Vol III

MH&S 3 HAZARDS FRM. MILITARY REACTORS

see: I D+R. 6 - Military Reactors

MH&S 3 Hazards frm. Military Reactors

	Date	To	From	Class	Ego. No.	To	From	Class
1	6-29-64	AEC 1067/19 Safety Responsibility for DOD Reactors	vee					
2	11-24-64	Reactor Captain Concept.	et					
3	12-23-64	DACE, USS	vee					

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UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

May 25, 1966

MEMORANDUM FOR THE COMMISSIONERS

SUBJECT: OPERATING PHILOSOPHY FOR NAVAL NUCLEAR VESSELS

You will recall that at the Meeting with the Advisory Committee on Reactor Safeguards held on May 6, 1966, the ACRS suggested the desirability of a definitive formulation of Admiral Rickover's philosophy of the operation of Naval nuclear vessels. The purpose of this would be to assure the continuity of the operating safety of the present system. The staff would appreciate guidance as to how this matter should be taken up with Admiral Rickover.

I would like to discuss this matter at the Information Meeting scheduled for Thursday, May 26, 1966.

Original signed
W. B. McCool

W. B. McCool
Secretary

cc:
General Manager
Director of Regulation

Copy filed..
O. M. 7. ACRS

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5-25-66

CROSS-REFERENCE *(Name, number, or subject under which this form is filed)*		[redacted]
		O&M 7 ACRS
IDENTIFICATION OF RECORD	DATE	
	TO	
	FROM	
	BRIEF SUMMARY OF CONTENTS	AEC-R 71/6 - ACRS REPORT ON REVIEW OF SECTION 91.b REACTORS
FILED *(Name, number, or subject under which the document itself is filed)*		MH&S 3 Rsg. Hazards of Military Reactors date of paper: 6-20-66

Optional Form 21
Feb. 1962
GSA Circular 264

CROSS-REFERENCE

CONFIRMED TO BE UNCLASSIFIED
DOE NSI DECLASSIFICATION REVIEW E.O. 12958
BY: MARY DEFFENBAUGH DOE/NN-522
THIS PAGE ONLY

MN-S-3 - Hazards Mil Reactors

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OPTIONAL FORM NO. 10
MAY 1962 EDITION
GSA GEN. REG. NO. 27

UNITED STATES GOVERNMENT

Memorandum

Copy - Germantown

TO : File

DATE: May 12, 1966

FROM : W. B. McCool, Secretary

SUBJECT: SAFETY REVIEW OF DOD REACTORS

SECY:ICB

1. During the Meeting between the Commissioners and Members of the Advisory Committee on Reactor Safeguards on May 6, 1966, it was agreed AEC would press the effort to negotiate an appropriate Memorandum of Understanding with the DOD regarding the safety review of DOD reactors.

2. It is our understanding the Director of Regulation is taking the required action.

cc:
Commissioners
Director of Regulation
Deputy Dir. of Regulation
Asst. Dir. of Reg. for Admin.
Asst. Dir. of Reg. for Nuclear Safety
General Manager
Deputy General Manager
Assistant General Manager
Exec. Asst. to Gen. Mgr.
Asst. Gen. Mgr. for Reactors
General Counsel
Dir., RD&T
Dir., Congr. Relations

copy filed: OM-7-ACRS

5-12-66

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Buy U.S. Savings Bonds Regularly on the Payroll Savings Plan

Mr. S. S. Hazard; Mil Reactors

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UNITED STATES GOVERNMENT

Memorandum

TO : R. E. Hollingsworth, General Manager
Harold L. Price, Director of Regulation

DATE: May 6, 1966
Approved _____
R.E.H./H.L.P.
Date _____

FROM : W. B. McCool, Secretary F. T. Hobbs

SUBJECT: CHECKLIST OF MEETING WITH MEMBERS OF THE ADVISORY COMMITTEE ON REACTOR SAFEGUARDS, FRIDAY, MAY 6, 1966, 11:30 A.M., ROOM 1030, D.C. OFFICE

SECY:ICB

1. Modification of the Statutory Requirement for ACRS Review

The Commission and the ACRS agreed submission of legislation could be deferred until the next Congressional session. (DR/OGC)

2. Safety Review of DOD Reactors

AEC will press the effort to negotiate an appropriate Memorandum of Understanding with the DOD. (DR)

The Commission will discuss the Naval Reactors' safety review procedures with Admiral Rickover from the standpoint of assuring the continuity of the present system. The Commission noted the ACRS suggestion regarding the desirability of a written record of the philosophy of operation of Naval nuclear vessels. (DR/SECY)

3. Conflict of Interest

cc:
Commissioners

Copies filed:
Com-6
Com. & ACRS

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Buy U.S. Savings Bonds Regularly on the Payroll Savings Plan

M H + S 3
Hazards for Military Reactors

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

MAY 5 1965

MEMORANDUM FOR CHAIRMAN SEABORG
COMMISSIONER PALFREY
COMMISSIONER RAMEY
COMMISSIONER TAPE

SUBJECT: SAFETY REVIEW OF DOD REACTORS

On September 22, 1964*, the Commission reviewed and discussed AEC 1067/19, "AEC Safety Responsibility for DoD Reactors." Following that, and a subsequent meeting with the Commission on November 18, 1965, I initiated discussions with Mr. William J. Howard, Chairman of the Military Liaison Committee, for the purpose of developing a "Memorandum of Understanding Between the DoD and the AEC" with respect to the safety review of DoD reactors. It was our plan that this Memorandum of Understanding formalize the procedures and working relationships between the AEC and the military services, in implementation of the Presidential Directive on this subject.

It is the purpose of this memorandum to report on the status of our negotiations with DoD and, more specifically, to alert the Commission to a recent situation that has developed in connection with two Air Force reactors.

Status of Negotiations with DoD on "Memorandum of Understanding"

As noted in my memorandum of June 30, 1965, our first conference with Mr. Howard and representatives of the DoD took place on February 25, 1965. At this meeting we discussed in detail the informal procedures which were being followed and arrived at, I thought, a general understanding as to the principal items to be incorporated into an AEC-DoD Memorandum of Understanding. While the DoD was less than enthusiastic as to the need to develop such an agreement, they prepared and forwarded to us the first draft of the Memorandum of Understanding. After discussing this draft with the Commission we submitted to the DoD on September 9, 1965, a revised draft for their review and comment. We have made a number of follow-up calls to Mr. Howard's office concerning the status of DoD comments on the AEC draft but we have not received a reply to date.

Mtg 2046
Reg Info Mtg 160

Reg Info Mtg 193

Secy.

5-5-66

Even though we have been unable to negotiate a formal Memorandum of Understanding, we have had no significant difficulty in carrying out the Commission's responsibilities with respect to the safety of these 91b reactors. There have been recent developments, however, with respect to two Air Force reactors which suggest a possible deterioration in the AEC-Air Force working relationship and which point up the need for a clearer understanding between the two agencies as to respective responsibilities in this area.

Operating Problems - PM-1 Reactor at Sundance, Wyoming

A recent review of the Air Force operating experience with the PM-1 reactor at Sundance, Wyoming, revealed a number of operating difficulties such that we and the ACRS became concerned that they might represent potential safety problems. We identified these potential problems in a letter to the Air Force dated March 24, 1966, and requested their evaluation of the situation. On April 13, 1966, the Air Force responded that the operating difficulties experienced had been completely resolved from a nuclear safety standpoint. No further explanation was given nor were any of the reasons for their conclusions advanced. We do not regard this as an acceptable response and plan to follow up with the Air Force in an attempt to obtain more specific information concerning their resolution of these problems.

Air Force Nuclear Engineering Test Facility (AFNETF) Wright-Patterson Air Force Base, Ohio

The AFNETF reactor was designed by Allis-Chalmers and built by the Corps of Engineers for the Air Force. The Corps of Engineers also had the responsibility for its initial start-up. We concurred in the initial start-up of the reactor by the Corps of Engineers on the basis of a request submitted by the Corps. Our review and concurrence did not include operation of the reactor by the Air Force since the Air Force had not submitted such a request. Our usual procedure in reviewing the long-term operation of a reactor involves a thorough review of its initial operating experience, as well as a review of the organization and qualifications of the group which will have operating responsibility.

On November 17, 1965, it came to our attention that the Air Force had assumed full operating responsibility from the Corps of Engineers and that the reactor was in operation. At a meeting called by us on December 1, 1965, the Air Force stated that the transfer had taken place and that the reactor was being operated in a restricted manner. They further indicated that the reactor would continue to be operated in this manner pending receipt and evaluation of the check-out data from initial operations. Following this meeting, we informed the

Air Force on December 23, 1965, that we were satisfied with the competence of the Air Force organization, provided the reactor continued to be operated in the restricted fashion described by them. We further indicated that in order to complete our review in regard to their proposed experiment program, we would need a report covering initial start-up of the reactor. This information has still to be furnished.

Conclusion

While we do notbelieve that any of the difficulties mentioned above require urgent action on the part of the AEC, they do reveal a situation that could potentially lead to future safety problems. They also point up the need to develop as soon as possible a clearer understanding between the two agencies as to their respective responsibilities in the safety review of 91b reactors.

On the basis of our experience to date, I am not hopeful that the staff will be able to negotiate an acceptable Memorandum of Understanding. While I plan to continue our efforts to resolve this matter with the DoD, direct Commission participation probably will be required.

I would like to discuss this matter at an early Information Meeting.

(Signed) HLP

Harold L. Price
Director of Regulation

cc: General Manager (2)
Secretary (2)
OGC (2)

THE WHITE HOUSE

WASHINGTON

October 12, 1965

Dear Mr. Chairman:

The President on October tenth signed an Executive Order entitled "Amending Regulations Relating to the Safeguarding of Vessels, Harbors, Ports, and Waterfront Facilities of the United States," a copy of which is enclosed.

