long as the dose can be given at least 30 minutes before a significant exposure to I-131 becomes probable. Persons at greater distances should have the solution available at convenient distribution points that can be reached within a time adequate to allow blocking doses to be administered at least 30 minutes before significant exposure. It is not possible for us to give recommendations in terms of precise distances from the facility, because the logistics of distribution and the probability of release affect those determinations.

Our advice is based upon the following considerations:

Blocking Effectiveness and Kinetics. Guidance on these subjects has been provided by the National Council on Radiation Protection and Measurement, Ad Hoc Committee on Thyroid Blocking, Report #55, recently published in the Federal Register (Dec. 15, 1978; copy attached). The blocking effect depends upon the action of non-radioactive iodine, provided as a saturated solution of potassium iodide (SSDI) at an adult dose of about 100 mg/day in competitively displacing I-131 in the uptake mechanism of the thyroid. In experiments in which the interval between pulses of I-131 and of KI was varied, blocking was fairly complete when the

blocking dose and the radioactive iodine were given simultaneously. About 50% blocking was seen when the KI followed the radioactive dose by 3-4 hours. Of course in real situations the exposure to radioactive iodine is continuous and the thyroid steadily accumulates it, so the blocking solution is effective even if doses of the KI ~~begin~~ ^{follow the exposure.} commenced and continued even if the exposure has begun hours or even days before. The kinetics of this interaction do argue ~~however~~ that the largest effect will be obtained if the KI solution is administered before the radioactive dose. If, however, the thyroid has been exposed to elevated levels of iodine by the administration of KI over several days — as would be likely in a continuous precautionary dosage regimen — there may be "escape" from protection against a subsequent dose of radioactive iodine.

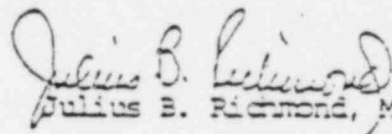
Possible Side Effects. The possible side effects of continuous administration of KI at high dose levels include some skin rashes (not serious), or (in a few cases per 100,000 population) hypothyroidism or hyperthyroidism. The latter effect, which is treatable, is especially likely in persons with goiter — a condition detectable in more extreme cases by visible swelling of the neck. Persons with this condition should be advised to consult their physicians while taking and advised KI dosages, and to continue consultation after the regimen has been discontinued. Pregnant and lactating women also may be subject to some elevated risk from continued KI administration. Like those persons with thyroid disease, pregnant and nursing women should take KI when the rest of the population is advised to do so, but should consult their physicians during and after the regimen.

Other Risks and Benefits. The psychological effects on the population that may be associated with an official program of protective medication are difficult to assess, but obviously should not be ignored. To some it may appear that hitherto unrevealed difficulties, now foreseen by the authorities. On the other hand, a successful program might well provide some reassurance that those responsible are displaying foresight and solicitude. It may also generate some positive sense of control on the part of residents over a situation in which they have been relatively powerless to affective outcomes up to now. We believe that only those directly in touch with the behavior and mood of the population at risk can make such judgments — and then only with difficulty.

It should also be pointed out that the decision depends critically upon information about the likelihood of a loss of containment at the site, about the nature of the accidents that might be anticipated, and about the intervals by which warnings might be expected to precede significant exposure at varying distances from the site. We believe that the benefits of protective dosing clearly outweigh the risks close to the site, where sufficient time to anticipate the exposure does not exist. Whether this zone extends to 2 miles or to five miles we cannot say.

We would emphasize that instructions will also need to be given to the population receiving blocking doses about how to discontinue the regimen after the need for it has passed. The dose must be tapered, presumably by a programmed decrease in the frequency of taking the medication.

It is our understanding that Dr. Neil Wald of the University of Pittsburgh is consulting with State health officials on this matter. Dr. Wald is highly knowledgeable in this area, and has been in regular communication with members of the NCRPM subcommittee and other experts.


Julius B. Richmond, M.D.