



DEPARTMENT OF THE ARMY
UNITED STATES ARMY TANK - AUTOMOTIVE AND ARMAMENTS COMMAND
ARMAMENT AND CHEMICAL ACQUISITION AND LOGISTICS ACTIVITY
ROCK ISLAND, ILLINOIS 61299-7630

REPLY TO
ATTENTION OF

23 MAY 1997

Yes -
10CFR 30.50(b)(1)(i)✓
10CFR 30.50(c)(2)

12-00722-06

3013027

Safety Office, Armament and Chemical Acquisition and
Logistics Activity

Mr. James Cameron
U.S. Nuclear Regulatory Commission
Region III
801 Warrenville Road
Lisle, Illinois 60532-4351

Dear Mr. Cameron:

Enclosed with this memorandum are 30 day follow-on reports concerning the Aberdeen Proving Grounds, MD incident reported to the Operations Center on 24 April 1997.

A synopsis of the incident follows:

On April 24, 1997 Aberdeen Proving Grounds, MD (APG) reported an incident involving improper work on and storage of tritium vials removed from fire control devices at APG.

The school had been performing unauthorized removal of tritium vials from devices used in class room instruction. This was done to preclude contaminating students during maintenance training. Furthermore, the vials were improperly stored after removal. The vials were accumulated in an unauthorized/uncontrolled area. Four vials were found to be broken, all others were intact.

Attachments include:

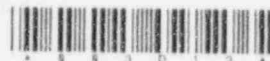
Enclosure A which details the event and actions taken to control and prevent reoccurrence.

Enclosure B which reports a reconciliation of the actual vials on hand in the maintenance room (page 1 of 6) and the fire control devices on hand (pages 2 of 6 thru 6 of 6).

The discrepancies indicate more vials on hand than devices from which they could have come. This is explained by the fact that some devices would have been discarded after being damaged beyond usefulness in the training process.

9706270005 970523
PDR ADOCK 03013027
C PDR

250135

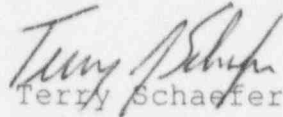


1E-72

-2-

The point of contact for this action is Mr. Timothy J. Mohs,
AMSTA-AC-SF, (309) 782-6228.

Sincerely,

A handwritten signature in dark ink, appearing to read "Terry Schaefer". The signature is stylized with a large, sweeping initial "T" and a cursive "S".

Terry Schaefer
Major, OD
Chief, Safety Office

Enclosures

16 May 1997

MEMORANDUM FOR Director, Armament and Chemical Acquisition and Logistics (ACALA) Activity, ATTN: AMSTA-AC-SF (Mr. Tim Mohs), Rock Island, IL 61299-7630

SUBJECT: Radiological Incident Report

1. On 23 April, 1997 an incident involving a find of four (4) broken level viles in bldg. 5047 Rm 12. OC&S maintenance facility was made. The find occurred during an inspection by ACALA.

a. Description of licensed material involved, kind, quantity, chemical and physical form:

- (1) Tritium
- (2) .3 curies (4 ea. @.075 curies)
- (3) Gas

b. Description of the circumstances under which the loss occurred:

Four broken tritium sources (level viles .075 curies ea) were discovered while ACALA inspector Ms. Dixie Wells and our APG facility ACALA rep Mr. Corpuz inspected bldg. 5047 Rm. 12 OC&S maintenance facility. This find was a surprise to everyone, as no one knew tritium elements were being removed at this site. There were twelve (12) leveling viles with .075 curies ea., of which four (4) were broken and fourteen (14) half moon viles with .81 curies of tritium ea. intact with their tritium gas. It seems that training devices were brought to bldg. 5046 Rm. 12 in the past for removal of their tritium elements ensuring a safer training environment for our students. The work performed was unsatisfactory for the training departments. At this point our instructors following Technical Manual guidance began removing the tritium from the training devices themselves. At this point our instructors were unaware they were doing anything wrong by removing/replacing tritium elements in our training devices. This task of removing tritium elements is no longer done at the U.S. Army Ordnance Center and School.

