48053:GM:mar
9900
Ser 732-4803

FIRST ENDORSEMENT ON NAVSHIPYD HUNTERS POINT LTR 380-430 9900/10 14 JUNE 74

DEC 8 1974

From: Commander, Naval Electronic Systems Command
To: U. S. Atomic Energy Commission
Directorate of Licensing, Material Branch
Via: Commander, Naval Facilities Engineering Command

Subj: AEC Byproduct Material License No. 04-13497-02

Ref: (a) NAVELEX ltr 9900 Ser 397-48063 dtd 25 June 1974 (NOTAL)

Encl: (1) Form AEC-314 (1-74)

1. Basic letter contains a request to terminate subject license.

2. Supplemental material requested by reference (a) is covered in enclosure (1). This material includes the completed, signed and dated Certificate of Disposition of Materials (i.e. the AN/UDM-1A Calibrator containing the 120 curies of Cesium-137) used in the Radiac Repair Facility at the Shipyard.

3. This Command recommends approval of the request for an amendment to terminate License No. 04-13597-02, which authorized the calibration sources used in the Radiac Repair Facility, due to Shipyard closure.

G. N. MAHAFFEY
By direction

Copy to:
NAVSEA Industrial Support Office (Code 1700) San Francisco
NAVELEXSYSENGCEN VALLEJO (Code 034)

amt
12-20-74

AEC-314
(1-74)

UNITED STATES ATOMIC ENERGY COMMISSION

CERTIFICATE OF DISPOSITION OF MATERIALS
(ALL BLOCKS MUST BE COMPLETED)

LICENSEE NAME AND ADDRESS:	LICENSE NUMBER:
Department of the Navy Hunters Point Naval Shipyard San Francisco, California 94135	04-13597-02
	LICENSE EXPIRATION DATE:
	March 31, 1975

The licensee and any individual executing this certificate on behalf of the licensee certify that (check appropriate item(s) below)

A.___ No materials have been procured by licensee.

B. X All materials procured and/or possessed by licensee under license number shown above, have been:

Transferred to: Naval Ordnance Laboratory, White Oak, Silver Spring, Maryland 20910

which has license number: 19-00166-10

C.___ Disposed of in compliance with 10 CFR 20.

D.___ Licensed under license number _____ issued by: _____, an Agreement State pursuant to Section 274 of the Atomic Energy Act of 1954, as amended.

REMARKS: (if additional space is needed, use reverse side)

L. G. Kearney

L. G. Kearney, Radiac Coordinator
Signature of Certifying Official

8/12/74
Date

Please return to:
U.S. Atomic Energy Commission
Office of Regulation
Directorate of Licensing
Washington D.C. 20545

ENCLOSURE (1)

DEPARTMENT OF THE NAVY
HUNTERS POINT NAVAL SHIPYARD
SAN FRANCISCO, CALIFORNIA 94135

IN REPLY REFER TO:
380-430
9900/10
14 JUN 1974

U. S. Atomic Energy Commission
Division of Material Licensing
Materials Branch
Washington, D. C. 20545

VIA: Commander (Code 5044)
Naval Electronic Systems Command
Washington, D. C. 20360

Gentlemen:

Due to Shipyard closure, this activity is no longer in need of by-product material held under AEC license no. 04-13597-02. All Cesium 137 sources have been shipped to Naval Ordnance Laboratory, White Oak, Silver Springs, MD under their AEC license no. 19-00166-10. Wipe tests indicate no detectable Beta-Gamma activity is present on the associated equipment or facilities.

It is requested that AEC license no. 04-13597-02 be terminated and that a copy of the termination notice be forwarded to Hunters Point Naval Shipyard, c/o CDR R. L. Henry, Code 380.

Sincerely yours,

R. L. HENRY
Commander, USN
Production Officer
By direction of the Commander
Hunters Point Naval Shipyard

96 / 5

SUPERVISOR OF SHIPBUILDING, CONVERSION AND REPAIR, USN
TWELFTH NAVAL DISTRICT
SAN FRANCISCO, CALIFORNIA 94135

IN REPLY REFER TO:
1700-54
9900

12 DEC 1974

From: Director, NAVSEA Industrial Support Office, San Francisco, California 94135

To: Commander, Naval Electronic Systems Command (CODE 48053)
Naval Electronic Systems Command Headquarters, Washington, D. C. 20360

Subj: AEC Byproduct Material License No. 04-13597-02

Ref: (a) NAVELEX ltr 4805:GNM:mar 9900 Ser 397-48053 of Jun 25, 1974

Encl: (1) Completed form AEC-314 (2 copies)
(2) NAVELEXSYSENGCEN, Vallejo memo: Radioactive Survey; results of, dtd 6 Dec 1974 (2 copies)
(3) Set of 5 Sketches of areas surveyed (2 sets)
(4) Copy of AEC Byproduct License No. 04-13597-02 w/amendment No. 01 (2 copies)

1. Reference (a) requested additional data known to be required for License termination. Enclosures (1) through (4) provide the requested data. Enclosure (1) is the Certificate of Disposition of Materials. Enclosure (2) is a report of a survey for radioactivity in areas where radioactive materials were used or stored. Enclosure (3) is a set of sketches of the surveyed areas showing grid location and identification of wipe tests. Enclosure (4) is a copy of the Hunters Point Naval Shipyard Byproduct Material License to be terminated.

2. The survey was made by the Shipyard Radiac Coordinator and NAVELEXSYSENGCENVALLEJO who provided the required instrumentation and qualified personnel. The Radiac Coordinator, Mr. L. Kearney will no longer be available after the end of the year. Person to contact in this and other similar matters is Mr. F. Stivender, Code 1700, Head, Maintenance and Security Department, NAVAL SEA Industrial Office, San Francisco, CA. 94135, Phone: COM (415) 641-2618, AV. 799-2618. Mr. Stivender is the last on-site person with continuity of knowledge of the shipyards operations with radioactive materials and instruments. The residual files concerning these matters will be in his custody.

3. Termination of the Byproduct Material License should be sent to: Director, NAVSEA Industrial Support Office (CODE 1700), San Francisco, CA. 94135.

P D Kieldgaard

P. D. KJELDGAARD

4805

Copy to:
NAVELEXSYSENGCEN VALLEJO (Attn: R. J. Reid, Code 034)

1217 037 074

NAVSO 5216/5 (REV. 11-67)
S/N 0104 1762 (REV. 11-67)

DEPARTMENT OF THE NAVY

Memorandum

DATE: 6 Dec 1974

FROM : L. P. McNeice, Code 034

TO : L. Kerney, Code 630.3, San Francisco, CA 94135

SUBJ : Radioactive Survey; results of

1. As requested, the following report is submitted on wipe tests performed at the locations indicated. In addition, surveys made with both an AN/PDR-56 and an E-140N at the same locations, indicated no detectable activity.

(a)	Building 113A	N.D.A.
(b)	Building 146	N.D.A.
(c)	Building 214, RM 105	N.D.A.
(d)	Building 253, 6th Floor	N.D.A.
(e)	Building 351A	N.D.A.

L. P. McNeice

L. P. McNEICE

ENCLOSURE (2)

☆ U.S. GOVERNMENT PRINTING OFFICE: 1970-977-399-147

AEC-314
(1-74)

UNITED STATES ATOMIC ENERGY COMMISSION

CERTIFICATE OF DISPOSITION OF MATERIALS
(ALL BLOCKS MUST BE COMPLETED)

LICENSEE NAME AND ADDRESS:	LICENSE NUMBER:
Department of the Navy Hunters Point Naval Shipyard San Francisco, California 94135	04-13597-02
	LICENSE EXPIRATION DATE:
	March 31, 1975

The licensee and any individual executing this certificate on behalf of the licensee certify that (check appropriate item(s) below)

A.___ No materials have been procured by licensee.

B. X All materials procured and/or possessed by licensee under license number shown above, have been:

Transferred to: Naval Ordnance Laboratory, White Oak, Silver Spring, Maryland 20910

which has license number: 19-00166-10

C.___ Disposed of in compliance with 10 CFR 20.

D.___ Licensed under license number _____ issued by: _____, an Agreement State pursuant to Section 274 of the Atomic Energy Act of 1954, as amended.

REMARKS: (if additional space is needed, use reverse side)

L. G. Kearney

L. G. Kearney, Radiac Coordinator
Signature of Certifying Official

8/12/74
Date

Please return to:
U.S. Atomic Energy Commission
Office of Regulation
Directorate of Licensing
Washington D.C. 20545

NAVSO 5216/5 (REV. 11-67)
S/N 0104-[illegible]762 (REV 11-67)

DEPARTMENT OF THE NAVY

Memorandum

DATE: 6 Dec 1974

FROM : L. P. McNeice, Code 034

TO : L. Kerney, Code 630.3, San Francisco, CA 94135

SUBJ : Radioactive Survey; results of

1. As requested, the following report is submitted on wipe tests performed at the locations indicated. In addition, surveys made with both an AN/PDR-56 and an E-140N at the same locations, indicated no detectable activity.

(a)	Building 113A	N.D.A.
(b)	Building 146	N.D.A.
(c)	Building 214, RM 105	N.D.A.
(d)	Building 253, 6th Floor	N.D.A.
(e)	Building 351A	N.D.A.

L. P. McNEICE

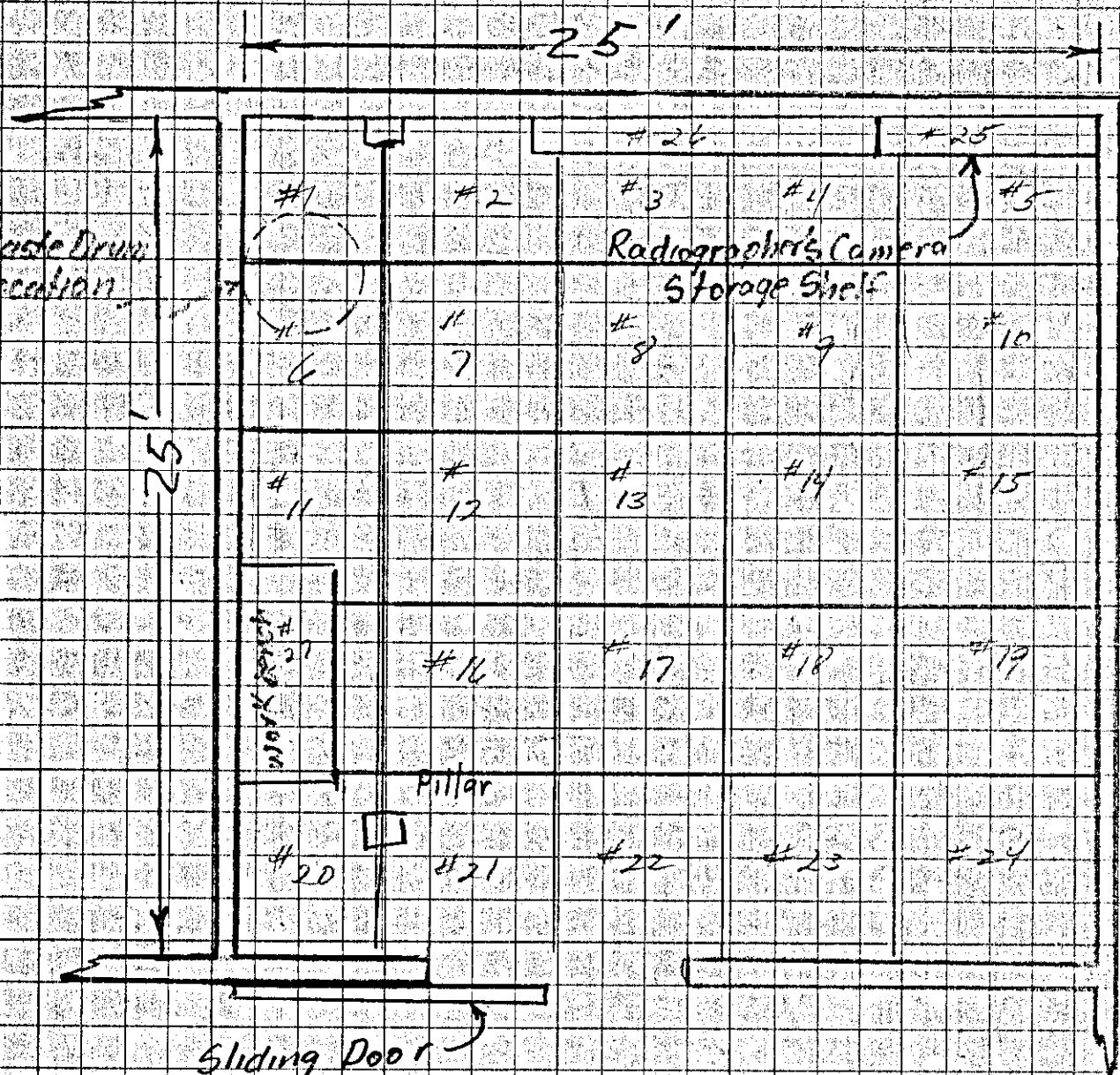
ENCLOSURE (2)

☆ U.S. GOVERNMENT PRINTING OFFICE: 1970-877-399-147

Bldg 103 A 8/15/78

Radiographers Vault & Waste Disposal Storage

Note: Used for Waste Disposal Storage from approx 10/73 to 6/74



Scale 1" = 1 foot

29 WIPES
2 WIPE ON SOURCE TRANSPORT BOX

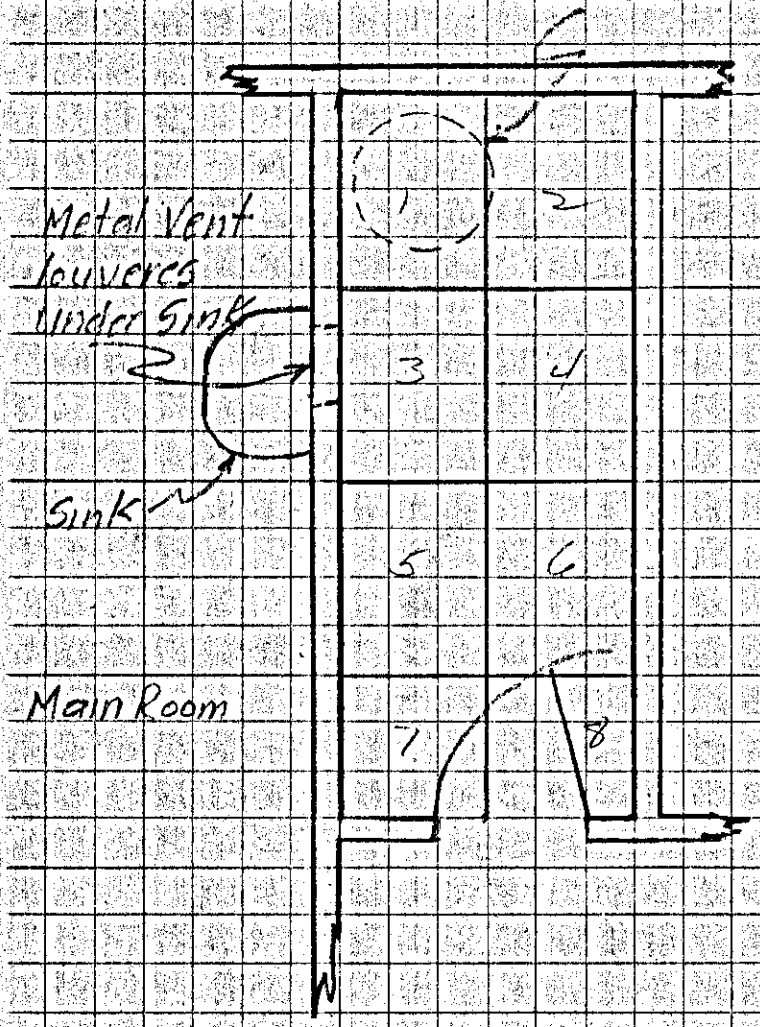
Construction: Concrete (Walls & Floor)

ENCLOSURE (3)

Bldg 146 (Ground floor) 8/21/74

Radioactive Waste Disposal Drum Storage

Note: Used for Waste Disposal Storage until room 10/73.



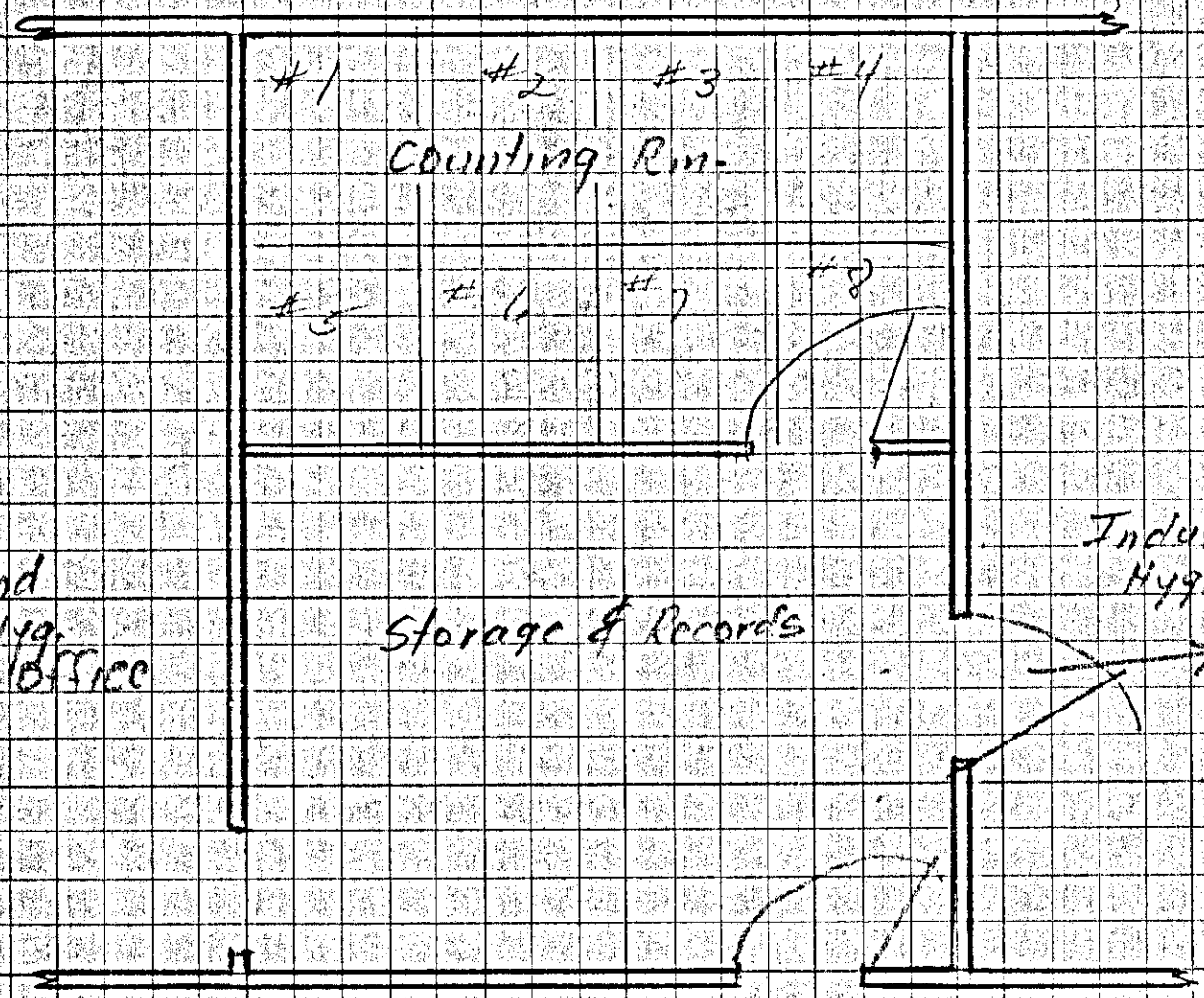
Scale 1 square = 1 ft.

Construction: Concrete Walls & Floor

ENCLOSURE (3)

Bldg 214 Rm 105 8/15/74

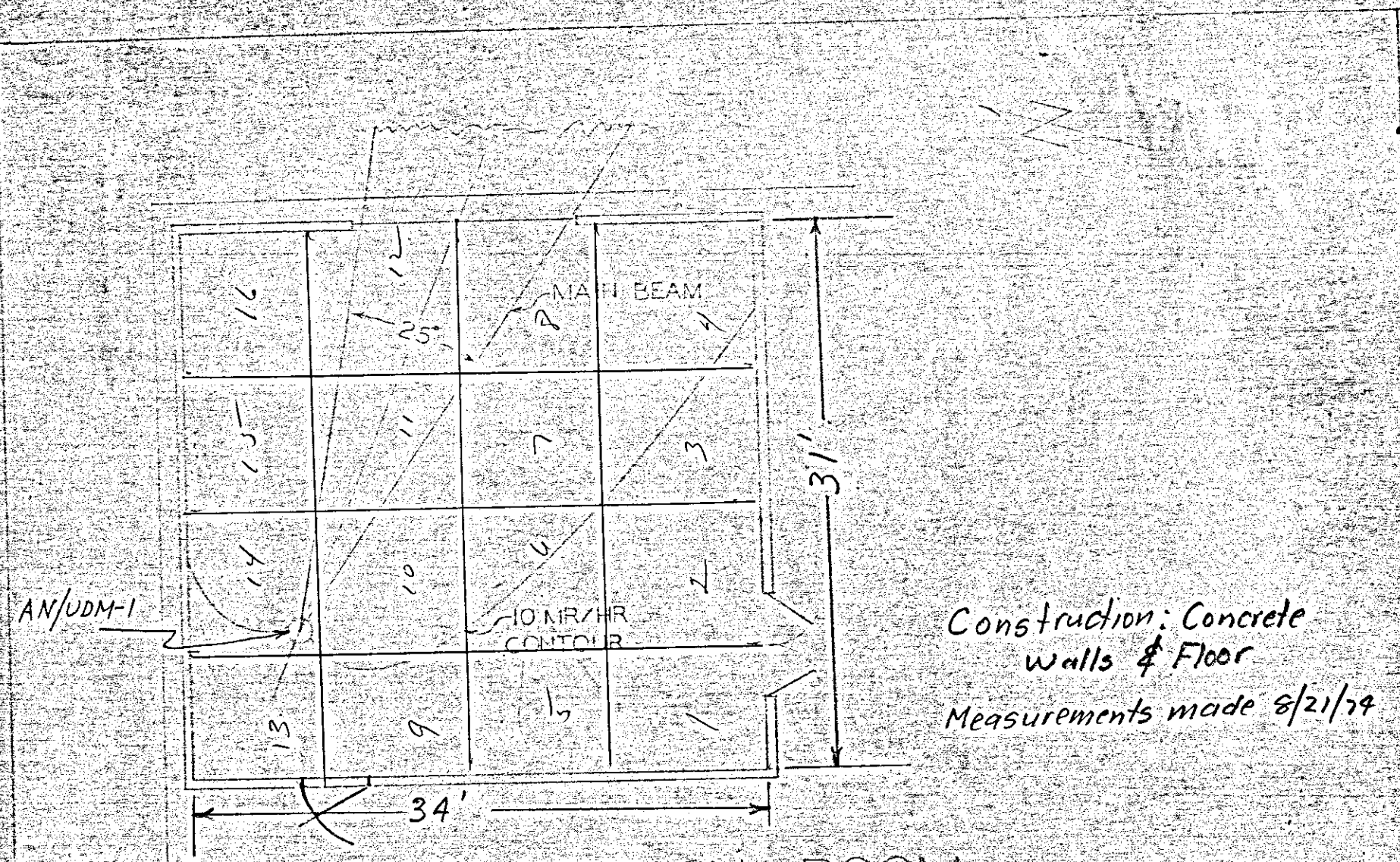
Health Physics Counting Rm.



Scale 1 Square = 1 foot

Construction: Wood frame

ENCLOSURE (3)



Construction: Concrete Walls & Floor

Measurements made 8/21/74

CALIBRATION ROOM

BLDG 253 6TH FLOOR

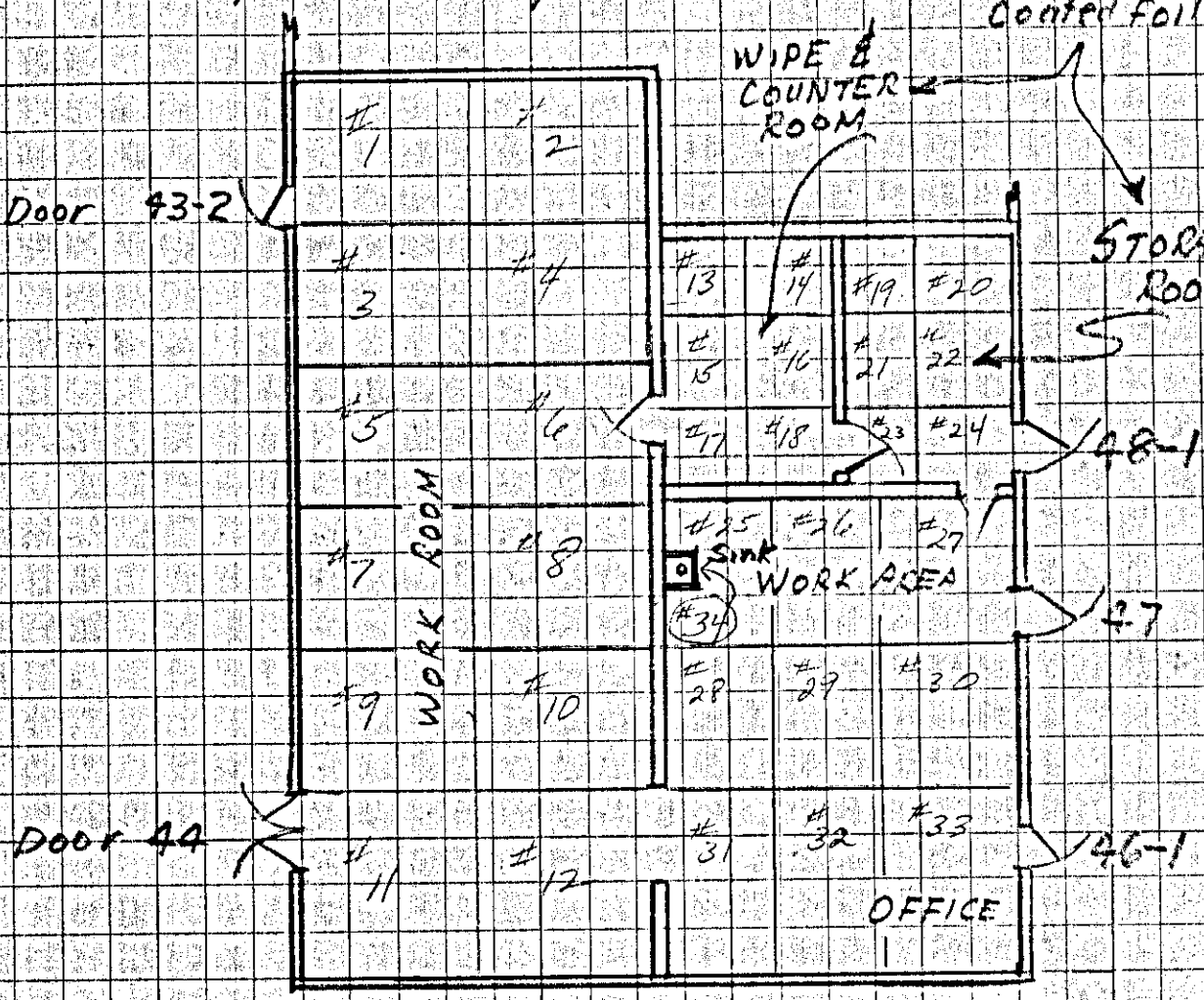
SFNS SKETCH NO. 10555

CODE 288 3/20/58

ENCLOSURE (3)

Bldg 35 A 8/15/74

Radioc Repair Facility



Scale: 1 Square = 3 ft

Construction: Wood frame

ENCLOSURE (3)

*******U N C L A S E F T O*******

ROUTINE
R 162033Z NOV 73
FM NAVELECSYSCOM WEST DIV VALLEJO CA

TO NAVSHIPYD HUNTERS POINT SAN FRANCISCO CA

INFO COMNAVELECSYSCOM WASHINGTON DC COMNAVSHIPSYSCOM WASHINGTON DC

UNCLAS E F T O //N09673//

NAVSHIPYD HUNTERS PT PASS TO CODE 214 AND 380; NAVELEX PASS TO CODE 5044; NAVSHIPS PASS TO CODE 073
RADIAC REPAIR FACILITY
A. HUNTERS PT MSG 151930Z NOV 73
B. NAVELECSYSCOMWESTDIV LTR 9673/R.3 SER 5824 OF 31 AUG 73 (NOTAL)
C. COMNAVELECSYSCOM LTR 9673 SER 551 OF 19 OCT 73 (NOTAL)

1. IN VIEW OF REF (A), IT IS REQUESTED THAT THIS COMMAND BE INFORMED OF THE ANTICIPATED DATE OF DISESTABLISHMENT OF YOUR RADIAC REPAIR FACILITY.

2. REF B AND C PROVIDDS INSTRUCTIONS FOR THE DISESTABLISHMENT OF THE RADIAC REPAIR FACILITY.

SHIP 073 (3)...COG
04(1) 044(1) 043(1) PM2(1) 0715(1) 2075M(1) 037(1)
0354(1) 0422(1) PMS3 &(1) 0567 A 013

ELEX 5044(3)...COG
01(1) 304(1) 102(1) 504(1) 09B51F(1) 1013(1) 50122(1) 0506 A 010

TOTAL COPIES .... 023 ....

E3

021544/321 1 OF 1 BTR 3481 321/00:38Z 162033Z NOV 73

*********U N C L A S E F T O*********

CODE 4805 ROUTE SLIP NAVELEX 5210/14 (5-68)

INDICATE ACTION BY USING APPROPRIATE NUMBER
1. APPROVAL
2. COMMENT
3. FILE
4. INFORMATION
5. INITIAL AND FORWARD
6. PREPARE REPLY
7. SEE ME IN REGARD TO THIS
8. SIGNATURE

ROUTE TO	NAME	ACTION	INITIAL	DATE
✓	4805 Meredith G. Williams		✓	6/28
	4805S Mary A. Roberts			
	48051 James E. Watkins			
	Henry B. Becker			
	48052 Charles S. Hollander			
	Robert E. KRUTOSIK			
	Darrell D. Helton			
	William H. Gibbs			
	Mike Schaeffer			
	Rick Jagdmann			
✓	48053 George N. Mahaffey		Bam	7/1/74
	F. Mullins			
	BRANCH FILE			
	DESTROY			

REMARKS

Retain for termination & RRF file @ Hunters Pt, Calif.

SHIPPING CONTAINER TALLY → 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49

REQUISITION AND INVOICE/SHIPPING DOCUMENT

SHEET NO. 1 / NO. OF SHEETS 1	5. REQUISITION DATE: 3/13/74
6. REQUISITION NUMBER: N00217 4052 3954A	
1. FROM: BASE CLOSURE EQUIPMENT COORDINATOR, CODE 380 HUNTERS POINT NAVAL SHIPYARD, S.F., CALIF. 94135	7. DATE MATERIAL REQUIRED: 3/14/74
8. PRIORITY: 07	
2. TO: RECO TRAFFIC DEPARTMENT HUNTERS POINT DIVISION CODE 906, BLDG. 405	9. AUTHORITY OR PURPOSE: NAVELEC SYSCOM 5044/EER 9673 SER 331 OF 19 OCT 73
RECEIVED 6-28	10. SIGNATURE: F. Stewart
11A. VOUCHER NUMBER AND DATE	
3. SHIP TO - MARK FOR: RECEIVING OFFICER (E60921) 657 NAVAL ORDNANCE LABORATORY (WHITE OAK) SILVER SPRING, MARYLAND 20910 M/T DON CASE CODE 223	12. DATE SHIPPED
13. MODE OF SHIPMENT	14. BILL OF LADING NUMBER
15. AIR MOVEMENT DESIGNATOR OR PORT REFERENCE NO.	

4. APPROPRIATION AND SUBHEAD	OBJ. CL.	SUB. CONT. NO.	SUBAL-LOT.	AUTHORIZATION ACCT'G ACTIVITY	TRANS. TYPE	PROPERTY ACCT'G ACTIVITY	COUN-TRY	COST CODE	AMOUNT
PACKING, CRATING, HANDLING, AND TRANSPORTATION CHARGEABLE TO J.O. 9873-10-9003-002 (applied)									

ITEM NO. (a)	FEDERAL STOCK NUMBER, DESCRIPTION, AND CODING OF MATERIAL AND/OR SERVICES (b)	UNIT OF ISSUE (c)	QUANTITY REQUESTED (d)	SUPPLY ACTION (e)	TYPE CON-TAINER (f)	CON-TAINER NOS. (g)	UNIT PRICE (h)	TOTAL COST (i)
	RADIAC TRANSFERS							
	* THIS REVISION IS TO BE PERMANENTLY ATTACHED TO THE ORIGINAL DOCUMENT BEARING THE SAME REQUISITION NUMBER.							
	* ITEM #1, RADIAC CALIBRATOR AN/UDM-1A IS CLASS 3 PLANT PROPERTY, NID #217-009200.							
	DIST: 380.02, 380.21, 380.24, 380.23, 380.226, 630.3							

RETURN RECEIPT TO NAVSHIPYD HUNTERSPT CODE 380.02

16. TRANSPORTATION VIA MATS OR MSTS CHARGEABLE TO

17. SPECIAL HANDLING

RECAPITULATION OF SHIPMENT

18. ISSUED BY: 15 C. SHIELDS

CHECKED BY

PACKED BY

TOTAL CONTAINER	TYPE CON-TAINER	DESCRIPTION	TOTAL WEIGHT	TOTAL CUBE
		TOTAL		

RECEIPT

19. CONTAINERS RECEIVED EXCEPT AS NOTED — DATE — BY — SHEET TOTAL

QUANTITIES RECEIVED EXCEPT AS NOTED — DATE — BY — GRAND TOTAL

POSTED — DATE — BY — 20. RECEIVER'S VOUCHER NO.

DD FORM 1 MAR 59 1149 (9-PT) 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

REPLACES EDITION OF 1 MAY 58 WHICH MAY BE USED S/N 0102-011-1801

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading

29341
SHIPPER'S NO.

From HUNTERS POINT NAVAL SHIPYARD DATE SHIPPED MARCH 27, 1974 B-2,707,190

At SAN FRANCISCO, CALIF. 430 MBK

NAME OF CARRIER TRI STATE MOTOR TRANSIT TO EXECUTIVE OFFICES BOX 113, JOPLIN, MO. 64801

CONSIGNED TO (Mail or street address of consignee — For purposes of notification only)

NAVAL AORDNANCE LAB

DESTINATION STATE COUNTY

SILVER SPRINGS, MARYLAND

DELIVERY ADDRESS (To be filled in only when shipper desires and governing tariffs provide for delivery thereat)

ROUTE DELIVERING CARRIER TRACTOR NO. TRAILER NO.

TRI STATE

Subject to Section 7 of conditions, if applicable bill of lading, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

(Signature of consignor.)

If charges are to be prepaid write or stamp here, "To Be Prepaid."

Rec'd $ to apply in prepayment of the charges on the property described hereon.

Agent or Cashier

Per

(The signature here acknowledges only the amount prepaid.)

Charges advanced:
$

NUMBER OF PACKAGES	HM	KIND OF PACKAGE, DESCRIPTION OF ARTICLES, SPECIAL MARKS AND EXCEPTIONS	WEIGHT (Subject to Correction)	CLASS OR RATE	CHECK COL.
1		CRT, ELECTRICAL INSTRUMENTS	543#		
1		BOX, RADIOACTI E MATERIALS NOS	602#		
1		MTL DRUM, RADIOACTIVE MATERIALS, NOS	119#		
		TOTAL	1,264#		
		DRO MEDARY SERVICE			
		DANGEROUS PLACARDS RADIOACTIVE PLACARDS			

LENGTH	WIDTH	HEIGHT	TRACE

UNLESS A GREATER VALUE IS DECLARED, THE SHIPPER HEREBY RELEASES THE VALUE TO $5000.00 PER TON OF 2000 POUNDS FOR EACH ARTICLE.

ARRIVED AT SHIPPER	DATE	TIME A.M. P.M.	LEFT SHIPPER	DATE	TIME A.M. P.M.	SHIPPER'S SIGNATURE

SHIPPER, PER AGENT, PER

PERMANENT POSTOFFICE ADDRESS OF SHIPPER

SIGNATURE TALLY RECEIPT

TO BE USED FOR SIGNATURE SECURITY SERVICE (SSS) OR PROTECTIVE SECURITY SERVICE (PSS) FOR THE HAND-TO-HAND RECEIPTING OF CONFIDENTIAL - SECRET OR SENSITIVE SHIPMENTS.

DATE SHIPMENT RECEIVED FROM CONSIGNER
3-27-74 DATE — 10:00 AM/PM TIME — TRACTOR NO. 909
R. Starkey DRIVERS SIGNATURE — TRACY HOME TERMINAL
DRIVERS SIGNATURE — HOME TERMINAL

DATE SHIPMENT RECEIVED FROM 1ST DRIVING TEAM
3-27-74 DATE — 1545 PM TIME — TRACTOR NO.
DRIVERS SIGNATURE — HOME TERMINAL
DRIVERS SIGNATURE — HOME TERMINAL

DATE SHIPMENT RECEIVED FROM 2ND DRIVING TEAM
4-3-74 DATE — 1900 AM/PM TIME — TRACTOR NO. 464
John Ross DRIVERS SIGNATURE — Seneca Dell HOME TERMINAL
DRIVERS SIGNATURE — HOME TERMINAL

DATE SHIPMENT RECEIVED FROM 3RD DRIVING TEAM
DATE — AM/PM TIME — TRACTOR NO.
DRIVERS SIGNATURE — HOME TERMINAL
DRIVERS SIGNATURE — HOME TERMINAL

DATE SHIPMENT RECEIVED FROM 4TH DRIVING TEAM
DATE — AM/PM TIME — TRACTOR NO.
DRIVERS SIGNATURE — HOME TERMINAL
DRIVERS SIGNATURE — HOME TERMINAL

DATE SHIPMENT RECEIVED FROM 5TH DRIVING TEAM
DATE — AM/PM TIME — TRACTOR NO.
DRIVERS SIGNATURE — HOME TERMINAL
DRIVERS SIGNATURE — HOME TERMINAL

DATE SHIPMENT RECEIVED FROM 6TH DRIVING TEAM
DATE — AM/PM TIME — TRACTOR NO.
DRIVERS SIGNATURE — HOME TERMINAL
DRIVERS SIGNATURE — HOME TERMINAL

DATE SHIPMENT RECEIVED FROM 7TH DRIVING TEAM
DATE — AM/PM TIME — TRACTOR NO.
DRIVERS SIGNATURE — HOME TERMINAL
DRIVERS SIGNATURE — HOME TERMINAL

DATE SHIPMENT RECEIVED FROM 8TH DRIVING TEAM
DATE — AM/PM TIME — TRACTOR NO.
DRIVERS SIGNATURE — HOME TERMINAL
DRIVERS SIGNATURE — HOME TERMINAL

ARRIVED AT CONSIGNEE	DATE	TIME A.M. P.M.	LEFT CONSIGNEE	DATE	TIME A.M. P.M.	CONSIGNEE'S SIGNATURE
	8 APR 74	1000		8 APR	1100	NAVAL ORDNANCE LAB SILVER SPRING MD

1 - CONSIGNEE'S COPY - 1

PING CONTAINER TALLY

REQUISITION AND INVOICE/SHIPPING DOCUMENT

SHEET NO. 1 / NO. OF SHEETS 2	5. REQUISITION DATE 2 4 74
6. REQUISITION NUMBER N00217 4052 3934	
7. DATE MATERIAL REQUIRED 3/24/74	8. PRIORITY 07

FROM: BASE CLOSURE EQUIPMENT COORDINATOR, CODE 380
NAVAL SHIPYARD HUNTERS POINT, S.F. CA. 94135

TO: ALCO TRAFFIC DEPARTMENT
HUNTERS POINT DIVISION
CODE 504, BLDG. 406

9. AUTHORITY OR PURPOSE: TRAVELEC SYSCOM 5044/KEK 5673 SER 551 OF 19 OCT 73

10. SIGNATURE: F.C. Stewart

11. VOUCHER NUMBER AND DATE: a. b.

12. DATE SHIPPED

13. MODE OF SHIPMENT

14. BILL OF LADING NUMBER

15. AIR MOVEMENT DESIGNATOR OR PORT REFERENCE NO.

SHIP TO - MARK FOR
RECEIVING OFFICER (N50921)
NAVAL ORDNANCE LABORATORY (WHITE OAK)
SILVER SPRING, MARYLAND 20910)

2 2 6x

W/2 DON CASE CODE 273

16. APPROPRIATION AND SUBHEAD	OBJ. CL.	SUB. CONT. NO.	SUBAL-LOT.	AUTHORIZATION ACCT'G ACTIVITY	TRANS. TYPE	PROPERTY ACCT'G ACTIVITY	COUN-TRY	COST CODE	AMOUNT
PACKING, CRATING, HANDLING, AND TRANSPORTATION CHARGEABLE TO J.O. 9873-10-9008									

ITEM NO. (a)	FEDERAL STOCK NUMBER, DESCRIPTION, AND CODING OF MATERIAL AND/OR SERVICES (b)	UNIT OF ISSUE (c)	QUANTITY REQUESTED (d)	SUPPLY ACTION (e)	TYPE CON-TAINER (f)	CON-TAINER NOS. (g)	UNIT PRICE (h)	TOTAL COST (i)
	RADIAC [illegible] MATERIAL, (RADIOACTIVE)							
01	RADIAC CALIBRATOR AN/UDM-1A SER-4, COMPLETE WITH (a) TRACKS, (b) CALIBRATION TABLE, (c) SCOPE WITH TEDCO 130 CURIES CESIUM 137 (IN SEPARATE CONTAINER) 5 CURIES PLUTONIUM 239							
02	RADIAC CALIBRATOR AN/UDM-5, SER. 25 (IN SEPARATE CONTAINER) [illegible] SHIPPING FACILITY: ARC LICENSE 19-07166-10 APPLIES. SHIP SUBJECT CALIBRATOR VIA TRI-STATE MOTOR TRANSIT COMPANY (IN REGULAR SERVICE). CALL JOPLIN, MO. FOR PICKUP TOLL FREE NO. 800-641-7560. TRANSPORTATION IS CHARGEABLE TO (TAC-2334). MILSTAMP IP-1 APPLIES. EXCLUSIVE USE OF REGULAR IS AUTHORIZED, IF REQUIRED, TO OBTAIN SERVICE. ADVISE ALCO COMPLETE CARGO. [illegible] MOVER SHALL WAIVE ALL RIGHTS TO FILE SUIT AGAINST GOVERNMENT FOR ANY DAMAGES OR INJURIES TO THE EQUIPMENT AND/OR PERSONNEL IN PERFORMANCE OF SERVICE.							

YELLOW II LABEL REQUIRED

X06

DIST: 380.02, 380.21, 380.24, 380.25, 380.226, 630.9

TO NAVSEC CODE

[illegible] (Signature and code) 580.2

18. TRANSPORTATION VIA MATS OR MSTS CHARGEABLE TO	TOTAL CONTAINER	TYPE CON-TAINER	DESCRIPTION	TOTAL WEIGHT	TOTAL CUBE
19. ISSUED BY: G.C. FOX	1	CRT			
CHECKED BY:	1	BX	METAL DRUMS	1247	49
PREPARED BY:	(3)		TOTAL		

17. SPECIAL HANDLING

20. RECEIPT			
CONTAINERS RECEIVED EXCEPT AS NOTED	DATE	BY	SHEET TOTAL
QUANTITIES RECEIVED EXCEPT AS NOTED	DATE	BY	GRAND TOTAL
NOTE POSTED	DATE	BY	20. RECEIVER'S VOUCHER NO.
POSTED	DATE	BY	21. RECEIVER'S REQUISITION NO.

DISTRIBUTION OF SHIPMENT

DD FORM 1 MAR 69 1149 (9-PT) S/N 0102-011-1801 REPLACES EDITION OF 1 MAY 68 WHICH MAY BE USED

* There will not be transp prepaid on this. 9(b) Material - Per KPM 4/8/74 Inventory 12.2

PACKING LIST

NAV. S. AND A. FORM 225 (4 PTY) (REV. 7-59)

SHEET NO. 1 OF 1

NUMBER OF INVOICES CONSOLIDATED 1

SHIPPING ACTIVITY N00228 NSC HUNTERS POINT DIV. S.F. CALIF

CONTAINER NO	TYPE CONTAINER	INVOICE OR BN NO	ITEM NO	QUANTITY	CLASSIFICATION DESCRIPTION	PACKAGE DIMENSIONS LENGTH	WIDTH	HEIGHT	CUBE (Feet)	WEIGHT (Pounds)
1 of 3	CRT	N00217 4052 3954	01		RADIAC CALIBRATOR AN/UDM-1A TRACKS CALIBRATION TABLE, SCOPE W/ TRIPOD	63"	44"	39"	62.56	543
2 of 3	Bx	" "	01		METAL CONTAINER 130 CURIES CESIUM 137 (AEC LICENSE # 19-00166-10) (H.P. SEAL # 3484)	35"	22"	23"	10.24	602
3 of 3	METAL DRUM	" "	02		PU-BE SOURCE OF RADIAC CALIBRATOR (AEC LICENSE # 19-00166-10) (H.P. SEAL # 3485)	17"	17"	22"	3.67	119
					TOTAL				76.47	1264

PACKED BY WHITE PARDINI (Date) 3/19/74

INSPECTED BY

MARKED BY PARDINI

LOCATION (Bldg. and Bay) 406

OPNAV 5216/144 (REV. 8-70)
S/N 0107-778-8097

DEPARTMENT OF THE NAVY

Memorandum

DATE: 10 April 7[illegible]

FROM: D. M. Schaffer

TO: R. Marquiss, NOL/WO, code 961

SUBJ: Recent AN/UDM-1A & Pu-Be source shipment from Hunter's Pt. NSY

Here's two letters (messages) backing up why NOL got the two sources. The 19 Oct ltr. was an answer to HPNSY giveing disposition on radioactive matls. when Radiac facility was disestablished. Sorr again not giveing you a copy of ltr.

DM Schaeffer

DEPARTMENT OF THE NAVY
NAVAL ELECTRONIC SYSTEMS COMMAND
WASHINGTON, D. C. 20360

IN REPLY REFER TO

5044/REK
9673
Ser 551

19 OCT 1973

From: Commander, Naval Electronic Systems Command
To: Commander, Hunters Point Naval Shipyard

Subj: Hunters Point Naval Shipyard, Radiac Repair Facility; recommendations concerning the disestablishment of

Ref: (a) NAVELECSYSCOMWESTDIV ltr 9673/R.3 W034:DJR:vg:5824 of 31 Aug 1973

Encl: (1) Shipping Instructions for Radioactive Sources and Counting Techniques, Procedures and Instrumentation Manuals NAVSHIPS 0967-884-6010

1. Reference (a) furnished recommendations concerning the disestablishment of the subject Radiac Repair Facility.

2. At that time when the addressee neither requires a radiac repair capability nor has the capability to perform it, he is requested to follow the disestablishment guidance specified in reference (a) and enclosure (1) attached hereto.

C. S. HOLLANDER
By direction

Copy to:
NAVSHIPS
NAVSHIPYD Hunters Point (Code 380, 214.E & 740)
NOL/WO (Code 223)
NSC Oakland (Code 501.3)
NAVELECSYSCOMSEDIV
NAVELECSYSCOMWESTDIV

Record Note: This correspondence was coordinated with Joe McVay on 10/17/73 REK

Yellow
DWS
10-10-73
REK
10-10-73

Enclosure (1) to NAVELEX Serial 551

1. Radiac Calibrator AN/UDM-1A, Serial E-4 shall be shipped to:

N60921
Receiving Officer,
Naval Ordnance Laboratory
White Oak
Silver Spring, Maryland 20910
M/F: Don Case, Code 223

AEC License 19-00166-10 applies. Ship subject calibrator via Tri-State Motor Transit Company (in dromedary service). Call Joplin, Mo. for pick-up, toll free No. 800-641-7580. Transportation is chargeable to TAC N354. Milstamp TP-1 applies. Exclusive use of dromedary is authorized, if required, to obtain service. Advise ALCON complete SHIPDA.

2. The Pu-Be source of Radiac Calibrator AN/UDM-5, Serial 25, shall be shipped by the same means and to the same destination as above. The AN/UDM-5 moderator may be stored separately at NAVELECSYSCOMWESTDIV for possible needs later. Section 91(b) of the USAEC Act applies.

3. Radiac Calibrator AN/UDM-7A, Serial 7, shall be forwarded to NAVELECSYSCOMSEDIV (Attn: Radiac Coordinator) for evaluation and return to stock at NSC Charleston, if calibrator is useable. Section 91(b) of USAEC Act applies.

4. NAVSHIPS 0967-884-6010 (Two Copies) shall be forwarded to NAVELEX 5044 via registered mail, return receipt requested.

Standard Form No. 1112
GSA FPMR (41 CFR) 101-40.1
1119-108

U.S. GOVERNMENT FREIGHT WAYBILL—CARRIER'S COPY

CONTINUATION SHEET

(THIS FORM TO BE USED AS A CONTINUATION SHEET FOR U.S. GOVERNMENT FREIGHT WAYBILL—CARRIER'S COPY, STANDARD FORM NO. 1124, OR U.S. GOVERNMENT TRANSIT FREIGHT WAYBILL—CARRIER'S COPY, STANDARD FORM NO. 1184)

B/L No. B-2707130

NAVY PUBLIC WORKS, WASHINGTON D.C. 20390
(DEPARTMENT OR ESTABLISHMENT AND BUREAU OR SERVICE)

SHEET No. 1 of 1

NAVAL SUPPLY CENTER OAKLAND MARINE POINT DIV SAN FRANCISCO CALIFORNIA
(DESTINATION)

TRANSPORTATION COMPANY TENDERED TO	FROM (SHIPPING POINT)	WAYBILL DATE	WAYBILL NO.

PACKAGES NO.	KIND	DESCRIPTION OF ARTICLES AND EXCEPTIONS	NUMBERS ON PACKAGES	WEIGHTS	RATE	FREIGHT	ADVANCES
		T.O., NAVAL ORDNANCE LABORATORY (N60921) SILVER SPRING, MARYLAND 20910 M/P: DON CASE, COOK 223 1/X3900.2349 022 74301 0 000023 2D 000000 00[illegible]35498093 H00217 4052 3954 TP 1					
1	CRT	MECHANICAL INSTRUMENTS, NOI, IN CRATES. (NMFC A-13 61700) 5'3"x3'6"x3'3" CUBE: 62.56		543			
1	BX	RADIOACTIVE MATERIALS, N.O.S., RADIOACTIVE MATERIALS, RADIOACTIVE YELLOW-II LABEL. (NMFC A-13 164900 SUB 1) CONTENTS: CESIUM 137 NO. OF CURIES: 130 TRANSPORT INDEX: III NRD-SHIPPER-S.P. SEAL 3454 CUBE: 10.24		602			
1	BX	RADIOACTIVE MATERIALS, N.O.S., RADIOACTIVE MATERIALS, RADIOACTIVE YELLOW-II LABEL. (NMFC A-13 164900 SUB 1) CONTENTS: PLUTONIUM 239 NO. OF CURIES: 5 TRANSPORT INDEX: I NRD-SHIPPER-S.P. SEAL 3485 CUBE: 3.67 IPD 02 RDD 089 MSN DATE 4052 AUTH: NAVSEASYSCOM LTR 5044/REX 9673 SER 551 of 19 OCT 73.		119			

"THIS IS TO CERTIFY THAT THE ABOVE NAMED ARTICLES ARE PROPERLY CLASSIFIED DESCRIBED PACKAGED MARKED LABELED AND ARE IN PROPER CONDITION FOR TRANSPORTATION ACCORDING TO THE APPLICABLE REGULATIONS OF THE DEPARTMENT OF TRANSPORTATION.

Signed: [illegible]

Standard Form 1105
5 CAO 3000—1105-105
PLACE SPECIAL SERVICE PASTERS HERE

U.S. GOVERNMENT FREIGHT WAYBILL
ORIGINAL

B/L NO. H-2,707,190

TRANSPORTATION COMPANY TENDERED TO: TRI-STATE MOTOR TRANSIT COMPANY (A)

TRAFFIC CONTROL NO.: [illegible]5091-H

NO.

STOP THIS CAR OR TRUCK AT

WEIGHT IN TONS			CAR-TRUCK LGTH., FT., INS.		MARKED CAPACITY		DATE FURNISHED	DATE B/L ISSUED
GROSS	TARE	NET	ORDERED	FURNISHED	ORDERED	FURNISHED		
							3/27/74	23 MAR 1974

FOR

CAR INITIALS AND NO.: TRUCK NO. 909

KIND: MS

CL TRANSFERRED TO OR LCL LOADING NO.

WAYBILL DATE

WAYBILL NO.

CARRIERS' ROUTING: TO — STATION — STATE

ROUTE (SHOW EACH JUNCTION AND CARRIER IN ROUTE ORDER TO DESTINATION OF WAYBILL)

FROM — STATION — STATE: SAN FRANCISCO, CALIFORNIA 94135

NO.

FULL NAME OF SHIPPER: NAVAL SUPPLY CENTER OAKLAND, HUNTERS POINT DIVISION

CONSIGNEE (NAME AND MAILING ADDRESS): TRANSPORTATION OFFICER, NAVAL ORDNANCE LABORATORY, SILVER SPRING, MARYLAND 20910

MARKS: DANGEROUS-RADIOACTIVE MATERIAL PLACARD REQUIRED

DESTINATION: WHITE OAK, SILVER SPRING, MARYLAND — STATE OF: TP 1

CHARGES TO BE BILLED TO (DEPARTMENT OR ESTABLISHMENT, BUREAU OR SERVICE AND LOCATION): NAVY FINANCE CENTER, WASHINGTON D.C. 20390

MOVEMENT DESIGNATED BY GOVERNMENT

APPROPRIATION CHARGEABLE: 17X3980.2349 022 74001 0 000023 2D 000000 000N35498003

SEAL NOS.: HPD-SF-B-NSY-S.F-NRS APPROVED BY 3485 BY SHIPPER

FOR CARRIER'S USE ONLY: WAYBILL NO. — FREIGHT BILL NO.

