



REPLY TO  
ATTENTION OF

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

22 APR 1997

Yes - Reportable per

10 CFR 30.50(c)(2) &

10 CFR 30.50 (b)(1)(i)

*ag*

Safety Office, Armament and Chemical Acquisition  
and Logistics Activity

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

12-00722-06  
03013037

Dear Sir:

Following is the 30 day written report on the Fort  
Devens Tritium release/exposure to personnel.

DESCRIPTION OF LICENSED MATERIAL:

Two M-17 Fire Control Quadrants, each containing a total of  
1.875 curies of tritium (H3). One .45 curie vial containing H3  
was damaged, causing contamination of the work area.

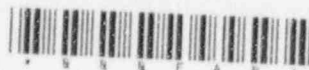
OVERVIEW OF EVENT:

The release of tritium in the Night Vision Room (NVR) of  
building 3713, at Fort Devens occurred in November, 1996, and  
extended through to 5 March, 1997. All work in the NVR had been  
suspended as of 5 March, 1997, with the exception of entries to  
conduct surveys.

The Fort Devens situation was initially reported to the  
licensee on 12 March 1997. The licensee considered the incident  
non reportable (enclosure (1)). However, conversation with Fort  
Devens indicated a need to verify contamination levels and status  
by an independent survey.

U.S. Army Center for Health Promotion and Preventive Medicine  
(USACHPPM) personnel were sent to Fort Devens to conduct and  
report on a wipe survey of the facilities. The USACHPPM report  
was received by the licensee on 21 March 1997, and indicated  
contamination levels and circumstances reportable under 20 CFR  
30.50. The incident was phoned into the NRC Operations Center at  
0845, March 21, 1997.

150072



9705160015 970422  
PDR ADOCK 03013037  
C PDR

APR 23 1997

1E-72

#### DESCRIPTION OF CIRCUMSTANCES:

Two M-17's were taken into the NVR to be repaired. The maintainer opened one M-17 and in the process noted a stripped thread in one of the body screw holes. At this point the maintainer decided to work the second M-17.

Upon opening the second M-17 it was noted that one of the .45 curie sources was broken. The M-17 was then bagged and the individual stopped work. He left the room, disrobed and bagged his clothes, showered, dressed in another set of personal clothing and ate lunch.

After lunch the individual re-entered the NVR and took the body of the first M-17 to the weld area of building 3713 to attempt a repair of the stripped screw hole. When the repair failed the body was returned to the NVR.

The individual then attempted to salvage one good M-17 from the two being worked. He opened the bag containing the damaged M-17 and removed the cover with its damaged H3 vial, and swapped parts by putting the damaged cover with the damaged body and visa versa with the remaining cover and body. The damaged M-17 (body with stripped screw hole and cover with a broken .45 curie vial) was then bagged as a contaminated commodity and returned to the owner.

#### ACTIONS TAKEN AND RESULTS:

In doing the above, both M-17's, other equipment in the area and the NVR were contaminated. Surveys of the area prior to reporting the situation to the licensee are at enclosures (A) through (G). A wipe survey conducted by Fort Devens personnel following a wipedown of the area is at enclosure (H), and the USACHPPM survey following the initial report to the licensee is at enclosures (I) & (K). Other surveys performed in and adjacent to the NVR and at locations visited by the individual, further defined the extent of the contamination for decontamination considerations (enclosures (L) through (N)).

The maintainer and four other individuals (two welders, the person who handles incoming items, the RPO) were all considered to have had a potential uptake of H3 during the actions performed or during surveys conducted. These individuals were bioassayed and the samples sent to USACHPPM for analysis. Results were calculated for worse case and are recorded in enclosure (P).

Surveys were also taken at the owners (Rhode Island National Guard MSCS) facilities and on commodities which had been worked at Fort Devens. The survey results are at enclosures (J) and (O). Surveys were also performed at the Reserve Unit the maintainer serves in on his reserve weekends and the results are at enclosure (Q).

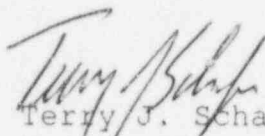
OUTCOME AS OF 4/21/97:

As of this date the maintainer has been removed from performing any radiological work at Fort Devens or in his Reserve Unit, pending the completion of an investigation of his actions by the MACOM for the U.S. Reserve Commands. The decontamination of the area has not commenced, pending contractual negotiations between the Reserve MACOM and USACHPPM. The Fort Devens Command is also considering the future disposition of the facility. Therefore, the type and extent of decontamination has not yet been determined.

Further details/information regarding the resolution of this incident are pending and will be reported as they decided and or completed. Procedures and measures adopted by Fort Devens and the Licensee to preclude re-occurrence will be provided under separate cover as they are implemented.

The point of contact for this incident is Mr. Timothy J. Mohs,  
AMSTA-AC-3F, (309) 782-6228, e-mail tmohs@ria-emh2.army.mil.

Sincerely,



Terry J. Schaefer  
Major, OD  
Chief, Safety Office

## APPENDIX 1

FUEL CYCLE AND MATERIALS EVENT NOTIFICATION WORKSHEET							
REPORT TIME 0945 3/12/97	FACILITY OR ORGANIZATION Army TACDM APLA		LICENSE NO. 12-00722-06	CALLER'S NAME Trinity J. Mohs		CALLBACK NUMBER 2-6228	
EVENT TIME	EVENT DATE unknown unknown	LOCATION OF EVENT (INCLUDE COUNTY AND STATE) Davis CoMS at RF H.G. involvement			PORTION OF PLANT AFFECTED		
EVENT CLASSIFICATIONS		EVENT TYPES		INCIDENT REPORTS 30.30, 40.30, 70.30			
GENERAL EMERGENCY *		FUEL CYCLE		30.30 LOSS / THEFT		(a) PROT ACTION PREVENTED	
SITE AREA EMERGENCY		MEDICAL/ACADEMIC		30.30 ACTUAL/THREAT OVEREX?		X (b)(1) UNPLANNED CONTAM	
ALERT		TRANSPORTATION		X 30.30 ACTUAL/THREAT RELEASE		(b)(2) SAFETY EQUIP FAILURE	
NOTIFICATION OF UNUSUAL EVENT *		WASTE MANAGEMENT		31.31 DEFECT / NONCOMPLIANCE		(b)(3) MED TREATMENT W/CONTAM	
X INCIDENT REPORT		INDUSTRIAL/COMMERCIAL		34.73 FITNESS FOR DUTY		(b)(4) FIRE / EXPLOSION	
TRANSPORTATION EVENT		FOREIGN EVENT		35.33 MISADMINISTRATION		70.32 CRITICALITY / SNM LOST	
INFORMATION ONLY		X OTHER TYPE EVENT		36.33 RADIACTOR EVENT		70.32 ACTUAL/ATTEMPTED THEFT	
OTHER		Release of H <sub>2</sub> gas in gas maintenance facility		37.77 RUPT WELL LOG SOURCE		CRIT CONTROL 4-HR (BL 91-01)	
* - ONLY UNDER OLD 1981 ORDER				37.77 RUPT WELL LOG SOURCE		CRIT CONTROL 24-HR (BL 91-01)	
				40.36 TAIL / WASTE DAM FAILURE		OTHER NON-CFR REQUIREMENT	

- On 12 March 97 a call was received from the Ft. Devens RPO. The RPO reported wipe survey results on the Ft. Devens CSMS were hot. Survey forms were sent to ACAA Safety and the levels were noted as being within limits on surveys done in Nov & Dec '96.
- The CSMS worker had downed his work area in Nov following a survey indicating elevated H<sup>3</sup>. Again in January a Routine wipe of the CSMS indicated elevated levels of H<sup>3</sup> (none above limits). The CSMS was again wiped down & work continued.
- In the Feb-Mar time frame the individual who works the CSMS (a 1-2 hrs/week) had a routine physical (UNRELATED to this situation). The CSMS worker mentioned a concern about working in a area that has had elevated H<sup>3</sup> contamination. The Nurse then contacted the Ft. Devens RPO. The RPO resurveyed the CSMS even on March 5 as a process to alleviate concern on the part of the CSMS worker.
- However the March 5th wipes indicated H<sup>3</sup> contamination levels slightly above limit & detected in AR-385-11 (the highest being 1,600 dpm on the floor of the CSMS). At this point the RPO had the CSMS isolated & wipe wipes were taken.
- The results of the March were not available until 3/20/97 and they indicated contamination above limits (1,349 dpm floor & 600 dpm on work bench).

Incl (1) B143



RADIOLOGICAL / CHEMICAL RELEASES: CHECK OR FILL IN APPLICABLE ITEMS							
ISOTOPE	ACTIVITY	PHYSICAL FORM	CHEMICAL FORM		STACK	LIQUID EFFLUENT	OTHER
H <sup>3</sup>	450 Ci	Gases in soil		MONITOR READING			
				ALARM SETPOINT			
ONGOING RELEASE		PERSONNEL EXPOSURE / CONTAMINATION DATA					
TERMINATED RELEASE		NUMBER OF PERSONNEL EXPOSED: <i>unknown 3/7/97</i>		NUMBER OF PERSONNEL CONTAMINATED:			
OFFSITE RELEASE		MAXIMUM EXTERNAL DOSE: —		MAXIMUM EXTERNAL LEVEL: <i>unknown at time of report</i>			
ONSITE AREAS EVACUATED		MAXIMUM INTERNAL DOSE: —		MAXIMUM INTERNAL LEVEL: —			
OFFSITE PROT ACT RECOMMENDED		CRITICAL ORGAN (IF KNOWN): —		CRITICAL ORGAN (IF KNOWN): —			
DEGRADED CRITICALITY CONTROLS (BULLETIN 91-01)							
ALL BARRIERS LOST	ALL BUT SINGLE BARRIER LOST	DEFICIENT SAFETY ANAL	SEVERITY UNKNOWN	> 4% MIN CRIT MASS DIV			
SAFETY SIGNIFICANCE OF EVENT:							
SAFETY EQUIPMENT STATUS:							
STATUS OF CORRECTIVE ACTIONS:							

EVENT DESCRIPTION CONTINUED

- Because the data from the local RPO was changing & the situation was growing, the MACOM for Ft Devens decided to have an outside command (CHPPM) travel to Ft Devens to conduct wipes/ambient investigation of the situation.
- On 3/21/97 initial wipe results were phoned in to ARL & Safety. The CHPPM wipe ranged from 3,800 cpm on floor beneath the work bench, to 200 cpm on an air conditioner intake screen, to 929 dpm on the work bench.
- As a result of these new findings, bioassays are/will be order of the CSMs worker and other as deemed necessary.
- Prior to CHPPM arrival at Ft Devens survey were taken on H<sup>3</sup> components located in the CSMs. These surveys indicated contamination on the H<sup>3</sup> items (an M17, M138, M142(2), M141 and an M137). These items were bagged and controlled. These items are from the ~~Rhode Island~~ Rhode Island National Guard. Therefore contact has been made with NGA of RI.
- Investigations & surveys are ongoing to determine the extent of contamination both at Ft. Devens & at R.I. N.G.
- A super survey was conducted at R.I. N.G. in January and it showed contamination on 2 components (M137 & M138). These components are separate from those noted at Ft Devens. Further investigations will be conducted at the R.I. N.G.

97-21

Mr. Gould MRC of Center

## FUEL CYCLE AND MATERIALS EVENT NOTIFICATION WORKSHEET

REPORT TIME 0945 3/12/97	FACILITY OR ORGANIZATION Army TACOM ACALA	LICENSE NO. 12-CC 722-06	CALLER'S NAME Timothy J. Mohr	CALLBACK NUMBER 2-6228
EVENT TIME	EVENT DATE Unknown Various	LOCATION OF EVENT (INCLUDE COUNTY AND STATE) Devens CMS at RF WG involvement	PORTION OF PLANT AFFECTED	

EVENT CIRCUMSTANCES		EVENT TYPES		INCIDENT REPORTS			
				30, 30, 40, 50, 70, 50			
<input type="checkbox"/>	GENERAL EMERGENCY *	<input type="checkbox"/>	FUEL CYCLE	<input type="checkbox"/>	30.00 LOSS / THEFT	<input type="checkbox"/>	(A) PROT ACTION PREVENTED
<input type="checkbox"/>	SITE AREA EMERGENCY	<input type="checkbox"/>	MEDICAL/ACADEMIC	<input type="checkbox"/>	30.00 ACTUAL/THREAT OVEREX?	<input checked="" type="checkbox"/>	(B1) UNPLANNED CONTAM
<input type="checkbox"/>	ALERT	<input type="checkbox"/>	TRANSPORTATION	<input checked="" type="checkbox"/>	30.00 ACTUAL/THREAT RELEASE	<input type="checkbox"/>	(B2) SAFETY EQUI FAILURE
<input type="checkbox"/>	NOTIFICATION OF UNUSUAL EVENT *	<input type="checkbox"/>	WASTE MANAGEMENT	<input type="checkbox"/>	31.01 DEFECT / NONCOMPLIANCE	<input type="checkbox"/>	(B3) MED TREATMENT W/ CONTAM
<input checked="" type="checkbox"/>	INCIDENT REPORT	<input type="checkbox"/>	INDUSTRIAL/COMMERCIAL	<input type="checkbox"/>	34.73 FITNESS FOR DUTY	<input type="checkbox"/>	(B4) FIRE / EXPLOSION
<input type="checkbox"/>	TRANSPORTATION EVENT	<input type="checkbox"/>	FOREIGN EVENT	<input type="checkbox"/>	33.33 MISADMINISTRATION	<input type="checkbox"/>	70.52 CRITICALITY / ENM LOST
<input type="checkbox"/>	INFORMATION ONLY	<input checked="" type="checkbox"/>	OTHER TYPE EVENT	<input type="checkbox"/>	34.83 RADIIATOR EVENT	<input type="checkbox"/>	70.52 ACTUAL/ATTEMPTED THEFT
<input type="checkbox"/>	OTHER	Release of H <sub>2</sub> gas in CMS maintenance facility		<input type="checkbox"/>	34.77 RUPT WELL LOG SOURCE	<input type="checkbox"/>	CRIT CONTROL 4-HR (BL 91-01)
* - ONLY UNDER OLD (1981) ORDER				<input type="checkbox"/>	34.77 DRIFT WELL LOG SOURCE	<input type="checkbox"/>	CRIT CONTROL 24-HR (BL 91-01)
				<input type="checkbox"/>	40.25 TAIL / WASTE DAM FAILURE	<input type="checkbox"/>	OTHER NON-CFR REQUIREMENT

## EVENT DESCRIPTION

- On 12 March 97 a call was received from the Ft. Devens RPO. The RPO reported wipe survey results on the Ft. Devens CMS were hot. Survey forms were sent to ACALA Safety and the levels were noted as being within limits on surveys done in Nov & Dec 96.
- The CMS worker had done his work area in Nov following a survey indicating elevated H<sub>2</sub>. Again in January a Routine wipe of the CMS indicated elevated levels of H<sub>2</sub> (none above limits). The CMS was again wiped down & work continued.
- In the Feb-Mar time frame the individual who works the CMS (41-2 hrs/week) had a routine physical (UNRELATED to this situation). The CMS worker mentioned a concern about working in an area that has had elevated H<sub>2</sub> contamination. The Nurse then contacted the Ft. Devens RPO. The RPO resurveyed the CMS even on March 5 as a process to alleviate concern on the part of the CMS worker.
- However the March 5th wipes indicated H<sub>2</sub> contamination at levels slightly above limit determinations in AR 385-11 (the highest being 1.66 dpm on the floor of the CMS). At this point the RPO had the CMS isolated & more wipes were taken.
- The results of the March were not available until 3/20/97 and they indicated contamination above limits (1.347 dpm floor & 6.00 dpm on work bench).

NOTIFICATIONS				ANYTHING UNUSUAL OR NOT UNDERSTOOD? <input type="checkbox"/> YES <input type="checkbox"/> NO (EXPLAIN ABOVE)	
NRC REGION?	YES	NO	WILL BE	DO ALL SYSTEMS FUNCTION AS REQUIRED? <input type="checkbox"/> YES <input type="checkbox"/> NO (EXPLAIN ABOVE)	
STATE?	YES	NO	WILL BE		
LOCAL?	YES	NO	WILL BE		
OTHER GOVT AGENCIES?	YES	NO	WILL BE	ADDITIONAL INFORMATION ON BACK? <input type="checkbox"/> YES <input type="checkbox"/> NO	

Incl (1) B1/3

REPLY TO  
ATTENTION OF:DEPARTMENT OF THE ARMY  
UNITED STATES ARMY MISSILE COMMAND  
REDSTONE ARSENAL, AL 38896-6400

AMSMI-TMDE-SR-DR (385-11d)

13 November 1996

MEMORANDUM FOR Commander, Safety Management Office, ATTN: AFRC-FMD-SO,  
Box 52, Devens RFTA, Devens, MA 01433-5520

SUBJECT: Wipe Tests

1. The results of wipe tests at your facility on 5 November 1996, which this center received on 12 November 1996, are indicated below.

ISOTOPE	IDENTIFICATION	DPM (Beta)
H-3	20-1	0.0
	20-2	0.0
	20-3	12.0
	20-4	1.0E+03

Reserve issue  
Russian Radio containing  
H<sup>3</sup> in wall locker

Note: Limit of Detection (LD) is 18.6 dpm for Tritium Beta.