c. Description of disposition, or probable disposition of the licensed material involved:

The ACALA inspector Ms. Dixie Wells and our APG facility ACALA rep Mr. Corpuz immediately bagged the items (broken & unbroken), sealed off the area and reported the find to the OC&S RPO. The room was

ENC (A)
1 of 2

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MEMORANDUM FOR Director, Armament and Chemical Acquisition and Logistics (ACALA) Activity, ATTN: AMSTA-AC-SF (Mr. Tim Mohs), Rock Island, IL 61299-7630

isolated (24 hours) until surveys could be performed and a decon completed, as necessary. Surveys of the area revealed that the south west wall in the room had been contaminated. The bagged material was turned in through the OC&S S-4 for disposal as contaminated waste.

d. Exposures of individuals to radiation, circumstances under which the exposures occurred, and the possible total effective dose equivalent to persons in unrestricted areas:

A bioassay was ordered for Mr. James G. Loar who showed a tritium level of .003 micro curies per liter. This was not a determinable level from 0 by the lab (encl. 1). There was no evidence of tritium in Mr. Loar's urine sample. There are no expected health effects from his exposure. In the long term it is unknown whether Mr. James G. Loar had previously experienced an uptake of tritium gas from any of the tritium leveling viles discovered in bldg. 5047 Rm 12. Additionally, in accordance with regulation, a permanent record of this bioassay will be filed in Mr. Loar's medical record and with the:

Chief, U.S. Army Ionizing Radiation Dosimetry Center, U.S. Army Test Measurement and Diagnostic Equipment Activity, ATTN: AMSMI-TMDE-SR-DD/Bldg 5417, Redstone Arsenal, AL 35898-5400

No dose equivalent to persons in unrestricted areas.

e. Actions taken to recover the material:

The items were bagged immediately, the items reported to the OC&S RPO and the bagged items contained in an isolated area. The room was isolated (24 hours) until surveys could be analyzed and a decon completed, as necessary (encl 2).

f. Procedures or measures that have been or will be adopted to ensure against the reoccurrence of the event. Please identify any common threads if a similar occurrence has occurred at that location previously.

Tritium devices are no longer being removed or replaced at the U.S. Army Ordnance Center and School. E-mail and verbal communication to

16 May 1997

MEMORANDUM FOR Director, Armament and Chemical Acquisition and Logistics (ACALA) Activity, ATTN: AMSTA-AC-SF (Mr. Tim Mohs), Rock Island, IL 61299-7630

all our training departments to no longer remove or replace tritium from our training devices has been done. No common threads of similar occurrences are noted as this was the first known incident of this kind reported at this location. Building 5047 will be scheduled for a close out survey by CHPPM soonest.

2. Our POC for this action at the Ordnance Center and School is ARPO Mr. Edward Bennett DSN: 298-3654 or Comm. 410 278-3654/3418.

Frank E. Majewski

Mr. Frank E. Majewski
Safety and Environmental Office Manager



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
U.S. ARMY CENTER FOR HEALTH PROMOTION AND PREVENTIVE MEDICINE
5158 BLACKHAWK ROAD
ABERDEEN PROVING GROUND, MARYLAND 21010-5422

MCHB-DC-OMH (40-14c)

12 MAY 1997

MEMORANDUM FOR Chief, U.S. Army Ionizing Radiation Dosimetry
Center, U.S. Army Test Measurement and
Diagnostic Equipment Activity, ATTN:
AMSMI-TMDE-SR-DD/Bldg 5417, Redstone Arsenal,
AL 35898-5400

SUBJECT: High Priority Interpretation of Tritium Bioassay
Results

1. See enclosure 1 for a list of references.
2. As requested, the bioassay results provided to us have been used to estimate radionuclide intake and dose for the individuals involved in the tritium incident 14 April 1997 at Aberdeen Proving Ground (USAIRDC Account Code: OK).
3. The estimated doses were calculated using the RBD computer package and are listed below. These estimated doses are calculated using all available bioassay results and are the best estimate at this time.