WEIGHED AT: GROSS — TARE — ALLOWANCE — NET

PACKAGES NO.	PACKAGES KIND	DESCRIPTION OF ARTICLES AND EXCEPTIONS	COMMODITY CODE NO.	NOS. ON PKGS	WEIGHTS	RATE	FREIGHT	ADVANCES
1	[illegible]	MISCELLANEOUS FREIGHT AS DESCRIBED ON ONE CONTINUATION SHEET ATTACHED. TOTAL PCS: 3 TOTAL CUBE: 76.47 "DROMEDARY SERVICE REQUESTED." "SIGNATURE SECURITY SERVICE REQUESTED." DATE 27 MARCH 1974 SIGNATURE V.O. BURTMAN V.O. Burtman TITLE SUPERVISORY TRANSPORTATION ASSISTANT "SHIPPER TO LOAD AND CONSIGNEE TO UNLOAD." "LOADING TO TRUCK PERFORMED BY THE SHIPPER." "L/S-15"			1264			

"THIS IS TO CERTIFY THAT THE ABOVE NAMED ARTICLES ARE PROPERLY CLASSIFIED DESCRIBED PACKAGED MARKED LABELED AND ARE IN PROPER CONDITION FOR TRANSPORTATION ACCORDING TO THE APPLICABLE REGULATIONS OF THE DEPT. OF TRANSPORTATION.

Signed: V.O. Burtman

TARIFF OR SPECIAL RATE AUTHORITIES (C/L-T/L OR VOL. ONLY): TRI-STATE TENDER 686E

IF THIS SHIPMENT FULLY LOADS THE CAR OR TRUCK USED, CHECK ☐ YES

CARRIER FURNISHED ☒ PICK UP— ☐ TRAP CAR— SERVICE AT ORIGIN. - INITIALS OF SHIPPER'S AGENT: VOB MB

NAME OF TRANSPORTATION COMPANY: TRI-STATE MOTOR TRANSIT COMPANY

NO.

DATE OF RECEIPT OF SHIPMENT: 3-27-74

INITIAL CARRIER'S AGENT, BY SIGNATURE BELOW, CERTIFIES HE RECEIVED THE ORIGINAL BILL OF LADING. ☐ YES (INDICATE BY CHECK)

SIGNATURE OF AGENT: R. Stark (13)

PER: TRI STATE

CERTIFICATE OF ISSUING OFFICER

I CERTIFY THAT THIS SHIPMENT IS MADE PURSUANT TO THE TERMS OF CONTRACT OR PURCHASE ORDER NO. SEE BELOW DATED 4052 OR OTHER AUTHORITY FOR SHIPMENT F.O.B. POINT NAMED IN CONTRACT N00217 4052 3954

ISSUING OFFICE: NSCO, HUNTSDIV SFRAN CALIF

SIGNATURE OF ISSUING OFFICER: V.O. Burtman V.O. BURTMAN

DATE 27 MAR 74 TITLE TRANSPORTATION ASSISTANT

OUTBOUND JUNCTION AGENT WILL SHOW JUNCTION STAMPS IN SPACE AND ORDER PROVIDED. ADDITIONAL JUNCTION STAMPS AND ALL YARD STAMPS TO BE PLACED ON BACK HEREOF

FIRST JUNCTION	SECOND JUNCTION	THIRD JUNCTION	FOURTH JUNCTION	DESTINATION AGENT WILL STAMP HEREIN STATION NAME AND DATE REPORTED

☆ U.S. GOVERNMENT PRINTING OFFICE: [illegible]

NAVAL MESSAGE *******U N C L A S S I F I E D******* **NAVY DEPARTMENT**

PRIORITY
P 281528Z MAR 74
FM NSC OAKLAND HUNPTDIV SAN FRANCISCO CA

TO NOL WHITE OAK SILVER SPRING MD

INFO NAVELECSYSCOM WASHINGTON DC NAVELECSYSENGCEN VALLEJO CA
NAVSHIPSYSCOM WASHINGTON DC NSC OAKLAND CA

UNCLAS //N04610//

NOL SILVER SPRING FOR DON CASE, CODE 223
NSC OAKLAND FOR CODE 501.3
NAVELECSYSCOM WASH DC FOR MR MIKE SCHAFFER
A-- REPSHIP
B-- 5NXX05091-N
C-- TRI-STATE MOTOR TRANSIT CO
D-- TRI-STATE 909 SEALS 3484 AND 3485
E-- GBL H-2707190
F-- SHPD 27 MAR 74
G-- ETA 8 APR 74
H (1)-- REQN N00217-4052-3954
(4)-- 1 CRT 1 BX AND 1 METAL DRUM
(5)-- A/543 LBS 63 CU B/602 LBS 10 CU C/119 LBS 4 CU
(6)-- COMPLETE SHIPMENT
I-- SIGNATURE SECURITY SERVICE REQUIRED DROMEDARY SERVICE

SHIP 01T(3)...COG
04(1) 2075M(1) 0956 A 005

ELEX 404C(3)...COG
04(1) PME121(1) 09B51F(1) 0360 A 006

TOTAL COPIES ... 011 ...

CONTROL NO.	PAGE	OF	PAGE	TIME OF RECEIPT	DATE TIME GROUP
286820/087	1	OF	1 BTR 1213	087/21:55Z	281528Z MAR 74

*******U N C L A S S I F I E D*******

RECEIPT

SAMPLE DESCRIPTION LEAK TEST - 130 Ci Cs^{137} SOURCE SER. E-4 - Pu^{239} 5 Ci SOURCE Set. 800-H

COUNTED BY	SCALER / DETECTOR / SHELF	TYPE OF RADIATION	DATE	STANDARD	REMARKS
HZ	Ba^{134} / GAS FLOW / 1	B-γ-α	5/8/74	Sr^{90} Y^{90}	9.99×10^{3}

SAMPLE NO.	TIME COUNT	TOTAL COUNT	DETR. TIME/MIN.	TOTAL COUNT RATE (C/M)	BACKGROUND C/M	NET COUNT RATE (C/M)	DIS./MIN	REMARKS
BKG.	0800	930	60	15.5				
STD	0930	38570	10	3857	15.5	3841.5		EFF. 38.5% CF 2.6
1	1025	237	10	23.7	15.5	8.2	21.3	PLUG & OUTER SURFACE 9.6×10^{-6} μci Cs^{137} Eq
2	1040	365	10	36.5	15.5	21	54.6	INSIDE PORT 2.5×10^{-5} μci Cs^{137} Eq
		SAC + - SCINT. ALPHA DETECTOR						
BKG	0800	85	50	1.7				EFF. 80% CF 1.25
Std.	0900	7944	10	794.4	1.7	792.7		
1	1025	16	10	1.6	1.7	—	—	$< 9.6 \times 10^{-7}$ μci 5 Ci Pu Source 800-H
		The level of Contamination does Not Constitute a health hazard to the User						

HEALTH PHYSICS DIVISION COUNTING DATA NDW-NOL-3400/31 (9-71)

GPO 919-105

Mahaffey

4805:GNM:mar
9900
Ser 397-48053

JUN 25 1974

From: Commander, Naval Electronic Systems Command
To: Commanding Officer, Hunters Point Naval Shipyard

Subj: AEC Byproduct Material License No. 04-13597-02

Ref: (a) NAVSHIPYD HUNTERS POINT ltr 380-430 9900/10 of 14 June 1974
(b) TELCON between G. N. Mahaffey, ELEX Code 48053 and Cdr. R. L. Henry and L. Kearney of the Shipyard on 24 June 1974.
(c) TELCON between G. N. Mahaffey, ELEX Code 48053 and D. J. Reid, Radiac Coordinator 12th Naval District on 24 June 1974

Encl: (1) Comments on request to terminate license No. 04-13597-02

1. Endorsement of the request to terminate subject license, submitted by reference (a), is being withheld pending receipt of supplemental information identified in enclosure (1).

2. The need for performing wipe tests and a summary report of findings for submission to the Atomic Energy Commission was discussed during the telephone conversations, references (b) and (c).

3. It is requested that the additional information to clarify questions raised in enclosure (1) be submitted to Commander, Naval Electronic Systems Command, Code 48053 as soon as possible.

G. N. MAHAFFEY
By direction

Copy to:
NAVELEXSYSENGCEN, VALLEJO (Attn: R. J. Reid, WO-34)

6-25-74

8-9912-2500

COMMENTS ON REQUEST TO TERMINATE AEC LICENSE 04-13597-02

1. AEC will require as supplement material the completed, dated and signed Form AEC-314 "Certificate of Disposition of Materials."

2. AEC will need a summary report on results of wipe tests performed on localized radioactive areas where radioisotopes authorized by the AEC have been used. This should also include the area(s) where wipe tests were performed and storage of swipes and radioactive materials pending disposal.

3. Final inspection of all monitored and decontaminated areas, where decontamination may have been necessary, is made by the AEC Division of Compliance. It is desirable to remove all traces of radioactive contamination; however, the AEC recognizes that small quantities of alpha and beta-gamma contamination is possible if the contamination can be demonstrated to be fixed as determined by swipe count. The AEC has specified that a localized radioactive area may be considered to be decontaminated when the beta-gamma dose rate of one cm averages less than 0.2mr/hr and the removalbe activity per 100 cm^2 of surface is less than 1,000 disintegrations per min (dpm). For alpha contaimination the fixed activity is less than 500 dpm per 100 cm^2 while the removable activity should be less than 100 dpm.

4. A copy of the AEC License will be helpful for NAVELEX, Code 48053 should questions be raised during AEC's review of the request for termination (note - have a copy of Amendment No. 01, dated 9 November 1972).

Enclosure (1) to Ser 397-48053

FORM AEC-374A
(2-65)
10 CFR 30

U. S. ATOMIC ENERGY COMMISSION
BYPRODUCT MATERIAL LICENS.
Supplementary Sheet

License Number 04-13597-02

Amendment No. 01

Department of the Navy
Hunters Point Naval Shipyard
San Francisco, California
94135

In accordance with letter dated September 27, 1972, License Number 04-13597-02 is amended as follows:

Subitem 8.A. is amended to read:

8.A. 2 sources not to exceed
130 curies each

For the U. S. Atomic Energy Commission
Original Signed By
Robert E. Brinkman
by Materials Branch
Division of Materials Licensing
Washington, D. C. 20545

Date NOV 9 1972

0516:GNM:rmr
9900
Ser 553-05163
10 OCT 1972

FIRST ENDORSEMENT On Hunters Point Naval Shipyard Letter 740/JGP:lh of 27 September 1972

From: Commander, Naval Electronic Systems Command
To: Chief, Materials Branch
Directorate of Licensing
U.S. Atomic Energy Commission
Washington, D.C. 20545

Subj: ALC Byproduct Material License No. ~~49~~ 04-13597-02

1. Basic letter contains a request to amend subject license for authorization to possess an additional 120 curie sealed source of Cesium-137 for an AN/UDM-1A Radiac Calibrator.

2. Authorization for two Cesium-137 sources will permit the Radiac Repair Facility at the Shipyard to have a unit in storage pending transfer to a Naval facility (e.g. Naval Ordnance Laboratory, White Oak (NOL/WO)) for maintenance and/or calibration.

3. Present plans are to ship a 120 curie Cesium-137 source in its Radiation Source Chamber from NOL/WO, which is covered under license #19-00166-10, to the Radiac Repair Facility and return the unit presently in use in the Radiac Calibrator at the Radiac Repair Facility in the shipyard to NOL/WO.

4. It is recommended that the request be approved and an amendment to license #04-13597-02 be issued. The availability of a second source in temporary storage at the Radiac Repair Facility during the transfer period will reduce "down-time" of the calibration facility and permit the processing of Radiac Sets on schedule.

G. N. MAHAFFEY
By direction

Copy to:
BUMED (Code 74)
NAVSHIPYD, HUNTERS POINT (Code 740) and L. Kearney, Radiac Coordinator

Amend #1, dtd 9 Nov. 1972, fwded by Stamp End. Form on 11/17/72. By telcon to John Phytas (Safes) on 11/17/72 informed Shipyd. of Amend. being mailed.

91411
051 r/f
05163
0516s

G.N.MAHAFFEY 27385/r.m.ripper

DEPARTMENT OF THE NAVY
HUNTERS POINT NAVAL SHIPYARD
SAN FRANCISCO, CALIFORNIA 94135

IN REPLY REFER TO:
740/JGP:dh
27 September 1972

From: Commander, Hunters Point Naval Shipyard
To: Director, Division of Materials Licensing
Isotopes Branch
U.S. Atomic Energy Commission
Washington, D.C. 20545

Via: Commander, Naval Electronic Systems Command (Code 05163)

Subj: AEC Byproduct Material License No. 04-13597-02; amendment of

1. This letter is submitted to request amendment to the subject license to permit possession of two Cesium 137 sources. These sources will consist of a new Cesium 137 sealed source of 120 curies nominal strength and the existing Cesium 137 sealed source having had a maximum strength of 128 curies.

2. The new source, Oak Ridge National Laboratory sealed source ORNL DWG. No. BRD 1152A, will be received and stored in an exposure device in the existing calibration room. It will be used to replace the existing source in the AN/UDM-1A calibration device. The existing source will then be temporarily stored in the calibration room pending final disposition.

M Balis
M. S. BALIS
By direction

Copy to:
Code 100
190
191.34
700

9900/10
M730

FEB 26 1969

From: Commander, San Francisco Bay Naval Shipyard
To: Director, Division of Materials Licensing
U. S. Atomic Energy Commission
Washington, D. C. 20545

Rec'd. 3/6/69

Subj: AEC Byproduct Material License No. 04-00364-06;
Application for renewal of

Ref: (a) Fonecon between Mr. Mahaffey (Code 0516, NAVELEX SYSCOM) and Mr. Rosati (Code M730, SFBNS) on 20 February 1969

Encl: (1) Duplicate Original NAVSHIPYD SFRANBAY Ltr 9900/10, M730 of 3 Feb 1969
(2) Duplicate Original Form AEC 313R of 3 Feb 1969

In accordance with the notification and request of reference (a), a duplicate original letter of transmittal and a duplicate original application for renewal of subject license are forwarded herewith as enclosures (1) and (2) to replace the copies which you have received.

L. B. MAYER
Acting

Copy to:
NAVELEXSYSCOM (Code 0516)

9900
Ser 46 - 0516
3 March 1969

From: Commander, Naval Electronic Systems Command
To: Chief, Isotopes Branch
Division of Materials Licensing
U. S. Atomic Energy Commission
Washington, D. C. 20545

Subj: AEC Byproduct Material License No. 04-00364-06

Encl: (1) Copy of NAVSHIPYD, SFRAN BAY letter with attachments Ser 9900/10 M730 of 24 FEB 1969

1. Enclosure (1) is forwarded for information and retention.

2. This material may facilitate the clarification of Automated Industries Incorporated (formerly Budd Company) Source and Source Changer Model numbers included in the Shipyard's recent application for renewal of subject license.

Copy to:
NAVSHIPYD, SFRAN BAY

W. G. WILLIAMS
By direction

orig forwded to AEC

MAHAFFEY/mitchell
61457 - 3/3/69

(2)

SAN FRANCISCO BAY NAVAL SHIPYARD
VALLEJO, CALIFORNIA 94592

IN REPLY REFER TO:
9900/10
M730
FEB 24 1969

From: Commander, San Francisco Bay Naval Shipyard
To: Commander, Naval Electronics Systems Command (Code 0516)

Subj: AEC Byproduct Material License 04-00364-06 license renewal, application for

Ref: (a) Fonecon between Mr. Mahaffey (Code 0516, NAVELEX SYSCOM) and Mr. Rosati (Code M730, SFBNS) on 20 February 1969

Encl: (1) Automation Industries, Inc. Ltr of Jan 27, 1969 to Mr. R. H. Parness, Code M-133B, SFBNS
(2) AEC Ltr DML:IB:JMB of Dec 8, 1967 to The Budd Company

As requested in reference (a), enclosures (1) and (2) are forwarded in connection with subject license renewal.

G. J. Rosati

G. J. ROSATI
By direction

ENCLOSURE (1) TO NESC SER-46-0516

AUTOMATION INDUSTRIES, INC.

MATERIALS EVALUATION GROUP
INSTRUMENT DIVISION
P.O. BOX 245
PHOENIXVILLE, PA., 19460
TELEPHONE (215) 933-8965

January 27, 1969

Mr. R. H. Parness
Code M-133B
San Francisco Bay Naval Shipyard
Vallejo, California 94592

Dear Mr. Parness:

Enclosed you will find a copy of a letter from the United States Atomic Energy Commission, Washington, D.C., dated December 8, 1967, approving our Capsule Assembly Number 041713 for use in radiographic work.

I find that no authorizations are issued covering source changers by the A. E. C., as all source changers are built to a spec and no approval is necessary.

If you have further questions, please feel free to contact me at your convenience.

We are reviewing yet - Came in last

Sincerely yours,

A. V. Kelley

A. V. Kelley
Product Manager - Nuclear

enc.

b

1/30/69

ENCLOSURE (1)

Telecon between Mr. A. V. Kelley, Mr. R. Parness & G. J. Rosati this date confirmed (per Mr. Kelley) that the correct (modified) capsule assembly number for 100 Ci ^{192}Ir sources for the Iridiatron Model 100 is 041713 and source changer is 043859. G. J. Rosati

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

IN REPLY REFER TO:

DML:IB:JMB

DEC 8 1967

The Budd Company
Instruments Division
Box 245
Phoenixville, Pennsylvania 19460

Attention: Mr. A. V. Kelley

Gentlemen:

AN

The 041713 Capsule Assembly described by your November 22, 1967, letter to the Isotopes Branch and your October 11, 1967, letter to the Long Beach Naval Shipyard is acceptable for licensing the possession and use of byproduct material.

Confirming Mr. Jack Bell's December 6, 1967, telcon with Mr. A. V. Kelley, we assume that the Capsule Assembly number referred to in the last paragraph of your November 22, 1967, letter should be 041701 instead of 041741.

A-1

Sincerely yours,

James C. Malaro

James C. Malaro
Isotopes Branch
Division of Materials
Licensing

Source Changer
700-041026
or 043859

ENCLOSURE (2)

DEC 12 1967
BUDD CO.
Inst. Div.

9900
Ser 33 - 0516
13 February 1969

FIRST ENDORSEMENT ON NAVSHIPYD SFRAN LETTER 9900/10 N730 OF 30 FEB 1969

From: Commander, Naval Electronic Systems Command
To: Chief, Isotopes Branch
Division of Materials Licensing
U. S. Atomic Energy Commission
Washington, D. C. 20545

Subj: AEC Byproduct Material License No. 04-00364-06

Ref: (a) PONECON between Mr. Mahaffey, NAVELEX and Mr. Rosati, NAVSHIPYD, SFRAN on 12 February 1969
(b) PONECON between Mr. Mahaffey, NAVELEX and Mr. Kelly, Automation Industries on 12 February 1969

1. Basic letter with enclosure contain an application for renewal of subject license.

2. The completed AEC-313R Form with updated information as attachments thereto has been received.

3. The validity of Automated Industries (formerly the Budd Company) Source Changer, Model #43859 was discussed during the telephone conversation reference (a). This Model number had been supplied the shipyard by the vendor. During the telephone conversation of reference (b), Mr. Kelly stated drawings, details, etc., of Model #43859 Source Changer were being forwarded to the Atomic Energy Commission for evaluation and authorization for storage and transfer of the 100 curie sealed source of Iridium-192, source model #041713.

4. The radiographic sources of Cobalt-60 and Iridium-192 with associated equipment authorized by AEC License No. 04-00364-06 are used in the Radiography Program at the Shipyard.

M. G. WILLIAMS
By direction

Copy to:
BUMED, Code 74(With basic mat'l)
NAVSHIPYD, SFRAN

MAHAFFEY/mitchell
61457 - 2/13/69

SAN FRANCISCO BAY NAVAL SHIPYARD
VALLEJO, CALIFORNIA 94592

IN REPLY REFER TO:
9900/10
MT30

Rec'd: 2/12/69 & fwded to AEC by ser 0516 33 of 14 Feb. 1969.

FEB -3 1969

Telcon with Yard ROSATI & Kelly - re-to Model # vendor Source Changes.

From: Commander, San Francisco Bay Naval Shipyard
To: Director, Division of Materials Licensing
U. S. Atomic Energy Commission
Washington, D. C. 20545
Via: Commander, Naval Electronics System Command (Code 0516)

Subj: AEC Byproduct Material License No. 04-00364-06; Application for renewal of

Ref: (a) NAVMED P-5055, Radiation Health Protection Manual
(b) NAVSHIPYD SFRANBAY Ltr 10330(108) of 23 Dec 1966

Encl: (1) Form AEC 313R, Application for Byproduct Material License-Use of Sealed Sources in Radiography, and three attachments (3 copies)

1. In accordance with reference (a) an application for renewal of subject license is forwarded as enclosure (1).

2. Sources and exposure devices used for radiography under Items 4.C. and D. (Supplement #1) of enclosure (1) are the same as previously licensed with the addition of Budd Company Model 041713 (100 Ci 192 Ir) sealed source for use with a Budd Iriditron Model 100 projector and Model 043859 source changer.

3. Operating and Emergency Procedures under Item 6.(e) are the same as previously licensed except for administrative changes and updating indicated in enclosed Change B to Attachment B of reference (b). This change will be issued on receipt of the renewed license.

4. The internal inspection system and organizational structure under Items 6.(g) and (h) are updated in the enclosed replacement Attachment D to reference (b).

5. Administrative changes in designation viz. organization codes, telephone and building numbers as well as named successors in operating positions are made directly to operating procedures on a continuing basis as they occur.

6. The Shipyard Ionizing Radiation Control Committee has reviewed this application and recommends approval.

N. FRANKENBERGER

Copy to: (w/encl)
BUMED (Code 74)
NAVELEXSYSCOM (Code 0516)

Form AEC-313R
(9-62)

UNITED STATES ATOMIC ENERGY COMMISSION

APPLICATION FOR BYPRODUCT MATERIAL LICENSE—USE OF SEALED SOURCES IN RADIOGRAPHY

Form approved.
Budget Bureau No. 38-R137

SEE ATTACHED FORM AEC-313R INSTRUCTIONS—USE SUPPLEMENTAL SHEET WHERE NECESSARY. BE SURE ALL ITEMS ARE COMPLETED AND THAT ALL NECESSARY ATTACHMENTS ARE FURNISHED. IF ANY PORTION OF THE APPLICATION IS NOT APPLICABLE SPECIFICALLY SO STATE. DEFICIENT OR INCOMPLETE APPLICATIONS MAY BE RETURNED WITHOUT CONSIDERATION.

1(a) NAME AND ADDRESS OF APPLICANT

Commander
San Francisco Bay Naval Shipyard
Vallejo, California 94592

1(b) APPLICANT IS: An individual [X] A partnership [ ] A Corporation [ ] An Unincorporated Association [ ] Other [ ] If applicant is other than an individual, the applicable section on the reverse side must be completed.

2. PREVIOUS LICENSE NUMBER(S) *(Indicate if application is for renewal or amendment of an existing byproduct material license.)*

Renewal of License No. 04-00364-06

3. LOCATION(S) WHERE SEALED SOURCES WILL BE USED AND/OR STORED. *(If use will be made in states other than named in 1(a), they should be listed here.)*

Hunters Point, San Francisco, Calif. 94135; Mare Island, Calif. 94592; and at temporary "field sites" on ships and stations under jurisdiction of the Department of Defense.

4. SEALED SOURCES TO BE USED IN RADIOGRAPHY

BYPRODUCT MATERIAL (Element and Mass No.)	SOURCE MODEL NUMBER	NAME OF MANUFACTURER	MAXIMUM ACTIVITY PER SOURCE	NUMBER OF SOURCES
A. See Supplement #1		A.	A.	A.
B.	B.	B.	B.	B.
C.	C.	C	C.	C.

5. RADIOGRAPHIC EXPOSURE DEVICES AND/OR STORAGE CONTAINERS TO BE USED WITH SOURCES LISTED ABOVE

MODEL NUMBER	NAME OF MANUFACTURER (If custom made, attach complete design specification.)
A. See Supplement #1	A.
B.	B.
C.	C.

6. THE FOLLOWING INFORMATION IS ATTACHED AS A PART OF THIS APPLICATION: *(Check appropriate blocks and attach information called for in the instructions with this form.)*

	Not Applicable	Attached	Previously Submitted
(a) Description of radiographic facilities (Instruction 6-a)	[ ]	[ ]	[X] on 12/23/66 (DATE)
(b) Description of radiation detection instruments to be used (Instruction 6-b)	[ ]	[ ]	[X] on (DATE)
(c) Instrument calibration procedures (Instruction 6-c)	[ ]	[ ]	[X] on (DATE)
(d) Personnel monitoring equipment (Instruction 6-d)	[ ]	[ ]	[X] on (DATE)
(e) Operating and emergency procedures (Instruction 6-e)	[ ]	[X] Change B to ATTACH B	[X] on (DATE)
(f) Training program (Instruction 6-f)	[ ]	[ ]	[X] on (DATE)
(g) Internal inspection system or other management control (Instruction 6-g)	[ ]	[X] ATTACH D	[ ] on (DATE)
(h) Overall organizational structure (Instruction 6-h)	[ ]	[X] "	[ ] on (DATE)
(i) Leak testing procedures (Instruction 6-i)	[ ]	[ ]	[X] on 12/23/66 (DATE)

CERTIFICATE (This item must be completed by applicant)

7. THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATE ON BEHALF OF THE APPLICANT NAMED IN ITEM 1, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS, PART 30, AND THAT ALL INFORMATION CONTAINED HEREIN, INCLUDING ANY SUPPLEMENTS ATTACHED HERETO, IS TRUE AND CORRECT TO THE BEST OF OUR KNOWLEDGE AND BELIEF.

Applicant Named in Item 1

By: N. FRANKLIN
Rear Admiral, USN
Commandant

Title of Certifying Official

DATE FEB 3 1969

WARNING.—18 U.S.C., Section 1001, Act of June 25, 1948, 62 Stat. 749; makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

4. Sealed Sources to be used in Radiography

5. Radiographic Exposure Devices and/or Storage Containers to be used with Sources Listed under Item 4

Byproduct Material	Source Model No.	Manufacturer	Maximum Activity per Source	Exposure Device Model No. *	Manufacturer	Source Changer Model No.
A. Cobalt 60	A-424-4	Technical Operations, Inc.	30 Ci	404	Tech Ops, Inc.	488
B. Cobalt 60	034500	Budd Company	20 Ci	52	Budd Co.	I-563
C. Cobalt 60	A-424-1	Technical Operations, Inc.	50 mCi	533	Tech Ops, Inc.	414
D. Cobalt 60	A-424-1	Technical Operations, Inc.	500 mCi	496	Tech Ops, Inc.	416
E. Iridium 192	041713	Budd Company	100 Ci	100	Budd Co.	043859
	36910	Budd Company			Budd Co.	43866
	G-1	General Radioisotope Processing Corp.			Gen Rad	130
					Proc Co.	
	A-424-1	Technical Operations, Inc.		490, 524, and 533	Tech Ops, Inc.	414
F. Iridium 192	36910	Budd Company	50 Ci		Budd Co.	43866
	G-1	General Radioisotope Processing Corp.			Gen Rad	130
					Proc Co.	
	A-424-1	Technical Operations, Inc.		490, 498, 524 and 533	Tech Ops, Inc.	414
G. Iridium 192	36910	Budd Company	10 Ci		Budd Co.	43866
	G-1	General Radioisotope Processing Corp.			Gen Rad	130
					Proc Co.	
	A-424-1	Technical Operations, Inc.		490, 498, 524, 532, and 533	Tech Ops, Inc.	414

Automation Ind.

Telcon with Kelley indicates this 043859 is similar to 41026

*All exposure devices used optionally with MI source positioning tip.

SUPPLEMENT #1
AEC Form 313R

SAN FRANCISCO BAY NAVAL SHIPYARD
VALLEJO, CALIFORNIA 94592

IN REPLY REFER TO:
(M133B-20-69) Cz
January 1969

MEMORANDUM

From: Head, Nondestructive Test Branch, Code M133B
To: All Radiographic Personnel, Code M133B/3

Subj: QRADEPT INST 4730.22 - Administrative, Operating, and Emergency Procedures for Radiographic Personnel; changes to

Encl: (1) Record of Changes Page, revised Pages No. 3, 24, 28/28A, 46, 47, 48, 49, and 52/52A

1. Enclosure (1) updates the subject procedure required for our Atomic Energy Commission Byproduct License renewal.

2. Each recipient of the subject procedure is responsible for making the necessary changes to his document. Changes are designated by (B), in addition to pen and ink changes, as follows:

a. Insert Record of Changes page in front of Title Page.
b. Remove Page 3, and substitute with revised Page 3.
c. Pen and ink change: Page 5, Para. 2.10. first line, "The Medical Department at Hunters Point, and the Industrial Dispensary at Mare Island, will conduct ...."
d. Pen and ink changes:
Page 12, Para. 5.2.1.)
Page 14, Para. 5.4.2.3.) "Change Code 130M2 to Code M133B"
Page 14, Para. 5.4.3.1.) "Change Code 131M2 to Code H133B"
Page 14, Para. 5.4.3.2.) (Nondestructive Test Branches)
Page 18, Para. 6.3.4.)
Page 18, Para. 6.3.5.)
e. Remove Page 24 and substitute with Page 24.
f. Page 26, Para. 8.2.2.2. - Insert "H" before "733."
g. Remove Page 28 and substitute with Pages 28 and 28A.
h. Pen and ink change on Page 44, Para. 13.1.1. - Add Under Model No. and Maximum Source Size (curies), "BUDD IRIDITRON 100" and "100-curies."
i. Remove Pages 46, 47, 48, 49 and 52, and replace with Pages 46, 47, 48, 49, 52 and 52A.
j. Page 51, Para. 14.2.4. second sentence, insert "H" before "733."
k. Page 51, Para. 14.3.1.3. second sentence, insert "H" before "733."

R. H. PARNESS

Copy to:
QRAD Div Heads - 1 ea
NDT Branch (NP) - 100

CHANGE B TO
ATTACHMENT B

SECTION II

ORGANIZATION AND RESPONSIBILITIES

2.1. SHIPYARD COMMANDER

2.2. RADIOLOGICAL PROTECTION OFFICER

2.3. HEAD, NONDESTRUCTIVE TEST BRANCH

2.4. HEAD, TECHNICAL SECTION

2.5. SECTION SUPERVISOR

2.6. RADIOGRAPHIC SHIFT SUPERVISORS

2.7. RADIOGRAPHER-IN-CHARGE

2.8. RADIOGRAPHER AND RADIOGRAPHERS' ASSISTANT

2.9. SUPPLY DEPARTMENT

2.10. MEDICAL DEPARTMENT HUNTERS POINT, INDUSTRIAL DISPENSARY, MARE ISLAND

B

RECORD OF CHANGES TO QRADEPT INST 4730.22

CHANGE NO.	DATE OF CHANGE:	PAGES CHANGED:
A	25 Apr 1968	Pages 24/25, 28/29, 30/31, 45/46, 51/52
B	Jan 1969	Record of Changes page. Pages 3, 24, 28/28A, 46, 47, 48, 49, 52/52A

SECTION VIII

RECEIPT, TRANSPORTATION AND SHIPMENT OF SOURCES

8.1. RECEIPT

B 8.2. TRANSPORTATION

8.3. LEAK TEST

A 8.4. SOURCE REPLACEMENT

8.5. SHIPMENT

8.6. RECORDS

8.2.2.3.12. IN THE EVENT OF A TRANSPORTATION ACCIDENT, THE REQUIREMENTS OF PARAGRAPH 14.3. SHALL BE ADHERED TO.

8.2.2.3.13. IF THE SOURCE IS TO BE SHIPPED BY COMMERCIAL AIR TRANSPORT, THE RESPONSIBLE RADIOGRAPHER SHALL MAKE THE PROPER ARRANGEMENTS FOR ESCORT AND DELIVERY OF THE SOURCE TO THE AIR CARRIER, AND SHALL TAKE CUSTODY OF THE SOURCE FROM THE AIR CARRIER AT THE DESTINATION AND ESCORT IT TO POINT OF USE.

B

8.2.2.3.14. THE ASSIGNED RADIOGRAPHER WILL OBTAIN TWO COPIES OF "RADIOISOTOPE TRANSPORTATION CHECKOFF LIST" FROM THE RADIOGRAPHIC SUPERVISOR. ALL NECESSARY INFORMATION SHALL BE FILLED IN PRIOR TO DEPARTURE FROM THE SHIPYARD. ONE COPY SHALL BE RETAINED IN THE NONDESTRUCTIVE TEST BRANCH HEAD OFFICE, THE OTHER COPY WILL REMAIN IN THE POSSESSION OF THE RADIOGRAPHER WHILE ON DUTY ASSIGNMENT. UPON RETURN TO THE SHIPYARD, THE RADIOGRAPHER AND RADIOGRAPHER'S ASSISTANT, (IF ASSIGNED), WILL FILL IN THE REMAINING INFORMATION REGARDING SOURCE RETURN AND EACH INDIVIDUAL WILL SIGN BOTH COPIES OF THE FORM. THE RADIOGRAPHIC SUPERVISOR WILL VERIFY THAT ALL NECESSARY INFORMATION HAS BEEN PROPERLY FILLED OUT BY THE RADIOGRAPHER, (I.E., THAT THE SOURCE PROJECTOR AND EQUIPMENTS ARE RETURNED IN SATISFACTORY CONDITION), AND WILL CERTIFY SUCH VERIFICATION BY HIS SIGNATURE ON THE CHECKOFF LIST FORM. UPON COMPLETION, THE NONDESTRUCTIVE TEST BRANCH HEAD OFFICE WILL RETAIN ONE COPY FOR FILE AND FORWARD A DUPLICATE COPY TO THE RADIOLOGICAL PROTECTION OFFICER.

B

8.2.2.3.15. IN ADDITION TO THE "RADIOISOTOPE CHECKOFF LIST" THE RADIOGRAPHER WILL OBTAIN A "LETTER OF IDENTITY" FROM THE HEAD, NONDESTRUCTIVE TEST BRANCH. THIS LETTER WILL CONTAIN: IDENTITY OF THE INDIVIDUAL(S) ACCOMPANYING THE SOURCE, DESTINATION, MODE OF TRAVEL, IDENTITY AND STRENGTH OF SOURCE, AND PREVENTATIVE SAFETY MEASURES. THE NAMES AND TELEPHONE NUMBERS OF SHIPYARD PERSONNEL TO BE CONTACTED IN THE EVENT THE ACCOMPANYING INDIVIDUALS BECOME INCAPACITATED DUE TO AN ACCIDENT ARE INCLUDED. A COPY OF THIS LETTER WILL BE FORWARDED TO THE RADIOLOGICAL PROTECTION OFFICER.

8.3. LEAK TEST

8.3.1. THE LEAK TEST IS PERFORMED EITHER BY A.E.C. LICENSED CONTRACTOR OR IN THE FOLLOWING MANNER BY NONDESTRUCTIVE TEST AND HEALTH PHYSICS PERSONNEL. THE SOURCE WILL BE OPERATED BY NONDESTRUCTIVE TEST BRANCH, AND THE RADIATION AND CONTAMINATION MEASUREMENTS WILL BE MADE BY HEALTH PHYSICS, USING INSTRUMENTATION CAPABLE OF DETECTING 0.005 MICROCURIES OF RADIOACTIVE MATERIAL. RECORDS OF LEAK TESTS WILL BE KEPT BY HEALTH PHYSICS IN UNITS OF MICROCURIES.

8.3.2. BEFORE ANY LEAK TESTING IS DONE, THE RADIOGRAPHIC AREA USED WILL BE CLEARED OF PERSONNEL AND ALL ENTRANCES SECURED AND POSTED WITH RADIATION SIGNS, FLASHING LIGHTS, ETC. THERE WILL BE NO SMOKING OR EATING LUNCHES IN THIS AREA. ALL CONTROL CABLES, BOXES, AND CONNECTIONS SHALL BE INSPECTED FOR WEAR OR MALFUNCTION AND REPLACED, IF NECESSARY.

8.3.3. A SPECIAL WIPE TEST TOOL HAS BEEN DESIGNED FOR PERFORMING LEAK TESTS OF INDUSTRIAL RADIOGRAPHY SOURCES. THIS TOOL FACILITATES POSITIVE CONTROL OF THE SOURCES WHILE THEY ARE BEING WIPED FOR DETECTION OF LEAKS. IT IS ADAPTABLE TO BOTH IRIDIUM 192 AND COBALT 60 PROJECTORS AND SHIPPING CONTAINERS, AND IT IS DESIGNED TO WIPE THE SOURCE EITHER PRIOR TO PLACING THE LATTER IN THE PROJECTOR OR WHEN IT IS ALREADY IN THE PROJECTOR. THE CAPABILITY OF PERFORMING A LEAK TEST ON A SOURCE PRIOR TO ITS INSERTION INTO A SOURCE PROJECTOR ELIMINATES THE POSSIBILITY OF THE SPREAD OF ANY POSSIBLE CONTAMINATION FROM A CONTAMINATED SOURCE AS RECEIVED.

8.3.4. DESCRIPTION OF WIPE TEST TOOL. (SEE PHOTOGRAPHS - FIGURES 8-1 and 8-2.)

A. PLUG, 1", 18 NPT ALUMINUM.

B. DUMMY SOURCE. (NOT LABELED IS A 1" I.D. SLEEVE THAT IS ATTACHED TO SHIPPING CONTAINER.)

C. 1/2" COPPER TUBING. (NOT LABELED IS THE KNURLED WIPING CHAMBER, 2-1/4", 20 NPT BRASS.)

D. 1" THICK FOAM PLASTIC DISK.

E. 7/8" TUBULAR GAUZE, STOCK #LF6510-200-7013.

13.2.2. COBALT 60 SOURCES IN THE FOLLOWING PROJECTORS WILL BE USED ONLY IN THE HIGH ENERGY (COBALT) ROOM IN BLDG. #676 (MARE), IN ROOM #2, BLDG. #113A (HP), AND IN OTHER LOCATIONS UNDER PROCEDURES AND CONDITIONS PREVIOUSLY APPROVED BY HEALTH PHYSICS BRANCH.

MODEL NO:	MAXIMUM SOURCE SIZE (CURIES)
T/O 404	30
BUDD 52	20

13.2.2.1. ALL SAFETY PRECAUTIONS OUTLINED IN SECTION XI AND SECTION VII MUST BE OBSERVED.

13.2.2.2. ALL INTERLOCKS AND SAFETY ALARMS PROVIDED FOR THESE UNITS MUST BE OPERATIVE WHEN UNITS ARE IN USE, AS OUTLINED IN SECTION VII.

13.2.2.3. THE 20-CURIE COBALT 60 SOURCE IN THE "BUDD" #52 PROJECTOR IS NOT TO BE USED WITH THE PANORAMIC PROJECTOR WITHOUT THE CONSENT OF THE HEAD OF THE BRANCH, AND THEN ONLY UNDER THE DIRECT SUPERVISION OF THE SUPERVISOR.

13.2.2.4. THE ALUMINUM PORT WINDOW OF THE 30-CURIE COBALT 60 SOURCE IN THE T/O 404 PROJECTOR MUST NOT BE REMOVED FROM THESE PROJECTORS AT ANY TIME, EXCEPT TO INSTALL THE SOURCE TUBES, AND THEN ONLY UNDER THE DIRECT SUPERVISION OF THE SUPERVISOR.

13.2.2.5. THE SAFETY LOCK ON THE CONTROLS FOR THESE UNITS WILL BE KEPT LOCKED WHEN NOT IN USE.

13.3. RADIUM

13.3.1. THE TWO MCI AND FIVE MCI RADIUM SOURCES ARE USED FOR CALIBRATION OF THE "RADIAC" RADIATION MEASUREMENT INSTRUMENT. THESE SOURCES ARE STORED IN A SHIELDED ROOM IN BLDG. #676, (MARE ISLAND), AND BLDG. #113A, (HUNTERS POINT), AND ARE SURROUNDED WITH SUITABLE LEAD SHIELDING. THEY ARE NOT TO BE REMOVED FROM THE STORED CONDITION NOR FROM THE BUILDING EXCEPT BY SPECIFIC APPROVAL OF THE HEAD, NONDESTRUCTIVE TEST BRANCH. EXTREME CAUTION WILL BE EXERCISED IN HANDLING EACH SOURCE, DUE TO THE CONTAMINATION POTENTIAL PRESENTED IF IT IS DAMAGED.

13.4. X-RAY MACHINES

13.4.1. ONLY CERTIFIED RADIOGRAPHERS AND RADIOGRAPHERS' ASSISTANTS WILL OPERATE THE X-RAY MACHINES.

B 13.4.2. THE X-RAY ROOMS (#5 AND #6) IN BLDG. #676 (MARE), AND ROOM (#1) IN BLDG. #113A (HUNTERS POINT) ARE PRIMARILY FOR X-RAY MACHINE USAGE, HOWEVER, ISOTOPES MAY ALSO BE USED IN THESE ROOMS, PROVIDED THE REQUIREMENTS OF PARAGRAPH 7.1.3. ARE ADHERED TO.

WHEN OPERATING X-RAY MACHINES OR ISOTOPES IN THESE ROOMS OR IN BLDG. 113A AT HUNTERS POINT, ALL RADIATION SAFETY REGULATIONS OUTLINED IN PARAGRAPH 7.1. OF THIS INSTRUCTION SHALL BE OBSERVED.

13.4.3. WHEN OPERATING PORTABLE MACHINES THROUGHOUT THE SHIPYARD, ALL RADIATION SAFETY REGULATIONS OUTLINED IN SECTION VII, AND SECTION IX, OF THIS INSTRUCTION SHALL BE OBSERVED.

13.4.4. WHEN OPERATING THE X-RAY MACHINE FOR FLUOROSCOPY, THE RADIATION CAUTION SIGNS, ROPES, RED FLASHER LIGHTS, AND BARRIERS ARE TO BE IN PLACE BEFORE BEGINNING OPERATIONS.

13.4.4.1. AFTER CHECKING POWER CONNECTIONS AND REMOTE CONTROL SWITCH, THE MOTOR SWITCH OF THE X-RAY UNIT SHOULD BE TURNED "ON" AND THE TIMER SET TO MAXIMUM, AUTO-TRANSFORMER SET TO APPROXIMATELY 55 KVP FOR 1" THICKNESS POLYETHYLENE SHEETS, OR 40 TO 50 KVP FOR 1/4" TO 1/2" THICKNESSES. THE MILLIAMP CONTROL SHOULD BE SET FOR 5 MA'S WITH THE REMOTE CONTROL ADJUSTMENT IN THE CENTER POSITION. THE RHEOSTAT SHOULD BE FULLY OUT.

13.4.4.2. THE UNIT IS EQUIPPED WITH REMOTE CONTROL CONTAINING "OFF-ON" SWITCH AND X-RAY TUBE FILAMENT CONTROL. A FOOT SWITCH, WHICH ALSO OPERATES RED LIGHTS AT EACH END OF THE VIEWING TABLE IS CONNECTED IN SERIES WITH THE "OFF-ON" X-RAY SWITCH.

13.4.4.3. THE X-RAY TUBE PORT AND VIEWING TABLE ARE LEAD-SHIELDED SO THAT RADIATION IN AREAS TO BE OCCUPIED BY PERSONNEL DURING OPERATIONS IS WELL WITHIN SAFE LIMITS.

13.4.4.4. ALL PERSONNEL OBSERVING OR ASSISTING IN FLUOROSCOPY WILL BE CONFINED TO THE AREA IN FRONT OF THE VIEWING TABLE BY ROPE BARRIERS.

13.4.4.5. ASSISTANTS WHO HANDLE POLYETHYLENE ARE ASSIGNED THE DUTY OF SECURING THE ROPE BARRIER AND SOUNDING THE "ALL CLEAR" FOR FLUOROSCOPE RADIOGRAPHER. THE RADIOGRAPHER WILL NOT START THE MACHINE UNTIL HEARING THE "ALL CLEAR." HE WILL THEN CALL OUT: "X-RAY ON." UPON COMPLETION OF THE SCAN, HE WILL SOUND: "X-RAY OFF." DURING THE INTERVAL THAT THE X-RAY MACHINE IS TURNED ON, ALL PERSONNEL WILL MAN THEIR ASSIGNED STATIONS.

13.4.4.6. UPON COMPLETION OF ASSIGNMENT, SECURE ALL BARRIERS, LIGHTS, AND SWITCHES.

13.5. PROCEDURE FOR ENTERING A CONTAMINATED RADIATION AREA, SUCH AS THE REACTOR COMPARTMENT OF AN OPERATING NUCLEAR-POWERED SUBMARINE.

B

13.5.1. THE RADIOLOGICAL CONTROL DIV., CODE 137, SHALL BE NOTIFIED AT LEAST FOUR HOURS PRIOR TO THE BEGINNING OF THE SHIFT ON WHICH THE BOARDING IS TO OCCUR.

13.5.2. RADIATION SAFETY CLEARANCE AND INSTRUCTIONS FOR RADIATION PROTECTION SHALL BE OBTAINED FROM THE RADIOLOGICAL CONTROL BRANCH.

13.5.3. PROTECTIVE CLOTHING SHALL BE CHECKED OUT OF SHOP #06 ON THE RADCON BARGE.

13.5.4. OBTAIN RADIATION EXPOSURE RECORD CARD, IBM L52769, FROM THE ATTENDING RADCON PERSONNEL, WHO WILL SEE THAT THE TOP LINE IS CORRECTLY AND LEGIBLY FILLED OUT.

13.5.5. PRESENT THE RADIATION EXPOSURE CARD TO THE RADIATION MONITOR BEFORE ENTERING RADIATION AREA FOR ISSUE OF DOSIMETERS.

SECTION XIV

EMERGENCY PROCEDURES

14.1. OVEREXPOSURE

14.2. UNCONTROLLED SOURCE

14.3. TRANSPORTATION ACCIDENTS

14.4. FIRE

B 14.5. PERSONS TO BE NOTIFIED

THE FIRE PROTECTION BRANCH PERSONNEL OF THE LOCATION AND EXTENT OF THE HAZARD. THE RADIOGRAPHER'S ASSISTANT WILL IMMEDIATELY NOTIFY THE SUPERVISOR, AND THE SUPERVISOR WILL NOTIFY ONE OF THE INDIVIDUALS LISTED IN PARAGRAPH 14.5.1. AS TO THE SITUATION. HEALTH PHYSICS BRANCH WILL MONITOR AND LOG EXPOSURES OF FIREFIGHTING PERSONNEL. THE RADIOLOGICAL PROTECTION OFFICER, OR HIS REPRESENTATIVE, WILL BE PRESENT TO FURNISH ADVICE CONCERNING MEANS TO AVOID SPREADING OF CONTAMINATION AND TO RECOVER THE EXPOSED SOURCE.

14.5. PERSONS TO BE NOTIFIED

14.5.1. THE FOLLOWING IS A LIST OF NAMES AND PHONE NUMBERS OF PERSONS WHO MAY BE CALLED:

B

NAME:	HOME TELEPHONE NO:	MARE NO:
R. H. PARNESS, HEAD NONDESTRUCTIVE TEST BRANCH	(415) 689-8268 (CONCORD)	646-4316
E. A. CHELINI, HEAD OPERATIONS SECTIONS	(707) WY6-0742 (SONOMA)	646-4316
C. E. SMITH, SENIOR SUPERVISOR RADIOGRAPHIC SECTION	(707) 643-5510 (VALLEJO)	646-4235
S. R. BILLINGS, SUPERVISOR RADIOGRAPHIC SECTION	(707) 642-1423 (VALLEJO)	646-4235
M. E. ROBINSON, SUPERVISOR RADIOGRAPHIC SECTION	(707) 644-8130 (VALLEJO)	646-4235

B

		HUNTERS POINT NO:
A. E. BERGERON, HEAD NONDESTRUCTIVE TEST BRANCH	584-8634 (SFRANCISCO)	824-3207
D. KEATING, ASSO. SUPERVISOR RADIOGRAPHIC SECTION	871-8949 (BRISBANE)	824-3138
J. TERRON, ASSO. SUPERVISOR RADIOGRAPHIC SECTION	756-0773 (SFRANCISCO)	824-3267
P. ARMENTROUT, SUPERVISOR RADIOGRAPHIC SECTION	583-8124 (SFRANCISCO)	824-3267

B

14.5.1.1. UPON RECEIVING NOTIFICATION OF ANY OF THE ABOVE SITUATIONS, THE HEAD, NONDESTRUCTIVE TEST BRANCH, OR IN HIS ABSENCE, THE SENIOR SUPERVISOR, WILL IMMEDIATELY NOTIFY EITHER THE HEALTH PHYSICIST, CODE 732, NORMALLY CALLED FIRST, OR THE RADIOLOGICAL PROTECTION OFFICER, CODE 108. THIS NOTIFICATION WILL BE MADE PRIOR TO INSTITUTING CORRECTIVE MEASURES, AND DETERMINATION OF THE NEED FOR FURTHER ASSISTANCE CAN THEN BE MADE. THE SHIPYARD WATCH OFFICER WILL ALSO BE NOTIFIED.

14.5.1.2. THE TELEPHONE NUMBERS ARE:

NAME AND TITLE:	HOME TELEPHONE NO:	MARE NO:
G. J. ROSATI, RADIOLOGICAL PROTECTION OFFICER	935-6068 (WALNUT CREEK)	646-2458
CHAPMAN BURK, HEALTH PHYSICIST	232-7232 (EL CERRITO)	646-2485
MALVIN JOHNSON, HEALTH PHYSICIST	843-3286 (BERKELEY)	646-2485
SHIPYARD WATCH OFFICER (MARE)		646-4222
SHIPYARD WATCH OFFICER (HP)		824-2888

B

SAN FRANCISCO BAY NAVAL SHIPYARD is headquartered at Vallejo, California and consists of the geographical areas of Mare Island, Vallejo, California, and Hunters Point, San Francisco, California. The official mission of the Shipyard is to provide logistic support for assigned ships and surface craft; to perform authorized work in connection with construction, conversion, overhaul, repair, alteration, drydocking, and outfitting of ships and craft, as assigned; and to provide services and material to other activities and units as directed by competent authority.

San Francisco Bay Naval Shipyard is under the command of an officer, ordered by the Navy Department to command the Shipyard, with the title COMMANDER, SAN FRANCISCO BAY NAVAL SHIPYARD.

DEPUTY COMMANDERS FOR INDUSTRIAL OPERATIONS. The Deputy Commanders for Industrial Operations at Hunters Point and Mare Island are responsible to the Shipyard Commander for execution of industrial operations at their respective sites and such other duties as may be assigned.

MEDICAL OFFICER, Code 700. The Medical Officer is responsible to the Shipyard Commander for administering cognizance over the Shipyard Ionizing Radiation Control Committee and to the Deputy Commander for Industrial Operations, Hunters Point, for occupational health functions at Hunters Point.

HEAD, INDUSTRIAL DISPENSARY, Code M720. The Head, Industrial Dispensary is responsible to the Deputy Commander for industrial operations, Mare Island, for occupational health functions at Mare Island and through the Industrial Hygiene Division provides Health Physics services for the Shipyard.

IONIZING RADIATION CONTROL COMMITTEE. The Ionizing Radiation Control Committee advises the Medical Officer and Shipyard Department Heads, at both sites, as appropriate, on the status of radiological safety matters excluding those related to nuclear propulsion; reviews applications and proposals for the use of sources of ionizing radiation; exercises surveillance over radiological safety matters; and develops operational procedures where necessary for management control.

RADIOLOGICAL PROTECTION OFFICER. The Radiological Protection Officer is responsible for advising and reporting on all matters pertaining to radiological health related to industrial operations exclusive of those related to nuclear propulsion. This includes the hazards of all forms of ionizing radiation as well as the implementation and effectiveness of controls. He is available to Heads of Departments and Offices for advice and consulation, and for special assignments. He is a member of the Shipyard Ionizing Radiation Control Committee, and serves as liaison officer between the Shipyard and the Atomic Energy Commission with respect to Byproduct, Special Nuclear, and Source Material licensing. He is custodian of AEC licenses issued to the Shipyard and all related records.

He also exercises surveillance over related training of personnel and compliance with pertinent Shipyard and AEC regulations, and certifies users of licensed sources of ionizing radiation as to radiation safety competence.

ATTACHMENT D

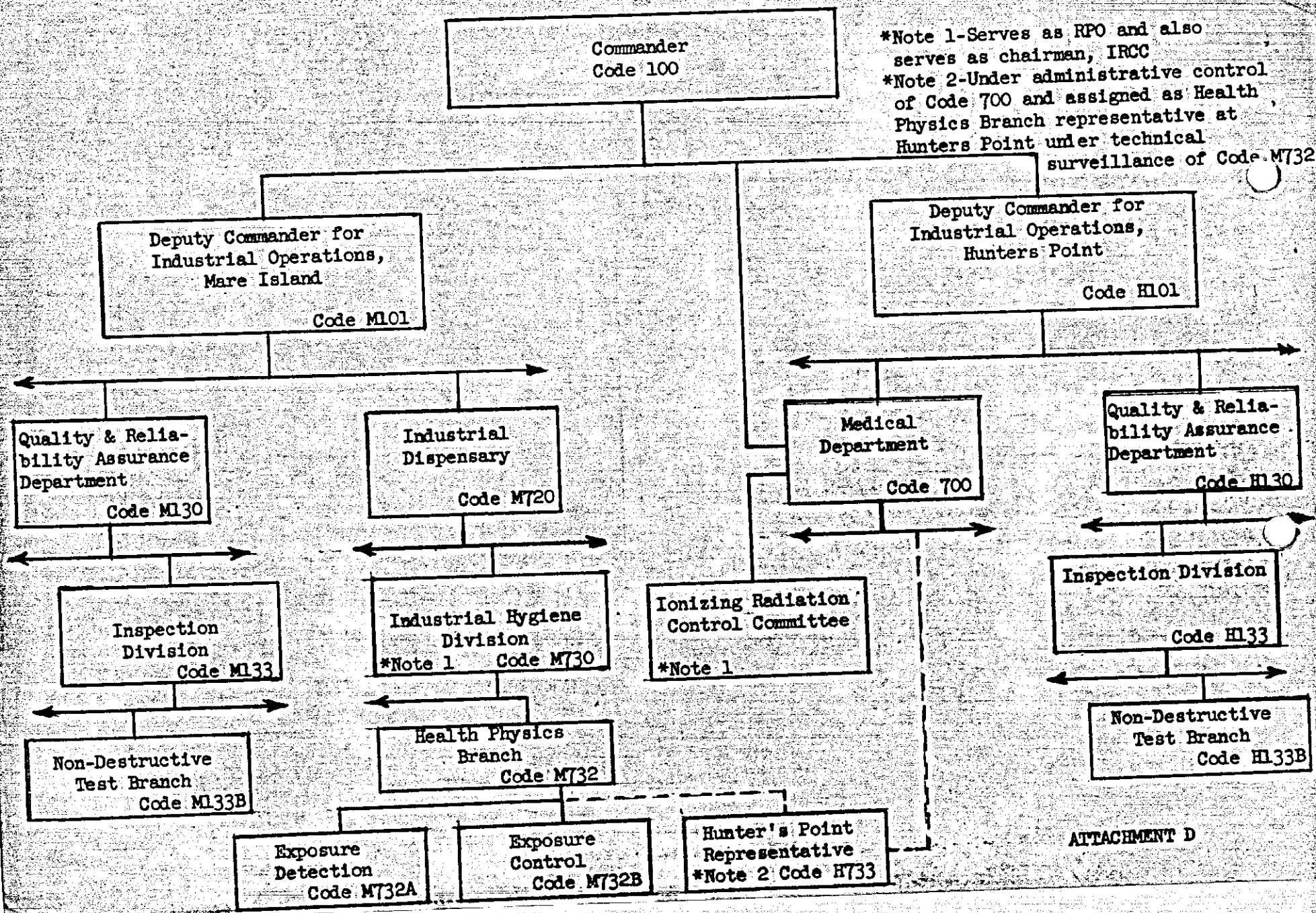
HEALTH PHYSICS BRANCH, Code M732. Provides technical surveillance at both sites for:

1. Detecting, evaluating, and formulating control for personnel exposures to ionizing radiation and training in radiological safety,
2. Laboratory services and personnel dosimetry,
3. Maintaining exposure records,
4. Performing environmental background radioactivity surveys,
5. Maintaining an inventory of Shipyard sources of ionizing radiation,
6. Performing inspections and surveys of existing and planned procedures, operations, and facilities, to determine the adequacy of controls.

