

Vol 1

MH&S-3-Hazards of Military Reactors

See also: MH&S-3-Eq-Hazards of Military Reactors (ACC-R 71)

MH&S-3-Hazards of Military Reactors

Date	To	From	Class	Pgs. No.	To	From	Class
1 11-15-61	Army Reactor Safety Rules		skw ouo				
2 2-9-61	AEC 1067 Operating Procedures for Military Reactors Military Reactors, Operating Procedures for		skw ouo				
3 6-15-61	AEC 1067/1 Operation of Nuclear Powered Ships Nuclear Powered Ships, Oper of		vee c				
4 6-16-61	AEC 1067/2 Radioactive Materials from Naval Activities		vee				
5 6-21-61	AEC 1067/3 Rickover, H. G.		vee				
6 8-3-61	AEC 1067/7 Radioactive Materials fm. Navy Activities Navy Accountability of SNM		vee				
7 7-5-61	AEC 1067/4		skw c 3				
8 7-24-61	AEC 1067/6 Radioactive Effluent Discharge by Naval Nuclear Powered Ships Rickover, Admiral		skw				
9 8-7-61	AEC 1067/5 Rickover, Admiral		skw u				
10 9-21-61	AEC 1067/8		vee				
11 5-22-62	Rickover, Admiral		skw ouo				

DATE:

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[REDACTED] to DOD

[REDACTED]

[REDACTED]

[REDACTED]

TO: COMMISSIONERS

FROM: W.B. McCool

SUMMARY: AEC RESPONSIBILITY FOR THE SAFETY OF NUCLEAR WEAPONS, REACTORS AND SPECIAL NUCLEAR MATERIALS IN THE CUSTODY OF THE ARMED SERVICE. The following report was prepared at CommissionersGraham's request for the Commissioner's information in connection with consideration of recommendations on procedures for the approval of visits of nuclear ships to ports.

FILED:

INDEXED: C&R-8-Commissioners' Study Projects

REMARKS: date of memo: 6-25-62

CONFIRMED TO BE UNCLASSIFIED
DOE NSI DECLASSIFICATION REVIEW E.O. 12958
BY: MARY DEFFENBAUGH DOE/NN-629
WEB FILE ONLY

U. S. ATOMIC ENERGY COMMISSION
CORRESPONDENCE REFERENCE FORM

6-25-62

UNITED STATES GOVERNMENT

Memorandum

TO : A. R. Luedcke, General Manager

DATE: May 22, 1962
Approved _____

FROM : W. B. McCool, Secretary *cc: [unclear]*

Date _____

SUBJECT: CHECKLIST OF MEETING WITH ADMIRAL RICKOVER ON VISITS OF
NUCLEAR VESSELS TO PORTS, TUESDAY, MAY 22, 1962, 9:50 A.M.,
ROOM 1113-B, D. C. OFFICE

SYMBOL: SECY:WLW

Commission Business

Meeting with Admiral Rickover on Visits of Nuclear Vessels to Ports

The Commission requested that Admiral Rickover discuss with the Secretary of the Navy the Commission's concern on the methods for approving visits of nuclear vessels to ports and inform the Secretary that the Commission wishes to discuss this matter further with him. (Rickover)

5-22-62

~~OFFICIAL USE ONLY~~

M.H.S. 3 - Hazards of Mil. Reactors

UNITED STATES GOVERNMENT

Memorandum

TO : A. W. Betts, Director, Military Application
F. K. Pittman, Director, Reactor Development DATE: March 12, 1962
R. Lowenstein, Director, Licensing & Regulation

FROM : W. B. McCool, Secretary

SUBJECT: BRIEFING ON THE DEPARTMENT OF THE ARMY REORGANIZATION

SYMBOL: SECY:MK

1. During the Briefing on the Department of the Army Reorganization on March 5, 1962, the Commission requested that steps be taken to develop procedures for cooperation with the Department of the Army on matters of mutual interest as related to the Army Reorganization Plan. The Commission also requested a report on the AEC-Army liaison procedures to be established.

2. The General Manager and the Director of Regulation have directed you to take the action required by the above request. We will assist in circulating the report for the information of the Commission. Copies of any pertinent correspondence should be provided the Office of the Secretary.

- cc:
- Chairman
- General Manager
- Director of Regulation
- Deputy General Manager
- Deputy Director of Regulation
- Assistant General Manager
- Asst. Gen. Mgr. for R&D
- General Counsel

*Copies filed: M.H.S. 3 - Reg. Hazards of Mil. Reactors
0470-12 - Army
P&S-50-APP*

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3-12-62

UNITED STATES GOVERNMENT

Memorandum

Encl. S. 3 - Hazardous Mat. Reactors
~~OFFICIAL USE ONLY~~
Continuing

TO : Dwight A. Ink, Assistant General Manager
Robert Lowenstein, Director,
Division of Licensing & Regulation

DATE: January 12, 1962

FROM : Harold D. Ansmosa, Acting Secretary

SUBJECT: AEC 1041/13 - SAFETY STANDARDS AND INSTRUCTIONS APPLICABLE TO
MILITARY AND CIVILIAN REACTORS

SYMBOL: SECY:JCH

1. At Meeting 1810 on January 9, 1962 the Commission:
 - a. Approved as revised the draft letter in Appendix "J" to AEC 1041/13 for transmittal to JCAE;
 - b. Noted that the detailed procedures for the safety reviews referred to in Paragraph 7 of AEC 1041/13 would be worked out by the staff with the appropriate DGD staff to implement the AEC-DGD agreement; and
 - c. Noted that AEC 1041/13 is unclassified.

2. You will recall the Commission requested Enclosure I of the draft letter to the JCAE be revised to refer to the Manager of Naval Reactors Branch by name and title in the first instance and thereafter by title, and to reflect minor language changes on pages 25 and 32 of AEC 1041/13.

3. The General Manager and the Director of Regulation have directed you to take the action required by the above decision. It is our understanding that the Assistant General Manager will prepare the correspondence to JCAE. A copy of this letter together with other pertinent correspondence should be provided the Office of the Secretary.

cc: Chairman
Director of Regulation
General Manager
Deputy General Manager
Asst. General Manager
General Counsel
Director, Reactor Development
Congressional Liaison

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copy filed Legat. in Leg Program

1-12-62

DATE:

INDEX: MH&S-3-Hazards of Military Reactors

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

TO:

FROM:

SUMMARY: AEC 1041/13: SAFETY STANDARDS AND INSTRUCTIONS APPLICABLE TO MILITARY AND CIVILIAN REACTORS. To consider a proposed draft reply to that portion of the JCAE letter dated February 23, 1961, which requested a review and analysis of AEC's past and current procedures for prescribing safety standards and instructions applicable to weapons and DOD and civilian reactors.

FILED:

INDEXER: Legal-4-Leg. Program

REMARKS: date of paper: 1-3-62

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BY: MARY DEFFENBAUGH DOE/NN-623
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U. S. ATOMIC ENERGY COMMISSION
CORRESPONDENCE REFERENCE FORM

1-3-62

DATE:

MEMO 6

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MEMO 3 Hazards from Military Reactors

TO:

FROM:

SUMMARY: Briefing on Nuclear Navy and Adm. Rickover presented to the Commission as informal discussion and review of the Naval Reactor program.

FILED: FILED 50 Naval Reactors

INDEXER: date of briefing, 12-29-61

REMARKS:

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BY: MARY DEFFENBAUGH DOE/NN-523

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12-29-61

DATE:

~~SECRET~~

INDEX: ~~NSA-3-Board of Military Reactors~~

~~SECRET~~

~~SECRET~~

TO:

FROM:

SUMMARY: **NSA 3 71/3: DRAFT STATEMENT OF POLICY FOR ARMY MOBILE NUCLEAR POWER PLANTS.**
 To consider the Department of the Army's draft statement of proposed policy for employment of mobile nuclear power plants. The Under Secy, of the Army submitted to AEC, for review & comment, a draft statement of the Proposed Policy. The stated objective of the policy is to ensure that mobile reactors are operated in manner that: (a) Meets the Army's needs for mobile nuclear power. (b) Protects the health and safety of both military personnel and the public. The draft statement was originally prepared by Army prior to discussions between Gen. Graham and the Chairman, AEC in Aug. 1961 & which ultimately resulted in the Director approved by the President on 9-23-61, defining safety responsibilities of AEC & DOD for section 91b reactors & special nuclear material.

FILED:

INDEXER: ~~NSA-3-Reg. Board of Military Reactors~~

REMARKS: date of paper: 11-7-61

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U. S. ATOMIC ENERGY COMMISSION
CORRESPONDENCE REFERENCE FORM

11-7-61

M.H. 5-3-14-61 are for Small Reactor

UNITED STATES GOVERNMENT

~~OFFICIAL USE ONLY~~

Memorandum

TO : Frank K. Pittman, Director
Division of Reactor Development
D. B. Burrows, Controller

DATE: September 22, 1961

FROM : W. B. McCool, Secretary

SUBJECT: REQUEST FOR ARMY SAFETY RULES GOVERNING OPERATION OF SMALL
POWER REACTORS

SYMBOL: SECY:DCR

1. We informed your offices on September 20, 1961, that at Meeting 1774 on September 16, during discussion of the Army power reactor portion of the FY 1963 Budget (page 57 of AEC 1070/8 - FY 1963 Budget Estimates), the Commission approved \$11.7 million for Army reactors, subject to receipt of safety rules originally requested at the 128th AEC-MEC Conference on October 6, 1961.

2. The General Manager has directed your offices to take the action required by the above decision. Copies of pertinent correspondence should be provided the Office of the Secretary.

