DEPARTMENT OF THE ARMY
WALTER REED ARMY MEDICAL CENTER
WASHINGTON, DC 20307-5001

REPLY TO
ATTENTION OF:

MCHL-HP

7 July 1997

MEMORANDUM FOR Record

SUBJECT: Decommissioning Survey of Building 513 Forest Glen Annex

1. A decommissioning survey was conducted in building 513, Forest Glen Annex on 27 June to 2 July 1997. The building was surveyed with survey meters for detectable contamination. In addition swipes were collected for each square meter of the floor area and up 5 feet on every inside wall for removable contamination.

2. The building was used as a storage location for a sealed source irradiator and a sealed drum containing depleted uranium shielding. No unsealed radioactive material was used at this location. Based on the knowledge of the site history and previous survey information this building was not expected to contain any residual radioactive contamination.

3. A historical review indicated that no spills or unusual occurrences happened at this location.

4. The floor of the building was grided off in 3 foot squares. The squares were labeled as indicated in enclosure 1. The inside walls were grided from the floor to 3 feet and labeled as the floor grid coordinate plus a reference direction (N=north, E=east, S=south, W=west) and a number 1. From 3 feet up to 5 feet as the floor coordinate, reference direction and number 2. An example of a wall coordinate is A1N1 for the area on the wall adjacent to the floor coordinate A1, in the north reference direction, and the lower grid coordinate from the floor up to 3 feet.

5. The survey instrumentation was chosen to provide the highest sensitivity for detecting alpha, beta, or gamma radiation. The calibration and sensitivity data for all instrumentation used in this report is included in enclosure 2.

6. Every square yard of the floor of building 513 was grided and directly surveyed for gamma contamination using the AN/PDR-77, serial number 41395A. The results of the survey are included in columns 1 and 4 of enclosure 3. The meter was checked for proper operation and calibrated against a NIST traceable check source. The check source was 1.81 μCi of Cs-137 as of December 1972

source number 475. The decayed source strength at the time of the survey was about 1.03 μCi of Cs-137. The measured activity of this check source was 11.0E4 CPM. The measured background level was 1.74E3 CPM. The swipes from these locations indicated no contamination (enclosure 4).

7. A Ludlum L-3 with an unshielded beta probe was used to directly survey the floor of building 513 for beta or gamma contamination. The results of the survey were recorded in columns 2 and 5 of enclosure 3. The meter was checked for proper operation and calibrated against a NIST traceable check source. The check source was 0.0064 μCi of Am-241 as of February 1970. The decayed source strength at the time of the survey was about 0.0064 μCi of Am-241. The measured activity of this check source was 15,000 CPM. The measured background level was 60 CPM. The results of this survey indicated that no beta contamination was present in building 513 (enclosure 5). Note that C-14 and tritium which emit very low energy beta radiation may not be detectable using this survey meter.

8. The AN/PDR-77, serial number 41395A was used to directly survey the floor of building 513 for alpha contamination. The results of the survey were recorded in columns 3 and 6 of enclosure 3. The meter was checked for proper operation and calibrated against a NIST traceable check source. The check source was 0.0064 μCi of Am-241 as of February 1970. The decayed source strength at the time of the survey was about 0.0064 μCi of Am-241. The measured activity of this check source was 10,200 CPM. The measured background level was 140 CPM. The results of this survey indicated that no alpha contamination was present in building 513 (enclosure 6).

9. Swipes were taken in each grid location and on every inside wall for removable contamination. The swipes were put in marked vials and analyzed in a Packard A5530 automatic gamma counter. The background was counted for 10 minutes and the samples were counted for 2 minutes each. The results are background subtracted and printed in enclosure 7. A diagram of the floor plan of the building with the walls is included as enclosure 8. The results of this survey indicate that no removable gamma contamination was present in building 513.

10. After the swipes were analyzed in the auto-gamma counter, 10 ml of liquid scintillation fluid was added to each vial and the vials were counted in a Packard 2500LX automatic liquid scintillation counter. The background was counted for 10 minutes

and the samples were counted for 2 minutes each. The results are background subtracted and printed in enclosure 9. A diagram of the floor plan of the building with the walls is included as enclosure 10. The results of this survey indicated possible contamination in on wall grid F10E2, however, this sample was rerun through the liquid scintillation counter and this time measured no contamination (enclosure 11). This problem could be due to chemical contamination of the swipe sample that reacted with the scintillation fluid.

11. Based on the results of this survey, building 513, Forest Glen Annex, can be removed from the WRAMC NRC license and is considered free from radioactive contamination.

11 Encls
as

ARTHUR R. MORTON
CPT, MS
Chief, Operations Branch, HPO

EXH 1

Building 513

US ARMY TMDE SUPPORT CENTER-ABERDEEN
ABERDEED PROVING GROUNDS,MD.

AREA NUCLEONICS LABORATORY
REPORT OF CALIBRATION
FOR
RADIAC SET/SURVEY METER

MODEL:3
SERIAL NO.:18103

SUBMITTED BY:

W2DH01

The measurements were performed under ambient conditions of approximately 22.7 Degrees C and 40% percent relative humidity.

This instrument was calibrated In accordance with TB9-6665-285-15. Army Calibration Program for Radiac Meters.

The reference standard for this Calibration in a model 500-2 LUDLUM Pulser, serial number 129168, Calibrated 30 JAN. 1996.

Calibration uncertainty including measuring errors and the accuracy Of the reference standard is +/- 10%.

This calibration is traceable to and compatible with National Institute of standards and technology (NIST) measurements.

In charge of test:

JUNG K. PARK

DAVID A. JAMISON
Radiation Protection Officer
US. ARMY DTSC-Aberdeen

Calibration Report No.: W2DH01059C
Calibration Date: 29 OCT 1996
Calibration Due Date: 24 OCT 1997

ENCL2

RADIAC INSTRUMENT DATA SHEET

INSTRUMENT MAKE: LUDLUM | MODEL NO. 3 | SER.NO.18103

PROBE TYPE: 44-9 | SERIAL NO.: 18103-1 | RATE:3300CPM/mR/HR

CALIBRATION GEOMETRY:

Check Source Reading at surface Level =18K

SCALE	SOURCE MODE	DISTANCE CM	INSTRUMENT METER READING RATE CPM	BEFORE	ADJUSTMENT AFTER
X100			400K 100K		400K 100K
X10			40K 10K		40K 10K
X1			4K 1K		4K 1K
X.1			400 100		400 100

Probe checked with= Americium-241

Activity: (2.65 kbq) 71.6 nci +/-10%.
Count rate in the alpha-plateau at 5 mm distance from the Surface of the source= 79,524 CPM.