2. The POC is Sun Almond, DSN 746-0520/0472.

A. EDWARD ABNEY

Chief, U.S. Army Ionizing Radiation  
Dosimetry Center

AN EQUAL OPPORTUNITY EMPLOYER

REPLY TO  
ATTENTION OF:DEPARTMENT OF THE ARMY  
UNITED STATES ARMY MISSILE COMMAND  
REDSTONE ARSENAL, AL 36998-6400

AMSML-TMDE-SR-DR (385-11d)

4 December 1996

MEMORANDUM FOR Commander, Devens RFTA, ATTN: AFRC-FMD-SO (Ms. Reichert).  
Devens, MA 01433-5520

SUBJECT: Wipe Tests

1. The results of the wipe tests made at your facility on 18 November 1996, which this center received on 20 November 1996, are indicated below.

ISOTOPE	IDENTIFICATION	DPM (Beta)
H-3	21-1	0.0
	21-2	0.0
	21-3	10.0
	21-4	9.9
	21-5	0.0
	21-6	0.0
	21-7	0.0
	21-8	53.6
	21-9	97.2

*Russian  
Radio issue*

Note: Limit of Detection (LD) is 15.6 dpm for Tritium Beta.

2. The POC is Sun Almond, DSN 746-0520/0472.

A. EDWARD ABNEY  
Chief, U.S. Army Ionizing Radiation  
Dosimetry Center

AN EQUAL OPPORTUNITY EMPLOYER

REPLY TO  
ATTENTION OF:DEPARTMENT OF THE ARMY  
UNITED STATES ARMY MISSILE COMMAND  
REDSTONE ARSENAL, AL 35898-6400

AMSMI-TMDE-SR-DR (385-11d)

4 December 1996

MEMORANDUM FOR Commander, Devens RFTA, ATTN: AFRC-FMD-SO (Ms. Reichert).  
Devens, MA 01433-5520

SUBJECT: Wipe Tests

1. The results of the wipe tests made at your facility on 18 November 1996, which this center received on 20 November 1996, are indicated below.

ISOTOPE	IDENTIFICATION	DPM (Beta)
H-3	22-1	24.7
	22-2	0.0
	22-3	11.7
	22-4	22.6
	22-5	1.8E+03
	22-6	26.3
	22-7	0.0
	22-8	19.7
	22-9	8.2
	22-10	33.2
	22-11	58.4
	22-12	14.5
	22-13	8.8

*Russian  
Radio issue*

Note: Limit of Detection (LD) is 15.6 dpm for Tritium Beta.

2. The POC is Sun Almond, DSN 746-0520/0472.

*A. Edward Abney*  
A. EDWARD ABNEY  
Chief, U.S. Army Ionizing Radiation  
Dosimetry Center



DEC- 5-96 THU 13:57

USAIRDC

FAX NO. 2058763816

P.03

Arthur Keefe  
3902REPLY TO  
ATTENTION OF:

DEPARTMENT OF THE ARMY  
UNITED STATES ARMY MISSILE COMMAND  
REDSTONE ARSENAL, AL 35890-6400

AMSMI-TMDE-SR-DR (385-11d)

4 December 1996

MEMORANDUM FOR Commander, Devens RFTA, ATTN: AFRC-FMD-DLM (Mr. Keefe),  
Devens, MA 01433-5320

SUBJECT: Wipe Tests

1. The results of the wipe tests made at your facility, which this center received on 25 Nov 96,  
are indicated below.

ISOTOPE	IDENTIFICATION	DPM (Beta)
H-3	#0	84.9 control
	#1	8.5E+02 A-17
	#2	8.6E+02 A-17
	#3	58.7 door
	#4	211.3 night switch
	#5	3.7E+02 table

night  
vision  
room

Note: Limit of Detection (LD) is 15.6 dpm for Tritium Beta.

2. The POC is Sun Almond, DSN 746-0520/0472.

A. EDWARD ABNEY

Chief, U.S. Army Ionizing Radiation  
Dosimetry Center

RE NG

AN EQUAL OPPORTUNITY EMPLOYER

Enc(B) 1 of 2

0 = base

1 = m17 cover

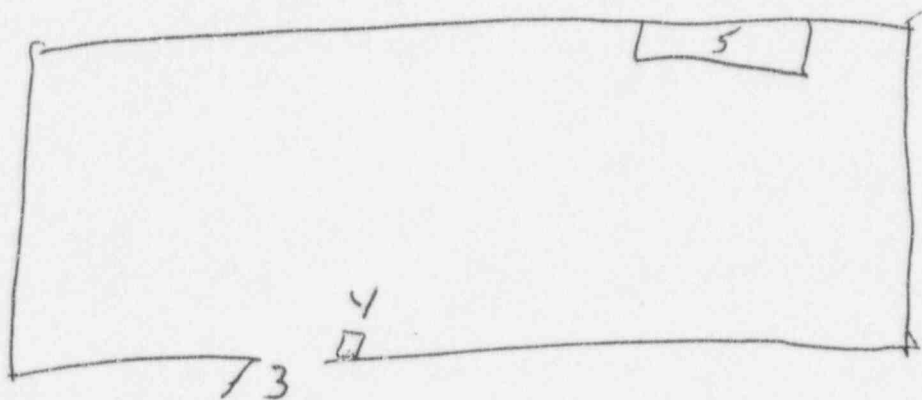
2 = m17 housing inside

SN 1113 WSN 1290-01-037-3883

3 = Door

4 = Light switch

5 Table





DEPARTMENT OF THE ARMY  
UNITED STATES ARMY MISSILE COMMAND  
REDSTONE ARSENAL, AL 35898-6400

REPLY TO  
ATTENTION OF:

AMSMI-TMDE-SR-DR (385-11d)

18 December 1996

MEMORANDUM FOR Commander, Devens RFTA, ATTN: AFRC-FMD-DLM, Devens,  
MA 01433-5328

SUBJECT: Wipe Tests

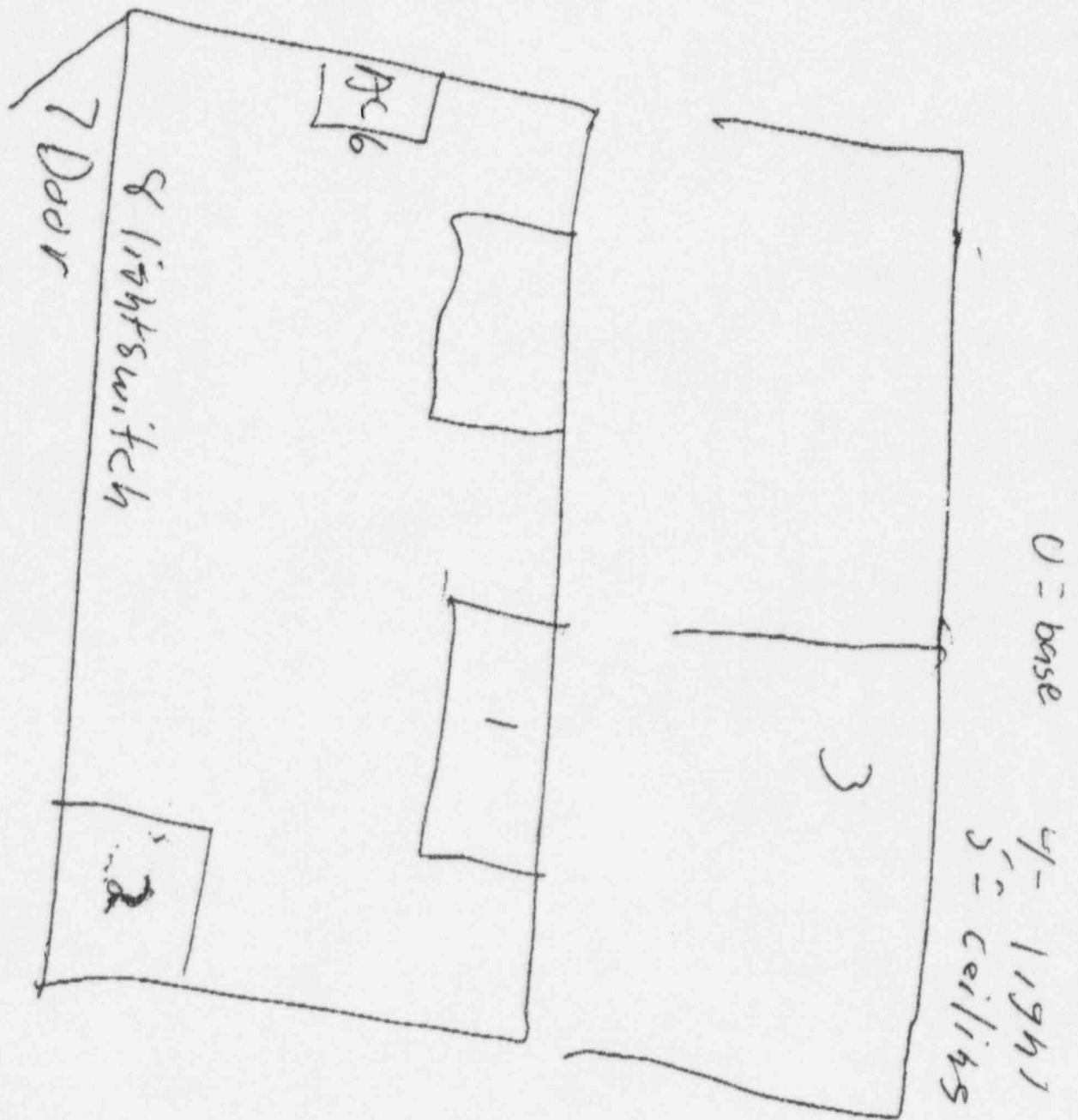
1. The results of wipe tests made at your facility on 12 December 1996, which this center received on 16 December 1996, are indicated below.

ISOTOPE	IDENTIFICATION	DPM (Beta)
H-3	#1	92.4
	#2	70.8
	#3	79.4
	#4	107.8
	#5	59.3
	#6	127.2
	#7	56.7
	#8	46.2
	#0	0.0

Note: Limit of Detection (LD) is 15.8 dpm for Tritium Beta.

2. The POC is Sun Almond, DSN 746-520/0472.

A. EDWARD ABNEY  
Chief, U.S. Army Ionizing Radiation  
Dosimetry Center



JAN-22-97 WED 8:24

USAIRDC

FAX NO. 2058763816

P.02

REPLY TO  
ATTENTION OF:

DEPARTMENT OF THE ARMY  
UNITED STATES ARMY MISSILE COMMAND  
REDSTONE ARSENAL, AL 35896-6400

AMSMI-TMDE-SR-DR (385-11d)

21 January 1997

MEMORANDUM FOR Commander, Devens RFTA, ATTN: AFRC-FMD-DLM (Mr. Keefe),  
Devens, MA 01433-5320

SUBJECT: Wipe Tests

1. The results of wipe tests made at your facility, which this center received on 13 Jan 97, are indicated below:

ISOTOPE	IDENTIFICATION	DPM (Beta)
H-3	0	0.0
	1	249.2
	2	3.8E+02
	3	176.3
	4	3.0E+02
	5	258.8
	6	226.7
	7	66.4
	8	97.8
	9	45.9
	V1	0.0
	V2	8.8
	V3	0.0
	V4	0.0
	V5	0.0
	V6	0.0
	V7	0.0
	V8	0.0
	V9	10.8
	V10	0.0

Routine Wipe  
Survey

New weapons vault  
3713

Note: Limit of Detection (LD) is 16.5 dpm for Tritium Beta.

2. The POC is Sun Almond, DSN 746-0520/0472.

*A. Edward Abney*  
A. EDWARD ABNEY

Chief, U.S. Army Ionizing Radiation  
Dosimetry Center

AN EQUAL OPPORTUNITY EMPLOYER

MAR-13-1997 13:39

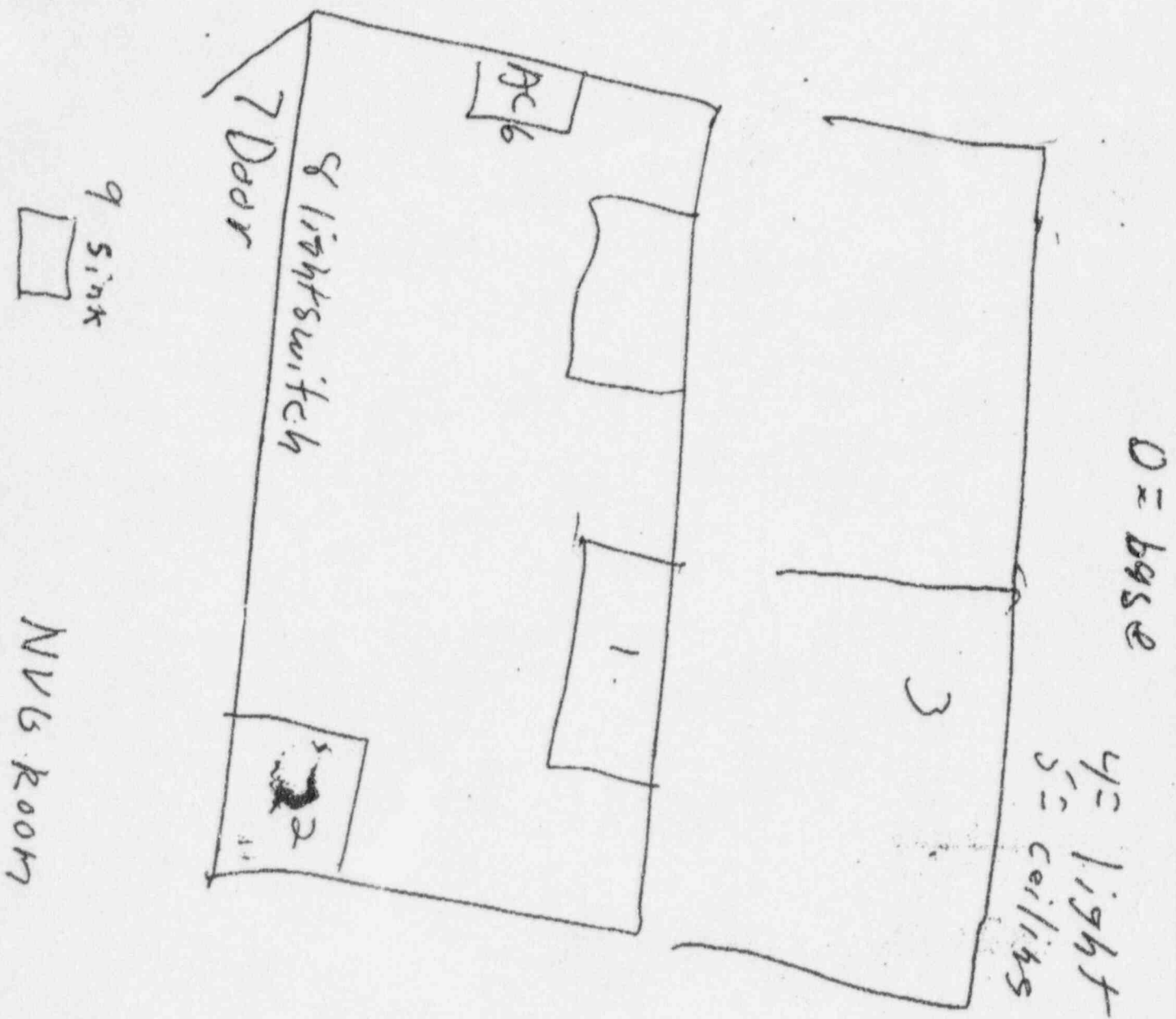
508 796 2064

94%

P.05

Encl(D), 1 of 2





REPLY TO  
ATTENTION OF:DEPARTMENT OF THE ARMY  
UNITED STATES ARMY MISSILE COMMAND  
REDSTONE ARSENAL, AL 35898-6400

AMSMI-TMDE-SR-DR (385-11d)

6 February 1997

MEMORANDUM FOR Commander, Devens RFTA, ATTN: AFRC-FMD-SO (Ms. Reichert),  
Devens, MA 01433-5520

SUBJECT: Wipe Tests

1. The results of wipe tests made at your facility on 31 January 1997, which this center received on 3 February 1997, are indicated below.

## IDENTIFICATION

	Alpha	DPM Beta	Gamma
1-1	0.0	0.0	0.0
1-2	0.0	0.0	0.0
1-3	0.0	0.0	0.0
1-4	0.0	0.0	0.0
1-5	0.0	0.0	84.9
1-6	0.0	0.0	0.0
1-7	0.0	0.0	0.0
1-8	0.0	0.0	0.0
1-9	0.0	0.0	0.0
1-10	0.0	0.0	0.0
1-11	0.0	0.0	0.0

*Routine wipe of  
storage area*

Note: Limit of Detection (LD) is 2 dpm for Alpha, 8 dpm for Beta, and 160 dpm for Gamma.

2. The POC is Sun Almond, DSN 746-0520/0472.

A. EDWARD ABNEY  
Chief, U.S. Army Ionizing Radiation  
Dosimetry Center

REPLY TO  
ATTENTION OFDEPARTMENT OF THE ARMY  
DEVENS RESERVE FORCES TRAINING AREA  
DEVENS, MASSACHUSETTS

01433-5520



AFRC-FMD-SO (385-11h)

5 March 1997

## MEMORANDUM FOR DIRECTOR

U.S. Army TMDE ACTIVITY

ATTN: AMSMI-TMDE-SR-DR/BLDG 5417

REDSTONE ARSENAL, AL 35898-5400

SUBJECT: Request for Analysis

1. Enclosed are seventeen decon swipes for analysis labeled "Series 4." The samples were taken on 5 March 1997, from a radiation storage area in Bldg 3713. Request all samples be analyzed for tritium contamination.