- cc:
- General Manager
- Deputy General Manager
- Assistant General Manager
- Asst. Gen. Mgr. for Research and Development
- General Counsel

~~OFFICIAL USE ONLY~~

*Copy for: Secy - 63
Pd H-1-57. Army Power Reactor*

9-23-61

June 7, 1962

MEMORANDUM TO VICE ADMIRAL H. G. RICKOVER
MANAGER, NAVAL REACTORS
DIVISION OF REACTOR DEVELOPMENT

SUBJECT: PROCEDURES FOR CLEARING NUCLEAR POWERED NAVAL
SHIPS FOR OPERATION IN PORTS

To assist the Commission in its consideration of the problems pertaining to operating nuclear powered naval ships in ports, it is requested that you prepare a summary showing how the present policy of clearing nuclear powered naval ships for operation into ports has evolved. This summary should start with the first consideration by the Reactor Safeguards Committee of operation of the Nautilus.

Glenn T. Seaborg
Chairman

Transmitted to Commissioners
by Memo: 6-19-62

copy sent Security-Visits by Ships in Ports

6-19-62

M. H. S. Hazardous Mil. Reactors

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

May 29, 1962

AEC 47/44

COPY NO. 1

ATOMIC ENERGY COMMISSION

PROPOSED OPERATION OF USS ENTERPRISE

Note by the Secretary

The attached letter from the Chairman, Advisory Committee on Reactor Safeguards, is circulated for the information of the Commission. It has been forwarded to the General Manager and the Director of Regulation for appropriate action.

DEPARTMENT OF ENERGY DECLASSIFICATION REVIEW	
1. REVIEW DATE: <i>7/16/82</i>	DATE IMPLEMENTED: <i>8/1/82</i>
2. REVIEW AUTHORITY: <i>DOE 12858</i>	1. CLASSIFICATION PERMANENT
3. REVIEW NAME: <i>W. B. McCool</i>	2. CLASSIFICATION CHANGED TO
4. REVIEW DATE: <i>7/16/82</i>	3. REVISIONS TO DATE CLASSIFIED INFO
5. REVIEW AUTHORITY: <i>DOE 12858</i>	4. COORDINATE WITH
6. REVIEW NAME: <i>W. B. McCool</i>	5. CLASSIFICATION CANCELED
	6. CLASSIFIED INFO BRACKETED
	7. OWNER (S) SPECIFY

W. B. McCool
Secretary

WITH ATTACH(S)/ENCL(S)

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NR DECLASSIFICATION REVIEW
Reviewers: [Signature]
Classification: Retained, Changed to [Signature]
Info: [Signature]
 Information bracketed yes no

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DOCUMENT TRANSMITTED HERewith CONTAINS
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EXTRACT COPY

Original filed: *M. H. S. Hazardous Mil. Reactors Prop.*

~~CONFIDENTIAL~~
COORDINATE WITH *DOE NAVY*
DOE NSI DECLASSIFICATION REVIEW E.O. 12958
BY: MARY DEFFENBAUGH DOE/NSI-622

~~CONFIDENTIAL~~

~~WITH ATTACHMENTS/ENCL~~

AEC
47
44

5-29-62

~~CONFIDENTIAL~~

May 26, 1962

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

Subject: PROPOSED OPERATION OF USS ENTERPRISE

Dear Dr. Seaborg:

This is a reply to your request, dated May 24, 1962, for advice on the proposed visit by the USS ENTERPRISE to Boston, Massachusetts, on or about June 29, 1962.

In our letter of May 20, 1961, the Committee stated the following:

"Concerning future operations, the Committee realizes the need to evaluate carefully each entry of a nuclear naval ship into any port. The Navy should insure that decisions concerning operation of nuclear ships utilize the knowledge and experience of persons completely familiar with the nature and magnitude of the radiation hazards involved and that such decisions be balanced against the need for the specific operation in the interests of military necessity. The Committee urges the Navy to consult with and be guided by the Naval Reactors Branch concerning reactor safety, operational procedures, and entry to ports of call for nuclear powered naval ships."

In his memorandum to Admiral Rickover, dated May 23, 1962, Admiral Ramadge gives as his reasons for desiring to operate the ENTERPRISE into Boston Harbor, the following:

- "1. Boston is a port of call in connection with a Midshipman Cruise. Routine logistic support will also be accomplished.
- "2. Port familiarization is an important part of the training of Midshipmen, as well as of regularly assigned personnel.
- "3. The Navy is proud of ENTERPRISE, which has received much well deserved acclaim. With due regard to safety, the Navy desires to show this ship to the American Public as much as is possible."

This material contains information affecting the national defense of the United States within the meaning of the espionage laws, Title 18, U.S.C., Sec. 793 and 794, the transmission or revelation of which in any manner to an unauthorized person is prohibited.

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

Honorable Glenn T. Seaborg

- 2 -

May 26, 1962

Without pretending to be capable of making the determination of military necessity itself, the Committee would like to point out that familiarization of Midshipmen with the Boston Harbor area could evidently be accomplished on a conventional naval ship.

The Committee is currently considering the problem of entry into crowded port areas by nuclear ships for reasons other than military necessity. Until such time as this study has been completed, the Committee believes that it would be premature to advise that a nuclear ship be allowed to enter the Boston Harbor for reasons other than military necessity.

Sincerely yours,

/s/ F. A. Gifford, Jr.

F. A. Gifford, Jr.
Chairman

References:

1. AEC ltr. dtd 5/24/62 to ACRS
with enclosures.

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

File

May 25, 1962

W. B. McCool, Secretary

VISIT OF THE USS ENTERPRISE TO THE BOSTON HARBOR

SYMBOL: SECDEF:EM

1. On May 22, 1962, Admiral Rickover informed the Commissioners of the request he had received from the Chief of Naval Operations for concurrence in the visit of the USS ENTERPRISE to the Boston harbor from about June 29 to July 5, 1962. Boston harbor has not been previously approved by the Navy and the AEC as a port which the ENTERPRISE can visit without undue risk to the public health and safety. At that time the Commission requested that Admiral Rickover discuss with the Secretary of the Navy the Commission's concern on the methods for approving visits of nuclear vessels to ports, and inform the Secretary that the Commission wishes to discuss this matter further with him.

2. At Information Meeting 158 on May 21, Commissioner Olson said he was informed that Admiral Rickover had discussed the Commission's concern with the Secretary of the Navy. The Secretary of the Navy discussed the visit of the ENTERPRISE with the Chief of Naval Operations, but the CNO has not changed his position on the desirability of this ship's visit to the Boston harbor.

Department of Energy Classification Review	
In accordance with 101CFR 101.118	1. INFORMATION CONTAINS NEITHER RECOMMENDATIONS NOR CONCLUSIONS OF THE AEC
DATE: 5/22/62	2. CLASSIFICATION APPLIED TO
BY: [Signature]	3. CONTAINS NO UNCLASSIFIED INFO
REASON: 101CFR 101.118	4. CONFIDENTIAL INFO
	5. INFORMATION CONTAINS BOTH CLASSIFIED AND UNCLASSIFIED INFO
	6. OTHER SPECIALS

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- 2 - Reference Section
- 3 - Meeting Branch
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- 5 - Policy Review

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copy filed
MAY 26 1962

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SUBNAME: [Signature]				COORDINATE WITH 2DD/ALHY
DATE: 5-29-62				DOE NSI DECLASSIFICATION REVIEW E.O. 12958
				BY: MARY DEPTENBAUGH, DOE/N-523

52962

MHS - Hazardous for mil. Reactors

UNCLASSIFIED

AEC 1067/8

September 21, 1961

COPY NO. 33

ATOMIC ENERGY COMMISSION

RADIOACTIVE EFFLUENT DISCHARGED BY NAVAL NUCLEAR POWERED SHIPS

Note by the Secretary

The Acting General Manager has requested that the attached letter from the Surgeon General and the letter to the Chairman, JCAE, be circulated for the information of the Commission.

W. B. McCool

Secretary

AEC
1067
8

DISTRIBUTION

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9-21-61

UNCLASSIFIED

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
WASHINGTON 25, D. C.

August 28, 1961

Dear Admiral Rickover:

I have your report on "Radioactivity Discharged by Naval Nuclear Powered Ships, Calendar Year 1960 - Total" transmitted by letter to my office on July 11, 1961.* The very low levels of activity reported bespeak the high degree of success attending your endeavor to control and reduce radiation exposure levels in the vital program of naval nuclear powered ships.

Your program for control of such discharges will continue to be of interest to the Public Health Service in connection with our radiological health activities because of the guidelines to practice which it helps provide. One result will take the form of more complete reports to State health departments and other interested agencies in the area of radioactive discharges to the environment.

Sincerely yours,

/s/

Surgeon General

Admiral H. G. Rickover
Assistant Chief of Bureau
for Nuclear Propulsion
Department of the Navy
Bureau of Ships
Washington 25, D. C.

* Secretariat Note: Circulated in AEC 1067/6.

UNCLASSIFIED

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

September 21, 1961

Honorable Chet Holifield, Chairman
Joint Committee on Atomic Energy
Congress of the United States

Dear Mr. Holifield:

My letter to you of July 20, 1961* forwarded for information a copy of a letter from Admiral Rickover to the Surgeon General, U. S. Public Health Service. This letter summarized the amounts of radioactivity discharged by naval nuclear powered ships in ports and at sea during calendar year 1960. Attached for your information is the Surgeon General's reply which might also be of interest to the Committee.