QUALITY AND RELIABILITY ASSURANCE OFFICERS, Codes H130 and M130. The Quality and Reliability Assurance Officers are responsible to the respective Deputy Commanders for Industrial Operations for the organization, administration, and supervision of the Quality and Reliability Assurance Department, and for such other work as may be assigned.

NON-DESTRUCTIVE TEST BRANCHES, Codes H133B and M133B. The Non-Destructive Test Branches are a component of the Inspection Division of the respective Quality and Reliability Assurance Department. The specific delegation of authority and responsibility for conducting the radiographic testing program is contained in Attachment B, Q&RA Instruction 4730.22 (Administrative, Operating, and Emergency Procedures for Radiographic Personnel).

SAN FRANCISCO BAY NAVAL SHIPYARD



ATTACHMENT D

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

DML: IB:36

JANUARY 16, 1969

PROGRAM CODE: 61421 42

LICENSE NUMBER: 04-00364-06

EXPIRATION DATE: 69/03/31

DEPT OF THE NAVY MARE ISLAND NAVAL
SHIPYARD NONDESTRUCTIVETEST BRANCH
QUALITY ASSURANCE DIV

VALLEJO CAL 94592

NOTE: The following paragraphs in this letter are applicable to your license: 1, 2, 3, 6, 7, 8

SUBJECT: NOTICE OF LICENSE EXPIRATION

1. The expiration date of your Byproduct Material (Radioisotopes) License is shown above.

2. If you desire to continue your radioisotope program, an application for renewal of the license should be filed with this office at least 30 days before the expiration date. Your program will then be covered by your existing license until a new license can be issued. (See Title 10, Code of Federal Regulations, Part 30, Section 30.37 (b)). However, if your application is received less than 30 days prior to the expiration date of your license, it possibly cannot be processed before your existing license expires. This could result in your possessing radioisotopes without a valid license which is a violation of Federal Regulations.

3. On a renewal application, all items on the enclosed Form AEC-313 must be completed. Information contained in previous applications, statements or reports filed with the Commission may be incorporated by reference in items 8 through 15, Form AEC-313, or in item 6, Form AEC-313R (for Radiography Licensees only). Such references, however, must be clear, specific, and made to the document which contains the information and not to the license.

4. If the renewal application is for a medical program and requests human uses not presently covered in the license, the information requested on pages 1 and 3 of enclosed Form AEC-313a must be included.

5. If you use byproduct material for studies in lower animals, this use must be authorized in the license. So, if lower animals are used in your radioisotopes program, your application should contain information about the types of animals to be used, the location of their use, handling instructions to animal caretakers where appropriate, and methods of disposal for animal wastes and carcasses.

6. If you do not wish to renew the license, please complete the enclosed Form AEC-314, "Certificate—Disposition of Radioisotopes," and return it to this office.

7. This notice of your license expiration is sent for your convenience, but it should not be interpreted that similar notices will be sent in the future. The responsibility for license renewal remains with the licensee.

8. Please disregard, this notice if you have obtained an amendment which has extended the expiration date of the above license or if a new license has been issued which supersedes the above license.

Richard E Cunningham

RICHARD E. CUNNINGHAM, *Chief*
Isotopes Branch
Division of Materials Licensing

Enclosures:
As stated

cc: Mr. George N. Mahaffey
Code: 05163

ACTION:
INFO: 0516

DEPARTMENT OF THE NAVY
NAVAL SHIP SYSTEMS COMMAND
WASHINGTON, D.C. 20360

IN REPLY REFER TO
12450
SER 2061-3358

15 JUN 1967

From: Commander, Naval Ship Systems Command
To: Commander, San Francisco Bay Naval Shipyard, Vallejo, California 94592

Subj: Beneficial Suggestion: #PROD-31 by Messrs. Robert C. Noble, Leland E. Broyles and Charles R. Sandeen, NAVSHIPYD SFBAY; "Wipe Testing of Sealed Sources"

Ref: (a) NAVSHIPYD SFBAY tracer of 24 March 1967
(b) BUSHIPS letter 10330/1 Ser 682C-358 of 29 March 1965

Rec'd this Copy 6/19/67.

Encl: (1) Case File
XXXXXXXXXXXX

1. Forwarded for reason(s) indicated:

	A. Evaluation	X	F. Award of $30.00
	B. Further information		
	C. Not cognizance		G. Case closed
	D. Case closed per encl (2)		
	E.		

2. Reference (a) inquired concerning the amount of an award recommended for use of the subject suggestion. Since the date of reference (b), approximately fourteen more tenders have been authorized by Atomic Energy Commission licensing to perform radiography. However, only four of these tenders use the device proposed by the suggestion; the rest use commercially available devices supplied by vendors of services and equipment.

3. In view of the foregoing, an award of $30 is recommended for the suggesters.

4. This award is chargeable to appropriation 1771804.2445 12 20995DI201 - 24 2D - - .

FRANK C. STANFORD
Head, Incentives Branch
By direction of Commander,
Naval Ship Systems Command

Copy to:
NAVELEX 05163 (Mahaffey)

NAVSHIPS 12450/1 (REV. 10-66)

* GPO : 1966 OF—236-977

6-5-67

Talcon With SAN FRAN BAY NAVSHIPYD
(Mr. Chapman Burke)

1. In Rosati's absence, talked to Mr. Burke re- to need for coming in with a request to amend lic. for possession & use of Po-Be Neutron Source for "Boron Content" measurements.

2. Mr. Burke stated:
a. Eqpt. to be used by the Quality Assurance Group.
b. Understood a 2-Ci source is used.
c. Sheets of material are to be tested. Absorption measurement are made.

3. Informed Mr. Burke relevant to recent discussion with AEC (Mr. Bassin):
a. Radiation Safety Program should be formulated & funded as part of the request to amend a license. Procedures to be followed by people using eqpt. should be included.
b. Preparation of instructions for use should be obtained from LAPAL.

9 May 1967

Rte Sheet from Code 2061, Miss Szego, Ships, Ext. 64084

Beneficial Suggestion – Wipe Test Tool For Radiographic Sealed Source (from Mare Island – SF BAY)

Our rte sheet comments following telcon this date:

1. No record of 3 Aug '66 ltr. from Shipyard
2. ≈14 more Tenders have been authorized by AEC Licensing to perform Radiography since 29 Mar. 1965 (our ser 682C-358, dtd 29 Mar 1968) (4) of these Tenders use the device. Others use commercially available devices supplied by vendors of Sources & Equipment.
3. Suggest consider an additional award of $15 to $25 – suggestion has utility & this will stimulate this type thinking among Naval Personnel @ the Shipyard

GAM

[Boyce Canyon – AD-36 (lic. 19 March 1965) – no
AD-28; AS-34; AR-7; AD-24; AD-19; AD-26; AD-27; AD-23 – {all no Use Budd Co LT-100 Device}
AD-14; AD-25; AR-8; & AD-17 – all yes]

SAN FRANCISCO BAY NAVAL SHIPYARD
VALLEJO, CALIFORNIA 94592

IN REPLY REFER TO:

10330
(108)

APR 25 1967

From: Commander, San Francisco Bay Naval Shipyard
To: Secretary, U. S. Atomic Energy Commission, Washington, D. C. 20545
Via: Commander, Naval Electronics Systems Command (0516)

Subj: Proposed Fees for AEC Byproduct Material Licenses; comments concerning

Ref: (a) Notice of Proposed Rule Making, 32 FR 3955, published in Federal Register, 11 March 1967

Fwded TO AEC By 1st End. Ser 138 of 2 May 67

1. The effect of fees proposed by reference (a) on this Command, and presumably on other Federal licensees, has been considered. It is concluded that, notwithstanding the merit of the intent of the proposal, its specific application to AEC Byproduct Material Licenses held by this activity is not economically feasible and therefore not in the best public interest.

2. The total annual fees for the four licenses now held by this Shipyard would amount to only $125 maximum. The additional direct and indirect cost to the government for merely processing these fees will approximate this amount and is not recoverable. Therefore, under the proposed Paragraph 170.11, it is suggested that the Commission consider exempting Federal licensees from the payment of subject fees.

J. H. McQUILKIN

Copy to:
NAVELEXSYSCOM (05163)

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

APR 7 1967

IN REPLY REFER TO:

DML:IB:NB (91649)

Commander
San Francisco Bay Naval Shipyard
Vallejo, California 94592

Dear Sir:

Enclosed is Amendment No. 16 to License No. 4-364-6. license renewal funded To Shipyard on 4/10/67

Please note that the license does not authorize the use of the General Radioisotope Processing Corporation source changer. We have been informed by the State of California, where General Radioisotope Processing Corporation is located, that the State has approved the use of the source changer only when it is used by General Radioisotope Processing Corporation personnel. If at some time in the future a manual is written for the use of the source changer, we shall be pleased to consider amendment of the license to provide for its use.

Sincerely yours,

Original Signed by
Nathan Bassin

Nathan Bassin
Isotopes Branch
Division of Materials
Licensing

Enclosure:
As stated above

cc: Naval Electronic
Systems Command

ELEX-0516
9900
Ser 05163-54
15 February 1967

FIRST ENDORSEMENT ON NAVSHIPYD, SFRAN BAY LETTER 10330(108) OF 8 FEB 1967

From: Commander, Naval Electronic Systems Command
To: Chief, Isotopes Branch
Division of Materials Licensing
U. S. Atomic Energy Commission
Washington, D. C. 20545

Subj: Application For Consolication of AEC Byproduct Material Licenses Nos. 04-00364-09 and 04-00364-06; Supplemental Information For

Ref: (a) FONECON between Mr. Mahaffey, NAVELEX and Mr. Bassin, AEC on 27 January 1967

1. Basic letter with enclosures thereto covers supplemental information for subject application.

2. This material has been reviewed and clarifies areas discussed during the telephone conversation, reference (a).

Copy to:
BUMED (Code 74)
NAVSHIPYD, SFRAN BAY

E. S. HOLLANDER
By direction

MAHAFFEY/mitchell
61457 - 2/15/67
Serial 670210-7227

SAN FRANCISCO BAY NAVAL SHIPYARD
VALLEJO, CALIFORNIA 94592

IN REPLY REFER TO:
10330
(108)

FEB -8 1967

Forwded To AEC by 1st End., Ser. 05163-54, of 2/15/67

From: Commander, San Francisco Bay Naval Shipyard
To: Director, Division of Materials Licensing (Isotopes Branch)
U. S. Atomic Energy Commission
Washington, D. C. 20545
Via: Commander, Naval Electronics Systems Command (Code 0516)

Subj: Supplementary Information for application to consolidate AEC Byproduct Material Licenses Nos. 04-00364-06 and 04-00364-09

Ref: (a) SFRANBAY NAVSHIPYD ltr 10330 (108) of 23 Dec 1966
(b) Fonecons of 9 and 27 Jan 1967 between Mr. Rosati, SFRANBAY NAVSHIPYD and Mr. Mahaffey, NAVELEXSYSCOM

Encl: (1) Supplementary Information to AEC Form 313X attachment in enclosure (1) of the referencad license application
(2) Summary of education and experience of instructors for radiography personnel

Supplemental information to reference (a), requested by reference (b), is submitted herewith as enclosures (1) and (2).

J. H. McQUILKIN

Copy to:
BUMED (Code 74)
NAVELEXSYSCOM (Code 05163)

SUPPLEMENTARY INFORMATION TO ITEMS 4 AND 5, AEC FORM 313R, OF THE REFERENCED APPLICATION

1. The various source types, strengths and exposure devices applied for in Item 4 (Supplementary Sheet No. 1 of the Application) have been compiled considering need, obsolescence and standardization of equipment at both Hunters Point and Mare Island. The deletions of some equipment which appeared on previous applications is intended to simplify operations, training and the content of the governing license. The sources involved in the latter equipment are being disposed of and are no longer possessed by the Shipyard.

2. The following is annotated to correspond with the specific item on the Form 313R:

(a) Item 4B: A source Model No. 934500 has been provided by the Budd Company as a replacement model for this Cobalt-60 source. Therefore, this number should be substituted for No. 41036.

(b) Items 4C, D and E:

(1) The application to use three different manufacturer's Iridium source models under Items 4C, D and E, was devised with the intent of achieving flexibility by permitting acceptance of likely low bidders for annual source contracts without further need of license amendment.

(2) The Model number "36910" for the Budd Company Iridium 192 sources was provided by the manufacturer and was represented as being approved and compatible for use with TechOps exposure devices, Model Nos. 490, 490, 524, 532 and 533. The promised written confirmation of this representation has not been provided by the manufacturer to date. If the inclusion of this source model will cause any further delay in the issuance of the license, it should be omitted.

(3) The Model G-1 source of the General Radioisotope Processing Corporation is indicated as being compatible for service as a replacement source for TechOps Model No. A-424-1 in the correspondence attached hereto.

(c) Item 5B:

(1) The Mare Island source positioning tip is fitted with a short, machined adaptor for use with the Budd Company Model 52 exposure device.

ENCLOSURE (1)

(d) Items 5C, D and E:

(1) Source Changer Model No. 130 of the General Radioisotope Processing Corporation should be added for handling iridium sources. The Shipyard owns two TechOps Model 414 Source Changers. They will be used for interchange of sources, regardless of manufacture, between cameras, since all source models are to be compatible replacements for TechOps Model A-424-1. Budd Company model Source Changers to accomodate their sources will be submitted in a separate application for amendment at some future date when the uncertainty of their source model numbers is clarified.

ENCLOSURE (1)

GENERAL RADIOISOTOPE PROCESSING CORPORATION
3000 SAN RAMON VALLEY BLVD. ☆ SAN RAMON, CALIFORNIA 94583
TELEPHONE 415-837-5424

November 18, 1966

J.A. Schrodinger (Code 130M2)
San Francisco Bay Naval Shipyard
Mare Island Division
Vallejo, California

Dear Mr. Schrodinger:

Attached is a copy of the letter which we received from the Atomic Energy Commission stating that they have reviewed our Model G-1 source and have found it compatible for service as a replacement source for Technical Operations' Model A424-1 Radiography source.

Yours sincerely,

James M. Gerhart
Executive Vice Pres.

JMG/W

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

IN REPLY REFER TO:
DML:IB:WFH

NOV 9 1966

General Radioisotope Processing
Corporation
3000 San Ramon Valley Boulevard
San Ramon, California 94583

Attention: Mr. James M. Gerhart
Executive Vice President

Gentlemen:

This refers to your letter of October 20, 1966, signed by James M. Gerhart, concerning your Model G-1 Radiography source.

The Division of Materials Licensing, U. S. Atomic Energy Commission has not evaluated your Model G-1 source. However, the State of California Bureau of Radiological Health, Department of Public Health has informed us that they have reviewed information concerning this source and find it to be compatable for service as a replacement source for Technical Operations Model A-424-1 radiography source. Normally this verification by the State of California will be sufficient for our licensing purposes.

We trust this letter will solve any future problems of this nature.

Very truly yours,

William O. Miller

William O. Miller
Isotopes Branch
Division of Materials
Licensing

SUMMARY OF EDUCATION AND EXPERIENCE OF INSTRUCTORS FOR RADIOGRAPHY PERSONNEL, SAN FRANCISCO BAY NAVAL SHIPYARD

GUIDO J. ROSATI, Radiological Protection Officer. University of California, B. S., College of Chemistry, 1941. Postgraduate study (Industrial Hygiene) Delmar Institute, Public Health, Columbia University, 1942; Radiological Safety (6 weeks), Damage Control School, Naval Training Station, Treasure Island, California, 1948; Postgraduate study (Radiological Health), New York University, Postgraduate Medical School, 1956. Twenty-five years professional experience in Industrial Hygiene, eleven years of this as Industrial Hygienist, Mare Island, followed by nine years as Head, Industrial Hygiene Division, Medical Department, Mare Island Naval Shipyard, last two years as Head, Industrial Hygiene Division, San Francisco Bay Naval Shipyard. Collateral duty, 1961-1965 as Industrial Radiological Safety Officer; 1965 to present, Radiological Protection Officer, SFBNS. Duties include technical and administrative direction of Health Physics functions for the Shipyard.

CHAPMAN BURK, Head, Health Physics Branch, 1957-1965, Mare Island Naval Shipyard; 1966 to present, Head, Health Physics Branch, SFBNS. University of Southern California, M. S., Chemical Engineering, 1948; B.S., Chemical Engineering, VPI, 1944; A.B., San Francisco State College, 1943. Special extension courses at UC in Nuclear Physics for Engineers, 1955; Nuclear Engineering, 1957; Measurement of Nuclear Radiations, 1957; Health Physics Review, 1966. Technical Coordinator, Health Chemistry Department, Lawrence Radiation Laboratory, UC, 1954 to 1957. Consultant to Ionizing Radiation Control Committee at this Shipyard since 1957.

MALVIN JOHNSON, Health Physicist, GS-11, Health Physics Branch, San Francisco Bay Naval Shipyard; B.S., Mathematics, 1956, Prairie View A&M, Texas; Lieutenant, U. S. Army, two years; Army Missile School Course, 1956. UC extension courses in Nuclear Radiation and Detection, 1960; Radiation Biology, 1961; Atomic Structure, 1961-62. Radiation Monitor course. Five years experience as professional health physicist.

ELMON M. ELMORE, Health Physicist, GS-12, Health Physics Branch, San Francisco Bay Naval Shipyard. B.S., Biology, Central State College, Ohio, 1953; graduate study in Radiation Biophysics, Ohio State University, 1957; Basic Radiological Health, Radiation Surveillance, Management of Radiation Accidents, Radionuclides in Water, Medical X-Ray Protection, R. A. Taft Sanitary Engineering Center, USPHS, 1957 to 1964; Nuclear Reactor Engineering I, II, III, Air Force Institute of Technology, 1959. Health Physicist, Occupational Medicine Division, Air Force Hospital, Wright-Patterson AFB, Dayton, Ohio, 1956 - 1966.

ENCLOSURE (2)

RICHARD W. REYNOLDS, Health Physicist, GS-7, San Francisco Bay Naval Shipyard. University of Nevada, B.S., Zoology, 1966; Basic Radiological Safety Training Course, Reynolds Electrical & Engineering Co., Inc., 1961. Radiological Safety Division, Reynolds Electrical & Engineering Co., 1960 - 1961; Health Physics Office, Walter Reed Army Medical Center, 1962-1963; State Health Laboratories, Las Vegas, Nevada, 1966.

A. E. BERGERON, Supervisory Inspector (Metals) A, Head, Nondestructive Test Branch, Hunters Point site, wherein all radiographic work is accomplished. Graduate of high school, employed in federal service as a welder from 1942 to 1952, supervisory welder until 1956. Assistant radiographer and radiographer from 1956 to 1958; supervisor of Radiography in 1959. Associate Supervisor of Metals in 1963, and now Supervisory Inspector, NDT Section. Training includes formal radiographer training in 1958 and continuing refresher training. Prepares the Radiological Safety Procedure for Hunters Point and instructs personnel in the application of all procedures.

HAROLD ROBERDS, Engineer Technician, Technical Section, NDT Branch, Hunters Point site. High school graduate, two years at City College of San Francisco, one year at Missouri School of Mines and Metallurgy, Civil Engineering major. Radiographer in 1961, and refresher training in 1962; five week course in radiography and film reading by Westinghouse; 1963, Radiographic and Film Reading course on pipe at Mare Island, and became an Examiner for U. T. operators. January, 1965, Mr. Roberds attended USNR Instructor Training School at Treasure Island. He instructs the practical portion of the Radiological Training Courses.

DAN TOMLINSON, high school graduate, 1956, one semester at College of San Mateo. San Francisco Naval Shipyard Apprentice Shipfitter School, graduated 1961. Radiographer, 1962. NDT Course, Concord Naval Ammunition Depot, 1963; SFNSY Radiography Course (Structural), 1965; Radiography Course (Pipe), 1966; Annual RadSafe Courses, 1962 to the present.

L. E. BROYLES, seven years industrial radiography experience and two years experience as instructor teaching radiation safety. High school graduate, two instructor training courses conducted at Mare Island.

N. C. DESNOYER, six years industrial radiography experience, high school graduate and one semester adult education course in radiation safety and industrial radiography.

J. A. DUTRA, eight years industrial radiography experience, three years experience as instructor teaching fundamental and advanced industrial radiography, and one year experience teaching general nondestructive testing at the Junior College level. B.S. in Industrial Management and an M.B.A. program to be completed in June, 1967.

ENCLOSURE (2)

G. E. HAMMONS, eight years industrial radiography experience and two and one-half years experience as an instructor teaching general industrial radiography. High school graduate, equivalent of two years college, three college level courses in radiation safety and radiography, and a 240 hour advanced radiography training course conducted at Mare Island.

D. R. MOON, eight years industrial radiography experience and six months experience as instructor teaching general industrial radiography. High school graduate, equivalent of one year college, two college level courses in radiation safety and industrial radiography.

R. H. PARNESS, seventeen years industrial radiography experience and eight years experience as an instructor teaching fundamental and advanced industrial radiography. High school graduate, equivalent of two years college.

E. J. SPECHT, twelve years industrial radiography experience, two years experience as an instructor teaching radiation safety. High school graduate, instructor training course, and radiography training at Bettis (Westinghouse) plant.

A. W. ZLOCZEWSKI, eight years industrial radiography experience and two years experience as an instructor teaching general industrial radiography. High school graduate, equivalent of one and a half years' college, two college level courses in industrial radiography, and a 240 hour advanced radiography training course at Mare Island.

NOTE: The above named individuals or successors to their respective positions will conduct appropriate training for radiographic personnel at San Francisco Bay Naval Shipyard.

ELEX-0516
9900
Ser 05163-50
14 February 1967

From: Commander, Naval Electronic Systems Command
To: Commander
San Francisco Bay Naval Shipyard
Vallejo, California 94592

Subj: Radiographic Sealed Sources; Information Concerning Disposal Of

Ref: (a) FONECON between Mr. Telton, NAVSHIPS, Code 0742 and Mr. Mahaffey, NAVELEX, ELEX-05163 on 8 February 1967
(b) SFBAY BAY NAVSHIPYD SPDLAR 4500, Ser 540-249 of 5 DEC 1966
(c) NAVSED P-5055

1. During the telephone conversation, reference (a), disposition instructions were requested for subject radioactive sources included in reference (b).

2. The list of Cobalt-60 sources has been reviewed. Technical Operations Model numbers for the three sources are not included; however, it appears that these are sources covered by Items 6A and 6B of the Shipyard's current AEC License #04-00364-06 (B-67). Should these not be authorized under the Shipyard's license covering radiographic sources it will be necessary to request an amendment for storage only pending disposal.

3. Disposal of the sources, which have been surveyed as excess to the needs of the Navy, shall be accomplished by transfer to an activity licensed by the U. S. Atomic Energy Commission to dispose of radioactive waste. This policy is in consonance with that established in reference (c).

4. The Naval Electronic Systems Command, ELEX-05163 desires a completed AEC Form WA-277 "Certificate-Disposition of Radioisotopes" for record purposes.

Copy to:
NAVSHIPS 0742
NAVSEC 6224E1

M. G. WILLIAMS
By direction

MAHAFFEY/mitchell
Serial 661209-0237
65986 - 2/14/67

USE FOR URGENT LETTERS ONLY

NAVAL SPEEDLETTER

DO NOT CLEAR THROUGH COMMUNICATION OFFICE

(One box must be checked)

☐ REGULAR MAIL ☐ SPECIAL DELIVERY

☒ AIR MAIL ☐ REGISTERED MAIL

CLASSIFICATION: UNCLASSIFIED

IN REPLY REFER TO: 4500 SER 540-249

DATE: 5 December 1966

TO: Commander
Naval Ship Systems Command
Department of the Navy
Washington, D.C. 20360

NAVAL SPEEDLETTER—
Permits dispatch or informal language.
May be sent (1) with enclosures, (2) in a window envelope (size 8⅞" x 3⅝"), if contents are not classified as confidential or higher, (3) to both naval and nonnaval activities.
Is packaged 500 sheets of white or of one color: yellow, pink, or green.

(Fold)

The Projectors and Sources listed in enclosure (1) are excess to this Shipyards requirements. Disposition instructions are requested.

D. HUNTER
By direction

Encl:
(1) List of excess Gamma Ray Projectors and Cobalt-60 Sources

Basic Spdltr - dtd 5 Dec. 1966 - hand carried by S. Tilton to Code 05163 & reviewed on 8 Feb. 1967. This answered by ltr 05163-50, dtd. 14 Feb 1967.

TRACER COPY

RECORDS OF THIS ACTIVITY INDICATE REPLY TO THIS CORRESPONDENCE NOT YET RECEIVED AS OF 10 January 1967

COPY TO

ADDRESS: Commander, (Code 540)
San Francisco Bay Naval Shipyard
Vallejo, California 94592

← SENDER'S MAILING ADDRESS

Address reply as shown at left; or reply hereon and return in window envelope (size 8⅞" x 3⅝"), if not classified as confidential or higher.

CLASSIFICATION: UNCLASSIFIED

List of Gamma Ray Projectors and Cobalt 60 Sources

Gamma Ray Projector, manufactured by Technical Operations Inc., Model 491, Serial #22 (Built 1959). Contains a 4.25 Curie Cobalt 60 Source, Serial #612.
Condition Code: Projector R-2
Cobalt Source 0-1

Gamma Ray Projector, manufactured by Technical Operations Inc., Model 491, Serial #21 (Built 1961). Contains a 4.5 Curie Cobalt 60 Source, Serial #654.
Condition Code: Projector R-2
Cobalt 60 Source 0-1

Gamma Ray Projector, manufactured by Technical Operations Inc., Model 489, Serial #51 (Built 1960). Contains a 25 Millicurie Cobalt 60 Source, Serial #629.
Condition Code: Projector R-2
Cobalt 60 Source 0-1

XERO COPY XERO COPY XERO COPY

ELEX-0516
3350
Ser 05163-13
13 January 1967

FIRST ENDORSEMENT ON NAVSHIPYD SFRAN BAY LETTER 10330(108) OF 23 DECEMBER 1966

From: Commander, Naval Electronic Systems Command
To: Chief, Isotopes Branch
Division of Materials Licensing
U. S. Atomic Energy Commission
Washington, D. C. 20545

Subj: Consolidation of AEC Byproduct Material Licenses Nos. 04-00364-09 and 4-364-6; Application For

Ref: (a) FONECON between Mr. Mahaffey, NAVELEX-05163 and Mr. Rossti, Code 108, NAVSHIPYD, SFRAN BAY on 11 Jan. 1967

1. Basic letter with enclosure and attachments thereto contains an application to consolidate subject licenses.

2. This material has been reviewed and covers the completed AEC-313? Form with attachments containing updated supplemental information.

3. Areas of clarification, which were discussed during the conversation, reference (a), include:

a. Inked changes as noted: pages 12 and 18 of Attachment B; and questions included in Annex A and B, Supplement 2 of Attachment C.

b. Identification of film badges as DuPont Type 544 with film #555 and #834; and pencil type pocket dosimeters as Type IM-9().

c. Submission by separate letter, the names and qualification of personnel conducting the training program.

4. The action, which is requested, will unify the management control by combining the training program and procedures for radiographic sources and equipment used in performing radiography at the Hunters Point and Mare Island locations of the Shipyard.

Copy to:
BUMED (Code 74)
NAVSHIPYD, SFRAN BAY

M. G. WILLIAMS
By direction

MAHAFFEY/mitchell
61457 - 1/12/67

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

IN REPLY REFER TO:
DML:IB:37

January 3, 1967

Department of the Navy
Mare Island Naval Shipyard
Nondestructive Test Branch
(code 305)
Quality Assurance Division
Vallejo, California 94592

LICENSE NUMBER
4-364-6
EXPIRATION DATE
February 28, 1967

SUBJECT: NOTICE OF LICENSE EXPIRATION

Notice is given that the above Byproduct Material (Radioisotopes) License expires on the date indicated.

If you desire to continue your radioisotope program, an application for renewal of the license should be filed with this office. It is to your advantage to file such an application at least thirty (30) days before the expiration date on your existing license. Your program will then be covered by your existing license until we can issue you a new license, (Title 10, Code of Federal Regulations, Part 30, Section 30.37(b).) If applications received less than 30 days prior to the expiration date of your license cannot be processed before your existing license expires, this could result in your possessing radioisotopes without a valid license which is a violation of Federal Regulations.

If you do not wish to renew your license, please complete the enclosed Form HQ-277, "Certificate - Disposition of Radioisotopes," and return it to this office.

In submitting a renewal application, all items in Form AEC-313 must be completed. Information contained in previous applications, statements, or reports filed with the Commission with respect to the information specified in Items 8 through 15, Form AEC-313, may be incorporated by reference, provided that such references are clear and specific. References should not be made to the license. The document which contains the information should be given instead.

If you have obtained an amendment which has extended the expiration date of the above license, or if a new license has been issued which superseded the above license, please disregard this notice.

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

DML:IB:37

IN REPLY REFER TO:
DML:IB:37

This notice of your license expiration is sent for your convenience and it should not be interpreted that similar notices will be sent in the future. The responsibility for license renewal remains with the licensee.

LICENSE NUMBER
4-364-9
EXPIRATION DATE
February 28, 1967

Sincerely yours,

Richard E. Cunningham
Chief, Isotopes Branch
Division of Materials
Licensing

Enclosures:
1. Form AEC-313
2. HQ-277

CC: Department of the Navy
Commander
Naval Electronics Systems Command
Baileys Crossroads, Virginia 22041

Attn: Mr. George N. Mahaffey
Code 0516

ELEX 0516
3350
Ser 05163-317

21 DEC 1966

From: Commander, Naval Electronic Systems Command
To: Chief, Isotopes Branch
Division of Materials Licensing
U.S. Atomic Energy Commission
Washington, D. C. 20545

Subj: AEC Byproduct Material License No. 04-01039-02; information concerning

Ref: (a) Amendment #10 to AEC License No. 04-01039-02
(b) AEC License No. 04-00364-09 dtd 26 MAY 1966
(c) FONECON between Mr. Mahaffey, NAVELEX-05163 and Mr. Rosati, NAVSHIPYD SFRAN BAY on 13 DEC 1966

1. Subject license was terminated by reference (a) and superseded by reference (b). AEC License 04-00364-09 has an expiration date of 31 March 1966. This action was necessitated by an organizational change at shipyards (i.e., establishing San Francisco Bay Naval Shipyard by consolidation of Mare Island and San Francisco Bay Naval Shipyards).

2. The sealed sources authorized by AEC License #04-00364-09 are used in the radiography program at the Hunters Point Division.

3. The radiography programs at Hunters Point and Mare Island divisions of the shipyard are to be consolidated and an application for a single license covering sealed sources used in radiographic devices will be submitted.

4. During the conversation, reference (c), the status of the application for a consolidated license was discussed. All material has been prepared, reviewed, and final typing is in process. The shipyard's target date for submitting the material covering the Radiography Program is 23 December 1966.

M. G. WILLIAMS
By Direction

Copy to:
NAVSHIPYD, SFRAN

G.N. MAHAFFEY, X61457; J.Thacker, 12/20/66

12-13-66

Called G. ROSATI

1. Blanks of App. To Renew Lic. For Radiography -
2. Typing nearing completion - scheduled to sign out & run mail by Friday. Secretary backlog - out 3 weeks.
3. Included :-
   a. Isotopes & Projectors listed
   b. Imaging Rad. Control Manual - in preparation
   c. Optional use of "Source Positioning Tips"
   d. Radiography sites :
      1. Existing & newly planned facility @ Hunters Point
      2. Using temporary sites.

(12:45) — (1:10)

{Vallejo, Calif.} — [Area 707] - 646-2458 - Rosaki
2485 - Burke

21-831-1566
842.

AEC ltr. DML:IB:37, dtd 1 Dec. 1966
re-lic. 04-01039-07. by Amend. #10
This was terminated & superseded by
lic. # 04-00364-09, dtd. 26 May 1966 - having
an expiration date of 31 March 1967.
Lic. 04-00364-09 covers byproduct material
(sealed sources) used in Radiography
Program at Hunters Point.

Lic. # 04-00364-06 covers byproduct
mtl. (sealed sources) used in Radiography
Program at Mare Island. Expiration
date is 28 Feb. 1967. Amend. #15, last one, covers
performing radiography aboard {USS ENTERPRISE}

Question:
Plans are still consolidation &
what is status of work on application
to authorize continuing radiography
at both Hunters Point & Mare Island
locations. Ans. - Yes
1. Is AEC choice but imagine
#04-00364-09 will continue being used
but renewal will cover both locations.

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

IN REPLY REFER TO:
DML:IB:38

Department of the Navy
San Francisco Naval Shipyard
Production Department
San Francisco, California 94101

December 1, 1966
LICENSE NUMBER
04-01039-02
EXPIRATION DATE
January 31, 1967

Rec'd: 12/9/66

SUBJECT: NOTICE OF LICENSE EXPIRATION

Telcon To Shipyd & Then Ltr To AEC 05165- of — Dec. Giving Status of appl.

Notice is given that the above Byproduct Material (Radioisotopes) License expires on the date indicated.

If you desire to continue your radioisotope program, an application for renewal of the license should be filed with this office. It is to your advantage to file such an application at least thirty (30) days before the expiration date of your existing license. Your program will then be covered by your existing license until we can issue you a new license, (Title 10, Code of Federal Regulations, Part 30, Section 30.37 (b).) If applications received less than thirty days prior to the expiration date of your license cannot be processed before your existing license expires, this could result in your possessing radioisotopes without a valid license which is a violation of Federal Regulations.

If you do not wish to revew your license, please complete the enclosed Form HQ-277 and return it to this office.

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This notice of your license expiration is sent for your convenience and it should not be interpreted that similar notices will be sent in the future. The responsibility for license renewal remains with the licensee.

Sincerely yours,

Richard E Cunningham

Richard E. Cunningham
Chief, Isotopes Branch
Division of Materials
Licensing

Enclosures:
1. Form AEC-313
2. Form HQ-277

CC: Dept. of Navy - Command
Naval Electronics System Command
Baileys Crossroads, Virginia 22041

ATTN: Mr. George N. Mahaffey
Code: 0516

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

IN REPLY REFER TO:
SLR:RH

DEC 1 1966

YOUR REF: 10330
(108)

Commander
San Francisco Bay Naval Shipyard
Vallejo, California 94592

Dear Sir:

Thank you for your letter of November 2, 1966, reporting pursuant to 10 CFR 20.405 the exposure of one of your employees to radiation.

Your cooperation with us is appreciated.

Very truly yours,

"Signed" Eber R. Price

Eber R. Price, Director
Division of State and
Licensee Relations

cc: Commander
Naval Electronics Systems Command
Baileys Crossroads, Virginia 22041
Attention: Mr. George N. Mahaffey
Code: 0516

AIR MAIL

10330/1
ELEX-0516
Ser 05163-189
18 November 1966

FIRST ENDORSEMENT ON NAVSHIPYD SFRAN BAY SFD/LTR SER (108) 10330 OF 10 NOVEMBER 1966

From: Commander, Naval Electronic Systems Command
To: Chief, Isotopes Branch
Division of Materials Licensing
U. S. Atomic Energy Commission
Washington, D. C. 20545

Subj: AEC Byproduct Material License No. 04-00364-06; Request For Amendment To

1. Basic letter contains a request to amend subject license to authorize transporting and using a sealed source of Iridium-192 in performing radiography aboard the USS ENTERPRISE (CVA(N)65).

2. This material has been ~~received~~ reviewed and pertinent information includes:

a. One 21 curie Iridium-192 sealed source, T/O, Inc., Model A-424-1 in T/O, Inc., Projector, Model 533.

b. Transporting radiographic device from San Francisco Bay Naval Shipyard (NRRE) to the USS ENTERPRISE and return.

c. Performing radiography associated with emergency repairs aboard ship after departure from the Continental United States.

d. The Model 533 equipment will be used by a certified radiographer from the San Francisco Bay Naval Shipyard.

e. Projector and sealed source, when not in use, will be secured safely in a shielded locker in a locked compartment aboard the Ship.

f. Operations will be in accordance with AEC License No. 04-00364-06 conditions.

3. Authorization to transport and use the sealed source and projector will permit the San Francisco Bay Naval Shipyard to perform this assignment during the period of 15 November through 15 December 1966

Copy to:
BUMED(Code 74)
NAVSHIPYD, SFRAN BAY

M. G. WILLIAMS
By Di[illegible]

MAHAFFEY/mitchell
61457 - 11/18/66
Serial 661116-3805

NAVEXOS-4181

NAVAL SPEEDLETTER

USE FOR URGENT LETTERS ONLY

DO NOT CLEAR THROUGH COMMUNICATION OFFICE

(One box must be checked)

☐ REGULAR MAIL ☐ SPECIAL DELIVERY

☒ AIR MAIL ☐ REGISTERED MAIL

CLASSIFICATION: UNCLASSIFIED

IN REPLY REFER TO: 10330 (108)

DATE: 10 November 1966

NAVAL SPEEDLETTER—
Permits dispatch or informal language.
May be sent (1) with enclosures, (2) in a window envelope (size 8⅞" x 3⅞"), if contents are not classified as confidential or higher, (3) to both naval and nonnaval activities.
Is packaged 500 sheets of white or of one color: yellow, pink, or green.

TO: Director, Division of Materials Licensing
(Isotopes Branch), U.S. Atomic Energy Commission
Washington, D. C. 20545

Via: Commander, Naval Electronics Systems Command
Code 0516, Main Navy Building
Washington, D. C.

(Fold)

1. Radiography associated with emergency repairs aboard the USS ENTERPRISE - CVA(N)65 must be undertaken after departure of the ship from the Continental United States.

2. Therefore, amendment to AEC Byproduct Material License No. 04-00364-06 is requested to permit transportation of a 21 curie Iridium 192 source, Technical Operations Model A-424-1, in a Technical Operations Model 533 projector (described under Items 6, 7, 8 and 9F in the license) from Mare Island to the USS ENTERPRISE and return for performing emergency radiography aboard. The period of transportation and use will be between 15 November and 15 December 1966. The source will be transported by Government vehicle to the ship and so returned to Mare Island after connection with either Government and/or Commercial Air, probably via Honolulu or possibly Guam. The source will be packed and labeled in accordance with ICC, FAA and/or Navy Regulations, as appropriate. It will be stored in a shielded locker in a locked compartment aboard the ship when not in use. The source will be used and, whenever possible, escorted by a certified Shipyard radiographer. Operations in all other respects will be in accordance with current license conditions.

G. J. ROSATI
By direction

COPY TO

BUMED (Code 74)
NAVELEXSYSCOM (Code 05163)

ADDRESS:

COMMANDER
SAN FRANCISCO BAY NAVAL SHIPYARD
VALLEJO, CALIFORNIA

← SENDER'S MAILING ADDRESS
Address reply as shown at left; or reply hereon and return in window envelope (size 8⅞" x 3⅞"), if not classified as confidential or higher.

CLASSIFICATION: UNCLASSIFIED

10330/1
ELEX-0516
Ser 05163-185
14 November 1966

FIRST ENDORSEMENT ON NAVSHIPYD SFRANBAY LETTER SER 10330(108) OF 2 NOV 1966

From: Commander, Naval Electronic Systems Command
To: Chief, Isotopes Branch
Division of Materials Licensing
U. S. Atomic Energy Commission
Washington, D. C. 20545

Subj: Report Of Incident With Radiographic Device

1. Basic letter with enclosure covers the report of an incident which occurred during radiographic operations when using a Technical Operations 20 curie Model A-424-1 Iridium-192 sealed source in a Technical Operations projector Model 498 authorized under AEC Byproduct Material License No. 04-0036406.

2. In accordance with the requirements of 10 CFR, Title 10, Part 20 notifications of this incident made by the Shipyard include:

a) The Director, Region V, Division of Compliance within twenty-four hours by telephone (i.e., Part 20.403(b)).

b) Mr. J. Wisdom has been informed in writing of the extent of the exposure (i.e., Part 20.405 (b)).

c) The name of the employee receiving the overexposure has been included in the Shipyard's letter but excluded from the report, enclosure (1) (i.e., Part 20.405 (c)).

3. This report has been reviewed and corrective measures being taken by the Shipyard to guard against a similar incident are covered in paragraph five of enclosure (1).

M. G. WILLIAMS
By Direction

Copy to:
BUMED (Code 74)

NAVSHIPYD, SFRANBAY

MAHAFFEY/mitchell
61457 - 11/14/66

REPORT OF EXPOSURE INCIDENT

1. Summary

The incident took place at San Francisco Bay Naval Shipyard, Vallejo, California, at about 0300 hours on 7 October 1966. Field industrial radiography was being accomplished in Building 655, an otherwise unoccupied warehouse. The source was a nominal 20 curie iridium-192 source, decayed to about 12.6 Ci at the time of the incident, in a Technical Operations projector Model 498. The source was held under Byproduct Material License No. 04-00364-06. The radiographer in charge received a whole-body exposure, measured by film badge, of 9.0 rem. The exposure to his hands, based on re-enactments, is estimated as 100 rem. The exposure evidently occurred while the radiographer was changing a film and the position of the source positioning tip. The source apparently had not been retracted to the safe position within the projector upon completion of the previous exposure, and this condition was not detected by the survey made by the radiographer. The cause of this incident is not definitely known. No clinical signs or symptoms of radiation exposure have been detected in the exposed employee by the Radiological Medical Officer. The Director, Region V, Division of Compliance, USAEC, was notified of the incident by telephone and telegraph within 24 hours.

2. Cause of Exposure

a. Actions of Radiography Crew

Industrial radiography was being accomplished in a temporary Radiation Area set up in Building 655, an otherwise unoccupied warehouse. A barricade of rope with warning signs and flashing red lights was set up entirely within the building. The radiation intensity at the barricade was 2 mr/hr or less, with the source fully exposed. The crew, consisting of the radiographer in charge, who was a certified radiographer, and an assistant, who also is a certified radiographer, took over the source projector and survey instruments at that location from the previous crew at about 0030 hours, 7 October 1966. The previous crew had noted no malfunction or suspected abnormality in the operation of any of the equipment. The new crew set up to make a radiograph of a weld in a piece of 8-inch diameter pipe, which was lying on a pallet. The first radiograph was underexposed, so a second exposure was made. At the conclusion of this exposure, the radiographer noted that the film had slipped out of position, so a third exposure was necessary. The radiographer in charge had made all surveys of the area and of the projector, as required by the license and AEC regulations, and noted nothing out of the ordinary. The assistant did not use a survey meter during this shift.

For the first and second exposures, the source positioning tip had been supported on a ringstand about 18 inches from the ground. A collimating head was used, with about 3/4" of lead shielding. In setting up for the third exposure, the radiographer decided to place the pipe being radiographed on a stand, to make it easier to insert the film. The ringstand was moved a few feet away, and the radiographer and his assistant placed the piece of pipe on a stand so the pipe was a little below waist-high. The radiographer then removed the collimating head, located the positioning tip properly and reinstalled the collimating head. He then attempted to clamp the source positioning tip to the pipe itself, but this arrangement was not able to support the weight of the collimating head. At about this time, his immediate supervisor and an assistant shift supervisor, arrived, and suggested using the frame of a nearby step-table as a support, which was done. During most of these manipulations, the source positioning tip, without collimating head, was about a foot from the radiographer's waist, where his film badge was located. The other two employees

were standing three to four feet away, observing and helping. At about this time, the assistant shift supervisor left. The third exposure proceeded normally, except that after terminating the exposure, the radiographer in charge noted a high reading on his survey meter on approaching the projector. He went back to the controls, cranked the source all the way out, and back to the safe position again. Radiation survey readings were then normal. At this time, about 0300 hours, the radiographer in charge checked his pocket dosimeters for the first time since the start of the shift. The dosimeters were off-scale (over 200 mr.) The assistant's dosimeters were also found to be off-scale. He then notified the Shift Supervisor, who contacted the assistant shift supervisor who had been at the site. His dosimeters were also off-scale. The shift supervisor notified the health physicist, the head of the Radiography Section, and the acting head of the NDT Branch.

b. Results of Investigations

The first investigation was made by the health physicist, the head of the Radiography Section, and the Shift Supervisor during the remainder of the graveyard shift. The radiographers and the assistant supervisor were questioned, the equipment was examined without operating the source or moving the projector, and the film badges of the three persons with off-scale dosimeters were processed. The results confirmed that a technical overexposure had occurred. The radiography personnel affirmed that all operations were carried out in accordance with the usual procedures authorized under the license, and the only unusual event was the apparent failure of the source to retract properly after the third exposure. The Shift Supervisor suspected that the survey meter used was defective in that he found the battery condition indicator was erratic and affected by jarring the instrument, and that there was the sound of a loose object inside the instrument, an AN/PDR-27D, serial number 481, last calibrated in September of 1966.

The second investigation was made by the Radiological Protection Officer during the following shift. It included his requestioning of the participants and re-enactments of their actions and time and distance measurements, referral for a medical examination by the Radiological Medical Officer, of the radiographer in charge, disassembly and inspection of the source projector by the NDT Branch maintenance mechanic, and examination of the survey meter by the Radiac Repair Facility. The statements and re-enactments of the participants re-affirmed that their operations were in accordance with standard procedures. The medical examination did not disclose any signs or symptoms of exposure. The source projector appeared to be in good condition. All cable and cable joints were sound, and the control handle operated properly. A subsequent inspection by the Supplier of the connection between the source capsule to the pigtail indicated no defect. The survey meter was still in calibration, and no malfunction was detected. The loose object was found to be a piece of a small screw, which had evidently been clipped off of a small machine screw. Its origin is not known, but it could have fallen into the case during a previous overhaul of the instrument. It is possible, but not likely, that this loose object could have affected the operation of the meter.

c. Conclusions

It is evident, from the exposures received and from the sequence of movements of the participants, that the exposure took place while the set-up was being made for the third exposure. The high radiation level noted after

the third exposure could have been the result of the source being not quite in the safe position, rather than at the source positioning tip. The survey meter may have been defective, but neither the previous crew nor the exposed crew noted anything wrong, such as a low reading when radiation was known to be present.

The available data, based primarily upon the statements of the participants, are not sufficient to determine how the source came to be at or near the source tip during a period when it should have been retracted, or why it was not detected in the exposed position.

3. Radioactive Material Involved

The source was Technical Operations, Incorporated, Model A-424-1, Iridum 192, serial number 1137, whose activity was measured by the vendor as 18.5 Ci on 25 August 1966. Its activity on 6 October 1966 was therefore about 12.6 Ci. The radiation intensity from this source was 115 mrem/min at one meter. The source was used in a Technical Operations projector, Model 498, serial number 38. The source was leak tested after the incident, and was well within the established limit, slightly less than when received.

4. Extent of Exposure

The only reportable exposure occurring during the operation was received by the radiographer in charge, whose whole-body exposure, as measured by a film badge at his waist, was 9.0 rem. His total lifetime exposure up to this time was 1.25 rem, for a current lifetime exposure of 10.25 rem. Since his age is 30 years, his permissible lifetime exposure is 60 rem.

His whole-body exposure of 9.0 rem is consistent with the duration of the exposure, estimated from the re-enactments as 5 to 10 minutes, and the average distance of the source from his film badge, estimated as 12 inches. This is confirmed by the following computation:

$$0.115 \frac{\text{rem}}{\text{min}} \times \left(\frac{39}{12}\right)^2 = 1.2 \frac{\text{rem}}{\text{min}}$$

$$\frac{9.0}{1.2} = 7.5 \text{ minutes}$$

The exposure to his hands was estimated by assuming that his hands were closer to the source than his body for about one-half minute, while removing and reinstalling the collimating head. The average distance of his hands from the source during this period of time was 1 inch (the collimating head is approximately 2" in diameter).

$$0.115 \frac{\text{rem}}{\text{min}} \times \left(\frac{39}{1}\right)^2 = 175 \text{ rem/min} \times \tfrac{1}{2} \text{ min} = 88 \text{ rem, or}$$

rounded off conservatively, 100 rem.

The assistant radiographer received an exposure of 0.37 rem, and the assistant shift supervisor, 0.54 rem.

5. Corrective Steps Taken

a. All radiographers are being reinstructed in the necessity of assuring that their survey meters are in good operating condition at all times, in the

necessity of performing all monitoring in a thorough and conscientious manner, and in the means for accomplishing these objectives.

b. The certification and film badge of the radiographer in charge in this incident are withdrawn for an appropriate period (until 1 July 1967), as determined by the Radiological Medical Officer, for amortization of the exposure.

c. The purchase of individual, audible pocket radiation alarm units is being undertaken for the protection of operating personnel against similar incidents where an unusual combination of factors may create a hazardous exposure that is difficult to detect.

10330
(108)

NOV -2 1966

Forwded by Encl (1) Ser 05163-185, dtd 14 Nov. 1966

From: Commander, San Francisco Bay Naval Shipyard
To: Director, Division of State and Licensee Relations
U. S. Atomic Energy Commission
Washington, D. C. 20545
Via: Commander, Naval Electronics Systems Command (Code 0516)

Subj: Notification of exposure incident

Ref: (a) 10 CFR 20.405

Encl: (1) Subject report

1. As required by paragraph (a) of reference (a), the subject report is forwarded herewith as enclosure (1).

2. In compliance with paragraph (b) of the reference, the employee who received a technical overexposure has been notified in writing of the extent of the exposure.

3. In accordance with paragraph (c) of the reference, the individual who received a technical overexposure is Jerry M. Wisdom, Employee No. 035-974840, Social Security No. 487-36-0190.

Copy to:
Director, Region V,
Division of Compliance

NRRED (Code 74)
NAVELECSYSCOM (Code 0516)

J. H. MC QUILKIN

REPORT OF EXPOSURE INCIDENT

1. Summary

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Encl. (1)

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The source was Technical Operations, Incorporated, Model A-424-1, Iridium 192, serial number 1137, whose activity was measured by the vendor as 18.5 Ci on 25 August 1966. Its activity on 6 October 1966 was therefore about 12.6 Ci. The radiation intensity from this source was 115 mrem/min at one meter. The source was used in a Technical Operations projector, Model 498, serial number 38. The source was leak tested after the incident, and was well within the established limit, slightly less than when received.

4. Extent of Exposure

The only reportable exposure occurring during the operation was received by the radiographer in charge, whose whole-body exposure, as measured by a film badge at his waist, was 9.0 rem. His total lifetime exposure up to this time was 1.25 rem, for a current lifetime exposure of 10.25 rem. Since his age is 30 years, his permissible lifetime exposure is 60 rem.

His whole-body exposure of 9.0 rem is consistent with the duration of the exposure, estimated from the re-enactments as 5 to 10 minutes, and the average distance of the source from his film badge, estimated as 12 inches. This is confirmed by the following computation:

$$0.115 \frac{\text{rem}}{\text{min}} \times \left(\frac{39}{12}\right)^2 = 1.2 \frac{\text{rem}}{\text{min}}$$

$$\frac{9.0}{1.2} = 7.5 \text{ minutes}$$

The exposure to his hands was estimated by assuming that his hands were closer to the source than his body for about one-half minute, while removing and reinstalling the collimating head. The average distance of his hands from the source during this period of time was 1 inch (the collimating head is approximately 2" in diameter).

$$0.115 \frac{\text{rem}}{\text{min}} \times \left(\frac{39}{1}\right)^2 = 175 \text{ rem/min} \times \tfrac{1}{2} \text{ min} = 88 \text{ rem, or}$$

rounded off conservatively, 100 rem.

The assistant radiographer received an exposure of 0.37 rem, and the assistant shift supervisor, 0.54 rem.

5. Corrective Steps Taken

a. All radiographers are being reinstructed in the necessity of assuring that their survey meters are in good operating condition at all times, in the

necessity of performing all monitoring in a thorough and conscientious manner, and in the means for accomplishing these objectives.

b. The certification and film badge of the radiographer in charge in this incident are withdrawn for an appropriate period (until 1 July 1967), as determined by the Radiological Medical Officer, for amortization of the exposure.

c. The purchase of individual, audible pocket radiation alarm units is being undertaken for the protection of operating personnel against similar incidents where an unusual combination of factors may create a hazardous exposure that is difficult to detect.

10330/1
ELEX-0516
Ser 05163-178
1 November 1966

FIRST ENDORSEMENT ON NAVSHIPYD SFRANBAY LETTER SER 10330/108 OF 25 OCTOBER 1966

From: Commander, Naval Electronic Systems Command
To: Chief, Isotopes Branch
Division of Material Licensing
U. S. Atomic Energy Commission
Washington, D. C. 20545

Subj: AEC Byproduct Material License No. 04-00364-06

1. Basic letter contains a request for a change to Amendment No. 13 of subject license.

2. Condition No. 20 of Amendment No. 13 authorizes transportation and use of a Technical Operations Model A-424-1 Sealed Source of Iridium-192 in a Technical Operations Model 490 Projector.

