

**INCOMING MAIL CONTROL SHEET**  
12ND NRDL 11 (REV. 2-59)

CONTROL NUMBER

91073

OUR FILE NUMBER: J3      THEIR FILE NUMBER: L&R:IE:RLH Docket #27-18      SERIAL NUMBER: #27-18      DATE RECEIVED: 4 May 59      DATE OF MATERIAL: 27 Apr 59

FROM: ~~1/3/59~~ AEC, Washington, D.C.      TO: BuShips (Cy to NRDL)

SUBJECT: Proposed issuance of radioactive waste disposal license; concerning

NO. COPIES RECEIVED: 1

ENCLOSURES: (1) Docket No. 27-18-Notice of proposed issuance of license to dispose of radioactive waste; (2) License No. 4-487-6

NO. ENCLS RECEIVED: 2

ENDORSEMENT:

NO. ENDS RECEIVED:

CODE	A730	<del>250</del>	250	240	200	244		
INITIAL	<del>WJ</del>	<del>WJ</del>	WJ			WJ		
DATE	5/6	<del>5/7</del>	5/7			5/3		

REMARKS

Carus. detached for file (~~27-18~~) (A6.1 ~~27-18~~)

Copy sent to Code 240

No action to be taken until license formally granted. It will be necessary to modify existing waste disposal procedures in order to fully comply with the conditions of the new license. These modifications will be discussed with Code 240 when the license is formally established. WJ

Code 240 - I would like to be present at above discussion on modified procedures. Code 255 will be involved & vehicles will have to be marked as indicated. WJ

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CODE	A730	<del>250</del>	250	740	200	244			
INITIAL	<del>MS</del>	<del>MS</del>	MS						
DATE	5/6	<del>5/7</del>	5/7			5/13			

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*Carus. Detached for file (~~250~~) (AG.1 ~~250~~).*

*Copy hand carried to code 240*

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

11070

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IN REPLY REFER TO:

LAR:IB:RLM

Docket No. 27-13

APR 27 1959

*Handwritten notes:*  
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Fog  
(A.C.)  
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Department of the Navy  
Chief, Bureau of Ships  
Washington 25, D. C.

Attention: Mr. Vincent F. Saitta  
Head, Special Warfare Section  
Research and Development Division

Gentlemen:

Attached is a notice which has been submitted to the Federal Register for filing and publication.

This concerns the proposed issuance of a Byproduct Material License to the U. S. Naval Radiological Defense Laboratory, San Francisco, California to dispose of low-level radioactive wastes in the Pacific Ocean.

You will be notified when final action is taken on this application for a license.

A copy of this letter and attachment is being sent to Mr. A. L. Baletti, Head, Health Physics Division, U. S. Naval Radiological Defense Laboratory.

Sincerely yours,  
(Signed) H. L. Price

H. L. Price, Director  
Division of Licensing and Regulation

Attachment:  
As stated above

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UNITED STATES ATOMIC ENERGY COMMISSION

DOCKET NO. 27-18

DEPARTMENT OF THE NAVY  
U. S. NAVAL RADIOLOGICAL DEFENSE LABORATORY

NOTICE OF PROPOSED ISSUANCE OF BYPRODUCT MATERIAL LICENSE TO  
DISPOSE OF RADIOACTIVE WASTE IN THE OCEAN

Please take notice that the Atomic Energy Commission proposes to issue a Byproduct Material License to the Department of the Navy, U. S. Naval Radiological Defense Laboratory, San Francisco Naval Shipyard, San Francisco, California substantially in the following form, authorizing the disposal of waste byproduct material in the Pacific Ocean at a minimum depth of 1,000 fathoms unless within fifteen (15) days after filing of this notice with the Federal Register Division a motion of intervention and a request for a formal hearing is filed with the Commission in the manner prescribed by Title 10, Code of Federal Regulations, Chapter 1, Part 2, "Rules of Practice". There is also set forth below a memorandum submitted by the Division of Licensing and Regulation which summarizes the principal factors considered in reviewing the application for a license.

For further details see (1) the application submitted by the U. S. Naval Radiological Defense Laboratory and amendments thereto and (2) a copy of Appendix A to the proposed license which contains transportation container specifications substantially similar to those contained in Title 49, Code of Federal Regulations, Part 78, referred to in Condition 5

of the license; both on file at the Commission's Public Document Room,  
1717 H Street, N. W., Washington, D. C. A copy of (2) above may be  
obtained at the Commission's Public Document Room or by request  
addressed to the Atomic Energy Commission, Washington 25, D. C.,  
Attention: Director, Division of Licensing and Regulation.

FOR THE ATOMIC ENERGY COMMISSION

(Signed) H. L. Price

H. L. Price, Director  
Division of Licensing and Regulation

Dated at Germantown, Maryland

this \_\_\_\_ day of April, 1959.

UNITED STATES ATOMIC ENERGY COMMISSION

MEMORANDUM BY THE

DIVISION OF LICENSING AND REGULATION

IN THE MATTER OF

DEPARTMENT OF THE NAVY  
U. S. NAVAL RADIOLOGICAL DEFENSE LABORATORY

DOCKET NO. 27-18

By application dated March 6, 1959, and amendments thereto, the U. S. Naval Radiological Defense Laboratory, San Francisco Naval Shipyard, San Francisco, California requested a license to receive, possess, package and dispose of low-level byproduct material wastes in the Pacific Ocean.