Sincerely yours,

/s/ R. E. Hollingsworth
Acting General Manager

* Secretariat Note: Circulated in AEC 1067/6.

DATE:

[REDACTED]

INDEX: **MS-3-wards of Military Reactors**

[REDACTED]

[REDACTED]

[REDACTED]

TO:

FROM:

SUMMARY: **ANS 104.1/12: SAFETY STANDARDS AND INSTRUCTIONS APPLICABLE TO MILITARY AND CIVILIAN REACTORS. To consider a proposed draft reply to that portion of the JCAE letter dated February 23, 1961, (Appendix "F") which requested a review and analysis of ANS's past and current procedures for prescribing safety standards and instructions applicable to weapons and DOD and civilian reactors.**

FILED:

INDEXER: **LEGAL-4-Reg. Program Vol. 2**

REMARKS: **date of papers 9-14-61**

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BY: MARY DEFFENBAUGH DOE/NN-623

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U. S. ATOMIC ENERGY COMMISSION

CORRESPONDENCE REFERENCE FORM

4-14-61

AUG 14 1961

Dear Mr. Gilpatrick:

This will inform you that the Atomic Energy Commission has reviewed the documents submitted with Vice-Admiral Wallace M. Beakley's letter of June 5, 1961. These documents are BUSHIPS INSTRUCTION 9890, "Control and Disposition of Radioactive Equipment and Material from Naval Nuclear Powered Ships"; SECNAV INSTRUCTION 4555., "Disposal of Radioactive Wastes"; and BUSHIPS INSTRUCTION 9890.10, "Accountability for Special Nuclear Material Utilized in Connection with Naval Nuclear Propulsion Plants".

The Commission agrees with the approach taken in BUSHIPS INSTRUCTION 9890 and SECNAV INSTRUCTION 4555. We note, however, that these Instructions reference the following documents:

- a. NAVSHIPS 389-0153, "Radiological Controls for Naval Nuclear Propulsion Plants".
- b. NAVSHIPS 389-0266, "Radiological Controls for Tenders Servicing Naval Nuclear Propulsion Plants".
- c. NAVSHIPS 389-0233, "Radiological Controls for Shipyards Servicing Naval Nuclear Propulsion Plants".

NAVSHIPS 389-0153 was concurred in by letter of April 1, 1960 to the Chief of Naval Operations. We understand that NAVSHIPS 389-0266 and NAVSHIPS 389-0233, now in preparation, will contain the criteria and standards for implementation of BUSHIPS INSTRUCTION 9890 and SECNAV INSTRUCTION 4555., and will be submitted to the Commission for review.

10.41-8

AUG 14 1961

It is noted also that the language in BUSHIPS INSTRUCTION 9890 is sufficiently broad that it might be interpreted as applying to byproduct material the possession and use of which are governed by Atomic Energy Commission license. The Commission understands that this is not the intent of the Instruction and requests that this be made clear in the promulgation of the Instruction to the naval activities involved.

With respect to SECNAV INSTRUCTION 4555 the Commission understands that naval facilities authorized by CNO will not be authorized by CNO to receive Atomic Energy Commission licensed radioactive material for disposal. The Commission believes that this can be controlled with the wording of the authorizations which we note will be prepared in consultation with the Commission.

The Atomic Energy Commission concurs in BUSHIPS INSTRUCTION 9890 and SECNAV INSTRUCTION 4555, subject to its review of NAVSHIPS 389-0266 and NAVSHIPS 389-0268 and the comments given above.

Based upon a review of BUSHIPS INSTRUCTION 9890.10; "Bureau of Ships Material Management Manual"; NAVSHIPS 350-471; and "Bureau of Supplies and Accounts Manual - Vol. II - Supply Ashore", the Commission concurs that the system of accountability for special nuclear material associated with naval nuclear propulsion is adequate.

Sincerely yours,

Distribution:

- 1 Addressee & courtesy cy.
- 2 Chairman
- 1 Director of Regulation
- 1 OOC
- 1 R. Lowenstein L&R
- 1 R. L. Kirk L&R
- 1 E. Price L&R
- 5 L&R: Isotopes Branch

Chairman

Honorable Maxwell Gilpatric
Deputy Secretary of Defense

L&R:IB

L&R:ML

L&R

JRMason

LJohnson

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UNITED STATES GOVERNMENT

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*Mkt = S-3. Hazard from this
Headline*

Reference Section

Memorandum

TO : Robert Lowenstein, Acting Director
Division of Licensing and Regulation

DATE: August 9, 1961

FROM : W. B. McCool, Secretary

SUBJECT: AEC 1067/7 - REVIEW OF NAVY INSTRUCTIONS FOR MANAGEMENT OF
RADIOACTIVE MATERIALS, WASTES, AND ACCOUNTABILITY OF SNM

SYMBOL: SECY:WLW

1. We informed your office on August 9, 1961, that at Meeting
1763 on August 8 the Commission:

a. Approved the draft letter (attached as Appendix "B"
to AEC 1067/7 to the Deputy Secretary of Defense; and

b. Noted that AEC 1067/7 is unclassified.

2. The Acting Director of Regulation has directed you to take
the action required by the above decision. It is our understanding that
your office will prepare the correspondence to the Deputy Secretary of
Defense. A copy of this letter together with other pertinent correspondence
should be provided the Office of the Secretary.

cc: Acting Director of Regulation
General Manager
Deputy General Manager
Asst. General Manager
General Counsel

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8-9-61

*M.A.S. - 3 Hazards of
Military Reactors*

UNCLASSIFIED

AEC 1067/5

August 7, 1961

COPY NO. 14

ATOMIC ENERGY COMMISSION

NAVY AND AEC CORRESPONDENCE CONCERNING NAVAL NUCLEAR
POWERED SHIPS

Note by the Secretary

The General Manager has requested that the ^{*}attached memorandum and enclosures from the Assistant Director (Naval Reactors), Division of Reactor Development, be circulated for the information of the Commission.

AEC
1067
5

W. B. McCool
Secretary

** filed in Bulky Package*

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Licensing & Regulation	11
Reactor Development	12
D. C. Office	13
Secretariat	14

x *M.A.S. - Naval Prop.
K-72-12-000
P.L.B. 1-50 - Military Reactors*

8-7-61

UNITED STATES GOVERNMENT

Memorandum

TO : W. B. McCool, Secretary
Office of the Secretary

DATE:

FROM : H. L. Price, Acting Director of Regulation
A. R. Luedecke, General Manager, Office of
the General Manager

HL 7/28/61

ARL - 7/29

SUBJECT: REVIEW OF NAVY INSTRUCTIONS

SYMBOL: L&R:IB:NB

Attached is a staff paper recommending that the Commission approve a draft letter to the Deputy Secretary of Defense with regard to Instructions submitted by the Navy for management of radioactive materials produced by naval reactors, management of radioactive wastes, and accountability of special nuclear material.

It is requested that the paper be circulated to the Commission for action.

Attachment:
Staff Paper

ARL-1067/7

7-29-61

Miles 3 Original for Mil
Heater
DC

UNCLASSIFIED
July 24, 1961

AEC 1067/6
COPY NO. 33

ATOMIC ENERGY COMMISSION

RADIOACTIVE EFFLUENT DISCHARGE
BY NAVAL NUCLEAR POWERED SHIPS

Note by the Secretary

The attached memorandum from H. G. Rickover to General Luedecke, together with attachments, is circulated for the information of the Commission.

W. B. McCool
Secretary

AEC
1067
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DECLASSIFICATION REVIEW
Reviewers: D. L. Thomas 4/16/97
OK unclassified
Classification: Retained, Changed to _____
Controlled _____
Information bracketed: _____ yes _____ no

CONTAINS INFORMATION UNCLASSIFIED INFO
~~COORDINATE WITH CNO (NAVAL Reactors)~~ ALS
DOE NSI DECLASSIFICATION REVIEW E.O. 12958
BY: MARY DEFFENBAUGH DCSNN-523 7/96 ooc
WITH ATTACHMENTS/ENCL

706-1000

UNCLASSIFIED

MEMORANDUM

July 11, 1961

TO : A. R. Luedcke, General Manager
F. K. Pittman, Director of Reactor Development

FROM : H. G. Rickover, Assistant Director (Naval Reactors)
Division of Reactor Development

SUBJECT: RADIOACTIVE EFFLUENT DISCHARGE BY NAVAL NUCLEAR
POWERED SHIPS

SYMBOL : RD:NAV:HGR

By letter dated July 11, 1961 I have sent to the Surgeon General, U. S. Public Health Service, a summary of the radioactivity discharged by naval nuclear powered ships in ports and at sea during calendar year 1960. The letter notes that measurements of environmental radioactivity by local public health agencies have shown the operation of the naval nuclear powered ships has had no detectable effect on the normal background radioactivity.

I believe this information is of interest to the Commission and the Joint Congressional Committee on Atomic Energy. I therefore recommend you send the attached proposed letter to the Chairman of the Joint Committee enclosing a copy of my letter to the Surgeon General. I also recommend the attached letter and its enclosure be circulated to the Commission for information.

/s/

H. G. RICKOVER

Attachment:
Proposed letter to Chairman JCAE w/encl.

UNCLASSIFIED

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

July 20, 1961

Honorable Chet Holifield, Chairman
Joint Committee on Atomic Energy
Congress of the United States

Dear Mr. Holifield:

Attached for your information is a copy of a letter from Admiral Rickover to the Surgeon General, U. S. Public Health Service, which summarizes the total amounts of radioactivity discharged by naval nuclear powered ships in ports and at sea during calendar year 1960. The letter notes that measurements of environmental radioactivity by local public health agencies have shown the operation of naval nuclear powered ships has had no detectable effect on the normal background radioactivity.