Sincerely,

William J. Hopkins
Executive Clerk

Honorable Glenn T. Seaborg
Chairman
Atomic Energy Commission
Washington, D. C.

Enclosure

10-12-65

FOR IMMEDIATE RELEASE OCTOBER 11, 1965

Office of the White House Press Secretary
(Bethesda Naval Hospital)

THE WHITE HOUSE

President Johnson has signed an Executive Order entitled, "Amending Regulations Relating to the Safeguarding of Vessels, Harbors, Ports, and Waterfront Facilities of the United States."

Executive Order 10173, issued in 1950, established regulations concerning the protection and security of vessels, harbors, and waterfront facilities. The Coast Guard, as the responsible agency, has administered and enforced these regulations since that time. Recent experience has indicated a need to expand the scope of these regulations by providing for the establishing of Security Zones over and adjacent to waters near areas where ship launchings are taking place in order to restrict the entry of persons or vessels by any manner or means. This amendment will accomplish that purpose.

In addition, Executive Order 10173 is being amended to apply existing provisions to the newly authorized zones when they are established and to clarify the definition of a Captain of the Port.

It is expected that with these amendments, the task of preventing damage or injury to vessels and waterfront facilities, as well as persons, will be made simpler and more effective.

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more

(OVER)

EXECUTIVE ORDER

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AMENDING REGULATIONS RELATING TO THE SAFEGUARDING OF VESSELS, HARBORS, PORTS, AND WATERFRONT FACILITIES OF THE UNITED STATES

By virtue of the authority vested in me by the Act of August 9, 1950, 64 Stat. 427, which amended section 1 of title II of the Act of June 15, 1917, 40 Stat. 220 (50 U.S.C. 191), and as President of the United States, I hereby prescribe the following amendments of the regulations prescribed by Executive Order No. 10173 of October 18, 1950, as amended by Executive Order No. 10277 of August 1, 1951, and Executive Order No. 10352 of May 19, 1952, which regulations constitute Part 6, Subchapter A, Chapter 1, Title 33 of the Code of Federal Regulations:

1. Section 6.01-3 is amended to read as follows:

§6.01-3 Captain of the Port. "Captain of the Port" as used in this part, means the officer of the Coast Guard, under the command of a District Commander, so designated by the Commandant for the purpose of giving immediate direction to Coast Guard law enforcement activities within his assigned area. In addition, the District Commander shall be Captain of the Port with respect to remaining areas in his District not assigned to officers designated by the Commandant as Captain of the Port.

2. Section 6.01-4 is amended to read as follows:

§6.01-4 Waterfront Facility. "Waterfront facility" as used in this part, means all piers, wharves, docks, and similar structures to which vessels may be secured; areas of land, water, or land and water under and in immediate proximity to them; buildings on such structures or contiguous to them and equipment and materials on such structures or in such buildings.

3. A new section 6.01-5 is added to read as follows:

§6.01-5 Security zone. "Security zone" as used in this part, means all areas of land, water, or land and water, which are so designated by the Captain of the Port for such time as he deems necessary to prevent damage or injury to any vessel or waterfront facility, to safeguard ports, harbors, territories, or waters of the United States or to secure the observance of the rights and obligations of the United States.

4. Section 6.04-5 is amended to read as follows:

§6.04-5 Preventing access of persons, articles or things to vessels, or waterfront facilities. The Captain of the Port may prevent any person, article, or thing from boarding or being taken or placed on board any vessel or entering or being taken into or upon or placed in or upon any waterfront facility whenever it appears to him that such action is necessary in order to secure such vessel from damage or injury or to prevent damage or injury to any vessel, or waterfront facility or waters of the United States, or to secure the observance of rights and obligations of the United States.

5. A new section 6.04-6 is added to read as follows:

§6.04-6 Establishing security zones; prohibitions with respect thereto. The Captain of a Port may establish security zones subject to the terms and conditions specified in §6.01-5. No person or vessel shall enter a security zone without the permission of the Captain of the Port. No person shall board or take or place any article or thing on board any

more

vessel in a security zone without the permission of the Captain of the Port. No person shall take or place any article or thing upon any waterfront facility in any such zone without such permission.

6. Section 6.04-7 is amended to read as follows:

§6.04-7 Visitation, search, and removal. The Captain of the Port may cause to be inspected and searched at any time any vessel, waterfront facility, or security zone, or any person, article, or thing thereon or therein, within the jurisdiction of the United States, may place guards upon any such vessel, waterfront facility, or security zone and may remove therefrom any and all persons, articles, or things not specifically authorized by him to go or remain thereon or therein.

LYNDON B. JOHNSON

THE WHITE HOUSE,

October 10, 1965.

# # #

MH-S-3-Hazards fm. Mrs Reactors
Res. & Status Br. - GTH

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OPTIONAL FORM NO. 10
MAY 1962 EDITION
GSA GEN. REG. NO. 27

UNITED STATES GOVERNMENT

Memorandum

TO : File

DATE: July 14, 1965

FROM : W. B. McCool, Secretary

SUBJECT: AEC-DOD MEMORANDUM OF UNDERSTANDING

SECY:JCH

1. At Regulatory Information Meeting 160 on July 12, 1965, the Commissioners reviewed Mr. Price's June 30 memorandum and agreed the DOD should be informed that their draft, as transmitted to Mr. Price by Mr. W. J. Howard's April 14 letter, is not acceptable to the Commission.

2. It is our understanding the Director of Regulation is taking the required action.

cc:
Chairman
Director of Regulation
Deputy Director of Regulation
Asst. Dir. of Regulation
Asst. Dir. of Reg. for Admin.
Asst. Dir. of Reg. for Nuclear Safety
General Manager
Deputy General Manager
Asst. General Manager
Exec. Asst. to Gen. Mgr.
General Counsel

7-14-65

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MH-S 3-Hazards Mil Reactors

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

JUN 30 1965

MEMORANDUM FOR CHAIRMAN SEABORG
COMMISSIONER BUNTING
COMMISSIONER PALFREY
COMMISSIONER RAMEY
COMMISSIONER TAPE

SUBJECT: AEC-DOD MEMORANDUM OF UNDERSTANDING

On September 22, 1964, the Commission reviewed and discussed AEC 1067/19, AEC Safety Responsibility for DoD Reactors. It was the purpose of that paper to set forth a proposed approach to the establishment of more formal procedures for (a) the safety review of particular reactors transferred to or acquired by the Army and the Air Force under Section 91b of the 1954 Act, and (b) the review of safety standards, procedures, or instructions generally applicable to the location and operation of such reactors.

Following discussion of the paper, the Commission approved the initiation of exploratory staff level discussions with the Department of the Army and Air Force in accordance with the general guidelines as set forth in AEC 1067/19. The Commission requested that following these discussions a meeting be re-scheduled for Commission consideration.

At Regulatory Information Meeting 131 on November 18, 1964, I reported that after discussions with representatives of Department of the Army it had been concluded that the matter should be discussed with and coordinated through Mr. W. J. Howard, Chairman, Military Liaison Committee. The Commission agreed with this procedure.

I contacted Mr. Howard by letter dated December 10, 1964, and requested the opportunity to meet with him and his staff. This conference took place on February 25, 1965, with representatives from the Office of the Secretary of Defense, Army, Air Force, and Navy present. At this meeting we discussed in detail the suggested guidelines which are outlined in paragraph 7 of AEC 1067/19.

Mr. Howard has forwarded to me by letter dated April 14, Attachment 1, which is DoD's version of a draft Memorandum of Understanding which would formalize existing arrangements regarding health and safety responsibilities for DoD reactors. We do not feel that the DoD draft Memorandum of Understanding adequately meets the guidelines set forth in the above-mentioned

6-30-65

staff paper (1067/19), or the requirements of the President's Directive, Attachment 2. The Office of General Counsel believes that the points specified in the staff paper, which have not been covered in the DoD draft Memorandum of Understanding, are desirable, particularly since agreement by the AEC to this draft Memorandum of Understanding may be considered as delineating the full extent of the Commission's responsibility under the President's Directive.

Upon the Commission's review and approval, it is recommended that Mr. Howard be notified that the DoD draft is not acceptable to the Commission and that DoD consider the AEC draft Memorandum of Understanding, Attachment 3. This draft follows closely the guidelines set forth in 1067/19 and the language used in the Presidential Directive which delineates AEC and DoD safety responsibility for 91b reactors. A comparison of the DoD draft with guidelines and the proposed AEC draft is made on Attachment 4.

I would like to discuss this with the Commission at an early Information Meeting.

Harold L. Price
Director of Regulation

Attachments:
1. DoD ltr dtd 4-14 w/draft Memo
2. President's Directive
3. AEC Memo of Understanding
4. Comparison

cc: General Manager
Secretary (2)
OGC (2)

DEPARTMENT OF DEFENSE
Military Liaison Committee
to the
Atomic Energy Commission
Washington 25, D. C.

C
O
P
Y

14 April 1965

Mr. Harold L. Price
Director of Regulation
U. S. Atomic Energy Commission
Washington, D. C.

Dear Mr. Price:

Inclosed is a draft AEC-DoD Memorandum of Understanding concerning health and safety responsibilities for DoD reactors which is in response to your letter of 10 December 1964 and the conference held in my office on 25 February 1965.

Request the draft Memorandum of Understanding be reviewed and your concurrence or recommended changes be forwarded to this office.

Sincerely yours,

/s/ W. J. Howard

W. J. HOWARD
Chairman

1 Inclosure

ATTACHMENT 1

MEMORANDUM OF UNDERSTANDING

Between the

Atomic Energy Commission

and the

Department of Defense

Health and Safety Responsibilities for DoD Reactors

I. Purpose

The purpose of this agreement is to formalize and perfect existing arrangements regarding health and safety responsibilities for DoD reactors.