NAME

SSN

DOSE in mrem

4.3
0

> This bioassay & results were
reported as part
of an earlier 30 day
report

A committed dose report (enclosure 2) is provided IAW AR 40-14.
For bioassay results above the detection limit, estimated doses
were verified using hand calculations.

Readiness thru Health

(ENCL 1) ①
Enc(A)
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MCHB-DC-OMH (40-14c)

SUBJECT: High Priority Interpretation of Tritium Bioassay Results

4. The point of contact is Mr. Sam Dunston, DSN 584-3548.

FOR THE COMMANDER:

Debra D. Schnelle

2 Encls
as

DEBRA D. SCHNELLE
MAJ, MS
Program Manager
Medical Health Physics

CF:

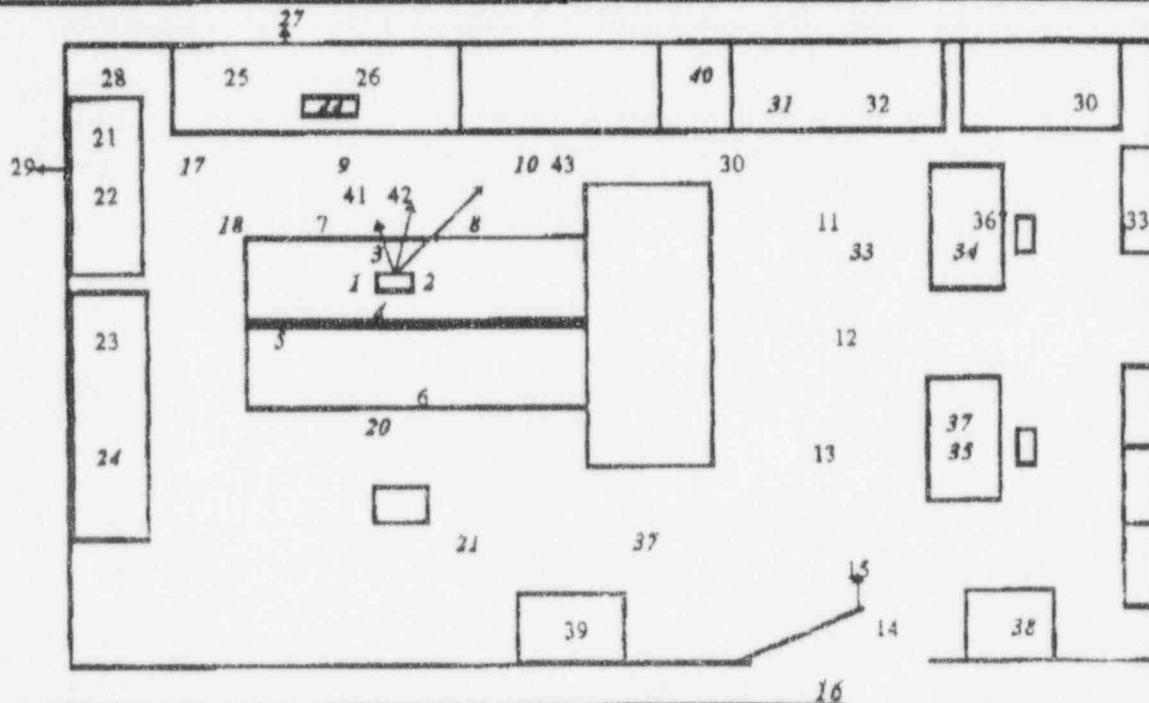
CDR, ACALA, ATTN: AMSTA-AC-SF

OIC, USAHC Kirk, ATTN: Occupational Health Clinic

(ENCL 1) ②
Encl (A)
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RADIATION AREA SURVEY

BUILDING NO: 5047 **rm 12 BACKGROUND:** _____ **mR/Hr DATE:** 04/23/97
INSTRUMENT: [] LUDLUM [] EBERLINE: OTHER _____
MODEL: _____ **SERIAL NO.** _____ **SURVEYOR:** CORPUZ
calibration due date: non used