	CPM	BEFORE	AFTER
X10	79,524	26K	

PROBE EFFICIENCY= 32.7%

CALIBRATION REPORT NO.W2DH01059C DATE 29 OCT 1996

TOTAL P.03

TSC-ABERDEEN,APG.MD.

SURVEY INSTRUMENT CALIBRATION REPORT
AN/PDR-77

Serial Number: 41395A Radionuclide: Cs-137

OUIC: W2DH01

PUIC: W4590C

Battery Check: OK

Beta/Gamma Probe Low Range Detector (DT-616/VDR-2)		
Applied	Read	Correction Factor
2 R/hr	2.02 K mR/hr	.99
200 mR/hr	193 mR/hr	1.04
80 mR/hr	76.4 mR/hr	1.05
20 mR/hr	19.5 mR/hr	1.03
8 mR/hr	7.78 mR/hr	1.03
0.8 mR/hr	.746 mR/hr	1.07
0.08 mR/hr	.073 mR/hr	1.09

Beta/Gamma Probe High Range Detector (DT-616/VDR-2)		
Applied	Read	Correction Factor
200 R/hr	N/A K mR/hr	N/A
80 R/hr	82.7 K mR/hr	.97
20 R/hr	19.9 K mR/hr	1.01
8 R/hr	8.2 K mR/hr	.98

Calibration Report Number: W2DH01279C

Date: 24 JAN. 97

CAIIBRATION DUE DATE 23 JUL. 97

Radionuclide: Pu-239 SERIAL NUMBER 41395A

Alpha Probe (DT-669/PDR-77)		
Applied	Read	Correction Factor
126 K cpm	122 K cpm	1.03
10.6 K cpm	10.1 K cpm	1.05
.856 K cpm	.823 K cpm	1.04
* Check Source	7.76 K cpm	N/A

** Check source (Th-232) measurement obtained with Alpha Side up, centered, and flush against detector.*

Radionuclide: Am-241

X-ray Probe (DT-674/PDR-77)				
Energy Select Position	Calibration Position	Applied	Read	Correction Factor
17 KeV	* Center	24.6 K cpm	25.2 K cpm	.98
17 KeV	**	Check Source	1.29 K cpm	N/A
60 KeV	Center	45.9 K cpm	46.3 K cpm	.99
60 KeV	**	Check Source	5.99 K cpm	N/A

** Center measurements were obtained 12 inches directly above source.*

*** Check source (Th-232) measurement obtained with X-ray Side up, centered, and flush against detector.*

Calibration Report Number: WADHC1219C

Date: 24 JAN 91

CALIBRATION DUE DATE 23 Jul. 91

Charles A. Dean
In Charge of Calibration

Reviewer

Instrument Detection Sensitivity

For an integrated measurement over a preset time, the minimum detectable activity (MDA) for surface activity can be approximated by:

$$MDA = \frac{2.71 + 4.65\sqrt{B_r * t}}{t * E * \frac{A}{100}}$$

where,

MDA = activity level in DPM/100 cm^2
B_r = measured background rate in CPM
t = counting time in minutes
E = detector efficiency in counts/disintegrations
A = active area of the probe in cm^2

Meter	SN	B_r (CPM)	t (min)	E	A (cm^2)	MDA (DPM)
AN/PDR-77	41395A	5	1	0.950	129.00	10.7
L-3	18,103	60	1	0.327	20.27	584.3
AN/PDR-77	41395A	1,740	1	0.600	506.70	64.8

Surveyor 1: Mikolosk Surveyor 2: Dupuis Date: 3 July 97

Coordinate	Alpha	Beta	Gamma	Coordinate	Alpha	Beta	Gamma
A1	3.22	80	1.76 k	F1	5.9	90	1.73 k
A2	2.75	80	1.93	F2	7.14	80	1.70
A3	3.27	100	1.87	F3	8.37	60	1.69
A4	6.48	60	1.73	F4	9.5	120	1.66
A5	9.92	60	1.83	F5	12.3	80	1.66
A6	9.26	60	1.81	F6	10.2	80	1.665
A7	8.24	80	1.82	F7	12.3	60	1.72
A8	12.0	80	1.77	F8	10.9	60	1.77
A9	10.03	80	1.78	F9	2.13	60	1.80
A10	2.9	100	1.79	F10	2.57	60	1.79
B1	12.4	80	1.82				
B2	10.0	80	1.90				
B3	11.0	80	1.82				
B4	7.71	80	1.92				
B5	4.16	80	1.91				
B6	4.57	60	1.97				
B7	6.03	80	1.98				
B8	8.90	100	1.83				
B9	10.4	100	1.82				
B10	11.8	80	1.80				
C1	11.4	100	1.80				
C2	8.4	100	1.89				
C3	7.03	80	1.76				
C4	12.1	80	1.82				
C5	12.7	100	1.85				
C6	6.0	80	1.89				
C7	14.1	80	1.81				
C8	13.5	120	1.88				
C9	12.0	100	2.00				
C10	3.6	80	1.94				
D1	8.93	100	1.80				
D2	10.2	100	1.87				
D3	12.0	80	1.86				
D4	14.1	80	1.82				
D5	3.17	120	1.89				
D6	3.82	80	1.95				
D7	4.49	80	1.97				
D8	5.1	100	1.88				
D9	6.79	80	1.88				
D10	6.79	60	1.90				
E1	7.45	80	1.82				
E2	6.36	100	1.92				
E3	5.42	80	1.84				
E4	4.78	100	1.81				
E5	3.06	100	1.83				
E6	6.66	80	1.82				
E7	5.51	60	1.80				
E8	4.70	60	1.80				
E9	3.76	60	1.70				
E10	3.72	60	1.79				

γ Meter/SN: AN/PDR77 41395A Chk Source: Cs 137 Msr: 11,000 cpm Bkgd: 1.74 k CPM

β Meter/SN: L-3 18103 Chk Source: Cl 36 2/73 0.02 μCi Msr: 15,000 Bkgd: 6.0 CPM

α Meter/SN: AN/PDR77 41395A Chk Source: Am241 2/70 0.0064 μCi Msr: 12,300 Bkgd: 5.0 CPM