II. Agreement

In order to enable the AEC to participate in the identification and resolution of health and safety problems, the AEC and DoD will be guided as follows:

A. New Reactor Projects. Each project which is the first of its kind will be furnished to AEC for review at the design stage, but before final design is frozen. A further review will be made by AEC, at the preoperational stage, of the reactor as built. AEC safety reviews will not be required for reactors having substantially the same design as one previously reviewed.

/Attachment 1/

B. Modifications of Reactors. Significant modifications to existing reactors which raise questions concerning health and safety will be furnished to the AEC for review while in the design stage and again in the preoperational stage.

C. Qualifications of Reactor Operators. AEC will become fully informed of the procedures by which DoD agencies assure the adequacy of qualifications of reactor operators.

D. Safety Policies, Standards and Instructions. Directives or regulations establishing safety policies, standards, and principles will be furnished to the AEC for information and such comment as the AEC may choose to make. The DoD will be responsible for the proper implementation of these policies, standards, and principles. The AEC will not review detailed operating procedures and instructions.

E. Reports.

1. Significant events, conditions, or operational problems relating to health considerations or reactor safety will be reported promptly to the AEC on a case basis.

2. Any potential safety problem noted by the AEC in reactor design, construction, modification, operator qualification, or safety policies, standards and instructions will be reported promptly by the AEC to the DoD for resolution.

F. Visits. Upon invitation by DoD, AEC representatives may participate in on-site visits for the purpose of observing operations, conditions, or equipment relating to health considerations or reactor safety.

III. Exceptions

All reactors which are the subject of special agreements, such as the reactors under the cognizance of the Director, Division of Naval Reactors, AEC/Assistant Chief, Bureau of Ships, U.S. Navy, for Nuclear Propulsion, are excluded from this agreement.

Glenn T. Seaborg
Chairman
U. S. Atomic Energy Commission

W. J. Howard
Assistant to the Secretary
of Defense (Atomic Energy)

C
O
P
Y

September 23, 1961

Dear Mr. Holifield:

In my letter of May 3, 1961, I informed you that I had issued a directive clarifying the responsibilities of the Atomic Energy Commission and the Department of Defense for health and safety in connection with nuclear weapons.

Following the same philosophy as that expressed in the directive covering nuclear weapons I have today issued a related directive, copy of which is enclosed. This directive covers responsibility for protection of public health and safety in connection with activities involving utilization facilities and special nuclear material used therein held by the Department of Defense pursuant to directives of the President issued under section 91b of the Atomic Energy Act. I have also directed the Atomic Energy Commission and the Department of Defense to take the action necessary to implement the directive.

Sincerely yours,

/s/ John F. Kennedy

The Honorable Chet Holifield
House of Representatives
Washington 25, D. C.

Enclosure
Directive

Copy for Mr. Seaborg

ATTACHMENT 2

PRESIDENTIAL DIRECTIVE

Responsibility will rest with the Department of Defense for identifying and resolving health and safety problems relating to the operation of utilization facilities, or to special nuclear material for use therein, which are held by the DoD pursuant to directives of the President under Section 91b of the Atomic Energy Act. In view of the Atomic Energy Act of 1954, the AEC will participate in the identification and resolution of these problems as a matter of responsibility. In this connection the Department of Defense or the appropriate Military Departments will prepare, issue and enforce safety standards, procedures or instructions applicable to the location and operation of utilization facilities and to special nuclear materials for use therein. Advice and assistance will be obtained from the AEC on the safety aspects of the design of utilization facilities and in the preparation or amendment of safety standards, procedures or instructions relating to location and operation of utilization facilities and to special nuclear materials for use therein, and comment or concurrence shall be obtained from the AEC as to their adequacy. Any disagreement as to safety aspects, arising as a result of comment by the AEC, which cannot be directly resolved by the two agencies will be referred to the President for decision.

Approved by the President
September 23, 1961

MEMORANDUM OF UNDERSTANDING
BETWEEN THE
ATOMIC ENERGY COMMISSION
AND THE
DEPARTMENT OF DEFENSE

Health and Safety Responsibilities for DoD Reactors
Acquired Pursuant to Section 91b of the
Atomic Energy Act of 1954, as amended

I. Purpose

The purpose of this agreement is to set forth existing arrangements observed pursuant to Presidential Directive of 9/23/61, regarding health and safety responsibilities for DoD reactors acquired pursuant to Section 91b of the Atomic Energy Act of 1954, as amended.

II. Agreement

This agreement recognizes that: (a) responsibility rests with the DoD for identifying and resolving health and safety problems relating to the operation of utilization facilities or to special nuclear material for use therein which are held by the DoD pursuant to Directives of the President under Section 91b of the Atomic Energy Act; and (b) in view of the Atomic Energy Act of 1954, the AEC will participate in the identification and resolution of health and safety problems of Section 91b reactors as a matter of responsibility. In carrying out their respective responsibilities under the Presidential Directive, the DoD and AEC agree as follows:

A. New Reactor Projects. The DoD will seek advice and assistance from the AEC on the safety aspects of the design and operations of reactor facilities. In this connection, a preliminary safety analysis report describing each reactor facility which is the first of its kind will be furnished to the AEC for review and

comment before final design is frozen. A final safety analysis report will be furnished to the AEC for concurrence prior to the initial start-up of the facility. For reactor facilities having the same design and operating principles as one previously reviewed, the AEC safety review will be limited to the siting factors.

B. Modification of Reactor Facilities. All proposed modifications to reactor facilities which may affect health and safety or which involve safety considerations not described or implicit in the final safety analysis report will be furnished to the AEC for review and comment or concurrence.

C. Qualification of Reactor Operators. Criteria and procedures used by the DoD in the qualification of reactor operators will be furnished to the AEC for comment or concurrence.

D. Safety Standards, Procedures and Instructions. The DoD will be responsible for the preparation, issuance and enforcement of safety standards, procedures and instructions relating to the location and operation of reactor facilities and to special nuclear materials for use therein. Proposed standards, procedures and instructions will be furnished to the AEC for comment or concurrence as to their adequacy to protect public health and safety. Normally the AEC will not review detailed operating procedures or instructions.

E. Reports.

1. Significant events, conditions or operational problems and any inspection findings relating to health considerations or reactor safety will be reported promptly to the AEC on a case basis.

2. Any potential safety problem noted by the AEC in reactor design, construction modification, or safety procedures, standards and instructions will be reported promptly by the AEC to DoD.

3. The DoD will advise the AEC of any disagreement as to safety aspects arising as a result of comment by the AEC.

F. Visits. Under mutually acceptable arrangements AEC will, from time to time, participate in on-site visits to DoD reactor facilities for the purpose of observing operations, conditions or equipment relating to health considerations or reactor safety.

III. Exceptions

All reactors which are the subject of special agreements, such as the reactors under the cognizance of the Director, Division of Naval Reactors, AEC/Assistant Chief, Bureau of Ships, U. S. Navy for Nuclear Propulsion, are excluded from this agreement.

Glenn T. Seaborg, Chairman
U. S. Atomic Energy Commission

W. J. Howard
Assistant to the Secretary
of Defense (Atomic Energy)

COMPARISON OF DOD DRAFT LITR GUIDELINES SET FORTH
IN 1067/19 AND PROPOSED AEC DRAFT

Guidelines in 1067/19	Proposed AEC Draft	Proposed DoD Draft
I. Purpose	I. Purpose: The purpose of this agreement is to set forth existing arrangements observed pursuant to Presidential Directive of 9/23/61, regarding health and safety responsibilities for DoD reactors acquired pursuant to Section 91b of the Atomic Energy Act of 1954, as amended.	I. Purpose: The purpose of this agreement is to formalize and perfect existing arrangements regarding health and safety responsibilities for DoD reactors.
II. Agreement	II. Agreement: This agreement recognizes that: (a) responsibility rests with the DoD for identifying and resolving health and safety problems relating to the operation of utilization facilities or to special nuclear material for use therein which are held by the DoD pursuant to Directives of the President under Section 91b of the Atomic Energy Act; and (b) in view of the Atomic Energy Act of 1954, the AEC will participate in the identification and resolution of health and safety problems of Section 91b reactors as a matter of responsibility. In carrying out their respective responsibilities under the Presidential Directive, the DoD and AEC agree as follows:	II. Agreement: In order to enable the AEC to participate in the identification and resolution of health and safety problems, the AEC and DoD will be guided as follows:
A. New Reactor Projects. Each project which which is the first of its kind would be submitted to AEC for review at the design stage, but before final design is frozen. A further review would be made by AEC, at the preoperational stage, of the reactor as built. The agreement would specify the kinds of information to be submitted for each stage of review and prescribe the timing of such submittals. These reviews would essentially be parallel to those for licensed reactors and would be based upon appropriate hazards summary reports. Safety reviews would not be required for reactors having substantially the same design as one previously reviewed.	A. New Reactor Projects. The DoD will seek advice and assistance from the AEC on the safety aspects of the design and operations of reactor facilities. In this connection a preliminary safety analysis report describing each reactor facility which is the first of its kind will be furnished to the AEC for review and comment before final design is frozen. A final safety analysis report will be furnished to the AEC for concurrence prior to the initial start-up of the facility. For reactor facilities having the same design and operating principles as one previously reviewed, the AEC safety review will be limited to the siting factors.	A. New Reactor Projects. Each project which is the first of its kind will be furnished to AEC for review at the design stage, but before final design is frozen. A further review will be made by AEC, at the preoperational stage, of the reactor as built. AEC safety reviews will not be required for reactors having substantially the same design as one previously reviewed.