2. Results should be forwarded to:

COMMANDER

ATTN: AFRC-FMD-SO (MS. REICHERT)

DEVENS, MA 01433-5520

3. Point of contact for the results is MS. Barbara Reichert, Installation Radiation Protection Officer, telephone DSN 256-2440 or commercial (508 796-2440).

17 Encls

*Barbara Reichert*BARBARA REICHERT  
Safety Director

R-12-97 WED 12:15

USAIRDC

FAX NO. 2058763816

REPLY TO  
ATTENTION OF:

DEPARTMENT OF THE ARMY  
UNITED STATES ARMY MISSILE COMMAND  
REDSTONE ARSENAL, AL 36886-6400

AMSMI-TMDE-SR-DR (385-11d)

11 March 1997

MEMORANDUM FOR Commander, Devens RFTA, ATTN: AFRC-FMD-SO (Ms. Reichert),  
Devens, MA 01433-5520

SUBJECT: Wipe Tests

1. The results of the wipe tests made at your facility on 5 March 1997, which this center received on 7 March 1997, are indicated below.

ISOTOPE	IDENTIFICATION	DPM (Beta)
H-3	4-1	137.3
	4-2	276.4
	4-3	3.8E+02
	4-4	249.1
	4-5	3.7E+02
	4-6	4.8E+02
	4-7	4.4E+02
	4-8	273.0
	4-9	5.2E+02
	4-10	4.0E+02
	4-11	6.1E+02
	4-12	1.2E+03
	4-13	4.0E+02
	4-14	110.8
	4-15	269.1
	4-16	1.6E+03
	4-17	231.2

Note: Limit of Detection (LD) is 15.6 dpm for Tritium Beta.

2. The majority of the vials received had loose caps, resulting in water leaking into the bag. Because of the large quantity of water that leaked from the vials, the contamination indicated may not adequately reflect the amount of contamination present.

3. Sampling requires the wipe be placed in a vial containing approximately 2 milliliters of water to prevent the dissipation of tritium. The vials which did not leak grossly exceeded this amount greatly reducing the efficiency for tritium detection.

AN EQUAL OPPORTUNITY EMPLOYER

MAR-13-1997 13:48

508 796 2064

P.08

Encl(F), 244

MAR-12-97 WED 12:16

USAIRDC

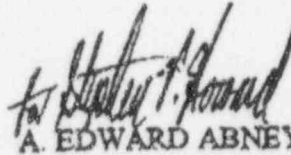
FHA NO. 2000103010

1100

AMSMI-TMDE-SR-DR  
SUBJECT: Wipe Tests

11 March 1997

4. The POC is Sun Almond, DSN 746-0520/0472.



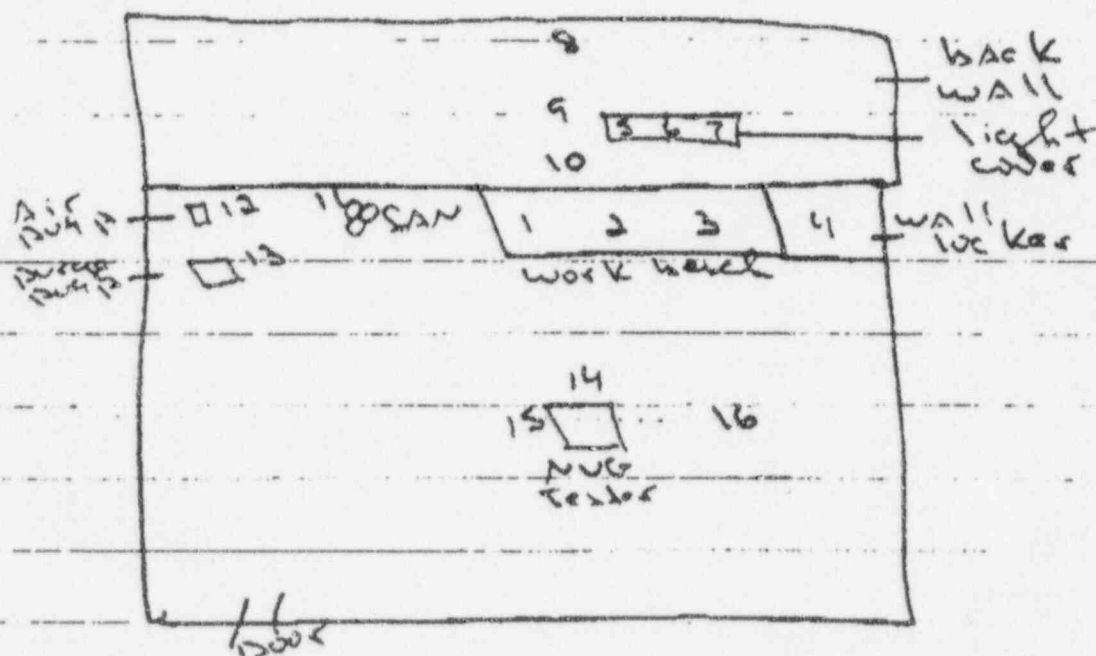
A. EDWARD ABNEY

Chief, U.S. Army Ionizing Radiation  
Dosimetry Center



5 March 97: Radiation Survey 0800-10:00 hrs  
 Blm 3713 - Tritium contamination NUG Room  
 Series 4

Assisted by Arthur Keele & Tim Murphy



- |                        |                              |
|------------------------|------------------------------|
| 4-1 workbench/left     | 4-12 blue Air pump           |
| 4-2 workbench/center   | 4-13 black purge pump        |
| 4-3 workbench/right    | 4-14 NUG Tester/eye hole     |
| 4-4 wall locker/center | 4-15 NUG Tester/outline case |
| 4-5 light cover/left   | 4-16 floor                   |
| 4-6 light cover/center | 4-17 Control                 |
| 4-7 light cover/right  |                              |
| 4-8 back wall/top      |                              |
| 4-9 back wall/center   |                              |
| 4-10 back wall/bottom  |                              |
| 4-11 Saw blade         |                              |



DEPARTMENT OF THE ARMY  
DEVENS RESERVE FORCES TRAINING AREA  
DEVENS, MASSACHUSETTS

01433-5520

REPLY TO  
ATTENTION OF

AFRC-FMD-SO (385-11h)

13 March 1997

MEMORANDUM FOR COMMANDER  
ROCK ISLAND ARSENAL  
RADIATION TEST LAB  
ATTN: SIORI-SEL  
ROCK ISLAND, ILLINOIS 61299-5000

SUBJECT: Request for Analysis

1. Enclosed are seventeen decon swipes for analysis labeled "Series 6." The samples were taken on 13 March 1997, from a radiation storage area in Bldg 3713. Request all samples be analyzed for tritium contamination.
2. Results should be forwarded to:  
  
COMMANDER  
ATTN: AFRC-FMD-SO (MS. REICHERT)  
DEVENS, MA 01433-5520
3. Point of contact for the results is MS. Barbara Reichert, Installation Radiation Protection Officer, telephone DSN 256-2440 or commercial (508 796-2440).

*Barbara Reichert*

17 Encls

BARBARA REICHERT  
Safety Director

*Encl(G), if 5*

## ROCK ISLAND ARSENAL

## RADIOISOTOPE ANALYSIS AND LABORATORY RESULTS

Lab Number	Date Received	Qty	Received From	Phone Comm	DSN	FAX	Date
R97-0699	3/18/97	17	REICHERT	(508) 796-2440	256-2440	99999	3-19

## MATERIAL:

AREA WIPE TEST AND/OR  
LEAK TEST OF RADIOACTIVE  
SOURCES OF BETA EMITTER

OTHER DEVICE  
AREA WIPES

17

H3

[ ]  
[X]

FACILITY REQUESTING  
WIPE TESTS:

COMMANDER  
ATTN: AFRC-FMD-SO (MS. REICHERT)  
DEVENS, MA 01433-5520

Test results No

3, 6, 7, 12, 13, 16

were not within acceptable surface contamination levels as specified in AR-385-11, table 4-3.

The contamination level for beta emitters for an uncontrolled area and equipment is 100 disintegrations per minute (DPM). The contamination levels for controlled area and equipment are 400 and 2000 DPMs respectively. These limits do not pertain to environmental samples.

**Notify your Radiation Protection Officer (RPO)** immediately after receiving these test results so prompt action can be taken. If this test result applies to equipment, double bag the item immediately. If this test result applies to an area, secure the area until decontamination of the affected area is complete. The RPO or safety officer must contact the ACALA safety office to receive disposition instructions for the contaminated item. **POC's for the disposition instructions are as follows:**

- U.S. Army Armament Chemical Acquisition and Logistics Activity (ACALA), AMSTA-AC-SF, Safety Office DSN 793-2962/6228/2965, commercial (309) 782-2962/6228/2965
- Rock Island Arsenal Radiation Test Lab, SIORI-SEL, test result information.  
Mr. Thomas Gizicki, DSN 793-7889, commercial (309) 782-7889, or  
Mr. Ronald Lund, DSN 793-7925, commercial (309) 782-7925.
- U.S. Army Industrial Operations Command, AMSIO-DMW, Radiation Waste Division, DSN 793-0338

CF. AMSTA-AC-SF  
AMSTA-AC-FASF  
AMSTA-AR-QAWC

Analyst: BB

1st Line Reviewer:

Richard W. Perry

Chief, Materials Laboratory Division

20 MAR 1997

Enc(G) 2 of 5

## TEST RESULTS

## ROCK ISLAND ARSENAL RADIOLOGICAL INDEPENDENT TEST LAB (RIA-RITL)

RIA LAB NO. R97-0699

Date Received

3/18/97

☐ M43A1 Detector☐ CAM☐ Other

ISOTOPE: H3

Reporting Act. DODAAC: W13GN5

Testing Act. DODAAC: W52H1C

Lower Limit of Detectability (LLD) 26 X2 = 52 DPM

Owning Activity DODAAC CODE	Cell S/N	Detector/ Monitor	Carrier Number	Activ/DPM +/- 2SD *	Pass
W13GN5	VIAL CAP	MARKED 6-1	1	180 +/- 43	Yes
W13GN5	VIAL CAP	MARKED 6-2	2	245 +/- 51	Yes
W13GN5	VIAL CAP	MARKED 6-3	3	600 +/- 83	No
W13GN5	VIAL CAP	MARKED 6-4	4	273 +/- 58	Yes
W13GN5	VIAL CAP	MARKED 6-5	5	265 +/- 56	Yes
W13GN5	VIAL CAP	MARKED 6-7	6	1,641 +/- 136	No
W13GN5	VIAL CAP	MARKED 6-6	67	594 +/- 81	No
W13GN5	VIAL CAP	MARKED 6-8	8	305 +/- 57	Yes
W13GN5	VIAL CAP	MARKED 6-9	9	317 +/- 59	Yes
W13GN5	VIAL CAP	MARKED 6-10	10	342 +/- 63	Yes
W13GN5	VIAL CAP	MARKED 6-11	11	152 +/- 42	Yes
W13GN5	VIAL CAP	MARKED 6-12	12	1,661 +/- 146	No
W13GN5	VIAL CAP	MARKED 6-13	13	605 +/- 87	No
W13GN5	VIAL CAP	MARKED 6-14	14	70 +/- 28	Yes
W13GN5	VIAL CAP	MARKED 6-15	15	115 +/- 40	Yes
W13GN5	VIAL CAP	MARKED 6-16	16	1,349 +/- 133	No
W13GN5	VIAL CAP	MARKED 6-17	17	< LLD	Yes

*work bench**light cover over bench  
light cover ..**air pump  
purge pump**floor*

\* NOTE: Test Results less than 2X LLD will not be reported

\* Activity will be reported to ACALA-AMSTA-AC-SIF: BETA in  
 Areas: > 100 DPM (uncontrolled), > 400 DPM (controlled),  
 Equipment: > 2000 DPM (controlled), > 100 DPM (uncontrolled),  
 Any Alpha Emitters: > 20 DPM.

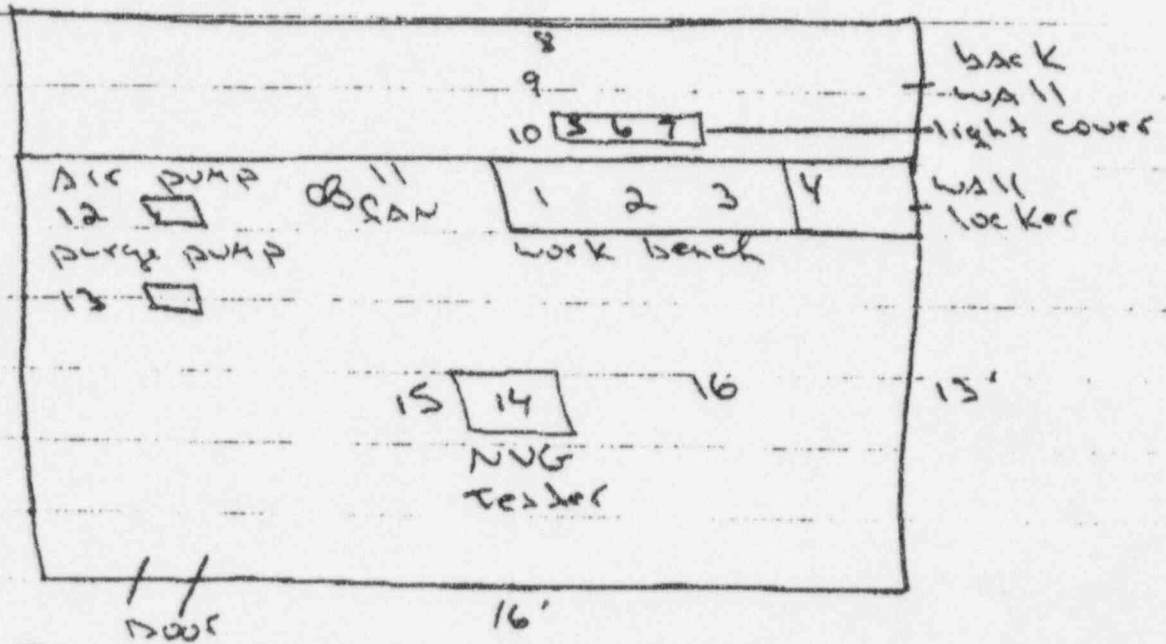
*Encl(9) 3 of 5*

Owning Activity DODAAC CODE	Cell S/N	Dectector/ Monitor	Carrier Group	Activ/DPM +/- 2SD *	Pass
DECON SAMPLES					

Encl(G) 4/5



13 March 97: Radiation Survey 0730-0845 Lrs  
 Bldg 3713 - NVG Room  
 Assisted by Tim Murphy



### Series 6

- |                         |                                 |
|-------------------------|---------------------------------|
| 6.1 Workbench/left      | ★ 6.13 black purge pump         |
| 6.2 Workbench/center    | ★ 6.14 NVG Tester/eye hole      |
| 6.3 Workbench/right     | ★ 6.15 NVG Tester/ outside case |
| 6.4 wall locker/center  | 6.16 floor                      |
| 6.5 light cover/left    | 6.17 control                    |
| 6.6 light cover/center  |                                 |
| 6.7 light cover/right   | ★ SAN, Air Pump, Purge          |
| 6.8 back wall / top     | pump & NVG Tester were          |
| 6.9 back wall / center  | double bagged & placed in       |
| 6.10 back wall / bottom | DRUM                            |
| ★ 6.11 SAN blade        |                                 |
| ★ 6.12 blue Air pump    |                                 |



REPLY TO  
ATTENTION OF

DEPARTMENT OF THE ARMY  
DEVENS RESERVE FORCES TRAINING AREA  
DEVENS, MASSACHUSETTS

01433-5520



AFRC-FMD-SO (385-11h)

14 March 1997

MEMORANDUM FOR COMMANDER  
ROCK ISLAND ARSENAL  
RADIATION TEST LAB  
ATTN: SIORI-SEL  
ROCK ISLAND, ILLINOIS 61299-5000

SUBJECT: Request for Analysis

1. Enclosed are seventeen decon swipes for analysis labeled "Series 7." The samples were taken on 14 March 1997, from a radiation storage area in Bldg 3713. Request all samples be analyzed for tritium contamination.

2. Results should be forwarded to:

COMMANDER  
ATTN: AFRC-FMD-SO (MS. REICHERT)  
DEVENS, MA 01433-5520

3. Point of contact for the results is MS. Barbara Reichert, Installation Radiation Protection Officer, telephone DSN 256-2440 or commercial (508 796-2440).

*Barbara Reichert*

17 Encls

BARBARA REICHERT  
Safety Director

## ROCK ISLAND ARSENAL

## RADIOISOTOPE ANALYSIS AND LABORATORY RESULTS

Lab Number	Date Received	Qty	Received From	Phone Comm	DSN	FAX	Date
R97-0701	3/18/97	17	REICHERT	(508) 796-2440	256-2440	99999	3-19

## MATERIAL:

AREA WIPE TEST AND/OR  
LEAK TEST OF RADIOACTIVE  
SOURCES OF BETA EMITTER

OTHER DEVICE  
AREA WIPES

17

H3

[ ]  
[X]

FACILITY REQUESTING  
WIPE TESTS:

COMMANDER  
ATTN: AFRC-FMD-SO (MS. REICHERT)  
DEVENS, MA 01433-5520

Test results No. 1, 3, 4, 6, 7

were not within acceptable surface contamination levels as specified in AR-385-11, table 4-3.