Based on the consideration set forth in this memorandum the Atomic Energy Commission has found that:

- (a) The applicant's proposed equipment, facilities and procedures are adequate to protect health and minimize danger of life or property;
- (b) The applicant is qualified by training and experience to conduct the proposed waste disposal service for byproduct material in such a manner as to protect health and minimize danger of life or property;
- (c) The issuance of a byproduct material license to U. S. Naval Radiological Defense Laboratory will not be inimical to the health and safety of the public.

### Experience of Personnel

The use of byproduct material at U. S. Naval Radiological Defense Laboratory is under the control of the Radioisotope Committee who designate the personnel who may handle licensed material. The members of this committee have had extensive training and experience in radiation safety and the use of byproduct material. Mr. Alfred L. Baietti is Chairman of the Radioisotope Committee and in charge of health physics for the laboratory. He has had over 10 years of training and experience in radiation protection work. Designated personnel of the Health Physics Division will be responsible for the waste disposal program and have several years of experience with radiation and radioactive material, radiation monitoring, decontamination methods, contamination control, and the principles and practices of radiation protection. Therefore, it appears that the applicant has personnel with sufficient training and experience in the handling of radioactive materials to provide assurance that the waste disposal operation will be conducted in a manner to protect the health and safety of the public and minimize danger of life or property.

### Equipment, Facilities and Procedures

NRDL is located within the San Francisco Naval Shipyard which is a restricted military area located on San Francisco Bay, California. The Health Physics Division of the Laboratory is responsible for the radiation safety aspects of the waste disposal operation. This service includes routine and special surveys, personnel monitoring, bioassay of personnel, monitoring instrumentation, and similar services to assure adequate radiological health safety practices. Written instructions on radiation protection precautions and procedures are given to employees.

Transportation of waste material will be conducted in accordance with the regulations of the Interstate Commerce Commission and the U. S. Coast Guard where such regulations apply. Where these regulations do not apply, transportation will be conducted in accordance with Condition 5 of the proposed license which establishes transportation requirements similar to those of the Interstate Commerce Commission Regulations.

The facilities, equipment and operating procedures described by the applicant appear adequate to assure that the disposal operations will be conducted in compliance with the Commission's regulations and the conditions of the proposed license.

#### Containers and Disposal Site

The packaging of waste material and the disposal site will meet the recommendations of the National Committee on Radiation Protection contained in Handbook 58, "Disposal of Radioactive Waste in the Ocean". Waste material is packaged either in 55 gallon drums or concrete blocks so that there will be no significant voids. The completed packages will have a minimum density of 10 lbs/gal. displacement volume to assure sinking. Each container is labeled to indicate the name of the licensee, the date of packaging, the most hazardous radioisotope, and the level of activity. All packages are checked for outside contamination and proper weight upon completion of packaging.

Disposal is within a 5 mile radius circle the center of which is located at the point designated as the parallel of Latitude 37° 41' N and meridian of Longitude 123° 25' W. where the minimum ocean depth is 1,000 fathoms.

This location is beyond the continental shelf and lies approximately 50 miles WSW of San Francisco, California. The licensee will maintain the necessary records to verify disposal at this site.

At least 20 days prior to each sea disposal the Commission will be notified of the proposed date for disposal, total number of containers, total activity of byproduct material in millicuries, and the most hazardous radioisotope in each container. The U. S. Naval Radiological Defense Laboratory has been disposing of waste byproduct material in the Pacific Ocean for several years.

The sea disposal of radioactive wastes at a depth of 1,000 fathoms when packaged in accordance with the requirements of the proposed license is considered a safe method of radioactive waste disposal. The small amounts of radioactive material licensed for disposal if released into sea water at the specified depth would be greatly diluted and dispersed by the ocean and would not result in radioactivity of public health significance.

ISSUED BYPRODUCT MATERIAL LICENSE

DEPARTMENT OF THE NAVY  
U. S. NAVAL RADIOLOGICAL DEFENSE LABORATORY

DOCKET NO. 27-18

License No. 4-487-6  
(D61)

Pursuant to the Atomic Energy Act of 1954, as amended, and 10 CFR 30, "Licensing of Byproduct Material", and in reliance upon the statements and representations contained in the application dated March 6, 1959, including documents incorporated by reference, hereinafter referred to as "the application", a license is hereby issued to the Department of the Navy, U. S. Naval Radiological Defense Laboratory, San Francisco Naval Shipyard, San Francisco, California to receive, possess, package, and dispose of byproduct material.

This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to the provisions of 10 CFR 20, "Standards for Protection Against Radiation", all other applicable rules, regulations, orders of the Atomic Energy Commission now or hereafter in effect, and to the following conditions:

1. The licensee shall not possess more than 150 curies of byproduct material at any one time.
2. Byproduct material shall be received, packaged, and disposed of by, or under the direct supervision of, individuals designated by the

licensee of Radiolotope Committee, pursuant to the terms and conditions governing the composition and functions of the radiolotope committee as described in the application.