ATTAC[illegible]

Guidelines in 1067/19	Proposed AEC Draft	Proposed DoD Draft
B. Modifications of Reactors. The agreements would define in general terms the proposed modifications of reactor facilities on which AEC advice and assistance would be requested. They would require AEC review of modifications involving significant safety questions not previously reviewed by AEC.	B. Modification of Reactor Facilities. All proposed modifications to reactor facilities which may significantly affect results or conclusions of analysis contained in the final safety analysis report will be furnished to the AEC for review and comment or concurrence.	B. Modifications of Reactors. Significant modifications to existing reactors which raise questions concerning health and safety will be furnished to the AEC for review while in the design stage and again in the preoperational stage.
C. Qualifications of Reactor Operators. AEC would become fully cognizant of the procedures by which Army and Air Force assure the adequacy of qualifications of reactor operators.	C. Qualification of Reactor Operators. Criteria and procedures used by the DoD in the qualification of reactor operators will be furnished to the AEC for comment or concurrence.	C. Qualifications of Reactor Operators. AEC will become fully informed of the procedures by which DoD agencies assure the adequacy of qualifications of reactor operators.
D. Safety Policies, Standards and Instructions. Internal departmental issuances, such as directive or regulations establishing safety policies, standards and principles, would be submitted for AEC comment or concurrence. AEC would not review detailed operating procedures and instructions.	D. Safety Standards, Procedures and Instructions. The DoD will be responsible for the preparation, issuance and enforcement of safety standards, procedures and instructions relating to the location and operation of reactor facilities and to special nuclear materials for use therein. Proposed standards, procedures and instructions will be furnished to the AEC for comment or concurrence as to their adequacy to protect public health and safety. Normally the AEC will not review detailed operating procedures or instructions.	D. Safety Policies, Standards and Instructions. Directives or regulations establishing safety policies, standards, and principles will be furnished to the AEC for information and such comment as the AEC may choose to make. The DoD will be responsible for the proper implementation of these policies, standards, and principles. The AEC will not review detailed operating procedures and instructions.
E. Reports. The agreements would provide for reports of reactor operations including any inspection findings involving significant safety questions to be submitted to AEC at prescribed intervals. Provision would also be made for timely reports on certain categories of abnormal events or incidents which appear to have important safety significance. These reports, together with reports of inspection findings, should enable AEC to participate in the identification and	E. Reports. 1. The DoD will report promptly to the AEC on a case basis significant events, conditions or operational problems involving significant safety questions relating to reactor operations. These reports, including inspection findings, should cover any incident or condition which prevented or could have prevented a system from performing its functions relating to prevention or reduction of nuclear radiation hazard to the public.	E. Reports. 1. Significant events, conditions, or operational problems relating to health considerations or reactor safety will be reported promptly to the AEC on a case basis. 2. Any potential safety problem noted by the AEC in reactor design, construction, modification, operator qualification, or safety policies, standards and instructions will be reported promptly by the AEC to the DoD for resolution.

Guidelines in 1067/19	Proposed AEC Draft	Proposed DoD Draft
resolution of health and safety problems as required by the Presidential Directive.	2. Any potential safety problem noted by the AEC in reactor design, construction modification, or safety procedures, standards and instructions will be reported promptly by the AEC to DoD. 3. The DoD will advise the AEC of any disagreement as to safety aspects arising as a result of comment by the AEC.	
F. Reviews of Reactor Operations. The agreement would recognize that AEC representatives, on occasion, might participate in on-site visits to observe reactor operations and equipment, and to observe reactor operator examinations, for the purpose of obtaining information on the department's standards and procedures and the adequacy of advice and assistance provided by AEC regarding them.	F. Visits. Under mutually acceptable arrangements, AEC will, from time to time, participate in on-site visits to DoD reactor facilities for the purpose of observing operations, conditions or equipment relating to health considerations or reactor safety.	F. Visits. Upon invitation by DoD, AEC representatives may participate in on-site visits for the purpose of observing operations, conditions, or equipment relating to health considerations or reactor safety.
III. Exceptions	III. Exceptions: All reactors which are the subject of special agreements, such as the reactors under the cognizance of the Director, Division of Naval Reactors, AEC/Assistant Chief, Bureau of Ships, U. S. Navy for Nuclear Propulsion, are excluded from this agreement.	III. Exceptions: All reactors which are the subject of special agreements, such as the reactors under the cognizance of the Director, Division of Naval Reactors, AEC/Assistant Chief, Bureau of Ships, U. S. Navy, for Nuclear Propulsion, are excluded from this agreement.

MH-S-3-Hazard & Mil Reactors

MAY 1 2 1965

MEMORANDUM FOR CHAIRMAN SEABORG
COMMISSIONER BUNTING
COMMISSIONER PALFREY
COMMISSIONER RAMEY
COMMISSIONER TAPE

SUBJECT: AEC-DOD MEMORANDUM OF UNDERSTANDING

On September 22, 1964, the Commission reviewed and discussed AEC 1067/19, AEC Safety Responsibility for DoD Reactors. It was the purpose of this paper to set forth a proposed approach to the establishment of more formal procedures for (a) the safety review of particular reactors transferred to or acquired by the Army and the Air Force under Section 91b of the 1954 Act, and (b) the review and safety standards procedures or instructions generally applicable to the location and operation of such reactors.

Following discussion of the paper, the Commission approved the initiation of exploratory staff level discussions with the Departments of the Army and Air Force in accordance with the general guidelines as set forth in AEC 1067/19. The Commission requested that following these discussions a meeting be re-scheduled for Commission consideration.

At Regulatory Information Meeting 131 on November 18, 1964, I reported that after discussions with representatives of Department of the Army it had been concluded that the matter should be discussed with and coordinated through Mr. W. J. Howard, Chairman, Military Liaison Committee. The Commission agreed with this procedure.

I contacted Mr. Howard by letter dated December 10, 1964, copy enclosed, and requested the opportunity to meet with him and his staff. This conference took place on February 25, 1965, with representatives from the Office of the Secretary of Defense, Army, Air Force and Navy present. At this meeting we discussed in detail the suggested guidelines which are outlined in paragraph 7 of AEC 1067/19.

Mr. Howard has now forwarded to me by letter dated April 14, copy enclosed, DoD's version of a draft Memorandum of Understanding which would formalize existing arrangements regarding health and safety responsibilities for DoD reactors. This DoD draft Memorandum of Understanding is in keeping

5/2/65

with the general guidelines which are set forth in the above-mentioned staff paper and reflects, I believe, a proper delineation of health and safety responsibilities for DoD reactors. The language is in some respects more general than the language outlined in paragraph seven of the staff paper, but in my view permits us to be involved in those matters and at those points necessary to carry out our safety responsibilities under the Atomic Energy Act and the Presidential Directive. There are certain minor changes and revisions in the DoD draft which I feel should be made. Subject to these changes, which are set forth in brackets on the draft, I recommend the Commission's favorable consideration of the DoD draft as modified. Upon the Commission's review and approval, I would propose to notify Mr. Howard that this draft is acceptable to the Commission. The next step would then be final clearance by DoD and arrangements made for the formal execution of the Understanding.

The General Manager has no objection to the DoD draft Memorandum of Understanding as modified. While the General Counsel has no legal objection, he believes that the points specified in the staff paper (see enclosure 3) which have not been covered in the Memorandum of Understanding are desirable, particularly since agreement by the AEC to this Memorandum of Understanding may be considered as delineating the full extent of the Commission's responsibility under the President's Directive.

I would like to discuss this with the Commission at an early Information Meeting.

(Signed) HLP

Harold L. Price
Director of Regulation

Enclosures:
1. HLPrice ltr dtd 12/10/64 to MJHoward
2. MJHoward ltr dtd 4/14/65 w/Draft Memo of Understanding
3. Comparison of DoD Draft with Guidelines in 1067/19

cc: General Manager
Secretary (2)
General Counsel (2)

bcc: AGMB
MWoodruff, DOS
Curtis Nelson, INS
HLPrice, REG
GKBeck, REG
RLowenstein, REG
MBlarn, REG
RLDoan, DRL
ERPrice, SLR
LDLow, CO
Forrest Western, OSS

ADIR:ADM:REG	OGC	GM	DIR:REG
CLHenderson:ps			HLPrice
5/11/65	5/ /65	5/ /65	5/11/65

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON D.C. 20545

C O P Y

December 10, 1964

Honorable W. Jack Howard, Chairman
Military Liaison Committee to the
U. S. Atomic Energy Commission
Department of Defense

Dear Mr. Howard:

As you know, the Presidential Directive of September 23, 1961, defines the respective responsibilities of the Department of Defense and the Commission for nuclear safety of reactors transferred to or acquired by the Department pursuant to section 91b of the Atomic Energy Act of 1954, as amended. A copy of the Directive is enclosed for ease of reference.

In accordance with the Directive, the military departments from time to time request AEC's comments or concurrence on the nuclear safety aspects of proposed new reactors and on significant changes in the design and operating procedures of existing reactors. The departments have also submitted for AEC's review and concurrence nuclear safety standards, procedures and instructions relating to section 91b reactors.

No cases have arisen, as far as we are aware, in which there has been a failure to comply with the Presidential Directive; nor are we aware of any pending problems in this connection. However, a current review of the present practice applicable to safety reviews of section 91b reactors suggests the desirability of establishing our procecures on a more formal basis. I would, therefore, like to discuss this matter with you at an early date and, at the same time, consider with you possible arrangements under which discussions with appropriate officials of the military departments might be initiated. I will appreciate your informing me as to what date or dates would be convenient to you for this purpose.

Sincerely yours,

/s/ Harold L. Price
Director of Regulation

C O P

DEPARTMENT OF DEFENSE
MILITARY LIAISON COMMITTEE
TO THE
ATOMIC ENERGY COMMISSION
WASHINGTON 25, D. C.

Mr. Harold L. Price
Director of Regulation
U. S. Atomic Energy Commission
Washington, D. C.