CHPPM SMEAR ANALYSIS DATED 01 may 97

Number	DDM	Number	DDM	Number	DDM	Number	DDM
1	-3+7	12	-4+7	23	-7+7	34	-10+8
2	11+8	13	-3+8	24	27+9	35	-6+8
3	0.3+7	14	-10+9	25	61+11	36	-3+7
4	14+8	15	-7+7	26	-0.4+7	37	-6+7
5	9+8	16	-6+8	27	-5+7	38	0.2+7
6	-7+8	17	-1+8	28	290+20	39	54+10
7	4+9	18	-5+8	29	24+9	40	38+10
8	-1+7	19	-2+7	30	-5+8	41	-0.9+6
9	-2+7	20	-1+8	31	-2+7	42	-4+7
10	21+8	21	-2+8	32	-71+8	43	32+8
11	-4+7	22	9+8	33	-0.7+7	44	0.3+7

REMARKS:

DDM = Disintegration per Minute per Wipe

Initial and final survey by ACG HPC, follow performed by CHPPM Health Physics Staff.

41 vials

42 inside of box

43 outside of box 44 inside of second box

OPTIONAL FORM 80 (7-90)

FAX TRANSMITTAL

of pages =

To: Mr. Majewski	From: Rafael
Dept/Agency	Phone #
Fax #	Fax #

NSN 7540-01-317-7308

5010-101

GENERAL SERVICES ADMINISTRATION

Initial Survey

(EXCL 2) Enc A, 6 of 12

Industrial Health Physics Program
ATTN: MCHB-DC-OIP
Aberdeen Proving Ground, MD 21010-5422

The samples collected from the work area in Bldg. 5047 on 28 April, 1997 had some 3 areas of elevation. The sample numbers were WD2A, R-6 and R-15. A decon was done WD2A, and the surrounding area. After the decon the results were under the MDA. R-15 was a box of broken amples. They were disposed of as rad waste. Sample point was a tool box which was deconed. Wipes were taken after the decon process. The wipes are represented as W-1 thru W-16. The final survey and deconing was performed by USACHPPM Health Physics Staff.

(ENC 2) ②

Enc(A)
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TRITIUM WIPES

MICHAEL J. STEWART

Instrument LS6500 A
 Count Time 5.00 min
 Avg. Background 22.92 cpm

Analyst: 17-5Reviewer: James Edge, M.I.H.P.P.

Sample ID	Position Number	Activity +/- 1.96 Std Dev dpm/wipe	MDA dpm/wipe	% RCM Warning	2-Phase Warning	MDA Ove 100 dpm Warning	Act Over 1000 dpm Warning
BKG1	1 1-1	-1.16 +/- 13.20	23.48				
BKG2	2 1-2	6.02 +/- 13.72	23.60				
BKG3	3 1-3	-3.45 +/- 13.24	23.81				
BKG4	4 1-4	0.64 +/- 13.61	24.01				
BKG5	5 1-5	-2.08 +/- 13.31	23.78				
F1A	6 1-6	-10.03 +/- 14.52	26.86				
F2A	7 1-7	-8.76 +/- 14.19	26.12		2P		
F3A	8 1-8	18.05 +/- 19.35	32.23		2P		
F4A	9 1-9	-8.64 +/- 15.87	29.08	%RCM	2P		
F5A	10 1-10	-5.61 +/- 15.33	27.77		2P		
F6A	11 1-11	10.85 +/- 15.73	26.61		2P		
F1B	12 1-12	1.20 +/- 14.87	26.16				
F2B	13 2-1	1.23 +/- 15.30	26.93				
F3B	14 2-2	-2.94 +/- 15.38	27.55		2P		
F4B	15 2-3	-9.33 +/- 15.12	27.83				
F5B	16 2-4	-24.20 +/- 16.49	32.07	%RCM	2P		
F6B	17 2-5	-4.63 +/- 14.02	25.34		2P		
F1C	18 2-6	-6.45 +/- 13.64	24.88				
F2C	19 2-7	-0.78 +/- 14.40	25.55				
F3C	20 2-8	0.65 +/- 13.82	24.37				
F4C	21 2-9	-4.31 +/- 14.58	26.28		2P		
F5C	22 2-10	-0.28 +/- 13.85	24.53				
F6C	23 2-11	5.51 +/- 14.70	25.38		2P		
F1D	24 2-12	-6.29 +/- 13.31	24.27	%RCM			
F2D	25 3-1	8.33 +/- 14.74	25.13				
F3D	26 3-2	-5.72 +/- 14.25	25.88		2P		
F4D	27 3-3	-6.89 +/- 14.59	26.61				
F5D	28 3-4	2.54 +/- 14.15	24.74		2P		
F6D	29 3-5	-4.80 +/- 14.54	26.27		2P		
F1E	30 3-6	-6.19 +/- 15.42	27.99		2P		
F2E	31 3-7	-0.30 +/- 14.74	26.11		2P		
F3E	32 3-8	16.85 +/- 15.58	25.70		2P		
F4E	33 3-9	11.10 +/- 14.77	24.89				
F5E	34 3-10	-4.88 +/- 14.76	26.67		2P		
F6E	35 3-11	2.44 +/- 16.61	29.10	%RCM	2P		
F1F	36 3-12	3.39 +/- 13.83	24.07				