ENCL 3

Building 513 Forest Glen Section

Gamma	Source	Activity	Date	Source	Bkgd
Meter		uCi		CPM	CPM
AN/PDR-77	Cs-137	1.81	Dec 1972	11,000	1.74E+03

Gamma Meter Readings (CPM) - Not Background Subtracted

	1	2	3	4	5	6	7	8	9	10	
A	1.76E+03	1.93E+03	1.87E+03	1.73E+03	1.83E+03	1.81E+03	1.83E+03	1.79E+03	1.78E+03	1.79E+03	A
B	1.85E+03	1.90E+03	1.88E+03	1.92E+03	1.91E+03	1.93E+03	1.88E+03	1.83E+03	1.82E+03	1.80E+03	B
C	1.80E+03	1.79E+03	1.80E+03	1.82E+03	1.85E+03	1.89E+03	1.87E+03	1.88E+03	2.00E+03	1.94E+03	C
D	1.80E+03	1.87E+03	1.86E+03	1.88E+03	1.89E+03	1.85E+03	1.87E+03	1.88E+03	1.88E+03	1.90E+03	D
E	1.82E+03	1.82E+03	1.84E+03	1.81E+03	1.83E+03	1.82E+03	1.80E+03	1.80E+03	1.80E+03	1.79E+03	E
F	1.73E+03	1.70E+03	1.69E+03	1.66E+03	1.66E+03	1.66E+03	1.72E+03	1.77E+03	1.80E+03	1.79E+03	F
	1	2	3	4	5	6	7	8	9	10	

Gamma Meter Readings (CPM) - Background Subtracted

	1	2	3	4	5	6	7	8	9	10	
A	20	190	130	0	90	70	90	50	40	50	A
B	110	160	140	180	170	190	140	90	80	60	B
C	60	50	60	80	110	150	130	140	260	200	C
D	60	130	120	140	150	110	130	140	140	160	D
E	80	80	100	70	90	80	60	60	60	50	E
F	0	0	0	0	0	0	0	30	60	50	F
	1	2	3	4	5	6	7	8	9	10	

ENCL 4

Building 513 Forest Glen Section

Beta Meter	Source	Activity uCi	Date	Source CPM	Bkgd CPM
L-3	Cl-36	0.02	Feb 73	15,000	60

Beta Meter Readings (CPM) - Not Background Subtracted

	1	2	3	4	5	6	7	8	9	10	
A	80	80	100	60	60	60	80	80	80	100	A
B	80	80	80	80	80	60	80	100	100	80	B
C	100	100	60	80	100	80	80	120	100	80	C
D	100	100	80	80	120	80	80	100	80	60	D
E	80	100	80	100	100	80	60	60	60	60	E
F	90	80	60	120	80	80	60	60	60	60	F
	1	2	3	4	5	6	7	8	9	10	

Beta Meter Readings (CPM) - Background Subtracted

	1	2	3	4	5	6	7	8	9	10	
A	20	20	40	0	0	0	20	20	20	40	A
B	20	20	20	20	20	0	20	40	40	20	B
C	40	40	0	20	40	20	20	60	40	20	C
D	40	40	20	20	60	20	20	40	20	0	D
E	20	40	20	40	40	20	0	0	0	0	E
F	30	20	0	60	20	20	0	0	0	0	F
	1	2	3	4	5	6	7	8	9	10	

ENCL 5

Building 513 Forest Glen Section

Alpha Meter	Source	Activity uCi	Date	Source CPM	Bkgd CPM
AN/PDR-77	Am-241	0.0064	Feb 70	12,300	5

Alpha Meter Readings (CPM) - Not Background Subtracted

	1	2	3	4	5	6	7	8	9	10	
A	3.22	2.75	2.27	6.48	9.98	9.06	8.24	12.00	10.03	13.90	A
B	13.40	10.00	11.00	7.81	4.16	4.57	5.03	8.90	10.40	11.80	B
C	11.40	10.40	9.42	13.10	16.50	15.00	14.10	16.50	15.00	13.60	C
D	8.73	10.20	12.00	14.10	3.17	3.83	4.49	5.10	5.79	6.79	D
E	7.45	6.36	5.42	4.78	8.06	6.66	5.51	4.79	3.76	3.32	E
F	5.90	7.14	8.37	9.50	12.30	10.20	12.30	14.90	2.13	2.57	F
	1	2	3	4	5	6	7	8	9	10	

Alpha Meter Readings (CPM) - Background Subtracted

	1	2	3	4	5	6	7	8	9	10	
A	0.00	0.00	0.00	1.48	4.98	4.06	3.24	7.00	5.03	8.90	A
B	8.40	5.00	6.00	2.81	0.00	0.00	0.03	3.90	5.40	6.80	B
C	6.40	5.40	4.42	8.10	11.50	10.00	9.10	11.50	10.00	8.60	C
D	3.73	5.20	7.00	9.10	0.00	0.00	0.00	0.10	0.79	1.79	D
E	2.45	1.36	0.42	0.00	3.06	1.66	0.51	0.00	0.00	0.00	E
F	0.90	2.14	3.37	4.50	7.30	5.20	7.30	9.90	0.00	0.00	F
	1	2	3	4	5	6	7	8	9	10	

ENCL 6

Building 513 FG

PROGRAM #: 1 07/01/97 12:19

REGION A:	LL= 15	UL= 85	BKG= 0	%SIGMA= .00	
REGION B:	LL= 85	UL= 150	BKG= 0	%SIGMA= .00	
REGION C:	LL= 150	UL= 275	BKG= 0	%SIGMA= .00	
REGION D:	LL= 275	UL= 400			
REGION E:	LL= 400	UL= 900			
REGION F:	LL= 900	UL= 1400			