Sincerely yours,

/s/

R. E. Hollingsworth
Deputy General Manager

Enclosure:
Letter, H. G. Rickover to
Surgeon General, USPHS

UNCLASSIFIED

DEPARTMENT OF THE NAVY
BUREAU OF SHIPS
WASHINGTON 25, D. C.

SER 15000-1452

C O P Y

July 11, 1961

Dr. Luther Terry
Surgeon General
U. S. Public Health Service
Department of Health, Education and Welfare
Washington 25, D. C.

Dear Dr. Terry:

Procedures and criteria for the disposal of low-level radioactive effluents from naval nuclear powered ships have been developed in cooperation with the United States Public Health Service and the United States Atomic Energy Commission. These procedures for controlling effluents from the ships are designed to insure that the radioactivity in the water surrounding the ship will not exceed the concentrations specified for unrestricted areas in the Code of Federal Regulations, Title 10, Part 20. Measurements of environmental radioactivity by local public health agencies in localities where naval nuclear powered ships are operating have shown that the operation of these ships has had no detectable effect on the normal background radioactivity.

In connection with environmental background radioactivity information which you already receive from certain naval and public health activities, you may find it helpful to have a periodic summary of the radioactivity discharged by naval nuclear powered ships. This information which is obtained from official reports by the ships, will be supplied to you annually as shown in the table below. The table summarizes the measured total radioactivity (excluding activities of less than one day half-life) discharged in various seaports and in the open sea. This table for 1960 does not list specific ports other than New London, Connecticut because no other port has had total discharge from the ships greater than 0.01 curies. The radioactivity of the discharges is due almost entirely to activated steel corrosion products. The regular measurements by ships personnel prior to discharge show that fission products do not exceed trace amounts and there is no detectable alpha activity.

UNCLASSIFIED

Ser 1500G-1542

COPY

RADIOACTIVITY DISCHARGED BY NAVAL NUCLEAR POWERED SHIPS
CALENDAR YEAR 1960 - TOTAL

A. Liquid Discharged in Port

New London, Connecticut 0.013 curies

All other ports combined
(none more than .01 curies) 0.017 curies

B. Liquid Discharged during operations
at Sea

0.007 curies

C. Spent Ion Exchange Resin

(Discharged at sea in water more
than 1200 feet deep) Approx. 14 curies

You may use this information as you consider appropriate to keep state and local health agencies and other cognizant groups informed. I am also sending this information to the United States Atomic Energy Commission and to the Joint Congressional Committee on Atomic Energy.

Sincerely yours,

/s/

H. G. Rickover
Assistant Chief of Bureau
for Nuclear Propulsion

M.H. 3 Hazards from Mil Reactors

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

June 26, 1961

Dear Ros:

The Commission and the DOD are both interested in health and safety problems involving nuclear weapons, special nuclear materials and reactors acquired by the DOD pursuant to Presidential directive. You will recall we recently agreed upon, together with Mr. McGeorge Bundy in the White House, some language which describes the procedures applicable to the safety aspects of such weapons.

The attached language follows the same pattern, but has been modified to make it adaptable to the safety aspects of special nuclear materials and reactors.

Prior to proposing this language to the President, we would like to have it, if it is at all possible, coordinated with you by Wednesday, June 28. It is our thought that the language would be incorporated in a statement which the President would sign prior to June 30 directing annual production of special nuclear material and weapons by the Commission and the transfer of reactors and special nuclear material to the DOD.

Sincerely yours,

/s/

Chairman

Enclosure:
Proposed Language

The Honorable Roswell Gilpatrick
Deputy Secretary of Defense

*Copies filed:
Materials 5-Prod Program
M.H. 4.5 Storage
M.H. 16.5*

6-24-61

Administrative responsibility will rest with the Department of Defense for identifying and resolving health and safety problems relating to special nuclear material or the operation of utilization facilities held by DOD pursuant to directives of the President under Section 91b of the Atomic Energy Act. In view of the Atomic Energy Act of 1954, AEC will participate as a matter of responsibility. In this connection, the Secretary of Defense shall prepare, issue, and enforce safety standards, instructions or procedures applicable to the possession and use of such special nuclear material or to the location and operation of utilization facilities. However, to the extent AEC deems necessary or desirable the Secretary of Defense shall obtain the advice and assistance of the AEC in the preparation or amendment of such safety standards, instructions or procedures, and shall obtain the concurrence of the Commission in their adequacy. The design of all utilization facilities must be approved by the Commission. Disagreements which cannot be directly resolved by the two agencies shall be referred to the President for decision.

*M.H. 2-3-Handbook of
Military Reactor*

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AEC 1067/3

June 21, 1961

COPY NO. 12

ATOMIC ENERGY COMMISSION

OPERATION OF NUCLEAR POWERED SHIPS

Note by the Secretary

The attached memorandum from H. G. Rickover is circulated for the information of the Commission.

W. B. McCool
Secretary

AEC
1067
3

DISTRIBUTION

COPY NO.

Secretary	1
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Secretariat	12 - 16

Draft filed Security - 4 - 5 - visits by Ships to Foreign Ports

6-21-61

UNCLASSIFIED

June 15, 1961

To: Chief of Naval Operations
From: Assistant Director (Naval Reactors)
Division of Reactor Development

Subj: Operation of Nuclear Powered Ships

1. Your Naval Message to Commander-in-Chief, U. S. Atlantic Fleet (Day-time group 122155 Z May 61) stated that an International Maritime Exhibition will be held in Halsingborg, Sweden from 11 to 27 August 1961. This message said the American Embassy in Stockholm had requested that a nuclear ship be made available to visit Halsingborg for this exhibition and that NS SAVANNAH was originally proposed but would not be available. You stated that a nuclear submarine was being considered as an alternate. You requested comments from Commander-in-Chief, U. S. Atlantic Fleet regarding the availability of a nuclear submarine for any time during the proposed period.

2. In a letter to me dated 22 May 1961, you stated:

"There is a military requirement for an operational visit of USS SHARK (SSN591) to Halsingborg, Sweden about 11-17 August 1961. The purpose of this visit is United States participation in an International Maritime Exhibition, 'Shipping 1961.'"

On May 26, 1961 your office (Op-75) informed me that the proposed operation had been cancelled because no nuclear submarine was available for the visit.

3. In a letter to you dated June 7, 1961, I expressed my concern over the Navy's handling of reactor safety aspects of the operation of nuclear powered naval ships. Specifically, I stated:

"...the Navy must ensure that in the event of a nuclear accident, the claim of 'military necessity' for an operation could be publicly justified. I am concerned that in some cases in the past this would have been difficult. For recurring operations it might even be difficult for the Navy to show that an adequate review and decision had been formally made in each case. Public and Congressional reaction to misuse of 'military necessity' would be profound; it could severely damage confidence in the Navy and could result in operational restrictions on nuclear powered naval ships by non-naval activities."

I of course am not in a position to evaluate military necessity. However, from the information available to me, it appears the Navy would have a difficult time justifying the military necessity of the proposed visit to Halsingborg.

/s/ H. G. Rickover

BCC:
Chairman, U. S. Atomic Energy Commission
Chairman, Advisory Committee on Reactor Safeguards

*M.H. 2-5 - Hazards of
Military Reactors*

~~CONFIDENTIAL~~

CONFIDENTIAL

AEC 1067/1

June 15, 1961

COPY NO. 33

AEC
1067
1

ATOMIC ENERGY COMMISSION

OPERATION OF NUCLEAR POWERED SHIPS

Note by the Secretary

The attached memorandum to the Chief of Naval Operations is circulated for the information of the Commission. The matter will be scheduled for discussion at an early Commissioners' Information Conference.

W. B. McCool
Secretary

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Asst. Gen. Mgr.	10 - 11
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BY: MARY DEFFENBAUGH / 02/27/93

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*X.M.P. A-6 - Naval Prop
M.H. 6 - Nuclear Subs.*

6.15.61

DATE:

INDEX: MR&S 3 Hazards ~~form~~ of Military Reactors

~~MR&S 3 Reg. Safety Hazards of Reactors - AEC~~
~~OM 7 MIA~~

TO:

FROM:

SUMMARY: AEC-R 71 - ENGINEERS MANUAL "SAFETY OF ARMY NUCLEAR POWER PLANTS"
ltr. from the MLC to AEC forwarding copies of the
above manual.

FILED: MR&S 3 Reg. Hazards of Military Reactors

INDEXER: date of paper: 3-28-61
date of ltr: 3-22-61

REMARKS:

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BY: MARY DEFFENBAUGH DOE/NN-523
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U. S. ATOMIC ENERGY COMMISSION
CORRESPONDENCE REFERENCE FORM

38861

*W. H. A. 3. Hazards of Power Reactors
Military*

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February 9, 1961

AEC 1067
COPY NO. 20

AEC
1067

ATOMIC ENERGY COMMISSION

OPERATING PROCEDURES FOR MILITARY REACTORS

Note by the Secretary

The Acting Chairman has requested that the attached memorandum and enclosures be circulated for the information of the Commission.

W. B. McCool
Secretary

<u>DISTRIBUTION</u>	<u>COPY NO.</u>
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Asst. Gen. Mgr. R&S	11
Asst. Gen. Mgr. R&ID	12
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*X. W. H. A. 3. Hazards of Power
D. M. 12-060
P. B. 5-50. Military Reactors*

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ENCLOSURE I

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D. C.