(Encl 2)

Enc(A)
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F2F	37	4-1	1.14	+/-	14.15	24.91	
F3F	38	4-2	2.14	+/-	14.54	25.48	
F4F	39	4-3	7.89	+/-	15.70	26.89	2P
F5F	40	4-4	-3.34	+/-	14.81	26.58	2P
F6F	41	4-5	-11.99	+/-	13.66	25.58	2P
F1G	42	4-6	3.06	+/-	14.40	25.13	%RCM 2P
F2G	43	4-7	16.28	+/-	15.48	25.59	2P
F3G	44	4-8	24.56	+/-	16.89	27.20	%RCM 2P
F4G	45	4-9	9.40	+/-	15.76	26.81	%RCM 2P
F5G	46	4-10	-4.10	+/-	13.89	25.04	
F6G	47	4-11	-1.77	+/-	14.46	25.77	
F1H	48	4-12	11.90	+/-	15.84	26.68	%RCM 2P
F2H	49	5-1	-1.24	+/-	14.03	24.96	2P
F3H	50	5-2	-6.31	+/-	14.44	26.28	%RCM 2P
F4H	51	5-3	9.80	+/-	15.61	26.51	2P
F5H	52	5-4	6.92	+/-	15.76	27.10	
F6H	53	5-5	-2.23	+/-	14.26	25.48	%RCM 2P
F1I	54	5-6	-5.37	+/-	14.68	26.60	%RCM 2P
F2I	55	5-7	1.16	+/-	14.45	25.42	2P
F3I	56	5-8	-5.40	+/-	14.76	26.73	2P
F4I	57	5-9	-8.42	+/-	13.64	25.10	2P
F5I	58	5-10	-6.66	+/-	15.26	27.76	2P
F6I	59	5-11	8.00	+/-	15.93	27.27	2P
F1J	60	5-12	30.31	+/-	17.25	27.24	2P
F2J	61	6-1	16.07	+/-	17.23	28.69	2P
F3J	62	6-2	1.55	+/-	13.63	23.93	2P
F4J	63	6-3	-1.72	+/-	14.09	25.13	2P
F5J	64	6-4	-1.32	+/-	15.01	26.71	2P
F6J	65	6-5	0.28	+/-	20.97	37.06	%RCM 2P
BLANK1	66	6-6	0.60	+/-	12.77	22.53	
WA1A	67	6-7	-13.76	+/-	16.39	30.61	%RCM 2P
WA2A	68	6-8	10.86	+/-	15.75	26.64	2P
WA3A	69	6-9	-2.43	+/-	15.53	27.75	2P
WA4A	70	6-10	57.56	+/-	24.17	36.67	%RCM 2P
WA5A	71	6-11	-0.28	+/-	13.63	24.14	2P
WA1B	72	6-12	0.69	+/-	14.59	25.73	
WA2B	73	7-1	-9.38	+/-	13.58	25.12	2P
WA3B	74	7-2	-7.64	+/-	16.17	29.49	%RCM 2P
WA4B	75	7-3	-11.41	+/-	16.52	30.56	2P
WA6B	76	7-4	-2.34	+/-	14.94	26.71	2P
WB3A	77	7-5	3.57	+/-	14.56	25.36	2P
WB8B	78	7-6	48.52	+/-	20.16	30.53	2P
WD4A	79	7-7	-6.76	+/-	15.47	28.14	2P
WD2A	80	7-8	3086.58	+/-	80.43	27.56	2P
R-6	81	7-9	285.79	+/-	32.04	32.72	2P
R-15	82	7-10	647.56	+/-	36.28	23.91	2P