TIME= 2.00 SCREENING LIMITS= 0 0

P#	S#	TIME	CPMA	CPMB	CPMC	CPMD	CPME	CPMF	FLAGS	MIN
1	0	10.00	32	25	52	33	71	29	B	10
1	1	2.00	2	0	0	5	0	0	A1	13
1	2	2.00	2	3	0	4	0	1	N1	15
1	3	2.00	0	0	0	3	0	0	N2	17
1	4	2.00	0	3	0	2	0	3	W1	19
1	5	2.00	3	0	1	0	8	7	W2	21
1	6	2.00	0	7	0	0	2	0	A2	23
1	7	2.00	0	6	2	1	0	0	N1	26
1	8	2.00	0	0	0	0	0	0	N2	28
1	9	2.00	1	4	9	0	0	2	A3	30
1	10	2.00	6	0	0	1	0	0	N1	32
1	11	2.00	1	0	3	4	0	1	N2	34
1	12	2.00	9	0	0	7	0	0	A4	36
1	13	2.00	0	1	0	5	2	5	N1	38
1	14	2.00	5	0	0	1	0	0	N2	41
1	15	2.00	2	0	4	9	0	1	A5	43
1	16	2.00	3	1	4	3	2	2	N1	45
1	17	2.00	0	1	0	4	0	0	N2	47
1	18	2.00	0	0	0	11	0	1	A6	49
1	19	2.00	0	4	0	0	3	0	N1	51
1	20	2.00	0	2	4	0	0	0	N2	53
1	21	2.00	0	0	0	0	0	0	A7	56
1	22	2.00	2	0	0	5	0	1	N1	58
1	23	2.00	6	0	0	1	0	0	N2	60
1	24	2.00	2	3	1	1	0	2	A8	62
1	25	2.00	1	0	2	8	0	3	N1	64
1	26	2.00	0	4	0	1	3	0	N2	66
1	27	2.00	0	2	4	1	0	2	A9	69
1	28	2.00	2	2	0	0	0	2	N1	71
1	29	2.00	0	2	0	2	0	0	N2	73
1	30	2.00	4	0	4	0	0	0	A10	75
1	31	2.00	5	4	0	0	2	0	N1	77
1	32	2.00	5	5	0	3	0	0	N2	79
1	33	2.00	2	0	1	0	0	2	E1	81
1	34	2.00	0	1	1	1	0	0	E2	84
1	35	2.00	0	0	0	3	3	0	B1	86
1	36	2.00	0	0	2	6	3	1	W1	88
1	37	2.00	0	1	0	0	0	4	W2	90
1	38	2.00	1	4	0	0	0	1	B2	92
1	39	2.00	11	5	6	6	0	0	23	94
1	40	2.00	4	0	8	0	0	0	24	96
1	41	2.00	6	0	1	1	1	10	25	99
1	42	2.00	0	0	0	0	0	1	26	101

ENCL

P#	S#	TIME	CPMA	CPMB	CPMC	CPMD	CPME	CPMF	FLAGS	MIN
1	43	2.00	1	0	2	2	0	4	B7	103
1	44	2.00	3	6	0	0	0	0	B8	105
1	45	2.00	2	0	0	4	0	1	B9	107
1	46	2.00	0	2	0	2	0	0	B10	109
1	47	2.00	4	1	0	0	3	7	E1	112
1	48	2.00	0	2	1	2	0	6	E2	114
1	49	2.00	0	4	0	0	0	0	C1	116
1	50	2.00	0	1	6	0	0	4	W1	118
1	51	2.00	0	0	0	0	0	3	W2	120
1	52	2.00	5	0	1	9	0	2	C2	122
1	53	2.00	0	1	0	5	10	0	C3	124
1	54	2.00	0	4	0	0	0	1	C4	127
1	55	2.00	0	3	1	3	0	3	C5	129
1	56	2.00	3	6	0	6	0	0	C6	131
1	57	2.00	2	0	0	0	0	2	C7	133
1	58	2.00	1	0	0	6	0	5	C8	135
1	59	2.00	4	5	0	4	0	0	C9	137
1	60	2.00	0	7	0	0	0	2	C10	139
1	61	2.00	0	7	1	7	0	0	E1	142
1	62	2.00	3	4	0	2	0	7	E2	144
1	63	2.00	0	0	0	0	0	1	D1	146
1	64	2.00	5	1	4	1	0	10	W1	148
1	65	2.00	0	8	5	0	0	0	W2	150
1	66	2.00	5	4	0	0	0	6	D2	152
1	67	2.00	0	0	9	3	0	4	D3	155
1	68	2.00	0	0	0	11	0	0	D4	157
1	69	2.00	2	0	0	0	0	2	D5	159
1	70	2.00	0	5	0	0	0	2	D6	161
1	71	2.00	0	6	0	0	0	0	D7	163
1	72	2.00	3	3	5	4	6	1	D8	165
1	73	2.00	1	1	0	7	0	3	D9	167
1	74	2.00	0	0	0	0	0	0	D10	170
1	75	2.00	0	4	0	0	6	4	E1	172
1	76	2.00	0	2	2	2	0	0	E2	174
1	77	2.00	2	0	0	0	0	5	E1	176
1	78	2.00	0	0	4	3	5	0	W1	178
1	79	2.00	7	0	0	5	0	3	W2	180
1	80	2.00	0	0	0	0	0	2	E2	182
1	81	2.00	3	0	0	0	0	1	E3	185
1	82	2.00	2	7	0	0	0	3	E4	187
1	83	2.00	2	5	0	0	0	1	E5	189
1	84	2.00	0	2	6	0	5	0	E6	191
1	85	2.00	4	0	0	0	1	5	E7	193
1	86	2.00	0	2	0	0	0	0	E8	195
1	87	2.00	2	1	6	5	0	5	E9	198
1	88	2.00	7	0	3	0	0	0	E10 E1	200
1	89	2.00	0	2	8	0	0	0	C10	202
1	90	2.00	1	5	1	0	0	0	E10 E2	204
1	91	2.00	5	0	0	0	0	0	F1	206
1	92	2.00	0	0	0	0	0	5	S1	208
1	93	2.00	6	3	0	0	0	1	S2	210