3. The licensee shall receive, package, possess and dispose of the byproduct material in accordance with the procedures described in the application, except as provided otherwise in this license.
4. A copy of "Radioactive Waste Handling Procedures" and "Accountability and Health Physics Measures for Radioactive Materials at BOKRE" shall be supplied to each employee of the licensee involved in the receipt, packaging and disposal of byproduct material.
5. The transportation of AEC-licensed material to and from the location designated in Condition 6 shall be subject to the applicable regulations of the Interstate Commerce Commission, United States Coast Guard and other agencies of the United States having appropriate jurisdiction, and where such regulations are not applicable shall be in accordance with the following requirements except as specifically provided by the Atomic Energy Commission:

A. Outside Shipping Containers

- (1) The containers shall meet the specifications for sea disposal containers as approved herein or any one of the following specifications described in Appendix A attached hereto:

- a. 15A, 15B, 12B, 6A, 6B, 6C, 17C, 17H, 19A,  
or 19B for the containment of radioactivity  
in amounts not in excess of 2.7 curies; except  
polonium, 2 curies; or
  - b. Specification 55 for containment of solid  
cobalt 60, cesium 137, iridium 192, or  
gold 198 in amounts not in excess of 300  
curies.
- (2) There shall be no radioactive contamination on any  
exterior surface of the container in excess of 500  
d/m/100 sq. cm. alpha and 0.1 mrep/hr beta-gamma  
radiation.
  - (3) The smallest dimension of the container shall not  
be less than 4 inches.
  - (4) The radiation level at any accessible surface of  
the container shall not exceed 200 mrem/hr.
  - (5) At one meter from any point on the radioactive  
source the radiation level shall not exceed 10  
mrem/hr.
  - (6) Containers which contain radioactive material emitting  
only alpha and/or beta radiation shall contain suffi-  
cient shielding to prevent the escape of primary  
corpuscular radiation to the exterior surface and to  
reduce the secondary radiation at the surface of the

container to at least 10 mrem/24 hours at any time during transportation.

B Inside Containers

- (1) Solid and gaseous radioactive materials shall be packed in suitable inside containers designed to prevent rupture and leakage under conditions incident to transportation.
- (2) Liquid radioactive materials must be packed in sealed glass, earthenware, or other suitable containers. The container must be surrounded on all sides by an absorbent material sufficient to absorb the entire liquid contents and be of such nature that its efficiency will not be impaired by chemical reactions with the contents. Where shielding is required the absorbent material must be placed within the shield. If the inside container meets the Specification 2R in Appendix A the absorbent material is not required.
- (3) Materials containing radioisotopes of plutonium, americium, polonium, or curium, or the isotope strontium 90, in quantities in excess of 100 microcuries, must be packed in containers which meet Specification 2R in Appendix A.
- (4) Inside containers are not required for sea disposal containers as approved herein except where specified in the application.

C. Shielding

Inside containers must be completely surrounded with sufficient shielding to meet the requirements of subparagraphs A(4), A(5) and A(6) of this condition. The shield must be so designed that it will not open or break under normal conditions incident to transportation.

D. Labeling

Each outside container label required under Section 20.203(f) of 10 CFR 20 shall bear the following information:

- (1) Total activity in millicuries, or in the case of source and special nuclear material, the total weight;
- (2) principal radioisotope;
- (3) radiation level at the surface of the container and at one meter from the source; and
- (4) the name and address of the licensee.

E. Each vehicle in which licensed material is transported shall be marked or placarded on each side and the rear with lettering at least 3 inches high as follows: "DANGEROUS - RADIOACTIVE MATERIAL".

F. Accidents

In the event of an accident involving any vehicle transporting licensed material, immediate steps shall be taken to prevent radiation exposure of persons and to control contamination.

G. Exemptions

Specific approval must be obtained from the Atomic Energy Commission for modification of, or exemption from, the

requirements of the license condition. Requests for such approval should be directed to the Chief, Isotopes Branch, Division of Licensing and Regulation, Atomic Energy Commission, and should contain sufficient information to support such a request.

6. The licensee shall store and package byproduct material for sea disposal only at U. S. Naval Radiological Defense Laboratory, San Francisco Naval Shipyard, San Francisco, California as described in the licensee's application.
7. The licensee shall dispose of byproduct material in the Pacific Ocean within a 2 mile radius circle the center of which is at a point designated as parallel of Latitude  $37^{\circ} 41'$  N. and meridian of Longitude  $123^{\circ} 25'$  W. at a minimum depth of 1,000 fathoms.
8. The licensee shall notify the Chief, Isotopes Branch, Division of Licensing and Regulation, Atomic Energy Commission, at least 20 days prior to each disposal, by letter deposited in the United States mail properly stamped and addressed, of the proposed date for disposal, the total number of containers, the total activity of byproduct material in millicuries, and the most hazardous radioisotope contained in each container.
9. Each container for sea disposal shall be durably and visibly labeled with the following information.
  - A. The name and address of the licensee.