Activity

(Encl 2)

Encl(A)
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Industrial Health Physics Program
ATTN: MCHB-DC-OIP
Aberdeen Proving Ground, MD 21010-5422

The following is a description from where each sample was taken.

W-1 thru W-16 are from the decon area in Bldg. 5047 collected on 30 April, 1997.

After 1 decon

W-1, W-2 are from tool box
W-3 vent
W-4 wall
W-5 window sill
W-6 back of work bench
W-7 adjacent left
W-8 adjacent right

After 2 decon

W-9, W-10 are from tool box
W-11 vent
W-12 wall
W-13 window sill
W-14 back of work bench
W-15 adjacent left
W-16 adjacent right

5

(ENCL 2)

Encl(A,
10 of 12

TRITIUM WIPES

MICHAEL J. STEWART

Instrument: LS6500 A
Count Time: 5.00 min
Avg. Background: 23.48 cpm

Analyst

Reviewer

M-JS
Harris Edge, M. J. Stewart

Sample ID	Position Number	Activity +/- 1.96 Std Dev dpm/wipe	Uncertainty	MDA dpm/wip	MDA Ove Act. Over		
					% RCM Warning	2-Phase Warning	100 dpm 1000 dpm Warning
W-1	48	4-12	7.01 (+/-)	13.13	22.44		
W-2	49	5-1	19.21 (+/-)	14.11	22.87		
W-3	50	5-2	3.13 (+/-)	12.56	21.85		
W-4	51	5-3	8.34 (+/-)	13.30	22.59		
W-5	52	5-4	11.63 (+/-)	12.94	21.59		
W-6	53	5-5	-2.24 (+/-)	12.32	22.04		
W-7	54	5-6	-5.97 (+/-)	12.07	22.02		
W-8	55	5-7	2.07 (+/-)	13.67	23.94		
W-9	56	5-8	5.86 (+/-)	13.30	22.86		
W-10	57	5-9	-6.28 (+/-)	12.68	23.14		
W-11	58	5-10	-2.24 (+/-)	12.29	21.98		
W-12	59	5-11	-5.10 (+/-)	12.02	21.84		
W-13	60	5-12	3.56 (+/-)	12.66	21.98		
W-14	61	5-13	2.71 (+/-)	12.50	21.80		
W-15	62	5-14	4.82 (+/-)	12.78	22.06		
W-16	63	5-15	1.05 (+/-)	12.25	21.54		

(6)

(ENCL 2)

Encl(A)
11 & 12-

F - Floor
W - Wall

WA1B	WA2B	WA3B	WA4B	WA5B	WA6B
WA1A	WA2A	WA3A	WA4A	WA5A	WA6A

WD1B	WD2B	WD3B	WD4B	WD5B	WD6B	WD7B	WD8B	WD9B	WD10B
WD1A	WD2A	WD3A	WD4A	WD5A	WD6A	WD7A	WD8A	WD9A	WD10A

F1A	F2A	F3A	F4A	F5A	F6A
F1B	F2B	F3B	F4B	F5B	F6B
F1C					
F1D					
F1E					
F1F					
F1G					
F1H					
F1I					
F1J					

WB1A	WB2A	WB3A	WB4A	WB5A	WB6A
WB1B	WB2B	WB3B	WB4B	WB5B	WB6B
WB1C	WB2C	WB3C	WB4C	WB5C	WB6C

WD11A - 1404
ARE1A

WC1A	WC2A	WC3A	WC4A	WC5A	WC6A
WC1B	WC2B	WC3B	WC4B	WC5B	WC6B

S

(4)
(ENC 2)