February 6, 1961

MEMORANDUM FOR: THE GENERAL MANAGER

I reviewed General Loper's letter of January 24th,* enclosing a copy of the Corps of Engineers' review of the PM-2A Army reactor at Greenland. (A copy of this correspondence is attached for your convenience.) In connection with our previous agreement with the MLC concerning Commission review of operating procedures for reactors, I assume that this is the first submission for this purpose.

You will recall that the above agreement was referred to in my memorandum of January 9, 1961 (copy attached for your convenience) and contemplates Commission action on operating procedures for reactors in a manner similar to that provided on safety rules for use of weapons and weapons systems.

I consider that this is an extremely important matter, and I would like the staff to review and submit for Commission consideration, as soon as possible, the attached rules. I believe that with the highly commendable procedures in effect for Naval reactors, and the advanced stage of their review, it would be most appropriate to establish the pattern for final Commission consideration of reactor operating procedures with them. It is highly important that we then follow up expeditiously to review the operation procedures for other reactors presently in operation.

In view of the importance of this matter, I believe we should have a plan which would show the scheduled date for submission of proposed rules by the Department of Defense in each of the following categories: reactors in operation, reactors under construction, and reactors authorized. The schedule should also show the time required for staff consideration and an estimated date for Commission consideration.

John S. Graham
Acting Chairman

Attachments

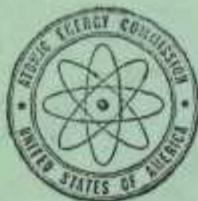
* Circulated as AEC 420/78.

Pl. B. L. S. - Army Power Reactor

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ENCLOSURE II

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

January 9, 1961

IN REPLY REFER TO:

MEMORANDUM FOR: John A. McCone, Chairman

Re: Army Reactor Safety Rules

References: Mr. McCool's memo to JSG of 12/14/60 enclosing
Dr. Pittman's memo of 12/13/60, and Mr. McCool's
memo to him of 11/15/60.

You will recall the discussion during the AEC-MLC briefing of October 6, 1960 (Meeting No. 128) concerning the Army Reactor Program.

The Commissioners raised questions concerning the safety and training programs for the operation of military power reactors and noted the necessity to have safety rules and procedures formally presented to the Commission as is done in the case of the weapons programs. It is my recollection that General Loper assured us that this would be done.

This point was followed up at the Agenda Planning Session of November 14, 1960. The Secretary's memorandum of November 15 (copy attached) noted such action and, at the request of the General Manager, Dr. Pittman was the addressee.

Dr. Pittman's memorandum to the Secretary of December 13, 1960 appears to have been prepared by the Army Reactors Branch (copy enclosed). It is not responsive, in my opinion. The memorandum does not reflect any awareness of the Commissioners' concern for matters of public health and safety despite the fact that a considerable portion of the MLC meeting of October 6, 1960 concerned this point. The memorandum merely sets forth the steps taken under present practice for processing the hazards analysis when a reactor is built or procured or when, in the opinion of the staff, there is a major modification or change in operating conditions. It does not go to the basic causes of the Commission's concern that there are in existence rules and procedures to insure the safe operation of the reactor. These would include the fixing of responsibility for safe operation of the reactor; the establishment by the military of adequate rules and procedures for their operation; the establishment of training programs and standards for operating personnel, etc.

Likewise, the memorandum does not deal with the question facing the Commission of discharging its responsibility for

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the public health and safety through the review and approval of the rules and procedures. In effect the memorandum seems to imply that the present practice of hazards reviews is adequate under which decisions are made on a case by case basis by the Director of Reactor Development for prototypes and by the Chief of Engineers, under the memorandum of understanding with the DOD of November 8, 1954, for field plants. The inference is that no further action is necessary or desirable.

I am surprised that Dr. Pittman by signing the memorandum prepared for his signature has endorsed this attitude. The whole issue of nuclear safety has had frequent mention not only with respect to weapons, but also with respect to naval and maritime reactors. Specifically, I have the impression that Dr. Pittman participated in the rather long discussion in the AEC regarding the Navy program, and which culminated in the Chairman's reply to the Chief of Naval Operations of June 23, 1959 (copy attached).

As a result of the unhappy incident at Idaho Falls the General Manager's office began to assemble the history of that reactor, including operating and training procedures. I would expect such work to result in action which will be responsive to the discussion at the MLC meeting and the follow-up request of November 15, 1960.

John S. Graham
John S. Graham

Attachments:

- (1) Mr. McCool's memo to JSG of 12/14/60
- (2) Dr. Pittman's memo to Mr. McCool of 12/13/60
- (3) Mr. McCool's memo to Dr. Pittman of 11/15/60
- (4) Chairman's letter to Adm. Burke of 6/23/59

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ENCLOSURE III

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D. C.

December 14, 1960

MEMORANDUM FOR COMMISSIONER GRAHAM

Subject: SAFETY RULES FOR ARMY REACTORS

At the Agenda Planning Session on November 14, 1960, you requested concurrent Commission consideration of Army Reactor Safety Rules and AEC 25/119 and 25/120 - Air Force Safety Rules, now scheduled for today's meeting. In discussion of my request memorandum (copy attached), the Army Reactors people informed me that the proposed rules would not be ready for AEC consideration at this time. I then requested submission of a status report for you, which is attached. You will note that AEC's consideration of the Hazard Reports, etc., on these reactors does not contemplate Commission review.

/s/ W. B. McCool

W. B. McCool
Secretary

Attachments:

Memo to Dr. Pittman from Mr. McCool dated 11/15/60

Memo to Mr. McCool w/attachments from Dr. Pittman dated 12/13/60

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ENCLOSURE IV

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D. C.

November 15, 1960

MEMORANDUM

TO : Frank K. Pittman, Director
Division of Reactor Development

FROM : W. B. McCool, Secretary

SUBJECT: ARMY REACTOR SAFETY RULES

SYMBOL : SECY:AHE

1. We informed your office on November 15, 1960 that at the Agenda Planning Session on November 14, Mr. Graham requested Safety Rules on Army Reactors submitted concurrently with proposed Weapons Safety Rules.

2. The General Manager has directed you to take the action requested above. As the Weapons Safety Rules will be submitted to the Commission shortly we will schedule the submission of the Army Reactor Rules at that time.

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ENCLOSURE V

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D. C.

December 13, 1960

MEMORANDUM

TO : W. B. McCool, Secretary

FROM : Frank K. Pittman, Director
Division of Reactor Development

SUBJECT: ARMY REACTOR SAFETY RULES (your memo 11/15/60)

SYMBOL : RD:ARM:GBK

Following Mr. Keyes' discussion with you concerning Mr. Graham's request for Army Reactor Safety Rules, I have had prepared an outline of the actions, relative to safety, which are planned by Col. Page for plants falling within the Army Nuclear Power Program. These actions --- which accommodate the provisions of the Joint Statement of Policy for Operation of Military Power Reactors, dated November 8, 1954 --- parallel those taken with regard to existing military prototypes and field plants, including the ML-1 and ML-1A, and reflect the pattern contemplated for any such future plants.

I understand that you will let me know whether or not this outline satisfies Mr. Graham's request.

Enclosure:
As stated

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ENCLOSURE VI

Hazards Analysis and Review for Army Nuclear Power
Program Reactors

The steps to be followed in reviewing the two classes of ANPP reactors --- prototypes and field plants --- differ somewhat because the former are exclusively within the jurisdiction of the AEC, but the latter are not. The step-by-step procedures for each type of plant are described below, and are represented graphically in the attached chart.

I. Prototypes

A. Preliminary and Final Hazards Reports; Major Plant Modifications; and Major Changes in Operating Procedures or Conditions

1. The contractor prepares material for hazards evaluation and submits to the appropriate Operations Office Manager for review.
2. The Operations Office Manager reviews and forwards to Director, Division of Reactor Development (DRD) with recommendations.
3. Director, DRD reviews and, if he agrees with Operations Office Manager, forwards recommendations to Director, Division of Licensing and Regulation (L&R), requesting approval.
4. L&R reviews the hazard aspects of the reactor, and after it has developed its conclusions arranges for review and evaluation by the Advisory Committee on Reactor Safeguards (ACRS) when appropriate.
5. Based on above reviews, L&R transmits its recommendations to the Director, DRD.
6. Director, DRD authorizes the Operations Office Manager to proceed in accordance with the conditions stipulated by L&R. (In accordance with AEC Manual, Chapter 8401, if the power level of the reactor involved is greater than 10,000 thermal kilowatts the approval of the AGMR&ID will be obtained prior to authorization.)
7. The Operations Office Manager directs the contractor to proceed in accordance with authorization by DRD.

B. Minor Plant Modifications; and Minor Changes in Operating Procedures or Conditions

1. The contractor prepares material for hazards evaluation and submits to the Operations Office Manager for review.
2. If the Operations Office Manager is satisfied that no significant hazards are involved, he recommends that DRD approve the proposed modification or change.

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3. DRD determines whether or not the modification involves significant potential hazards; if no significant potential hazards are involved, DRD authorizes the Operations Office Manager to accomplish the proposed modification or change, informing I&R of the action taken.
4. The Operations Office Manager directs the contractor to proceed in accordance with authorization by DRD.

NOTE: If, in step 3, it is determined that significant potential hazards are or may be involved, action proceeds as in Procedure IA above, beginning with step 3.