3. This request is made because of changes in plans for equipment to be used in performing the radiography assignment aboard the USS BALDRIDGE AND USS LONG BEACH when berthed at the Long Beach Naval Shipyard.

Copy to:
BUMED (Code 74)

NAVSHIPYD, SFRANBAY

M. G. WILLIAMS
By Direction

Amd. #14 From AEC
dtd. 11-10-66 authorized this chge.
orig. Fwded to Shipyd. on 11/17/66.

Amend #14 (dtd 11/10/66)
covers this request -
per telem with AEC on 11/10/66

MAHAFFEY/mitchell
61457 - 11/1/66
Serial 661027-3234

10-31-66

Telcon To G. J. ROSATI — 707-646-2458 (20 min)

Called re - to SANFRANBAY SHIPY ltr. 10330/108 of 10/25/66

1. Need to know "how & when" - not necessarily "why".

2. Rosati stated an error had been made - smaller projector (i.e. T/O Inc., Mode 532) rather than what previously requested (i.e. T/O Inc Model 490) is being used.

3. I stated the chge requested hadn't been justified in Shipyard ltr.

4. Had a suggestion which ROSATI bought. (Last Hend. on Shipyard's ltr) - "Reason for change is because chge in plans of eqpt to be used in performing assigned Radiography aboard BAINBRIDGE & LONGBEACH when berthed at Longbeach".

5. Said OK - actually they made an error out at Shipyards

6. Talked to Ivan who was at YARD at time.

Itinerary - to be at Camp Parks in morning - T.I. in afternoon - back at Lab for short time on Wed. Return home Wed. afternoon.

SAN FRANCISCO BAY NAVAL SHIPYARD
VALLEJO, CALIFORNIA 94592

IN REPLY REFER TO:
10330
108

OCT 25 1966

From: Commander, San Francisco Bay Naval Shipyard
To: Director, Division of Materials Licensing (Isotopes Branch)
U. S. Atomic Energy Commission
Washington, D. C. 20545
Via: Commander, Naval Electronics Systems Command (Code 0516)

Subj: AEC Byproduct Material License No. 04-00364-06, Amendment 13; request for change to

Ref: (a) SFRAN BAY NAVSHIPYD VALLEJO MSG P052228Z of 5 Oct 1966
(b) Letter No. 10330/1 ELEX-0516, Ser 05163-144 of 12 Oct 1966

1. References (a) and (b) constitute an application for the subject amendment, authorizing transporting and use of a radiographic device on ships berthing at Long Beach Naval Shipyard.

2. It is requested that the amendment be changed to permit transportation of a source and projector described under items 6, 7, 8, and 9G of the current license, specifically, one Iridium-192 Technical Operations Model A-424-1 sealed source of 10.9 curies, contained in a Technical Operations Model 532 projector.

3. All other representations made in references (a) and (b) remain unchanged.

I. H. MC QUILKIN

Copy to:
BUMED (Code 74)
→ NAVELEXSYSCOM (Code 0516)

10330/1
ELEX-0516
Ser 05163-144
12 October 1966

From: Commander, Naval Electronic Systems Command
To: Chief, Isotopes Branch
Division of Materials Licensing
U. S. Atomic Energy Commission
Washington, D. C. 20545

Subj: AEC Byproduct Material License No. 04-00354-06; Request For Amendment To

Ref: (a) SFRAN BAY NAVSHIPYD HQ VALLEJO MSG P052228Z OCT 1966
(b) FONECON from G. H. Mahaffey, NAVELEX-05163, to G. J. Rosati, NAVSHIPYD SFRAN BAY on 7 October 1966
(c) FONECON from R. Burke, NAVSHIPYD SFRAN BAY to G. Mahaffey, NAVELEX-05163 on 11 October 1966

1. Reference (a) requested an amendment to subject license authorizing the transporting to and the use of a radiographic device on ships berthed at the Long Beach Naval Shipyard.

2. Additional pertinent information was discussed during the telephone conversation, references (b) and (c), and includes:

a. One Technical Operations Incorporated Projector Model 490 with sealed source of Iridium-192 will be used.

b. The Model 490 equipment will be used by a certified licensed radiographer from San Francisco Bay Naval Shipyard for work associated with the propulsion plant on nuclear powered ships berthed at the Long-Beach Naval Shipyard.

c. Projector and sealed source, when not in use, will be locked and secured safely aboard the USS LONGBEACH or USS BAINBRIDGE. The key will only be in the possession of the Radiographer.

3. Authorization to transport and use the sealed source and projector will permit the San Francisco Bay Naval Shipyard to perform this assignment during the period of 15 October to 15 December 1966.

Copy to:
BUMED (Code 74)
NAVSHIPYD, SFRAN BAY

M. G. WILLIAMS
By Dire[illegible]

MAHAFFEY/mitchell
61357 - 10/12/66

10/7/66

Telcon From G. Rosati: 10/7/66

Guido stated message on way in requesting an amendment to SANFRAN BAY SHIPYD license for x-rayting & using a radiographic device with sealed source of Ir-192 for work, special assignment, on ships berthed at Longbeach.

Called G. Rosati:— 10/10/66

1). Clarification & additional info - required. Need info - on what Projector, Model, etc how many, & what surveillance during storage when not in use.

2) Promised answers would be given by phone 10/11/66 since an individual from SANFRAN BAY SHIPYD was at Longbeach checking into details.

Telcon From R. Burke:— 10/11/66

Burke called & stated storage arrangements made to secure safely the Model H90 with Ir-192 sealed source aboard Longbeach or Bainbridge when not in use. Projector would be locked & key in possession of Radiographer at all times.

0516

R 052228Z OCT 66
FM SFRAN BAY NAVSHIPYD HQ VALLEJO
TO RUEPXG/HQ AEC WASH DC
INFO RUECYD/NAVELEXSYSCOM
BT
UNCLAS
REQUEST FOR AMMENDMENT TO AEC BYPRODUCT LICENSE 04-00364-06
(AEC PASS TO DIV MATERIALS LICENSNG MR BASSING NAVELEXSYSCOM PASS TO
MR MAHAFFEY CODE 05163)
AMMENDMENT TO AEC LICENSE 04-00364-06 IS REQUESTED TO PERMIT TRANSPORT-
ATION OF SOURCE DESCRIBED UNDER SIX SEVEN EIGHT AND NINE ECHO OF THE
CURRENT LICENSE TO LBEACH NAV SHIPYD FOR RADIOGRAPHY OF WELDS ABOARD
SHIPS BERTHED THERE AND RETURN PERIOD OF TRANSPORTATION AND USE IS ON
OR ABOUT 15 OCT AND INTERMITTENTLY TO 15 DEC 66 SOURCES WILL BE TRANS-
PORTED BY USN AIR BETWEEN NAS ALAMEDA AND LBEACH MUNICIPAL AIRPORT WITH
CONNECTING GOVERNMENT TRANSPORTATION AT EACH END SOURCE WILL BE ESCORTED
BY CERTIFIED RADIOGRAPHER AND PACKED AND LABELED IN ACCORDANCE WITH
ICC AND NAVY REGULATIONS OPERATIONS IN ALL OTHER RESPECTS WILL BE IN
ACCORDANCE WITH CURRENT LICENSE CONDITIONS
BT

248/RA2

TOR: 06/0707Z

NSY SFRAN VALLEJO
052228Z OCT 66

24 Oct. 1966

Telcon From H. J. Rosati - NAUSHIPYD SAN FRANCISCO

Called to state the men took the T/O Model 532 Projector with a 10.92 Curie Ir-192 Source. Rather than what amendment #13 authorized. Suggested he send in a ltr - correcting Model # of Projectr & size of Ir-192 sealed source. (Source of Ir-192 - 10.92 Curies

Amend. #13 authorizes xporting one T/O Inc. Model A-424-1 sealed Source Ir-192 in a T/O Inc. Model 490 Projector to Long Beach Naval Shipyd. & to perform industrial radiography as specified in msg dtd 10-5-66 & 05163 ltr. dtd. 10-12-66.

Amend. #13 dtd. 10-17-66 & fwd. sig. by rubber stamp endorsement on 10-20-66.

AEC Lic. #04-00364-06 (B-67), Amend. #10, Items 6E, 7E, 8E & 9E covers the Ir-192 Sealed Source (6E); - T/O Inc. Model A-424-1 (7E); - No single source to exceed 100 Curies (8E); - & T/O Inc Model 490 Projector (9E).

The unit they have, in accordance with telcon, is Item 6G; 7G; 8G; & 9G.

10330/1
Ser 05163-107
31 August 1966

FIRST ENDORSEMENT ON NAVSHIPYD SFRAN BAY LETTER 10330(108) of 29 AUGUST 1966

From: Commander, Naval Electronic Systems Command
To: Chief, Isotopes Branch
Division of Materials Licensing
U. S. Atomic Energy Commission
Washington, D. C. 20545

Subj: AEC Byproduct Material License No. 04-00364-07; Request For Amendment

Ref: (a) NAVELEX letter ELEX 0516 Ser 05163-106 of 31 August 1966

1. Reference (a) stated official request would be endorsed upon receipt of official material.

2. Official material endorsed and forwarded.

W.H. MUENCH
By direction

Copy to:
BUMED (Code 74)

NAVSHIPYD SFRAN BAY

MITCHELL
61457 - 8/31/66

10330
(108)

AUG 29 1966

From: Commander, San Francisco Bay Naval Shipyard
To: Director, Division of Materials Licensing (Isotopes Branch)
U. S. Atomic Energy Commission
Washington, D. C. 20545
Via: Commander, Naval Electronics Systems Command (Code 0516)

Subj: AEC Byproduct Material License No. 04-00364-07; request for amendment

Encl: (1) Item 13, Facilities and Equipment

1. In view of emergency space requirements, relocation of the sources under subject license used in the Health Physics calibration range has become essential and urgent. It is therefore requested that the subject license be amended to reflect the following changes to our application dated 9 June 1966, and thereby authorize the relocation.

a. Item 13 is resubmitted in its entirety as enclosure (1).

b. Item 14 is revised as follows:

Change Attachment A, Health Physics Procedure VII.A.1, as follows:

(1) Para a, line 2, change location from "4th floor, Bldg. 273" to "5th floor, Bldg. 483"

(2) Para i(3), line 1, change "Bldg. 273" to "Bldg. 483"

(3) Para k, line 2, delete "2nd Floor, Bldg. 273" after "Health Physics Branch Office".

J. H. McQUILKIN

Copy to:
NRMED (Code 74)
NAVELEXSYSCOM (Code 0516)

8/31 To AEC
Sec 05163-109
Betty

10330/1
NLEX 0516
Ser 05163-106
31 August 1966

From: Commander, Naval Electronic Systems Command
To: Chief, Isotopes Branch
Division of Materials Licensing
U. S. Atomic Energy Commission
Washington, D. C. 20545

Subj: AEC Byproduct Material License No. 04-364-07; Request For Amendment To

Ref: (a) FONECON from Mr. G. J. Rosati, NAVSHIPYD, SFRANBAY to Mr. G. H. Mahaffey, NAVELEX 05163 on 26 August 1966

1. An emergency space problem at the San Francisco Bay Naval Shipyard (Formerly the Mare Island Division) necessitates moving the Health Physics Calibration Facility and sources authorized by subject license was discussed during the telephone conversation, reference (a).

2. To facilitate the planned re-location of this calibration facility it is necessary to request an amendment to AEC License No. 04-364-07 authorizing the transfer and storage only of the sealed sources from the fourth floor of building 273 to the fifth floor of building 483 in the Shipyard.

3. Complete details relevant to an official request to amend this license is in preparation and will be endorsed and submitted to the Atomic Energy Commission upon receipt from the Shipyard.

W.H. MUENCH
By direction

Copy to:
BUSED (Code 74)
NAVSHIPYD, SFRAN BAY

MAHAFFEY/mitchell
61457 - 8/31/66

MARE ISLAND DIVISION

SAN FRANCISCO BAY NAVAL SHIPYARD

VALLEJO, CALIFORNIA 94592

IN REPLY REFER TO:
4430
540
11 July 1966

From: Commander, San Francisco Bay Naval Shipyard, Vallejo, California
To: Commander, Naval Electronic System Command

Subj: Receipt for Accountable Radioactive Material

Ref: (a) Industrial Manager USN Twelfth Naval District ltr 10550/9673 1125-4-B-3200 of 17 June 1966
(b) Naval Electronic Systems Command ltr ELEX 043 Ser 043-183 7 June 1966

Encl: (1) Three copies Accountable Radioactive Material Receipt Number 540-RI-1040

1. Enclosure (1) is forwarded as requested by references (a) and (b).

H. K. FRALEY
By direction

Copies to:
12ND Ind Manager Code 1125-4B

NAVAL SHORE ELECTRONICS ENGINEERING CENTER
RADIAC REPAIR FACILITY

Receipt No. 540 RI 1010

RECEIPT FOR ACCOUNTABLE RADIOACTIVE MATERIAL

From: Commander, San Francisco Bay Naval Shipyard, Vallejo, California
To: Commander, Naval Electronic Systems Command, 5805 Leesburg Pike, Baileys Crossroads, Virginia. Attn: Radiac Coordinator, Code 04312
Subj: Receipt or Transfer of Accountable Radioactive Material

1. This is to certify receipt from U.S. NAVAL STATION, WASHINGTON, D.C. of equipment with labels or accompanied by invoices of accountable radioactive material as follows:

Equipment Nomenclature	Serial	Isotope	Quantity
Item 1. AN/UDM1A	28	Cesium 137	120 Curies

Mounted on 1/4 ton 2-wheel trailer USN#97-16818
Authority for possession and use of Cesium 137-120 curies is U.S. Atomic Energy Commission license # 04-00364-05, amendment No. 09

Item 2. AN/UDM7A	21	Plutonium 239	808 micrograms

Possession of Plutonium 239 as authorized under title 91b of A.E.C. Act of 1954

Above items part of AN/MDM-1 Mobile Radiac Repair Facility

2. The presence of the radioactive sources has been verified for the serial reported above.

H.K. FRALEY
Signature Custodian of Radioactive Material
Material Superintendent
Supply Department

Date: Month Day Year

Enclosure (1)

D Q

26 April 1966

Telcon From San Fran Bay Shipyd:

Mr. Rosati -

Ltr. out re-amend to Hunter's Point License
Require a hi-specific activity Ir^{192} source ≈30 Curies.
To be used when U.S.S. Enterprise docks.
This Radiography Sealed Source & Projector is to
used on the U.S.S. ENTERPRIZE at the Shipyard
Will expedite when ltr. arrives in Bureau.

AIR MAIL LETTER:

SAN FRANCISCO BAY NAVAL SHIPYARD
SER. #10330, 108 OF 26 APRIL 1966
To: AEC ; Via: BUSHIPS, CODE 682C

9 May 1966

Telcon From Mr. Rosati -

1) Re- to ltr. of 26 Apr. 1966 - fwded to AEC as encl (1)
dtd 5 May 1966. No word as yet
2) Re- consolidate Radiography Licenses. Would like to
include their (shipyard's) modified connector. Will
send (3) samples - 1 of old; 1 of new; & 1 of changed by Shipyd
I requested write-up - to be same as that to be
included in updated rest. working on.

10330/1
Ser 05163-46
6 July 1966

From: Commander, Naval Electronic Systems Command
To: Chief, Isotopes Branch
Division of Materials Licensing
U. S. Atomic Energy Commission
Washington, D. C. 20545

Subj: Gamma Ray Source Positioning Tip

Ref: (a) AEC License No. 4-364-6(B-67) of 11 February 1965
(b) Mare Island Naval Shipyard letter 10330(108) of 21 January 1965

Encl: (1) One each, defective Tech. Ops. source switch and Mare Island proposed replacement
(2) CONSTRAN BAY NAVSHIPYD letter 10330 (108) of 17 June 1966 with attachments

1. Exhibits of a defective and proposed replacement for subject devices are contained in enclosure (1). Enclosure (2) provides background information relating to these exhibits.

2. This material covers the major difficulties experienced with the Technical Operations Incorporated units and details of the Shipyard's proposed tip to overcome these deficiencies.

3. In accordance with Condition 15 of the license, reference (a), these units with attached labels and comments are forwarded for review. Recent telephone discussion with the Shipyard personnel indicates screw sections and mating parts of the proposed gamma ray source positioning tip fit all Technical Operations source projectors used at the Shipyard.

4. The economic considerations presented in reference (b) apply.

M. G. WILLIAMS
By Direction

Copy to:
BUMED (Code 74)
NAVSHIPYD, SFRANBAY

MAHAFFEY/mitchell
61457 - 7/6/66

SAN FRANCISCO BAY NAVAL SHIPYARD
VALLEJO, CALIFORNIA 94592

IN REPLY REFER TO:
10330
108

JUN 17 1966

Fwded To AEC (ltr, dwgs & 2-units) by 05163 4b of 6 July 1966.

From: Commander, San Francisco Bay Naval Shipyard
To: Commander, Naval Electronics Systems Command (ELEX Code 05163)

Subj: Mare Island proposed replacement for Technical Operations, Inc. Cable Terminal Switch

Ref: (a) Telecon on 9 May 1966 between Mr. Mahaffey, ELEX Code 05163, and G. J. Rosati, Code 108, SFBNS
(b) Application for renewal of AEC Byproduct Material License No. 4-364-6, serial 10330 (108) dtd 21 January 1965

Encl: (1) Description of the gamma ray source positioning tip proposed as a replacement for the Technical Operations, Inc. Cable Terminal Switch (SC)

1. In accordance with the arrangement made by reference (a), a defective Technical Operations, Incorporated cable terminal switch and a gamma ray source positioning tip proposed as a replacement are being forwarded under separate cover. The Technical Operations, Incorporated one piece replacement for the cable terminal switch, which was originally intended for forwarding also, has not been made available to date by the manufacturer, although it allegedly has already received AEC approval. Therefore, in order to avoid further delay, only two items are being sent at this time.

2. It will be noted from the label attached to the exhibits that the two major deficiencies, in addition to the unreliable function of the switch proper, experienced with the Technical Operations, Incorporated cable terminal switch are due to

(1) The thin gauge metal used at the tip, which is easily breached (labeled (A) on the defective switch).

This defect in the exhibit originally appeared as a circular fracture of only about 3/4 of the circumference of the present hole. The piece of metal circumscribed by the fracture was displaced outward by 1/8". During subsequent handling, the circular fracture was accidentally completed and the metal tip lost.

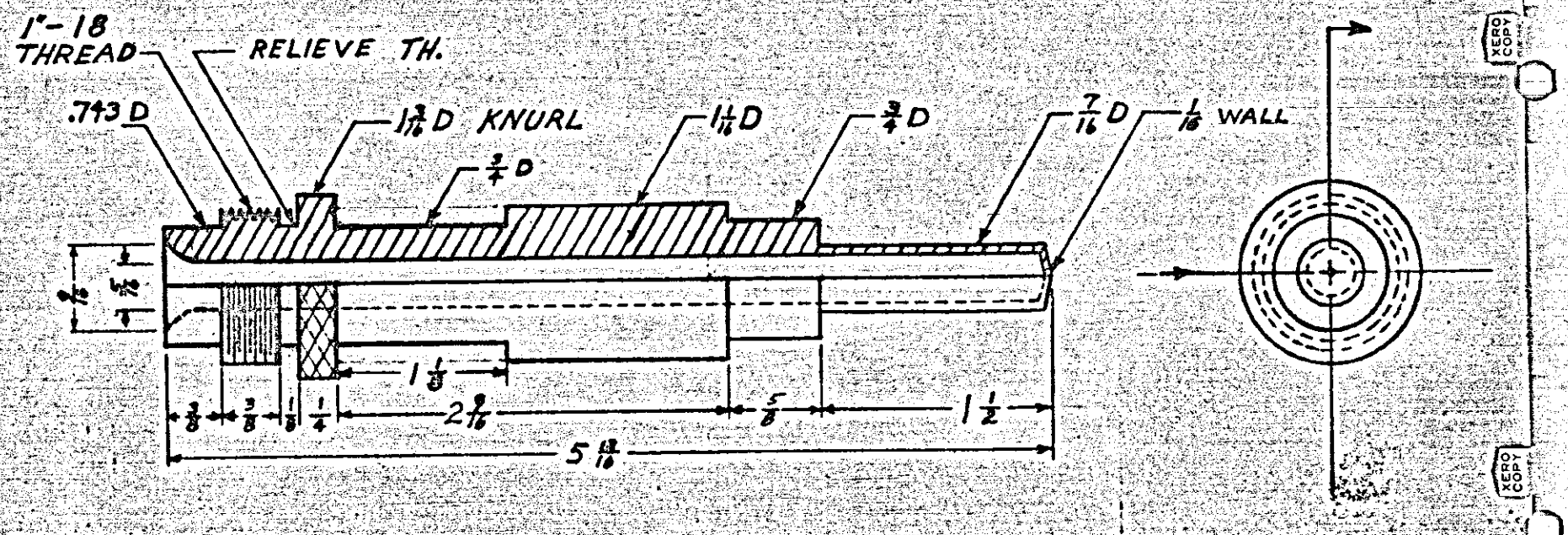
(2) The release of the swedged connection (labeled (B) on the defective switch). Both of these typical deficiencies have resulted in loss of control of the source during past operations.

3. The drawings for the Mare Island proposed replacement, enclosed with this letter, describe dimensions, construction and appearance. The features of this proposed tip are believed to be effective in overcoming the deficiencies described in the foregoing.

4. The request for approval of use of this Mare Island device in connection with Technical Operations Model projectors was originally made in reference (b) and presumably is still under advisement. The related comments made in reference (b) still apply.

5. It is requested that these exhibits and comments be brought to the attention of the head of the Isotopes Branch, Division of Materials Licensing of the USAEC toward obtaining approval for use of the Mare Island proposed gamma ray source positioning tip in conjunction with source projectors used at this Shipyard.

J. H. MC QUILKIN



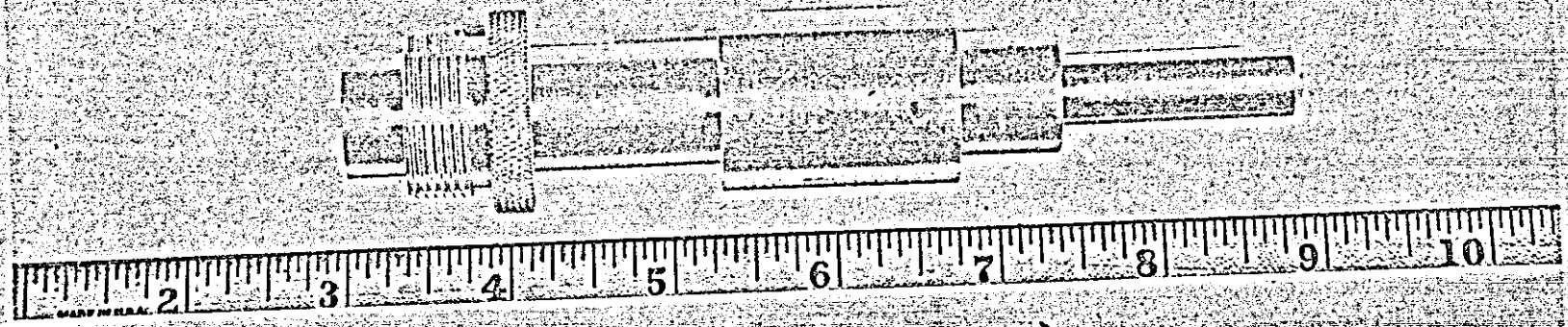
GAMMA RAY SOURCE
POSITIONING TIP

SCALE: 1" = 1"
DRAWN BY: J.E. HEIN
CHECKED BY: Robert E. Boyles

MATERIAL: ALUMINIUM
DATE: 1 APR 1964

Fig. (1)

OFFICIAL PHOTOGRAPH
NOT TO BE RELEASED
FOR PUBLICATION



SOURCE:

XERO COPY

SAN FRANCISCO BAY NAVAL SHIPYARD
VALLEJO, CALIFORNIA 94592

IN REPLY REFER TO:
10330
108

From: Commander, San Francisco Bay Naval Shipyard
To: Director, Division of Materials Licensing (Isotopes Branch)
U. S. Atomic Energy Commission
Washington, D. C. 20545
Via: Chief, Bureau of Ships (Code 682C)

APR 5 1966

Fwded to AEC By 682C-181 of 12 April 1966

Subj: AEC Byproduct Material Licenses Nos. 4-1039-3(J66) and 4-364-5(J66); application for consolidation of

Ref: (a) NAVMED P-5055, Radiation Health Protection Manual

Encl: (1) Form AEC 313, Application for Byproduct Material License, and Attachments (original and 3 copies)

1. Recently the former San Francisco and Mare Island Naval Shipyards were merged to form this command. This reorganization has made the consolidation of certain of their AEC byproduct material licenses appear practicable in the interest of effective management control. In this instance it is requested that a new license be issued consolidating the two which were originally issued to the former commands to authorize possession and use of sources for calibrating ionizing radiation detecting and measuring instruments. A single license will achieve consistent control techniques and procedures as well as reduce administrative processing and duplication.

2. In accordance with reference (a), an application for a new license to consolidate and replace AEC Byproduct Material Licenses No. 4-1039-3 (J66) and No. 4-364-5(J66) is forwarded as enclosure (1).

3. The Radioactive Materials Control Committee has reviewed this application and has recommended approval.

J. H. McQUILKIN

Copy to:
BUMED (Code 74)
BUSHIPS (Code 682C)

10330/1
Ser 682C-181

12 APR 1966

FIRST ENDORSEMENT ON NAVSHIPYD SFRAN BAY LETTER 10330(108) OF 5
APRIL 1966

From: Chief, Bureau of Ships
To: Chief, Isotopes Branch
Division of Materials Licensing
U. S. Atomic Energy Commission
Washington, D. C. 20545

Subj: Consolidation of AEC Byproduct Material Licenses Nos. 4-1039-3 and 4-364-5; Application For

1. Basic letter with enclosure contains an application to consolidate subject licenses.

2. This material has been reviewed and covers the completed AEC-313 Form with attachments containing updated supplemental information.

3. The action, which is requested by the San Francisco Bay Naval Shipyard, will unify the management control by combining the training program and procedures for the activities authorized by the license.

Copy to:
BUMED (Code 74)
(w/Basic Mat'l)

NAVSHIPYD, SFRAN BAY

M. G. WILLIAMS
By Direction

MAHAFFEY/mitchell
61457 - 4/12/66

4-12-66

Telcon With Mr. G. J. Rosati —

1. Questions re - to:

a) Time Frame for Formal Training Plan —

Ans. 10 hrs

B) New names added?

Ans. Yes — Dennis - succeeds Medcalf; Smith succeeds Brock

Philbrook & Meyer - users.

Actual info - for users covered in # G-14

c) Suggested "& related amendments" be added — Rosati agreed.

2. To date had not received a copy of our 1st. End. (on SERAN BAY Shipyd ltr of 2/4/66) 682C-141

Will make quick copy & fwd. to Rosati.

10330/1
Ser 682C-145

FIRST ENDORSEMENT ON NAVSHIPYD SFRAN BAY LETTER 10330(108) OF 18 FEBRUARY 1966

25 FEB 1966

From: Chief, Bureau of Ships
To: Chief, Isotopes Branch
Division of Materials Licensing
U. S. Atomic Energy Commission
Washington, D. C. 20545

Subj: AEC Byproduct Material License No. 4-394-2(C66); Application For Renewal Of

1. Basic letter with enclosure contains an application for renewal of subject license in response to your notice of license expiration dated 1 February 1966.

2. The application with attachments and the supplemental information referenced in the completed Form AEC-313 have been reviewed. This information seems to adequately cover the requirements of Title 10, CFR, Parts 20, 30 and 33 for the byproduct materials and levels of radioactivity used in chemical and physical research problems in the Radio-Chemical Laboratory at the Shipyard.

Copy to:
BUSHIP(Code 74)
NAVSHIPYD, SFRAN BAY

MAHAFFEY/mitchell
61457 - 2/24/66

M. G. WILLIAMS
By Direction

682 OU.56.66

10330
(108)

FEB 18 1966

From: Commander, San Francisco Bay Naval Shipyard
To: Director, Division of Materials Licensing (Isotopes Branch)
U. S. Atomic Energy Commission
Washington, D. C. 20545
Via: Chief, Bureau of Ships (Code 682C)

Subj: AEC Byproduct Material License No. 4-364-2; request for renewal of

Ref: (a) NAVMED P-5055, Radiation Health Protection Manual

Encl: (1) Form AEC-313, Application for Byproduct Material License, and attachment. (3 copies)

1. It is requested that the subject license be renewed. Enclosure (1) is forwarded in accordance with reference (a).

2. The Shipyard Radioactive Materials Control Committee has reviewed and approved the renewal application. It considers the proposed equipment and facilities adequate to protect health and minimize danger to life or property, and the users qualified by training and experience to use the material in a safe manner.

I. H. MC QUILKIN

Copy to:
BUMED (Code 74)
→ BUSHIPS (Code 682C)

Code 108
M300
M303C (2) (1 cy w/encl)
M303/303L
730
732

GREEN
PINK
YELLOW

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

IN REPLY REFER TO:
DML:IB:37

642

February 1, 1966

Dept. of the Navy
Mare Island Naval Shipyard
Industrial Lab. Br., Chemical Lab.
Vallejo, California 94592

SUBJECT: NOTICE OF LICENSE EXPIRATION

Notice is given that Byproduct Material (Radioisotopes) License No. 4-364-2 expires on March 31, 1966.

If you desire to continue your radioisotope program, an application for renewal of the license should be filed with this office. It is to your advantage to file such an application at least thirty (30) days before the expiration date on your existing license. Your program will then be covered by your existing license until we can issue you a new license, (Title 10, Code of Federal Regulations, Part 30, Section 30.37(b).) If applications received less than 30 days prior to the expiration date of your license cannot be processed before your existing license expires, this could result in your possessing radioisotopes without a valid license which is a violation of Federal Regulations.

If you do not wish to renew your license, please complete the enclosed Form WA-277, "Certificate - Disposition of Radioisotopes," and return it to this office.

In submitting a renewal application, all items in Form AEC-313 must be completed. Information contained in previous applications, statements, or reports filed with the Commission with respect to the information specified in Items 8 through 15, Form AEC-313, may be incorporated by reference, provided that such references are clear and specific. References should not be made to the license. The document which contains the information should be given instead.

If you have obtained an amendment which has extended the expiration date of the above license, or if a new license has been issued which supersedes the above license, please disregard this notice.

This notice of your license expiration is sent for your convenience and it should not be interpreted that similar notices will be sent in the future. The responsibility for license renewal remains with the licensee.

Sincerely yours,

Richard E. Cunningham

Richar- E. Cunningham
Chief, Isotopes Branch
Division of Materials
Licensing

Enclosures:
1. Form AEC-313, w/instr. (1 set)
2. Certificate

CC: Dept. of the Navy ✓
Chief, Bureau of Ships
Washington, D. C. 20360

Attn: Mr. George N. Mahaffey
Code: 682-C

TELEPHONE CONVERSATION RECORD
12ND MINS 73 (11-57) (Formerly 12ND Wi...15)

This record will be used for both incoming and outgoing calls

CONVERSATION INITIATED BY George Mehaffey, BuShips, Code 682C	DATE 21 Dec. 1965 TELEPHONE NO. 346-2485	HOUR 1130 EXTENSION

PERSON CALLED OR RECEIVING CALL
Chapman Burk, SFBNS, Code 732

PURPOSE OR REFERENCE
Transmittal of AEC License Number of consignee of Radiac Set AN/MDM-1.

RESUME OF POINTS DISCUSSED AND CONCLUSIONS REACHED

Mr. Mehaffey stated that he was calling to give Code 108, SFBNS, the AEC License Number assigned to the U. S. Naval Ship Repair Facility at Guam, in order to enable us to ship a Radiac Set AN/MDM-1 to them. The license number is 56-11445-1 (L67). The license is Department of the Navy, U. S. Naval Ship Repair Facility, Guam. The license is dated 17 December 1965, and authorizes the receipt and use of an AN/MDM-1.

I stated that I would transmit this information to the Industrial Radiological Safety Officer, Code 108 (G. J. Rosati).

Rec'd. by Air Mail on 12/23/65

Actually sent copy of AEC Lic. #56-11445-1 (L67)

COPIES TO
Codes 108, 732, BuShips 682C

SIGNATURE
Chapman Burk

CODE
732, San Francisco Bay Naval Shipyard

VIA AIR MAIL

9890
(640)
21 October 1965

From: Commander, San Francisco Bay Naval Shipyard
To: Industrial Manager, USN
Naval District Washington

Subj: Neutron Source Part of Model AN/UCM-3 Serial B-8

Ref: (a) BuShips Spdltr 9673 Ser 627G3C1662 of 29 Sept 1965
(b) BuShips Ltr 10330/1 Ser 682C544 of 9 June 1965
(c) BuShips Instruction 9890.1D

Encl: (1) Acceptance forms (5 copies)

1. References (a) and (b) authorized the transfer of one (1) Radiac Calibration Set Model AN/UCM-3 Serial B-8, including a PuBe neutron source, to your activity. Material was shipped October 20, 1965 via REA on document 221-5287-C954 GBL A-6671581.

2. Accountability for Special Nuclear Material as required by reference (c) shall be acknowledged by your signature on the acceptance forms, enclosure (1). It is requested that three copies of the acceptance forms attached to three copies of this letter be signed and returned to this Command.

N. K. FRALEY, LCDR, SC, USN
Material Superintendent

Copy to:
BuShips, Code 682
Ind.Mgr. 12ND, Code 1125-4B

Telcon with Gus Eslin on 11/8/65 - stated eqpt (cal.) had arrived. The Al L around top lid broken - everything else seems OK. Will replace this L - held by self tapping screws.

682
BF

9673

LLR

68.028-0309

ACCEPTANCE FORM

Receipt No. _____ Date _____

Receipt is acknowledged by the undersigned for one PuBe Neutron Source Serial MRO-N-SS-W-PuBe-35D Part of Radiac Calibrator Model AN/UDM-3 Serial B#8. Weight and identification of the special nuclear material: 80 grams of plutonium 239.

INDUSTRIAL MANAGER USN
Naval District Washington
U. S. Naval Station
Washington, D. C.

10330/1
Ser 682C-594

FIRST ENDORSEMENT ON NAVSHIPYD SFRAN BAY LETTER 10330(108) OF 7 JULY 1965

19 JUL 1965

From: Chief, Bureau of Ships
To: Chief, Isotopes Branch
Division of Materials Licensing
U. S. Atomic Energy Commission
Washington, D. C. 20545

Subj: Model A-424-1 Iridium-192 Sealed Source; Report Of Incident Concerning

1. Basic letter with enclosure covers the notification and report of an incident which occurred during radiographic operations when using the subject source and projector authorized under AEC Byproduct Material License No. 4-364-6(B67). Under the requirements of the Code of Federal Regulations, Title 10, Part 20, the Director, Division of Compliance, Region V, U. S. Atomic Energy Commission was notified of the incident by the Shipyard.

2. This report has been reviewed and corrective steps listed in paragraph four have been taken by the Shipyard to guard against a similar incident.

Copy to:
BUMED(Code 74)
NAVSHIPYD, SFRAN BAY

M. G. WILLIAMS
By Direction

MAHAFFEY/mitchell
61457 -19 JUL 1965
Serial 650713-0507

10330
(100)
JUL -7 1965

Rec'd. 7/13/65
ft. to AEC by
Encl #1. 682C-594
of 19 July 1965

From: Commander, San Francisco Bay Naval Shipyard
To: Director, Division of Licensing and Regulations
U. S. Atomic Energy Commission
Washington, D. C. 20545
Via: Chief, Bureau of Ships (Code 682C)

Subj: Technical Overexposure; notification of

Ref: (a) 10 CFR 20.405

Encl: (1) Report of Technical Overexposure

1. As required by the reference, subject report is forwarded herewith as enclosure (1).

2. Also in accordance with the reference, Ronald W. Nevcase, employee No. 39-644890, who received the technical overexposure, has been notified of the extent of the exposure.

EDWARD J. FAHY

Copy to: (All w/encls)
Director, Div. of Compliance, Region V
U.S. Atomic Energy Commission
Berkeley, Calif. 94704

BUMED (Code 74)
✓BUSHIPS (Code 682C)

SFENS Code 108
730
732
303

Green (w/encl)
Yellow (w/encl)

REPORT OF TECHNICAL OVEREXPOSURE

1. Cause of exposure

During the midnight to 0800 shift on 10 June 1965, a 90-curie iridium-192 source in a Technical Operations Model 533 projector was being used to radiograph a submarine hull section on the building ways. Near the end of operations, both the radiographer and his helper read their pocket dosimeters and noted that they were off scale (over 200 mrem). They had read their dosimeters at intervals earlier in the shift, the last time an hour and a half before, when the readings were normal. The investigation of the incident indicates, with high probability, that at about 0700, after one of the scheduled radiographic exposures, the source was not completely retracted into the safe position, and a rather narrow beam of radiation was emitted from the projector at the point where the source tube was connected. The radiographer made a survey of the projector, but did not detect this beam.

As a consequence, the radiographer was unknowingly exposed to this beam for the short time he disassembled the setup and relocated the source tube. He then turned the projector so that the source tube connection was facing the location of the next exposure where his helper was placing film. The radiographer left the area to position the source exposure tip on the opposite side of the thick steel hull section. During this period of about 5 minutes, the helper was continuously exposed to the beam of radiation at 2 feet from the source.

In a re-enactment, a film badge placed at the helper's position indicated an exposure of 9.25 rem, and one placed at the radiographer's position, 0.09 rem. This does not include exposure received by the radiographer while disassembling the initial setup. These results are in substantial agreement with previously computed values based on estimated times and distances of reported actions.

The film exposed in the next scheduled radiographic setup was found, after processing, to be grossly overexposed, indicating that it was additionally exposed to radiation probably while being positioned prior to the intended radiographic exposure.

Although the projector and survey meters used were reported to be in proper working condition, subsequent investigation of these items revealed: (a) misalignment of the connector unit of the shielding nozzle of the projector which could cause the source to "hang up" in a partially shielded position; (b) a lag in the response time of the survey meter on switching the instrument from the "off" position to a chosen scale; however, subsequent response was normal. These conditions, particularly the first, may have been contributing causes.

2. Radioactive Material Involved

The source was Technical Operations, Incorporated, Model A-424-1, iridium-192, serial number 7501, whose activity was measured by the vendor as 100 curies on May 27, 1965. Its activity on June 10, 1965, was therefore about 90 curies. The radiation intensity from this source was 800 mr/min at one meter. Most of the exposures made during this series were 17-1/2 minutes in length; one was 26 minutes.

The source was housed in a Technical Operations, Incorporated, projector, Model 533, serial number 81.

3. Extent of exposure

The only reportable exposure occurring during this incident was received by the helper, whose exposure, as measured by film badge, was 12.5 rem. His exposure in April was 0.09 rem, and in May, 0.24 rem. for a quarterly total of 12.83 rem.

Medical examinations have been performed periodically since the exposure and reveal no abnormalities.

The exposure received by the radiographer was 0.80 rem.

4. Corrective steps taken

a. The certification of the radiographer has been withdrawn for an appropriate period and he has been given a letter of caution by his supervisor for not complying with operating instructions in using an ineffective surveying technique.

b. The helper has been removed from work in Radiation Areas until the second quarter of 1966 in order to amortize his exposure.

c. All radiographers and assistants have been reinstructed by line supervisors in the importance and correct technique of surveying the projector each time the source is returned to it, in accordance with existing instructions.

d. All radiographers and assistants have been directed to complete the monitoring of the projector, after securing the source, by placing the radiac survey meter switched to an appropriate scale about 1 to 2 feet in front of the source container and in line with the front opening. The survey instrument shall remain in this position and in the "on" condition until the radiographer retreats to start another exposure.

e. The radiation survey instrument involved in this incident was returned for maintenance check and all instruments in use were checked for a lag in response time.

f. All Model 532 and 533 projectors have been checked for proper alignment of the connector unit with the shielding nozzle.

¶ Price's ltr implies that interpretation of 31.301 means continuous visual observation of Hi Rad. Area & all accesses thereto. On this premise, the provision of 10 CFR 31.301 are believed to be impractical with respect to shipboard Radiography. Therefore, the enclosed application for exception to the provisions of 10 CFR 31.301 is submitted for appropriate routing & processing.

¶ In meantime, a lge violet colored rotating beacon is being located at or near the source exposure head of projectors used in all temporary radiographic areas. These measures augment the guarding of major accesses by radiographic personnel. The attention of all Shipyard employees is being called to these safeguards, their purpose & significance, by means of articles in the Shipyard newspaper, the Grapevine, & specifically to all employees working in the production area by means of a presentation at a Stand-up Safety Meeting.

VIA AIR MAIL

SAN FRANCISCO BAY NAVAL SHIPYARD
VALLEJO, CALIFORNIA 94592

IN REPLY REFER TO:
10330
(108)
JUL -7 1965

682

This copy, Code 682C's, rec'd in Section on 12 July 1965

Mr. Nathan Bassin
Division of Materials Licensing
Isotopes Branch
U. S. Atomic Energy Commission
Washington, D. C. 20545

Dear Mr. Bassin:

Enclosed are two copies each of the implementing instructions requested in your letter, DML:IB:NB (68272) of June 21, 1965, and needed for your further consideration of our application for exception to the provisions of 10 CFR 31.301.

Enclosures (1) and (2) contain instructions to radiographic personnel concerning measures stated both in the body of our letter, serial number 10330 (108) of 4 May 1965, and in paragraph 1 of the enclosure thereto, Application for Amendment to AEC License No. 4-364-6.

Enclosures (3) and (4) implement the measures, referred to in the body of our letter, for notifying other employees of these safeguards.

Please note the redesignation of this facility. The new designation is applicable to all licenses and related current documents.

Very truly yours,

EDWARD J. FAHY
Rear Admiral, U.S.N.
Shipyard Commander

4 Encls:
Encl. 1 - Extract, RS1B
Encl. 2 - M. I. Memo 305TK-46-65
Encl. 3 - Handout, Radiation Safety Meeting
Encl. 4 - "Grapevine" article

Copy to: (w/encls)
BUSHIPS (Code 682C)

EXTRACT FROM PROCEDURE 305/RS1B

9.1. POSTING TEMPORARY RADIATION AREAS

9.1.1. All temporary Radiation Areas shall be posted with appropriate radiation signs, flashing red lights and yellow rope by Code 305 personnel. A rotating red beacon may be used to inform other personnel of radiographic operations.

9.1.1.1. Before any radiography is performed aboard commissioned ships or ships in service, the Radiographer will contact the Deck Watch and inform him of the following:

a. The area that is to be radiographed.

b. Length of time the area will be restricted to all personnel.

c. Location of the isodose line.

The Radiographer will then request the Deck Watch to notify all Shipboard personnel (by Ship's intercom) that radiography is to be performed at a designated area and all personnel shall observe the posted radiation signs and remain clear of such areas until given the "all-clear." If the Ship's intercom is inoperative, the Radiographer shall NOT proceed with the exposure until the Deck Watch has verbally notified cognizant personnel aboard Ship, and after all access areas are roped off with appropriate signs and flashing lights."

9.1.1.2. On commissioned Ships or Ships in service, all access areas to the Radiation Area (i.e., passageways, compartment doors, etc.) shall be roped off at the 2 mr/hr isodose line and appropriate signs posted. In addition, a battery-operated flashing red light should be placed, if possible, at the same level as the radiation sign and within a yard, at any interior access areas that cannot be observed or controlled by the Radiographer or Assistant Radiographer.

9.1.2. The posting of the Radiation Area shall be accomplished prior to exposure of the source, under the direction of the Radiographer-in-charge.

9.1.3. It will be the Radiographer's duty to ascertain that the monitoring and the placing of barriers, lights, signs, etc., are accomplished as described in SECTION 10.1. He will also enter a sketch of the area in the Survey Log Book, (Paragraph 12.3.)

9.1.4. If the combined total exposure time in any given area is not more than 20 minutes in any one hour, the isodose line will be established at the 5 mr/hr level. If the combined total is over 20 minutes, the isodose line will be established at the 2 mr/hr level.

Encl (1)

MARE ISLAND NAVAL SHIPYARD
VALLEJO, CALIFORNIA 94592

IN REPLY REFER TO
(305TK/Parness)rh
26 April 1965

MEMORANDUM NO. 305TK-46-65

From: Head, Nondestructive Test Branch
To: All Radiographic Personnel

Subj: Posting of Radiation Areas

1. Section 9 of RS1B explains the requirements for posting temporary radiation areas. Because of recent incidents that have occurred, it has become necessary to amplify these requirements.

2. Effective immediately, when posting temporary radiation areas, a rotating red beacon shall be placed as close as possible to the radiation source. Red rotating beacons will be used only until magenta beacons are available, at which time the red beacons will not be used for this purpose. In addition, flashing red lights and signs shall be positioned at all access areas (as stated in RS1B). During the exposure all access areas shall be continuously surveyed to the maximum extent possible by the radiographer and his assistant.

Schoedinger

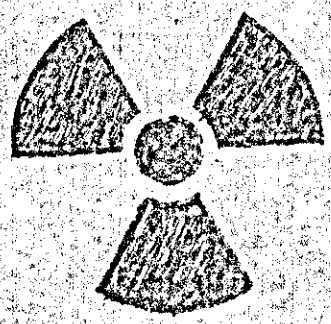
J. A. SCHOEDINGER, Jr.

Encl. (2)

NOTE: This information was presented through Stand-up Safety Meetings to 5,000 employees in groups of approximately 20 people. In addition, the "Grapevine" carried the same message on April 30, 1965.

SPECIAL SAFETY DIVISION HANDOUT FOR STAND-UP SAFETY MEETING TO BE HELD 28 APRIL

DANGER



KEEP OUT

RADIATION SAFETY

Mr. G. J. Rosati, Industrial Radiological Safety Officer, recently contacted the Safety Division to urge that a Stand-Up Safety Session be devoted to a discussion of radiation safety. He is concerned because recent events have indicated that some employees are becoming lax about respecting Radiation Areas set up by the Non-Destructive Test Branch in the Building Ways and aboard ships.

Mr. Rosati urged that the following topics, which are quoted from his letter, be discussed with every employee who may enter shipbuilding or repair areas.

"Radiation Areas are set up for the protection of employees working in the neighborhood. Respect them for your own safety.

"There are two main types of Radiation Areas:

"(1) The type where various trades are working on or near relatively lower level radioactive items, such as in reactor compartments. These posted areas may be entered if you have a film badge, assigned business in the area, and follow the safety instructions of the Radiation Monitor in regard to proper clothing, stay time, etc.

"(2) The other is the industrial radiography Radiation Area set up by Nondestructive Test Branch personnel while making X-rays of welds, etc. These areas are marked with yellow and purple rope barricades and posted with yellow and purple warning signs, and blinking red lights. These signs specifically instruct all personnel to "KEEP OUT". <u>These areas must not be entered even if you have a film badge.</u> Very powerful radiation sources are used in these areas and severe injury could result during unauthorized entry. A rotating purple or violet-colored beacon is located near the source. If you must enter a posted industrial radiography Radiation Area, contact the radiographer in charge first.

"Be sure not to enter industrial radiography areas at the beginning of a shift or when returning from lunch, even if you think the exposure is over. The radiography is often not completed at those times. The radiation warning signs for these areas read: "Danger, High X-Radiation Area Inside, Keep Out", and they mean what they say.

Encl (3)

"If you should unknowingly enter such an area, stay as far from the rotating beacon as you can, and leave the area immediately. Report directly to your supervisor or the radiographer in charge. Your exposure will be investigated, and if found to be excessive every effort made to control any resulting effects.

"Disciplinary action will be taken for wilful or careless violation of industrial radiography Radiation Areas."

Radiation Safety service is Health Physics business. If you have any questions about radiation safety, do not hesitate to call the Health Physics Branch, extension 2626.

Mare Island GRAPE VINE

Our Sole Mission Is To Serve the Fleet

Mare Island Naval Shipyard, Vallejo, Calif.

Vol. XXIV, No. 47 April 30, 1965

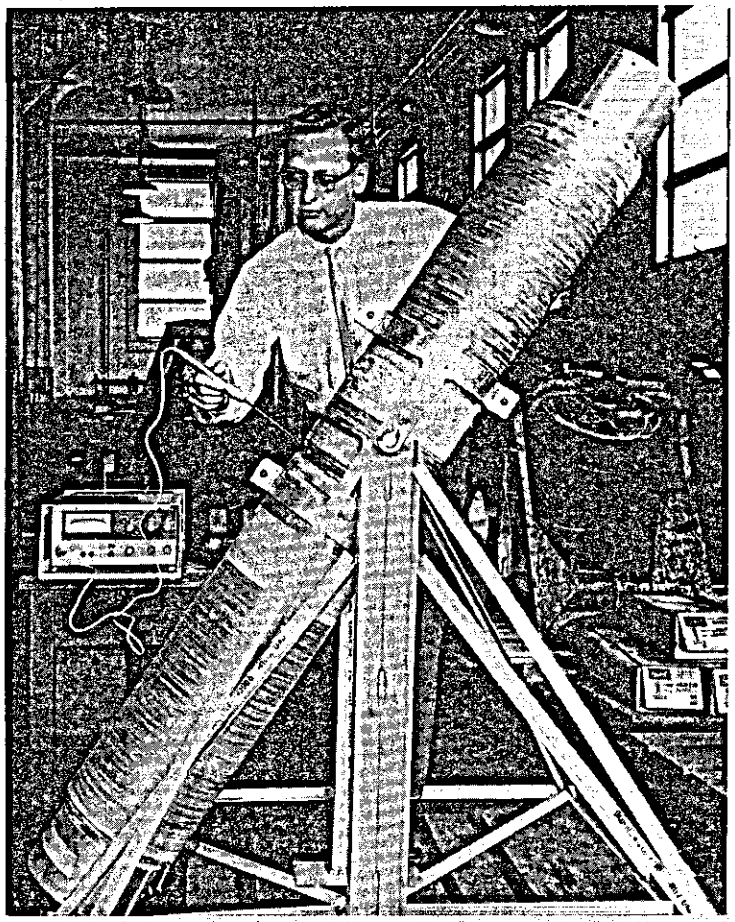
First on Destroyer Thomas

★ ★ ★ ★

Navy Yard Group Needs You!

★ ★ ★ ★

Bannerman in Banner Event



No Moon Shot, This

TELESCOPE? Cannon? What have we here? Metallurgist Mel Andrasco inserts the probe of the gaussmeter to determine the magnetism in an HY-80 steel specimen. It's a very important research project, Bureau-sponsored. HY-80 is the steel used for Polaris submarine hulls.

Metallurgist Sleuths Probing

Yard X-Ray Signs Mean What They Say--It's Up To You To Heed

Occasionally, an article of editorial rather than news content is considered of sufficient importance to appear on Page 1. In our book, radioactive safety is such a subject. It should be read and heeded by all waterfronters.—Editor.

In a few recent incidents, people have entered Nondestructive Test Branch Radiation Areas in spite of the warning signs and barricades placed for their protection. This is a very foolish violation of safety regulations. Powerful radioactive sources are used in these areas to make X-ray pictures of welds in ship construction and repair. A person who gets too close to the radioactive source could be injured and might, in extreme cases, get a permanent disability.

These areas, set up temporarily on ships during construction, overhaul and repair are marked with yellow and purple rope barricades, yellow and purple warning signs, and blinking red lights. A rotating purple or violet-colored beacon is set up very near the source as an additional warning. The nearer you may happen to be, therefore, to a rotating purple or violet-colored beacon, the nearer you are to a radioactive source used for radiography.

NEVER enter a compartment, space, or area where there is such a rotating beacon. If you should not happen to see the rotating beacon until you are already in the area or compartment, LEAVE IMMEDIATELY AND REPORT DIRECTLY to your supervisor or the radiographer in charge of the area.

Warning signs posted around these areas read: "Danger, High X-Radiation Area Inside, Keep Out." For your own protection, these signs must be obeyed. Do not assume that it is safe if you see other people in the area. The radiographers assigned to do this work know from the conditions of their work how to protect themselves, but you do not.

Disciplinary action will be taken in the event of wilful or care-

G. C. BANNERMAN
. . . Ass't Navy Secretary

Speaker At Armed Forces Fete

Armed Forces Day will be observed in Solano County this year at a civic dinner to be held in Gibson Hall at County Fairgrounds, Tuesday, May 11. No-host cocktail hour at 7 p.m.

PRINCIPAL speaker will be the Honorable Graeme C. Bannerman, Assistant Secretary of the Navy for Installations and Logistics, successor to the Honorable Kenneth E. Belieu, now

HY-80 Steel at Bureau Behest

In the wake of last week's HY-80 steel feature, word was given GRAPEVINE of a new project on which the Yard is working on assignment from the Bureau of Ships. Head of Engineering Metallurgy Section, Metals Fabrication Branch, is Horace MacKerrow. He said the Bureau selected Mare Island for a research project, investigating the magnetic qualities of HY-80 steel.

SAID MacKerrow, "Results obtained from this investigation are used to improve magnetic particle testing at all shipyards." Consistent testing results will assure consistent quality in the finished product. (See pic of cannon-like test setup.)

Another phase of Metallurgy Section work which will have far-reaching effect once yard operations are merged is boiler-tube examinations to determine the extent of corrosion. Such examinations are a controlling item in surface ship overhauls.

It is expected that the combined shipyards will have a heavy workload of surface ships to repair and overhaul.

MACKERROW said that metallurgical examinations of boiler tubes provides the info as to whether the boiler tubes on any given ship must be re-

CONTINUED ON PAGE 3

Caught in Door Whirl--Thomas

This week revolving doors—believed the first to go in any ship of the U. S. Fleet—went aboard destroyer THOMAS. Air-tight, they are a part of STOPS work in the FRAM conversion. When unneeded, the doors fold flat and are pushed to the side—out of the way.

H. J. THOMAS

"THE 833" entered Drydock 3 on swing shift Tuesday for vinyl painting of the hull and installation of new quiet-type

CONTINUED ON PAGE 3

Begins Drive --MI Navy Yard Ass'n

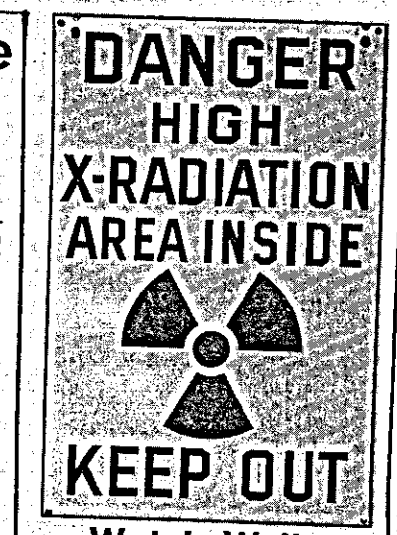
An all-out membership campaign is on for the Navy Yard Association of Mare Island with the hope that all Mare Islanders will endorse its program by joining.