Dear Mr. Price:

Inclosed is a draft AEC-DoD Memorandum of Understanding concerning health and safety responsibilities for DoD reactors which is in response to your letter of 10 December 1964 and the conference held in my office on 25 February 1965.

Request the draft Memorandum of Understanding be reviewed and your concurrence or recommended changes be forwarded to this office.

Sincerely yours,

W. J. HOWARD
Chairman

1 Inclosure

Rec'd Off. Dir. of Reg
Date 4-15-65

MEMORANDUM OF UNDERSTANDING

BETWEEN THE

ATOMIC ENERGY COMMISSION

AND THE

DEPARTMENT OF DEFENSE

Health and Safety Responsibilities for DoD Reactors
[Acquired Pursuant to Section 91b of the
Atomic Energy Act of 1954, as amended]

I. Purpose

The purpose of this agreement is to formalize [~~and perfect~~] existing arrangements [observed pursuant to Presidential Directive of 9/23/61] regarding health and safety responsibilities for DoD reactors [acquired pursuant to Section 91b of the Atomic Energy Act of 1954, as amended.]

II. Agreement

In order to enable the AEC to participate in the identification and resolution of health and safety problems, the AEC and DoD will be guided as follows:

A. New Reactor Projects. Each project which is the first of its kind will be furnished to AEC for review at the design stage, but before final design is frozen. A further review will be made by AEC, at the preoperational stage, of the reactor as built. AEC safety reviews [of design information] will not be required for reactors having substantially the same design as one previously reviewed. [With regard to the latter, AEC safety reviews will be limited to information regarding proposed new sites.]

B. Modifications of Reactors. Significant modifications to existing reactors which raise questions concerning health and safety will be furnished to the AEC for review while in the design stage and again in the preoperational stage.

C. Qualifications of Reactor Operators. AEC will [~~become~~] [be] fully informed of the procedures by which DoD agencies assure the adequacy of qualifications of reactor operators.

D. Safety Policies, Standards and [~~Instructions~~] [Principles]. Directives or regulations establishing safety policies, standards, and principles will be furnished to the AEC for [~~information~~] [advice and assistance] and such comment as the AEC may choose to make. The DoD will be responsible for the proper implementation of these policies, standards, and principles. The AEC will not review detailed operating procedures and instructions.

E. Reports

1. Significant events, conditions, or operational problems relating to health considerations or reactor safety will be reported promptly to the AEC on a case basis.

2. Any potential safety problem noted by the AEC in reactor design, construction, modification, operator qualification, or safety policies, standards, and instructions will be reported promptly by the AEC to the DoD for resolution.

F. Visits. Upon invitation by DoD, AEC representatives may participate in on-site visits for the purpose of observing operations, conditions, or equipment relating to health considerations or reactor safety.

III. Exceptions

All reactors which are the subject of special agreements, such as the reactors under the cognizance of the Director, Division of Naval Reactors, AEC/Assistant Chief, Bureau of Ships, U. S. Navy, for Nuclear Propulsion, are excluded from this agreement.

Glenn T. Seaborg, Chairman
U. S. Atomic Energy Commission

W. J. Howard
Assistant to the Secretary
of Defense (Atomic Energy)

DoD DRAFT AS MODIFIED COMPARED WITH THE
GUIDELINES SET FORTH IN AEC 1067/19

Guidelines in 1067/19	DoD Draft as Modified
a. New Reactor Projects. Each project which is the first of its kind would be submitted to AEC for review at the design stage, but before final design is frozen. A further review would be made by AEC, at the pre-operational stage, of the reactor as built. The agreement would specify the kinds of information to be submitted for each stage of review and prescribe the timing of such submittals. These reviews would essentially be parallel to those for licensed reactors and would be based upon appropriate hazards summary reports. Safety reviews would not be required for reactors having substantially the same design as one previously reviewed.	A. New Reactor Projects. Each project which is the first of its kind will be furnished to AEC for review at the design stage, but before final design is frozen. A further review will be made by AEC, at the preoperational stage, of the reactor as built. AEC safety reviews {of design information} will not be required for reactors having substantially the same design as one previously reviewed. [With regard to the latter, AEC safety reviews will be limited to information regarding proposed new sites.]
b. Modifications of Reactors. The agreements would define in general terms the proposed modifications of reactor facilities on which AEC advice and assistance would be requested. They would require AEC review of modifications involving significant safety questions not previously reviewed by AEC.	B. Modifications of Reactors. Significant modifications to existing reactors would raise questions concerning health and safety will be furnished to the AEC review while in the design stage and again in the preoperational stage.
c. Qualifications of Reactor Operators. AEC would become fully cognizant of the procedures by which Army and Air Force assure the adequacy of qualifications of reactor operators.	C. Qualifications of Reactor Operators. AEC will {become} [be] fully informed of the procedures by which DoD agencies assure the adequacy of qualifications of reactor operators.
d. Safety Policies, Standards and Instructions. Internal departmental issuances, such as directive or regulations establishing safety policies, standards and principles, would be submitted for AEC comment or concurrence. AEC would not review detailed operating procedures and instructions.	D. Safety Policies, Standards and {~~Instructions~~} [Principles]. Directives or regulations establishing safety policies, standards, and principles will be furnished to the AEC for {~~information~~} [advice and assistance] and such comment as the AEC may choose to make. The DoD will be responsible for the proper implementation of these policies, standards, and principles. The AEC will not review detailed operating procedures and instructions.

Guidelines in 1067/19	Modified DoD Draft
e. Reports. The agreements would provide for reports of reactor operations including any inspection findings involving significant safety questions to be submitted to AEC at prescribed intervals. Provision would also be made for timely reports on certain categories of abnormal events or incidents which appear to have important safety significance. These reports, together with reports of inspection findings, should enable AEC to participate in the identification and resolution of health and safety problems as required by the Presidential Directive.	E. Reports 1. Significant events, conditions, or operational problems relating to health considerations or reactor safety will be reported promptly to the AEC on a case basis. 2. Any potential safety problem noted by the AEC in reactor design, construction, modification, operator qualification, or safety policies, standards, and instructions will be reported promptly by the AEC to the DoD for resolution.
f. Reviews of Reactor Operations. The agreement would recognize that AEC representatives, on occasion, might participate in on-site visits to observe reactor operations and equipment, and to observe reactor operator examinations, for the purpose of obtaining information on the department's standards and procedures and the adequacy of advice and assistance provided by AEC regarding them.	F. Visits. Upon invitation by DoD, AEC representatives may participate in on-site visits for the purpose of observing operations, conditions, or equipment relating to health considerations or reactor safety.

NH-5-3 Hazardous Mil Reactors

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON 25, D.C.

C/d

1965

Dear Larry:

The General Advisory Committee's letter to the Atomic Energy Commission on April 3, 1961, included a recommendation for the establishment of the profession of "Reactor Captain". This recommendation was part of a discussion of the AEC's safety policy and organization. The Commission has reported to the GAC from time to time, and has had further discussions which served, among other things, to clarify the "Reactor Captain" concept. Your letter of July 8, 1964, described the three principal aspects associated with the "Reactor Captain" concept, the name itself being of no significance. You pointed out that (1) the individual must be sufficiently broadly trained to understand all factors of reactor safety; (2) he must have full information about the reactor, and full authority over its operation and safety during maintenance; and (3) he must not be distracted by other responsibilities unrelated to the particular reactor (or group of reactors in a single power station).

We wish to summarize our actions and findings in determining that the concept of the "Reactor Captain" is being met in AEC operations and in licensed activities.

With respect to licensed reactor facilities, there is good evidence that the function of a "Reactor Captain" is being fulfilled satisfactorily through the supervisory organizations set up by the management of the respective facilities. It is not AEC regulatory practice to insist that each organization owning a reactor accomplish this function in accordance with a single pattern prescribed by the regulatory authority. In this regard, the regulatory staff's safety evaluation is to determine that the owning organization possesses adequate technical competence to maintain and operate the reactor safely; that there are appropriate organizational assignments, with well-defined responsibility and authority, with written procedures for all important operations, and with internal safety checks and balances for revisions in facilities and procedures; and that the instructions to the actual reactor operators include directions to shut down the reactor without reference to higher authority if condition arises which would appear to make it unsafe.

The periodic inspections by compliance inspectors afford opportunity to ascertain that licensed reactor facilities are properly maintained,

2-23-65

cy filed O-M-7- ACRS

and that the staffs are functioning in an acceptable manner.

With respect to AEC-owned reactors, we have conducted a survey at three sites to ascertain that the principal aspects associated with the "Reactor Captain" concept are being met by AEC operating contractors. The AEC's Brookhaven, Savannah River and Idaho offices, and their respective operating contractors, were selected for this special survey, since they are representative of the spectrum of AEC reactor operations in research, nuclear materials production, and engineering development. The summary report enclosed identifies the organizational levels and individuals that correspond to the function of "Reactor Captain" in each contractor's organization.

Based upon our operating contractors' responses, we are assured that duly authorized supervisors are in charge at these AEC-owned reactors at all times during operations and maintenance. The supervisors have clear authority, responsibility, and information essential to their assigned duties and are not distracted by duties unrelated to reactor operations and maintenance. They possess the broad qualifications of education and experience specified by the GAC as essential for "Reactor Captains".

Thus, it is our opinion that general equivalence presently exists between the GAC's "Reactor Captain" concept and the general organizational features, and the individuals identified in this survey report, and that the regular AEC reactor safety appraisal system is an accurate and reliable mechanism for collection and audit of such information. Our field office reactor safety staff will continue the collection of such information as a part of their routine reactor safety appraisal of AEC operating contractors.

These discussions have been useful, and if the GAC has any further questions on this matter, we will be pleased to discuss them at a future meeting.

Sincerely yours,

[illegible]

Chairman

Dr. L. R. Hafstad, Chairman
General Advisory Committee
to the Atomic Energy Commission

Enclosure:
Summary Report as stated above

MH.S-3 - Hazards from Power Readers

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON 25, D.C.