P#	S#	TIME	CPMA	CPMB	CPMC	CPMD	CPME	CPMF	FLAGS	MIN
1	94	2.00	1	6	0	0	0	0	W1	213
1	95	2.00	0	4	6	2	0	0	W2	215
1	96	2.00	0	1	6	0	0	0	F2	217
1	97	2.00	0	0	2	0	0	4	S1	219
1	98	2.00	2	6	4	4	0	9	S2	221
1	99	2.00	3	5	0	9	0	3	F3	223
1	100	2.00	3	0	0	0	0	4	S1	225
1	101	2.00	0	0	0	0	0	0	S2	228
1	102	2.00	0	4	0	0	0	0	F4	230
1	103	2.00	5	1	0	6	0	2	S1	232
1	104	2.00	0	0	0	2	0	6	S2	234
1	105	2.00	1	0	0	4	0	0	F5	236
1	106	2.00	0	2	0	0	0	7	S1	238
1	107	2.00	0	2	4	0	6	0	S2	240
1	108	2.00	4	6	0	0	0	0	F6	243
1	109	2.00	5	1	6	7	0	1	S1	245
1	110	2.00	3	0	0	7	0	0	S2	247
1	111	2.00	0	0	15	1	0	0	F7	249
1	112	2.00	0	1	0	0	3	3	S1	251
1	113	2.00	0	0	0	0	0	5	S2	253
1	114	2.00	1	0	1	0	0	0	F8	256
1	115	2.00	1	0	0	2	0	0	S1	258
1	116	2.00	0	4	2	7	0	0	S2	260
1	117	2.00	1	3	0	4	0	1	F9	262
1	118	2.00	0	0	0	4	0	0	S1	264
1	119	2.00	9	5	0	3	0	0	S2	266
1	120	2.00	1	0	0	5	0	2	F10	268
1	121	2.00	2	1	0	0	0	0	E1	271
1	122	2.00	3	0	6	0	3	0	E2	273
1	123	2.00	0	0	0	0	0	3	S1	275
1	124	2.00	3	7	0	2	0	0	S2	277
	Highest		11	8	15	11	10	10		

Auto Gamma Counter	Bkgd A CPM	Bkgd B CPM	Bkgd C CPM	Bkgd D CPM	Bkgd E CPM	Bkgd F CPM
Packard A5530	32	25	52	33	71	29

* 2 minutes count time per sample
* Measured counts are background subtracted

Building 513 Forest Glen Section

	W2	W1	1	2	3	4	5	6	7	8	9	10	E1	E2	
			0	0	1	5	0	0	6	0	0	5			
			0	0	0	0	1	2	0	4	2	5			
N2			0	0	3	0	0	4	0	0	0	0			N2
			3	0	4	1	4	0	1	1	2	3			
			0	0	0	0	0	0	0	3	0	0			
			0	0	1	0	0	0	0	0	0	0			
			2	0	6	0	3	0	2	1	2	5			
			3	6	0	1	1	4	0	0	2	4			
N1			0	2	0	0	4	0	0	2	0	0			N1
			4	1	1	5	3	0	5	8	0	0			
			0	0	0	2	2	3	0	0	0	2			
			1	0	0	5	2	0	1	3	2	0			
	3	0	2	0	1	9	2	0	0	2	0	4	2	0	
	0	3	0	7	4	0	0	0	0	3	2	0	0	1	
A	1	0	0	0	9	0	4	0	0	1	4	4	1	1	A
	0	2	5	0	0	7	9	11	0	1	1	0	0	1	
	8	0	0	2	0	0	0	0	0	0	0	0	0	0	
	7	3	0	0	2	0	1	1	0	2	2	0	2	0	
	0	0	0	1	11	4	6	0	1	3	2	0	4	0	
	1	0	0	4	5	0	0	0	0	6	0	2	1	2	
B	0	2	0	0	6	8	1	0	2	0	0	0	0	1	B
	0	6	3	0	6	0	1	0	2	0	4	2	0	2	
	0	3	3	0	0	0	1	0	0	0	0	0	3	0	
	4	1	0	1	0	0	10	1	4	0	1	0	7	6	
	0	0	0	5	0	0	0	3	2	1	4	0	0	3	
	0	1	4	0	1	4	3	6	0	0	5	7	7	4	
C	0	6	0	1	0	0	1	0	0	0	0	0	1	0	C
	0	0	0	9	5	0	3	6	0	6	4	0	7	2	
	0	0	0	0	10	0	0	0	0	0	0	0	0	0	
	3	4	0	2	0	1	3	0	2	5	0	2	0	7	
	0	5	0	5	0	0	2	0	0	3	1	0	0	0	
	8	1	0	4	0	0	0	5	6	3	1	0	4	2	
D	5	4	0	0	9	0	0	0	0	5	0	0	0	2	D
	0	1	0	0	3	11	0	0	0	4	7	0	0	2	
	0	0	0	0	0	0	0	0	0	6	0	0	6	0	
	0	10	1	6	4	0	2	2	0	1	3	0	4	0	
	7	0	2	0	3	2	2	0	4	0	2	0	7	1	
	0	0	0	0	0	7	5	2	0	2	1	2	0	5	
E	0	4	0	0	0	0	0	6	0	0	6	8	3	1	E
	5	3	0	0	0	0	0	0	0	0	5	0	0	0	
	0	5	0	0	0	0	0	5	1	0	0	0	0	0	
	3	0	5	2	1	3	1	0	5	0	5	0	0	0	
	0	1	5	0	3	0	1	4	0	1	1	1	2	3	
	4	6	0	1	5	4	0	6	0	0	3	0	1	0	
F	6	0	0	6	0	0	0	0	15	1	0	0	0	6	F
	2	0	0	0	9	0	4	0	1	0	4	5	0	0	
	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
	0	0	0	0	3	0	0	0	0	0	1	2	0	0	
			0	0	3	5	0	5	0	1	0	0			
			0	0	0	1	2	1	1	0	0	0			
S1			0	2	0	0	0	6	0	0	0	0			S1
			0	0	0	6	0	7	0	2	4	0			
			0	0	0	0	0	0	3	0	0	0			
			5	4	4	2	7	1	3	0	0	3			
			6	2	0	0	0	3	0	0	9	3			
			3	6	0	0	2	0	0	4	5	7			
S2			0	4	0	0	4	0	0	2	0	0			S2
			0	4	0	2	0	7	0	7	3	2			
			0	0	0	0	6	0	0	0	0	0			
			1	9	0	6	0	0	5	0	0	0			
	W2	W1	1	2	3	4	5	6	7	8	9	10	E1	E2	

ENCL 8

Protocol #: 1 ROUTINE A User : SPC Dupui

Time: 2.00
Data Mode: Dual DPM Nuclides: 3H-14C-UG Quench Sets
Low Energy: 3H-UG
Background Subtract: 1st Vial High Energy: 14C-U(