RADM EDWARD J. FAHY said as he approved the request to hold the drive, "I believe every employee of Mare Island should be a member of the Navy Yard Association."

What is NYA? It started 44 years ago to assist in developing and obtaining adequate retirement legislation.

OVER the years the Association has maintained its interest in retirement matters. But it also has become a group toward which employee organizations look for a coordinated

CONTINUED ON PAGE 2



Watch Well, Watch Out!

Under Secretary of the Navy.

Top military officers from Mare Island and Travis Air Force Base, and commanding officers of other nearby defense installations, will be guests of honor.

LOU Burgelin, Code 104A, has tickets.

LATE FLASH: Assistant Secretary Bannerman will visit Mare on Tuesday, May 11.

NEWS HIGHLIGHTS

PAGE 1—GOODY GUMSHOES
PAGE 2—FAR-OUT PLANNING
PAGE 3—BASEBALL CHANGE
PAGE 4—BOUND BEACHWARD

Magnetic Mac

NEITHER horseshoe nor magnet frames Horace MacKerrow whose work has much to do with magnetism. It's a weld test piece!

Sub Vallejo Control Panels Land; Fourteen Missile Tubes Aboard

Last two of the three main control panels landed in SSBN 658 earlier this week. Last week, boring for torpedo tubes began and secondary propulsion gear went into AMR-2; oxygen generators are due for AMR-1 next week.

MARIANO G. VALLEJO

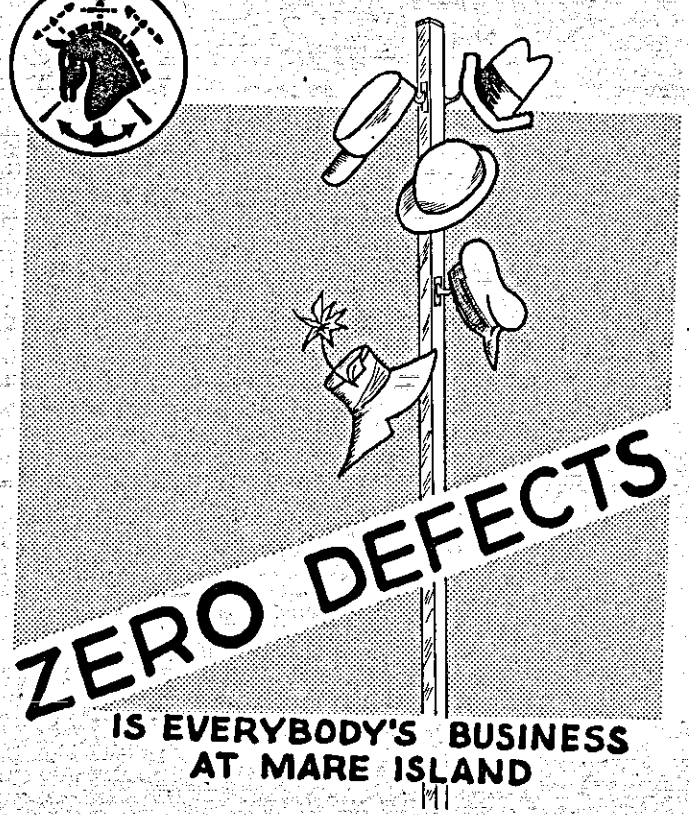
Fourteen missile tubes are now complete and main ballast tank work is progressing well, but the schedule remains tight. Emergency electric propulsion motor is in the ship and tanks are going in the operations compartment — most of the platform decks are already in place there.

Trades are working hard to enable the ship to meet launch dates, says LT Al Hawk, who promises that next month's rundown will have much to report on VALLEJO progress.

KAMEHAMEHA

Batteries will receive second charge over the weekend and next week the ballast control panel will land in "the 642." Main ballast tank work and testing of sea valves will be accomplished during the

CONTINUED ON PAGE 2



Encl (2)

Mare Island GRAPEVINE

Official Naval Shipyard Publication
Room 1, Ground Floor, Bldg. 521
RADM EDWARD J. FAHY
Shipyard Commander
Pictures, unless otherwise credited are official Navy photos. Grapevine is issued weekly with the approval of the Bureau of Budget, Washington, D. C. Printed commercially from appropriated funds in compliance with NAVEXOS P-35, revised July, 1958.
Grapevine Telephone Extensions: News (6397) and 8212
All correspondence and contributions should be directed to — The Editor, Code 193, Mare Island Naval Shipyard, Vallejo, California. The Grapevine subscribes to Armed Forces Press Service.
EDITOR Norma Ross Walter
Associate Editor Don G. Dopkins
Printing and Presswork by Gibson Publications, Vallejo

M. I. Employees Organization Pushes Membership Drive

CONTINUED FROM PAGE 1

They Ask for Your $--Navy Yard Association

APPROVAL of Navy Yard Association's membership drive is given in writing to Secretary Betty (Rod) Sardo by Admiral Fahy. In rear other drive boosters: (l to r) Dorothy Scheiler, IndMan, Rose Simmons, Inspection; Lou Burgelin, prexy; Ruth Horan, Admin, Marie Lear, Security. JOIN UP TODAY! The employees' group needs you.

position on issues of mutual concern.

Navy Yard Association has worked closely with the Armed Services Committee of the Vallejo Chamber of Commerce, participating in all of their efforts, assisting in financing publications, preparation of position papers, etc.

ACTIVE as a founder, NYA holds membership in the Council of Naval Employee Groups (CONEG), a federation of Employees Associations from Puget Sound, Pearl Harbor, Long Beach, Hunters Point and Mare Island.

Lou Burgelin, Association president, is a vice-president of CONEG. He has testified frequently before the House and Senate regarding the distribution of work between Navy Yards and private yards.

BURGELIN said, "The Navy Yard Association welcomes the opportunity to serve as the Chamber of Commerce for Mare Island. We don't want to spend any more money doing the job than is absolutely necessary. This is why we have attempted to keep the dues minimal. But we do need your approval by your membership, and we need the accumulated dollars your membership represents. We want to do the best job for you that we can, so please join the Association. Your dollar will buy more for you than you realize."

In charge of membership drive again this year is Jack (Red) McKinlay, head of Shop 99 and NYA veep. He is assisted by Richie Flanigan, Shop 11, and Meredith Bennett, Design. Publicity is in the capable hands of Don Byers, Comptroller, with Ruth Horan

New Subs...

CONTINUED FROM PAGE 1

drydocking now slated in early May.

Relocation of the chill water valve will be done then for minimum interference. M.I. has come up with an alternate location which will save considerable money while satisfying the intent without loss of accessibility to the valve.

Ship Supe LCDR Warren Dietz says the test program in secondary systems and ships systems is picking up and that work is beginning to move in AMR-1.

GURNARD

First section to join the "keel" is slated in about a month and it will be followed closely by another. Bulkhead section will go to vertical at the end of May, and the first sea valve from Shop 31 will be landed shortly before this happens.

Ship Supe LT Hal Bullock told GRAPEVINE that Shop 56 will be putting bank piping in "the 662" as sections arrive on the ways.

SSNs 665 666

What's Up With Shipyard Personnel

P&E DIVISION

(By Rosmary Kelsey) — Ah, Spring . . .! When a young man's fancy lightly turns to thoughts of love. (And young ladies are not immune either.) During off-work hours, of course! Wedding bells will chime for James Schallon of 231 in June, and for Sharon Parfet and Dory Vallejo of 239 in May and June, respectively.

IN SOME cases, Spring merely turns a young man's thoughts toward baseball—understand Al Gregor, 231, was present to help the Giants lose their opening game.

P&E, these days, is reminiscent of Grand Central Station, people coming and going. J. Mattos, 231B, returned from New York where he attended BuShips-sponsored course, "Laminating Plastics in Small talks re GUDGEON. Now, with H. Grady and A. Ohrn, he's in Hawaii for COMSUBPAC ADMIN conferences.

C. O'Donnell, R. Marshall and LCDR M. Bishop are back from their very important conference in Washington, D.C., on Change Order Pricing. Bureauward goes N. O'Hara, 230A, for a standards meeting next month. Last weekend was spent in Credit Union confab at Hoberg's by J. Bucciarelli and C. Cavett.

PLEASANT weather and beautiful countryside drew CDR C. F. Wicks and family northward to Washington State during Easter Week. There they visited Tacoma friends and "sightsaw" in Seattle. On leave also that week: LCDR J. Collier.

Meanwhile, Hazel Hiday is ber—indicates that everything is well in hand and our Division has no problems, only solutions.

FORMER P&E supe, CAPT H. A. Gerdes, says he and family are settled but he's been traveling 40 per cent of his time since taking helm of SUPSHIPS and INDMAN EIGHT. He and Mrs. Gerdes send their best to all Mare friends.

Planning Department Bowling Team, made up of Code 200 officers and wives, won Officers Club Bowling League championship. In there rolling: CDR J. D. Working, LCDR and Mrs. J. Collier, LT and Mrs. F. Meyer. (League is composed of Mare teams and those of tenant commands.) Those were "strikes" in the right direction.

sister ships of GURNARD, reports that templates are being checked in the Mold Loft in preparation for start of construction of the first of the two fast attack N-subs.

spring bird told us he finished at the head of the class.

WASHINGTON and Groton were stops for LCDR D. McLaughlin. At EB he checked on "601" material and at DC had

week's European tour, visiting World's Fair enroute. Sounds nice!

RETIREMENT luncheon, featuring home-prepared goodies, was given for George Koppen by his code, 227. When you hear the expression, "Let George do it," it is with good reason and a great deal of affection. He will be missed by all. George, who is going to fix our broken earrings? And write this column?

New Faces Dept.—Arvie Williams and Mary Jackson, 239, Carol Grant, 227K, W. (Parkie) Parkinson, 227. Welcome aboard! Familiar face, but new addition in 215/216, is none other than Cindy Fitzpatrick.

THANKS to Georgia Weaver for the fine way in which she handled our personnel matters while detailed to Code 3201.

Our Council "rep"—Kay Bar-

At Work on Hulls 665, 666

SUBMARINES require much planning before keel laying. Planning and Estimating Division is hard at work ordering material and determining requirements for attack subs 665 and 666. In three-column pic (l to r): R. C. Holton, N. W. Guzman, J. J. Barrios, R. W. Stromnes, L. F. Hall, all Code 229. In top pic, hull structural P&Eers Chet Crow, Frank Moon, Loren Vernon and Apprentice Jim McDonald discuss ordering steel for hulls.

Training Slated

Metals Trades Council is sponsoring a training institute and seminar for its stewards May 4, 5, 6, in Bldg. 698, Training School. Starts each day at 8:15 a.m.

Dance on May 15 at the Country Club. Everyone should plan to attend. It was arranged for YOU.

PLANT AND UTILITIES
Shop 02

(By Betty Brown)—We welcome new employees John Kruse, John Drayden, Robert Hurd and William Meyer. Happy to have you aboard. Many leisure hours are in store for retirees William (Bunny) Orrock and Myron Hewett.

CONGRATULATIONS to Harold Scott, Richard Mahoney and Allen Hurst on recent promotions.

Nice to see Ernie Walling back from several months on the sick list, also Dennis Newberg, Sullivan Tate, Robert Burns, Penny McAtee, Colette Culhane. Still off: Graden Haggard, who was seriously injured in a skiing accident.

WANT any dangerous articles hauled? Just call us. Drivers R. Almstrom, E. Beauford, J. Arnold, J. Clark, J. Lande and R. McNeill have completed a course in hauling

CONTINUED ON PAGE 3

Bullock Takes MI Colors to District Speech Contest

Ship Supe LT Hal Bullock is a mighty toastmaster, GV is informed. Bullock has won speech contests in the M.I. club, the area and division and is now set to appear in District 57, Toastmasters International, contest on May 8. Competition includes area from San Francisco to Oregon border. Bullock represents not only Mare Island and Solano County but Sonoma, Napa and Marin counties as well. (Good luck, Hal. Shipyard is pulling for you!)

Administrative; Dorothy Schieler, InMan 12; Rose Simmons, Inspection; and Marie Lear, Security, assisting.

SECRETARY of NYA, Betty (Rod) Sardo, 300s, said, "I took this job two years ago because someone said the Association needs a Secretary. After two years I know that the Association needs the help of everyone in the Shipyard. Matters concerning DOD and Navy Department policy, national legislation and other shipyards or just defending Mare Island's good name are numerous and require constant attention. Give the Association your support, the officers can use it."

(We think they're nice too—Editor.)

What's Cooking At Cafeteria

MONDAY	
Chicken Salad Plate	.70
Chicken Chow Mein, Rice	.65
Spaghetti, Creole Sauce	.55
Breaded Veal Cutlet	.75
Baked Dinner Steak	.95
TUESDAY	
Fresh Fruit Salad	.80
Baked Short Ribs, Spanish	.75
Baked Meat Loaf	.65
Calves Liver & Bacon	.85
Marinated Sirloin Steak	.95
WEDNESDAY	
Red Alaska Shrimp Salad	.80
Roast Lamb, Dressing	.85
Baked Chicken Pie	.75
Creamed Tuna, Noodles	.65
Steak in Mushroom Sauce	.95
THURSDAY	
Combination Seafood Salad	.80
Irish Beef Stew, Vegetables	.65
Corned Beef & Cabbage	.75
Baked Ham & Candied Yams	.85
Roast Half Chicken, Cranberries	.95
FRIDAY	
Deluxe Crab Louie Salad	.80
Old Fashion Meat Pie	.65
Baked Macaroni & Cheese	.55
Salmon Steak, Tartar Sauce	.75
Dinner Steak, Onions	.95
SATURDAY	
Tossed Green Salad	.65
Braised Beef Ribs, Brown Gravy	.75
Roast Pork, Applesauce	.85
Fish Sticks, Tartar Sauce	.65
Grilled Club Steak	.95

THINK ABOUT IT

Some people aren't the life of the party until they leave.

Repair Spotlight on Thomas Merry-Go-Round Door - - a First

CONTINUED FROM PAGE 1

propellers. She will undock early next week.

Last week landings included remainder of the air-conditioning equipment and the Mark 37 director. Ship Supe CWO J. B. Hicks told GV that three boilers have been chemically cleaned and the fourth will get the treatment when the ship comes out of drydock. Light-off is slated June 18.

THIRTEEN compartments have been closed, but Hicks predicted the rate of closures will increase very rapidly within the next two weeks. Air tests have been completed in all fuel oil tanks and 75 per cent of below-deck compartments.

All office equipment and stateroom furniture is aboard. About 95 per cent of electronics gear and all foundations for it have landed, and 75 per cent of the inclined ladders are in place. Deck covering is going down in the wash and shower rooms, food and berthing areas.

ALSO, both engine room patches have landed and the air conditioning patch came aboard this week.

ROBERT E. LEE

Hull inserts and lower sections of four missile tubes are positioned in SSBN 601 in Drydock 2. The ship is now ready for four more and they will come aboard after pre-installation inspections.

SANDBLASTING of missile tubes before painting was carried out within the ship. Shrouds kept the sand from spreading. Main shaft, upper and lower rudders and stern planes have been removed for overhaul. Upper rudder will be modified also.

New depth control tank No. 1 —one of the big jobs—is now beginning. Trades are busy throughout the ship and in Shops 11, 31, 36 and 51.

OF "THE 601" job, Ship Supe LCDR John Thune says, "We've made a good start, but it is a tight schedule with much work and a few material problems. We are going to have to maintain a fast pace to meet completion date."

SCAMP

Big SCAMP overhaul is suped by LT Gus Builder. Last week high pressure air flasks began landing in the ship, now in Drydock 1; the diesel generator is already back on board.

Tank stiffening and modifications in the sail area are listed as progressing satisfactorily and the secondary propulsion system modification is moving right along. Repairs on the turbines are now being made in Bldg. 866.

BREAM

Two engines landed this week. Third (and last) main engine will be lowered in place on Monday. Patches over the engine compartment of AGSS 243 in Drydock 4 are still a couple of weeks away, reports Ship Supe LT Ed Guntrum.

BASHAW

Ship Superintendent ENS Roy Ray was full of praise for the way all trades turned to in completing AGSS 241 five days early — and costs were kept down. This was done on the five-week interim docking which included big sea valve jobs and in-place generator repairs.

Submarine departed, another customer well pleased with Mare Island traditional skills and spirit of can-do.

Open-and-Shut Case for Destroyer's Doors

PUSHED FLAT by Marine Machinist Chester Fellon (left) doors are out of the way. When needed the doors are pulled out and locked into position, as Kenneth Frye of Shop 38 does at right, and they become airtight revolving doors; 833 is first Fleet ship so equipped.

Sleuthing...

CONTINUED FROM PAGE 1

newed. **This is a costly decision and controls future work for the ship.** (See pic of metallurgist with dial micrometer.)

New wrinkle in testing wire materials used for welding electrodes has been pressed in this section. It was explained that some wires tend to oxidize or absorb gases. Such wires then may produce porous welds.

"AND THIS," MacKerrow declared, "is bad trouble in the shipbuilding business."

How was this problem solved at M.I.? As in many another instance, know-how mothered invention. An instrument was built by the metallurgy experts which can quickly separate the good material from the unusable. This device (see pic with glass tank at bottom) can reveal whether electrodes stored for long periods can be used in production without costly delays.

PRODUCTION metallurgists of the Metals Fabrication Branch are constantly working to improve shipyard operations.

Detection of metal failures, pioneering of new methods of work for this yard and some for other Government activities, along with constant quality control, are on the daily agenda of this alert and busy group.

What's Up With Shipyard Personnel...

CONTINUED FROM PAGE 2

explosives, etc. Three Hunters Point drivers—F. Elliott, F. Greene and R. Glover—also attended.

How lucky can a person be? Jim Gunby's trip east took in Washington, D.C., New York, New Orleans and the Mardi Gras, Chicago and St. Louis. He was gone a whole month.

ANYONE in 02 with a safety problem should take it up with our new Safety Coordinator Mack Hodge.

SUPPLY

(By Bernice Dunn)—It's ship ahoy to new employees and/or transferees Kay Dogherra, James May, Matthew Barnes, Catherine Northcutt, Al Ball, Christine Predd, Dolores Powell and Cathy Simons.

COFFEE 'n cake bade farewell to transferee Bob Neumann last Friday. LCDR A. J. Carpenter will get the same treatment this afternoon; he leaves for Saigon soon. Dan O'Conner's pleasant smile is much missed in Bldg. 71 since his retirement.

"Get wells" go to Pat Calsazia, Truly Kling, Bess Poling, Dorothy Oubichon, Arlena Wales and Henry Wilson. Back on the job: Everett Keisling, Al Johannessen.

DEEPEST sympathy is extended to Feliciano Munar, Pat Prenkert, Katie Johnson, Jean Luckow and Walter McAllister upon deaths in their families.

It was active duty with the Naval Reserve for Jose Barbosa. Gert Strong has a new trailer—have fun! Margaret Carl's daughter Barbara becomes the bride of Code 583's Darrell Thurber tomorrow. Happiness to both!

VACATION treks have begun. Charles Standler went to Fiesta-Land (or is it Siesta?)—Mexico, that is. Clifford Doll made Hawaii his destination. Fishermen Ben Phillips, Pat O'Neal, Ed Shiller, Joe Kolda, LCDR A. J. Carpenter, LTJG K. W. Mielke and Gaylord Bilmore caught 11 salmon from the wild-blue depths.

SERVICE GROUP

Shop 64

(By Joe L. Vigil)—Talk about honest yard-mates — Al Christensen's wallet was returned before he realized he had lost it.

SHIPWRIGHTS receiving certificates for completion of Hull Circulatory Measurement and Fundamentals of Optical Tooling training: E. L. Devereaux, G. N. T. Enomoto, V. T. Greco, M. A. House, C. L. Malinowski, "O" "K" McDaniel, W. B. Post, R. R. Mares, S. G. Howell, A. H. Bourgeau, J. L. Webster.

Following Service Group employees have successfully passed the exam following a training course on the S5W reactor plant (like SCAMP's): F. C. Ashoff, Orlando Roybal, W. M. Doig, R. W. Fielding, A. Gee, A. J. Montalbano, J. T. Valentine, R. N. Yarborough. Congrats to both groups.

EXPECTING to be a grandpa soon: Van Der Meer. Orval Longcor was married on the 9th of April. Meanwhile, "General" Grant goes drag racing and fishing at Lake Berryessa—fling before his marriage on May 30. Congrats to Herman (Moose) Rupkalvis—he collects superior cash today.

It is three months with P&E for Don Yip. H. Ullyot is back from two weeks of leave. We hear that Fred Ashoff has paid up his dues in Nevada.

Shop 72

Sail Lofter John Winn is the proud owner of a new "Honda"; for Leroy Weiling and his wife, it was something even better—a baby girl.

NOW ATTENDING a six-week diving school in San Diego: Mike Raymond and Bob Brackett . . . Best wishes to Floyd Langerman on his marriage to Edeltraud M. Seidel of Germany.

Home remodelling is taking up Jim Bolch's week off. None of that for Frank Fanning who is fishing from the banks of Whiskey Slough. Iso Sampala was off for a week but snow prevented him from getting to his cabins in the mountains. Miles Harrison, all fired up and hard at it again in Bldg. 51, also had a week's leave. Harry Schoonmaker and Hardy Dosher spent a pleasant weekend in Reno with their wives.

STILL ON sick leave is Loyd Brown, and ace radio dispatcher Chuck Hoover is home recovering from a motorcycle mishap. All wish a speedy recovery to both. Joe Casulo is back from sick leave and with

CONTINUED ON PAGE 4

Ticket-Holders! May 8 Game At 2:15 p.m.

Holders of tickets awarded by the Employees' Recreation Association to the Giants-Dodgers ball game on Saturday, May 8, are reminded of a change in starting time.

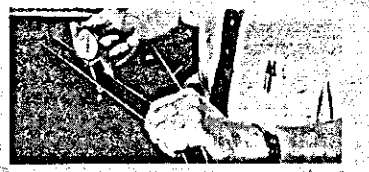
As the May 8 game has been selected for televising as the "Game of the Week," the contest will begin at 2:15 p.m.—tickets read 1 p.m. Have fun!

It's a Gas

PERFECT welds demand material of low gas content. Physical Chemist John Osborne is shown with the gas analyzer he developed to measure this. Welding wire is tested in vacuum tube below the instrument.

Store Closed

Retail Store's sale of surplus items has been discontinued temporarily. Reopening date will be announced in GRAPEVINE, says Supply.



Plumbs Depth

WITH a dial micrometer Hanford Yee, metallurgical technician, measures depth of corrosion pits in THOMAS boiler tubes.

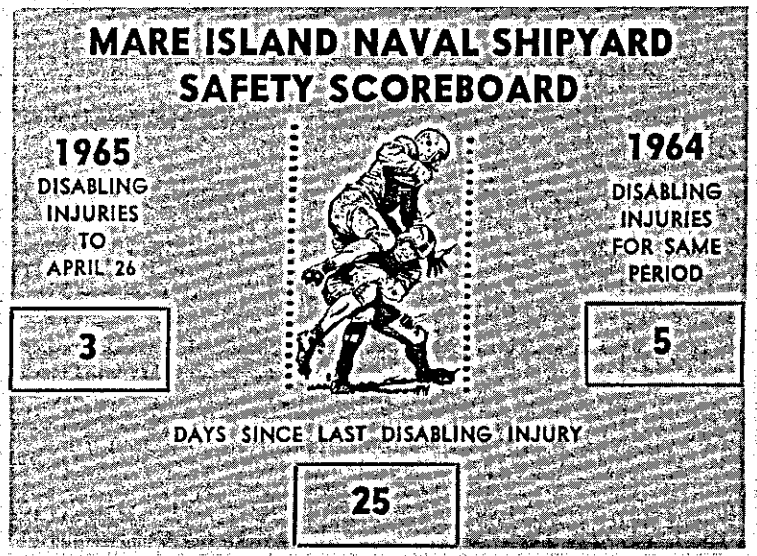
P.W. Dinner-Dance To Honor Outgoing Captain, His Wife

Gala Spring Dinner-Dance of Public Works offices will honor the departing CAPT J. W. Gordanier and his wife on Saturday, May 8. Menu at Rudy's for the affair includes Steak and Ravioli.

Tickets may be obtained from Esther Francom, ext. 6156 or 2678, LaDean Murphy, ext. 5143, or Bill Powers, ext. 4141.

BONNIE BONDS SAYS

Considering a secure way to save? U. S. Savings Bonds fill the bill. Sign up for more!



Island Personnelities . . .

CONTINUED FROM PAGE 3

Nave's crew in the Rigging Loft.

Condolences to Cecil Holt on the loss of his father, Augustus Holt, a retired rigger and friend of many on the Yard. Also to David Herndon on a loss in his family. Service Group is sorry to lose Mary Lou Kerswick to Nuclear Power Division, but all wish her lotsa luck.

WELCOME sight is Georgia Weaver—back from Code 3201, after having been away for some time.

Shop 99

William Hilton, who put in his last work day last Friday, retires after 30 years' service. Congrats to Tim Wood on his marriage to Leora Holt, daughter of Jess Holt.

FOR Carmelo Maldonado a busy season is beginning—he is vice-president of the Wilson Park Little League.

SHOP 11
Swing Shift

(By Robert E. Walker)—While Donald Hill was home baby-sitting last week, his wife was in the hospital providing him with a new son. Frank Villa was watching his four children, also, while his wife was in the hospital.

WELCOME mat is out for Les Moeller on swing shift. Also to Booker T. Ighner from days: he was a calker and chipper transfer from San Diego. Ed Martinson is headed for days with Code 307 inspectors. Congrats to Manuel Lopez on advancing from shipfitter helper to calker and chipper.

Shop 26 men Richard Lossing, Robert Myers, Martin Pueblo, Hermo Amayo, Frank Sullivan and Edward Mitchell

Deep-sea fishing excursion of L. Smylie wasn't too rewarding. All he could catch were jellyfish, and when he woke up from a nap he found his pal had consumed all of the refreshments . . . Dale Strachan and family enjoyed a weekend of skiing at Squaw Valley.

LOOKS like Moses Escalante has plans for the summer. He is shopping for a new pickup camper. Doug Pleger is building one in his back yard. He and John Garvin are planning a weekend of target practice at Cow Mountain.

Leisure hours of Walt Smith are divided between fly-fishing at Putah Creek and skin-diving north off Fort Ross. Walt says his diving is limited to keeping the fire going and directing his son from a dry rock.

MANY Shop 11ers will remember the friend with whom Frank Andrew spent a night on the town. He is Jimmy Saunders, Shop 11 personnel supervisor before transferring to P&E and then to San Diego with the Navy's Inspection Division.

Some people! Not only has Les Cavanah bought a Cadillac, he won two free tickets to the Giants-Dodgers game . . . Adgia Willis has been buying "hay" at Golden Gate for Lady Diver . . . Sherrod Freeman is putting in two-weeks' Reserve time, training in San Diego.

KEEPING an eye on weather and flying conditions, M. C. Sims is trying to decide whether or not to ride in Quarterman Shipfitter John Thomas' airplane. Shipfitters Kozak and Case are anxiously waiting for May 1. Trout season, maybe?

Son and grandchildren of Ed Clagett visited over Easter. Fred Kinder helped out Explor-

April Retirees

Led by two 40-year men, 11 shipyarders past the 30-year point in Federal service will receive gold retirement pins from the Shipyard Commander today. Twenty-three others with less time also retire this month.

Machinist (Marine) **Edward A. Keller** of Shop 38 has put in 40 years, 2 months; **Frank A. Skipper**, assistant meat cutter in Commissary Stores, closes out an even 40 years.

William F. Orrock, Shop 02, with 38 years, 10 months, on the books, has two months more than **Stanley H. Kaufman**, P&E. **George P. Koppen**, P&E, **Thomas W. Colt Jr.**, Design, and **Joseph D. Van Zant**, Shop 31, recorded these service times: 37 years, 3 months; 36 years, 6 months; 36 years, 3 months, respectively.

Shop 72's **Pedro E. Badillo** retires after 30 years, 3 months. **George S. Cornell**, Shop 51; **William J. DeSilva**, Shop 38; **William T. Hilton**, Shop 99, close out an even 30 years service.

UNDER 30 YEARS

Figures in parentheses denote full years completed in Federal service.

L. C. Clayton, Shop 31 (29); **L. J. Corbeau**, Shop 11 (29); **G. R. Rhomberg**, Shop 31 (27); **J. A. DeBrake**, Shop 51 (26); **A. G. Coleman**, Shop 67 (26); **G.M. Talmadge**, Shop 71 (25); **R. L. Pinkston**, Shop 07 (24); **J. E. Dulaney**, Supply (24).

M. W. Cleveland, Shop 31 (23); **R. F. Lewis**, Supply (23); **M. M. Baleme**, Shop 64 (23); **Myrtle Taylor**, Production (22); **J. S. Soriano**, Shop 51 (22); **R. W. Gutheridge**, Shop 26 (22); **O. J. Stroeh**, Shop 72 (21); **L. F. Kilfoil**, Supply (21); **G. F. Cyr**, Shop 56 (20).

Head in the Clouds

LOCAL Benny Sugg that made good earned a patent for a happy Burton L. Frye, Shop 06. Production Officer CAPT N. Frankenberger (left) congratulates him on microfilm viewer.

Thanks From Captain-san

Letter of thanks to the Shipyard Commander arrived from Tokyo, Japan. It was from CAPT Tetsuro Motomura, Chief, Administration Section, Maritime Staff Office, and said, in part:

I should like to express my sincere thanks for your kind hospitality shown to me during my stay in San Francisco.

It was very instructive for me to receive your explanation and to see your naval facilities.

It is my great wish that my visit may have further strengthened the ties of friendship and co-operation between our two navies.

Supes' Dinner-Dance

Promise of fun, music and a prize is made for the Ladies' Night dinner-dance of the Na-

Frye Patent Paper Given

An idea submitted as a Beneficial Suggestion by Burton L. Frye, Shop 06, has earned $150 in incentive awards. Handviewer for Microfilm Aperture Cards" now has earned patent to open up possible royalties on outside sales.

Written up by BuShips JOURNAL and several trade publications, the device has aroused much interest. Every N-sub carries two of the units, Mare Island uses about 50, and others are in BuShips, DOD and at Aerojet. British Admiralty and Netherlands Navy also own viewers.

Frye began at M.I. in 1943 but had breaks for service with the 11th Airborne and Air Force. An M.I. Apprentice, he worked in Shop 31 and 38 before going to 06, where for the past 12 years he has kept ma-

were loaned to calkers and chippers for several weeks of Quality Control grinding.

A LITTLE red-faced the other day, Bud Sisemore accidentally launched his new boat on dry land. We have been looking forward to the launching of Dewey Sweet's new one, but it looks as if he may have to reschedule it because of a higher priority—work!

Employee Gifts To JFK Library Top $2,000,000

Some $2 million have been given to the John F. Kennedy Memorial Library by civilian Federal personnel. This astonishing outpouring represents one-fifth of the total cost of the project and is double the estimate of a report made last June.

ing in Death Valley. Ralph Drury returned from a week in Southern California and said the sun shone??

May Work Wonder --All the Livelong Day on Railroad

TRAFFIC'S NORMAL --OR SO WE HOPE

By the time you read this, Railroad Ave. should be open to normal traffic again. If so, or when it is, please remember that California will be CLOSED to private vehicles from Seventh to Twelfth Sts. except for those with Special Parking Permits and those who have ASSIGNED parking spaces within the south part of this area.

This applies to ALL times—morning rush traffic will no longer be EXCEPTED.

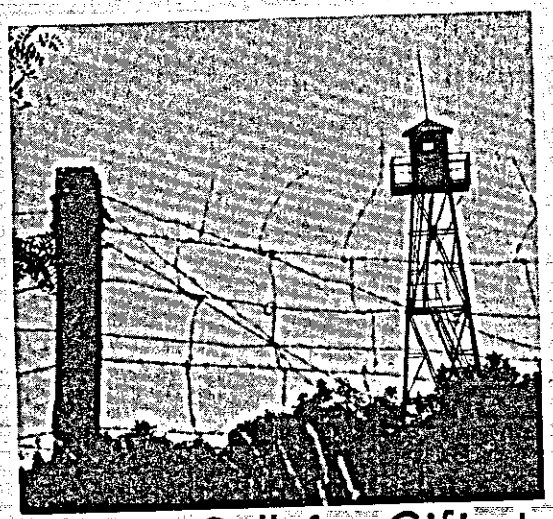
B. O. Warwick, Shop 38; D. P. Harrison, Shop 38; Elinor Woodbury, Design; H. K. Shockey Jr., Shop 26; W. E. Jackson, Shop 26.

Added to March list of retirees: W. D. Wilson, Shop 51 (26); L. K. Urquhart, Shop 36 (22).

A-3 From Surface

Shipyarders remember that ANDREW JACKSON (SSBN 619) was the first submarine to fire Polaris A-3 missile while submerged. Now the submarine of our sister shipyard has got in on the act.

Successful firing of two Polaris missiles by the FBM submarine NATHANAEL GREENE has been reported. This was the first surface firing of the current version of the 2500-mile Polaris A-3. Submerged firing of a bird off Cape Kennedy was also reported.



Last Call for Gifts to FSJC Worthy Causes

FEDERAL Service Joint Campaign for funds to support international organizations such as Radio Free Europe and national health organizations, such as Society for Crippled Children and Adults, winds up today at M. I. If you haven't given, see your long-suffering keyman and do your bit for worthy causes. Photos show the Iron Curtain barriers RFE tries to penetrate and ill child getting therapy from a health organization. GIVE.

tional Association of Supervisors — Saturday, May 15.

cities of Photographic and Reproduction Section going.

In on the Ground Floor

GRAPEVINE SCOOP ON JOBS

Applications must be received or postmarked (U. S. Mail) not later than the closing date indicated for the announcement. Applicants who use the Yard Mail System for filing applications are cautioned that since the Yard Mail does not have a postmark, its use is subject to the sender's risk. Applications that do not meet the time requiremens for filing will not be accepted.

Promotional Opportunities

Applications will be accepted from Career and Career-Conditional employees of the Shipyard. In addition, for positions preceded by an asterisk (*), applications will be considered from persons eligible for reinstatement. Send Form 57 to the Employment Division (Attention Code 171). Include Announcement Number on Form 57. All of these positions are temporary not to exceed one year.

***ELECTRONIC ENGINEER (GENERAL), GS-855-9, 11, 12, $7,710 through $13,445 per year:** IndMan 12ND, Shore Electronics Department, Special Facilities Division; Annct. No. 94-65-A; Closing date extended to May 21, Ext. 8109.

***CRANE HOOKMAN, $2.81 through $3.05 per hour:** Supply Department, Material Division, Annct. No. 98-65-A; Closes May 7, Ext. 6256.

ELECTRICIAN (LIMITED), $3.00 through $3.26 per hour: Production Department, Service Group, Shop 99; Annct. No. 99-65-A; open until further notice, Ext. 8418.

***JOINER, $3.29 through $3.57 per hour:** Production Department, Service Group, Annct. No. 100-65-A; Open until further notice, Ext. 8418.

INSPECTOR (SHIP'S HULL), $3.82 through $4.14 per hour: Production Department, Quality Assurance Division; Annct. No. 101-65-A; Closes May 6, Ext. 8418.

***PERSONNEL STAFFING SPECIALIST (EXAMINING), GS-212-5, $5,000 through $6,485:** Industrial Relations Office, Employment Division; Annct. No. 102-65-A; Closes May 7, Ext 8109.

Competitive Promotional Exams Open

Applications will be accepted from Shipyard employees serving under Career or Career-Conditional appointments. Send NAVEXOS 4155-AB to Employment Division (Code 171). Call Ext. 7251 for details.

PRODUCTION SHOP PLANNER (ELECTRICIAN) (SHOP 06), $3.82, $3.98, $4.14 Per Hour: CPE Annct. No. 65-12; Closes May 6.

Promotions Effective April 11

(All Temporary NTE one year, unless otherwise authorized)

PLANNING DEPARTMENT, Design Division: Clerk-Stenographer, GS-312-4, Beverly J. Federigi, NTE 10-9-65. Marine Engineer, GS-870-9, Charles R. Hug. Blueprinting-Machine Operator, Glenn S. Gragg.

PLANNING/PRODUCTION DEPARTMENT, Nuclear Power Division: Nuclear Engineer, GS-840-12, James C. Stone.

PRODUCTION DEPARTMENT, Quality Assurance Division: Engineer-Aid, GS-802-4, Marie E. Rice. Senior Supervisory Inspector (Metals) A, Willie P. Ptomey, NTE 7-9-65. Inspector (Ship's Mechanical Systems), Russell H. Bosworth, NTE 7-9-65, Thomas J. Murphy, NTE 7-9-65. Shop 51: Instrument Mechanic (General), Clarence E. Strickland, John R. Ledwidge, Charles A. Lavine, Jr., Lloyd A. Johnson, Joseph G. Michalik. Shop 56: Production Shop Planner (Pipefitter), Louis B. Ferronato, NTE 7-9-65, Shop 71: Leadingman Painter, Dennis W. Vaughan, NTE 7-9-65. Shop 72: (The following promotions are without time limitations) Quarterman Industrial Cleaner, Harold E. Hales. Leadingman Industrial Cleaner, Angelo J. Montalbano, Harry A. Thomas, James J. Greenan, Solomon R. Daughtry, Joe C. Jones, Charles W. Stephens, Jr., Arnold J. Martini. Shop 72: Laborer, Pete C. Cornelio, Selmar Cook, Mariano C. Pabiling, Eddie Diggs, Paul M. Sitjar, Francisco C. Cruz, Woodrow Russell, George Washington, Otto Smith.

PUBLIC WORKS DEPARTMENT, Engineering Division: Mechanical Engineering Technician (Drafting), GS-802-9, Walter R. Mayton. **Shop 02:** Leadingman Engineman (Hoisting and Portable), Allen M. Hurst.

SUPPLY DEPARTMENT, SHOP 01: Stockman, Walter E. Williams, Carmel Irick, Ellie L. Barner, Robert L. Andrews, Floyd E. Carr, Leslie E. Pullen, Albert E. Swanson, Sidney E. Evans, John S. Frost.

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

IN REPLY REFER TO:
DML:IB:NB (68272)

682

JUN 21 1965

Recd. This Copy On 6/24/65

Commanding Officer
Mare Island Naval Shipyard
Vallejo, California

Dear Sir:

This refers to your letter dated May 4, 1965, for exception to the provisions of Section 31.301, 10 CFR 31.

In order to consider the request further, we need to have two copies of the instructions to personnel which implement the procedures described in your May 4, 1965 letter. We shall continue review of the request upon receipt of the instructions.

Sincerely yours,

Nathan Bassin
Isotopes Branch
Division of Materials
Licensing

cc: Bureau of Ships

29 June 1965

1. Ltr. From San Francisco Bay Shipyd. (Mare Island) forwding copies (one each) of AEC Form 101 & Custody Receipt for PuBe neutron source for use in neutron calibrator being fabricated at Shipyard.

2. Ltr. forwded to Code 682B since Darrell Helton keeps these records on the Neutron Calibrators. (Orig. 6/29/65.)

3. This was result of Bishop Ltr 682C-544 of 9 June 1965 which answered Shipyd Mare's request for info - relative to Intra-Agency Xfer of the Pu-239 used in the AN/UDM-3 Neutron Calibrator.

SAN FRANCISCO BAY NAVAL SHIPYARD
VALLEJO, CALIFORNIA 94592

IN REPLY REFER TO:
(108)

7 June 1965

Rec'd. 6/11/65

Mr. G. N. Mahaffey
Bureau of Ships (Code 682C)
Washington, D. C. 20360

Dear Mr. Mahaffey:

Attached is the outcome of the inquiry we made as a result of our phonecon of 12 May.

We haven't had any success with our other attempt either; however, we'll keep trying.

Thanks again for your interest.

Sincerely yours,

G. J. Rosati

G. J. ROSATI
Industrial Radiological Safety Officer

Encl.

AMERICAN NUCLEAR CORPORATION box 426 oak ridge, tennessee phone 457-1234

June 1, 1965

Mr. G. J. Rosati
Industrial Radiological Safety Officer
San Francisco Bay Naval Shipyard
Vallejo, California

Dear Mr. Rosati:

Thank you for your letter of May 24, regarding a proximity warning device for access to high radiation areas. We regret to advise you that we do not at present manufacture a device of this type.

Technical data sheets are enclosed describing our RAY-D-TEC Radiation Monitoring and Survey Instruments. These are in use at a number of Naval installations. Your consideration of these for your present and future requirements will be appreciated.

Sincerely,
AMERICAN NUCLEAR CORPORATION

William E. Duff

William E. Duff
Director, Special Projects

WED/sjw

~~Enclosures~~

10330
(108)

24 May 1965

American Nuclear Corporation
P. O. Box 426
Oak Ridge, Tennessee

Attention: Mr. Graybeal

Gentlemen:

In a recent telephone conversation with Mr. Mahaffey of the Bureau of Ships, Code 682C, he suggested that you may market a device which we are looking for. Specifically, we have a requirement for a control device or alarm system practicable for use at accesses to High Radiation Areas attending shipboard radiographic operations. The device sought would be used at all temporary location accesses and permit compliance with the requirements of Title 10 Code of Federal Regulations, Part 20, 20.203(c)(2) and Part 31, 31.301. This might be a proximity warning device which would activate an alarm in case of unauthorized entry into a High Radiation Area.

Any information or brochures you may have will be appreciated.

Sincerely yours,

G. J. ROSATI
Industrial Radiological Safety Officer

10330/1
Ser 682C-544

From: Chief, Bureau of Ships
To: Commander
San Francisco Bay Naval Shipyard
MARE Island Division
Vallejo, California 94952

9 - JUN 1965

Subj: AN/UDM-3 Neutron Calibrator; Transfer Of

Ref: (a) NAVSHIPYD (MARE) SFRAN BAY letter 10330(108) of 2 June 1965
(b) AEC letter of 31 March 1965 to NAVSHIPYD MARE

Encl: (1) BUSHIPS INSTRUCTION 9890.10 Ser 1500M-2112 of 30 November 1960

1. By reference (a), the Commander, San Francisco Bay Naval Shipyard, MARE Island Division, requested information relative to the Intra-Agency transfer of the plutonium used in subject equipment. Authorization was granted by reference (b) to obtain the plutonium-239 in the form of a Pu-Be source for use in the AN/UDM-3 calibrator and transfer the source to the Navy under Section 91b of the Atomic Energy Act of 1954.

2. Accountability for this Special Nuclear Material is to be maintained and the procedures to follow are covered in enclosure (1). The AN/UDM-3 Calibrator is considered Radiac Equipment, therefore, copies of transfer documents, receipts, etc., should be forwarded to the Bureau of Ships, Code 682.

3. It should be noted that Industrial Manager, Naval District, Washington, D. C. (vice the Naval Weapons Plant, Washington, D. C. as mentioned in reference (a)) will be the consignee, custodian, and user of the AN/UDM-3 presently under construction at the shipyard.

M. C. WILLIAMS
By Direction

MAHAFFEY/mitchell
61457 - 6/9/65
Serial 650607-0545

SAN FRANCISCO BAY NAVAL SHIPYARD
VALLEJO, CALIFORNIA 94592

IN REPLY REFER TO:
10330
(108)
JUN -2 1965

From: Commander, San Francisco Bay Naval Shipyard
To: Chief, Bureau of Ships (Code 682C)

Subj: Intra-Agency Transfer of Special Nuclear Material Sources; request for information

1. Information is requested concerning current Department of the Navy or BUSHIPS directives governing intra-agency transfers of plutonium sources not related to the nuclear power program, but which were originally acquired under Section 91b of the Atomic Energy Act of 1954.

2. The current need involves the transfer of a neutron detector calibrator, AN/UDM-3, which is being manufactured by this Shipyard for subsequent shipment to the Naval Weapons Plant, Washington, D. C.

G. J. ROSATI
Industrial Radiological Safety Officer

Answered by BUSHIPS ltr Ser 682C-544 of 9 June 1965

020903-0727

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

IN REPLY REFER TO
BUSHIPS 9890.10
Ser 1500H-2112
30 November 1960

BUSHIPS INSTRUCTION 9890.10

From: Chief, Bureau of Ships
To: Distribution List

Subj: Accountability for Special Nuclear Material Utilized in Connection with Naval Nuclear Propulsion Plants

Ref: (a) BuShips serial 1500H-1745, dated 24 May 1957 to ComSubLant
(b) BuShips serial 1500H-2511, dated 2 December 1957 to various CDRS., NavShipYards and SupShips
(c) BuShips ltr., dated 6 December 1958 to ComSubPac
(d) BuShips serial 1500H-1406, dated 18 May 1959 to SupShips, Pascagoula
(e) OpNav INSTRUCTION 9080.2D
(f) OpNav INSTRUCTION 9080.3A

1. Purpose. The purpose of this INSTRUCTION is to promulgate procedures for maintaining proper accountability within the Navy for special nuclear material utilized in connection with Naval nuclear propulsion plants.

2. Cancellation. References (a) through (d) are hereby cancelled and superseded by this INSTRUCTION.

3. Definition. The term "special nuclear material" means: (1) uranium enriched in the isotope 233 or the isotope 235, or (2) plutonium.

4. Scope. This INSTRUCTION is applicable to all naval ships and activities which handle, store, or utilize special nuclear material in connection with Naval nuclear propulsion plants (see paragraphs 5.c. and 5.d. below). It does not apply to special nuclear material in the possession of naval activities under a license issued by the U. S. Atomic Energy Commission.

5. Background.

a. The Atomic Energy Act of 1954 provides that title to all special nuclear material is vested in the Atomic Energy Commission. Atomic Energy Commission regulations require that accountability be maintained for all special nuclear material (except minute quantities which are less than an established "recordable unit"; materials covered by this INSTRUCTION do not fall within this exempted category).

S2498

b. The President of the United States from time to time authorizes the Atomic Energy Commission to transfer to the Department of the Navy quantities of special nuclear material for use in connection with Naval nuclear propulsion plants. Upon transfer, title to this special nuclear material remains with the Atomic Energy Commission, but custody of and accountability for the material becomes the responsibility of the Department of the Navy. This INSTRUCTION describes how this responsibility is to be discharged within the Navy.

c. The special nuclear material being transferred to the Navy for use in connection with Naval nuclear propulsion plants is presently contained in the following:

(1) Reactor cores (U-235);
(2) Reactor core fuel assemblies (U-235);
(3) Fission Chambers (Power range neutron detectors) (U-235);
(4) Neutron Detector Test and Calibration Sources (Plutonium).

d. The above types of components and instruments will be consigned to designated Navy ships or activities for the following purposes:

(1) Ship propulsion
(2) On-board spares
(3) Storage as stock spares ashore or afloat
(4) Instrument calibration
(5) Temporary custody pending installation in or delivery to nuclear powered ships or tenders, awaiting return to the Atomic Energy Commission, or pending other disposition as directed by BuShips.
(6) Temporary custody pending further transfer to Navy installation or delivery activities.

e. Reactor cores and reactor core fuel assemblies are classified CONFIDENTIAL - RESTRICTED DATA and therefore will require security handling and storage. Reactor cores and reactor core fuel assemblies will be received in sealed shipping-installation containers or shipping-storage containers. Outside storage is acceptable for reactor cores and reactor core fuel assemblies consigned for temporary custody pending installation in nuclear powered ships, provided adequate security protection is maintained and provided that the cores and assemblies are stored in their own specially designed containers.

f. Fission chambers and neutron sources may be unclassified and would then require no special security handling or storage except that which may be required to protect against loss or damage and to protect personnel against radiation.

6. Action.

a. Bureau of Ships.

(1) Designate the naval activity which will initially receive the special nuclear material from the Atomic Energy Commission and authorize that activity to accept the special nuclear material on behalf of the Department of the Navy.

(2) Authorize transfer of reactor cores and reactor core fuel assemblies between Naval ships and activities after initial receipt from the Atomic Energy Commission. Specific authority for intra-Navy transfer of other components and instruments which contain special nuclear material will not be required except as provided in paragraphs 6.a(3) and 6.b(8), below.

(3) Provide disposition authority and instructions for spent reactor cores and fuel assemblies and for unserviceable or excess components or instruments containing special nuclear material.

b. Naval Activities and Tenders of Nuclear-powered Ships.

(1) Naval activities or tenders which have been designated and authorized to receive components or instruments containing special nuclear material from the Atomic Energy Commission will receipt for the special nuclear material on the transfer documents provided for this purpose and return the signed documents to the designated Atomic Energy Commission activity or licensee in accordance with the instruction accompanying the transfer documents.

(2) Naval activities or tenders receiving components or instruments containing special nuclear material from other naval activities or from other Navy ships will receipt for the special nuclear material on the transfer documents provided for this purpose and will return the signed documents to the transferring activity or ship.

(3) The Commanding Officer will ensure the proper handling and storage of components or instruments containing special nuclear material, in accordance with sub-paragraphs 5.e. and 5.f., above.

(4) Upon issue or transfer of components or instruments containing special nuclear material, whether from temporary custody or stock, accountability will be passed to the receiving ship or activity by means of a signed receipt. This receipt may be in letter format or by use of Invoice/Shipping Document (DD Form 1148). One copy of each signed receipt will be forwarded by the transferring activity to the Bureau of Ships (Code 1500H). The same procedure applies in the case of special nuclear material returned to the Atomic Energy Commission.

(5) References (e) and (f) provide that the responsibility for and custody of the special nuclear material contained in the reactor core will be transferred to the Officer in Charge of new construction nuclear powered ships at the time the ship is placed "In Service." Responsibility for and custody of the special nuclear material contained in components and instruments from the time of installation in a new construction ship until the time the ship is placed "In Service" remains with the Commander of the Naval Shipyard or the Supervisor of Shipbuilding who is the responsible Supervising Authority, as defined in references (e) and (f). Responsibility for and custody of special nuclear material contained in replacement components and replacement instruments will be transferred to the Commanding Officer at the time installed in or delivered to the ship. On-board spare components and instruments containing special nuclear material should be issued to a new construction nuclear-powered ship after the ship is placed "In Service". A Supervisor of Shipbuilding may utilize the physical facilities and other services of a private shipbuilder for such purposes as testing, storage, yard transportation, security, installation, or packaging and disposal of components and instruments containing special nuclear material. However, responsibility for and custody of the special nuclear material remains in the Supervisor of Shipbuilding until such components or instruments are transferred to a ship, another Naval Activity or the Atomic Energy Commission, or are disposed of.

(6) Loss or damage of any component or instrument containing special nuclear material should be reported immediately to the Bureau of Ships.

(7) Disposition instructions for defective or unserviceable components or instruments containing special nuclear material should be requested from the Bureau of Ships.

(8) Components and instruments containing special nuclear material are under the inventory control of the Bureau of Ships. Existing supply procedures with respect to inventories, issues, and stock status and transaction reports for BuShips controlled material are applicable to those components and instruments containing special nuclear material which are consigned to Naval Activities or Navy Tenders as <u>stock spares</u>.

c. <u>Nuclear Powered Ships</u>.

(1) The Officer in Charge of a new construction ship will receipt for special nuclear material contained in installed reactor cores at the time the ship is placed "In Service" (see sub-paragraph 6.b.(5) above). The Commanding Officer will receipt for special nuclear material contained in replacement reactor cores or replacement fuel assemblies at the time installed in or delivered to the ship.

(2) The Commanding Officer or Officer in Charge will receipt for special nuclear material contained in fission chambers and neutron sources, both installed and on-board spares, at the time of installation or receipt, or at the time the ship is placed "In Service" if the instruments were installed prior thereto.

(3) An inventory of components and instruments containing special nuclear material will be made quarterly and upon relief of command; custody will be maintained in the same manner as for equipage requiring custodial signature. The Commanding Officer or Officer in Charge will ensure the proper handling and storage of components or instruments containing special nuclear material in accordance with sub-paragraphs 5.e. and 5.f., above.

(4) Loss or damage of any component or instrument containing special nuclear material should be reported immediately to the Bureau of Ships (Code 1500).

(5) Disposition instructions for defective or unserviceable components or instruments containing special nuclear material should be requested from the Bureau of Ships (Code 1500).

(6) Upon transfer of any component or instrument containing special nuclear material to another naval ship or activity or to the Atomic Energy Commission, accountability will be passed to the receiving activity by means of a signed receipt. This receipt can be in letter format or by use of Invoice/Shipping Document (DD Form 1148). A copy of the signed transfer receipt shall be forwarded by the transferring ship to the Bureau of Ships (Code 1500H).

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

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F23 (PERU)

THIS DIRECTIVE STOCKED AT:
NSC NORVA
GSD, NSC OAKLD CALIF
U. S. NAVAL WEAPONS PLANT

10330/1
Ser 682C-521

17 MAY 1965

From: Chief, Bureau of Ships
To: Chief, Isotopes Branch
Division of Materials Licensing
U. S. Atomic Energy Commission
Washington, D. C. 20545

Subj: AEC Byproduct Material License No. 4-364-6(267); Request For Amendment To

Ref: (a) NAVSHIPYD MARE letter 10330 (108) of 4 May 1965 with attached enclosure

1. Reference (a) contains an application to amend subject license.

2. The request covers an exception of the operating and emergency procedures to the provisions of 10 CFR 31.101 when performing radiography at temporary sites aboard ship. This material has been reviewed and the Bureau of Ships concurs in the action proposed by the Shipyard since these measures appear practical and economically sound. The potential radiation hazard is further reduced by establishing most temporary radiographic areas during the third shift when few people are at work.

Copy to:
BUMED(Code 74)

NAVSHIPYD, MARE

M. G. WILLIAMS
By Direction

MAHAFFEY/mitchell
61457 - 5/17/65

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

682C

MAY 17 1965

Rec'd. 5/19/65

IN REPLY REFER TO:
SLR:RH
4-364-6

YOUR REF: 10330
(108)

Commanding Officer
Mare Island Naval Shipyard
Vallejo, California

Dear Sir:

Thank you for your letter of May 4, 1965, with enclosure, in reply to our letter dated March 23, 1965.

Your application for exception to the requirements of 10 CFR 31.301 has been referred to the Isotopes Branch, Division of Materials Licensing, for handling.

Your cooperation with us is appreciated.