FEB 12 1965

MEMORANDUM FOR CHAIRMAN SEABORG

for THROUGH GENERAL MANAGER Signed: John V. Vinciguerra FEB 12 1965

SUBJECT: SUMMARY REPORT ON NUCLEAR SAFETY RESEARCH AND DEVELOPMENT

The attached subject report describes the research and development activities in nuclear safety under the technical direction of the Division of Reactor Development and Technology. We are pursuing a coordinated effort including reactor safety (e.g., kinetics, containment, fission product phenomena); engineering field tests of aerospace and terrestrial nuclear systems; radioactive effluent control (e.g., environmental studies, waste management); and nuclear safety analysis and evaluation.

I made reference to this report in my testimony before the Joint Committee on Atomic Energy on Monday, February 8, 1965. A copy has been supplied to the Controller for transmittal to the JCAE with the transcript. The report has been given general distribution under TID-4500, UC-80 (Reactor Technology).

Milton Shaw, Director
Division of Reactor Development
and Technology

Enclosure:
Nuclear Safety Summary Report, November 1964

cc: Commissioner Bunting
Commissioner Palfrey
Commissioner Ramey
Commissioner Tape

bcc:
GM (2)
AGMR
Secretariat (2)

RD:DNA	RD:DN	RD:DA	RD:D
Jackson/cmw			
Booth	Lieberman	Arrotta	Shaw
2-10-65	2- -65	2- -65	2- -65

MH.S-3 Hazards & Mil Reactors

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Res. & Status Br. - GTN

OPTIONAL FORM NO. 10
MAY 1962 EDITION
GSA GEN. REG. NO. 27

UNITED STATES GOVERNMENT

Memorandum

TO : File

DATE: January 7, 1965

FROM : W. B. McCool, Secretary

SUBJECT: CORRESPONDENCE FROM ASSISTANT CHIEF OF NAVAL OPERATIONS

SECY:JCH

At Regulatory Information Meeting 137 on January 6, 1965, Mr. Price commented briefly on the background of his proposed response to Admiral Connolly's December 23 letter regarding the proposed operation of USS DACE. The Commissioners approved transmittal of the draft letter as attached to Mr. Price's January 5 Memorandum for the Commissioners.

cc:
Chairman
Director of Regulation
Deputy Director of Regulation
Asst. Director of Regulation
Asst. Dir. of Reg. for Nuclear Safety
Asst. Dir. of Reg. for Admin.
General Counsel
Director, Reactor Licensing

1-7-65

copy filed.
MH.S 3. Reg Hazards &
Mil Reactors

OFFICIAL USE ONLY

MHOS 3- Hazard of Power Reactors

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

November 24, 1964

MEMORANDUM FOR COMMISSIONER TAPE

for ~~THROUGH~~ GENERAL MANAGER John V. Vinciguerra

SUBJECT: REPORT ON GENERAL ADVISORY COMMITTEE'S REACTOR CAPTAIN RECOMMENDATION

This memorandum report transmits a Division of Operational Safety (OS) summary of information collected directly from three AEC field offices and their respective reactor operating contractors on the General Advisory Committee's (GAC) reactor captain concept. The Brookhaven, Idaho and Savannah River offices were selected for collection of such information, since they represent a spectrum of the AEC's research, engineering development, and production reactor activities.

We believe that this information illustrates that supervisors at AEC-owned reactors have been clearly assigned reactor safety responsibilities in writing, and that they possess qualifications by way of training, experience, and certification commensurate with the GAC's reactor captain recommendation. This report also illustrates that the reactor operations supervisory staff at AEC-owned reactors are in attendance during all operations, are not distracted by responsibilities unrelated to their respective reactors, and have full authority over, and information on, reactor operations and maintenance as these may affect safety. Continuing reactor safety surveillance is assured for each AEC-owned reactor by the internal reactor safety review, inspection and audit system required of each operating contractor, and by the regular reactor safety inspection and review implemented by the respective AEC field offices.

The information collected in this survey generally duplicated that collected on previous occasions by the AEC in the areas of: (1) contractor standards and procedures for selection, training, and certification of the reactor operating staff; (2) contractor's organizational assignment of reactor safety authorities and responsibilities; and (3) contractor's internal safety review and inspection system. The analysis of detailed information collected from the three offices and their contractors did not uncover any "surprises" or situations which would warrant concern.

X MHOS 3- Hazard of Power Reactors
O-M- 7 (GAC)
PFC- 1-1 Reg. Oper. Safety

11-24-64

We feel that equivalence presently exists between what the GAC is seeking and what the AEC and its operating contractors are providing on the reactor captain question. Further, we believe that the formality of identifying (by name and title) reactor supervisors whose role is most similar to a "reactor captain" could be satisfactorily achieved through the AEC's regular reactor safety appraisal program and such procedure would assure continuing surveillance on this matter. However, similar data could be requested from the other field offices and their contractors, if it is believed to be useful.

We would appreciate your direction as what further steps, if any, should be taken on this matter

Nathan H. Woodruff

Nathan H. Woodruff, Director
Division of Operational Safety

Attachment:
As stated above

Distribution:
Chairman Seaborg
Commissioner Bunting
Commissioner Palfrey
Commissioner Ramey
R. E. Hollingsworth, GM
R. J. Bloch, DGM
D. A. Ink, AGM
J. V. Vinciguerra, SAGM
H. L. Price, REG
S. G. English, AGMRD
W. B. McCool, SECY (2)

"REACTOR CAPTAIN" INFORMATION FROM CERTAIN AEC-OWNED REACTORS

The following data were collected from the AEC's Brookhaven, Idaho and Savannah River offices and their respective reactor operating contractors (Brookhaven National Laboratory, Phillips Petroleum Co., and Aerojet General Nucleonics, and the du Pont Company) in response to the General Advisory Committee's "reactor captain" recommendation and comments. These data emphasize the role of the individuals which the operating contractors have designated as being most similar to that described as a "reactor captain" by the GAC. The role of the next higher and lower levels in the respective operating organizations are only described in general terms as are the roles of reactor safety advisory committees. Thus, attention is focused on the individuals who are thought to be of primary interest to the GAC. These data have been abstracted for brevity of presentation; however, the complete text of the respective replies is available upon request to the AEC's Division of Operational Safety.

(more)

MHoS 3 Hazards Mil Reactors

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Res. & Status Br. - GTN

OPTIONAL FORM NO. 10
MAY 1962 EDITION
GSA GEN. REG. NO. 27

UNITED STATES GOVERNMENT

Memorandum

TO : File

DATE: November 19, 1964

FROM : W. B. McCool, Secretary

Original signed W. B. McCool

SUBJECT: SAFETY REVIEW OF DOD REACTORS

SECY:JCH

At Regulatory Information Meeting 131 on November 18, 1964, Mr. Price reported that in discussions with Colonel Burlin it had been suggested staff should now discuss the safety review of DOD reactors with Mr. Jack Howard, MLC. The Commissioners agreed staff should proceed.

cc:
Chairman
Director of Regulation
Deputy Director of Regulation
Assistant Director of Regulation
Asst. Dir. of Reg. for Admin.
Asst. Dir. of Reg. for Nuclear Safety
General Manager
Deputy General Manager
Assistant General Manager
General Counsel

Copy filed:
MHoS-3-Reg. Hazards for Mil Reactors

11-19-64

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MH.S.3. Hazards of Mil Reactors

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OPTIONAL FORM NO. 10
MAY 1962 EDITION
GSA GEN. REG. NO. 27

UNITED STATES GOVERNMENT

Ass. & Status Dr. - GTN

Memorandum

TO : Harold L. Price, Director of Regulation

DATE: September 23, 1964

FROM : W. B. McCool, Secretary

Original signed W. B. McCool

SUBJECT: AEC 1067/19 - AEC SAFETY RESPONSIBILITY FOR DOD REACTORS

SECY:AJ

1. At Meeting 2046 on September 22, 1964, the Commission approved the initiation of exploratory staff level discussions with the Departments of the Army and the Air Force in accordance with the general guidelines set forth in AEC 1067/19. Following these discussions, the matter should be rescheduled for Commission consideration.

2. The Commission has directed you to take the action required by the above decision.

cc:
Chairman
Deputy Director of Regulation
Asst. Dir. of Regulation
Asst. Dir. of Reg. for Admin.
Asst. Dir. of Reg. for Nuclear Safety
General Manager
Deputy General Manager
Asst. General Manager
Asst. Gen. Mgr. for R&D
General Counsel
Director, Reactor Development
Director, Operational Safety
Director, Inspection

Copy filed:
MH.S.3. Reg Hazards of Mil Reactors

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9-23-64

MHOS - 3 - Hazards of Mil Reactors

September 22, 1964

MEMORANDUM FOR THE COMMISSIONERS

SUBJECT: BACKGROUND ON STAFF PAPERS SCHEDULED FOR CONSIDERATION AT 10:30 A.M. TODAY

The following is a brief summary of the status of the staff papers scheduled for the 10:30 a.m. Commission Meeting this morning:

- - - - - - - - - - - -

AEC 1067/19 - AEC Safety Responsibility for DOD Reactors - the Director of Regulation has prepared this paper in response to a suggestion made by Commissioner Ramey in his memorandum of August 20, 1963 (Appendix "B" to AEC 1067/19), as a follow-up to a brief discussion on the matter at Meeting 1954 held on July 29, 1963.

9-22-64

CONFIRMED TO BE UNCLASSIFIED
DOE NSI DECLASSIFICATION REVIEW E.O. 12958
BY: SP E.A. Pahl 7-1-77 DOE/NN-523
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July 29, 1964

AEC 1067/19

COPY NO. 54

AEC 1067/19

ATOMIC ENERGY COMMISSION

AEC SAFETY RESPONSIBILITY FOR DOD REACTORS

(DISCUSSION PAPER)

Note by the Secretary

The Director of Regulation has requested that the attached report be circulated for discussion by the Commission at an early date.