	LL	UL	LCR	2S%	BKG
Region A:	0.0	12.0	0	0.0	7.17
Region B:	12.0	156	0	0.0	12.31
Region C:	156	2000	0	0.0	12.01

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
Coincidence Time(ns): 18
Delay Before Burst(ns): Normal

S#	TIME	CPMA	A:2S%	CPMB	B:2S%	CPMC	DPM1	DPM2	tSIE	FLAG
1	10.00	7.17	23.61	12.31	18.03	12.01			695.49	B
2	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	578.98	A1
3	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	566.08	N1
4	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	602.95	N2
5	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	603.17	W1
6	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	596.00	W2
7	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	539.56	A2
8	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	577.17	N1
9	2.00	0.00	0.00	1.19	475.1	0.00	0.00	1.47	563.48	N2
10	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	408.91	A3
11	2.00	0.83	526.3	0.00	0.00	0.00	1.87	0.00	613.48	N1
12	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	584.90	N2
13	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	485.59	A4
14	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	583.72	N1
15	2.00	0.94	464.0	0.00	0.00	0.00	2.17	0.00	597.46	N2
16	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	479.00	A5
17	2.00	0.00	0.00	3.19	187.9	0.00	0.00	3.94	569.95	N1
18	2.00	3.33	146.9	0.00	0.00	0.00	7.58	0.00	607.77	N2
19	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	556.45	A6
20	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	601.98	N1
21	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	585.48	N2
22	2.00	4.83	107.4	0.19	2891	0.00	12.39	0.00	491.82	A7
23	2.00	0.00	0.00	2.19	266.1	0.00	0.00	2.71	566.37	N1
24	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	596.14	N2
25	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	509.09	A8
26	2.00	0.00	0.00	3.69	164.7	0.00	0.00	4.56	590.25	N1
27	2.00	0.00	0.00	2.69	219.8	0.00	0.00	3.32	621.89	N2
28	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	431.41	A9
29	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	568.34	N1
30	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	574.10	N2
31	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	581.15	A10
32	2.00	0.00	0.00	2.69	219.8	0.00	0.00	3.32	585.99	N1
33	2.00	0.00	0.00	0.19	2891	0.00	0.00	0.23	580.42	N2
34	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	592.04	E1
35	2.00	0.00	0.00	0.19	2891	0.00	0.00	0.23	579.47	E2
36	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	472.91	B1
37	2.00	0.00	0.00	2.12	274.7	0.00	0.00	2.61	593.44	W1
38	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	574.79	W2
39	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	459.16	B2
40	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	431.96	B3

ENCL 9

S#	TIME	CPMA	A:2S%	CPMB	B:2S%	CPMC	DPM1	DPM2	tSIE	FLAG
41	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	464.26	B4
42	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	351.94	B5
43	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	366.55	B6
44	2.00	0.83	526.3	0.00	0.00	0.00	2.21	0.00	466.05	B7
45	2.00	5.88	91.55	0.63	875.2	0.00	15.83	0.11	450.87	B8
46	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	438.31	B9
47	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	389.95	B10
48	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	557.68	C1
49	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	572.49	C2
50	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	490.18	C1
51	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	576.99	W1
52	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	576.36	W2
53	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	429.01	C2
54	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	423.62	C3
55	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	362.21	C4
56	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	415.94	C5
57	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	374.00	C6
58	2.00	0.00	0.00	0.89	629.4	0.00	0.00	1.13	384.25	C7
59	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	452.67	C8
60	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	402.68	C9
61	2.00	0.00	0.00	3.69	164.7	0.00	0.00	4.66	394.00	C10
62	2.00	1.96	234.3	2.05	282.7	0.00	3.97	2.34	553.08	E1
63	2.00	1.81	251.9	0.00	0.00	0.00	4.31	0.00	562.91	E2
64	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	478.72	D1
65	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	577.88	W1
66	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	585.16	W2
67	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	403.20	B2
68	2.00	0.00	0.00	0.69	806.9	0.00	0.00	0.88	324.24	D3
69	2.00	0.00	0.00	0.19	2891	0.00	0.00	0.24	332.30	D4
70	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	325.56	D5
71	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	307.17	D6
72	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	330.00	D7
73	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	396.22	D8
74	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	441.53	D9
75	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	416.54	D10
76	2.00	0.53	809.1	0.00	0.00	0.00	1.27	0.00	549.77	E1
77	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	528.69	E2
78	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	405.66	E1
79	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	569.41	W1
80	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	588.43	W2
81	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	458.24	E2
82	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	515.44	E3
83	2.00	0.00	0.00	1.69	339.7	0.00	0.00	2.17	305.24	E4
84	2.00	0.00	0.00	1.31	431.9	0.00	0.00	1.64	482.76	E5
85	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	397.29	E6
86	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	306.16	E7
87	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	388.46	E8
88	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	345.36	E9
89	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	571.53	E10 E1
90	2.00	0.00	0.00	0.19	2891	0.00	0.00	0.24	359.07	E10
91	2.00	0.00	0.00	0.19	2891	0.00	0.00	0.23	581.41	E10 E2
92	2.00	3.81	130.8	0.00	0.00	0.00	12.50	0.00	355.40	F1
93	2.00	0.33	1299	0.00	0.00	0.00	0.75	0.00	595.08	S1
94	2.00	0.33	1299	0.00	0.00	0.00	0.75	0.00	589.50	S2
95	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	589.28	W1
96	2.00	0.49	868.8	0.00	0.00	0.00	1.13	0.00	601.99	W2