Very truly yours,

Eber R. Price, Director
Division of State and
Licensee Relations

cc: Department of the Navy
Chief, Bureau of Ships
Washington, D. C. 20360
Attention: Mr. George N. Mahaffey
Code: 682-C

AIR MAIL

MARE ISLAND NAVAL SHIPYARD
VALLEJO, CALIFORNIA

IN REPLY REFER TO
10330
(108)

MAY - 4 1965

682C
HB

682C's copy rec'd. 5/10/65
fwded to AEC under 682C -

Mr. Eber Price, Director
Division of State and Licensee Relations
U. S. Atomic Energy Commission
Washington, D. C. 20545

Dear Mr. Price:

In your letter of 23 March 1965, it is implied that "...shall maintain a direct surveillance of the operation to protect against unauthorized entry into a high radiation area..." means continuous visual observation of the High Radiation Area and all accesses thereto. On this premise, the provisions of 10 CFR 31.301 are believed to be impractical with respect to shipboard radiography. Therefore, the enclosed application for exception to the provisions of 10 CFR 31.301 is submitted for appropriate routing and processing.

In the meantime, a large violet-colored rotating beacon is being located at or near the source exposure head of projectors used in all temporary radiographic areas. This beacon is operated during the period of source exposure and is used in addition to the flashing red lights, rope barricade, and posted warning signs placed at the perimeter and all accesses to the Radiation Area. These measures augment the guarding of major accesses by radiographic personnel. The attention of all Shipyard employees is being called to these safeguards, their purpose and significance, by means of articles in the Shipyard newspaper, the Grapevine, and specifically to all employees working in the production area by means of a presentation at a Stand-up Safety Meeting.

Efforts are also being continued to either locate and purchase or to develop an appropriate control device or alarm system practicable for use at accesses to High Radiation Areas attending shipboard radiographic operations. Thus far, photo-electric and ultrasonic devices are being considered. Your assistance in advising me of the availability of acceptable devices of which you may be aware will be appreciated.

Very truly yours,

EDWARD J. FAHY
Rear Admiral, U.S.N.
Shipyard Commander

Encl: Application for
Exception

Copy to:
✓ BUSHIPS (Code 682C)
BUMED (Code 74)
Region V, Division of Compliance
2111 Bancroft Way
Berkeley, California 94704

APPLICATION FOR AMENDMENT TO

AEC BYPRODUCT MATERIAL LICENSE NO. 4-364-6

1. Subject application is hereby made to provide an exemption of the operating and emergency procedures to the provisions of 10 CFR 31.301 with respect to operations in temporary radiographic areas involved in ship construction and repair. It is requested that these operations be exempted from the above provisions to the extent that maintaining "a direct surveillance of the operation to protect against unauthorized entry..." is satisfied by the following measures:

a. The use of a magenta and yellow rope barricade at the 2 mr-in-any-one-hour isodose line posted with conventional warning signs.

b. Using, in addition to (a) above, battery-operated flashing red lights placed, if possible at the same level as the radiation warning sign and within 3 feet, at any access that cannot be continuously observed by the radiographer or the assistant radiographer.

c. The operation of a large violet-colored rotating beacon at or near the source exposure head of the projector during actual exposure of the source.

d. The continuous visual observation of the High Radiation Area, where possible, and/or major and as many other accesses to it, that can be maintained by at least two certified radiographic personnel. For usual operations two such individuals attend each source.

2. This exemption is required because:

a. Due to the multiplicity of accesses and their nature during certain phases of construction and repair, it is economically prohibitive to provide the numbers of trained and certified personnel required to exercise direct and continuous visual observation of all possible accesses.

b. No control devices or alarm systems have been found as yet which are feasible for use in temporary radiographic areas involved in ship construction and repair considering portability, initial cost, maintenance, practicability of installation, and degree of effectiveness.

c. Nearly all of these accesses by their structural nature do not permit the installation of doors or other closures for locking. Further, the relatively high danger of fire attending construction, and particularly repair operations, prohibits any action, such as locking hatches or passage-ways, which further limits personnel access.

ENCLOSURE (1)

3. Most temporary radiographic areas related to ship construction and repair are established for the midnight to 0800 shift only - when the fewest number of employees are at work. The planned establishment of these areas is made known to all concerned supervisory personnel in advance of the shift and their actual existence to all personnel by signal lights and notices at entrances to the general area. Employees working in neighboring areas have been trained to recognize the significance of these warning devices and instructed to heed their warning. Operations under these conditions and those described under paragraph 1 above are believed not to result in undue hazard to life or property.

12 May 1965

Telcon With Mr. Rosaiti - Mare Island [707-644-1111]
Ext. 8595

1. Called concerning status of chges which would be req'd. should AEC approve the "Application for Exception" to the provision of 10 CFR 31.301 with respect to operations in temporary radiographic areas involved in ship construction & repair. Copy of Shipyd's ltr, 10330 (108) of 4 May 1965, covered measures which would be followed to protect against unauthorized entry.

2. Question in ltr asked about an alarm & control device, if available, for use at accesses to Hi Radiation Areas attending shipboard radiographic operations. Gave name of American Nuclear Corp., P.O. Box 426, Oak Ridge, Tennessee. Company makes a radiation monitoring system - single & multi-channel. Can have lite or aural indication of readout - can have both. Unit is flexible - can have remote readout. One unit, 4 channel, is calibrated 1 R/hr to 100 R/hr. Also, have single channel unit calibrated 10 R/hr to 1000 R/hr. Suggested this may be a unit worth considering.

10330/1
Ser 682C-387

From: Chief, Bureau of Ships
To: Commander
MARE Island Naval Shipyard
Vallejo, California 94592

21 APR 1965

Subj: Measuring Surface Radiation Levels Of Outside Shipping Containers; Information Concerning

Ref: (a) NAVSHIPYD MARE letter 10330(108-26443) of 27 November 1964
(b) BUSHIPS FIRST ENDORSEMENT 10330/1 Ser 682C-347 of 22 March 1965

Encl: (1) Interstate Commerce Commission letter dated 12 April 1965, File 73.393(K), with attachment

1. Enclosure (1) covers an explanation of subject measurements relative to problem areas raised in reference (a) which were forwarded to the Interstate Commerce Commission by reference (b).

2. A review of this material indicates the following:

a. The ICC does not require specific model and/or type instruments be used in making measurements.

b. Each facility should be satisfied that instruments used in making measurements are properly calibrated.

c. Shipments that do not meet acceptable limits should be rejected.

d. Disputes between the vendor and the customer will not be settled by the Interstate Commerce Commission.

Copy to:
BUSAND(w/encl (1))

R. D. CLUBB
By direction

MAHAFFEY/mitchell
61457 - 4/21/65

Interstate Commerce Commission
BUREAU OF SAFETY AND SERVICE
Washington, D.C. 20423

682C

April 12, 1965

File: 73.393(k)

Mr. R. D. Clubb
Bureau of Ships
Department of the Navy
Washington, D. C. 20360

Dear Mr. Clubb:

This refers to your letter dated March 22, 1965, files 10330/1 and Ser. 682C-347, concerning choice of radiation detection meters.

Such equipment has been used and studied by the Bureau of Explosives of the Association of American Railroads, whose Director and Chief Inspector, Mr. T. C. George, has explained the matter in his letter of April 6, 1965, of which I attach two copies for your use.

His explanation should enable you to resolve the problem.

Very truly yours,

C. W. Taylor
Director

Attachment

cy; Mr. T. C. George, Director and Chief Inspector; Bu. Explosives, AAR, 63 Vesey St., New York, N. Y. 10007

ENCLOSURE 1 TO BUSHIPS SER 682C-387

BUREAU OF EXPLOSIVES
ASSOCIATION OF AMERICAN RAILROADS
59 VESEY STREET
NEW YORK, N. Y. 10007

T. C. GEORGE, DIRECTOR AND CHIEF INSPECTOR

FILE NUMBER
25-3
25-16-174
G-MM

April 6, 1965

Mr. C. W. Taylor
Director, Bureau of Safety and Service
Interstate Commerce Commission
Washington, D. C. 20423

Dear Mr. Taylor:

Please refer to your letter of March 26, your file 183.3, having to do with correspondence you have received from the Department of the Navy relative to specifying additional standards of radiation detection instruments because of variables in readings.

Of course, the Navy Department's argument that the geometry of ionization chambers varies so that the identical readings will not be obtained with all meters is correct. It is not physically possible to have the center of the ionization chamber on surface of the package and from the theoretical point of view this may be a problem. In actual practice, it is not a problem as our years of experience have demonstrated. The only purpose in naming a type of instrument in the regulations was to establish a degree of accuracy. Since the instrument named is a simple ionization chamber type which does not rely on a lot of erratic electronic circuity in its operation, it is the most reliable instrument for the purposes of a practical standard portable instrument which can be used in shipping rooms and in the field. The regulations were not worded so as to require that the particular instrument be used and you may recall that the original regulations required the Landsverk L100, which probably is no longer available. We changed this to the L75 which is exactly the same type of instrument as was originally specified. Through the years one or two other manufacturers have produced the same type of instrument. Because of the very large number of instrument manufacturers in the field, particular models come and go with surprising frequency and some of them have been good and some of them bad. Few of the portable instruments have better than 20% accuracy but most of them are capable of greater accuracy if calibrated frequently. While the Landsverk is not the easiest to use, it can be readily established that when properly calibrated it is capable of a greater degree of accuracy over an extended period of time than any of the Geiger tube operated instruments. The Landsverk L75 has the advantage that it will either operate with reasonable accuracy or not at all and hence misleading results are not likely to be obtained when it is used for monitoring radiation on the surface of the package.

April 6, 1961

Mr. J. W. Taylor
(2-3)

So far as I know, no one (with the possible exception of some instrument manufacturer) who has studied the problem carefully has presented any supportable objection to the present wording of the ICC Regulations in this respect. Actually, most shippers calculate the surface radiation on their packages and also must shippers hold the radiation well below the 200 mr. per hour which is permitted for the simple reason that if they are handling large numbers of packages in their facilities over long periods of time they require a lower surface radiation in order to protect their own employees. The infrequent and relatively short exposure of transportation employees makes the 200 mr. per hour figure established by the regulations quite acceptable and, in fact, provides a good margin of safety even for employees such as the express messengers in the Oak Ridge area. From this, you will see that absolute accuracy of instruments is not necessary to safety of carriers' employees. If the Navy Department has persons who are constantly exposed to radioactive materials, they too should use a figure lower than the 200 mr. per hour at the surface of their packages for the protection of their own personnel. Of course they are at liberty to use any instrument which will provide the degree of accuracy of the L75 Landsverk Electrometer without actually using the Electrometer to make their measurements. If they use the Geiger tube type of meter employing an amplifier circuit and an ordinary microammeter scaled to read in mr's per hour, they must frequently check their instrument for accuracy if they are depending upon it to maintain their packages near the top limit permitted under the regulations. We do not use this latter type of instrument at all except to measure the very high levels of radiation which might exist under some emergency condition. The few times we have actually found it necessary to check the radiation on the surface of a package, we always have used the Landsverk Electrometer but I would agree that any properly calibrated ionization chamber type electrometer could serve our purposes equally well.

I am sorry that I could not explain this matter more briefly but trust that this will serve your purposes.

Yours truly,

Director and Chief Inspector

Interstate Commerce Commission
BUREAU OF SAFETY AND SERVICE
Washington, D.C. 20423

March 26, 1965

File: 183.3

Mr. R. D. Clubb
Bureau of Ships
Department of the Navy
Washington, D. C. 20360

Dear Mr. Clubb:

This has reference to your letter dated March 22, 1965, suggesting a change in the detectors used for measurement of radioactivity of shipments.

Copies of your proposal are being made and will be referred to our advisors for study, after which I will write you further.

Very truly yours,

C. W. Taylor
Director

10330/1
Ser 6820-377

FIRST ENDORSEMENT ON NAVSHIPYD MARE LETTER 10330(108) OF 6 APRIL 1965

14 APR 1965

From: Chief, Bureau of Ships
To: Chief, Isotopes Branch
Division of Materials Licensing
U. S. Atomic Energy Commission
Washington, D. C. 20545

Subj: Model A-424-4 Cobalt-60 Sealed Source; Report Of Incident Concerning

1. Basic letter with enclosure covers the notification and report of an incident which occurred while returning to its regular storage area the subject source and projector authorized under AEC Byproduct Material License No. 4-394-6(B67). Under the requirements of the Code Of Federal Regulations, Title 10, Part 20, the Director, Division of Compliance, Region V, U. S. Atomic Energy Commission was notified of the incident by the Shipyard.

2. This report has been reviewed and corrective steps listed in paragraph four have been established by the Shipyard to guard against a similar incident.

Copy to:
NRSED(Code 74)

NAVSHIPYD, MARE

R. D. CLUBB
By direction

Record Note: One person (a radiographer) received about one-month's allowed dose in a few seconds. Serious, but no permanent damage anticipated.
MBW

MAHAFFEY/mitchell
61457 - 4/13/65

MARE ISLAND NAVAL SHIPYARD
VALLEJO, CALIFORNIA

IN REPLY REFER TO
10330
(108)

APR -6 1965

Recd. -4/12/65

From: Commander, Mare Island Naval Shipyard
To: Director, Division of Materials Licensing
U. S. Atomic Energy Commission
Washington, D. C. 20545
Via: Chief, Bureau of Ships (Code 682C)

Fwded to AEC by 1st. End. BUSHIPS SER. 682C-377 of - April 1965

Subj: Exposure incident; notification of

Ref: (a) 10 CFR 20.405

Encl: (1) Report of Possible Technical Overexposure Incident

1. As required by paragraph (a) of the reference, subject report is forwarded herewith as enclosure (1).

2. In compliance with paragraph (b) of the reference, the potentially exposed employee has been notified of the probable extent of exposure.

3. In accordance with paragraph (c) of the reference, the name of the employee who may have received the technical overexposure is W. Hammond, #039-363400.

EDWARD I. FAHY

Copy to:
Director, Division of Compliance, Region V
U. S. Atomic Energy Commission
2111 Bancroft Way, Berkeley, Calif 94704
BUMED (Code 74)
BUSHIPS (Code 682C)

REPORT OF POSSIBLE TECHNICAL OVEREXPOSURE

1. Cause of exposure

At approximately 0800 on 10 March 1965, a source and projector, which had been used for radiography during the previous shift at a new construction berth, was being returned to its regular storage area in Building 676.

The source and projector were being moved on a 4-wheel hand truck out of the work site to a location where they could be loaded on a pickup truck with a crane. In making a turn, one wheel of the hand truck struck an object, the front wheels cramped sharply, the wagon tipped, and the projector fell to the ground.

The projector and source were immediately monitored by the certified radiographer in charge. The results were normal. Since the only damage observed was that two of the four bolts holding the control box to the projector had been sheared, the projector was loaded into the truck and escorted back to the storage area by the radiography supervisor.

Upon arrival at Building 676, the truck was driven under an electric crane near the regular storage area and the source and projector lifted as the truck was driven out of the way. While the equipment maintenance specialist nearby was being alerted to check the projector further, the certified radiographer in charge of the storage area undertook to complete the unloading by lowering the projector and putting the control cables onto a storage pallet.

As the control cables were lowered first, their weight apparently pulled the control box, and with it the connecting "pigtail" and Cobalt^{60} source, away from the still suspended projector. The control box and exposed source fell to the floor. The radiographer noticed this while operating the hoist. He immediately approached the exposed source and picked it up by the connecting "pigtail" and returned it to the projector in a matter of seconds. Assistance was immediately given to secure the source in the projector and remove it to a proper storage location. It was subsequently found that the two bolts which were apparently intact had been stripped and were therefore unable to hold the control box to the projector when the weight of the cables acted upon them. The damaged bolts were replaced and the projector has been returned to good operating condition by the manufacturer's representative.

2. Radioactive material involved

The source was Technical Operations, Inc., Model A-424-4 Cobalt^{60}, Serial No. 1003, whose activity was measured by Technical Operations, Inc., at 31 curies on 23 April 1964. Its activity on 10 March 1965 was therefore 27.6 curies.

The radiation intensity from this source on this date was 40.6 r/hr at 3 feet and 14.6 r/sec at 1 inch.

This source was housed in a Technical Operations, Inc., Model 404 projector, Serial No. 6A.

3. Extent of exposure

The only unusual exposure incurred during this incident was by the certified radiographer who replaced the source in the projector. He was wearing a film badge which, upon processing, indicated an exposure of 420 mrem since 1 March 1965. Pocket dosimeter readings between 1-9 March totaled about 20 mrem; thus 400 mrem whole-body exposure may be attributed to this incident.

The exposure to the thumb and forefinger of the left hand was computed from interview statements and times and distances observed from the average of at least three re-enactments timed with a stopwatch. Based upon this data, the maximum probable exposure to the left hand was 46.6 rem.

4. Corrective steps taken

a. A structural metal frame has been installed around the Cobalt^{60} projector. This frame provides positive protection to the control box as well as the projector as a whole. The frame also provides a more satisfactory method for rigging attachments in moving or lifting the projector.

b. A suitable cart is being fabricated for moving the projector within construction areas. It has been designed specifically for this projector and will provide for positive attachment of the projector to the cart.

c. Suitable shielding material is being prepared for future emergency use. This shielding is in the form of leather bags containing lead shot which can be effectively and rapidly placed to shield irregular shapes. These bags will have a rope pendant 4 feet long at each end thus allowing radiographers to place the shielding over uncontrolled sources while still remaining at some distance away.

d. Re-instruction of radiographic personnel is being accomplished with particular emphasis on absolute conformance to Radiological Safety emergency procedures.

e. The certification of the exposed radiographer is being withdrawn for an appropriate period.

8 April 1965

Telcon with Mare Island Shipyard

(1) Called Mr. Rosati relative to status of Amendment #7 (Orig.) to AEC Lic. # 4-364-5 (J66) covering possession & use of X Sensing Element, using Sr^{90}, Victoreen Model A 716A Eqpt. Ltr. Xmittal signed here on 4/5/65. Rosati indicated have at Shipyd - arrived on 4/7/65.

(2) Stated an incident recently occurred at Shipyard. Radiographer picked up unit which had dropped from eqpt. Received ≈40 rem to hands. Film badge ≈ 0.700 Rems. Report signed & coming to AEC. Copy is being funded to BUSHIPS.

682 (D)

MARE ISLAND NAVAL SHIPYARD
VALLEJO, CALIFORNIA

IN REPLY REFER TO
10330
(108)

APR -5 1965

Rec'd. 4/8/64 (*)

From: Commander, Mare Island Naval Shipyard
To: Chief, Bureau of Ships (Code 682C)

Subj: Gamma Sensing Element; AEC Byproduct Material License for

Ref: (a) Telephone conversations, Mr. Mahaffey, Code 682C, BUSHIPS, and Mr. Rosati, Code 108, Mare Island, of 23 Mar 1965
(b) MARE msg 270001Z dtd 26 Mar 1965

1. As discussed in reference (a), a Gamma Sensing Element, Model A716A, was shipped to Mare Island Naval Shipyard and to Portsmouth Naval Shipyard under project numbers N221-106(X) and N221-(102)-107 by the Victoreen Instrument Company, 5806 Hough Avenue, Cleveland, Ohio. These elements are to be used on barges YFN 1224, now under construction at this Shipyard, and YFN 1225 at Portsmouth. It was not known that these elements contained a sealed source until a follow-up letter was received from the Victoreen Company which disclosed that the elements each contain 3 microcuries of Strontium^{90} as an internal calibration check source. Possession and use of this source requires an appropriate AEC byproduct material license.

2. The Victoreen Company has requested that we send them copies of the license authorizing possession and use in order to comply with existing regulations. We do not now have an appropriate AEC byproduct material license providing this authorization and possibly neither does Portsmouth Naval Shipyard.

3. In view of the imminent need, as well as the implications of future relocation of the barge to other commands, we proposed that these sources be included under a BUSHIPS-held AEC license as the most expeditious arrangement. After considering our proposal, the opinion was expressed during reference (a) that it would be more appropriate to include these sources under a Mare Island-held AEC license instead. Accordingly, a request was made by reference (b) to forward the application for amending Mare Island AEC Byproduct Material License No. 4-364-5 to authorize possession and use of these sources.

682c
B

Edward J. Fahy

EDWARD J. FAHY

(*) Called Rosati this P.M. & informed him of sending Orig. of Amend. #7, to Lic. #4-364-5 (J66) to Mare Island on 5 April 1965

MARE ISLAND NAVAL SHIPYARD
VALLEJO, CALIFORNIA

IN REPLY REFER TO
10330
(108)
APR 5 1965

From: Commander, Mare Island Naval Shipyard
To: Chief, Bureau of Ships (Code 682C)

Subj: Gamma Sensing Element; AEC Byproduct Material License for

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EDWARD J. FAHY

DEPARTMENT OF THE NAVY
BUREAU OF SHIPS
WASHINGTON, D. C. 20360

IN REPLY REFER TO

10330/1
Ser 602C-367

Downgraded to UNCLASSIFIED [redacted]

5 - APR 1965

Address All Replies to Chief, Bureau of Ships

TO: Commander, MARE Island Naval Shipyard, Vallejo, California

VIA:

THE MATERIAL ITEMIZED BELOW, OR ON ATTACHED LIST, IS FORWARDED AS INDICATED:

	Forwarded per your request
XX	*For information and retention*
	On loan and to be returned to the Bureau of Ships
	Return of loaned material
XX	*For use in connection with* Check Source in sensing element of Victoreen Model A-716-A
	Partial fulfillment of order - Balance will be forwarded when available
	SECRET AND TOP SECRET - THE ATTACHED RECEIPT, OPNAV 5511-10 MUST BE SIGNED AND RETURNED TO THE BUREAU OF SHIPS IMMEDIATELY.

Encl:
(1) Original of Amend. No. 7
to AEC License No. 4-364-5(J66)
and extra copies of Form AEC-313

R. D. CLUBB
[redacted]

Copy to:
BUMED (Code 74)
AEC, WASHDC

MAHAFFEY/mitchell
6;457 - 4/5/65

NAVSHIPS 4669 (REV. 11-63)

C-23156

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

6 82C
BS

MAR 31 1965

Rec'd. 4-5-65

Commander, Mare Island Naval Shipyard
Vallejo, California

Attn: Edward J. Fahy

Dear Sir:

Reference is made to your letter 10330 (108) of March 5, 1965, which was forwarded to this division by the Bureau of Ships on March 22, 1965.

This letter is your authorization to obtain 80 grams of plutonium pursuant to Section 91b of the Atomic Energy Act of 1954 from the Monsanto Research Corp., Dayton, Ohio, which holds this material under AEC License No. SNM-567. The plutonium will be in the form of one plutonium-beryllium source.

The source is to be shipped to the Test, Evaluation and Repair Facility for Neutron Detectors, Radiac Repair Facility, Electronics Shop, Mare Island Naval Shipyard.

The Albuquerque Operations Office is designated as liaison office to handle this transfer. All pertinent correspondence should be addressed to U. S. Atomic Energy Commission, Albuquerque Operations Office, P. O. Box 5400, Albuquerque, New Mexico 87115, Attn: N. H. MacKay.

Sincerely yours,

Original signed by
Douglas E. George

Douglas E. George, Director
Division of Nuclear Materials Management

cc: Monsanto Research Corp., Dayton, Ohio
Dept. of Navy, Chief, Bureau of Ships, Code 682C
USAEC, AL, Attn: N. H. MacKay w/cy AEC 256
USAEC, OR, Attn: H. J. McAlduff, Jr.
USAEC, AGMR, HQ, Attn: C. S. Speed
Douglas E. George
T. J. Haycock

30 March 1965

Met With T/O Representatives —

Mr. Blackstor discussed a non-switch type of exposure head for radiographic cameras which is a std item made by Tech. Op. at a unit cost of $10.00 ea. West Coast organization (Suckler Co) has fwd. a listing of items which Mare Island bought during 1964 as replacement parts. Only 1 Source Switch Item (Cat. # C-40220) was included. Suckler Co. had three 1963 (not renewed) a Service Type Contract in which they maintained all T/O Type Cameras & Projectors at Mare Island. Their contract called for 24 hr. service 7 days/week at a cost of $25/month/unit plus cost of any replacement items. Contract dis-continued since the shipyard decided to do own maintenance. This non-switch ("source-stop assembly") eliminates the switch & position lights but does not impair radiation safety. (Note: Ltr. from Shipyd Mare states radiographers & assistants have been instructed in past not to depend upon the position indicator lites in the source projectors but rather to determine proper positioning of the source by use of radiation survey instrumentation.)

10330/1
Ser 682C-358

29 MAR 1965

From: Chief, Bureau of Ships
To: Commander
MARE Island Naval Shipyard
Vallejo, California 94592

Subj: Wipe Test Tool For Radiographic Sealed Source

Ref: (a) NAVSHIPYD MARE letter, FRCD-31, of 29 October 1964

1. Reference (a) wished to be advised as to the amount of use subject device has found in naval installations.

2. A review has been made of the leak test procedures for radiographic sealed sources used by all naval activities presently engaged in radiography programs. Approximately thirty-five per cent of these installations (i.e., tenders, submarine bases and shipyards) use the device in wipe testing sealed sources in their radiographic projectors or cameras.

M. G. WILLIAMS
By Direction

Copy to:
Code 267

MAHAFFEY/mitchell
61457 - 3/29/65

(1)

25 February 1965

Telcon With Rosati & Pollack at Mare Island
(21-831-1566 - Ext. 8595

1. Informed Shipyd Mare of receiving copy of despatch from Mare Island Shipyard to AEC for Amending AEC License to permit xportation & use of 25C Iridium-192 source for emergency radiographic operations aboard ships at San Diego (Constellation).

2. Pollack & Rosati worried about what they should say in answering their ltr (re Mr. Price's 15 Feb 1965 ltr.) Suggested an answer be given to include the (3) items asked about; - cover these areas as currently being handled

3. Worried about conditions 15 & 16 of the license:
a) Condition 15 - my interpretation is changed or modified cameras can not be used until an evaluation is made by the AEC; - must know which device to be modified; modification which

25 February 1965

Condition 16: Indicate what surveillance is being adhered to to meet the criteria of #31.301 "SECURITY".

4. Suggest Shipyard answer AEC ltr - answer questions as best you can. Believe that further questions may be asked if AEC requires them.

CUA-64 — Collmer — C

(651)

25 February 1965

Telcon From AEC (N. Bassin) —

AEC rec'd phone call from SHIPYD HARE (G.J. Rosati), at 4:45 P.M. on 2/24/65.

1) Need to have telephonic approval to take sealed sources & eqpt. to San Diego to do Radiography on Constallation. Rosati indicated an urgent need to do the work.

2) AEC authorized permission to move & use the sources & eqpt. necessary to do the work under the SHIPYARD's License #4-364-6, Amendment #10 provided the Shipyard sent a T.WX to AEC immediately with copy to 682C.

Discussed with B.A. Collmer, Code 522, concerning the above. A classified dispatch has been funded to Mare Island & San Diego Shipyard concerning need for qualified people at the moment on film reading & radiography for the Constallation. Also thought Adm. Fulton has discussed urgency of this during telcon to Shipyards yesterday.

(over)

10:00 AM:-

AEC received the TWX from Mare Island at 9:30 A.M.

10330
(108)

JAN 27 1965

From: Commander, Mare Island Naval Shipyard
To: Chief, Bureau of Ships (Code 682C)

Subj: Source switch; transmittal of photos pertaining to

Ref: (a) Telephone conversation between Mr. Mahaffey, Code 682C, Mr. Keaton, Code 634, and Mr. Tilton, Code 776, of BUSHIPS and Mr. Rosati, Code 108, Mare Island, 21 Jan 65

Encls: (1) Photograph of Gamma Ray Positioning Tip
(2) Plan of Gamma Ray Positioning Tip

1. Enclosures (1) and (2) are forwarded as requested in the reference.

2. If approved by the AEC, it is proposed to use the non-switch type exposure head shown in enclosure (1) instead of Source Switch, T/O Catalog #C-40220, for industrial radiography at Mare Island to avoid problems discussed in the reference.

3. A beneficial suggestion covering the Gamma Ray Positioning Tip is being processed under Mare Island No. Prod-257 in the names of J. E. Hein and L. E. Broyles.

W. B. PARHAM, Captain, USN
Administrative Officer

This mtl. flies Shipyard's comments re - to probs. with T/O unit discussed with Mr. Blackton & Mr. Tilton (776) on or about 24 Feb. 1965.

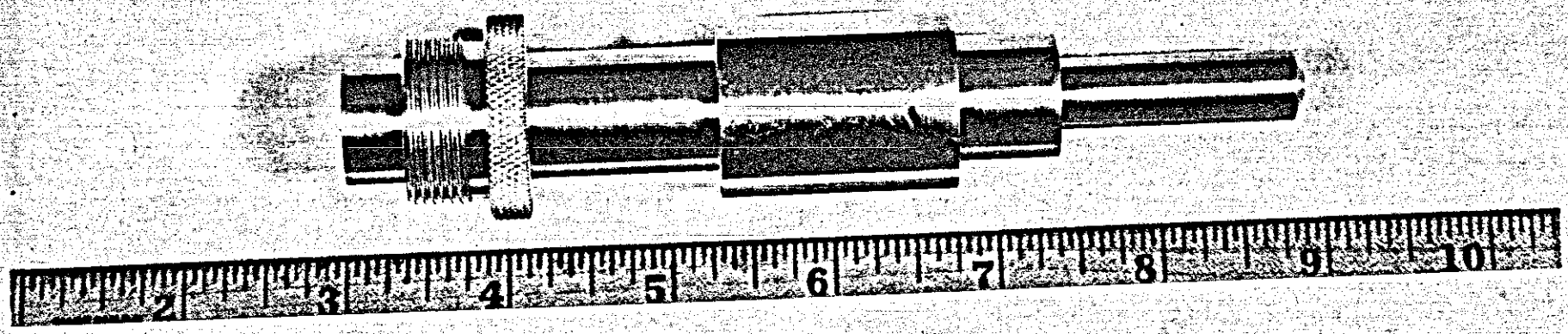
Recent discussion with Mr. Tilton indicates recent discussion by phone with T/O - well have data collected recently during mtl visit to Bureau

Left original + copies of this mtl. with Mr. Tilton (776) on 2/26/65

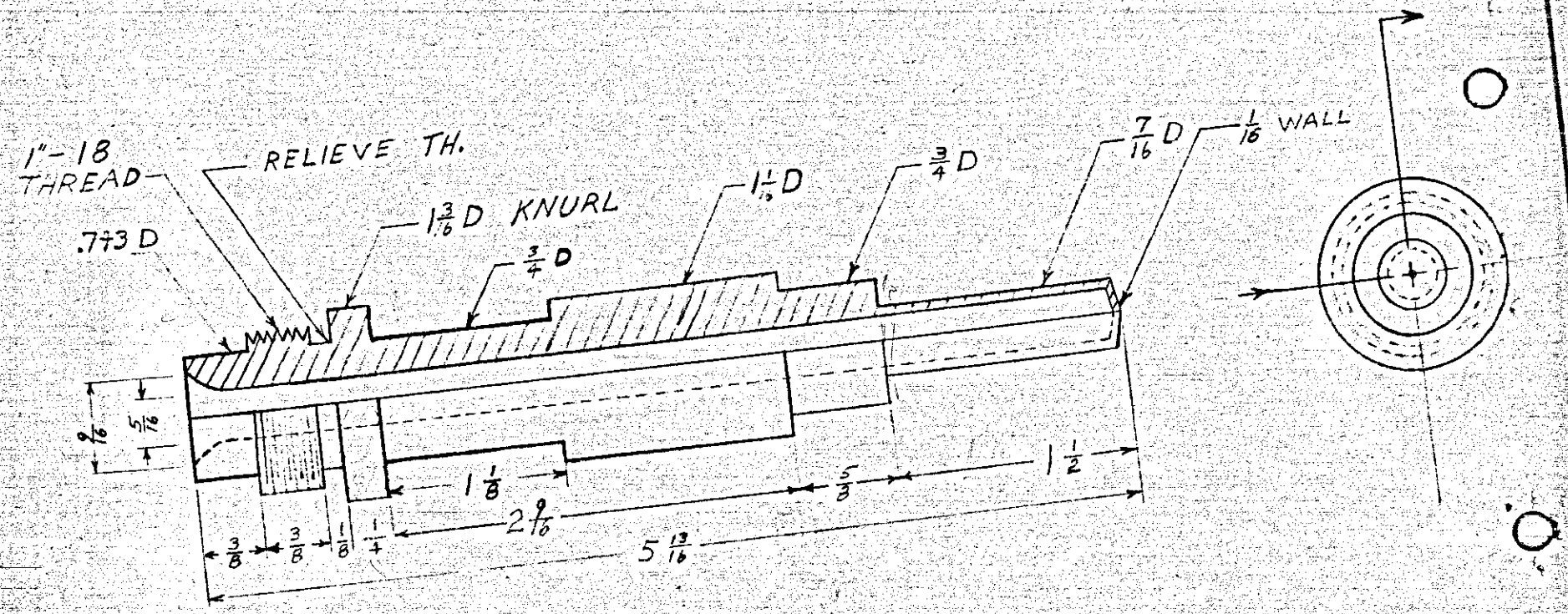
Informed Code 26> that mtl. had been rtd. to Code 776

OFFICIAL PHOTOGRAPH
NOT TO BE RELEASED
FOR PUBLICATION
PEARL HARBOR NAVAL SHIPYARD

Beneficial Suggestion Prod-257



ENCLOSURE (1)



GAMMA RAY
POSITIONING TIP

MATERIAL: ALUMINUM
DATE: 1 APR 1964

ENCLOSURE (2)

SCALE: 1" = 1"
DRAWN BY: J.E. HEIN

NNNNCDA3810CC219
RR RUECD
DE RUWSDM 01 26/2337Z
ZNR
R 270001Z
FM NSY MARE
TO RUECD/BUSHIPS
BT
U CLAS
BUSHIPS PASS TO CODE 682C MR MAHAFFEY
REQ FORWARDING THIS APPLICATON FOR AMENDMENT TO AEC BY [illegible] LIC
4-364-5 TO AUTH POSSESXION AND USE OF G AMMA SENSIN[illegible]
VICTOREEN MODEL A716A. ELEMENTS, EACH CONTAINING 3 [illegible]
STRONTIUM 90, TO BE INSTALLED IN NEW CONSTRUCTION. [illegible]
COMMITMENT, AUTHORIZATION REQ ASAP AND NLT 5 APRIL.
BT

3/29/65

Info typed to feed same to AEC -

Re-address message to: Chief, Isotopes Branch, Division of Materials Licensing, USAEC.

*# Approve request to amend SHIPYD MARE Lic. #4-364-5 to authorize possession & use of strontium-90 operational check source (containing 3 μc) in Victoreen Model A716A equipment.

Per discussion with Betty on 3/30/65 can add to so leave off #2*

Telcon, Shipyard Mare, Mr. Rosaiti (Ext-8595) 23 March 1965

Three attempts to use Autovon failed so used regular long distance

① Returned Mr. Rosaiti's phone call

Mr. Rosaiti stated — Shipyd purchased & rec'd Victoreen Model A-716A "γ" Sensing Element Inst. for Decontamination Barge (YFN-1224 or YFN-1225) which is under construction. No indication on outside that pkge contained radioactive mtl. When opened found unit did contain a sealed source for operational check purpose. Phone call to Victoreen (Mr. Hubbard) by Yard indicates an error had been made & an Inspection by AEC, several days after shipping egpt, revealed this non-compliance. AEC Regional Office, Berkeley, informed Yard not to use egpt. until Licensed. Informed Mr. Rosaiti I would phone AEC (Brown) & Victoreen to determine whether integrity of sealed source had been evaluated & what the acceptance (if any) has been by AEC.

② Made 2nd Phone Call to Shipyard Mare — having completed calls to Victoreen & AEC found source contained 3 μc of Sr^{90} Y^{90} & was an acceptable item by AEC. Since egpt. was purchased by Yard it would necessary for Yard to request an Amendment to one of their Licenses. AEC will amend a license to authorize possession & use upon receipt of the Shipyard's request. BUSHIPS Lic. 8-38-12 is for Radiac purchase by BUSHIPS & cannot be amended to cover egpt purchased by Yard

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

IN REPLY REFER TO:
SLR:RH
4-364-6

MAR 23 1965

682C

Rec'd: 3/26/65

Commanding Officer
Mare Island Naval Shipyard
Vallejo, California

Dear Sir:

While the control procedures described in your letter of March 3, 1965 may be the basis for an application for an exception to the provisions of 10 CFR 31.301, they do not fully comply with the requirements of that section of the regulation. Section 31.301 states:

> "§ 31.301 Security. During each radiographic operation the radiographer or radiographer's assistant shall maintain a direct surveillance of the operation to protect against unauthorized entry into a high radiation area, as defined in Part 20 of this chapter, except (a) where the high radiation area is equipped with a control device or an alarm system as described in § 20.203(c)(2), or (b) where the high radiation area is locked to protect against unauthorized or accidental entry."

The utilization of posted ropes and flashing lights at access points to high radiation areas does not meet the foregoing requirements unless the flashing light is actuated upon entry of an individual into the high radiation area as described in paragraph 20.203(c)(2) of 10 CFR 20.

Accordingly, we request that you inform us of the steps which will be taken by the Shipyard in achieving full compliance with the provisions of 10 CFR 31.301. If you believe the provisions of 10 CFR 31.301 to be impractical with respect to shipboard radiography, you may wish to submit an application for an appropriate amendment of License No. 4-364-6. The application should explain why the exception is required.

Very truly yours,

"Signed" Eber R. Price

Eber R. Price, Director
Division of State and
Licensee Relations

cc: Bureau of Ships
Attention: Code: 682-C

AIR MAIL

10330/1
Ser 682C-348

FIRST ENDORSEMENT ON NAVSHIPYD MARE LETTER 10330(108) OF 5 MARCH 1965

From: Chief, Bureau of Ships
To: Director
Division of Nuclear Materials Management
U. S. Atomic Energy Commission
Washington, D. C. 20545

22MAR1965

Subj: Plutonium-Beryllium Source - Request For Authorization To Obtain

1. Basic letter contains information relative to subject material and a request for authorization to obtain and transfer a plutonium-beryllium source to the Navy under Section 91b of the Atomic Energy Act.

2. The AN/UDM-3 Neutron Calibrator, which was developed by MARE Island Naval Shipyard, uses an 80 gram plutonium-beryllium source. Subsequent to that development seven AN/UDM-3 Neutron Calibrators have been constructed. These equipments are used at shore facilities. The associated sources have been issued to the Navy by the Atomic Energy Commission in accordance with the Atomic Energy Act of 1954, Section 91b

3. An additional AN/UDM-3 Neutron Calibrator is being constructed by the Shipyard. It is therefore requested that authority be issued for transfer of the 80 gram plutonium-beryllium source to the Navy under Section 91b of the Atomic Energy Act.

4. It is further requested that one copy of the authorization for transfer be forwarded to the Bureau of Ships, Code 682C, in addition to the copy for the Shipyard.

Copy to:
BUMED (Code 74)
CO, NAVSTA, WASHDC
NAVSHIPYD, MARE

R. D. CLUBB
By direction

MAHAFFEY/mitchell
61447 - 3/22/65
Serial650309-0123

MARE ISLAND NAVAL SHIPYARD
VALLEJO, CALIFORNIA

IN REPLY REFER TO
10330
(108)

MAR -5 1965

From: Commander, Mare Island Naval Shipyard
To: Headquarters, Atomic Energy Commission
Division of Nuclear Materials Management
Washington, D. C. 20545
(Mr. James Verme, Chief, Materials Budgeting Branch)
Via: Chief, Bureau of Ships (Code 682C)

Subj: Plutonium-Beryllium Source; request for authorization to purchase

Ref: (a) BUSHIPS Project Order 5-0004, Amendment No. 2, of 19 Oct 1964

1. Reference (a) authorized and funded the fabrication of one Neutron Calibration Range, AN/UDM-3, which requires a 5-curie Plutonium-Beryllium neutron source.

2. It is requested that authorization be granted under Section 91B of the Atomic Energy Act of 1954, to transfer the material described below to the Test, Evaluation and Repair Facility for Neutron Detectors, Radiac Repair Facility, Electronics Shop, Mare Island Naval Shipyard.

a. One Plutonium-Beryllium source with the following characteristics:

(1) Contains 80 grams of Plutonium 239

(2) Emission rate - 6.9×10^6 n/sec

b. The firm which may supply the above source is Monsanto Research Corporation, Dayton Laboratory, 1515 Nicholas Road, Dayton, Ohio, under AEC License No. SNM-567.

3. The container to be used for this source is in accordance with BUSHIPS drawing RM6-H-2709, Revision C. It is certified that the total intensity from beta, gamma and fast or thermal neutrons shall be 10 mrem/hour or less at the surface of the container.

4. The source will be used in accordance with all applicable provisions of 10 CFR Part 20.

5. Upon receipt, the subject source will be installed in the range and calibrated in Building 866 of this Shipyard. When completed, this calibrator and source will be shipped on a permanent transfer to Industrial Manager, Naval District Washington, at the Naval Weapons Plant, Washington, D. C.

EDWARD J. FAHY

Copy to:
BUMED (Code 74)
Naval Weapons Plant
Washington, D.C.

10330/1
Ser 602C-347

FIRST ENDORSEMENT ON NAVSHIPYD MARE LETTER 10330(108-26443) OF 27 NOVEMBER 1964

22 MAR 1965

From: Chief, Bureau of Ships
To: Director, Bureau of Safety and Service
Interstate Commerce Commission
Washington, D. C. 20545

Subj: Measuring Surface Radiation Levels Of Outside Shipping Containers

1. Basic letter states different readings can be obtained when making subject measurements, depending upon the type detector used. The different readings have been the cause for disagreement among shippers of radioactive materials. Of primary interest is whether the limits specified in the Code of Federal Regulations, Title 49, Part 73, Section 73.393 were exceeded or not, as well as having the proper label attached to the outside shipping container.

2. Standardized types of radiometers having different type detectors are used in monitoring exterior surfaces of the storage containers. The instrument detector geometry must be considered and it will be necessary to normalize readings where different type radiometers are used.

3. To facilitate the monitoring of subject containers it is recommended that survey meters capable of measuring 10 and 200mr/hr shall be used.

Copy to:
BUMED (Code 74)
NAVSHIPYD, MARE

D. CLUBB
ection

MAHAFFEY/mitchell
61457 - 3/19/65
Serial 641203-0077

MARE ISLAND NAVAL SHIPYARD
VALLEJO, CALIFORNIA

IN REPLY REFER TO
10330
(108-26443)
NOV 27 1964

From: Commander, Mare Island Naval Shipyard
To: Director, Bureau of Safety and Service
Interstate Commerce Commission
Washington, D. C. 20545
Via: Bureau of Ships (Code 682)

Subj: Measuring surface radiation levels of outside shipping containers

Ref: (a) Code of Federal Regulations, Title 49, Part 73, Section 73.393

1. Reference (a) limits acceptable gamma radiation to 200 mr/hr, or equivalent, at any point of readily accessible surface. The measuring instrument is specified as a Landsverk Electrometer, Model L75, or equally efficient, standardized meter.

2. The geometry of the various types of instrument detectors will limit the closeness of their approach to the surface to be monitored. Consequently, significantly different readings can be obtained for any given surface radiation level, depending on the type of detector used. These variables have been responsible for much disagreement among shippers of radioactive materials as to whether the limits specified in reference (a) were exceeded or not, as well as the propriety of the label affixed on the outside shipping containers. A further complicating circumstance is that the model electrometer specified has not been marketed for the past several years.

3. In order to avoid misunderstandings in complying with reference (a), it is requested that a list of currently acceptable and obtainable measuring instruments and detectors be provided and, if appropriate, published. If this is not feasible, it is requested that the limit given in reference (a) be redefined in terms which can be equated to the reading obtained with the shipper's or receiver's particular instrument.

EDWARD J. FAHY

Copy to:
BUSANDA (Storage Division)

18 March 1965

Discussed with Dr. Smith the practical approach to measure radiation surface leakage on sealed sources. Statement in ICC Reg. Title 49, #73.393 (b) - measurement must be made with Landsverk Electrometer L-75 is equally efficient standardized meter.

(d) smallest dimension of any outside shipping container for radioactive mtk. must not be less than 4".

(e) all outside shipping containers must be of such design that the "γ" radiation will not exceed 200 mr/hr. or equivalent @ any pt. of readily accessible surface.

Must use judgment in making measurements. Victreen "R" meter, if have one, is better than L-75 (which probably don't make any more).

10 mr/hr. @ 1 meter is good. Again - practically - source may not be in center or maybe unevenly centered; source may not be shielded with homogenous shielding mtl; impossible to measure on surface*; Better stated at two distances than one; With TV (kinescope) make measurement @ 5 cm. & with x-ray tube - leakage radiation is measured @ 5 cm. Practically get as close to surface & make allowances for some variations (* not possible right at surface of package without an extrapolation chamber. Good to have criteria: 200 mr/hr @ surface & 10 mr/hr. @ 1 meter - can visualize having small cobalt-60 sealed source which could meet 10 mr/hr @ 1 meter but a real hazard (higher than 200 mr/hr @ surface) at surface (i.e many r/hr). Best to have gen'l. & not specific instrument and/or instruments (Get into proprietary - which don't want).

10330/1
Ser 682C-345

FIRST ENDORSEMENT ON NAVSHIPYD MARE LETTER 10330(108-25444) of 27 NOVEMBER 1964

22 MAR 1965

From: Chief, Bureau of Ships
To: Chief, Isotopes Branch
Division of Materials Licensing
U. S. Atomic Energy Commission
Washington, D. C. 20545

Subj: Measuring Surface Radiation Levels Of Storage Containers

1. Basic letter states differences in surface radiation levels have been noted among licensees transferring sealed sources for radiographic devices in storage containers.

2. Radiometers used in monitoring exterior surfaces of the storage container may have different type detectors and the instrument detector geometry must be considered. Therefore, it will be necessary to normalize readings made by the supplier of the byproduct material with readings made by the Shipyard. Differences in readings should be resolved by the contractor furnishing the sealed sources and the Shipyard.

3. It is recommended that unresolved readings which do not comply with the Code of Federal Regulations, Title 10, Part 31, Section 31.101 shall be referred to the Atomic Energy Commission's Regional Compliance Office in Berkeley, California.

R. D. CLUBB
By direction

Copy to:
BUSANDA(Storage Division)
BUMED (Code 74)
NAVSHIPYD, MARE

MAHAFFEY/mitchell
61357 - 3/19/65
Serial 641203-0078

1st. End On Shipyd Mare ltr 10330 (108-26443)
of 27 Nov. 1964 to ICC via Buships.

1. Basic ltr. states different readings can be obtained when making subject measurements, depending upon the type detector used. The different readings have been the cause for disagreement among shippers of radioactive mtls. Of pri-interest is whether the limits specified in CRF, Title 49, Part 73, Sec. 73.393 were exceeded or not, as well as having the proper label attached to the outside shipping container.
2. Standardized types of radiaimeters having different type detectors are used in monitoring exterior surfaces of storage containers. The inst. detector geometry must be considered & it will be necessary to normalize readings where different type radiaimeters are used.
3. To facilitate the monitoring of subject containers it is recommended that survey meters capable of measuring 10 and 200 mr/hr shall be used.

BUMED

WAUSHPYD MARK

1st. End. On SHIPYD MARE ltr. of 27 Nov. 1964.

1. Basic ltr states differences in surface radiation levels have been noted among licensees X ferring sealed sources for radiographic devices in storage containers.

2. Radiometers used in monitoring exterior surface of the storage container may have different type detector & the instrument detector geometry must be considered. Therefore, it will necessary to normalize readings made by the supplier of the byproduct material with readings made by the Shipyard. Differences in readings should be resolved by the contractor furnishing the sealed sources & the Shipyd

3. It is recommended that unresolved readings, which do not comply with CFR, Title 10 Part 31, Sec. 31.101, shall be referred to the AEC's Regional Compliance Office in Berkeley, California.

POUSANDA (Strong
BUMED
Shipyd min

MARE ISLAND NAVAL SHIPYARD
VALLEJO, CALIFORNIA

IN REPLY REFER TO
10330
(103-26444)
NOV 27 1964

From: Commander, Mare Island Naval Shipyard
To: Director of Regulation
U. S. Atomic Energy Commission
Washington, D. C. 20545
Via: Chief, Bureau of Ships (Code 682)

Subj: Measuring surface radiation levels of storage containers

Ref: (a) Code of Federal Regulations, Title 10 Part 31, Section 31.101

1. Reference (a) limits acceptable radiation to 200 mr/hr at any exterior surface of all storage containers for sealed sources or for radiographic exposure devices. Neither the acceptable types nor the characteristics of the measuring instrument, however, are specified.

2. The geometry of the various types of instrument detectors will limit the closeness of their approach to the surface to be monitored. Consequently, significantly different readings can be obtained for any given surface radiation level, depending upon the type of detector used. The existing ambiguity has resulted in disagreement among licensees transferring sealed sources.

3. In order to avoid misunderstandings and confusion in complying with reference (a), it is requested that a list of acceptable measuring instruments and detectors be provided and, if appropriate, published. If this is not feasible, it is requested that the limit in reference (a) be redefined in terms which can be equated to the reading obtained with the user's particular instrument.

EDWARD I. FAHY

Copy to:
BUSANDA (Storage Division)

MARE ISLAND NAVAL SHIPYARD
VALLEJO, CALIFORNIA

IN REPLY REFER TO
10330
(108)

682C

MAR -3 1965

Rec'd 3-9-65

682C copy from Shipyd.

Director, Division of State and Licensee Relations
U. S. Atomic Energy Commission
Washington, D. C. 20545

Dear Sir:

Your notice dated 15 February 1965 concerned the investigation of a possible technical overexposure to radiation which occurred on 14 December 1964 during the use of a source under AEC Byproduct Material License No. 4-364-6.

Pursuant to Section 2.201, Part 2, Title 10, Code of Federal Regulations, the following is submitted in answer to your notice:

1. It is considered that radiographic personnel were maintaining adequate surveillance in accordance with license conditions, including 10 CFR 31.301 and operating procedures, prior to and during the incident referred to above.

a. This incident resulted from a combination of unusual and unforeseeable circumstances, viz., interior lights went out during an exposure without the knowledge of the radiographers; the intercom system was out of service for repair and a general announcement was not made by Ship's Force; there was no automatic emergency lighting, and the individual concerned did not attempt to find out the purpose of the barricade or the sign that he could not read or identify.

b. Conspicuous barricades with conventional radiation warning signs were established for this temporary Radiation Area. After searching the restricted area to assure that no personnel were present, the two radiographers remained on the weather deck to observe and guard the deck and gangway barricades toward preventing inadvertent entry into the posted area. This was done because the probability of inadvertent entry through these barriers was greater than for others.

2. It is not, in fact, known that as a result of this incident the individual <u>actually</u> received a radiation dose as described in your notice.

a. Paragraph 2c, "Extent of Exposure" in enclosure (1) to our report dated 11 January 1965 states, ". . . it is estimated that his exposure did not exceed 0.2 rem to the eyes, 5 rem to the whole body, but probably not over 2.5 rem, and 350 rem to the fingertips of the left hand, but probably as low as 175 rem."

b. The higher dosages indicated in the report and quoted in your notice are the maximum credible dosages that could have been received; however, it is fully as probable that the individual received zero or nearly zero dosage. In reconstructing the incident and estimating the time relationship between the positions of the source and the individual, an error of ± 30 seconds from that used could well result in an estimated dosage at either of these extremes.

c. The potentially exposed individual has never exhibited any sign or symptom of ill effect, including erythema to the skin of the left hand.

In replying to the specific considerations stated in your notice, the following corrective steps, in addition to existing requirements, were taken to guard against a similar incident:

1. Before any radiography is performed aboard commissioned ships or ships in service, the Radiographer will contact the Deck Watch and inform him of:

a. The area to be radiographed;

b. Length of time the area will be restricted to all personnel; and

c. Location of the isodose line.

The Radiographer will then request the Deck Watch to notify all Shipboard personnel (by Ship's intercom) that radiography is to be performed at a designated area and all personnel shall observe the posted radiation signs and remain clear of such areas until given the all-clear. If the Ship's intercom is inoperative, the Radiographer shall not proceed with the exposure until the Deck Watch has verbally notified cognizant personnel aboard Ship, and until all access areas are roped off and posted with appropriate signs and flashing lights.

2. On commissioned ships or ships in service, all access areas to the Radiation Area (i.e., passageways, compartment doors, etc.) shall be roped off at the 2 mr/hr isodose line and appropriate signs posted. In addition, a battery-operated flashing red light is to be placed, if possible at the same level as the radiation sign and within 3 feet, at any interior access areas that cannot be continuously observed by the Radiographer or Assistant Radiographer.

There have been no subsequent incidents and we consider that these measures will adequately protect against a recurrence of such an incident. No further corrective measures are therefore deemed necessary.

It is considered that our operations are in full compliance with 10 CFR Parts 20 and 31.

Sincerely,

EDWARD J. FAHY
Rear Admiral, USN
Shipyard Commander

Copy to:
✓BUSHIPS (Code 682C)
Region V, Division of Compliance
2111 Bancroft Way, Berkeley, Calif
BUMED

9 March 1965

Telcon From Bacain –

1. Nothing – corrective action
Putting up ropes, issuing warning letter, etc.
will not keep people out.
Note condition in your license.

DEPARTMENT OF THE NAVY
BUREAU OF SHIPS
WASHINGTON, D. C. 20360

IN REPLY REFER TO

10330/1
Ser 682C-331

Downgraded to XXXXXXXXXX UNCLASSIFIED when enclosure(s) is/are detached XXXXXXXXXXXXXXXXXXXXXXXXXX

11 MAR 1965

Address All Replies to Chief, Bureau of Ships

TO:
~~Commander, MARE ISLAND NAVAL SHIPYARD, Vallejo, California~~

VIA:
~~XXXX~~

THE MATERIAL ITEMIZED BELOW, OR ON ATTACHED LIST, IS FORWARDED AS INDICATED:

	Forwarded per your request
XX	*For information and retention*
	On loan and to be returned to the Bureau of Ships
	Return of loaned material
XX	*For use in connection with* Transport and using Ir-192 sealed source and equipment to ~~perform radiography aboard ship at San Diego per wire of 24~~ Feb. 1965
	Partial fulfillment of order - Balance will be forwarded wh
	SECRET AND TOP SECRET - THE ATTACHED RECEIPT, OPNAV 5511-10 MUST BE SIGNED AND RETURNED TO THE BUREAU OF SHIPS IMMEDIATELY.