The contamination level for beta emitters for an uncontrolled area and equipment is 100 disintegrations per minute (DPM). The contamination levels for controlled area and equipment are 400 and 2000 DPMs respectively. These limits do not pertain to environmental samples.

**Notify your Radiation Protection Officer (RPO)** immediately after receiving these test results so prompt action can be taken. If this test result applies to equipment, double bag the item immediately. If this test result applies to an area, secure the area until decontamination of the affected area is complete. The RPO or safety officer must contact the ACALA safety office to receive disposition instructions for the contaminated item. **POC's for the disposition instructions are as follows:**

- U.S. Army Armament Chemical Acquisition and Logistics Activity (ACALA), AMSTA-AC-SF, Safety Office DSN 793-2962/6228/2965, commercial (309) 782-2962/6228/2965
- Rock Island Arsenal Radiation Test Lab, SIORI-SEL, test result information.  
Mr. Thomas Gizicki, DSN 793-7889, commercial (309) 782-7889, or  
Mr. Ronald Lund, DSN 793-7925, commercial (309) 782-7925.
- U.S. Army Industrial Operations Command, AMSIO-DMW, Radiation Waste Division, DSN 793-0338

CF: AMSTA-AC-SF  
AMSTA-AC-FASF  
AMSTA-AR-QAWC

Analyst: BB

1st Line Reviewer: *[Signature]*

*[Signature]*  
Richard W. Perry

Chief, Materials Laboratory Division

20 MAR 1997

## TEST RESULTS

## ROCK ISLAND ARSENAL RADIOLOGICAL INDEPENDENT TEST LAB (RIA-RITL)

RIA LAB NO. R97-0701

Date Received

3/18/97

☐ M43A1 Detector☐ CAM☐ Other

ISOTOPE: H3

Reporting Act. DODAAC: W13GN5

Testing Act. DODAAC: W52H1C

Lower Limit of Detectability (LLD) 26 X2 = 52 DPM

Owning Activity DODAAC CODE	Cell S/N	Detector/ Monitor	Carrier Number	Activ/DPM +/- 2SD *	Pass
W13GN5	VIAL CAP	MARKED 7-1	1	7,259 +/- 291	No
W13GN5	VIAL CAP	MARKED 7-2	2	264 +/- 55	Yes
W13GN5	VIAL CAP	MARKED 7-3	3	672 +/- 90	<del>No</del> YES
W13GN5	VIAL CAP	MARKED 7-4	4	8,268 +/- 308	No
W13GN5	VIAL CAP	MARKED 7-5	5	< 2 X LLD	Yes
W13GN5	VIAL CAP	MARKED 7-6	6	7,038 +/- 284	No
W13GN5	VIAL CAP	MARKED 7-7	7	6,664 +/- 277	No
W13GN5	VIAL CAP	MARKED 7-8	8	134 +/- 40	Yes
W13GN5	VIAL CAP	MARKED 7-9	9	< LLD	Yes
W13GN5	VIAL CAP	MARKED 7-10	10	< LLD	Yes
W13GN5	VIAL CAP	MARKED 7-11	11	72 +/- 30	Yes
W13GN5	VIAL CAP	MARKED 7-12	12	145 +/- 41	Yes
W13GN5	VIAL CAP	MARKED 7-13	13	94 +/- 33	Yes
W13GN5	VIAL CAP	MARKED 7-14	14	96 +/- 34	Yes
W13GN5	VIAL CAP	MARKED 7-15	15	104 +/- 36	Yes
W13GN5	VIAL CAP	MARKED 7-16	16	191 +/- 49	Yes
W13GN5	VIAL CAP	MARKED 7-17	17	< 2 X LLD	Yes

M17 area 1

M17 area 2

M138 telescope

M182 Gammacount

M1A1 collimator

\* NOTE: Test Results less than 2X LLD will not be reported

\* Activity will be reported to ACALA-AMSTA-AC-SIF: BETA in  
 Areas: > 100 DPM (uncontrolled), > 400 DPM (controlled),  
 Equipment: > 2000 DPM (controlled), > 100 DPM (uncontrolled),  
 Any Alpha Emitters: > 20 DPM.

Encl(A) 3 of 5

Owning Activity DODAAC CODE	Cell S/N	Dectector/ Monitor	Carrier Group	Activ/DPM +/- 2SD *	Pass
--------------------------------	-------------	-----------------------	------------------	------------------------	------

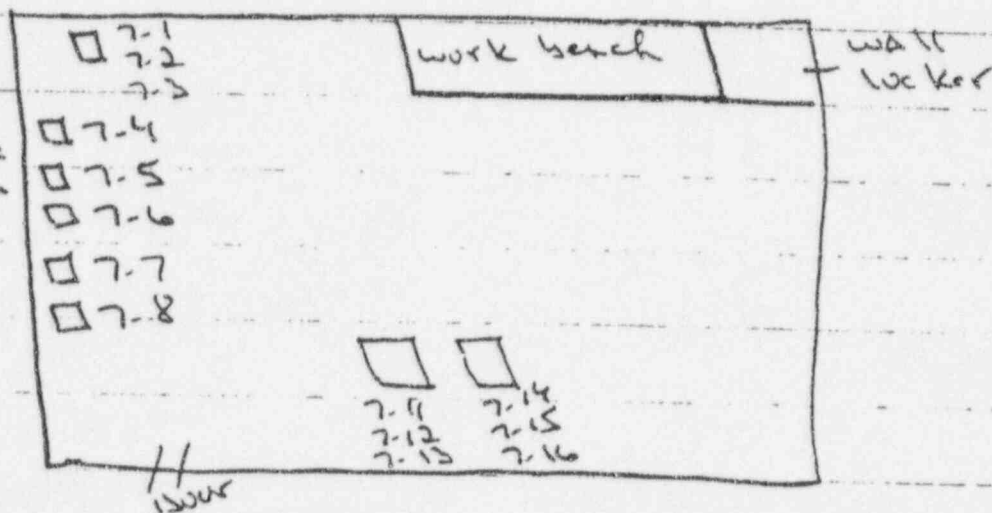
SAMPLES ARE FROM A RADIATION STORAGE AREA IN BLDG. 3713.

Radiation Survey. 14 March 97 0745-1100 hrs

Blind 3713. NUG Room / Tritium

Assisted by Arthur Keefe

All 8 items  
where removed  
from room, multiple  
bags & placed in  
room



### Series 7

- 7-1 M-17, Correction Mils, SN 871/7259<sup>DPM</sup> / 7-16 Top Case / 191<sup>57000709</sup>
- 7-2 M-17, Elevation Mils, SN 871/264 / 7-17 Control / 192
- 7-3 M-17, Level vial, SN 871/672
- 7-4 M-138, Elbow Telescope, SN 1403/8268
- 7-5 M-1A2, Gunner's Quad, SN 1375/42
- 7-6 M-1A2, Gunner's Quad, SN 2058/7038
- 7-7 M-1A1, Collimator, SN 2175/6664
- 7-8 M-137, Telescope, SN 1340/134
- 7-9 Arthur / 4 LLS
- 7-10 Control / 4 LLS
- 7-11 Night Vision Site, MX-7833/PVS-2, SN 24101/72
- 7-12 Bottom Case, SN 24101/145
- 7-13 Top Case, SN 24101/94
- 7-14 Night Vision Site, MX-7833/PVS-2, SN 57000709/96
- 7-15 Bottom Case, SN 57000709/104

Enc(H) 5/5



MCHB-DC-OIP (40)

MEMORANDUM FOR RECORD

SUBJECT: Ft. Devens, MA/ Building 3713/Night Vision Room

1. Preliminary results of liquid scintillation wipes of Ft. Devens, Building 3713, Night Vision Room indicate work is beyond the intended scope of USACHPPM efforts. The area immediately adjacent to the Night Vision Room indicates no elevated contamination levels.

a. Draft copy of preliminary results is attached.

2. It is advised that a record be made of personnel entry into the Night Vision Room since survey results indicated tritium contamination. Bioassay analysis is recommended for those personnel.

3. The point of contact for further details is Mr. Scott Kaepfel. He may be reached at USACHPPM office (410)671-1502 (DSN 384).

*Jerry Collins*

Jerry Collins

Henry Jackson Foundation Participant  
Industrial Health Physics Program

21 MAR 97

Encl (I) 1 of 8

## TRITIUM WIPES

21 MAR 97

PLAST

Instrument: LS6500 A  
 Count Time: 5.00 min.  
 Avg. Background 30.20 cpm

Analyst: \_\_\_\_\_

Reviewer: Gary Collins/Celling

Sample ID	ositio Number	Activity +/- 1.96 Std Dev dpm/wipe	MDA dpm/wipe	% RCM Warning	2-Phase Warning	MDA Over Act. Over 100 dpm 1000 dpm Warning Warning
B K611	1	1.70 +/- 14.59	25.47			
	2	6.38 +/- 14.85	25.47			
	3	-4.90 +/- 13.62	24.42			
	4	-4.08 +/- 13.68	24.44			
	5	1.26 +/- 14.43	25.23			
A/C OUTSIDE	6	18.09 +/- 42.10	72.20	%RCM	2P	
THAT MAKES	7	1915.14 +/- 59.31	26.73			
WINDY AS	8	538004.66 +/- 1094.30	34.67		2P	Activity
BLOCK CASE	9	48251.73 +/- 288.55	26.81			Activity
INDIVIDUAL A/C	10	1803.64 +/- 58.29	27.27			Activity

Encl(I) 2 of 8

## TRITIUM WIPES

DRAFT

Instrument: LS6500 A  
 Count Time: 5.00 min.  
 Avg. Background 30.92 cpm

Analyst: M-17 / Michael J. Stewart  
 Reviewer: Jay Allen / J. Collins UC433007

Sample ID	ositio Number	Activity +/- 1.96 Std Dev dpm/wipe	MDA dpm/wipe	% RCM Warning	2-Phase Warning	MDA Over Act. Over 100 dpm 1000 dpm Warning Warning
AK6   1	1-1	-2.86 +/-	14.77	26.21		
AK6   2	1-2	2.36 +/-	15.20	26.46		
AK6   3	1-3	-9.74 +/-	13.67	24.98		
AK6   4	1-4	1.40 +/-	14.28	24.94		
AK6   5	1-5	4.44 +/-	14.97	25.87		
0 1 6	1-6	10.55 +/-	15.48	26.17		
0 2 7	1-7	205.73 +/-	26.59	30.72		
0 3 8	1-8	218.79 +/-	26.28	29.47	2P	
0 4 9	1-9	111.87 +/-	24.22	32.97	2P	
0 5 10	1-10	104.13 +/-	41.87	64.05	2P	
2-1 11	1-11	929.33 +/-	43.44	27.76		
2-2 12	1-12	7385.98 +/-	115.88	28.10		Activity
2-3 13	2-1	4520.79 +/-	91.60	28.34		Activity
2-4 14	2-2	9998.08 +/-	170.21	44.64	2P	Activity
2-5 15	2-3	8473.80 +/-	139.77	35.56		Activity
2-6 16	2-4	4646.10 +/-	92.47	28.13		Activity
2-7 17	2-5	15009.11 +/-	163.19	27.69	2P	Activity
2-8 18	2-6	9937.72 +/-	131.89	27.20		Activity
2-9 19	2-7	3744342.18 +/-	3859.99	62.69	2P	Activity
2-10 20	2-8	40507.38 +/-	265.21	27.26		Activity
2-11 21	2-9	22662.09 +/-	200.88	27.88		Activity
2-12 22	2-10	33804.56 +/-	254.19	29.98		Activity
2-13 23	2-11	132589.67 +/-	521.11	32.23	2P	Activity
2-14 24	2-12	9085.33 +/-	130.62	29.11		Activity
2-15 25	3-1	25526.82 +/-	237.61	34.61	2P	Activity
2-16 26	3-2	6572.58 +/-	111.25	29.02	2P	Activity
2-17 27	3-3	11496.16 +/-	150.44	30.60		Activity
2-18 28	3-4	14593387 +/-	170.08	30.90	2P	Activity
2-19 29	3-5	2743.22 +/-	69.89	26.72		Activity
2-20 30	3-6	5710.97 +/-	108.83	31.77		Activity
2-21 31	3-7	20843.31 +/-	195.05	28.56		Activity
2-22 32	3-8	106.74 +/-	21.09	28.04		
2-23 33	3-9	101.40 +/-	21.29	28.76		
2-24 34	3-10	79.59 +/-	23.85	34.81	2P	
2-25 35	3-11	102.51 +/-	21.46	28.97		
2-26 36	3-12	303.71 +/-	31.95	33.77		
2-27 37	4-1	212.79 +/-	27.07	31.08		
2-28 38	4-2	62.61 +/-	21.13	31.48		

Enc/(I) 3 of 8.



DRAFT

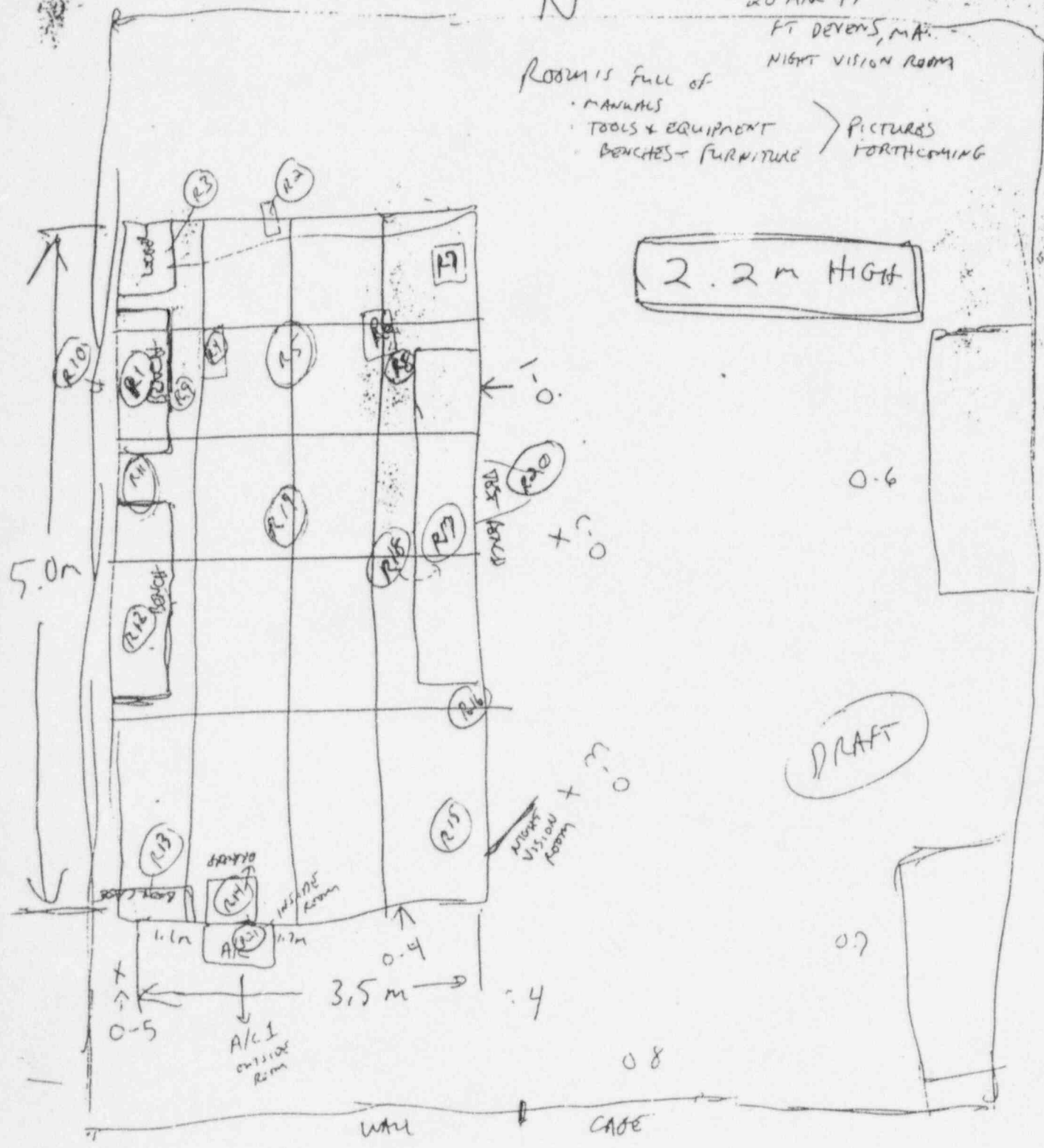
20 MAR 97

FT DEVENS, MA.  
NIGHT VISION ROOM

Room is full of

- MANUALS
- TOOLS & EQUIPMENT
- BENCHES - FURNITURE

PICTURES  
FORTHCOMING



Encl(I) 4/3

# DATA COLLECTION SHEET FOR STRATFORD ARMY ENGINE PLANT, CT

FR DEWINS NATI

Building: 3713

Space number: OUTSIDE NORTH VISION RM

Date: 20 MAR 91

Surveyors: ( print/sign )