W. B. McCool

Secretary

DISTRIBUTION	COPY NO.
Secretary	1,51-59
Commissioners	2-6,60-64
Dir. of Regulation	7 - 9
General Manager	10 - 11
Deputy Dir. of Regulation	12
Asst. Dir. of Regulation	13
Deputy Gen. Mgr.	14
Asst. Gen. Mgr.	15
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ATOMIC ENERGY COMMISSION

AEC SAFETY RESPONSIBILITY FOR DOD REACTORS

Report by the Director of Regulation

PURPOSE

1. To discuss the establishment of formal procedures for AEC participation in reactor safety determinations by the Departments of the Army and Air Force in accordance with the President's Directive of September 23, 1961 (Appendix "A").

BACKGROUND AND SUMMARY

2. This paper outlines a proposed approach to the establishment of formal procedures (a) for the safety review of particular reactors transferred to or acquired by Army and Air Force under section 91b of the 1954 Act and (b) for the review of safety standards, procedures or instructions generally applicable to the location and operation of such reactors. It has been prepared in response to the suggestion made by Commissioner Ramey, in his memorandum of August 20, 1963 (Appendix "B"), to the effect that the Commission formalize and strengthen the safety review procedures for reactors transferred to or acquired by the Department of Defense under section 91b of the Atomic Energy Act.

3. The paper does not include consideration of procedures for reactors transferred to or acquired by the Department of the Navy. All Navy reactors except PM-3A and the Naval ship propulsion reactors were acquired and are operated under AEC licenses. The PM-3A is being treated as a special case. The propulsion reactors are, therefore, the only Navy reactors to which the safety review procedures proposed in this paper would otherwise be applicable. As to these, the staff believes

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that it is not necessary or desirable to establish any new arrangements for safety reviews. The unique organizational relationship of Admiral Rickover as Manager, Naval Reactors, AEC, to the Bureau of Ships, which enables him to exercise nuclear safety responsibilities in both capacities, does not exist elsewhere in the military departments. According to the Summary Notes of Briefing on Naval Reactors (briefing held December 29, 1961), the Commission has assigned to Admiral Rickover execution of the Commission's responsibility to maintain "the present standards and procedures being used by Naval Reactors for assuring safety ....."* The system and procedures under which safety is assured for naval propulsion reactors are well known to and understood by the Commission and Navy. We believe that redefinition of these relationships is not desirable.

DISCUSSION

4. The Presidential Directive of September 23, 1961 (Appendix "A") defines, in general terms, the safety responsibilities of the Commission and the military departments for section 91b reactors. We propose that specific procedures, to assure compliance with the Directive, be discussed separately with Army and Air Force and, as agreed upon, embodied in formal memoranda of understanding. The purpose would be to: (a) define the kinds of safety matters to be referred to AEC for review; and (b) provide a procedure for AEC participation in the identification and resolution of safety problems.

5. We believe that the President's Directive requires that: (a) AEC provide advice and assistance that might be requested by the military departments on reactor safety questions

* Atomic Energy Commission Summary Notes of Briefing on Nuclear Navy, held December 29, 1961. On file in Office of the Secretary.

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(we now do this); (b) AEC be informed on and satisfied as to the adequacy of the system by which each department assures safety in the management and operation of its reactors (this is now true as to Navy but less so for Army and Air Force); and (c) there be a system under which AEC is furnished information to show whether the desired level of safety is being achieved under the interagency arrangement (this exists as to Navy but less so for Army and Air Force).

6. In order to fulfill the requirements identified in paragraph 5, the proposed agreements or memoranda of understanding between AEC and Army, and AEC and Air Force, should provide for: (a) AEC advice and assistance as requested by the two departments on any matters relating to reactor safety; (b) a safety review of all new reactor facilities; (c) a similar review of major modifications to existing reactors; (d) AEC advice and assistance on those safety standards and instructions which establish or implement broad policies and procedures for reactor operation; (e) AEC cognizance of procedures and policies for qualifications of operating personnel and for maintenance of facilities; (f) periodic summary reports by the departments on operating experience, including any inspection findings of major safety importance; and (g) AEC participation from time to time with the departments in reviewing operations of selected reactors in order for AEC to better advise and assist the departments on safety standards.

7. Each agreement would set forth the general principles under which Army and Air Force would obtain AEC review and AEC comments or concurrence, as appropriate, with respect to nuclear safety matters. In general, the following areas would be covered:

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a. New Reactor Projects. Each project which is the first of its kind would be submitted to AEC for review at the design stage, but before final design is frozen. A further review would be made by AEC, at the preoperational stage, of the reactor as built. The agreement would specify the kinds of information to be submitted for each stage of review and prescribe the timing of such submittals. These reviews would essentially be parallel to those for licensed reactors and would be based upon appropriate hazards summary reports. Safety reviews would not be required for reactors having substantially the same design as one previously reviewed.

b. Modifications of Reactors. The agreements would define in general terms the proposed modifications of reactor facilities on which AEC advice and assistance would be requested. They would require AEC review of modifications involving significant safety questions not previously reviewed by AEC.

c. Qualifications of Reactor Operators. AEC would become fully cognizant of the procedures by which Army and Air Force assure the adequacy of qualifications of reactor operators.

d. Safety Policies, Standards and Instructions. Internal departmental issuances, such as directive or regulations establishing safety policies, standards and principles, would be submitted for AEC comment or concurrence. AEC would not review detailed operating procedures and instructions.

e. Reports. The agreements would provide for reports of reactor operations including any inspection findings involving significant safety questions to be submitted to AEC at prescribed intervals. Provision would also be made for timely reports on certain categories of abnormal events or incidents which appear to have important safety significance. These reports, together with reports of inspection findings, should enable AEC to participate in the identification and resolution of health and safety problems as required by the Presidential Directive.

f. Reviews of Reactor Operations. The agreement would recognize that AEC representatives, on occasion, might participate in on-site visits to observe reactor operations and equipment, and to observe reactor operator examinations, for the purpose of obtaining information on the department's standards and procedures and the adequacy of advice and assistance provided by AEC regarding them.

8. With respect to reactors that are built by AEC as prototypes and for later transfer to one of the military departments, we propose to consult with the General Manager to identify any special procedural problems or considerations which

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should be taken into account in negotiations with the military departments concerned.

9. The proposed scope of the agreements contemplates that AEC would provide advice and assistance in the preparation of each service's safety standards, procedures and instructions by providing advice and assistance thereon in accordance with the Presidential Directive. With regard to the design of specific reactor projects, however, AEC's role would continue to be in the performance of independent safety reviews, as requested.

10. There have been no cases in recent years, as far as we are aware, in which the military departments have made significant changes or modifications to reactors without first having submitted them for AEC review. However, formal agreement with Army and Air Force on the substance of procedures in the areas outlined above should provide an adequate basis upon which each agency can be assured that it is carrying out its responsibilities under the Presidential Directive. Negotiations looking toward such an agreement could be initiated by AEC through letters to Army and Air Force such as Appendix "D".

11. As noted in the Report by the Director of Inspection dated March 25, 1964, Safety Procedures Applicable to DOD Reactors (AEC 1067/18), no single, uniform procedure is likely to be adequate for both Army and Air Force. For that reason, we would expect that the content of the agreements will vary and be designed to accommodate differences between and within the two departments in safety organization and needs.

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APPENDIX "A"

PRESIDENTIAL DIRECTIVE

Responsibility will rest with the Department of Defense for identifying and resolving health and safety problems relating to the operation of utilization facilities, or to special nuclear material for use therein, which are held by the DOD pursuant to directives of the President under section 91b of the Atomic Energy Act. In view of the Atomic Energy Act of 1954, the AEC will participate in the identification and resolution of these problems as a matter of responsibility. In this connection the Department of Defense or the appropriate Military Departments will prepare, issue and enforce safety standards, procedures or instructions applicable to the location and operation of utilization facilities and to special nuclear materials for use therein. Advice and assistance will be obtained from the AEC on the safety aspects of the design of utilization facilities and in the preparation or amendment of safety standards, procedures or instructions relating to location and operation of utilization facilities and to special nuclear materials for use therein, and comment or concurrence shall be obtained from the AEC as to their adequacy. Any disagreement as to safety aspects, arising as a result of comment by the AEC, which cannot be directly resolved by the two agencies will be referred to the President for decision.

Approved by the President
September 23, 1961

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APPENDIX "B"

August 20, 1963

MEMORANDUM FOR CHAIRMAN SEABORG
COMMISSIONER PALFREY
COMMISSIONER TAPE
COMMISSIONER WILSON
GENERAL MANAGER
DIRECTOR OF REGULATION

SUBJECT: AEC RESPONSIBILITY FOR THE SAFETY OF NUCLEAR REACTORS IN THE CUSTODY OF THE DEFENSE DEPARTMENT

At Meeting 1954 on July 29th, the Commission considered Division of Inspection reports on safety review procedures for Part 115 reactors and AEC owned reactors.

At this meeting, I brought up the related subject of safety review procedures for nuclear reactors in the custody of the Department of Defense, and indicated that there were questions in my mind whether the Commission was properly discharging its responsibilities under the existing review system. This tentative conclusion was based on a summary of the procedures, as presented in a memorandum dated June 22, 1963, signed by the General Manager and Director of Regulation in response to my request of some months earlier, and the previous record on this subject (including in particular AEC 1041/13). The Commission then requested the Division of Inspection to undertake a detailed study of the review procedures and report back later this year.

I thought it would be helpful to discuss the main questions I have run into and suggest some possible means for improving our surveillance over these reactors.