Encl:
(1) Original of Amendment No. 11 to AEC License No. 4-364-6(E67)

G. WILLIAMS
Director

Copy to:
BUMED (Code 74)
AEC, WASHDC

MCHAFFEY/mitchell
61457 - 3/11/65

C-23156

NAVSHIPS 4669 (REV. 11-63)

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

IN REPLY REFER TO:
SLR:RH
4-364-6

FEB 15 1965

Commanding Officer
Mare Island Naval Shipyard
Vallejo, California

Dear Sir:

This refers to the investigation conducted on December 17, 1964, of your activities authorized under AEC Byproduct Material License No. 4-364-6 with respect to the personnel radiation exposure which occurred on December 14, 1964.

As a result of this investigation, it appears that certain of your activities were not conducted in full compliance with the requirements of the AEC's "Standards for Protection Against Radiation," Part 20, and "Radiation Safety Requirements for Radiographic Operations," Part 31, Title 10, Code of Federal Regulations, in that:

1. Radiographic personnel did not maintain an adequate surveillance of the radiographic operation on December 14, 1964, to protect against unauthorized entry into the area, contrary to 10 CFR 31.301, "Security."

2. An individual received a radiation dose of about 5 rems to his whole body and 350 rems to his left hand on December 14, 1964 when he entered the area where a radiographic exposure was being conducted, contrary to 10 CFR 20.101.

This notice is sent to you pursuant to the provisions of Section 2.201 of the AEC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations. Section 2.201 requires you to submit to this office, within twenty (20) days of your receipt of this notice, a

FEB 15 1965

written statement or explanation in reply including (1) corrective steps which have been taken by you, and the results achieved; (2) corrective steps which will be taken; and (3) the date when full compliance will be achieved.

Very truly yours,

"Signed" Eber R. Price

Eber R. Price, Director
Division of State and
Licensee Relations

cc: Department of the Navy
Chief, Bureau of Ships
Washington, D. C. 20360
Attention: Mr. George N. Mahaffey
Code: 682-C

5 February 1965

Telcon With Mare Island Shipyard —

Mr. Rosaiti returned my call.

Informed Rosaiti that Mare Island's license was in process of being renewed. Conditions of license would specify: a) Direct surveillance at all times when using radiography equipment; b) Modified eqpt. will not be permitted unless modifications are approved by AEC.

Mr. Rosaiti felt these requirements would work hardships on the Shipyard's Program.

10030/1
Ser 62xc-168

FIRST ENDORSEMENT ON NAVSHIPYD MARE LETTER 10330(108) OF 21 JANUARY 1965

2-FEB 1965

From: Chief, Bureau of Ships
To: Chief, Isotopes Branch
Division of Materials Licensing
U. S. Atomic Energy Commission
Washington, D. C. 20545

Subj: AEC Byproduct Material License No. 4-364-6; Revised Application For Renewal

Ref: (a) BUSHIPS letter (FIRST END) Ser 62xc-922 of 10 November 1964 on NAVSHIPYD MARE letter of 2 November 1964
(b) NAVSHIPYD MARE letter, Covering Supplemental Information dated 10 December 1964

1. Basic letter contains information to revise the application for renewal of subject license submitted by reference (a).

2. The material has been reviewed and specific changes reference sections and paragraphs in Attachment (A) to the completed Form AEC-313M - Administrative, Operating, and Emergency Procedures For Radiographic Personnel - forwarded by reference (a). Information in addition to that supplied by reference (b) will be supplied by the Shipyard. This material should include drawings and pictures of a modified exposure head and circumstances under which malfunctioning has occurred when using the "switch-type" exposure head.

Copy to:
BUSHIP(Code 74)(w/Basic Mat'l)

R. D. CLUBB
/ direction

NAVSHIPYD, MARE

MAHAFFEY/mitchell
61457 - 2/2/65

MARE ISLAND NAVAL SHIPYARD
VALLEJO, CALIFORNIA 94592

IN REPLY REFER TO
10330
(108)

JAN 21 1965

From: Commander, Mare Island Naval Shipyard
To: Director, Division of Materials Licensing
U. S. Atomic Energy Commission
Washington, D. C. 20545
Via: Chief, Bureau of Ships (Code 682) 1st End. - Ser 682C 168 of 2 Feb 65

Forwded to AEC by

Subj: AEC Byproduct Material License No. 4-364-6; revised application for renewal of

Ref: (a) Telephone communication between Mr. McCracken and Mr. Williams, Code 682C, BUSHIPS, and Mr. Rosati, Code 108, Mare Island, of 13 Jan 65
(b) Application for renewal of AEC Byproduct Material License No. 4-364-6, Ser. 10330 (108-26441), dtd 2 Nov 64
(c) Supplementary information related to application for renewal of AEC Byproduct Material License No. 4-364-6, Ser. 10330 (108-26445), dtd 10 Dec 64

1. In accordance with the request made in reference (a), the application submitted by reference (b) is herein resubmitted with the following revisions:

a. Paragraph 2 is deleted in its entirety and substituted therefor is the following:

"2. The only significant change from the current license which is contained in the Operating and Emergency Procedures (Attachment A to Enclosure (1)) involves the use of a non-switch type of exposure head. Radiographers and their assistants have been instructed in the past not to depend upon the position indicator lights in the source projectors but rather to determine proper positioning of the source by use of radiation survey instrumentation. This has been necessary because these switches have proven unreliable and most often inoperative. Further, failure of the switch has frequently prevented sources from being readily retracted to their shielded position. The cost of replacing present source switches on our equipment has been over $1000 per year. Use of the proposed exposure head, which eliminates the switch and position lights, is estimated to require renewal at a rate of not more than two per year at a cost of $20 each. The overall saving to be realized is approximately $1000 a year in addition to increased operational safety.

b. Attachment A to Enclosure (1) is changed as follows:

(1) Paragraph 6.3.5 on page 19 is deleted and substituted therefor is the following:

"6.3.5. AN/PDR 18 and AN/PDR 27 instruments, or their equivalent, will always accompany a radiation source when in use or being transported on the Shipyard."

(2) Paragraph 6.3.6 on page 19 is deleted in its entirety.

(3) Under paragraph 9.1.1 on page 33 add the following subparagraphs:

"9.1.1.1. Before any radiography is performed aboard commissioned ships or ships in service, the radiographer will contact the Deck Watch and inform him of the following:

a. The area that is to be radiographed.

b. Length of time the area will be restricted to all personnel.

c. Location of the isodose line.

The radiographer will then request the Deck Watch to notify all Shipboard personnel (by Ship's intercom) that radiography is to be performed at a designated area and all personnel shall observe the posted radiation signs and remain clear of such areas until given the all-clear. If the Ship's intercom is inoperative, the radiographer shall not proceed with the exposure until the Deck Watch has verbally notified cognizant personnel aboard Ship, and after all access areas are roped off with appropriate signs and flashing lights.

9.1.1.2. On commissioned ships or ships in service, all access areas to the Radiation Area (i.e., passageways, compartment doors, etc.) shall be roped off at the 2 mr/hr isodose line and appropriate signs posted. In addition, a battery-operated flashing red light should be placed, if possible at the same level as the radiation sign and within a yard, at any interior access areas that cannot be observed or controlled by the radiographer or assistant radiographer."

2. In reference (c), delete paragraphs 1 to 3, inclusive.

EDWARD J. FAHY

21 January 1965

Telcon With Mr. Rosaiti - Mare Island (30 min)

1. Messers. D. Keaton* & S. Tilton** (634B* & 776A**) joined in conversation & discussed the problem of malfunctioning experienced with the use of the switch-type exposure heads for radiography devices.

2. All switch-type exposure heads have given trouble at the Shipyard. Basically the switch-type exposure heads are not rugged enough.

3. An improved "non-switch-type" exposure head has been developed at the shipyard. Not in use on any devices. Features include: more rugged construction; no moving parts; & cost reduction for maintenance.

4. Mr. Rosaiti will send pictures of the modified exposure head. Additional info - probably dwgs., & circumstances under which malfunctioning has happened in the past, & steps taken where emergencies have occurred will be funded to BUSHIPS.

10330/1
Ser 682C-147

From: Chief, Bureau of Ships
To: Commander
Mare Island Naval Shipyard
Vallejo, California 94592

22 JAN 1965

Subj: A.E.C. By-product Material License No. 4-364-6; Application For Renewal of

Ref: (a) NAVSHIPYD MARE ltr 10330-(108-26441) of 2 NOV 1964.
(b) NAVSHIPYD MARE ltr 103-(108-26445) of 10 DEC 1964.
(c) Telcon between Mr. Bassin, A.E.C. Division of Materials Licensing, and Mr. Mahaffey, Code 682C, BUSHIPS, on 8 JAN 1965.
(d) Telcon between Mr. Rosati, Code 108, NAVSHIPYD MARE, and Mr. McCracken, Code 682C, BUSHIPS, on 13 JAN 1965.
(e) Code of Federal Regulations, Title 10, Part 31, #31.104.

1. The application for renewal of subject license submitted by reference (a), and the additional information submitted by reference (b), were discussed during reference (c). Salient points of the Atomic Energy Commission's (AEC) review of the application were covered by reference (d).

2. During reference (c), Mr. Bassin stated that A.E.C. License #4-364-6 would not be renewed on the basis of references (a) and (b), and requested that the application be withdrawn. The A.E.C. will grant a ninety day extension to subject license to allow the Shipyard to resubmit an application which is in accordance with reference (e). The alternative is a rejection of the application for renewal, which would leave Mare Island Naval Shipyard without an A.E.C. By-product Material License to perform Radiography.

R. D. CLUBB
By direction

Copy to:
BUMED (Code 74)
A.E.C. Washington, D.C.

Record Note: A letter such as this was requested by MINS in ref (d), for the record.

G.N. MAHAFFEY, X61457; J. Sturdivant, 1/22/65

682C-

From: Chief, Bureau of Ships (Not used in this form)
To: Commander, Mare Island Naval Shipyard
Vallejo, California 94592

See 682C-147 of 1/22/65

Subj: Application For Renewal Of AEC Byproduct Material License No. 4-364-6; Information Concerning

(f) Forecon Mr. McCracken, Code 682C of BUSHIPS & Mr. Rizali, of Mare Island of 13 Jan 1965

Ref: (a) NAVSHIPYD MARE ltr 10330-(108-26441) of 2 Nov 1964
(b) NAVSHIPYD MARE ltr 10330-(108-26445) of 10 Dec. 1964
(c) Telcon With Mr. Bassin, from AEC on 8 January 1965
(d) Code of Federal Regulations, Title 10, Part 31, B.31.104

1. References (a) and (b) were discussed during a telephone conversation, reference (c), in which AEC has stated that the subject license will not be renewed by the application in its present form ~~[illegible]~~

Radiographers ~~carrying one type of radiation survey mater~~ ~~(AN/PDR-27) to temporary radiation area sites instead of the~~ must carry Survey Instruments to comply with Ref (d) ~~two types currently specified (AN/PDR 27 and AN/PDR-60) will~~

~~not be authorized~~. This ~~change~~ is not reflected in the Operating & Emergency Procedures in the application.

2. To permit continuance of the radiography program AEC will grant a ninety day extension to the License #4-364-6 pending withdrawal of references (a) and (b). This will permit the resubmission of an application for renewal of subject license which is in conformance with instrument requirements set forth in reference (d).

3. The problem discussed in reference (f) should be resolved by the supplier of the radioactive material & the shipyard. Differences which will

10330/1
Ser 632C-148

22 JAN 1965

FIRST ENDORSEMENT ON NAVSHIPYD MARE ltr 10330 (103) of 7 January 1965

From: Chief, Bureau of Ships
To: Chief, Isotopes Branch
Division of Materials Licensing
U.S. Atomic Energy Commission
Washington, D.C. 20545

Subj: Title 10 Code of Federal Regulations, Part 20.203(f); comment on proposed amendment to

1. Basic letter contains suggested material for inclusion in subject proposed amendment.

2. The Shipyard's comments have been reviewed and the Bureau of Ships concurs with the suggested wording. The information is comparable to that found in Military Specification MIL-M-19590C, Marking of Commodities and Containers to Indicate Radioactive Material.

Copy to:
CIR NAVSHIPYD, MARE
BUMED (Code 74)

R. D. CLUBB
By direction

Receipt of this acknowledged by
Dr. Western - AEC - ltr dtd 29 Jan. 1965

G.N. MAHAFFEY, X61457; J. Sturdivant, 1/22/65

10330
(108)

JAN -7 1965

From: Commander, Mare Island Naval Shipyard
To: Secretary
U. S. Atomic Energy Commission
Washington, D. C. 20545
Via: Chief, Bureau of Ships (Code 682)

Subj: Title 10 Code of Federal Regulations, Part 20.203(f); comment on proposed amendment to

Ref: (a) Volume 29 Federal Register, 14756, October 29, 1964

1. Reference (a) proposed amendments to Title 10 Code of Federal Regulations, Part 20, and invited comments from interested persons for consideration.

2. In many cases, radioactive material is transported, stored, or used within a series of containers. For example, a radioactive liquid may be shipped in a glass bottle inside a sealed can within a shipping crate. In some instances, there has been disagreement as to how many of the intermediate containers should be labeled. It is therefore suggested that the subject amendment include consideration of the case of multiple containment.

3. It is suggested that the following sentences be considered for inclusion in the proposed amendment:

a. The required label shall be placed on the radioactive material enclosure itself and on each surrounding container so that the presence of the radioactive material within can be readily recognized and located. In cases where it is impracticable to label the radioactive material enclosure itself because of small size, the label may be on a durable tag at least one (1) inch square, permanently attached to the enclosure, or an alternate means of labeling may be provided for by the license.

The wording in the above suggestion was taken largely from Military Specification MIL-M-19590C, "Marking of Commodities and Containers to Indicate Radioactive Material," but modified to correspond to the language of AEC regulations.

Forwded To AEC By BUSHIPS 1st End.
682C 148 of 22 Jan 1965.

EDWARD L. FAHY

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

682

JAN 28 1965

IN REPLY REFER TO:
SLR:RH
4-364-6

Your Ref: 10330
(108)

Commanding Officer
Mare Island Naval Shipyard
Vallejo, California

Dear Sir:

Thank you for your letter of January 11, 1965, with enclosures, reporting pursuant to 10 CFR 20.405 the exposure of an individual to radiation.

We will advise you if further information is required.

Very truly yours,

"Signed" Eber R. Price

Eber R. Price, Director
Division of State and
Licensee Relations

cc: Department of the Navy
Chief, Bureau of Ships
Washington, D. C. 20360
Attention: Mr. George N. Mahaffey
Code: 682-C

10330/1
Ser 685C-141

22 JAN 1965

FIRST ENDORSEMENT ON NAVSHIPYD, MARE ISLAND ltr 10330 (108) of 11 January 1965

From: Chief, Bureau of Ships
To: Chief, Isotopes Branch
Division of Materials Licensing
U.S. Atomic Energy Commission
Washington, D.C. 20545

Subj: Iridium 192, 81.5 Curie Sealed Service; Report of Incident Concerning

1. Basic letter with enclosure covers the notification and report of an incident which occurred while performing radiography with subject source authorized under AEC By-product Material License No. 4-364-6. Under the requirements of the Code of Federal Regulations, Title 10, Part 20, the Director, Division of Compliance, Region V, U.S. Atomic Energy Commission was notified of the incident by the Shipyard.

2. This report has been reviewed and corrective steps have been instituted by the Shipyard to guard against a similar incident.

Copy to:
BUMED, Code (74) (w/copy of basic material)
COM NAVSHIPYD MARE

R. D. CLUBB
By direction

Acknowledgement of this by AEC's ltr of 28 Jan. 1965 (re- SLR: RH 4-364-5) by Eber R. Price, Dir.

G.N. MAHAFFEY, X61457; J. Sturdivant, 1/22/65

MARE ISLAND NAVAL SHIPYARD
VALLEJO, CALIFORNIA

IN REPLY REFER TO
10330
(108)

From: Commander, Mare Island Naval Shipyard
To: Director, Division of Licensing and Regulation
U. S. Atomic Energy Commission
Washington, D. C. 20545
Via: Bureau of Ships (Code 682)

Subj: Exposure incident; notification of

Ref: (a) 10 CFR 20.405

Encl: (1) Report of Possible Technical Overexposure Incident

1. As required by paragraph (b) of reference (a), the subject report is forwarded herewith as enclosure (1).

2. In accordance with paragraph (c) of reference (a), the name of the individual who may have received a technical overexposure is James C. Greer.

Copy to:
Director, Division of Compliance, Region V
U. S. Atomic Energy Commission
211 Bancroft Way, Berkeley, California 94704

Commander J. C. Greer, USN
USS BREAM (SS-243)

Edward J Fahy

BuShips 1st End, Ser 682C-141 of 22 Jan 1965
forwded to AEC

REPORT OF POSSIBLE TECHNICAL OVEREXPOSURE INCIDENT

1. Summary

The incident took place at Mare Island Naval Shipyard, Vallejo, California, at about 1210 hours on 14 December 1964. Field industrial radiography was being accomplished aboard a submarine undergoing overhaul in drydock. The source was 81.5 curies of iridium-192, under AEC Byproduct Material License No. 4-364-6. One individual entered the posted and barricaded Radiation Area, passed near the source, briefly touched the shielded source exposure head, and exited. His exposure is conservatively estimated to have been 0.2 rem to the eyes, up to 350 rem to the skin on the fingertips of the left hand, and up to 5.0 rem to the whole body. No signs or symptoms of radiation exposure have been detected by the medical examiner. The Director, Division of Compliance, Region V, U. S. Atomic Energy Commission, was notified of the incident by telephone and telegraph within 24 hours.

2. Description of Incident

a. Cause of Exposure

The attached sketch shows the relationship among the various areas and pieces of equipment concerned. Letters in parentheses in this report refer to the letters in the sketch.

A series of radiographs was scheduled to be made during the lunch period, since nearly all other workers leave the drydocked submarine during this period. Two certified radiographers were assigned to this operation. On arriving at the ship, the radiographers notified the quarterdeck watch (K) of the location of the planned radiography, and requested him to temporarily relocate his station by about 10 feet in order to be outside the posted Radiation Area. The usual announcement of radiography was not made to personnel aboard the ship, since the ship's intercom system was inoperative.

The radiographers set up the exposure head (B) in the forward escape trunk (F), with the projector (D) on the deck, and the controls (E) near the barricade. Rope barricades with conventional radiation warning signs were placed completely across the weather deck (A') and across the gangway (J) at the far end (A). A masking tape barricade and conventional sign (A") was placed across the passageway (H) leading aft to the rest of the ship. The radiographers searched the restricted area to assure that no personnel were present, and started the planned 4-minute exposure of area (C) at about 1210. The two radiographers remained on the weather deck to observe and guard the deck and gangway barricades, since experience has shown that personnel returning to the ship from lunch require the greatest surveillance to prevent inadvertent entry into the posted area.

ENCLOSURE (1)

While the radiographers were on the weather deck, the ship's installed lighting in and near the restricted area below decks went out because it was being changed to another power source. The radiographers were not aware of this. The only interior lighting was a few extension lamps in the Forward Torpedo Room.

At about this time, an officer attached to the ship left the conning tower and proceeded forward through the ship on an inspection tour. In the now darkened passageway (H) he proceeded by touch. He felt the radiation warning sign, but could not read or identify it. He proceeded to go under the barricade and entered the Forward Torpedo Room (G). After a short time, estimated to be less than 5 minutes, he started to leave by the escape trunk (F). While ascending the first ladder, he noticed the exposure head (B), and paused a few moments to observe it, since he did not know what it was. He then climbed into the escape trunk, passing through the main beam, and stood there to examine the exposure head further. He touched it briefly with his left hand, and felt the beam port on the underside with his fingertips. During this time, he was probably in the main beam from about the knees down only. He was seen by the radiographers when he left the portable shelter (I) over the escape trunk hatch after about 1½ minutes of the radiographic exposure had elapsed. They warned him out of the Radiation Area, terminated the exposure, and notified supervision in accordance with the Operating & Emergency Procedures.

b. Level of Radioactive Material Involved

The source was iridium-192, Serial No. 6363, measured by Technical Operations, Inc., as 96 curies on 20 November 1964. The exposure head has 3/4 inch of lead shielding and a 60 degree beam port. Based on the half-life, the activity at the time of the incident was 81.5 curies, the main beam intensity was about 0.7 r/min at 1 meter, and the leakage radiation intensity was about 0.09 r/min at 1 meter.

c. Extent of Exposure

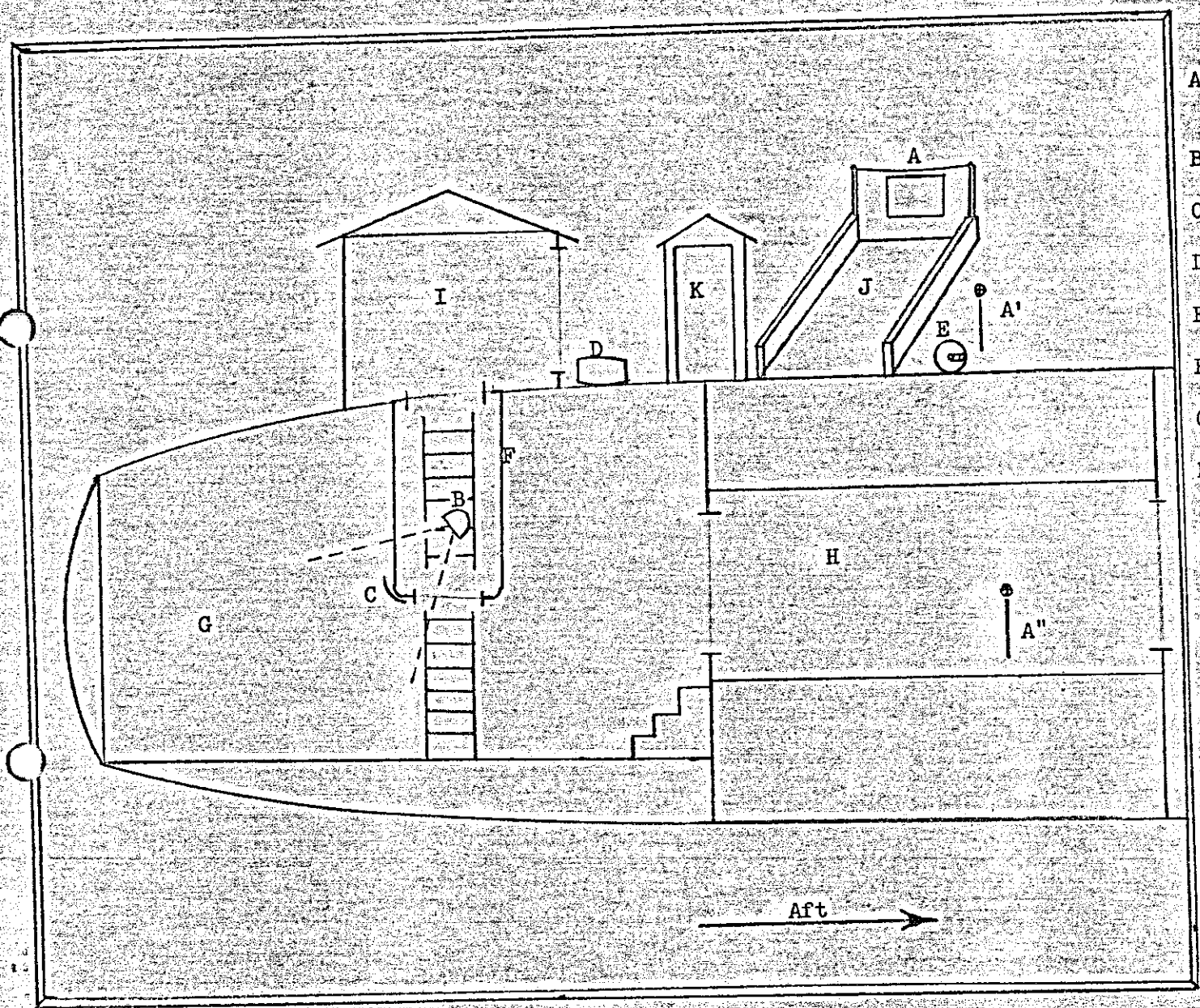
The exposed individual did not have a film badge, since his regular work does not involve possible exposure to ionizing radiation. His exposure was estimated from his location relative to the source at various times. Based upon a reconstruction of the incident, timing various actions, it is estimated that his exposure did not exceed 0.2 rem to the eyes, 5 rem to the whole body, but probably not over 2.5 rem, and 350 rem to the fingertips of the left hand, but probably as low as 175 rem.

He was given a medical examination the same day, including a complete blood count and a slit-lamp examination of the eyes, and a follow-up examination a week later. Further follow-up examinations will be made to detect any signs of effect or damage. None have been detected up to the time of this report.

d. Corrective Steps Taken

This incident resulted from a combination of unusual events, viz., interior lights went out during an exposure without the knowledge of the radiographers; the intercom system was out of service and a general announcement was not made; there was no automatic emergency lighting and the individual concerned did not attempt to find out the purpose of the sign that he could not read or identify.

In order to guard against a similar incident, however unlikely, two protective measures have been instituted. Firstly, radiography aboard ship will not be started until an announcement has been made through the ship. Secondly, aboard commissioned ships, a battery-operated flashing red light will be placed at each interior perimeter barricade that is not guarded by radiography personnel.



A. Rope barricades and radiation signs

B. Exposure head

C. Film

D. Projector

E. Projector controls

F. Forward escape trunk

G. Forward torpedo room

H. Passageway aft to rest of ship

I. Temporary shelter over forward hatch

J. Gangway to side of drydock

K. Shelter for deck watch

Sketch of Radiography Setup Aboard Submarine

12 January 1965
(4:10) PM
(5 min)

Telcon To Mare Island Shipyd

Talked to Mr. Rosaiti Secretary -
need to chge application for renewal of
Lic. 4-364-6 as presently granted.
Requires using both inst. @ temporary
sites. Chge documentation (i.e.
instructions, etc. accordingly).

MARE ISLAND NAVAL SHIPYARD
VALLEJO, CALIFORNIA

IN REPLY REFER TO
10330
(108-31655)

DEC 22 1964

This mtl. rec'd 12/31/64

From: Commander, Mare Island Naval Shipyard
To: Chief, Bureau of Ships (Code 682)

Subj: Instances of disagreement in determining surface radiation intensity per 10 CFR 31 or 49 CFR 73

Ref: (a) Fonecon of 8 Dec 64, between Mr. Rosati, MARE, and Mr. Mahaffey, BUSHIPS
(b) COMNAVSHIPYDMARE ltr 10330 (108-26444) of 27 Nov 64

1. In response to the request contained in reference (a), the following information supplementing that submitted in reference (b) is forwarded.

2. The most recent instance concerning an apparent violation of 49 CFR 73 was the receipt of industrial radiography sources in a wooden crate that measured, at one point, 260 mr/hr, using an AN/PDR-27(J) radiacmeter. Iridium-192 Source Nos. 6313 (50 curies) and 6314 (108 curies) were received in shipping container Model 414, Serial No. 161, from Technical Operations, Incorporated, Burlington, Massachusetts. The shipping container (lead-shielded) was packed in a wooden crate. The crate was monitored upon receipt on 20 October 1964.

3. The San Francisco representative of Technical Operations, Sicular X-Ray Company, was notified, and sent a representative on the following day. Using his Victoreen Model 592 survey meter, he obtained readings which he stated to be about 100 mr/hr. Using a Victoreen Model 440 survey meter belonging to the Shipyard, our readings were as high as 115 mr/hr.

4. On opening the crate, the shipping container surface radiation intensity was as high as 290 mr/hr, as measured with the AN/PDR-27(J) radiacmeter, an apparent violation of 10 CFR 31. The Victoreen Model 440 gave readings up to 150 mr/hr. Both instruments are calibrated to read the same in a uniform radiation field. The difference between the readings obtained with the two instruments at the same surface is due to differences in the distance between the source and the effective center of their respective detectors, which in turn is due to different physical sizes of the detectors.

682 641229-0832

9673

ELM

10330
(108-31655)

Subj: Instances of disagreement in determining surface radiation intensity per 10 CFR 31 or 49 CFR 73

5. In 1962, similar difficulty was experienced in monitoring industrial radiography projectors. Measurements made with AN/PDR-27 series radiacmeters were often over 200 mr/hr at the surface, in violation of 10 CFR 31. The manufacturer stated that he used an ion-chamber instrument, and that his readings were accepted by the AEC. Projectors found to be over the limit by our monitoring were either left out of service until source decay reduced the surface radiation to an acceptable level, or shielding of sheet lead was added.

6. Since that time, the problem has been solved for most Iridium-192 projectors because the new ones have less than four inches of shielding, and the radiation intensity permitted by 10 CFR 31 is 50 mr/hr at six inches from the surface. This limitation is generally met, and any detector element can be positioned so that its center of detection is six inches from the surface, resulting in essential agreement among various types of detectors.

7. In addition to these two specific instances of disagreement, during the past year the receipt of a number of shipments deficient because of excessive surface radiation levels has been reported to the respective shippers and the ICC. Because few rebuttals have been received, the type of instrumentation used by these shippers for monitoring packages prior to shipment is unknown. All receipt and shipment measurements here have routinely been made with an AN/PDR 27.

Edward L Fahy

Copy to:
BUSANDA (Storage Division)

641229-0832 EDWARD L FAHY

7

MARE ISLAND NAVAL SHIPYARD
VALLEJO, CALIFORNIA

IN REPLY REFER TO
10330
(108-26445)

682B
TC

DEC 10 1964

From: Commander, Mare Island Naval Shipyard
To: Director, Division of Materials Licensing
U. S. Atomic Energy Commission
Washington, D. C. 20545
Via: Chief, Bureau of Ships (Code 682)

Subj: Supplementary information related to application for renewal of AEC Byproduct Material License No. 4-364-6

Ref: (a) Telephone communication between Mr. Mahaffey, Code 682C, BUSHIPS, and Mr. Rosati, Code 108, Mare Island, on 18 Nov 64
(b) Application for renewal of AEC Byproduct Material License No. 4-364-6, Ser. 10330 (108-26441) dtd 2 Nov 64
(c) Code of Federal Regulations, Title 10 Part 31

1. Reference (a) reported a discussion with the Atomic Energy Commission concerning provisions in reference (b) relating to the use of only a low-range survey meter at the site of radiographic operations. It was also requested by reference (a) that the types of difficulty caused by using a switch-type exposure head be described.

2. Consequently, a careful re-evaluation was made of the operating procedure enclosed with reference (b), stipulating that radiographers routinely carry only the low-range radiation survey instrument, namely, the AN/PDR 27, to temporary radiation areas instead of the two specified in the current license. The re-evaluation confirmed the conclusion that this procedure would relieve radiographers of a requirement that adversely affects safety, efficiency, and cost. This conclusion is based on the following considerations:

a. Section 31.104 of reference (c) requires that radiation survey instrumentation having a range of 2 mr/hr through 1 r/hr be maintained by the licensee; and Section 31.303(a) requires this instrumentation be used at each site when radiographic exposures are made.

b. In order to meet these requirements with available instrumentation, two instruments, an AN/PDR 27 Radiac having four ranges, namely 0 - .5, 0 - 5, 0 - 50, and 0 - 500 mr/hr, and an AN/PDR 18 having higher ranges, namely 0 - .5, 0 - 5, 0 - 50, and 0 - 500 r/hr must be used.

c. Because of these high ranges, the AN/PDR 18 lacks sensitivity, and is considered inadequate for monitoring and making required routine surveys safely and effectively. It is needed in controlling extensive emergencies only, and these operations are led by the supervisor. The AN/PDR 27, due to its greater sensitivity and ample range, although only half that specified in 31.104, has been used exclusively in the past for making exposure site surveys.

d. Both of these two relatively heavy instruments must now be carried to and from each of the many temporary exposure sites in compliance with the current license. Routinely carrying high-range instruments to each site constitutes a needless burden when added to the source projector, barricades, ropes and stanchions, signs, and lights, and is therefore a detriment to efficiency and economy.

e. The AN/PDR 18 contains up to 300 microcuries of Strontium 90, licensed to the Bureau of Ships, as an internal calibration source. The AN/PDR 27 survey meter contains no radioactive calibration source. The continued general circulation of the AN/PDR 18s increases the probability of loss or damage of these unused high-range instruments and the Strontium 90 sources they contain. It is considered that this practice subjects the public health and safety to a greater risk than that resulting from the use of only one instrument which has a lower but ample range for satisfying all regular operating needs and contains no radioactive material.

f. Section 31.104 will be complied with, if the procedure is authorized, even though only the instrument with a lower range is at the site. As stated in reference (b), the AN/PDR 18 would be maintained in all source-transporting vehicles, and also at specific points readily accessible to the supervisors who would use them.

For these reasons, and those previously stated in reference (b), it is believed that the procedure submitted in reference (b) and discussed in the foregoing should be reconsidered.

3. In accordance with Section 31.401 of reference (c), application is hereby made to exempt the operating procedures in the enclosure to reference (b) from the conditions of Section 31.303(a) of reference (c). The exemption requested is limited to the extent that AN/PDR 27 Radiacs alone are authorized as the radiation survey instrumentation to be used at each temporary site of radiographic exposure under the provisions specified in reference (b). This application is premised on the belief that the exemption will not result in undue hazard to life and property, but rather will further minimize any existing hazard.

10330
(108-26445)

4. As requested in reference (a), the following information describes the types of malfunctions experienced with the use of the switch-type exposure head:

a. The swaged connection of the switch fitting separates from the unit, causing an open-end, no-stop situation for the source.

b. The material at the tip of the switch is thin, and crushes or is easily distorted by positioning clamps. The extreme tip of the switch has cracked and separated, causing an open end on the source tube. Distortion of the tips has cause seizing, resulting in nonoperation of the switch in the "On" position.

c. The various electrical connections loosen in use, and the mating plugs in the wire connectors are easily damaged, causing a lack of contact, and resulting in failure of the system.

d. Both switches are critical in operation, and have provided erroneous position indication. The microswitch in the projector has failed, causing continuous indication of safe position.

e. The system circuit board connections are not sufficiently rugged to withstand the constant handling encountered in normal industrial operations.

f. The lamps utilized in the system are not dependable, and frequently do not operate even though they are not "burned out."

g. Defects in the tip occur eight to ten times per year, and an indication system failure occurs at least once during a 24-hour period.

W. B. PARHAM, Captain, USN
Acting Shipyard Commander

8 December 19[illegible]

Telcon To Mare Island Shipyard: (Actual time of 25 mins)

1. What is status of supplementary info - required by AEC for [illegible] Lic. Renewal App. for Ind Radiography

2. This was follow-up telephone call since during phone call on 18 Nov. 1964 Rosati stated he would review the chge he had made relative to using single inst. (AN/PDR-27) & not have (AN/PDR-18) at temporary sites when doing Radiography.

3. Rosati said ltr. was being prepared - suggested again that AEC would take "dim view" & should get lic. renewed, as previously - using 2 rather than the 1 inst - since lic. would expire 31 Dec. 1964.

4. Also, stated addtl. info. on the safety lock. prob for camera devices should be covered in the shipyd's forthcoming ltr.

Standard Form 63
November 1961
GSA Ger[illegible] g. No. 27

MEM[illegible]ANDUM OF CALL

Date	Time
	1115

TO—

Mr. Mahaffey

☐ YOU WERE CALLED BY— ☐ YOU WERE VISITED BY—

Mr. Rosati - Naush pyd Man

TELEPHONE:	Number or code	Extension
	AC 707 64-4111	8595

☐ PLEASE CALL
☐ WILL CALL AGAIN
☐ RETURNING YOUR CALL
☐ IS REFERRED TO YOU BY:
☐ WAITING TO SEE YOU
☐ WISHES AN APPOINTMENT

LEFT THIS MESSAGE: Pls call at 1215 or 12.45

(25 minutes)

Received By—

63-105

18 November 1964

Telcon To Mare Island - 707-644-1111 (8595*)
Mr. Raiti* - Code 682C called re - to
Shipyard's application for renewal of AEC Lic. # 4-364-6.

1. Shipyd ltr 10330 (108-26441) of 2 Nov. 1964 BUSHIPS was endorsed over to AEC. by 1st. End. Ser 682C-922 of 10 Nov. 64.
2. Stated telcon from N. Bassin, AEC on 11/17/64, & reviewed pts. which AEC was concerned about in Shipyd's application with supplemental info -
   a. Take dim view of using only AN/PDR-27 - well not authorize. Require capability of both instruments at temporary work sites as well as fixed sites.
   b. Interested in chge concerning of non-sw. type of exposure head. Has trouble been experienced, where, when, how many unit(s) involved - doesn't this chge require new type & model # to unit being used & proposed to be used? Would like more info - Would help all.
3. Suggest Yard re-consider & to expedite getting renewal - withdraw chge - use '27 & '18 at sites. Reflect this chge in sections of Adm., Op., & Emergency Procedures & Radiographic Personnel - be specific & not genl (i.e. '27 is equivalent/or '18 is equivalent).

4. N. Bassin, AEC, will be on leave for 2 weeks beginning Feb (i.e. 21 Nov. 1964) - will not act upon application until return.

5. Suggest Yard Instruction be re-written & use two instruments, rather than, to comply with AEC criteria and fwd to AEC via BUSHIPS as soon as possible.

10 NOV 1964

10330/1
Ser 682C-922

FIRST ENDORSEMENT ON NAVSHIPYD MARE LETTER 10330(108-26441) of 2 NOV 1964

From: Chief, Bureau of Ships
To: Chief, Isotopes Branch
Division of Materials Licensing
U. S. Atomic Energy Commission
Washington, D. C. 20545

Subj: AEC Byproduct Material License No. 4-364-6; Application For Renewal Of

1. Basic letter with enclosure contain an application for renewal of subject license in response to your notice of license expiration of 20 October 1964.

2. Updated supplemental information is attached to the application as Supplemental Sheets 1 and 2 and Attachment (A) which covers items 4 and 5 and sections of item 6 of the completed AEC Form 313-R.

3. The material has been reviewed and seems to adequately cover the criteria set forth in the Licensing Guide for the Cobalt-60 and Iridium-192 sealed sources used in the equipment in the Shipyard's Radiography Program.

R. D. CLUBB
By direction

Copy to:
CDR NAVSHIPYD, MARE

BUMED (Code 74)

MAHAFFEY/mitchell
61457 - 11/10/64

ROUTE SLIP AND OFFICE MEMO
NAVSHIPS 30-1 (REV. 1-57)

DO NOT DETACH FROM OFFICIAL CORRESPONDENCE
WRITE OR PRINT LEGIBLY IN INK

ORIGINATING CODE 682C NAME G. N. Makoffy EXTN. 61457 DATE Nov

*INDICATE ACTION BY USING APPROPRIATE NUMBER
1. APPROVAL
2. COMMENT
3. INFORMATION
4. PREPARE REPLY
5. SIGNATURE
6. FOR OFFICIAL RECORDING (CODE 236)

ROUTE TO CODE	ACTION*	RELEASED INITIAL	DATE MONTH	DAY	YEAR	SUBJECT
682C		GNM	11	10	4	
682X		MSW	11	10	4	10 NOV 1964
682		RPC	11	10	4	Sig
233		✓	✓			R. D. CLUBB direction
682C						

SIGNATURE, EXTN., CODE AND DATE ARE TO FOLLOW COMMENTS

FILE.—Unless this material is to be further routed, return to file by dating and initialing below.

INITIAL DATE

If additional space is required use REVERSE SIDE

FILE NO. SERIAL NO.

U.S. GOVERNMENT PRINTING OFFICE : 1959 O—498767

The attached document(s) is/are not considered worthy of filing in permanent records.

Code 236A, X65369

10 NOV 1964

10330/1
Ser 6820-922

FIRST ENDORSEMENT ON NAVSHIPYD MARE LETTER 10330(108-26441) of 2 NOV 1964

From: Chief, Bureau of Ships
To: Chief, Isotopes Branch
Division of Materials Licensing
U. S. Atomic Energy Commission
Washington, D. C. 20545

Subj: AEC Byproduct Material License No. 4-364-6; Application For Renewal Of

1. Basic letter with enclosure contain an application for renewal of subject license in response to your notice of license expiration of 29 October 1964.

2. Updated supplemental information is attached to the application as Supplemental Sheets 1 and 2 and Attachment (A) which covers items 4 and 5 and sections of item 6 of the completed AEC Form 313-R.

3. The material has been reviewed and seems to adequately cover the criteria set forth in the Licensing Guide for the Cobalt-60 and Iridium-192 sealed sources used in the equipment in the Shipyard's Radiography Program.

R. D. CLUSS
By direction

Copy to:
CDR NAVSHIPYD, MARE

BUMED (Code 74)

MAHAFFEY/mitchell
61457 - 11/10/64

Encl: Form AEC-313R (2 sets)

[Didn't Use Since Mare Island's Mtl arrived 11/6/64]

Naval Ltr - ☒ Air Mail Unclassified 685C - ~~[illegible]~~

Commander
Mare Island Naval Shipyard
Vallejo, California

(hold - don't need)
now

The U.S. Atomic Energy Commission ltr. ML:IB:37 dtd. 29 October 1964 notified the Shipyard of the expiration date of AEC Byproduct Material License #4-364-6. This license lists the Cobalt-60 and Iridium-192 sealed sources authorized for possession & use in camera devices for the performance of industrial radiography.

It is requested that an original & five copies of the application with updated supplemental information in its entirety be prepared for renewal of the AEC License. The AEC Form-313R should be used when preparing the application in accordance with the AEC Licensing Guide for Industrial Radiography.

This material should be forwarded to the Atomic Energy Commission via the Bureau of Ships, Code 682C, prior to 1 December 1964 since the present license expires 31 December 1964.

Copy to: AEC

DEPARTMENT OF THE NAVY
BUREAU OF SHIPS
WASHINGTON, D. C. 20360

IN REPLY REFER TO

10330/1
Ser 682C-913

~~Downgraded to~~ ~~XXXXXXXXXX~~ UNCLASSIFIED when enclosure(s) is/are detached ~~XXXXXXXXXXXXXXXXXXXXXXXXXXXX~~

2-NOV 1964

Address All Replies to Chief, Bureau of Ships

TO: ~~Commander, MARE ISLAND NAVAL SHIPYARD, Vallejo, California~~

VIA: ~~XXXXXX~~

THE MATERIAL ITEMIZED BELOW, OR ON ATTACHED LIST, IS FORWARDED AS INDICATED:

	Forwarded per your request
	For information and retention
XX	*On loan and to be returned to the Bureau of Ships*
	Return of loaned material
	For use in connection with ~~AN/UDM-1 and AN/UDM-1A Radiac Calibrator~~
XX	*Partial fulfillment of order - Balance will be forwarded when available*
	SECRET AND TOP SECRET - THE ATTACHED RECEIPT, OPNAV 5511-10 MUST BE SIGNED AND RETURNED TO THE BUREAU OF SHIPS IMMEDIATELY.

Encl:
(1) Original of AEC License No. 4-364-5(J66) Renewal, Amend. #6 and Copies of Form AEC-313

R. D. CLUBB
direction

MAHAFFEY/mitchell
61457 - 10/30/64

C-23156

NAVSHIPS 4669 (REV. 11-63)

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

IN REPLY REFER TO:
ML:IB:37

October 29, 1964

Commander
Mare Island Naval Shipyard
Vallejo, California

[Rec'd.-682C-11/3/64] Fwd-follow-up to Shipyd (11/6/64) by 682C -

SUBJECT: NOTICE OF LICENSE EXPIRATION

Gentlemen: A follow-up on this not made to Shipyard since Mtl. arrived in Bureau 11/6/64 & fwded to AEC by 1st Endorsement

Notice is given that Byproduct Material (Radioisotopes) License No. 4-364-6 expires on December 31, 1964.

If you desire to continue your radioisotope program, an application for renewal of the license should be filed with this office. It is to your advantage to file such an application at least thirty (30) days before the expiration date of your existing license. Your program will then be covered by your existing license until we can issue you a new license. (Title 10, Code of Federal Regulations, Part 30, Section 30.35(b).) If applications received less than 30 days prior to the expiration date of your license cannot be processed before your existing license expires, this could result in your possessing radioisotopes without a valid license which is a violation of Federal Regulations.

If you do not wish to renew your license, please complete the enclosed Form WA-277, "Certificate - Disposition of Radioisotopes," and return it to this office.

In submitting a renewal application, all items in Form AEC-313 must be completed. Information contained in previous applications, statements, or reports filed with the Commission with respect to the information specified in Items 8 thru 15, Form AEC-313, may be incorporated by reference, provided that such references are clear and specific. References should not be made to the license. The document which contains the information should be given instead.

If you have obtained an amendment which has extended the expiration date of the above license, or if a new license has been issued which supersedes the above license, please disregard this notice.

This notice of your license expiration is sent for your convenience and it should not be interpreted that similar notices will be sent in the future. The responsibility for license renewal remains with the licensee.

Sincerely yours,

Richard E. Cunningham

Richard E. Cunningham
Chief, Isotopes Branch
Division of Materials
Licensing

Enclosures:
1. Form AEC-313, w/instr. (1 set)
2. Certificate
3. 10 CFR 30

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

OCT 16 1964

IN REPLY REFER TO:
DML:CEM
70-259

Department of the Navy
Bureau of Ships
Washington 25, D. C.

Attention: Chief, Bureau of Ships
10330/1
Ser 682C-759

Gentlemen:

This refers to the Mare Island Naval Shipyard application dated September 17, 1964, requesting cancellation of Special Nuclear Material License No. SNM-232.

As you know, Title 10, Code of Federal Regulations, Part 70, "Special Nuclear Material," copy enclosed, was amended, effective June 5, 1964, providing a general license pursuant to Paragraph 70.19(a), 10 CFR 70, to certain categories of persons for receipt, possession, use and transfer of plutonium in the form of calibration or reference sources. However, pursuant to Paragraph 70.19(b), the general license provided as above is effective only if the reference or calibration sources have been manufactured in accordance with the specifications contained in a specific license issued by the Commission to the manufacturer of the sources pursuant to Section 70.39 or in accordance with the specifications contained in a specific license issued to the manufacturer by an agreement State which authorizes manufacture of the sources for distribution to persons generally licensed by the agreement State.

Since, as of this date, no specific licenses have been issued pursuant to Section 70.39 to authorize the manufacture of plutonium sources, it appears that the sources which you presently possess would not be within the purview of the general license provisions. Accordingly, no action will be taken to cancel License No. SNM-232 as requested in your letter dated September 29, 1964, unless we hear further from you.

Very truly yours,

Robert L. Layfield
Robert L. Layfield
Source & Special Nuclear Materials Branch
Division of Materials Licensing

682

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10330/1
Ser 682C-141

11 FEB 1964

FIRST ENDORSEMENT ON MARE ISLAND NAVAL SHIPYARD 10330(108-26425)
OF 23 JANUARY 1964

From: Chief, Bureau of Ships
To: U. S. Atomic Energy Commission
Production Division
AEC Materials Licensing Officer
Attention Mr. H. J. McAlduff, Jr.
Oak Ridge, Tennessee

Subj: AEC License No. SNM-232; statement in lieu of Material Status Report (Form AEC-578)

1. Basic letter forwarded for your information.

Copy to:
NAVSHIPYD MARE
EMED (Code 74)

R. D. CLUBB
By direction

MAHAFFEY/mitchell
62935 - 2/10/64

Serial 640130-0270

10330
(108-26426)

23 January 1964

From: Commander, Mare Island Naval Shipyard
To: U. S. Atomic Energy Commission, Production Division
AEC Materials Leasing Officer (Mr. H. J. McAlduff, Jr.)
Oak Ridge, Tennessee
Via: Chief, Bureau of Ships (Code 682)

Subj: AEC License No. SNM-232; statement in lieu of Material Status Report (Form AEC-578)

Ref: (a) Ltr COMNAVSHIPYDMARE to USAEC, Oak Ridge, Tennessee, of 19 July 1963

1. As described in reference (a), there is no reportable material now possessed under AEC License No. SNM-232.

EDWARD J. FAHY
Rear Admiral, USN
Shipyard Commander

Copy to:
BUMED (Code 74)

Mare Is. N.S.Y.

UNITED STATES
ATOMIC ENERGY COMMISSION

SPECIAL NUCLEAR MATERIAL LICENSE

Pursuant to the Atomic Energy Act of 1954 and Title 10, Code of Federal Regulations, Chapter 1, Part 70, "Special Nuclear Material Regulations," this license is hereby issued authorizing the licensee to receive and possess the special nuclear material designated below, to use such special nuclear material for the purpose(s) and at the place(s) designated below, and to transfer such material to persons authorized to receive it in accordance with the regulations in said Part. This license shall be deemed to contain the conditions specified in Section 70.32 of said regulations, and is subject to all applicable rules, regulations, and orders of the Atomic Energy Commission now or hereafter in effect, and to any conditions specified below.

Licensee	3. License No.
1. Name Department of the Navy	SNM-237, as renewed
2. Address Bureau of Ships Mare Island Naval Shipyard Vallejo, California	4. Expiration Date August 31, 1968
	5. Docket No. 70-259

6. Special Nuclear Material	7. Maximum quantity of special nuclear material which licensee may possess at any one time under this license
Plutonium	Three tenths (0.3) microgram as plutonium alpha sources

8. Authorized Use

For use in accordance with the procedures described in the licensee's application dated July 1, 1963.

9. Quantity of special nuclear material allocated to licensee pursuant to Section 70.31(b) of said part:

- - - - - - - - - -

CONDITIONS

10. Unless otherwise specified, the authorized place of use is the licensee's address stated in Item 2 above.

Authorized place of use: The licensee's [illegible] Physics Laboratory
[illegible] 273
[illegible], California

11. The licensee shall comply with the attached leak test conditions.

For the U.S. ATOMIC ENERGY COMMISSION

Date of issuance Aug 6, 1963

[illegible] Donald A. [illegible]
[illegible]

United States

Atomic Energy Commission

SPECIAL NUCLEAR MATERIAL INTERAGENCY AGREEMENT

(SECTION 53 MATERIAL)

SNM INTERAGENCY AGREEMENT NO. 232

THIS INTERAGENCY AGREEMENT (sometimes referred to as the "Agreement"), entered into this 1 day of July, 1963, by and between the UNITED STATES ATOMIC ENERGY COMMISSION (hereinafter called the "Commission") and Department of the Navy, Bureau of Ships, Mare Island Naval Shipyard, Vallejo, California, (License No. SNM-232) (hereinafter called the "Agency"), an executive department or independent establishment of the Government of the United States of America or a bureau or office thereof;

WHEREAS, the parties hereto desire to establish the terms and conditions applicable to the distribution of special nuclear material to the agency, pursuant to Section 53 of the Atomic Energy Act of 1954, as amended, whether ordered and received directly from a Commission facility or transferred from a lessee of the Commission;

NOW, THEREFORE, the parties hereto do mutually agree as follows:

ARTICLE 1 – DEFINITIONS

As used in this agreement:

a. The term *"Act"* means the Atomic Energy Act of 1954, as amended.

b. The terms *"Atomic Energy Commission"*, *"Commission"* or *"AEC"* mean the United States Atomic Energy Commission or any duly authorized representative thereof.

c. The term *"base charge"* means the dollar amount per unit of special nuclear material in standard form and specification in effect as of the time any particular transaction under this agreement takes place, as set forth in schedules published by the Commission in the Federal Register from time to time.

d. The term *"Commission facility"* means a laboratory, plant, office or other establishment operated by or on behalf of the Commission.

e. The term *"Commission's established specifications"* means the specifications for purity and other physical or chemical properties of special nuclear material, as published by the Commission in the Federal Register from time to time.

f. The terms *"consumed"* or *"consumption"* include the reduction in value of material due to blending of different assays of special nuclear material, or other alteration of the isotopic ratio, and the disposition of material in such manner that it cannot be economically recovered for further use.

g. The term *"lessee"* means a person who is a party to a Special Nuclear Material Lease Agreement with the Atomic Energy Commission. For the purposes of this Agreement the term *"lessee"* also includes another Government agency which has executed a Special Nuclear Material Interagency Agreement with the Commission.

h. The term "*persons acting on behalf of the Commission*" includes employees and contractors of the Commission, and employees of such contractors, who implement or participate in the implementing of this Agreement pursuant to their employment or their contracts with the Commission.

i. The term "*source material*" means (1) uranium, thorium, or any other material which is determined by the Commission pursuant to the provisions of Section 61 of the Act to be source material; or (2) ores containing one or more of the foregoing materials, in such concentration as the Commission may by regulation determine from time to time.

j. The term "*special nuclear material*" means (1) plutonium, uranium 233, uranium enriched in the isotope 233 or in the isotope 235, and any other material which the Commission, pursuant to the provisions of Section 51 of the Act, determines to be special nuclear material, but does not include source material; or (2) any material artificially enriched by any of the foregoing, but does not include source material. Unless the context otherwise indicates, the term "material" refers to "special nuclear material" as defined herein.

k. The term "*value*" means the dollar amount determined by multiplying the applicable Commission base charge by the number of units, or fractions thereof, of special nuclear material involved, whether or not such material is in standard form and specification.

l. The term "*worth*" means the dollar amount determined by multiplying the applicable Commission unit price for normal or depleted uranium by the number of units, or fractions thereof, or normal or depleted uranium involved. The Commission's applicable unit price for normal or depleted uranium will be fixed in accordance with established Commission pricing policy then in effect.

m. The term "*established Commission pricing policy*" means any applicable price or charge in effect at the time any particular transaction under this Agreement takes place (i) published by the Commission in the Federal Register, or (ii) in the absence of such a published figure, determined in accordance with the Commission's pricing policies. A statement of such pricing policies will be furnished Agency upon request. The Commission's published prices and charges, as well as its pricing policies, may be amended from time to time.

n. The term "*standard form*" means the chemical form of special nuclear material, as published by the Commission in the Federal Register from time to time.

ARTICLE 2 – SCOPE

a. Unless otherwise provided herein, or in a written agreement between the Commission and the Agency, the terms and conditions contained herein shall apply to material and related services furnished to the Agency by the Commission on and after the date of execution of this Agreement, and to the material, if any, subject to the Special Nuclear Material Interagency Agreement between the Commission and the Agency as of midnight June 30, 1963, whether ordered and received directly from a Commission facility or obtained from another lessee of the Commission. Nothing herein shall be deemed to prevent the Agency from shipping material covered by this Agreement to any person duly authorized by the Commission to possess and use such material. Material received by the Agency from any source shall be subject to the provisions of this Agreement only if such material is furnished pursuant to an order accepted by the Commission as provided in paragraphs b., and c., below.

b. Agency shall order material pursuant to this Agreement through the execution and submission of a special nuclear material order form prescribed by the Commission.

c. Where Agency orders material which is to be obtained from a lessee, this Agreement shall not be applicable to such material unless and until such lessee and the Commission have acknowledged their consent and agreement to the transfer of such material to Agency.