Efficiency: Alpha: \_\_\_\_\_ Beta: \_\_\_\_\_  
 Probe Area: Alpha: \_\_\_\_\_ cm<sup>2</sup> Beta: \_\_\_\_\_ cm<sup>2</sup>  
 Backgrounds: Alpha: \_\_\_\_\_ counts Beta: \_\_\_\_\_ counts Gamma: \_\_\_\_\_  $\mu$ R/hr  
 Bkg Cnt time: Alpha: \_\_\_\_\_ min Beta: \_\_\_\_\_ min Gamma: \_\_\_\_\_ min  
 MDA: Alpha: \_\_\_\_\_ dpm/100cm<sup>2</sup> Beta: \_\_\_\_\_ dpm/100cm<sup>2</sup> Gamma: \_\_\_\_\_  $\mu$ R/hr  
 Flags: Alpha: \_\_\_\_\_ counts Beta: \_\_\_\_\_ counts Gamma: \_\_\_\_\_  $\mu$ R/hr  
 Count time: Alpha: \_\_\_\_\_ sec Beta: \_\_\_\_\_ sec Gamma: N/A  
 Inst/Probe SN: Alpha: \_\_\_\_\_ Beta: \_\_\_\_\_ Gamma: \_\_\_\_\_  
 Inst Cal Date: Alpha: \_\_\_\_\_ Beta: \_\_\_\_\_ Gamma: \_\_\_\_\_

Specific Features	Location Code	Gross Alpha (counts)					Gross Beta (counts)					Direct Gamma ( $\mu$ R/hr)	Sample ID#
		WALL	DOOR	FLOOR	CEILING	STATE	WALL	DOOR	FLOOR	CEILING	STATE		
OUTSIDE	0-1 (WALL)	0				1	120				40	10	
	0-2 FLOOR	3				1	164				60	11	
	0-3 FLOOR	1				0	134				60	12	
	0-4 (WALL)	1				0	126				40	9	
	0-5 FLOOR	0				2	135				60	12	
SCORES	SC 1	0				N/A	106				N/A	NA	
	SC 2	0				N/A	108				N/A	NA	
						TOE							
	0-6	0				NA	92				NA	NA	
	0-7	1				NA	98				NA	NA	
	0-8	0				NA	80				NA	NA	
	0-9	2				0/1	97				NA	NA	
	0-10	0				N/A	91				NA	NA	
MR COND TOWER OUTSIDE	AC-1	N/A				N/A	N/A				N/A	N/A	

Reading #: 1 2 3 4 5 1 2 3 4 5 1 2

REVIEWER: \_\_\_\_\_

GRID SIZE: p 1m x 1m p \_\_\_ x \_\_\_ grid (other) 4 5

COMMENTS/NOTES:



# DATA COLLECTION SHEET FOR STRATFORD ARMY ENGINE PLANT, CT

Building: 3713  
 Space number: NIGHT VISION RM  
 Date: 20 MAR 97

Surveyors: ( print/sign ) \_\_\_\_\_

Efficiency: Alpha: \_\_\_\_\_ Beta: \_\_\_\_\_  
 Probe Area: Alpha: \_\_\_\_\_ cm<sup>2</sup> Beta: \_\_\_\_\_ cm<sup>2</sup>  
 Backgrounds: Alpha: \_\_\_\_\_ counts Beta: \_\_\_\_\_ counts  
 Bkg Cnt time: Alpha: \_\_\_\_\_ min Beta: \_\_\_\_\_ min  
 MDA: Alpha: \_\_\_\_\_ dpm/100cm<sup>2</sup> Beta: \_\_\_\_\_ dpm/100cm<sup>2</sup>  
 Flags: Alpha: \_\_\_\_\_ counts Beta: \_\_\_\_\_ counts  
 Count time: Alpha: \_\_\_\_\_ sec Beta: \_\_\_\_\_ sec  
 Inst/Probe SN: Alpha: \_\_\_\_\_ Beta: \_\_\_\_\_  
 Inst Cal Date: Alpha: \_\_\_\_\_ Beta: \_\_\_\_\_

Gamma: \_\_\_\_\_  $\mu$ R/hr  
 Gamma: \_\_\_\_\_ min  
 Gamma: \_\_\_\_\_  $\mu$ R/hr  
 N/A  
 Gamma: \_\_\_\_\_  
 Gamma: \_\_\_\_\_

Specific Features	Location Code	Gross Alpha (counts)					Gross Beta (counts)					Direct Gamma ( $\mu$ R/hr)	Sample ID#
		WIRE				STAT					STAT		
R1 TOP WORK BENCH - RUBBER		1				1	50				60	14 $\mu$ R/hr	
R2 LIGHT FIXTURE COVER		1				1	183				50-60	12 $\mu$ R/hr	
R3 O/S LOCKER		0				4	151				60	11	
R4 INSIDE LIGHT FIXTURE (new)		0				1	158				60	10	
R5 FLOOR #16		1				1	141				50	12	
R6 NE LIGHT FIXTURE OUTSIDE		0				0	135				60	8	
R7 WORK BENCH NE		0				2	185				40	8	
R8 NIGHT VISION GOGGLE CASE		0				2	150				30	13	
R9 FLOOR UNDER R1		1				2	167				80	15	
R10 WALL + GAUGE ABOVE R1		0				2	148				80	10	
R11 GAS CYLINDER + DRILL NEXT TO R1		0				0	122				40	8	
R12 SW WALL WORK BENCH/FLOOR COVER		2				0	141				80	11	
R13 BODC CAB + BOOKS		1				2	136				50	9	
R14 S. BENCH TOP/STAIRWAY/DOOR		1				2	115				40	10	
R15 ENTRANCE FLOOR + GAS CYL		0				2	135				60	9	
R16 ENTRANCE WALL + PLATE ABOVE DOOR		2				1	128				60	10	
R17 E WALL WORK BENCH + ITEMS		0				0	117				60	10	
R18 FLOOR UNDER R17		1				0	136				50	12	
R19 CEILING - ROOM CENTER		1				2	132				60	11	
R20 WINDOWS + ITEMS		0				3	138				40	12	
R21 A/C		1				2	141				40	10	

Reading #: 1 2 3 4 5 1 2 3 4 5 1 2

REVIEWER: \_\_\_\_\_  
 GRID SIZE: p 1m x 1m p \_\_\_ x \_\_\_ grid (other) 4 5

COMMENTS/NOTES:



# INVENTORY ~~THE~~ NIGHT VISION ROOM

2 OFFICE CHAIRS

1 life measure - proximity of ceiling

GAS CYLINDERS (WATER)

- WORK BENCH w/ DRILL PRESS 1 STORAGE DRAWER

1 AC UNIT

3 BOXES ON LOWER SHELF

2 STORAGE TOTES IN REAR  
MISC OFFICE SUPPLIES

- SCALE

- 5 SECTION DRAWER - SHELVES COMPLETELY  
~ 3 - 12" FULL OF MANUALS  
& REFERENCE MATERIAL

- 4 FLUORESCENT LIGHT FIXTURES  
ON CEILING

WIRE BENCH w/ 12 DRAWERS CONTAINING MISC ITEMS / EQUIPMENT

SKINNY BOTTLES

WALKERS

BASKET w/ MISC DOCUMENTS

BOX OF TACKS  
TOTE

- FIRE EXTINGUISHER

- A/C UNIT ADJACENT TO SOUTH WALL

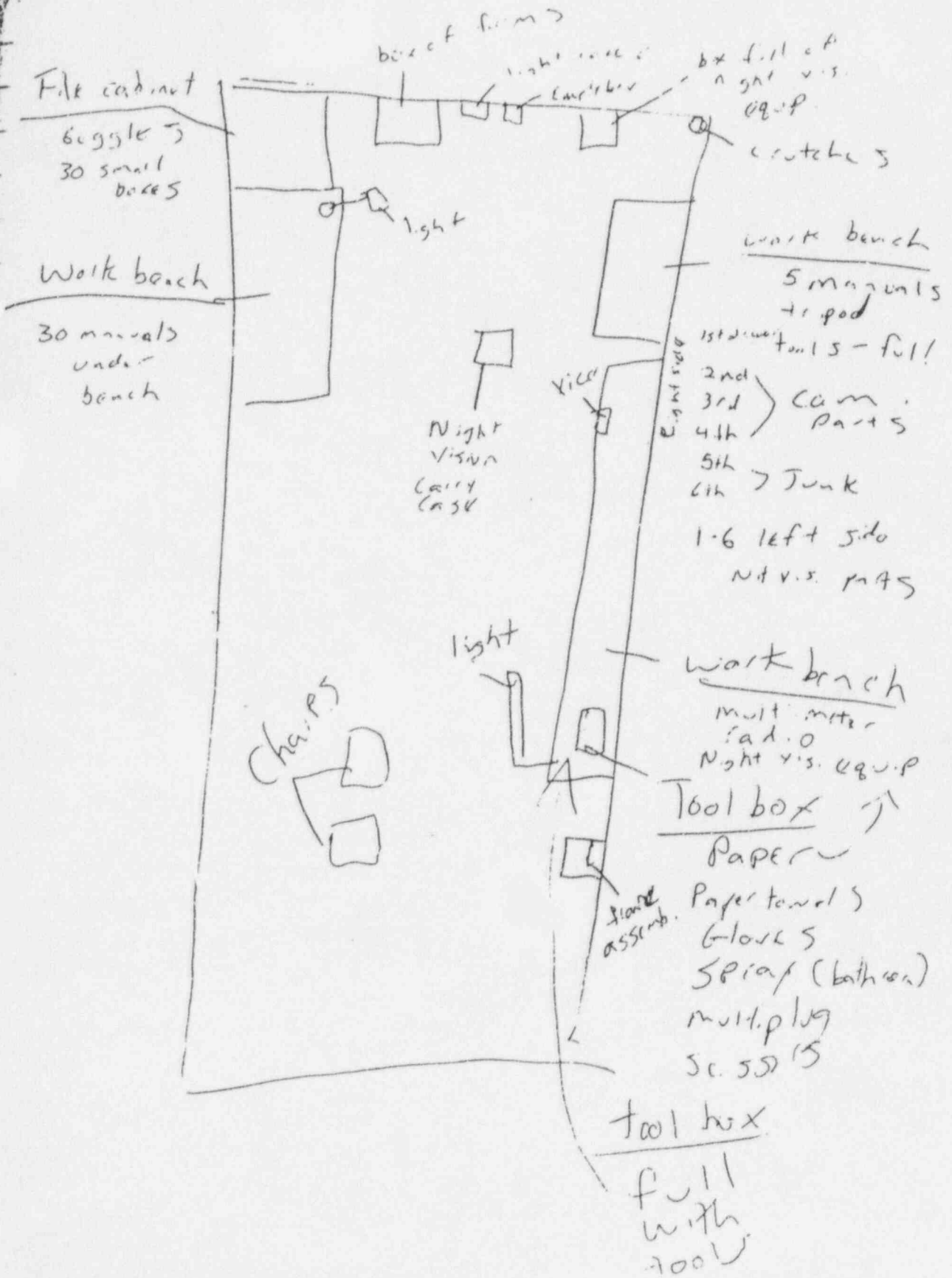
- THERMOMETER

- PUMP

2 55" ~~DRUMS~~ ~~DRUMS~~

Enc(I) 748

DRAFT



Encl (I) of 8



DEPARTMENT OF THE ARMY  
HEADQUARTERS, US ARMY COMMUNICATIONS-ELECTRONICS COMMAND  
AND FORT MONMOUTH  
FORT MONMOUTH, NEW JERSEY 07703-5000

REPLY TO  
ATTENTION OF

AMSEL-SF-RE

24 March 1997

MEMORANDUM FOR Director, U.S. Army Armament & Chemical  
Acquisition & Logistics Activity, ATTN:  
AMSTA-AC-SF (Schaefer), Rock Island, IL  
61299-7630

SUBJECT: Wipe Test Analysis Results from Rhode Island Army  
National Guard (RIARNG)

1. References:

- a. FONECON between the undersigned, this directorate and  
MAJ Schaefer, ACALA, 24 March 1997, SAB.
- b. Memorandum, Wipe Test Analysis Request, 2 January 1997,  
received on 6 January 1997. (encl 1)
- c. Army Regulation 385-11, Ionizing Radiation Protection,  
1 May 1980.
- d. FONECON between Al Perrella, this directorate, and  
CW2 Dean Mansfield, RIARNG, 7 January 1997, SAB.
- e. Memorandum for RIARNG, ATTN: TAGRI-SAO/SO, 16 January  
1997, SAB. (encl 2)
- f. Memorandum, Wipe Test Analysis Request, 16 January 1997,  
received on 17 January 1997. (encl 3)
- g. FONECON between Al Perrella, this directorate, and  
CW2 Dean Mansfield, RIARNG, 21 January 1997, SAB.
- h. FONECON between Messrs. Craig Goldberg, Hugo Bianchi, and  
Frank Piazza, this directorate, and Mr. Dean Mansfield, RIARNG,  
24 March 1997, SAB.
- i. FONECON between Messrs. Craig Goldberg, Hugo Bianchi, and  
Frank Piazza, this directorate, and Mr. Philip Edwards, RIARNG,  
24 March 1997, SAB.

2. As requested in reference 1a FONECON, the following  
information is provided to clarify the incident involving the  
RIARNG:

Enc 1(J) of 14

AMSEL-SI-RE

SUBJECT: Wipe Test Analysis Results from Rhode Island Army  
National Guard (RIARNG)

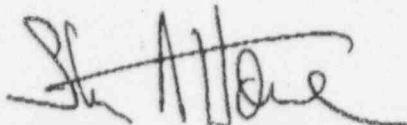
- a. Wipes received on 2 January 1997 from the RIARNG on an M137 Panoramic Telescope and M138 Elbow Telescope (reference 1b) indicated levels in excess of the limit allowed by reference 1c of 2000 dpm of tritium.
- b. Results of this analysis were conveyed in reference 1d FONECON, with follow-on memorandum 1e. The memorandum provided decontamination instructions for the M137 and M138.
- c. Wipes taken of the M137 and M138 after the decontamination effort indicated that all analyses were below the specified limit of reference 1c. In addition, wipes of the M17 Fire Control Quadrant taken at this time were also below this limit (reference 1f). These results were then conveyed to the RIARNG during reference 1g FONECON.
3. Based on reference 1h and 1i FONECONs, it is our understanding that the RIARNG complied with good work practices by ensuring the items were illuminating prior to transfer to Fort Devens. Sometime after the items were left at Fort Devens, the RIARNG was instructed to return to pick up the items, as no further action would be taken by Fort Devens.
4. Upon receipt of the items from Fort Devens, the M17 was double-bagged, but the M137 and M138 were not. The RIARNG decided to perform a wipe survey of the M137 and M138 once they returned to their shop. These are the wipes referenced in paragraph 1a above.
5. The vehicle that the items were transferred in were not wiped for contamination at the time. Subsequent attempts to track down the vehicle have been unsuccessful.
6. The items in question are currently double-bagged and placed inside a metal drum. They are located in an approved radioactive material waste storage area at the RIARNG.

AMSEL-SF-RE

SUBJECT: Wipe Test Analysis Results from Rhode Island Army  
National Guard (RIARNG)

7. Our POC is Mr. Frank Piazza, AMSEL-SF-RE, DSN 995-3112 ext.  
6443, Com (908) 427-3112 ext. 6443, Facsimile on DSN 992-6403 or  
Com (908) 532-6403 or milnet piazza@doim6.monmouth.army.mil.