Protocol #: 1 ROUTINE A User : SPC Dupuis

S#	TIME	CPMA	A:2S%	CPMB	B:2S%	CPMC	DPM1	DPM2	tSIE	FLAG	
97	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	316.03	F2	
98	2.00	0.00	0.00	0.02	35389	0.00	0.00	0.02	556.47		S1
99	2.00	0.00	0.00	0.19	2891	0.00	0.00	0.23	591.12		S2
100	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	348.09	F3	
101	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	537.79		S1
102	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	496.76		S2
103	2.00	0.00	0.00	3.69	164.7	0.00	0.00	4.57	525.83	F4	
104	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	587.14		S1
105	2.00	0.83	526.3	1.69	339.7	0.00	1.45	2.01	507.52		S2
106	2.00	0.06	6926	0.00	0.00	0.00	0.17	0.00	424.07	F5	
107	2.00	0.00	0.00	1.19	475.1	0.00	0.00	1.48	498.08		S1
108	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	380.01		S2
109	2.00	0.00	0.00	0.00	0.00	0.99	0.00	0.00	254.76	F6	
110	2.00	0.00	0.00	2.46	238.5	0.00	0.00	3.06	504.61		S1
111	2.00	0.00	0.00	3.19	187.9	0.00	0.00	3.97	497.11		S2
112	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	460.64	F7	
113	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	496.77		S1
114	2.00	0.00	0.00	4.19	147.0	0.00	0.00	5.19	539.19		S2
115	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	417.97	F8	
116	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	424.91		S1
117	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	500.08		S2
118	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	376.14	F9	
119	2.00	2.83	169.3	0.00	0.00	0.00	6.68	0.00	568.50		S1
120	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	595.92		S2
121	2.00	0.83	523.0	2.68	220.2	0.00	0.98	3.23	587.18	F10	
122	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	562.07		E1
123	2.00	19.38	38.61	5.64	113.3	0.00	47.42	4.90	498.82		E2
124	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	581.48		S1
125	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	582.20		S2

F10 E2

Building 513 Forest Glen Section

Auto Beta Counter	Bkgd A CPM	Bkgd B CPM	Bkgd C CPM
Packard 2500 LX	7.17	12.31	12.01

* 2 minutes count time per sample
* Measured counts are background subtracted

	W2	W1	1	2	3	4	5	6	7	8	9	10	E1	E2	
N2			0 0 0	0 1.19 0	0 0 0	0.94 0 0	3.33 0 0	0 0 0	0 0 0	0 2.69 0	0 0 0	0 0.19 0			N2
N1			0 0 0	0 0 0	0.83 0 0	0 0 0	0 3.19 0	0 0 0	0 2.19 0	0 3.69 0	0 0 0	0 2.69 0			N1
A	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	4.83 0.19 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0.19 0	A
B	0 0 0	0 2.12 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0.83 0 0	5.88 0.63 0	0 0 0	0 0 0	0 0 0	0 0 0	B
C	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0.89 0	0 0 0	0 0 0	0 3.69 0	1.96 2.05 0	1.81 0 0	C
D	0 0 0	0 0 0	0 0 0	0 0 0	0 0.69 0	0 0.19 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0.53 0 0	0 0 0	D
E	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 1.69 0	0 1.31 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0.19 0	0 0 0	0 0.19 0	E
F	0.49 0 0	0 0 0	3.81 0 0	0 0 0	0 0 0	0 3.69 0	0.06 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0.83 2.68 0	0 0 0	19.38 / 0.79 5.64 / 0 0 / 0	F
S1			0.33 0 0	0 0.02 0	0 0 0	0 0 0	0 1.19 0	0 2.46 0	0 0 0	0 0 0	2.83 0 0	0 0 0			S1
S2			0.33 0 0	0 0.19 0	0 0 0	0.83 1.69 0	0 0 0	0 3.19 0	0 4.19 0	0 0 0	0 0 0	0 0 0			S2
	W2	W1	1	2	3	4	5	6	7	8	9	10	E1	E2	

Sample F10E2 was rerun in the LSC with a 30 minute count time. The results of the second count were substantially lower than the first (0.79, 0.0, 0.0).

ENCL 10

Protocol #: 8 LIQUID WASTE A User : SSG Mille

Time: 30.00
Data Mode: Dual DPM Nuclides: 3H-14C-UG Quench Sets
Sigma Coincidence On Low Energy: 3H-UG
Background Subtract: 1st Vial High Energy: 14C-U

	LL	UL	LCR	2S%	BKG
Region A:	0.0	12.0	0	1.0	7.27
Region B:	12.0	156	0	1.0	12.20
Region C:	156	2000	0	0.0	12.03

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
5338 1-14
Coincidence Time(ns): 18
Delay Before Burst(ns): Normal

S#	TIME	CPMA	A:2S%	CPMB	B:2S%	CPMC	DPM1	DPM2	tSIE	FLAG
1	30.00	7.27	13.54	12.20	10.46	12.03			536.82	B
PLOE2 2	30.00	0.79	180.3	0.00	0.00	0.00	2.79	0.00	328.05	

ENCL 11

DEPARTMENT OF THE ARMY
WALTER REED ARMY MEDICAL CENTER
WASHINGTON, DC 20307-5001

REPLY TO
ATTENTION OF:

MCHL-HP

7 July 1997

MEMORANDUM FOR Record

SUBJECT: Decommissioning Survey of Building 513 Forest Glen Annex

1. A decommissioning survey was conducted in building 513, Forest Glen Annex on 27 June to 2 July 1997. The building was surveyed with survey meters for detectable contamination. In addition swipes were collected for each square meter of the floor area and up 5 feet on every inside wall for removable contamination.

2. The building was used as a storage location for a sealed source irradiator and a sealed drum containing depleted uranium shielding. No unsealed radioactive material was used at this location. Based on the knowledge of the site history and previous survey information this building was not expected to contain any residual radioactive contamination.

3. A historical review indicated that no spills or unusual occurrences happened at this location.

4. The floor of the building was grided off in 3 foot squares. The squares were labeled as indicated in enclosure 1. The inside walls were grided from the floor to 3 feet and labeled as the floor grid coordinate plus a reference direction (N=north, E=east, S=south, W=west) and a number 1. From 3 feet up to 5 feet as the floor coordinate, reference direction and number 2. An example of a wall coordinate is A1N1 for the area on the wall adjacent to the floor coordinate A1, in the north reference direction, and the lower grid coordinate from the floor up to 3 feet.

5. The survey instrumentation was chosen to provide the highest sensitivity for detecting alpha, beta, or gamma radiation. The calibration and sensitivity data for all instrumentation used in this report is included in enclosure 2.

6. Every square yard of the floor of building 513 was grided and directly surveyed for gamma contamination using the AN/PDR-77, serial number 41395A. The results of the survey are included in columns 1 and 4 of enclosure 3. The meter was checked for proper operation and calibrated against a NIST traceable check source. The check source was 1.81 µCi of Cs-137 as of December 1972

source number 475. The decayed source strength at the time of the survey was about 1.03 µCi of Cs-137. The measured activity of this check source was 11.0E4 CPM. The measured background level was 1.74E3 CPM. The swipes from these locations indicated no contamination (enclosure 4).