II. Field Plants

A. Hazards Report; Major Plant Modifications; and Major Changes in Operating Procedures or Conditions

1. The DOD contractor (or the Plant Operator, as appropriate) prepares a Hazards Report and submits it to the Office, Chief of Engineers, which is the cognizant DOD authority for land-based nuclear plants.
2. The Chief of Engineers submits the Hazards Report to AEC's Assistant General Manager for Regulations and Safety (AGMRS), requesting review.
3. AGMRS refers the Hazards Report to I&R for review.
4. I&R evaluates the potential hazards involved and furnishes comments and recommendations to AGMRS; whether or not ACRS review is required is a matter for AEC determination.
5. AGMRS reports AEC comments and recommendations to the Office, Chief of Engineers.
6. Following review of AEC comments and recommendations, the Office, Chief of Engineers, authorizes the officer in charge of the plant (Plant Operator) to operate the plant with any conditions or limitations considered appropriate by the Office, Chief of Engineers.

B. Minor Plant Modifications; and Minor Changes in Operating Procedures or Conditions

1. Plant Operator prepares material for hazards evaluation and submits to Office, Chief of Engineers for review and approval.
2. The Office, Chief of Engineers refers the material to his Special Assistant for Nuclear Power (SANP), requesting review and recommendations.

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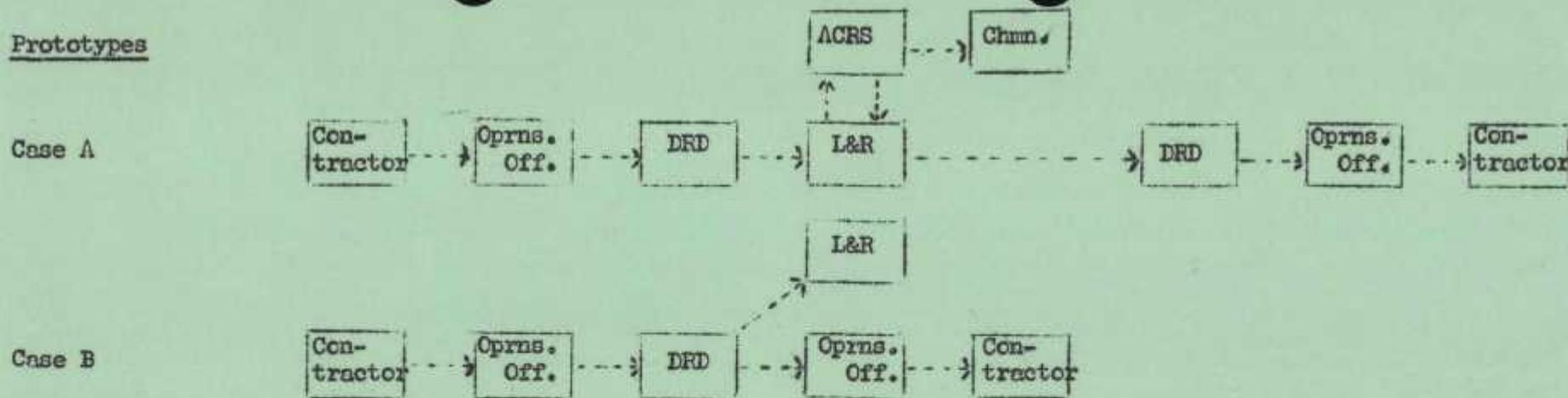
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3. If the SANP considers that no significant hazards are involved, he recommends approval of the proposed modification or change, and the Office, Chief of Engineers notifies the Plant Operator accordingly and informs the AEC's Assistant General Manager for Regulations and Safety of the action taken.

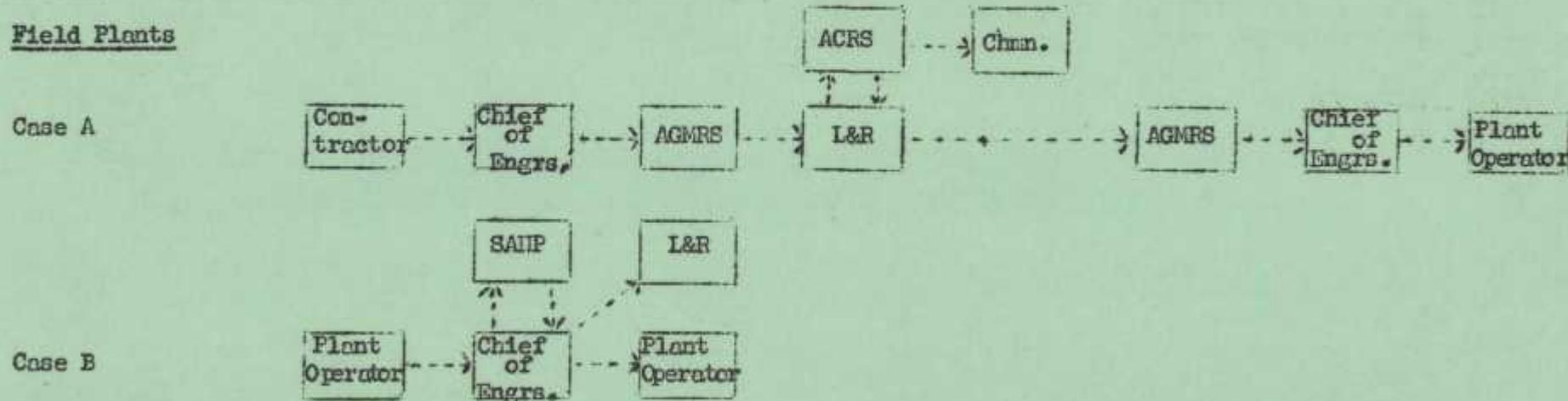
NOTE: If, in step 3, the SANP finds that significant hazards are or may be involved, action proceeds as in Procedure IIA above, beginning with step 2.

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I. Prototypes



II. Field Plants



I. Prototypes

Case A: Preliminary and Final Hazards Reports; Major Plant Modifications; and Major Changes in Operating Procedures or Conditions.

Case B: Minor Plant Modifications; and Minor Changes in Operating Procedures or Conditions.

II. Field Plants

Case A: Hazards Report; Major Plant Modifications; and Major Changes in Operating Procedures or Conditions.

Case B: Minor Plant Modifications; and Minor Changes in Operating Procedures or Conditions.

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ENCLOSURE VIII

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

June 23, 1959

Dear Admiral Burke:

This is in reference to your letters and Instructions on nuclear power naval ships as follows:

Letter of January 21, 1958, transmitting BUPERS Instruction 1540.38 "Personnel and Training Aspects of the Nuclear Propulsion Program", dated December 31, 1957

Letter of February 20, 1958, transmitting OPNAV Instruction O3000.5 "Operation of Nuclear Powered Ships", dated February 6, 1958

Letter of February 25, 1958, transmitting BUSHIPS Instruction 9890.h "Repair and Maintenance of Nuclear Propulsion Plants for Naval Ships", dated February 25, 1958

Letter of November 25, 1958, transmitting OPNAV Instruction O3000.5A (supercedes OPNAV Instruction O3000.5A), dated November 25, 1958

Letter of December 20, 1958, transmitting OPNAV Instruction O3040.3 "Nuclear Reactor Incident; procedures for" dated December 16, 1958

The Commission has reviewed these procedures and Instructions and has had them reviewed by the statutory Advisory Committee on Reactor Safeguards.

In section 161 b. and i. of the Atomic Energy Act of 1954 the Commission is authorized to:

"b. establish by rule, regulation, or order, such standards and instructions to govern the possession and use of special nuclear material, source material, and byproduct material as the Commission may deem necessary or desirable to promote the common defense and security or to protect health or to minimize danger to life or property."

"i. prescribe such regulations or orders as it may deem necessary . . . (3) to govern any activity authorized pursuant to this Act, including standards and restrictions governing the design, location, and operation of facilities used in the conduct of such activity, in order to protect health and to minimize danger to life or property."

In view of the excellence and completeness of the Navy's Instructions from the standpoint of public safety, the Commission does not now deem it necessary or desirable to issue any Commission rules, regulations, or orders concerning nuclear powered naval ships.

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The Commission does not, by reason of this determination, accept responsibility for operational decisions made by the Chief of Naval Operations.

We note that your Instructions are designed to centralize in your office control over the movement of nuclear powered naval ships, because of the potential hazard to life and property in the event of a serious accident. We approve and commend such a system which seems to provide for flexibility of operations for ships at sea or in harbors but emphasizes safety, which is of concern to the AEC.

It is our understanding that such Instructions are prepared in consultation with the Chief of our Naval Reactors Branch. We are pleased that his counsel is sought because we also rely heavily upon his advice in being assured that Navy procedures adequately provide for the safety of the public. Obviously the AEC itself cannot carry out its responsibilities for public health and safety in the field of military nuclear reactors except by arrangement with the military services.

With respect to the design of naval reactor plants, the present practice is working satisfactorily whereby the design of each new class of reactors is summarized in a Reactor Hazards Summary Report and presented by the Naval Reactors Branch and the reactor contractor for review by the Commission's safeguards staff and by the Advisory Committee on Reactor Safeguards (a statutory body). The Commission then transmits to you for guidance the verbatim comments of these reviewing bodies. The Commission also relies on the Chief, Naval Reactors Branch, to keep it informed concerning any design changes or operating data which may have reactor safety significance, in accordance with the applicable Memoranda of Understanding between the DOD and the AEC and the Navy. Thus there seems to be an adequate system in being with respect to the safety of the design, repair, and maintenance aspects of these plants. The continued adequacy of this system, however, as the Commission and the Advisory Committee on Reactor Safeguards have stated in connection with several particular safeguards reviews, requires that the care and competence with which this procedure is presently being carried out be maintained.