ENC 1A
12 12

FIRE CONTROL TRITIUM DEVICES IN MAINTENANCE ROOM

<u>NAME</u>	<u>PART NO</u>	<u>NSN</u>	<u>QUANTITY</u> <u>EACH</u>		
Lamp, Nuclear Assembly	11729559	1290-01-043-6209	145	x0.45=65.25Ci	51 overage
Lamp, Nuclear	11729515	6260-01-051-9606	12	x0.6=7.2Ci	7 overage
Lamp, Nuclear	12599198	6260-01-283-8639	2 sets of 4=8	x.81=6.48Ci	8 Lost
Level, Fire Control	11729512	1290-00-257-2769	72	x0.075=5.4Ci	10 overage
Beam Splitter, Optic	12304725-2	*****	12	x10=120Ci	0 overage 0 Lost
			total=249	total=204.33Ci	

Enc 1(B)

1 of 6

13/13

29
29 April 1997

FIRE CONTROL TRITIUM DEVICES

TM 9-1240-404-34&P

NOTE: [t] tritium still in component, [tf] tritium free (tritium removed from components).

END ITEM

Mount Telescope Indirect Fire M187 2.65Ci total= 13.25Ci

1240-01-277-0474 total= 5 [tf]

Lamp, Nuclear, Assembly

ITEM: 4 (2ea)
.45Ci 11729559
x10
4.50Ci

PAGE: 5-1
1290-01-043-S209

10 removed

Lamp, Nuclear

ITEM: 13 (1ea)
.81Ci 12599198
x5
4.05Ci

PAGE: 5-1
6260-01-283-8639

5 removed

Level, Fire Control

ITEM: 2 (2ea)
.075Ci 11729512
x10
.75Ci

PAGE: 6-1
1290-00-257-2769

10 removed

END ITEM

Telescope Panoramic M137A1 5.0Ci total=30Ci
tritium removed from telescope, not counters; 1 tritium not removed.

1240-01-277-0472 total= 6 [t] 5

Lamp, Nuclear

ITEM: 3 (4ea)
0.6Ci 11729515
x20
12Ci

PAGE: 15-1
16260-01-051-9606

20 removed

Lamp, Nuclear, Assembly

ITEM: 4 (6ea)
0.45Ci 11729559
x30
13.5Ci

PAGE: 25-1
6240-01-043-8209

0 removed

END ITEM

Telescope Sighting M90A2 1.6Ci total=6.4Ci

1240-01-277-2875 total= 4 [t]

0 removed

Lamp, Nuclear

ITEM: 1 (2ea)
0.8Ci 12599190

PAGE: 38-1
16260-01-280-1795

8 of 13

Enc 1(B)
2 of 6

TM 9-1240-375-34&P

END ITEM

Quadrant, Fire Control M17 1.875Ci total=16.875Ci

1290-01-037-3833 total= 9, 8 [tf] 1 [t]

Lamp, Nuclear, Assembly

ITEM: 4 (4ea)
0.45Ci 11729559
x32
256CiPAGE: 21
1290-01-043-8209

32 removed

Level, Fire Control

ITEM: 3 (1ea)
0.075Ci 11729512
x8
0.6CiPAGE: 19
1290-00-257-2769

8 removed

END ITEM

Quadrant, Fire Control M18 1.95Ci total=17.55Ci

1290-01-037-7289 total= 9, 8 [tf] 1 [t]

Lamp, Nuclear, Assembly

ITEM: 4 (4ea)
0.45Ci 11729559
x32
14.4CiPAGE: 21
1290-01-043-8209

32 removed

Level, Fire Control

ITEM: 3 (2ea)
0.075Ci 11729512
x16
1.2CiPAGE: 19
1290-00-257-2769

16 removed

END ITEM

Mount, Telescope and Quadrant M171 0.15Ci total=1.35Ci

1240-01-039-7273 total= 9 [tf]