7. A Ludlum L-3 with an unshielded beta probe was used to directly survey the floor of building 513 for beta or gamma contamination. The results of the survey were recorded in columns 2 and 5 of enclosure 3. The meter was checked for proper operation and calibrated against a NIST traceable check source. The check source was 0.0064 µCi of Am-241 as of February 1970. The decayed source strength at the time of the survey was about 0.0064 µCi of Am-241. The measured activity of this check source was 15,000 CPM. The measured background level was 60 CPM. The results of this survey indicated that no beta contamination was present in building 513 (enclosure 5). Note that C-14 and tritium which emit very low energy beta radiation may not be detectable using this survey meter.

8. The AN/PDR-77, serial number 41395A was used to directly survey the floor of building 513 for alpha contamination. The results of the survey were recorded in columns 3 and 6 of enclosure 3. The meter was checked for proper operation and calibrated against a NIST traceable check source. The check source was 0.0064 µCi of Am-241 as of February 1970. The decayed source strength at the time of the survey was about 0.0064 µCi of Am-241. The measured activity of this check source was 10,200 CPM. The measured background level was 140 CPM. The results of this survey indicated that no alpha contamination was present in building 513 (enclosure 6).

9. Swipes were taken in each grid location and on every inside wall for removable contamination. The swipes were put in marked vials and analyzed in a Packard A5530 automatic gamma counter. The background was counted for 10 minutes and the samples were counted for 2 minutes each. The results are background subtracted and printed in enclosure 7. A diagram of the floor plan of the building with the walls is included as enclosure 8. The results of this survey indicate that no removable gamma contamination was present in building 513.

10. After the swipes were analyzed in the auto-gamma counter, 10 ml of liquid scintillation fluid was added to each vial and the vials were counted in a Packard 2500LX automatic liquid scintillation counter. The background was counted for 10 minutes

and the samples were counted for 2 minutes each. The results are background subtracted and printed in enclosure 9. A diagram of the floor plan of the building with the walls is included as enclosure 10. The results of this survey indicated possible contamination in on wall grid F10E2, however, this sample was rerun through the liquid scintillation counter and this time measured no contamination (enclosure 11). This problem could be due to chemical contamination of the swipe sample that reacted with the scintillation fluid.

11. Based on the results of this survey, building 513, Forest Glen Annex, can be removed from the WRAMC NRC license and is considered free from radioactive contamination.

11 Encls
as

ARTHUR R. MORTON
CPT, MS
Chief, Operations Branch, HPO

DEPARTMENT OF THE ARMY
WALTER REED ARMY MEDICAL CENTER
WASHINGTON, DC 20307-5001
25 June 1997

REPLY TO
ATTENTION OF:
Preventive Medicine Services

Nuclear Regulatory Commission, Region I
Medical Licensing Division
475 Alendale Road
King of Prussia, Pennsylvania 19406-1415

Medical Licensing Division :

In compliance with the "Timeliness Rule," the Health Physics Office will cease license operations in buildings 149A and 508, Forest Glen, Silver Spring, MD, Walter Reed Army Medical Center, Washington, DC. The HPO received radiological packages, and has stored a variety of sealed radioactive sources in the buildings. No unsealed radioactive materials were used in either of these buildings. Neither of the buildings are individually listed on the Walter Reed Army Medical Center NRC Byproduct Materials License 08-01738-02, therefore, we do not believe that an amendment to this license is required.

The decommissioning of the buildings has begun with a historical records investigation, and decontamination surveys. The documentation for the final surveys will include meter surveys, swipe surveys, and historical survey records of the buildings. The meter surveys will search for alpha, beta, and gamma radioactive contamination. The swipe survey will consist of surveying the entire building floor and up to 5 feet on the walls or doors for removable contamination. The survey swipes will be processed in both the auto-gamma and liquid scintillation counters. We will also take additional samples in areas where dust could collect, such as lighting fixtures and any equipment that will remain in the buildings. Permanent records for this decommissioning survey will be maintained in the HPO files.

For additional information regarding this decommissioning plan, please contact Colonel William B. Johnson, Chief, Health Physics Office or Captain Arthur R. Mortón, Chief, Operations Branch, Health Physics Office, Preventive Medicine Services, at (202) 356-0058.

Sincerely,

William B. Johnson
Colonel, U.S. Army
Radiation Protection Officer

DEPARTMENT OF THE ARMY
WALTER REED ARMY MEDICAL CENTER
WASHINGTON, DC 20307-5001

30 June 1997

REPLY TO
ATTENTION OF:
Preventive Medicine Services

FILE COPY

Nuclear Regulatory Commission, Region I
Medical Licensing Division
475 Alendale Road
King of Prussia, Pennsylvania 19406-1415

Medical Licensing Division :

In compliance with the "Timeliness Rule," the Health Physics Office will cease license operations in buildings 149A and 513, Forest Glen, Silver Spring, MD, Walter Reed Army Medical Center, Washington, DC. The Health Physics Office received radiological packages, and has stored a variety of sealed radioactive sources in the buildings. No unsealed radioactive materials were used in either of these buildings. Neither of the buildings are individually listed on the Walter Reed Army Medical Center NRC Byproduct Materials License 08-01738-02, therefore, we do not believe that an amendment to this license is required.

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For additional information regarding this decommissioning plan, please contact Colonel William B. Johnson, Chief, Health Physics Office or Captain Arthur R. Morton, Chief, Operations Branch, Health Physics Office, Preventive Medicine Services, at (202) 356-0058.

Sincerely,

FOR William B. Johnson
Colonel, U.S. Army
Radiation Protection Officer

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

JUL 30 1997

William B. Johnson
Colonel, U.S. Army
Radiation Protection Officer
Department of the Army
Walter Reed Army Medical Center
MCHL-HP/Health Physics Office
Building 41, Room 38
Washington, D.C. 20307-5001

Dear Colonel Johnson:

In accordance with 10 CFR 30.36 (d), your letter dated June 30, 1997 is accepted as notification that you have ceased operations in buildings 149A and 513. A review of decommissioning records and surveys will be performed at the time of your next inspection. No further correspondence on this matter is required.

Your cooperation is appreciated.

Sincerely,

for Thomas K. Thompson
Division of Nuclear Materials Safety

License No. 08-01738-02
Docket No. 030-01317
Control No. 124735