Similarly, the great care and attention being given to the selection and training of personnel for the Navy's nuclear program has also been specifically cited by the Safeguards Committee as essential to continued safe operation. In view of the possible serious consequences of a reactor casualty, it is of utmost importance that the operation of nuclear powered ships be entrusted only to persons whose mental abilities and qualities of judgment are commensurate with the responsibilities involved. Therefore, the Commission commends the policy and procedures in BUPERS 1540.38, which recognizes the importance of careful selection and detailed technical training of the officers and men who operate naval nuclear plants.

The Commission wishes to be of maximum assistance to the Navy in nuclear safeguards matters and to this end utilizes the Naval Reactors Branch as a means of liaison between the Navy and the Commission as agreed to in the Memoranda of Understanding. This arrangement has operated effectively; it permits the Naval Reactors Branch to draw various parts of the Commission such as the Hazards

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Evaluation Branch, the Division of Biology and Medicine, and the Advisory Committee on Reactor Safeguards.

The AEC has under review the question of whether there should be any other method of adequately assuring and protecting the public health and safety with respect to military nuclear reactors. We will keep you informed of developments.

In summary, the Commission considers that the Navy's Instructions represent a practical and effective means for providing maximum assurance of safe operation of nuclear powered naval ships. As changes or additional Instructions are issued in this area, the Commission would appreciate being kept informed.

Sincerely yours,

/s/ John A. McCone

Chairman

Admiral Arleigh A. Burke, USN
Chief of Naval Operations
Department of the Navy

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M.A. 9-5-Storage

File

December 14, 1960

MEMORANDUM FOR COMMISSIONER GRAHAM

Subject: SAFETY RULES FOR ARMY REACTORS

At the Agenda Planning Session on November 14, 1960, you requested concurrent Commission consideration of Army Reactor Safety Rules and AEC 25/119 and 25/120 - Air Force Safety Rules, now scheduled for today's meeting. In discussion of my request memorandum (copy attached), the Army Reactors people informed me that the proposed rules would not be ready for AEC consideration at this time. I then requested submission of a status report for you, which is attached. You will note that AEC's consideration of the Hazard Reports, etc., on these reactors does not contemplate Commission review.

W. B. McCool
Secretary

Attachments:

Memo to Dr. Pittman from Mr. McCool dated 11/15/60

Memo to Mr. McCool w/attachments from Dr. Pittman dated 12/13/60

cc: D.C. Office
U.S. Atomic Energy Commission
Office of the Secretary
DEC 15 1960
P.M.

Copy of this memo filed: M.A. 9-5-Storage

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DATE ▶					

83-1460

UNITED STATES GOVERNMENT

Memorandum

TO : W. B. McCool, Secretary

FROM : Frank K. Pittman, Director
Division of Reactor Development

SUBJECT: ARMY REACTOR SAFETY RULES (your memo 11/15/60)

RD:ARM:GBK

Following Mr. Keyes' discussion with you concerning Mr. Graham's request for Army Reactor Safety Rules, I have had prepared an outline of the actions, relative to safety, which are planned by Col. Page for plants falling within the Army Nuclear Power Program. These actions --- which accommodate the provisions of the Joint Statement of Policy for Operation of Military Power Reactors, dated November 8, 1954 --- parallel those taken with regard to existing military prototypes and field plants, including the ML-1 and ML-1A, and reflect the pattern contemplated for any such future plants.

I understand that you will let me know whether or not this outline satisfies Mr. Graham's request.

Enclosure:
As stated

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DEC 13 1960

Hazards Analysis and Review for Army Nuclear Power Program Reactors

The steps to be followed in reviewing the two classes of ANPP reactors --- prototypes and field plants --- differ somewhat because the former are exclusively within the jurisdiction of the AEC, but the latter are not. The step-by-step procedures for each type of plant are described below, and are represented graphically in the attached chart.

I. Prototypes

- A. Preliminary and Final Hazards Reports; Major Plant Modifications; and Major Changes in Operating Procedures or Conditions
 1. The contractor prepares material for hazards evaluation and submits to the appropriate Operations Office Manager for review.
 2. The Operations Office Manager reviews and forwards to Director, Division of Reactor Development (DRD) with recommendations.
 3. Director, DRD reviews and, if he agrees with Operations Office Manager, forwards recommendations to Director, Division of Licensing and Regulation (L&R), requesting approval.
 4. L&R reviews the hazard aspects of the reactor, and after it has developed its conclusions arranges for review and evaluation by the Advisory Committee on Reactor Safeguards (ACRS) when appropriate.
 5. Based on above reviews, L&R transmits its recommendations to the Director, DRD
 6. Director, DRD authorizes the Operations Office Manager to proceed in accordance with the conditions stipulated by L&R. (In accordance with AEC Manual, Chapter 8401, if the power level of the reactor involved is greater than 10,000 thermal kilowatts the approval of the AGMR&ID will be obtained prior to authorization.)
 7. The Operations Office Manager directs the contractor to proceed in accordance with authorization by DRD
- B. Minor Plant Modifications; and Minor Changes in Operating Procedures or Conditions
 1. The contractor prepares material for hazards evaluation and submits to the Operations Office Manager for review.
 2. If the Operations Office Manager is satisfied that no significant hazards are involved, he recommends that DRD approve the proposed modification or change.

3. DRD determines whether or not the modification involves significant potential hazards; if no significant potential hazards are involved, DRD authorizes the Operations Office Manager to accomplish the proposed modification or change, informing L&R of the action taken.
4. The Operations Office Manager directs the contractor to proceed in accordance with authorization by DRD.

NOTE: If, in step 3, it is determined that significant potential hazards are or may be involved, action proceeds as in Procedure IA above, beginning with step 3.

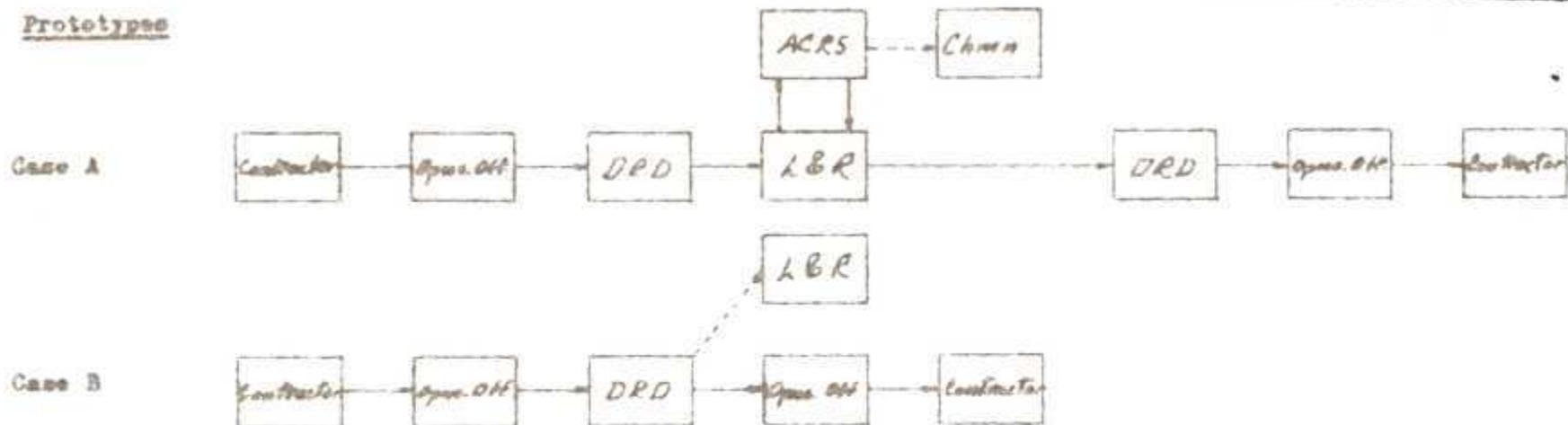
II. Field Plants

- A. Hazards Report; Major Plant Modifications; and Major Changes in Operating Procedures or Conditions
 1. The DOD contractor (or the Plant Operator, as appropriate) prepares a Hazards Report and submits it to the Office, Chief of Engineers, which is the cognizant DOD authority for land-based nuclear plants.
 2. The Chief of Engineers submits the Hazards Report to AEC's Assistant General Manager for Regulations and Safety (AGMRS), requesting review.
 3. AGMRS refers the Hazards Report to L&R for review.
 4. L&R evaluates the potential hazards involved and furnishes comments and recommendations to AGMRS; whether or not ACRS review is required is a matter for AEC determination.
 5. AGMRS reports AEC comments and recommendations to the Office, Chief of Engineers.
 6. Following review of AEC comments and recommendations, the Office, Chief of Engineers, authorizes the officer in charge of the plant (Plant Operator) to operate the plant with any conditions or limitations considered appropriate by the Office, Chief of Engineers.
- B. Minor Plant Modifications; and Minor Changes in Operating Procedures or Conditions
 1. Plant Operator prepares material for hazards evaluation and submits to Office, Chief of Engineers for review and approval.
 2. The Office, Chief of Engineers refers the material to his Special Assistant for Nuclear Power (SANP), requesting review and recommendations.