8. CECOM Bottom Line: THE SOLDIER.



STEVEN A. HORNE  
Director, Safety Risk  
Management

3 Encls

CF:

Commander, RIARNG, ATTN: TAGRI-SAO/SO, 645 New London Ave.,  
Cranston, RI 02920-1037

**WIPE TEST ANALYSIS REQUEST FORM**

(Instructions On Reverse Side)

(1) FROM: **RIARNG**  
ATTN: THARI-SAD/KO  
645 NEW LONDON AVE.  
CRANSTON, RI 02926-1637

(2) TO: Commander, US Army CECOM  
ATTN: AMSEL-SF-RE (Evans)  
Fort Monmouth, NJ 07703-5036

M138

(3) SAMPLE #	(4) DESCRIPTION OF WIPE	(5) ISOTOPE	RESULTS ( $\mu\text{Ci}$ )	DFM
1.	PALE CARPET ELBOW TELESCOPE 253	Hg Tritium	$7.88\text{E}-4$	1749
2.	LENS AREA	"	$1.18\text{E}-3$	2619
3.	EYE PROTECTOR	"	$1.91\text{E}-3$	4246
4.	INSIDE STORAGE CASE	"	$1.55\text{E}-3$	3454
5.	OUTSIDE STORAGE CASE	"	$8.52\text{E}-5$	190

(6) WIPE TAKEN BY/DATE: **2-2 Dean L. Mansfield 2 Jan 97**

(7) PHONE: DSN: **557-3150** Commercial: **(401) 457 4150**

(8) COMMENTS: **NO Illumination**

\*\*\*\*\*FOR USE BY CECOM SAFETY OFFICE ONLY\*\*\*\*\*

1. Reference FONECON between this office and your organization,
2. The above results are below the contamination limits as specified in AR 385-11, Table 4-3, Ionizing Radiation Protection, 1 May 1980.
3. If you require further assistance, contact us at DSN 987-5370; Commercial (908) 427-5370; FAX: Comm (908) 427-2667; DSN 987-2667.
4. The estimated lower limit of detection (LLD) for

JOSEPH M. SANTARSIERO  
Chief, Radiological  
Engineering Division



**WIPE TEST ANALYSIS REQUEST FORM**

(Instructions On Reverse Side)

(1) FROM: RIARNG

(2) TO: Commander, US Army CECOM  
ATTN: AMSEL-SF-RE (Evans)  
Port Monmouth, NJ 07703-5036

(3) SAMPLE #	(4) DESCRIPTION OF WIPE	(5) ISOTOPE	RESULTS (μCi)	DPM
2-1.	Wanted BARREL m137 SAW 263	H <sup>3</sup> Tritium	3.99E-4	885
2-2.	Knobs & SIDE PLATE	"	1.26E-3	2801
2-3.	EYE PIECE AREA	"	3.76E-4	835
2-4.	BACK SIDE OF EYE PIECE	"	1.01E-3	2233
2-5.	IN SIDE CASE	"	1.16E-3	2586

(6) WIPE TAKEN BY/DATE: CW2 DEAN L. MANSFIELD 2 JAN 97

(7) PHONE: DSN: 557-3150 Commercial: (401) 457-4150

(8) COMMENTS: NO Illumination

\*\*\*\*\*FOR USE BY CECOM SAFETY OFFICE ONLY\*\*\*\*\*

1. Reference PONECON between this office and your organization,
2. The above results are below the contamination limits as specified in AR 385-11, Table 4-3, Ionizing Radiation Protection, 1 May 1980.
3. If you require further assistance, contact us at DSN 987-5370; Commercial (908) 427-5370; FAX: Comm (908) 427-2667; DSN 987-2667.
4. The estimated lower limit of detection (LLD) for

JOSEPH M. SANTARSIERO  
Chief, Radiological  
Engineering Division



## DEPARTMENT OF THE ARMY

HEADQUARTERS, US ARMY COMMUNICATIONS-ELECTRONICS COMMAND

AND FORT MONMOUTH

FORT MONMOUTH, NEW JERSEY 07703-5000

REPLY TO  
ATTENTION OF

AMSEL-SF-RE (385-11d)

16 January 1997

MEMORANDUM FOR Commander, RIARNG, ATTN: TAGRI-SAO/SO  
645 New London Ave., Cranston, RI 02920-1037

SUBJECT: Wipe Test Analysis Results and Decontamination  
Procedures

## 1. References:

a. Wipe Test Analysis Request Memorandum, 2 January 1997,  
received on 6 January 1997.

b. FONECON between Al Perrella, this office, and  
CW2 Dean Mansfield, your organization, 7 January 1997, SAB.

c. Army Regulation 385-11, Ionizing Radiation Protection,  
1 May 1980.

2. Analysis of wipe test(s)/sample(s) of shelves provided with  
reference 1a indicate the following levels of removable  
contamination as discussed in reference 1b FONECON:

SAMPLE ID #	Tritium μCi (dpm)
1. Telescope Barrel (M138)	7.88E-4 (1749)
2. Lens area	1.18E-3 (2619)
3. Eye piece	1.91E-3 (4246)
4. Inside storage case	1.55E-3 (3454)
5. Outside storage case	8.56E-5 (190)
2-1. Barrel (M137)	3.99E-4 (885)
2-2. Knob & side plate	1.26E-3 (2801)
2-3. Eye piece area	3.76E-4 (835)
2-4. Back side of eye piece	1.01E-3 (2233)

AMSEL-SF-RE

SUBJECT: Wipe Test Analysis Results and Decontamination Procedures

2-5. Inside case

1.16E-3(2586)

The estimated Lower Limit of Detection (LLD) for tritium, beta radiation, is 5.86E-6 microcuries ( $\mu\text{Ci}$ ) or 13 dpm.

3. As requested, the wipes were analyzed for tritium, beta radiation. The analysis of samples 2, 3, 4, 2-2, 2-4, and 2-5 were above the contamination guidelines of 2,000 dpm/100cm<sup>2</sup> for "other equipment items", as specified in AR 385-11, Table 4-3.

4. As discussed in reference 1b FONECON, we request that you do the following:

a. Double plastic bag the items.

b. Place them in your radioactive storage area.

c. Perform wipe tests of all areas at the CSMS where these items have been stored; contact all personnel involved in the transportation of the items Fort Devens and back; and take wipes of the transport vehicle and all areas where the items are known to have been before transit.

d. We request that you keep access to the items restricted to AUTHORIZED PERSONNEL ONLY! We also request that you continue decontamination efforts and resurvey the items following the instructions provided:

e. Decontamination instructions for the M137 and M138:

(1) Don disposable protective rubber gloves prior to the decontamination effort.

(2) Fill a spray bottle with a mild soap and water solution. Spray the area to be decontaminated with the spray bottle (mist is preferred so as not to saturate the area).

(3) Wipe the items with paper towels to remove loose dirt and residual surface contamination.

(4) Dispose of the paper towels in a large plastic bag. The plastic bag should be marked with the following information: "Radioactive Waste," "H-3," and the date.

(5) Re-wet the items using the spray bottle as above.

AMSEL-SF-RE

SUBJECT: Wipe Test Analysis Results and Decontamination Procedures

(6) Clean the area with a scrub pad (no brushes), then wipe the area with paper towels, which will remove residual contamination, and dry the area.

(7) Dispose of the scrub pad(s) and used paper towels in the marked large plastic bag.

(8) Repeat steps 4e(6) and 4e(7) above.

(9) Remove the protective gloves carefully, slowly peel the gloves off in an inside-out fashion.

(10) Upon completion of decontamination effort, ensure all cleaning materials, and gloves which have been contaminated, are properly disposed of in the marked large plastic bag.

(11) Exit the area.

b. Post Decontamination survey instructions for the M137 and M138:

(1) Don protective gloves prior to performing the survey.

(2) Take wipes of the items, as identified in paragraph 3, using metrical wipes. Be careful not to cross contaminate the wipes during the survey. This can be accomplished by placing the wipe in an individual container (a liquid scintillation vial) before proceeding to the next survey point.

(3) Upon completion of the survey, remove the protective gloves carefully and place them in a large plastic bag as described in 4e(4) above.

(4) All waste held for subsequent disposal should be double bagged with the outer most bag marked as described in 4e(4) above.

(5) Exit the area.

(6) Send the wipes to our laboratory for analysis at the following address:

Commander  
U.S. Army Communications-Electronics  
Command and Fort Monmouth  
ATTN: AMSEL-SF-RE (Evans)  
Fort Monmouth, New Jersey 07703-5036

AMSEL-SF-RE

SUBJECT: Wipe Test Analysis Results and Decontamination  
Procedures

5. Our POC is Mr. Al Perrella, AMSEL-SF-RE, DSN 987-5370,  
Commercial (908) 427-5370, Facsimile on DSN 995-2667 or 908-427-  
2667.

6. CECOM Bottom Line: THE SOLDIER.

STEVEN A. HORNE  
Director, Safety Risk  
Management

CF:

Director, U.S. Army Armament & Chemical Acquisition & Logistics  
Activity, ATTN: AMSTA-AC-SF (Havenner), Rock Island, IL  
61299-7630



**WIPE TEST ANALYSIS REQUEST FORM**

(Instructions On Reverse Side)

(1) FROM: TAGRE-SAO/50  
 Command Readiness Center  
 645 New London Ave.  
 Cranston, RI - 02920.

(2) TO: Commander, US Army CECOM  
 ATTN: AMSEL-SF-RE (Evans)  
 Fort Monmouth, NJ 07703-5036

(3) SAMPLE #	(4) DESCRIPTION OF WIPE	(5) ISOTOPE	RESULTS (μCi)	DPM
1.	TOP OF BENCH	H <sup>3</sup>	≤ LLD	
2.	FRONT OF BENCH	H <sup>3</sup>	≤ LLD	
3.	WALL BEHIND BENCH	H <sup>3</sup>	≤ LLD	
4.	TOOL BOX ON BENCH	H <sup>3</sup>	≤ LLD	
5.	VISE ON BENCH	H <sup>3</sup>	≤ LLD	

(6) WIPE TAKEN BY/DATE: 1/7/97

(7) PHONE: DSN: 557-3150 Commercial: (401) 457-4150

(8) COMMENTS: Taken as a result of phone conversation w/Al Perillio CECOM Tue 7 Jan 97

\*\*\*\*\*FOR USE BY CECOM SAFETY OFFICE ONLY\*\*\*\*\*

1. Reference FONECON between this office and your organization, (CW2 Mansfield) 8 JAN 97.
2. The above results are below the contamination limits as specified in AR 385-11, Table 4-3, Ionizing Radiation Protection, 1 May 1980.
3. If you require further assistance, contact us at DSN 987-5370; Commercial (908) 427-5370; FAX: Comm (908) 427-2667; DSN 987-2667.
4. The estimated lower limit of detection (LLD) for H<sup>3</sup>, beta radiation, is 6.31E-6 μCi or 14 dpm.

*Joseph M. Santarsiero*  
 JOSEPH M. SANTARSIERO  
 Chief, Radiological  
 Engineering Division

Revised March 1996

MAR-21-1997 13:32

P.02

Enc(J) 10 of 14



**WIPE TEST ANALYSIS REQUEST FORM**

(Instructions On Reverse Side)

(1) FROM: K I ARNG

ATTN: TAGRI-540120

645 NEW LONDON AVE.

CRANFORD, NJ

02920-1037

(2) TO: Commander, US Army CECOM

ATTN: AMSKL-SF-RE (Evans)

Port Monmouth, NJ 07703-5036

(3) SAMPLE #	(4) DESCRIPTION OF WIPE	(5) ISOTOPE	RESULTS ( $\mu\text{Ci}$ )	DFM
1.	MIT MOUNT. LEVEL VIOLE AREA	H 3	3.22E-04	715
2.	HAND CRANK	H 3	3.73E-04	829
3.	BASE	H 3	2.22E-04	493
4.	FABE	H 3	2.07E-04	460
5.				

(6) WIPE TAKEN BY/DATE: 16 JAN 97 / DEAN MANSFIELD CW 2

(7) PHONE: DSN: 557-3150 Commercial: 801 457-4150

(8) COMMENTS:

1MM Read File

\*\*\*\*\*FOR USE BY CECOM SAFETY OFFICE ONLY\*\*\*\*\*

- Reference FONECON between this office and your organization,  
(DEAN MANSFIELD) 21 JAN 97.
- The above results are below the contamination limits as specified in AR 385-11, Table 4-3, Ionizing Radiation Protection, 1 May 1980.
- If you require further assistance, contact us at DSN 987-5370; Commercial (908) 427-5370; FAX: Comm (908) 427-2667; DSN 987-2667.
- The estimated lower limit of detection (LLD) for H3, beta radiation, is  $6.31E-6 \mu\text{Ci}$  or 14 dpm.

JOSEPH M. SANTARSIERO  
Chief, Radiological  
Engineering Division

ENCLOSURE  
11/14

# WIPE TEST ANALYSIS REQUEST FORM

(Instructions On Reverse Side)

(1) FROM:

(2) TO: Commander, US Army CECOM  
ATTN: AMSEL-SP-RE (Evans)  
Fort Monmouth, NJ 07703-5036

M158

(3) SAMPLE #	(4) DESCRIPTION OF WIPE	(5) ISOTOPE	RESULTS ( $\mu\text{Ci}$ )	DPM
2-1.	ELBOW TELESCOPE EYE PIECE	713	5.45E-05	121
2-2.	Lens TUBE	143	5.00E-05	111
2-3.	LOCKING BRACKET	143	2.34E-05	52
2-4.	LENS	143	1.62E-05	36
5.				

(6) WIPE TAKEN BY/DATE: 16 JAN 97

(7) PHONE: DSN: 557-3150 Commercial: (401) 457-4150

(8) COMMENTS:

\*\*\*\*\*FOR USE BY CECOM SAFETY OFFICE ONLY\*\*\*\*\*

1. Reference FONECON between this office and your organization,
2. The above results are below the contamination limits as specified in AR 385-11, Table 4-3, Ionizing Radiation Protection, 1 May 1980.
3. If you require further assistance, contact us at DSN 987-5370; Commercial (908) 427-5370; FAX: Comm (908) 427-2667; DSN 987-2667.
4. The estimated lower limit of detection (LLD) for

JOSEPH M. SANTARSIERO  
Chief, Radiological  
Engineering Division

# WIPE TEST ANALYSIS REQUEST FORM

(Instructions On Reverse Side)

(1) FROM:

(2) TO: Commander, US Army CECOM  
 ATTN: AMERL-SF-RE (Evans)  
 Fort Monmouth, NJ 07703-5036

(3) SAMPLE #	(4) DESCRIPTION OF WIPE	(5) ISOTOPE	RESULTS ( $\mu\text{Ci}$ )	DFM
3-1.	TELESCOPE M137 FACE PLATE	H-3	2.55E-04	565
3-2.	LENS TUBE	H-3	2.37E-04	527
3-3.	EYE PIECE AREA	H-3	1.96E-04	435
3-4.	Body	H-3	4.25E-04	944
5.				

(6) WIPE TAKEN BY/DATE: 16 JAN 97

(7) PHONE: DSN: 557-3150 Commercial: (908) 457-4150

(8) COMMENTS:

\*\*\*\*\*FOR USE BY CECOM SAFETY OFFICE ONLY\*\*\*\*\*

1. Reference FONECON between this office and your organization,
2. The above results are below the contamination limits as specified in AR 385-11, Table 4-3, Ionizing Radiation Protection, 1 May 1980.
3. If you require further assistance, contact us at DSN 987-5370; Commercial (908) 427-5370; FAX: Comm (908) 427-2667; DSN 987-2667.
4. The estimated lower limit of detection (LLD) for

JOSEPH M. SANTARSIERO  
 Chief, Radiological  
 Engineering Division

# WIPE TEST ANALYSIS REQUEST FORM

(Instructions On Reverse Side)

(1) FROM:

(2) TO: Commander, US Army CECOM  
 ATTN: AMEL-SF-RM (Evans)  
 Fort Monmouth, NJ 07703-5036

(3) SAMPLE #	(4) DESCRIPTION OF WIPE	(5) ISOTOPE	RESULTS ( $\mu\text{Ci}$ )	DFM
4-1.	CARING CASE INSIDE TOP	H3	4.28E-05	95
4-2.	INSIDE BOTTOM	H3	6.71E-05	149
4-3.	OUTSIDE TOP	H3	1.85E-05	41
4-4.	OUTSIDE BOTTOM	H3	1.07E-05	37
5.				

(6) WIPE TAKEN BY/DATE: 16 JAN 97

(7) PHONE: DSN: 557-3150 Commercial: (401) 457-4150

(8) COMMENTS:

\*\*\*\*\*FOR USE BY CECOM SAFETY OFFICE ONLY\*\*\*\*\*

1. Reference FONECON between this office and your organization,
2. The above results are below the contamination limits as specified in AR 385-11, Table 4-3, Ionizing Radiation Protection, 1 May 1980.
3. If you require further assistance, contact us at DSN 987-5370; Commercial (908) 427-5370; FAX: Comm (908) 427-2667; DSN 987-2667.
4. The estimated lower limit of detection (LLD) for

JOSEPH M. SANTARSIERO  
 Chief, Radiological  
 Engineering Division

EXL(J)  
 14/14

REPLY TO  
ATTENTION OF

DEPARTMENT OF THE ARMY  
U.S. ARMY CENTER FOR HEALTH PROMOTION AND PREVENTIVE MEDICINE  
6155 BLACKHAWK ROAD  
ABERDEEN PROVING GROUND, MARYLAND 21010-8422

MCHB-DC-OIP (40)

24 March 1997

MEMORANDUM FOR Ms. Pam Henderson, Nuclear Regulatory Commission,  
(Region I), 475 Allendale Road, King of Prussia,  
PA 19406-1415

SUBJECT: Draft Wipe Test Sample Analysis at Fort Devens

1. Reference telephone conversation between Ms. Pam Henderson, NRC-Region I, and Mr. Patrick Mark Moscato, Health Physicist, Industrial Health Physics Program, U.S. Center of Health Promotion and Preventive Medicine, 24 March 1997, SAB.
2. Preliminary results of liquid scintillation wipes of the Night Vision Room located in Building 3713 at Fort Devens are enclosed. The draft preliminary results of the tritium analysis can be found in DRAFT Table 1 and DRAFT Table 2 of enclosures 1 and 2, respectively.
3. The points of contact are Mr. Scott Kaepfel or Mr. Patrick Mark Moscato, DSN 584-3502 or commercial (410) 671-3502.