ARTICLE 3 — TERM OF AGREEMENT; TERMINATION AND CANCELLATION

a. Except as otherwise provided herein, Agency shall have the right to possess and use material covered by this Agreement until June 30, 1967; provided this Agreement may be extended by mutual agreement of the parties.

b. The expiration, suspension or termination, in whole or in part, of a license of the Agency to possess material subject to this Agreement or of an allocation for such material, shall automatically result in an expiration of this Agreement insofar as the affected material is concerned and any orders for material shall be of no further force or effect as to the affected material.

c. Agency may cancel any order for material under this Agreement by notice in writing to the Commission at any time prior to delivery of the material; provided, Agency shall reimburse the Commission for the costs incurred by the Commission in connection with such order, as determined in accordance with established Commission pricing policy in effect at the time such costs are incurred.

ARTICLE 4 — MATERIAL TO BE FURNISHED BY THE COMMISSION; SERVICE CHARGES

a. Except as otherwise provided herein, special nuclear material subject to this Agreement shall be furnished to Agency in standard form in accordance with the Commission's established specifications.

b. Agency shall pay the Commission's service charges, if any, for withdrawal and packaging, and for any other special service rendered pursuant to Agency's order, with respect to material ordered subject to this Agreement. Unless such charge or charges are agreed to in the order executed by Agency and the Commission for material, Agency shall pay the Commission its charges for the services rendered pursuant to Agency's order as determined in accordance with established Commission pricing policy in effect at the time such services are rendered. Agency shall also pay the value of material consumed in the rendering of such special services.

c. The Commission will pay the transportation charges for returning any material obtained directly from the Commission which does not conform to applicable specifications, as well as the transportation charges for shipping conforming replacement material.

d. It is recognized that material furnished under this Agreement as enriched uranium (U-235) may be consumed in such manner as to reduce the isotopic ratio thereof to the extent that the material is no longer special nuclear material as defined herein. Except as provided herein, or in paragraph e., below, the resulting normal or depleted uranium will be and remain subject to the provisions of this Agreement as if the material were special nuclear material; provided, that Agency's obligations for loss or consumption of such material shall be computed using the worth of the normal or depleted uranium and provided, further, that if in lieu of returning such material directly to a Commission facility as provided in this Agreement, Agency desires to transfer such material to another person and terminate its obligations with respect thereto, the Commission may, at its option, require Agency to pay the worth of such material, and transfer full custody and responsibility of such material to Agency.

e. (1) Except as provided in subparagraph 4.e.(2) below, the Agency agrees either to secure the Commission's written agreement in advance as to the terms and conditions under which special nuclear material subject to this Agreement may be blended with other special nuclear material or with source material, or to accept as conclusive and binding the Commission's determination in writing as to the consequences of any such blending, with respect to the disposition of any material subject to this Agreement or any other source material or special nuclear material, and amounts due the Commission and the Agency.

The Agency agrees to notify the Commission of any blending of special nuclear material subject to this Agreement with other special nuclear material or with source material. Notice of any proposed blending shall be furnished as far in advance as practicable and notice of any actual blending shall be furnished promptly thereafter. In each such case, such notice shall be in writing and shall contain such information as the Commission may request as to the quantity and properties of all source material and special nuclear material used in blending.

(2) In the case of blending of uranium enriched in the isotope U-235 subject to this Agreement with normal or depleted uranium, the following provisions shall apply:

(a) If the resulting blended material is not special nuclear material, the special nuclear material covered by this Agreement which is used by the Agency in blending shall be deemed to have been lost or consumed, and, in addition to any other rights which the Commission may have, Agency shall pay to the Commission an amount equal to the value of such special nuclear material used in blending. Full custody and responsibility of the blended material shall pass to Agency upon such payment. Agency hereby agrees to pay to the Commission the amount determined to be due for such loss upon receipt of the Commission's invoice.

(b) All blended material which is special nuclear material shall be held by Agency subject to the provisions of this Agreement. Agency's account provided for in Article 8 shall be adjusted to reflect the value of the blended material, and Agency shall pay to the Commission an amount equal to the monetary loss suffered by the Commission computed by adding the value of the material used in the blend and the worth of normal or depleted uranium used in the blend, and subtracting from the total the value of the resulting blended material. Agency hereby agrees to pay to the Commission the amount determined to be due for such loss upon receipt of the Commission's invoice. The Commission shall compensate Agency for the worth of Agency's normal or depleted uranium used in blending, and may so compensate Agency by delivering to Agency f.o.b. any Commission facility a quantity of normal or depleted uranium, as uranium hexafluoride (or other mutually agreeable form), equivalent to the quantity of Agency's normal or depleted uranium blended with the material. Agency shall pay the Commission's service charges, if any, for withdrawal and packaging of such normal or depleted uranium, and for any other special service rendered with respect to such uranium. Agency agrees that such delivery shall constitute full compensation to Agency for normal or depleted uranium used in blending.

(c) As used in this Paragraph e., the terms "value" and "worth" refer to value and worth as of the date of blending.

f. Paragraphs a., and b., above, do not apply in any instance where Agency obtains material directly from a lessee of the Commission.

g. The Agency shall maintain and make available to the Commission for examination, upon reasonable notice, adequate records pertaining to his receipt, possession, use or transfer of material subject to this Agreement. The Agency shall afford to the Commission, at all reasonable times, opportunity to inspect the material subject to this Agreement and the premises and facilities where such material is used or stored. The Agency shall permit the Commission to perform such audit tests and inventory tests as the Commission deems necessary for verification of the accuracy of any reports submitted by the Agency to the Commission. The Commission agrees to perform any inventory tests with respect to material subject to this Agreement (which the Agency agrees may include the taking of a reasonable number of samples for physical or chemical analyses) so as to minimize interference to the Agency's processing, delivery schedules, and third party commitments regarding the material. Nothing contained herein shall authorize the Commission to perform destructive testing of a fabricated article

containing special nuclear material except with the consent of the Agency. The Agency agrees that no charges for costs or value of any material samples, or for services or equipment, should such be furnished by the Agency, provided in connection with the performance of audit tests and inventory tests, shall be made against the Commission; however, the Commission will allow full credit in the Agency's account with the Commission for the value of the material included in the samples and the Commission will make no charge against the Agency for reconversion of the material samples to standard form. In the event the Agency should ship material subject to this Agreement to any other person, or cause such shipment of such material, Agency shall assure that the rights and privileges granted to the Commission under this paragraph shall not be affected by such shipment.

h. The Agency shall use its best efforts to segregate physically all material subject to this Agreement from any other source material and special nuclear material in the Agency's possession. However, it is recognized that in certain situations some of the material subject to this Agreement may become unavoidably mixed with other material due to the nature of the process or work performed by the Agency. In the event unavoidable mixing should occur, the parties shall negotiate in good faith to reach an equitable agreement, taking into consideration the provisions of this Agreement and the provisions of the agreement or agreements establishing the Agency's responsibility with respect to such other material, concerning the assignment or allocation of any losses resulting from such mixing as between this Agreement and such other agreement or agreements, and any other necessary arrangements. Nothing in this paragraph shall be deemed to apply to the creation of mixtures of materials in the course of operation of a nuclear reactor.

ARTICLE 5 – RETURN OF MATERIAL TO THE COMMISSION; SPECIAL CHARGES FOR COMMISSION SERVICES

a. Agency will return all material subject to this Agreement upon the expiration or earlier termination of this Agreement, provided, however, that Agency shall have the right to return such material at any time prior to such date.

b. Except as otherwise provided herein, material subject to this Agreement will be returned directly to the Commission in standard form and in accordance with the Commission's established specifications for return of material in effect as of the date of this Agreement.

c. Material transferred to a lessee of the Commission, regardless of the form and/or specification of such material, shall be deemed to have been returned to the Commission if such lessee, the Commission, and the Agency have executed an order covering the material so transferred.

d. If Agency returns material in a form and/or specification other than as provided in b., above, Agency shall pay a service charge for processing such returned material so as to enable it to satisfy the Commission's established specifications in effect as of the date of this Agreement, unless the Commission shall determine that it is in the Commission's best interest to accept the material in its existing form. Such charge shall include the Commission's charge for processing, as determined in accordance with the established Commission pricing policy in effect at the time the material is returned, and an amount, as determined by the Commission, for the value or worth of the material consumed during processing.

e. If the Commission shall, in its sole discretion, determine that the material in a form and/or specification other than as provided in b., above, returned by Agency is of no value to the Commission, the Agency shall pay to the Commission a sum equal to the value or worth of the material. In addition, Agency shall also pay a special service charge, as determined in accordance with established Commission pricing policy in effect at the time the material is returned, for the handling, storage and/or disposal of such material.

f. Material subject to this Agreement returned directly to the Commission in the form of uranium hexafluoride shall be shipped only in cylinders of appropriate size as specified by the Commis-

sion. The quantity of such material shipped in a container shall not be less than the Commission-established minimum loading for the type of cylinder used.

g. All material returned directly to the Commission shall be delivered by Agency to the Commission facility or location specified by the Commission, f.o.b. commercial conveyance at such facility or location. Unless waived by the Commission, Agency shall give the Commission at least fifteen (15) days' written notice of intent to return material directly to the Commission. The Commission will notify Agency promptly after receipt of Agency's notice of intent to return material as to the Commission facility or location designated for return of the material. Agency, at the time of shipment of material, shall notify the Commission facility or other location to which shipment is made of the date and method of shipment, and expected date of arrival.

ARTICLE 6 – PAYMENT FOR MATERIAL LOST AND CONSUMED

a. Except as otherwise provided herein, Agency shall be responsible for and shall reimburse the Commission for any loss or consumption of material, whether or not such loss or consumption is due to the fault or neglect of Agency, or any other cause occurring from the time of delivery of such material to Agency and until such material has been returned to the Commission as provided herein.

b. Except as otherwise provided herein, the amount due the Commission for material lost or consumed shall be the value or worth of such material computed in accordance with this Agreement as of the time of such loss or consumption. Agency may, and shall, when required by the Commission, pay for material lost or consumed on a provisional basis based on the data reflected in Agency's reports of material lost or consumed. The forms for reporting material lost or consumed shall be prescribed by the Commission.

ARTICLE 7 – OTHER AUTHORITY

Nothing in this Agreement shall be deemed to require Agency to pay the Commission's charges with respect to materials and/or services subject to this Agreement, or to observe other specific provisions of this Agreement, if the Commission, in accordance with statutory or other authority available to it, determines that such charges, or other provisions, are not applicable.

ARTICLE 8 – ESTABLISHMENT OF SPECIAL NUCLEAR MATERIAL ACCOUNT

a. The Commission will establish a special nuclear material account for Agency to which will be debited as provided herein the amount or amounts equal to the value or worth of the material subject to this Agreement. Such account will be credited as provided herein with the amount or amounts equal to the value or worth of the material returned or paid for, in accordance with this Agreement. The value or worth of material reflected in this account after credit for the value or worth of material returned and for payments for material lost or consumed shall represent the amount due to the Commission for material not returned or paid for. In the event material paid for as having been lost or consumed is later re-established in Agency's account, said account shall be debited as of the date of refund (or appropriate setoff) of such payment to Agency as provided in paragraph c. of Article 10 hereof, with the amount or amounts equal to the value or worth of such material at the time of such re-establishment in Lessee's account.

b. Except as otherwise provided in this Agreement, Agency's account will be debited for material furnished as of the date material is delivered to Agency; provided, that in the case of material obtained directly from a lessee of the Commission, the debit will be made as of the effective

date specified in the order executed by Agency, the lessee, and the Commission for such material.

c. Agency's account will be credited for material returned directly to the Commission or transferred to a lessee only when the material is returned or transferred in accordance with Article 5. Except as otherwise provided in this Agreement, Agency's account will be credited for material returned directly to the Commission as of the date the material is delivered to a location specified by the Commission pursuant to this Agreement. Credit for material transferred to a lessee will be made as of the effective date specified in the order executed by the lessee, the Commission, and Agency. Credit for material paid for will be made as of the date such payment is received by the Commission.

d. Whenever the Commission changes any applicable base charge as provided in Article 9, below, the value or worth of material recorded in Agency's account will be recomputed at the new base charge; provided, that the value or worth of material lost or consumed as of the date of such charge shall not be recomputed. Subsequent to the effective date of the change in the applicable base charge, the new base charge will be used in determining the value or worth of material lost or consumed.

e. Agency will be notified of the debits and credits made to its account as the result of shipments and transfers of material, and of any changes in the value or worth of material in such account as the result of changes in the applicable base charges. Agency will promptly notify the Commission of any disagreement with, discrepancies, or errors in such notices.

f. Agency will submit such transfer documents covering receipts and shipments, and reports of loss or consumption, and inventory, with respect to material subject to this Agreement as the Commission may prescribe, and shall maintain and make available to the Commission for inspection, upon reasonable notice, adequate records pertaining to the receipt, possession, transfer, or use of material subject to this Agreement.

ARTICLE 9 – CHANGES IN RATE OF USE-CHARGE, BASE CHARGES, AND SPECIFICATIONS

a. The rate of use-charge, base charges, standard form and/or specifications for material furnished pursuant to this Agreement is subject to change by the Commission in accordance with the Act.

b. Any changes in rate of use-charge, base charges, standard form, and/or specifications shall be effective on either July 1 or January 1 as stated in a notice of change published by the Commission, provided thirty days' prior notice of such changes is given Agency, by publication or otherwise, and provided further, that the Commission may reduce the rate of use-charge or the base charges at any time by a notice of change published by the Commission and without prior notice to Agency.

ARTICLE 10 – PERFORMANCE OF AEC OBLIGATIONS; BILLING

a. The Commission may fulfill its obligations under this Agreement through the operator of any of its facilities.

b. Billing for amounts due the Commission under this Agreement will ordinarily be made

(1) Following the performance of any service, and

(2) Semiannually for use-charge and for loss or consumption of material.

c. All billings and payments made on a provisional basis are subject to adjustment to recognize actual or calculated amounts, enrichment, isotopic content, and specifications of material in-

volved. Whenever Agency has paid for material reported as having been lost or consumed and such material is later re-established in Agency's account, the Commission shall refund to Agency (or appropriately set off against any amounts due the Commission) the amount paid by Agency for such material. The adjustments provided for in this paragraph will not subject Agency or the Commission to liability for interest.

d. All bills rendered by or on behalf of the Commission are due 30 days from the date of invoice.

ARTICLE 11 — TIME OF DELIVERY

The Commission will make reasonable efforts to deliver material at the time or times stated in orders for material subject to this Agreement.

ARTICLE 12 — DELIVERY — F.O.B. POINT

a. Material furnished directly from a Commission facility will be shipped f.o.b. commercial conveyance at such Commission facility. Delivery of material or containers to Agency or its designee or to a carrier for the account of Agency or its designee shall be deemed delivery of such material or containers to Agency for the purposes of this Agreement.

b. Unless Agency furnishes a prepared bill of lading, all shipments by the Commission will be made collect on a commercial bill of lading to be converted at destination.

c. When Agency obtains material from a lessee of the Commission pursuant to this Agreement, such material is furnished in place, and, as between the Commission and Agency, all costs of packaging, shipment, and handling shall be the responsibility of Agency.

ARTICLE 13 — CYLINDERS AND EQUIPMENT

a. All shipments of enriched uranium (U-235) in the form of uranium hexafluoride (UF_6) from the Commission to Agency, and from Agency directly to the Commission, will be made in AEC-owned cylinders unless the use of other cylinders is mutually agreed to by the Commission and the Agency. AEC-owned cylinders for return of UF_6 directly to the Commission will be made available to Agency f.o.b. commercial conveyance at the Commission facility.

b. Except as provided in a, above, shipments of material subject to this Agreement to Agency, and the return of such materials to the Commission, shall be made only in containers and/or equipment acceptable to the Commission. The Commission may, but shall not be required to, furnish containers and equipment for shipping such material.

c. Any non-AEC-owned cylinders, containers and equipment furnished or utilized by Agency will meet current Commission specifications and practices as to safety, design criteria, cleanliness and freedom from contamination, of which the Commission shall be the sole judge. The Commission will endeavor to return non-AEC-owned cylinders, containers and other equipment to the Agency in a reasonable time. The Commission shall be responsible for and shall reimburse the Agency for any loss of or damage to such cylinders, containers or equipment occurring from the time of delivery to the Commission until delivery to the Agency. Such return shipments by the Commission will be made f.o.b. commercial conveyance at the Commission facility.

d. Agency shall pay such rental charge, if any, for AEC-owned cylinders, containers and equipment as shall be set forth or referenced in the orders executed by Agency and the Commission for delivery of material. Unless otherwise agreed, Agency will clean AEC-owned cylinders, containers, or equipment to be returned directly to the Commission to the satisfaction of the Commission. The Agency will keep AEC-owned cylinders, containers, and equipment in good

condition, and will return them to the Commission facility from which received, f.o.b. commercial conveyance at such facility. Agency shall reimburse the Commission for any loss of or damage to AEC-owned cylinders, containers, or equipment occurring from the time of delivery to Agency (or to a carrier for delivery to Agency) until return to the Commission, as provided above. AEC-owned cylinders, containers, or equipment will be used only for storage of material shipped therein, or for return directly to the Commission of material designated by the Commission to be shipped therein. Any residual quantities of material in cylinders, containers, and equipment returned to the Commission will be deemed to have been lost or consumed by Agency and Agency shall pay for such material in accordance with this Agreement.

e. Whenever material is shipped to the Commission, and the Commission elects to decontaminate the containers, railroad cars, trucks or other shipping vehicles or the Commission's unloading area and machinery, because the containers, or the material or the method of shipment failed to meet the health and safety standards prescribed by the Commission or any other Government agencies having jurisdiction over such matters, the Agency shall pay the Commission the full cost of such decontamination as determined by the Commission in accordance with established Commission pricing policy.

ARTICLE 14 – TRANSFER OF MATERIAL

Transfer of material by the Agency to a lessee with the approval of the Commission as provided in this Agreement shall not have the effect of relieving the Agency of any obligation hereunder, except as to return of or payment for material so transferred.

ARTICLE 15 – OTHER CONTRACTS AND AGREEMENTS

This Agreement contemplates the possibility of separate agreements between the Agency and the Commission for processing services of irradiated materials which are subject to this Agreement and/or agreements between Agency and the Commission under which material subject to this Agreement is made available to the Commission for its benefit, which may provide for suspension, termination, or revision of matters hereunder, and/or for measurement of amounts of material which the Agency is returning. Except for such suspension or termination, or revision or the use of measurement data in determining amounts of material returned for which the Agency will be allowed credit hereunder, the Agency's obligations under this Agreement for material subject to this Agreement shall continue notwithstanding the existence of such separate agreement or agreements.

ARTICLE 16 – NOTICES

a. Any notices required by this Agreement of the Agency shall be submitted in writing to the Commission addressed to:

AEC Materials Leasing Officer
Oak Ridge Operations Office
United States Atomic Energy Commission
Post Office Box E
Oak Ridge, Tennessee

b. Any notices required by this Agreement of the Commission shall be submitted in writing to the Agency addressed to:

Commander
Mare Island Naval Shipyard
Vallejo, California

IN WITNESS WHEREOF, the parties have executed this Interagency Agreement the day and year first above written.

Department of Navy, Bureau of Ships
Mare Island Naval Shipyard
(Agency)

BY: _____

TITLE: _____

THE UNITED STATES ATOMIC ENERGY COMMISSION

BY: _____
(AEC Materials Leasing Officer)

10330/1
Ser 682C-759

FIRST ENDORSEMENT ON NAVSHIPYD, MARE ISLAND LETTER 10330, 108-26439
OF 17 SEPTEMBER 1964

29 SEP 1964

From: Chief, Bureau of Ships
To: Chief, Source and Special Nuclear Materials Branch
Division of Materials Licensing
U. S. Atomic Energy Commission
Washington, D. C. 20545

Subj: Special Nuclear Material License No. SNM-232; Request For Cancellation Of

1. Basic letter contains a request that the subject license be cancelled.

2. The amount of plutonium in the two alpha calibration sources is well within the allowable activity of 5 microcuries specified in Title 10, CFR, Part 70.19(C)-1.

Copy to:
BUMED (Code 74)

NAVSHIPYD, MARE

R. D. CLUBB
By direction

MAHAFFEY/mitchell
61457 - 9/28/64
Serial 640923-0271

NAVEXOS-4181

USE FOR URGENT LETTERS ONLY

NAVAL SPEEDLETTER

DO NOT CLEAR THROUGH COMMUNICATION OFFICE

(One box must be checked)

☐ REGULAR MAIL ☐ SPECIAL DELIVERY

☐ AIR MAIL ☐ REGISTERED MAIL

CLASSIFICATION

IN REPLY REFER TO

10330/1

DATE 21 SEP 1964

AM AM AM

TO:

Commander
MARE Island Naval Shipyard
Vallejo, California

NAVAL SPEEDLETTER—
Permits dispatch or informal language.
May be sent (1) with enclosures, (2) in a window envelope (size 8⅞" x 3⅞"), if contents are not classified as confidential or higher, (3) to both naval and nonnaval activities.
Is packaged 500 sheets of white or of one color: yellow, pink, or green.

(Fold)

AIR MAIL

Confirming telephone conversation with Mr. G. J. Rosati, (NAVSHIPYD, MARE) on 21 September 1964.

The Bureau of Ships has no objections to an Atomic Energy Commission (AEC) Inspection of the Shipyard Facilities on 23 September 1964 provided there are no interruptions to work schedules.

R. D. CLUBE
By direction

MAHAFFEY/mitchell
61457 - 9/21/64

COPY TO

AEC, Chief, Isotopes Branch
Division of Materials Licensing
Washington, D. C.

ADDRESS:

CHIEF, BUREAU OF SHIPS
DEPARTMENT OF THE NAVY
WASHINGTON, D. C.
20360

← SENDER'S MAILING ADDRESS

Address reply as shown at left; or reply hereon and return in window envelope (size 8⅞" x 3⅞"), if not classified as confidential or higher.

CLASSIFICATION

NNNNCDA557GCV638
RR RUECD
DE RUWSDM 034 21/1659Z
ZNR
R 211545Z
FM NSY MARE
TO RUECD/BUSHIPS
BT
UNCLAS
1. VISIT CLRNCE REQ MINSY EMPLS US CITS
A. LOUIS R POLLACK SUPVY CHEMIST (GEN) CLRD SECGET BI 18 MAY 56
B. GINO L GUIDI MARINE ENGR CLRD SECRET LBI 19 MAY 53
C. VISIT 22 & 23 SEPT 64 TO ATTEND CONF TO ESTABLISH CONTAMINATION LEVEL SPECIFICATIONS & METHOD OF DETERMINING CONTAMINATION LEVEL OF SUB HYDRAULIC SYS
D. REPLY IF NEG
BT

SH. 35

21 September 1964

Telcon - Mr. G. J. Rosati with LCdr. Clubb -

1. Mr. Rosati called re - to planned Inspection by AEC on Wed., 23 Sept. 1964.

2. LCdr. Clubb stated phone gave verbal OK but ltr. confirming would follow.

3. Mr. Rosati made re - to Mare Island ltr. to Code 362, dtd. 12 June 1961, ser 10330 (100-644); also, BUSHIPS ltr., Ser. 710330/2, 362-565 of 21 June 1961.

Air Mail Spdltr. Ser 682c-749 - confirming telcon with Mr. G. J. Rosati (M.I.) on 21 Sep. 1964.

BUSHIPS has no objection to an AEC Inspection of the Shpyd Facilities on 23 Sept. 1964 provided there are no interruptions to work schedules.

8595

G.J. Rosati – Ind. Hyg.

C.G. Donahoe – Rad. Con Br. – Nucl. Pwr Div 8686

3615

L.R. Pollack – Ind. Lab.

Rosati Code 108

730

Donahoe 2304

Pollack 303C

1 25 P.M.

U-463-64 f

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

IN REPLY REFER TO:
ML:IB:37

July 31, 1964

682/RY

Ser. Code 682C - 706 of 26 Aug 1964
forded COMNAVSHIPYD Mare Application
for renewal of lic. 4-364-5 to AEC.

Commanding Officer
Mare Island Naval Shipyard
Vallejo, California

SUBJECT: NOTICE OF LICENSE EXPIRATION

Dear Sir:

Notice is given that Byproduct Material (Radioisotopes) License No. 4-364-5 expires on September 30, 1964.

If you desire to continue your radioisotope program, an application for renewal of the license should be filed with this office. It is to your advantage to file such an application at least thirty (30) days before the expiration date of your existing license. Your program will then be covered by your existing license until we can issue you a new license. (Title 10, Code of Federal Regulations, Part 30, Section 30.35(b).) If applications received less than 30 days prior to the expiration date of your license cannot be processed before your existing license expires, this could result in your possessing radioisotopes without a valid license which is a violation of Federal Regulations.

If you do not wish to renew your license, please complete the enclosed Form WA-277, "Certificate - Disposition of Radioisotopes," and return it to this office.

In submitting a renewal application, all items in Form AEC-313 must be completed. Information contained in previous applications, statements, or reports filed with the Commission with respect to the information specified in Items 8 thru 15, Form AEC-313, may be incorporated by reference, provided that such references are clear and specific. References should not be made to the license. The document which contains the information should be given instead.

If you have obtained an amendment which has extended the expiration date of the above license, or if a new license has been issued which supersedes the above license, please disregard this notice.

This notice of your license expiration is sent for your convenience and it should not be interpreted that similar notices will be sent in the future. The responsibility for license renewal remains with the licensee.

Sincerely yours,

Richard E. Cunningham

Richard E. Cunningham
Chief, Isotopes Branch
Division of Materials
Licensing

Enclosures:
1. Form AEC-313, w/instr. (1 set)
2. Certificate
3. 10 CFR 30

GPO 874-280

10330/1
Ser 602C-706

26 AUG 1964

From: Chief, Bureau of Ships
To: Chief, Isotopes Branch
Division of Materials Licensing
U. S. Atomic Energy Commission
Washington, D. C. 20545

Subj: AEC Byproduct Material License No. 4-364-5; Application For Renewal Of

Ref: (a) AEC letter ML:IB:37 of 31 July 1964 to COMNAVSHIPYD MARE

Encl: (1) Original and two copies of COMNAVSHIPYD MARE letter 10330 (100-26438) of 12 August 1964 with copies of enclosures thereto

1. The renewal application for subject license is forwarded as enclosure (1) in response to your notice of license expiration, reference (a).

2. Revised Emergency and Operating Procedures for these sealed sources and equipments containing them have been reviewed and seems to be adequately covered. This material is contained in Attachment "C" to enclosure (1).

Copy to:
BUMED (Code 74)(w/encl (1) and attachments)

R. D. CLUBB
By direction

COMNAVSHIPYD MARE

MAHAFFEY/mitchell
61457 - 8/25/64

10330
(108-26438)

AUG 12 1964

From: Commander, Mare Island Naval Shipyard
To: Chief, Bureau of Ships (Code 682C)

Subj: AEC Byproduct Material License No. 4-364-5; application for renewal

Ref: (a) BUSHIPSINST 5100.11A

Encl: (1) Form AEC-313, Application for Byproduct Material License with Attachment C (original and 5 copies)

1. The renewal of AEC Byproduct Material License No. 4-364-5 is requested in order to continue the use of sealed byproduct material calibration sources in the Electronics Shop, Radiac Repair Facility, Mare Island Naval Shipyard. In accordance with reference (a), the license renewal application is forwarded as enclosure (1).

2. The Shipyard Radioactive Materials Control Committee has reviewed the application and has recommended approval. It considers the facilities and equipment ample for protecting health and minimizing danger to life or property and believes that the users are qualified by training and experience to use these sources in a safe manner.

3. The project for which this byproduct material is used has been coordinated within the Shipyard under the Medical Officer, the Industrial Radiological Safety Officer and the Radioactive Materials Control Committee.

This mtl. forwded to AEC by BUSHIPS ltr ser 682C-706 dtd 26 Aug 1964

EDWARD L. FAHY

Form AEC-313 (5-58)

ATOMIC ENERGY COMMISSION

APPLICATION FOR BYPRODUCT MATERIAL LICENSE

Form approved. Budget Bureau No. 38-R027.4.

INSTRUCTIONS.—Complete Items 1 through 16 if this is an initial application. If application is for renewal of a license, complete only Items 1 through 7 and indicate new information or changes in the program as requested in Items 8 through 15. Use supplemental sheets where necessary. Item 16 must be completed on all applications. Mail three copies to: U.S. Atomic Energy Commission, Washington, D.C., 20545. Attention: Isotopes Branch, Division of Licensing and Regulation. Upon approval of this application, the applicant will receive an AEC Byproduct Material License. An AEC Byproduct Material License is issued in accordance with the general requirements contained in Title 10, Code of Federal Regulations, Part 30 and the Licensee is subject to Title 10, Code of Federal Regulations, Part 20.

1. (a) NAME AND STREET ADDRESS OF APPLICANT. (Institution, firm, hospital, person, etc.)

Commander
Mare Island Naval Shipyard
Vallejo, California

(b) STREET ADDRESS(ES) AT WHICH BYPRODUCT MATERIAL WILL BE USED. (If different from 1 (a).)

2. DEPARTMENT TO USE BYPRODUCT MATERIAL

Production Department
Electronics Shop
Radiac Repair Facility

3. PREVIOUS LICENSE NUMBER(S). (If this is an application for renewal of a license, please indicate and give number.) RENEWAL of AEC License No. 4-364-5 (164)

4. INDIVIDUAL USER(S). (Name and title of individual(s) who will use or directly supervise use of byproduct material. Give training and experience in Items 8 and 9.) Byproduct materials shall be used by, or under the direct personal supervision of those individuals who have been certified as qualified by the Industrial Radiological Safety Officer.

5. RADIATION PROTECTION OFFICER (Name of person designated as radiation protection officer if other than individual user. Attach resume of his training and experience as in Items 8 and 9.) G. J. Bosati, Industrial Radiological Safety Officer (See COMNAVSHIPYDMARE ltr to AEC-10330(108-640) dtd 5-10-61 for resume of training and experience.)

6. (a) BYPRODUCT MATERIAL. (Elements and mass number of each.)

A. Cesium 137

B. Cobalt

C. Cesium 137

(b) CHEMICAL AND/OR PHYSICAL FORM AND MAXIMUM NUMBER OF MILLICURIES OF EACH CHEMICAL AND/OR PHYSICAL FORM THAT YOU WILL POSSESS AT ANY ONE TIME. (If sealed source(s), also state name of manufacturer, model number, number of sources and maximum activity per source.)

A. ORNL sealed source Drwg. No. 2333A — A. 1 source of 120,000 mc

B. ORNL sealed source Drwg. No. 2333 — B. 1 source of 12,000 mc

C. ORNL sealed source Drwg. No. 2333A — C. 1 source of 120,000 mc to be verified upon receipt.

7. DESCRIBE PURPOSE FOR WHICH BYPRODUCT MATERIAL WILL BE USED. (If byproduct material is for "human use," supplement A (Form AEC-313a) must be completed in lieu of this item. If byproduct material is in the form of a sealed source, include the make and model number of the storage container and/or device in which the source will be stored and/or used.) Byproduct materials A and B are to be used in Model AN/UDM-1A and AN/UDM-1 calibrator sets, respectively, for calibrating high and low range gamma detection instruments and, in connection with AN/UDM-3, neutron detection instruments. Byproduct material C is to be used in a Mobile Radiac Repair Facility Model AN/MDM-1 ( ) for calibrating radiac equipment at temporary locations for various activities throughout the Twelfth Naval District. The facility consists of a source-containing Model AN/UDM-1A calibrator set mounted in a trailer which is towed by a truck van. This facility will be moved on highways between the various temporary field locations in the States of California, Nevada and Utah as needed.

(Continued on reverse side)

Form AEC-313 (5-58)

TRAINING AND EXPERIENCE OF EACH INDIVIDUAL NAMED IN ITEM 4 (Use supplemental sheets if necessary)

8. TYPE OF TRAINING	WHERE TRAINED	DURATION OF TRAINING	ON THE JOB (Circle answer)	FORMAL COURSE (Circle answer)
a. Principles and practices of radiation protection	See Attachment A on previous application for renewal dated 31 August 1962		Yes No	Yes No
b. Radioactivity measurement standardization and monitoring techniques and instruments			Yes No	Yes No
c. Mathematics and calculations basic to the use and measurement of radioactivity			Yes No	Yes No
d. Biological effects of radiation			Yes No	Yes No

9. EXPERIENCE WITH RADIATION. (Actual use of radioisotopes or equivalent experience.)

ISOTOPE	MAXIMUM AMOUNT	WHERE EXPERIENCE WAS GAINED	DURATION OF EXPERIENCE	TYPE OF USE
See Attachment A on previous application for renewal dated 31 August 1962.				

10. RADIATION DETECTION INSTRUMENTS. (Use supplemental sheets if necessary.)

TYPE OF INSTRUMENTS (Include make and model number of each)	NUMBER AVAILABLE	RADIATION DETECTED	SENSITIVITY RANGE (mr/hr)	WINDOW THICKNESS (mg/cm²)	USE (Monitoring, surveying, measuring)
AN/PDR-18	4	Gamma & Beta	0-500 r/hr	Thick aluminum case	Personnel Monitoring
AN/PDR-27	6	Gamma & Beta	0-500 mr/hr	3.5 - 4	Monitoring and Surveying

11. METHOD, FREQUENCY, AND STANDARDS USED IN CALIBRATING INSTRUMENTS LISTED ABOVE. Methods and standards described in manuals and manufacturer instructions for calibrators and instruments are applied to calibrate the instruments not less frequently than every three months.

12. FILM BADGES, DOSIMETERS, AND BIO-ASSAY PROCEDURES USED. Give the frequency, method of calibrating and processing film badges. Film badges and self reading dosimeters are used. Dosimeter readings are recorded daily. Film badges are routinely issued and processed monthly by Earth Mykits in the branch. If a suspected excessive exposure or other non-routine incident occurs in the interim, special processing is done.

INFORMATION TO BE SUBMITTED ON ADDITIONAL SHEETS

See Attachment B on previous renewal dated 31 Aug 62 and supplement thereto submitted on 2 Apr 63.

13. FACILITIES AND EQUIPMENT. Describe facilities and remote handling equipment, storage containers, shielding, fume hoods, etc. Explanatory sketch of facility is attached. (Circle answer) Yes No

14. RADIATION PROTECTION PROGRAM. Describe radiation protection program including precautionary measures. If application covers sealed sources, submit leak testing procedures where applicable, name, training, and experience of person to perform leak tests, and arrangements for performing initial radiation survey, servicing, maintenance and repair of the source.

Revised attachment C enclosed.

15. WASTE DISPOSAL. If commercial waste disposal service is employed, state name of company, if licensed, submit license number. If not employed, state licensed waste disposal site to be used for disposing of radioactive wastes and estimates of the type and amount of activity involved.

Waste disposal not anticipated.

CERTIFICATE (This item must be completed by applicant)

16. THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATE ON BEHALF OF THE APPLICANT NAMED IN ITEM 1, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS, PART 30, AND THAT ALL INFORMATION CONTAINED HEREIN, INCLUDING ANY SUPPLEMENTS ATTACHED HERETO, IS TRUE AND CORRECT TO THE BEST OF OUR KNOWLEDGE AND BELIEF.

Commander, Mare Island Naval Shipyard

Applicant named in item 1

Date AUG 12 1964

By: EDWARD J. FAHY

Title of certifying official: Rear Admiral, U.S.N. Shipyard Commander

WARNING.—18 U. S. C., Section 1001; Act of June 25, 1948; 62 Stat. 749; makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

DEPARTMENT OF THE NAVY
BUREAU OF SHIPS
WASHINGTON, D. C. 20360

IN REPLY REFER TO
10330/1
Ser 682C-513

Downgraded to UNCLASSIFIED when [illegible]

19 JUN 1964

Address All Replies to Chief, Bureau of Ships

TO: Commander, Mare Island Naval Shipyard, Vallejo, California

VIA

THE MATERIAL ITEMIZED BELOW, OR ON ATTACHED LIST, IS FORWARDED AS INDICATED:

- [ ] Forwarded per your request
- [X] For information and retention
- [ ] On loan and to be returned to the Bureau of Ships
- [ ] Return of loaned material
- [X] For use in connection with AEC License No. 4-364-7, Amendment #3
- [ ] Partial fulfillment of order - Balance will be forwarded when available
- [ ] SECRET AND TOP SECRET - THE ATTACHED RECEIPT, OPNAV 5511-10 MUST BE SIGNED AND RETURNED TO THE BUREAU OF SHIPS IMMEDIATELY.

Encl:
(1) AEC License #4-364-7, Amendment No. 3

M. G. WILLIAMS
By Direction

Copy to:
BUPEND (Code 74)

MAHAFFEY/mitchell
61457 - 6/19/64

C-23156

NAVSHIPS 4669 (REV. 11-63)

NAVEXOS-4181

NAVAL SPEEDLETTER

USE FOR URGENT LETTERS ONLY

DO NOT CLEAR THROUGH COMMUNICATION OFFICE

(One box must be checked)

☐ REGULAR MAIL FM RM FM ☐ SPECIAL DELIVERY

☐ AIR MAIL ☐ REGISTERED MAIL

CLASSIFICATION

UNCLASSIFIED

IN REPLY REFER TO

10330/1
~~Ser 6020-511~~

DATE

18 JUN 1964

NAVAL SPEEDLETTER

Permits dispatch or informal language.

May be sent (1) with enclosures, (2) in a window envelope (size 8⅞" x 3⅞"), if contents are not classified as confidential or higher, (3) to both naval and nonnaval activities.

Is packaged 500 sheets of white or of one color: yellow, pink, or green.

TO:

Commander
Mare Island Naval Shipyard
Vallejo, California

(Fold)

Confirming telephone conversation with Mr. Rosati, the use of Training Plan No. MI-100-63-27 is considered by the Bureau of Ships as being adequate to qualify LTJG. Lieske to act as Radiological Protection Officer aboard the USS DIXIE(AD-14).

M. G. WILLIAMS
By Direction

MAHAFFEY/mitchell
61357 - 6/18/64

COPY TO

USAEC, Isotopes Branch
Division of Materials Licensing

ADDRESS:

Chief, Bureau of Ships
Department of the Navy
Washington, D. C. 20360

← SENDER'S MAILING ADDRESS

Address reply as shown at left; or reply hereon and return in window envelope (size 8⅞" x 3⅞"), if not classified as confidential or higher.

CLASSIFICATION

1500
Ser 12/
10 JUN 1964

From: Commander Cruiser-Destroyer Force, U. S. Pacific Fleet
To: Commander Mare Island Naval Shipyard, Vallejo, California 94592

Subj: Training for Radiation Protection Officer; request for

Ref: (a) AEC Licensing Guide

1. It is requested that a course of instruction be provided to prepare the USS DIXIE (AD-14) Radiation Safety Officer in accordance with Appendix E of reference (a). Training is desired prior to August 1964 when DIXIE expects to submit application for an AEC License.

2. The officer to receive this training is LTJG U. D. LIESKE II, 662195/1105. He is a graduate of Texas A & M University and holds a B. S. Degree in Civil Engineering. He has completed the five week ABCD Course at San Francisco, California but has not received any training in Radiation Safety.

R. J. HANKS
Assistant Chief of Staff
for Personnel/Administration

Copy to:
BUSHIPS (Code 362B)
CO, USS DIXIE (AD-14)

362B

9903

This is in relation to phone call from Mr [illegible], Mare Island Shipyard, & our [illegible] (Ser 682C-571) 6-18-64 confirming [illegible] & [illegible] adequacy of Training Plan MI-100-63-27 (Paid pertaining to Rad Prot. Officer)
[illegible]

640622-0664

17 June 1964

Telcon from Mr. Rosati - Mare Island Shipyard

1. Have a request from CRUDESPAC for Mare Island to Train a Radiation Protection Officer for USS DIXIE.

2. Will use Training Plan # MI-100-63-27

3. Radiation Protection Officers from USS PRAIRIE (Lt. Richardson) & USS ISLE ROYALE (Lt. Chamberlain) have been thru this training program.

4. Candidate for USS DIXIE is a graduate* from {Texas A&M

Question - Will Bureau & AEC accept this?

Ans. - Will review re - Training Plan
Will check with AEC

* LtJG D.D. Lieske

Question - What deadline do you have to meet?

Ans. - Given Mare Island as 14 Aug - best planning dates will be 21 Aug.

Discussion - Since 4 Weeks of training will be at U.S. Public Health Service - Next class scheduled for week beginning 13 July 1964.

Action - Code 682 will return call - confirm telcon by Spltr.

DEPARTMENT OF THE NAVY
BUREAU OF SHIPS
WASHINGTON, D. C. 20360

IN REPLY REFER TO
10330/1
Ser 682C-398

XXXXXXXXXX UNCLASSIFIED XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
Downgraded to when enclosure(s) is/are detached

File - Mare. Is.

5 - JUN 1964

Address All Replies to Chief, Bureau of Ships

TO: Mr. G. J. Rosati, MARE ISLAND Naval Shipyard, Vallejo, California

VI XXX

THE MATERIAL ITEMIZED BELOW, OR ON ATTACHED LIST, IS FORWARDED AS INDICATED:

Forwarded per your request

For information and retention

On loan and to be returned to the Bureau of Ships

XX *Return of loaned material* (Mr. JAMES J. MCCRACKEN, CODE 682C, BUSHIPS)

For use in connection with

Partial fulfillment of order - Balance will be forwarded when available

SECRET AND TOP SECRET - THE ATTACHED RECEIPT, OPNAV 5511-10 MUST BE SIGNED AND RETURNED TO THE BUREAU OF SHIPS IMMEDIATELY.

Encl:
(1) 12 Photographs and
2 Films

R. D. CLUBB
By direction

MCCRACKEN/mitchell
62935 - 6/4/64

C-23156

NAVSHIPS 4669 (REV. 11-63)

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

IN REPLY REFER TO
10330/1
Ser 682C-362

XXXXXXXXX UNCLASSIFIED XXXXXXXXXXXXXXXXXXXXXXXXXXXX

Downgraded to when enclosure(s) is/are detached

8-MAY 1964

Address All Replies to Chief, Bureau of Ships

TO: ~~Commander, MARE Island Naval Shipyard, Vallejo, California~~ XXX

VIA:

THE MATERIAL ITEMIZED BELOW, OR ON ATTACHED LIST, IS FORWARDED AS INDICATED:

XX *Forwarded per your request*

For information and retention

On loan and to be returned to the Bureau of Ships

XX *Return of loaned material*

For use in connection with ~~AEC License No. 4-364-5~~

Partial fulfillment of order - Balance will be forwarded when available

SECRET AND TOP SECRET - THE ATTACHED RECEIPT, OPNAV 5511-10 MUST BE SIGNED AND RETURNED TO THE BUREAU OF SHIPS IMMEDIATELY.

Encl:
(1) Amendment No. 5 to
AEC License No. 4-364-5

M. G. WILLIAMS
By Direction

MCCRACKEN/mitchell
62935 - 5/8/64

NAVSHIPS 4669 (4-56)

10330/1
Ser 682C-352

5 MAY 1964

From: Chief, Bureau of Ships
To: Chief, Isotopes Branch
Division of Materials Licensing
U. S. Atomic Energy Commission
Washington, D. C. 20390

Subj: AEC Byproduct Material License No. 4-364-7; Application For Renewal Of

Encl: (1) Original and two copies of COMNAVSHIPYD MARE letter 10330 (108-26434) of 27 April 1964 with three copies of enclosures thereto

1. An application with supplemental attachments for renewal of subject license is forwarded as enclosure (1).

2. Specific changes to the application dated 29 March 1962 are contained in the updated material and includes:

a. Supplemental Sheet to Form AEC-313

Item 13. Facilities and Equipment - Para. 1 and 2 partial rewrite, para. 3 rewrite.

Item 14. Radiation Protection Program - Partial rewrite.

Item 15. Waste Disposal - Rewrite.

Figures 1 and 2 - Show the 2 and 5 mr/hr isodose lines respectively for sources on the calibration range.

b. Health Physics Branch Procedure V. E. 2(Rev.)

V. Contamination Control

E.2.b Procedure - Partial rewrite.

c. Health Physics Branch Procedure VII.A.1 - Pages 4 and 5 - Para. A.1.j. Exchange of Sealed Sources - rewrite.

d. Health Physics Branch Procedure VII.A.1., Appendix Rev. 27 March

10330/1
Ser 682C-352

1963. Page 1 - VII.A.1.1. Description - Partial rewrite. Page 1 - VII.A.1.2. Procedure - Para. b, c, f, and h rewrite.

Copy to:
BUSED(Code 74) (w/encl (1))

COMNAVSHIPYD MARE

M. G. WILLIAMS
By Direction

MAHAFFEY/mitchell
62935 - 5/5/64

4-271-64

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

IN REPLY REFER TO:
I&R:IB:37

APR 30 1964

Department of the Navy
Mare Island Naval Shipyard
Industrial Hygiene Division
Health Physics Branch
Vallejo, California

SUBJECT: NOTICE OF LICENSE EXPIRATION

Gentlemen:

Notice is given that Byproduct Material (Radioisotopes) License No. 4-364-7 expires on June 30, 1964.

If you desire to continue your radioisotope program, an application for renewal of the license should be filed with this office. It is to your advantage to file such an application at least thirty (30) days before the expiration date of your existing license. Your program will then be covered by your existing license until we can issue you a new license. (Title 10, Code of Federal Regulations, Part 30, Section 30.35(b)). If applications received less than 30 days prior to the expiration date of your license cannot be processed before your existing license expires, this could result in your possessing radioisotopes without a valid license which is a violation of Federal Regulations.

If you do not wish to renew your license, please complete the enclosed Form WA-277, "Certificate - Disposition of Radioisotopes," and return it to this office.

In submitting a renewal application, all items in Form AEC-313 must be completed. Information contained in previous applications, statements, or reports filed with the Commission with respect to the information specified in Items 8 thru 15, Form AEC-313, may be incorporated by reference, provided that such references are clear and specific. References should not be made to the license. The document which contains the information should be given instead.

APR 30 1964

If you have obtained an amendment which has extended the expiration date of the above license or if a new license has been issued which supersedes the above license, please disregard this notice.

This notice of your license expiration is sent for your convenience and it should not be interpreted that similar notices will be sent in the future. The responsibility for license renewal remains with the licensee.

Very truly yours,

Richard E. Cunningham

Richard E. Cunningham
Chief, Isotopes Branch
Division of Licensing and Regulation

Enclosures:
1. Application forms w/instr. (1 set)
2. Certificate
3. Part 30, 10 CFR

10330
(108-26434

From: Commander, Mare Island Naval Shipyard
To: Chief, Bureau of Ships (Code 682C)

APR 27 1964

Subj: AEC Byproduct Material License No. 4-364-7; application for renewal

Ref: (a) BUSHIPSINST 5100.11A

Encl: (1) Form AEC-313, Application for Byproduct Material License with Supplemental Attachments (original and 5 copies)

1. The renewal of AEC Byproduct Material License No. 4-364-7 is requested in order to continue the use of sealed byproduct material calibration sources in the Health Physics Branch, Industrial Hygiene Division, Medical Department, Mare Island Naval Shipyard. In accordance with reference (a), the license renewal application is forwarded as enclosure (1).

2. The Shipyard Radioactive Materials Control Committee has reviewed the application and has recommended approval. It considers the facilities and equipment ample for protecting health and minimizing danger to life or property and believes that the users are qualified by training and experience to use these sources in a safe manner.

3. The project for which this byproduct material is used has been coordinated within the Shipyard under the Medical Officer, the Industrial Radiological Safety Officer and the Radioactive Materials Control Committee.

EDWARD J. FAHY

Form AEC-313
(5-58)

ATOMIC ENERGY COMMISSION

APPLICATION FOR BYPRODUCT MATERIAL LICENSE

Form approved.
Budget Bureau No. 38-R027.4.

INSTRUCTIONS.—Complete Items 1 through 16 if this is an initial application. If application is for renewal of a license, complete only Items 1 through 7 and indicate new information or changes in the program as requested in Items 8 through 15. Use supplemental sheets where necessary. Item 16 must be completed on all applications. Mail three copies to: U. S. Atomic Energy Commission, Washington 25, D. C. Attention: Isotopes Branch, Division of Licensing and Regulation. Upon approval of this application, the applicant will receive an AEC Byproduct Material License. An AEC Byproduct Material License is issued in accordance with the general requirements contained in Title 10, Code of Federal Regulations, Part 30 and the Licensee is subject to Title 10, Code of Federal Regulations, Part 20.

1. (a) NAME AND STREET ADDRESS OF APPLICANT. *(Institution, firm, hospital, person, etc.)*

Commander
Mare Island Naval Shipyard
Vallejo, California (94592)

(b) STREET ADDRESS(ES) AT WHICH BYPRODUCT MATERIAL WILL BE USED. *(If different from 1 (a).)*

2. DEPARTMENT TO USE BYPRODUCT MATERIAL

Health Physics Branch
Industrial Hygiene Division
Medical Department

3. PREVIOUS LICENSE NUMBER(S). *(If this is an application for renewal of a license, please indicate and give number.)* RENEWAL of 4-364-7 (P64)

4. INDIVIDUAL USER(S). *(Name and title of individual(s) who will use or directly supervise use of byproduct material. Give training and experience in Items 8 and 9.)* Same as in application dated 28 Mar 62 (ltr 10330 (108-11865))

5. RADIATION PROTECTION OFFICER *(Name of person designated as radiation protection officer if other than individual user. Attach resume of his training and experience as in Items 8 and 9.)* Guido J. Rosati, Industrial Radiological Safety Officer, (See ltr 10330 (108-640) of 10 May 61 from COMNAVSHIPYDMARE to AEC for resume)

6. (a) BYPRODUCT MATERIAL. *(Elements and mass number of each.)*

(b) CHEMICAL AND/OR PHYSICAL FORM AND MAXIMUM NUMBER OF MILLICURIES OF EACH CHEMICAL AND/OR PHYSICAL FORM THAT YOU WILL POSSESS AT ANY ONE TIME. *(If sealed source(s), also state name of manufacturer, model number, number of sources and maximum activity per source.)*

Same as in application dated 28 Mar 62 (ltr 10330 (108-11865)).

7. DESCRIBE PURPOSE FOR WHICH BYPRODUCT MATERIAL WILL BE USED. *(If byproduct material is for "human use," supplement A (Form AEC-313a) must be completed in lieu of this item. If byproduct material is in the form of a sealed source, include the make and model number of the storage container and/or device in which the source will be stored and/or used.)*

Same as in application dated 28 Mar 62 (ltr 10330 (108-11865)).

(Continued on reverse side)

Form AEC-313 (5-58)

TRAINING AND EXPERIENCE OF EACH INDIVIDUAL NAMED IN ITEM 4 (Use supplemental sheets if necessary)

8. TYPE OF TRAINING	WHERE TRAINED	DURATION OF TRAINING	ON THE JOB (Circle answer)	FORMAL COURSE (Circle answer)
a. Principles and practices of radiation protection	Same as in application dated 28 Mar 62 (ltr 10330 (108-11865)) and amendment thereto dated 12 Jun 62 (ltr 10330 (108-11868)).		Yes No	Yes No
b. Radioactivity measurement standardization and monitoring techniques and instruments			Yes No	Yes No
c. Mathematics and calculations basic to the use and measurement of radioactivity			Yes No	Yes No
d. Biological effects of radiation			Yes No	Yes No

9. EXPERIENCE WITH RADIATION. (Actual use of radioisotopes or equivalent experience.)

ISOTOPE	MAXIMUM AMOUNT	WHERE EXPERIENCE WAS GAINED	DURATION OF EXPERIENCE	TYPE OF USE
Same as in application dated 28 Mar 62 (ltr 10330 (108-11865)).				

10. RADIATION DETECTION INSTRUMENTS. (Use supplemental sheets if necessary.)

TYPE OF INSTRUMENTS (Include make and model number of each)	NUMBER AVAILABLE	RADIATION DETECTED	SENSITIVITY RANGE (mr/hr)	WINDOW THICKNESS (mg/cm²)	USE (Monitoring, surveying, measuring)
Refer to application dated 28 Mar 62 (ltr 10330 (108-11865)). Delete Model CS-40, RFD Instrument Company and add the following:					
Model 440 Victoreen Instrument Company	2	beta gamma	0.01 to 300	1.	monitoring and surveying

11. METHOD, FREQUENCY, AND STANDARDS USED IN CALIBRATING INSTRUMENTS LISTED ABOVE.
Same as in application dated 28 Mar 62 (ltr 10330 (108-11865)).

12. FILM BADGES, DOSIMETERS, AND BIO-ASSAY PROCEDURES USED. (For film badges, specify method of calibrating and processing, or name of supplier.)
Same as in application dated 28 Mar 62 (ltr 10330 (108-11865)).

INFORMATION TO BE SUBMITTED ON ADDITIONAL SHEETS

13. FACILITIES AND EQUIPMENT. Describe laboratory facilities and remote handling equipment, storage containers, shielding, fume hoods, etc. Explanatory sketch of facility is attached. (Circle answer) (Yes) No See supplemental sheet

14. RADIATION PROTECTION PROGRAM. Describe the radiation protection program including control measures. If application covers sealed sources, submit leak testing procedures where applicable, name, training, and experience of person to perform leak tests, and arrangements for performing initial radiation survey, servicing, maintenance and repair of the source. See supplemental sheet

15. WASTE DISPOSAL. If a commercial waste disposal service is employed, specify name of company. Otherwise, submit detailed description of methods which will be used for disposing of radioactive wastes and estimates of the type and amount of activity involved. See supplemental sheet

CERTIFICATE (This item must be completed by applicant)

16. THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATE ON BEHALF OF THE APPLICANT NAMED IN ITEM 1, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS, PART 30, AND THAT ALL INFORMATION CONTAINED HEREIN, INCLUDING ANY SUPPLEMENTS ATTACHED HERETO, IS TRUE AND CORRECT TO THE BEST OF OUR KNOWLEDGE AND BELIEF.

Commander, Mare Island Naval Shipyard
Applicant named in item 1

Date APR 27 1964

By: Edward J. Fahy
EDWARD J. FAHY
Rear Admiral, U.S.N.
Shipyard Commander
Title of certifying official

WARNING.—18 U. S. C., Section 1001; Act of June 25, 1948; 62 Stat. 749; makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

* U.S. GOVERNMENT PRINTING OFFICE : 1961 O—590221