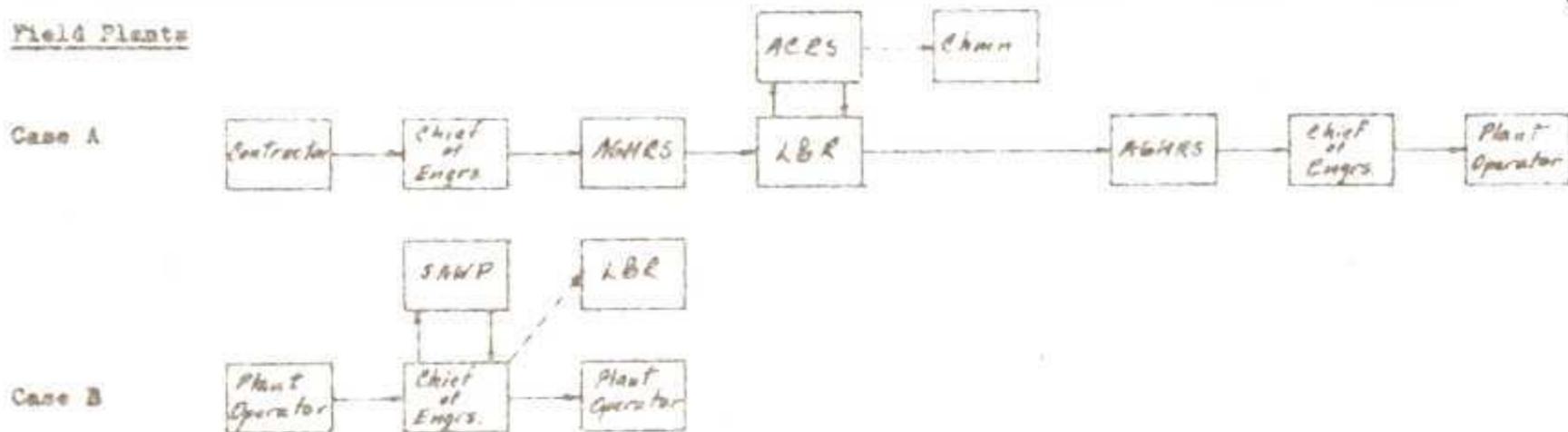
3. If the SANP considers that no significant hazards are involved, he recommends approval of the proposed modification or change, and the Office, Chief of Engineers notifies the Plant Operator accordingly and informs the AEC's Assistant General Manager for Regulations and Safety of the action taken.

NOTE: If, in step 3, the SANP finds that significant hazards are or may be involved, action proceeds as in Procedure IIA above, beginning with step 2.

I. Prototypes



II. Field Plants



I. Prototypes

Case A: Preliminary and Final Hazards Reports; Major Plant Modifications; and Major Changes in Operating Procedures or Conditions.

Case B: Minor Plant Modifications; and Minor Changes in Operating Procedures or Conditions.

II. Field Plants

Case A: Hazards Report; Major Plant Modifications; and Major Changes in Operating Procedures or Conditions.

Case B: Minor Plant Modifications; and Minor Changes in Operating Procedures or Conditions.

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Frank K. Pittman, Director
Division of Reactor Development

November 15, 1960

W. B. McCool, Secretary

ARMY REACTOR SAFETY RULES

SYMBOL: SECT:AHE

1. We informed your office on November 15, 1960 that at the Agenda Planning Session on November 14, Mr. Graham requested Safety Rules on Army Reactors submitted concurrently with proposed Weapons Safety Rules.

2. The General Manager has directed you to take the action requested above. As the Weapons Safety Rules will be submitted to the Commission shortly we will schedule the submission of the Army Reactor Rules at that time.

cc: Mr. Graham
General Manager
Deputy Gen. Manager
Asst. Gen. Mgr.
Asst. Gen. Mgr. for R&ID
General Counsel
Director, Military Application

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COPY

UNITED STATES GOVERNMENT

Memorandum

MS-3 - [unclear] to [unclear]
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*Secretary
Reference Sec*

TO : Frank K. Pittman, Director
Division of Reactor Development

DATE: November 15, 1960

FROM : W. B. McCool, Secretary

SUBJECT: ARMY REACTOR SAFETY RULES

SYMBOL: SECY:AHE

1. We informed your office on November 15, 1960 that at the Agenda Planning Session on November 14, Mr. Graham requested Safety Rules on Army Reactors submitted concurrently with proposed Weapons Safety Rules.

2. The General Manager has directed you to take the action requested above. As the Weapons Safety Rules will be submitted to the Commission shortly we will schedule the submission of the Army Reactor Rules at that time.

cc: Mr. Graham
General Manager
Deputy Gen. Manager
Asst. Gen. Mgr.
Asst. Gen. Mgr. for R&ID
General Counsel
Director, Military Application

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Copy filed: MR. A-95. Storage

11-15-60

MH-13 - Hazards of Power Reactor

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Reference See

UNITED STATES GOVERNMENT

Memorandum

TO : Frank K. Pittman, Director
Division of Reactor Development

DATE: October 12, 1960

FROM : W. B. McCool, Secretary

SUBJECT: REVIEW OF THE ARMY'S MOBILE POWER REACTORS

SYMBOL: SECY:WLW

1. We informed your office on October 12, 1960, that at Meeting 1663 on October 11, 1960, during discussion of AEC 1049/3 - FY 1962 Budget Estimates, Commissioner Graham requested a prompt safety review of the Army's mobile power reactors.

2. The General Manager has directed you to take the action required by the above request.

cc: Commissioner Graham
General Manager
Deputy General Manager
Asst. General Manager
Asst. Gen. Mgr. for R&ID
General Counsel

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Cy filed: P2B&S-50-2PPK

10-12-60

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*M.H.A. 2-1-1960
Reference See*

UNITED STATES GOVERNMENT

Memorandum

TO : Frank K. Pittman, Director
 Division of Reactor Development
 Harold S. Price, Director
 Division of Licensing & Regulation

FROM : W. B. McCool, Secretary

DATE: October 12, 1960

SUBJECT: PROCEDURE FOR THE SAFETY REVIEW OF ALL MILITARY AND OTHER REACTOR PROJECTS

SYMBOL: SECY:WLW

1. We informed your office on October 12, 1960, that at Meeting 1663 on October 11, 1960, during discussion of AEC 1049/3 - FY 1962 Budget Estimates, Commissioner Olson requested the establishment of procedures for the safety review of all military and other reactor projects which are not subject to reactor licensing procedures.

2. The General Manager has directed you to take the action required by the above request.

cc: Commissioner Olson
 General Manager
 Deputy General Manager
 Asst. General Manager
 Asst. Gen. Mgr. for R&S
 Asst. Gen. Mgr. for R&ID
 General Counsel

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Cy filed: P.L.B. & 50 Military Reactors

16-12-60

UNIVERSITY OF CALIFORNIA

LAWRENCE RADIATION LABORATORY
BERKELEY 4, CALIFORNIA

August 18, 1960

The Honorable John A. McCone
Chairman
U. S. Atomic Energy Commission
Washington 25, D. C.

Dear Mr. McCone:

I have just returned from a trip on the USS PATRICK HENRY, one of the Navy's nuclear-powered submarines designed to fire Polaris missiles. Accompanying me on this trip were the Advisory Committee on Reactor Safeguards, Commissioner Wilson, Admiral Rickover, General Starbird, and members of the Commission staff. I appreciated the opportunity to see at first hand the operation of one of our latest naval nuclear power plants, review its salient safety features, and observe the performance of the crew. I was truly impressed with all that I saw.

I know that you are acquainted with my great concern about the dangers associated with the operation of mobile reactors. I feel that such reactors are inherently more dangerous to the public since they can be involved in collisions and crashes, in addition to the other casualties that must be considered in evaluating the safety of a reactor plant.

My trip on the PATRICK HENRY convinced me that the care that has been exercised in the design, building, and testing of naval nuclear power plants together with the intelligence and extremely high state of training of the Navy crew has greatly minimized the risk, but has not eliminated it.

The safety record of these nuclear-powered ships is impressive. I know that this is due in a large measure to the safety criteria established by Admiral Rickover in his close working with the Reactor Safeguards Committee. I also know of the pressure he has been under to relax these standards in design and training. In light of the risks that are unavoidably involved, it is of concern to me, and I am sure to the members of the Reactor Safeguards Committee, that such pressures do exist.

Admiral Rickover and his staff have an excellent insight into the entire reactor safety field. Undoubtedly their naval plants are setting

X. Mr. A. C. Nuclear Sub.
Security 5-1-70.C

MEMBERS FALL

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August 18, 1960

the pace in the field of reactor safety. With so many nuclear submarines contemplated, the Navy is fortunate to have such a qualified group to advise them; their advice should be respected.

The application of nuclear power to our naval vessels is extremely important; it has given naval warfare a new dimension. In view of the importance of these ships to our national defense, we must accept the inescapable risk associated with their operation.

My conclusion, however, that such risks are acceptable, is based on present design standards, maintaining the present care in building these power plants and testing them, and maintaining careful selection and training of their operating crews. My conclusion would change if the standards were relaxed.

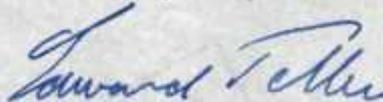
We must not be deluded by the excellent safety record made to date; such a record is not intrinsic to any reactor plant. Reactors are not, ipso facto, safe devices.

It is still my deep conviction that it would be wrong, in spite of all the care taken, to operate these ships in and out of populated ports unless it was absolutely necessary. Since the entire world is watching us in this field, the same prudence should be applied in visits to foreign ports.

I want to thank you for arranging this trip for me, for it gave me great insight into the care that is being taken in the naval nuclear power program. I am sure the Atomic Energy Commission will continue to work with the Navy to insure that the fine record achieved to date will be upheld in the future.

I would appreciate it if you would send copies of this letter to the proper people in the Navy; I believe they may be interested in some of these conclusions.

Sincerely yours,



Edward Teller

ET:gg