FOR THE COMMANDER:

HARRIS EDGE  
Program Manager  
Industrial Health Physics

CF:

CDR, ACALA, ATTN: MS. PETERSON  
CDR, USARC, ATTN: MS. GIBBS

*Readiness thru Health*



DRAFT Table 1. Liquid Scintillation Wipe Test Samples - Note: Backgrounds and Samples taken Outside of Night Vision Room of Building 3713 at Fort Devens, Massachusetts

Sample I.D.	Activity $\pm$ 1.96 Std Dev (dpm/wipe)	Minimum Detectable Activity (dpm/wipe)
Bkg 1	$-2.86 \pm 14.77$	26.21
Bkg 2	$2.36 \pm 15.20$	26.46
Bkg 3	$-9.74 \pm 13.67$	24.98
Bkg 4	$1.40 \pm 14.28$	24.94
Bkg 5	$4.44 \pm 14.97$	25.87
O-1	$10.55 \pm 15.48$	26.17
O-2	$205.73 \pm 26.59$	30.72
O-3	$218.79 \pm 26.28$	29.47
O-4	$111.87 \pm 24.22$	32.97
O-5	$104.13 \pm 41.87$	64.05
O-6	$79.59 \pm 23.85$	34.81
O-7	$102.61 \pm 21.46$	28.97
O-8	$303.71 \pm 31.95$	33.77
O-9	$212.79 \pm 27.07$	31.08
O-10	$62.61 \pm 21.13$	31.48

Notes: Samples collected on 20 Mar 97

Counted on 21 Mar 97 (5.00 minute counting time with an avg. background of 30.92 cpm)

Instrumentation: Beckman Model LS 6500, SN 7067402



DRAFT Table 2 Liquid Scintillation Wipe Test Samples - Note: Samples taken Inside of Night Vision Room of Building 3713 at Fort Devens, Massachusetts

Sample I.D.	Activity $\pm$ 1.96 Std Dev(dpm/wipe)	Minimum Detectable Activity (dpm/wipe)
R-1	929.33 $\pm$ 43.44	27.76
R-2	7385.98 $\pm$ 115.88	28.10
R-3	4520.79 $\pm$ 91.60	28.34
R-4	9998.09 $\pm$ 170.21	44.64
R-5	8473.80 $\pm$ 139.77	35.56
R-6	4646.10 $\pm$ 92.47	28.13
R-7	15009.11 $\pm$ 163.19	27.69
R-8	9937.72 $\pm$ 131.89	27.20
R-9	3744342.18 $\pm$ 3859.99	62.69
R-10	40507.38 $\pm$ 265.21	27.26
R-11	22662.09 $\pm$ 200.88	27.88
R-12	33804.56 $\pm$ 254.19	29.98
R-13	132589.67 $\pm$ 521.11	32.23
R-14	9085.33 $\pm$ 130.62	29.11
R-15	25526.82 $\pm$ 237.61	34.61
R-16	6572.58 $\pm$ 111.25	29.02
R-17	11496.16 $\pm$ 150.44	30.60
R-18	14593.87 $\pm$ 170.08	30.90
R-19	2743.22 $\pm$ 69.89	26.72
R-20	5710.97 $\pm$ 108.83	31.77
R-21	20843.31 $\pm$ 195.05	28.56
Scope 1	106.74 $\pm$ 21.09	28.04
Scope 2	101.40 $\pm$ 21.29	28.76

Notes: Samples collected on 20 Mar 97

Counted on 21 Mar 97 (5.00 minute counting time with an avg. background of 30.92 cpm)

Instrumentation: Beckman Model LS 6500, SN 7067402

Encl 2

TOTAL P.04  
P.04

Encl (K) 3/3  
TOTAL P.04

Transmittal Header Sheet  
Safety Management Office  
Devens RFTA  
Devens, MA 01433-5520

TO:

*Tim Mohr*

DATE:

*27 Mar 97*

SUBJECT:

*NRC-1 Wipes of outside  
Devens NVG Room*

PAGES:

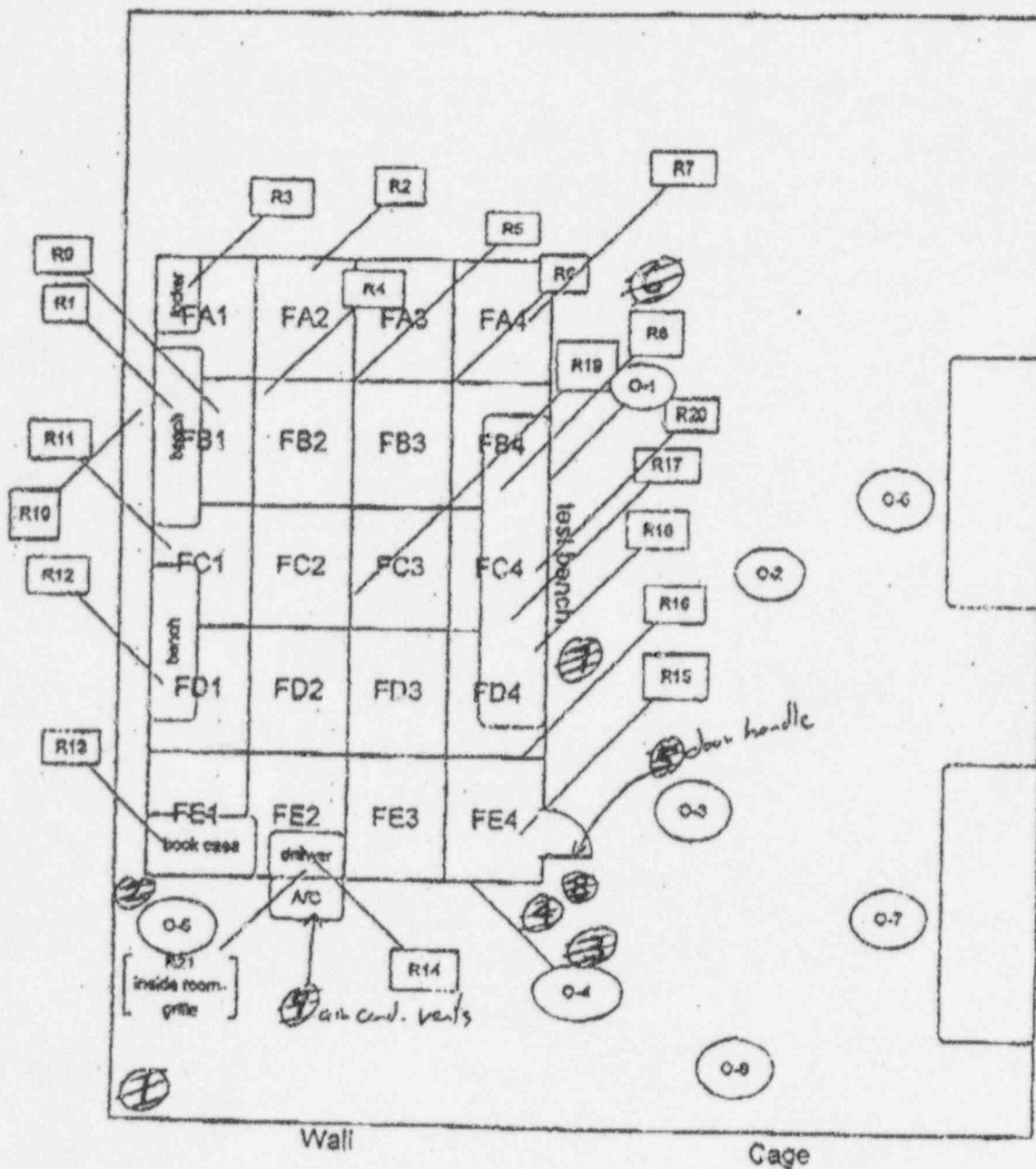
*3*

NOTES:



FT. DEVENS, MA  
 NIGHT VISION ROOM  
 BUILDING 3713

26 Mar 97



Note: Room is full of manuals, tools & equipment, and benches & furniture.

OPTIONAL FORM 94 (7-97)

FAX TRANSMITTAL

1 of pages 2

To: PAMA WENDERSON	From: MARK MOSCATO
Display: REGISRIE - NRC	Phone: (410) 671-3502
Fax: (610) 337-5324	Fax: (410) 671-8261
FORM 7540-01-317-7308	GENERAL SERVICES ADMINISTRATION

SAMPLES O-9 AND O-10

OFF-SCALE OF DIAGRAM

⊗ - NRC sample location  
 (Moist wipe) on 3/29/97

**SAMPLE RECORD SHEET**  
REGIONAL LABORATORY

U.S. NUCLEAR REGULATORY COMMISSION

LAB CONTROL  
NUMBER

301895

FILE LOCATION		DIVISION		PHONE	DATE ANALYSIS BEGAN	DATE COMPLETED	ROUTINE	URGENT	DATE NEEDED
DATE	HOUR	SAMPLE	DESCRIPTION	ANALYST	QUANTITY	DATE	ANALYST	ANALYST	DATE
3/4		1	wipes	H-3 LSC	11	428	321		3-46-97
		2				322			146±13
		3				820			70±10
		4				1496			288±15
		5				408			510±10
		6				334			40±12
		7				383			77±10
		8							39±7
		9				1814			690±20
		10				374			96±10

\* Random Agency, when reported are 1 standard deviation. If shall negative and other results 2σ are reported as including "not" or as not detected. If appropriate, number of possible systematic errors are reported in parentheses.

1. ANALYST 2. INSPECTOR



Page 1 of 3

ROCK ISLAND ARSENAL  
RADIOISOTOPE ANALYSIS AND LABORATORY RESULTS

Lab Number	Date Received	Qty	Received From	Phone Comm	DSN	FAX	Date
R97-0819	4/1/97	34	REICHERT	(508) 796-2440	256-2440	99999	4-2

## MATERIAL:

AREA WIPE TEST AND/OR  
LEAK TEST OF RADIOACTIVE  
SOURCES OF BETA EMITTERCHEMICAL AGENT MONITOR  
OTHER DEVICE  
AREA WPES 34 H3[ ]  
[ ]  
[X]FACILITY REQUESTING  
WIPE TESTS:COMMANDER  
ATTN: AFRC-FMD-SO (MS. REICHERT)  
DEVENS, MA 01433-5520

Test results were within acceptable surface contamination levels as specified in AR-385-11, (May 1980), table 4-3.  
Removable surface contamination in excess of those limits listed in the above regulation will be reported to:

Armament Chemical Acquisition Logistics Activity (ACALA)  
AMSTA-AC-SF  
Rock Island, IL 61299-5000POCs: Mr. Thomas Gizicki, RPO, DSN 793-7889  
Mr. Ronald Lund, Alternate RPO, DSN 793-7925

Analyst: BB

1st Line Reviewer: 

Richard W. Perry

Chief, Materials Laboratory Division

Page 2 of 3

## TEST RESULTS

## ROCK ISLAND ARSENAL RADIOLOGICAL INDEPENDENT TEST LAB (RIA-RITL)

RIA LAB NO. R97-0819

Date Received

4/1/97

☐ M43A1 Detector☐ CAM☐ Other

ISOTOPE: H3

Reporting Act. DODAAC: W13GN5

Testing Act. DODAAC: W52H1C

Lower Limit of Detectability (LLD) 19 X2 = 38 DPM

Owning Activity DODAAC CODE	Cell S/N	Dectector/ Monitor	Carrier Number	Activ/DPM +/- 2SD *	Pass
W13GN5	VIAL CAP	MARKED 8-1	1	< 2 X LLD	Yes
W13GN5	VIAL CAP	MARKED 8-2	2	< LLD	Yes
W13GN5	VIAL CAP	MARKED 8-3	3	"	Yes
W13GN5	VIAL CAP	MARKED 8-4	4	< 200	Yes
W13GN5	VIAL CAP	MARKED 8-5	5	< 2 X LLD	Yes
W13GN5	VIAL CAP	MARKED 8-6	6	< LLD	Yes
W13GN5	VIAL CAP	MARKED 8-7	7	"	Yes
W13GN5	VIAL CAP	MARKED 8-8	8	"	Yes
W13GN5	VIAL CAP	MARKED 8-9	9	< 91	Yes
W13GN5	VIAL CAP	MARKED 8-10	10	< LLD	Yes
W13GN5	VIAL CAP	MARKED 8-11	11	"	Yes
W13GN5	VIAL CAP	MARKED 8-12	12	"	Yes
W13GN5	VIAL CAP	MARKED 8-13	13	"	Yes
W13GN5	VIAL CAP	MARKED 8-14	14	< 2 X LLD	Yes
W13GN5	VIAL CAP	MARKED 8-15	15	"	Yes
W13GN5	VIAL CAP	MARKED 8-16	16	"	Yes
W13GN5	VIAL CAP	MARKED 8-17	17	"	Yes
W13GN5	VIAL CAP	MARKED 8-18	18	40 +/- 22	Yes
W13GN5	VIAL CAP	MARKED 8-19	19	< LLD	Yes
W13GN5	VIAL CAP	MARKED 8-20	20	"	Yes
W13GN5	VIAL CAP	MARKED 9-1	21	"	Yes
W13GN5	VIAL CAP	MARKED 9-2	22	"	Yes
W13GN5	VIAL CAP	MARKED 9-3	23	"	Yes
W13GN5	VIAL CAP	MARKED 9-4	24	"	Yes
W13GN5	VIAL CAP	MARKED 9-5	25	"	Yes
W13GN5	VIAL CAP	MARKED 9-6	26	"	Yes
W13GN5	VIAL CAP	MARKED 9-7	27	< 2 X LLD	Yes

Encl (M) 2 of 5



Page 3 of 3

Owning Activity DODAAC CODE	Cell S/N	Dectector/ Monitor	Carrier Group	Activ/DPM +/- 2SD *	Pass
W13GN5	VIAL CAP	MARKED 9-8	28	< LLD	Yes
W13GN5	VIAL CAP	MARKED 9-9	29	"	Yes
W13GN5	VIAL CAP	MARKED 9-10	30	"	Yes
W13GN5	VIAL CAP	MARKED 9-11	31	"	Yes
W13GN5	VIAL CAP	MARKED 9-12	32	"	Yes
W13GN5	VIAL CAP	MARKED 9-13	33	"	Yes
W13GN5	VIAL CAP	MARKED 9-14	34	"	Yes

\* NOTE: Test Results less than 2X LLD will not be reported

\* Activity will be reported to ACALA-AMSTA-AC-SIF: BETA in  
Areas: > 100 DPM (uncontrolled), > 400 DPM (controlled),  
Equipment: > 2000 DPM (controlled), > 100 DPM (uncontrolled),  
Any Alpha Emitters: > 20 DPM.

ALL 34 SAMPLES ARE DECON SWIPES.

SAMPLES 8-1 THRU 8-20 INCL ARE FROM A WELDING AREA IN  
BLDG. 3713.

SAMPLES 9-1 THRU 9-14 INCL. ARE FROM [REDACTED] POV.  
Sample 4 and 9 extremely low eff. < 10 % , ie dirty sample

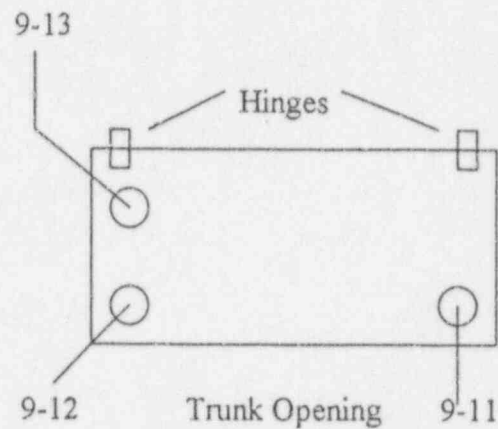
Encl (m) 3 of 5

WIPE TEST SAMPLES DATA  
WELDING SHOP  
27 Mar 97

- 8-1 Welder on/off switch, power rheostat, handle of torch tip.
- 8-2 Vise (jaws) on work bench
- 8-3 Handle of vise
- 8-4 Work table top
- 8-5 Porter Cable grinder, serial number 038137
- 8-6 Work gloves used by welder Phil Kelly
- 8-7 Welding hood opening
- 8-8 Welding helmet (red color)
- 8-9 Grinder (Black and Decker)
- 8-10 Wire wheel grinder tool rests (T09908)
- 8-11 Field Blank
- 8-12 Floor at entrance to small arms room
- 8-13 Upper shelf, wall locker, arms vault
- 8-14 Middle shelf, wall locker, arms vault
- 8-15 Handle on wall locker, arms vault
- 8-16 Inside, right side, door of wall locker
- 8-17 Handle of vault door
- 8-18 [REDACTED] shoes (between heel and walking portion of sole)
- 8-19 Top of [REDACTED] shoe/ steel toes
- 8-20 Blank

**WIPE TEST SAMPLES**  
**FORD TEMPO, MASS LICENSE 654-AJO**  
28 Mar 97

- 9-1 Blank
- 9-2 Driver side seat, top where butt sits
- 9-3 Gear shift
- 9-4 Steering wheel
- 9-5 Driver side door handle
- 9-6 Driver seat, shoulder area
- 9-7 Driver side floor board accelerator area
- 9-8 Left rear passenger seat butt area
- 9-9 Trunk at lock area
- 9-10 Right rear passenger seat butt area
- 9-11 Sock, right side of trunk
- 9-12 Left side rear inside trunk
- 9-13 Poncho area
- 9-14 Underside of trunk lid over areas 9-12/13



Transmittal Header Sheet  
Safety Management Office  
Devens RFTA  
Devens, MA 01433-5520

TO:

Tim Mohr/Betty Peterson

DATE:

9 Apr 97

SUBJECT:

More Devens's Wipe Test Results  
[REDACTED] Home, Plus Maintenance  
Building Shower & Welding Area

PAGES:

5

NOTES:

Lang B.