Level, Fire Control

ITEM: 2 (2ea)
0.075Ci 11729512
x18
1.35CiPAGE: 45
1290-00-257-2769

18 removed

END ITEM

Telescope Panoramic M137 5.1Ci total=25.5Ci

1240-01-038-0531 total= 5 [t]

Lamp, Nuclear

ITEM: 3 (6ea)
0.6Ci 11729515
x5
3CiPAGE: 115
16260-01-051-9606

0 removed

Lamp, Nuclear, Assembly

ITEM: 4 (4ea)
0.45Ci 11729559
x5
2.25CiPAGE: 139
6240-01-043-8209

0 removed

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Enc(B)
3 of 6

END ITEM

Telescope Elbow M138 4.4Ci total=83.6Ci

1240-01-038-0530 total= 19; 5 [t] 14 [tf]

Light Source Assembly

ITEM: 4 (2ea)
2.2Ci 11748012
x28
61.6CiPAGE: 167
16260-01-1131-7947

2.2 removed

TM 9-1290-200-14&P

END ITEM

Quadrant, Fire Control Gunner's M1A2 0.075Ci total=0.6Ci 1290-00-160-1937 total= 8 [tf]

Level, Fire Control

ITEM: 32 (1ea)
0.075Ci 10556128
x8
0.6CiPAGE: F-2-1
1290-00-257-2765

8 removed

TM 9-1200-206-34&P

END ITEM

Collimator Assembly 10Ci total=40Ci

1240-01-356-5887 total= 4 [tf]

Beam Splitter, Optic

ITEM: 13 (1ea)
10Ci 12304725-2
x4
40CiPAGE: 198-1
N/A

4 removed

END ITEM

Collimator Assembly 10Ci total=80Ci

1240-01-324-2217 total= 8 [tf]

Beam Splitter, Optic

ITEM: 17 (1ea)
10Ci 12304725-2
x8
80CiPAGE: 137-1
N/A

8 removed

TM 9-4931-710-14&P

END ITEM

Alignment Device M139 3.0Ci total=15Ci

4931-01-048-5834 total= 5 [t]

Cell, Optical Element

ITEM: 3 (1ea)
3.0Ci 10544456
x5
15CiPAGE: C-3-1
4931-01-169-3255

0 removed

Encl(B)
4 of 6

100/13

END ITEM

Alignment Device M140 3.0Ci total=15Ci

4931-01-187-9713 total= 5 [t]

C-11 Optical Element

ITEM: 3 (lea)

3.0Ci 10544456

x5

15Ci

PAGE: C-3-1

4931-01-169-3255

0 removed

TM 9-1240-324-34&P

END ITEM

Collimator Infinity Aiming Reference M1A1 10Ci total= 100Ci 1240-00-332-1780 total=

10 [t]

Cell Assembly, Optical

ITEM: 2 (lea)

10Ci 10556128

x10

100Ci

PAGE: 3-2-1

1240-01-079-5453

0 removed

Enc(B)
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FIRE CONTROL TRITIUM DEVICES IN MAINTENANCE ROOM

NAME	PART NO	NSN	QUANTITY EACH	
Lamp, Nuclear Assembly	11729559	1290-01-043-8209	145	94 removed x0.45=65.25Ci 51 overage
Lamp, Nuclear	11748012	6260-01-113-7947		
Lamp, Nuclear	11729515	6260-01-051-9606	12	x0.6=7.2Ci 7 overage
Lamp, Nuclear	12599190	6260-01-280-1795		
Lamp, Nuclear	12599198	6260-01-283-8639	2 sets of 4=8	x81=6.48Ci 8 Lost
Level, Fire Control	11729512	1290-00-257-2769	72	x0.075=5.4Ci 10 overage
Level, Fire Control	10556130	1240-00-332-1781		
Level, Fire Control	11729513	1290-00-257-2765		
Cell Assembly, Optical	10556128	1240-01-079-5453		
Cell, Optical Element	10544456	4931-01-169-3255		
Beam Splitter, Optic	12304725-2	*****	12	x10=120Ci 0 overage 0 Lost
			total=249	total=204.33Ci

Enc (B)
696