The reactors which are involved include:

Army	Air Force	Navy
SM-1	PM-1	Propulsion reactors
SM-1A	ASTRA	
PM-2A	GTR	
MH-1A		
DOFL		

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The main defect in the present system, in my opinion, is the reliance on voluntary action by DOD to request our advice and comment or concurrence. The Commission would appear to have a distinct legal as well as moral responsibility to participate in the identification and resolution of health and safety problems of utilization facilities. In reviewing the language of the Act and the Presidential Directive, and the past record (see AEC 1041/13 paragraphs 4, 5 and 7, at pages 6, 7 and 8) which suggests that AEC advice be mandatory on DOD, I cannot agree that an informal, voluntary action mechanism provides adequate assurance. At the very least, some regularized method of spot checking by the AEC should be seriously considered.

In this respect, I am especially concerned about our lack of control over changes or modifications to existing plants, and the fact that at present, according to the June 22nd memo, "no agreed criteria have been established for determining what changes will be submitted to us for review." Recalling the SL-1 incident, one of the lessons learned there was that there should be a formal mechanism for subjecting significant changes to a proper safety review.

I am certainly not suggesting that DOD has been or will be making facility changes important to safety without first consulting the Commission. I am merely pointing out that under the present system the potential for by-passing the AEC review is very high.

Another problem of the present system, as discussed in AEC 1041/13 (pages 9 and 32), is the apparent lack of consistency in the safety reviews conducted for the three services. I understand that it is not feasible to have complete uniformity, and that there must be some tailoring of requirements and procedures to each of the services. However, I cannot go along with the present system in which the nature and extent of reviews to be requested of the AEC is apparently largely dependent on the practices and policies of the respective service rather than on AEC's independant action. There certainly should be some consistency in the type of review conducted by the AEC in each instance.

The June 22nd summary suggests that more formally agreed procedures may be desirable at a later date. I would submit that the proper time to initiate action is now when the number of such reactors is relatively small. Since considerable time would be necessary to establish a more formal system and to get it functioning smoothly, it would seem to me that we shouldn't delay much longer. I might add that the Commission has been considering this subject since 1959.

I realize that there are several arguments in favor of not having formal understandings with DOD on implementing the Presidential Directive. One of the prime arguments presented is that we might dilute DOD responsibility

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for safety by too active AEC participation in the control of these plants. Another concern is that these reactors would be subjected to surveillance by two groups with the attendant possibilities of conflicting requirements and regulations. There is clearly some merit to these arguments, and thus extreme care would have to be taken in working out the exact procedures. However, since we already have the safety responsibility, these arguments should not stop us from taking the proper steps to assure that it is discharged in a more orderly fashion.

There is certainly a basic question of the means by which we assure ourselves that the Commission is maintaining surveillance commensurate with its responsibility. A number of possible methods that could be used are as follows:

1. Inspectors from the AEC could make periodic visits to the facilities. Some inspections apparently have been conducted at the RER.

   Alternatively, AEC inspectors could accompany inspectors from the respective services when they make their visits to the various facilities.

2. Operators of the military plants could be required to pass examinations similar to those required for operators of licensed reactors. I understand this has already been done in some cases.

3. Criteria similar to those of Part 50.59 could be established to clarify when the military service would refer changes back to the AEC for review. (Such criteria would require designation of technical specifications for the facility.)

4. Operating reports could be transmitted to the AEC on a periodic basis. Again, oral and written reports have been made to the AEC, but not on any kind of regular basis.

I am not advocating any particular method, or combination of methods; there might be others which would be more palatable to the DOD. However, irrespective of the particular method chosen, I do believe that the Commission should act now to formalize and strengthen the safety review procedures for reactors transferred to or acquired by the DOD under Section 91 b. of the Act.

James T. Ramey
Commissioner

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APPENDIX "C"

June 22, 1963

MEMORANDUM FOR COMMISSIONER RAMEY

THROUGH CHAIRMAN SEABORG

SUBJECT: AEC RESPONSIBILITY FOR THE SAFETY OF FIELD STATION REACTORS IN THE CUSTODY OF THE ARMED SERVICES

Your memorandum of April 9, 1963 requests a summary of the procedures utilized by the AEC in discharging its responsibility for the safety of field station reactors in the custody of the Armed Services.

The Presidential Directive of September 23, 1961, attached as Appendix "A," is the basic document defining the respective responsibilities of the AEC and the Department of Defense for safety of reactors transferred to or acquired by DOD under section 91b of the Atomic Energy Act of 1954, as amended.

In accordance with the Directive, the Military Departments request AEC's comment or concurrence prior to assuming operating responsibility for field station reactors. Such requests are normally addressed to the Director of Regulation and the reviews are performed by the Division of Licensing and Regulation. The reviews are based on the hazards summary reports submitted by the Military Departments concerned. The reactor design, operating experience, if any, and the general operating plans for the reactor are reviewed by DL&R and in appropriate cases, as indicated below, the Advisory Committee on Reactor Safeguards. The AEC formally advises the Military Department of the results of the evaluations and reviews made by the Regulatory Staff and the ACRS, and makes appropriate recommendations with respect to the hazards of operation. Further details with respect to the scope and procedures for these pre-operational safety reviews are contained in Enclosure I to AEC 1041/13 dated January 3, 1962.

In accordance with the Presidential Directive, the Military Departments from time to time also request AEC's comment or concurrence on significant changes in the design and operating procedures of field station reactors. In this regard the Army has requested AEC's comment or concurrence on significant changes relating to the SM-1, SM-1A, and PM-2A

reactors, and has kept DL&R informed both orally and in writing of significant operational experience with these reactors. Similarly, the Air Force has requested AEC's comment or concurrence on a significant increase in authorized power level of the ASTR reactor and has informed AEC of changes in staffing of the PM-1 reactor. The Navy has not as yet assumed operating responsibility for any field station reactor under section 91b of the Act.

The determination as to whether a particular change or modification warrants AEC's review is made by the Military Department. No agreed criteria have been established for determining what changes will be submitted to us for review.

Appendix "B" is a listing of safety review actions requested by Army and Air Force and includes, for completeness, requests made both before and after the date of the Presidential Directive.

The procedures employed by DL&R for the review of safety matters on Military field station reactors are essentially the same as those for AEC-owned reactors. The staff deals directly with the appropriate personnel of the Military Departments. Copies of the hazards summary reports are furnished to the ACRS in all cases and, where the project presents novel or significant safety questions, the advice of the ACRS is obtained.

The AEC has also been consulted from time to time in the drafting of internal issuances relating to reactor safety. For example, the Army formally requested AEC's review of its draft Statement of Policy on mobile power reactors and, following a series of discussions between our staff and Army, the Commission formally concurred in the draft statement. We have also been consulted informally by the Army on draft regulations planned to be issued within the Department "to assure that adequate health and safety measures are considered and observed in the design, construction, testing, operation, location and surveillance of all nuclear reactor systems for which the Army has operating responsibility." Similarly, the Navy has requested advice on the proposed operations of Navy nuclear ships into specific ports and will request AEC's comment or concurrence on criteria to be developed for port visits of such ships. At the request of Air Force we conducted examinations to test the qualifications of operators of the Radiation Effects Reactor when that facility was operated as an Air Force reactor.

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All requests by Military Departments for safety reviews are on their initiative. We have not construed the Presidential Directive as imposing upon the AEC responsibility for assuring that the Departments do, in fact, come to us on all significant safety matters; nor that they comply with the advice we give them.

No formal understandings or agreements have thus far been prepared by or entered into between the AEC and the Military Departments prescribing detailed procedures under which the respective agencies discharge their responsibilities under the Directive. It is likely that as the number of field station reactors increases more formally agreed procedures may be desirable.

The organizational elements which report to the General Manager have no responsibility for safety of field station reactors in the custody of the Armed Services.

The Division of Reactor Development staff does, of course, keep currently informed on safety matters relating to reactor field plants in the custody of the Armed Services and does provide information to the services and to the Division of Licensing and Regulation as requested.

/s/ H. L. Price
Director of Regulation

/s/ A. R. Luedecke
General Manager

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APPENDIX "D"

DRAFT LETTER TO ARMY AND AIR FORCE

1. Certain of the reactors owned by the military departments were acquired and are being operated pursuant to the licensing provisions of the Atomic Energy Act of 1954, as amended. Safety reviews and inspections by AEC of these facilities are under the Commission's licensing program.

2. Other reactors have been acquired by the Departments under section 91b of the Act and are exempt from licensing. For Army (Air Force) reactors in that category, the President's Directive of September 23, 1961 defines the responsibilities of our two agencies for nuclear safety, and in this connection the Commission has recently completed an evaluation of the procedures and practices currently in effect for the nuclear safety review of reactors which are exempt from licensing.

3. Safety reviews of section 91b reactors, and their nuclear fuel, and reviews of safety standards, procedures and instructions regarding such facilities have been requested by the Department of the Army (Air Force) and performed by AEC under practices which have evolved from our common interest in nuclear safety and from the close working relationship of our agencies in this field. The Commission's current evaluation has indicated, however, that the present procedures may not be adequate in every case to assure either the Department or the Commission that their respective responsibilities under the Presidential Directive are being fully executed. The present procedures do not appear to assure participation by AEC in the identification and resolution of significant nuclear health and safety problems, and correspondingly the Department may not

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feel that it is receiving the advice and assistance to which it is entitled under the Directive. These are questions which, I am certain you will agree, should not be left in doubt.

4. For these reasons it would seem desirable that the Department of the Army (Air Force) and the Commission jointly re-evaluate the procedures now followed and; with such revisions as may be indicated, formalize them by way of a joint statement of policy or memorandum of understanding. If you agree with the Commission that such a course appears desirable, arrangements can be made under which members of our respective staffs could initiate appropriate discussions for that purpose.

5. I would appreciate your views on this suggestion.