Page 2 of 3

# TEST RESULTS

## ROCK ISLAND ARSENAL RADIOLOGICAL INDEPENDENT TEST LAB (RIA-RITL)

RIA LAB NO. R97-0880

Date Received 4/4/97

☐ M43A1 Detector

☐ CAM

☐ Other

ISOTOPE: H3

Reporting Act. DODAAC: W13GN5

Testing Act. DODAAC: W52H1C

Lower Limit of Detectability (LLD) 21 X2 = 42 DPM

Owning Activity DODAAC CODE	Cell S/N	Detector/ Monitor	Carrier Number	Activ/DPM +/- 2SD *	Pass
W13GN5	11-1		1	< LLD	Yes
W13GN5	11-2		2		Yes
W13GN5	11-3		3		Yes
W13GN5	11-4		4		Yes
W13GN5	11-5		5		Yes
W13GN5	11-6		6		Yes
W13GN5	11-7		7		Yes
W13GN5	11-8		8		Yes
W13GN5	11-9		9		Yes
W13GN5	11-10		10		Yes
W13GN5	11-11		11		Yes
W13GN5	11-12		12		Yes
W13GN5	11-13		13		Yes
W13GN5	11-14		14		Yes
W13GN5	11-15		15		Yes
W13GN5	10-1		16		Yes
W13GN5	10-2		17		Yes
W13GN5	10-3		18		Yes
W13GN5	10-4	Sample too dirty/analysis in CPM	19	< 23 CPM	Yes
W13GN5	10-5		20	< LLD	Yes
W13GN5	10-6		21		Yes
W13GN5	10-7		22		Yes
W13GN5	10-8		23		Yes
W13GN5	10-9		24		Yes
W13GN5	10-10		25		Yes
W13GN5	10-11		26		Yes

Page 3 of 3

Owning Activity DODAAC CODE	Cell S/N	Dectector/ Monitor	Carrier Group	Activ/DPM */- 2SD *	Pass
--------------------------------	-------------	-----------------------	------------------	------------------------	------

\* NOTE: Test Results less than 2X LLD will not be reported

\* Activity will be reported to ACALA-AMSTA-AC-SIF: BETA in  
Areas: > 100 DPM (uncontrolled), > 400 DPM (controlled),  
Equipment: > 2000 DPM (controlled), > 100 DPM (uncontrolled),  
Any Alpha Emitters: > 20 DPM.

SAMPLES 11-1 THRU 11-15 INCL. ARE FROM AN EMPLOYEE'S HOME.

SAMPLES 10-1 THRU 10-5 INCL. ARE FROM A WELDING AREA.

SAMPLES 10-6 THRU 10-11 INCL. ARE FROM A SHOWER AREA IN  
BLDG. 3713.

Encl (N) 345




WIPE TEST SAMPLES  
Welding Area

Sample Number	Description
10-1	Blank
10-2	Air powered grinder, Sun-X #9262328
10-3	Air powered grinder, #93D46220
10-4	Mctal break press
10-5	Metal break press
10-6	Left shower head, men's shower
10-7	Right shower head, men's shower
10-8	Left shower hot and cold water faucets
10-9	Right shower hot and cold water faucets
10-10	Dust on wall at top of tiles
10-11	Drain strainer in men's shower room

Encl (N) 445

Wipe Test Samples From the Home  
of Arthur Keefe  
3 Lakeview Ave, Apartment 6  
Reading, MA

2 April 97

Sample Number	Wipe Taken From
11-1	Floor inside living room in front of door
11-2	Apartment front door, inside door knob
11-3	Shower drain
11-4	Hot and cold faucet handles, bathroom sink
11-5	Door knob, outside of bathroom door
11-6	Corner of green carpet
11-7	 boots between sole and heel
11-8	Clothes hamper/basket
11-9	Inside clothes bag
11-10	Inside lid/basket apron washing machine far right
11-11	Inside lid/basket apron washing machine, one to left
11-12	Inside lib/basket apron washing machine, second to left
11-13	Outside door knob to apartment
11-14	Inner hallway door "bar"
11-15	Outside of outside door to building

Encl (N) 545



DEPARTMENT OF THE ARMY  
HEADQUARTERS, US ARMY COMMUNICATIONS-ELECTRONICS COMMAND  
AND FORT MONMOUTH  
FORT MONMOUTH, NEW JERSEY 07703-5000

REPLY TO  
ATTENTION OF

AMSEL-SF-RE

8 April 1997

MEMORANDUM FOR Commander, RIARNG, ATTN: TAGRI-SAO/SO  
645 New London Ave., Cranston, RI 02920-1037

SUBJECT: Wipe Test Analysis Results

1. References:

a. Wipe Test Analysis Request Memorandum, 26 March 1997, received on 26 March 1997.

b. FONECON between Mr. Frank Piazza, our directorate, and SSG Philip Edwards, your organization, 27 March 1997, SAB.

c. Memorandum, USACECOM, ATTN: AMSEL-SF-RE, 17 January 1997, SAB.

d. Army Regulation 385-11, Ionizing Radiation Protection, 1 May 1980.

2. Analysis of wipe test samples of shelves and the commodities provided with reference 1a indicate the following levels of removable contamination as discussed in reference 1b FONECON:

<u>SAMPLE ID #</u>	<u>Tritium</u> <u>μCi (dpm)</u>
1. Left side of Bench #1	≤ LLD
2. Right side of Bench #1	≤ LLD
3. Front left side of Bench #2	≤ LLD
4. Rear left side of Bench #2	≤ LLD
5. Rear right side of Bench #2	≤ LLD
6. Front right side of Bench #2	≤ LLD
7. Floor in front of Bench #2	≤ LLD
8. Top of office desk	≤ LLD
9. Handle of entrance door	≤ LLD
10. Floor entrance	≤ LLD

AMSEL-SF-RE  
SUBJECT: Wipe Test Analysis Results

1-1. Top face plate of M17	1.40E-4 (312)
1-2. Top face plate of M17	2.19E-4 (485)
1-3. Top face plate of M17	1.27E-4 (283)
1-4. Elevation knob	9.87E-5 (219)
1-5. Level vial	1.00E-4 (224)
1-6. Black knob	6.01E-5 (133)
1-7. Base Plate	2.19E-4 (485)
1-8. Bottom plate	2.13E-4 (473)
1-9. Data plate	1.28E-4 (285)
1-10. Weld	2.51E-4 (558)
2-1. Eye piece of M137	1.37E-5 (31)
2-2. Eye piece casing	1.53E-5 (34)
2-3. Correction knob	2.21E-5 (49)
2-4. Lens	1.27E-5 (28)
2-5. Deflection knob w/handle	2.47E-5 (55)
2-6. Elevation knob	1.97E-5 (44)
2-7. Front plate #1	2.98E-5 (66)
2-8. Front plate #2	≤ LLD
2-9. Bottom of counter	2.30E-5 (51)
2-10. Tube	2.47E-5 (55)
3-1. Protective cap M138	4.87E-4 (1081)
3-2. Lens	1.20E-5 (27)
3-3. Tube	3.35E-5 (75)

AMSEL-SF-RE  
SUBJECT: Wipe Test Analysis Results

3-4. Data plate	1.41E-5 (32)
3-5. Locking lugs	3.25E-5 (72)
3-6. Number ring	5.50E-5 (122)
3-7. Eye piece	1.61E-5 (36)
3-8. Handle bars	≤ LLD
3-9. Nitrogen purge valve	2.38E-5 (53)
3-10. Overall outer casing	2.61E-5 (58)
4-1. Eye piece of M139	≤ LLD
4-2. Tube	≤ LLD
4-3. Base	1.51E-5 (34)
CI-1. Inside of carrying case for M137/8, Elbow slot	2.22E-5 (49)
CI-2. M137 slot	1.50E-5 (33)
CI-3. Data plate	1.01E-5 (22)
CI-4. Inside upper cover	≤ LLD
CO-1. Outside of case, front	1.18E-5 (26)
CO-2. Top	≤ LLD
CO-3. Handles and latches	≤ LLD
5-1. Face plate of M137 from workbench	≤ LLD
5-2. Eye piece	≤ LLD
5-3. Lens	≤ LLD
5-4. Tube	≤ LLD
5-5. Crank knob	≤ LLD

The estimated Lower Limit of Detection (LLD) for tritium, beta radiation, is 8.11E-6 microcuries ( $\mu\text{Ci}$ ) or 18 dpm.

AMSEL-SF-RE

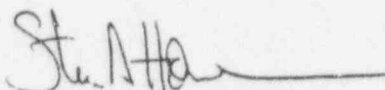
SUBJECT: Wipe Test Analysis Results

3. As requested, the wipes were analyzed for tritium, beta radiation. The analysis of samples 1-1, 1-2, 1-3, 1-4, 1-5, 1-6, 1-7, 1-8, 1-9, 1-10, 3-1 and 3-6 revealed contamination above guidelines of 100 dpm/100cm<sup>2</sup> for "uncontrolled work areas and equipment items", as specified in Table 4-3 of reference 1d.

4. As discussed in reference 1b FONECON, we request that you continue decontamination efforts and resurvey the items following the instructions provided in reference 1c.

5. Our POC is Mr. Frank Piazza, AMSEL-SF-RE, DSN 987-3112/ext 6443, Commercial (908) 427-3112/ ext. 6443, Facsimile on DSN 992-6403 or 908-532-6403.

6. CECOM Bottom Line: THE SOLDIER.



STEVEN A. HORNE  
Director, Safety  
Risk Management

CF:

Director, U.S. Army Armament & Chemical Acquisition & Logistics  
Activity, ATTN: AMSTA-AC-SF (MAJ Schaefer), Rock Island, IL  
61299-7630





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

REPLY TO  
ATTENTION OF

MCHB-DC-OMH (40-14c)

3 APR 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: Priority Interpretation of Tritium Bioassay Results

1. See enclosure 1 for a list of references.
2. As requested, the bioassay results provided to us were used to estimate radionuclide intake and internal dose for the individuals involved in the incident with the nonilluminating M-17 Fire Control Quadrant at Fort Devens (USAIRDC Account Code: Unknown).
3. The estimated radiation doses were calculated using the RBD computer software package. Conservative estimates of dose based on the assumption that all the intake occurred at the earliest known exposure date are listed below. The incident date was acquired in a telephone conversation between Ms Barbara Reichert and Mr Dunston on 31 March, 1997. A committed dose report (enclosure 2) for each individual is provided IAW AR 40-14. For bioassay results above the USACHPPM laboratory detection limit, estimated doses were corroborated by a computational check using hand calculations.

Name	SSN	Dose in mrem	Incident date
[REDACTED]	[REDACTED]	146	14 Nov 96
[REDACTED]	[REDACTED]	7.59	14 Nov 96
[REDACTED]	[REDACTED]	0.0136	13 Mar 97
[REDACTED]	[REDACTED]	0.0254	05 Mar 97
[REDACTED]	[REDACTED]	7.53	14 Nov 96

Readiness thru Health

Enc1(P) 143

MCHB-DC-OMH (40-14c)

SUBJECT: Priority Interpretation of Tritium Bioassay Results

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

FOR THE COMMANDER:



2 Encls  
as

DEBRA D. SCHNELLE  
MAJ, MS  
Program Manager

CF:

CDR, ACALA, ATTN:AMSTA-AC-SF (Safety Office) Rock Island, IL  
61299-7630

OIC, Occupational Health Clinic, USA Soldiers System Command,  
Bldg 30, Natick, MA 01760

## REFERENCES

1. Radiological Bioassay and Dosimetry (RBD) Software Package, Version 4.1, 1 August 1992.
2. AR 40-14, Occupational Ionizing Radiation Dosimetry, 30 June 1995.
3. DA Pam 40-18, Personnel Dosimetry Guidance and Dose Recording Procedures for Personnel Occupationally Exposed to Ionizing Radiation, 30 June 1995.
4. ICRP Publication No. 54, "Individual Monitoring for Intakes of Radionuclides by Workers: Design and Interpretations," 1988.
5. Preliminary Results, U.S. Army Center for Health Promotion and Preventive Medicine, MCHB-DC-LRC, 01 April 1997, subject: Tritium in Urine.



DEPARTMENT OF THE ARMY  
HEADQUARTERS, 94TH ARMY RESERVE COMMAND  
695 SHERMAN AVENUE  
FORT DEVENS, MASSACHUSETTS 01433-4000



REPLY TO  
ATTENTION OF:  
AFRC-CMA-SO (385-11d)

7 April 1997

MEMORANDUM FOR COMMANDER, Rock Island Arsenal Radiological  
Independent Test Lab, ATTN: SIORI-SE, Bldg  
210 4th Floor, Rock Island, IL 61299-5000

SUBJECT: Swipe Samples, Request for Analysis

1. An ongoing investigation of a radiation incident at the RFTA, Devens, MA revealed that one of the individuals involved was a reservist assigned to a 94th RSC unit. As RPO for 94th RSC, I felt it prudent to take swipe samples of the unit area this individual worked in as a reservist. All radiation sources identified in this workplace were tritium.
2. Enclosed are seventeen separate swipes for analysis. The seventeen vials are identified by the numbers 1 through 17 on the caps. All swipes were taken from the above mentioned workplace.
3. Results should be forwarded to:

COMMANDER  
94th RSC  
50 Sherman Avenue  
ATTN: AFRC-CMA-SO (MR. MORRISON)  
Devens, MA 01433-4000

4. Point of contact for this action is undersigned, DSN 256-2530 or commercial (508) 796-2530.

17 Encls

  
BILLYFRANK MORRISON  
94th RSC Safety Manager/RPO

0888

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ROCK ISLAND ARSENAL  
RADIOISOTOPE ANALYSIS AND LABORATORY RESULTS

Lab Number	Date Received	Qty	Received From	Phone Comm	DSN	FAX	Date
R97-0888	4/8/97	17	MORRISON	(508) 796-2530	256-2530	999999	4-8-97

## MATERIAL:

AREA WIPE TEST AND/OR  
LEAK TEST OF RADIOACTIVE  
SOURCES OF BETA EMITTERCHEMICAL AGENT MONITOR  
OTHER DEVICE  
AREA WIPES 17 H3[ ]  
[ ]  
[X]FACILITY REQUESTING  
WIPE TESTS:COMMANDER  
94 TH. RSC  
50 SHERMAN AVE.  
ATTN: AFRC-CMA-SO (MR. MORRISON)  
DEVENS, MA 01433-4000

Test results were within acceptable surface contamination levels as specified in AR-385-11, (May 1980), table 4-3.  
Removable surface contamination in excess of those limits listed in the above regulation will be reported to:

Armament Chemical Acquisition Logistics Activity (ACALA)  
AMSTA-AC-SF  
Rock Island, IL. 61299-5000POCs: Mr. Thomas Gizicki, RPO, DSN 793-7889  
Mr. Ronald Lund, Alternate RPO, DSN 793-7925

Analyst: BB

1st Line Reviewer: 

Richard W. Perry

Chief, Materials Laboratory Division

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## TEST RESULTS

## ROCK ISLAND ARSENAL RADIOLOGICAL INDEPENDENT TEST LAB (RIA-RITL)

RIA LAB NO. R97-0888

Date Received

4/8/97

☐ M43A1 Detector☐ CAM☐ Other

ISOTOPE: H3

Reporting Act. DODAAC: W13GN5

Testing Act. DODAAC: W52H1C

Lower Limit of Detectability (LLD) 23 X2 = 46 DPM

Owning Activity DODAAC CODE	Cell S/N	Detector/ Monitor	Carrier Number	Activ/DPM +/- 2SD *	Pass
W13GN5	VIAL CAP	MARKED #1	1	< 2X LLD	Yes
W13GN5	VIAL CAP	MARKED #2	2		Yes
W13GN5	VIAL CAP	MARKED #3	3		Yes
W13GN5	VIAL CAP	MARKED #4	4		Yes
W13GN5	VIAL CAP	MARKED #5	5		Yes
W13GN5	VIAL CAP	MARKED #6	6		Yes
W13GN5	VIAL CAP	MARKED #7	7		Yes
W13GN5	VIAL CAP	MARKED #8	8		Yes
W13GN5	VIAL CAP	MARKED #9	9		Yes
W13GN5	VIAL CAP	MARKED #10	10		Yes
W13GN5	VIAL CAP	MARKED #11	11		Yes
W13GN5	VIAL CAP	MARKED #12	12		Yes
W13GN5	VIAL CAP	MARKED #13	13		Yes
W13GN5	VIAL CAP	MARKED #14	14		Yes
W13GN5	VIAL CAP	MARKED #15	15	✓	Yes
W13GN5	VIAL CAP	MARKED #16	16	47 ± 23	Yes
W13GN5	VIAL CAP	MARKED #17	17	< 2X LLD	Yes

\* NOTE: Test Results less than 2X LLD will not be reported

\* Activity will be reported to ACALA-AMSTA-AC-SIF: BETA in  
 Areas: > 100 DPM (uncontrolled), > 400 DPM (controlled),  
 Equipment: > 2000 DPM (controlled), > 100 DPM (uncontrolled),  
 Any Alpha Emitters: > 20 DPM.

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Owning Activity DODAAC CODE	Cell S/N	Dectector/ Monitor	Carrier Group	Activ/DPM +/- 2SD *	Pass
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INCIDENT AT RFTA, DEVENS, MA  
RESERVIST'S WORK AREA

Encl(Q) 4/4