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SNM-1323  
29-01022-14  
LICENSE NO: 29-01022-06  
29-01022-13

DOCKET NO. (s) 30-05248  
20601  
30-06387  
070-01351  
30-29746

PAGE \_\_\_\_\_ OF \_\_\_\_\_

ATTACHED

- Appendix A
- Appendix B
- Appendix C
- Memo

INSPECTION REPORT NO. 87-001

DEPT. OF THE ARMY; U.S. ARMY COMMUNICATIONS  
ELECTRONIC CO.

FORT MONMOUTH, NEW JERSEY 07703-5000

LICENSEE CONTACT: \_\_\_\_\_ Telephone No: \_\_\_\_\_

LICENSE NO: 29-01022-06 CATEGORY EVA PRIORITY: 2

29-01022-13 CATEGORY E PRIORITY: 3

29-01022-14, SNM-1323 CATEGORY E3 PRIORITY: 1

INSPECTION DATE (s): 10-8-87 TYPE OF INSPECTION:  SPECIAL  ANNOUNCED  
 ROUTINE  UNANNOUNCED  
 DAYSHIFT  
 OTHER

SUMMARY OF FINDINGS AND ACTION

- NO NONCOMPLIANCE, CLEAR 591 ISSUED
- NO NONCOMPLIANCE, LETTER
- NONCOMPLIANCE, APPENDIX A
- ACTION ON PREVIOUS NONCOMPLIANCE, APPENDIX B
- NONCOMPLIANCE, 591 ISSUED
- SUPPLEMENTAL INFO, APPENDIX C

RECOMMENDATIONS  
SEE BASIS IN APPENDIX C

- CHANGE CATEGORY TO: \_\_\_\_\_
- NEXT INSPECTION DATE: 10/90
- CHANGE PRIORITY TO: \_\_\_\_\_

PERSONS CONTACTED

J. FURIA - H.P. B. GIBSON - SECURITY

S. HORNE SAFETY OFFICER E. POTENZIANI - PHYSICIST

B. SILBER - H.P. E. GROEBER - DIV. CHIEF

J. SANTARSIERO - H.P. J. TO MAINI - RESEARCHER

R. LOVELL - H.P.

M. ZARICK - CAPTAIN - U.S.

INSPECTOR: M.A. Vanda 11-5-87  
R.H. Ladum 11-4-87

APPROVED: J. Costello 11/18/87 00/46

INSPECTION PLAN AND REPORT NUMBER \_\_\_\_\_ Page \_\_\_\_\_ of \_\_\_\_\_

Plan Approved: \_\_\_\_\_ Date: \_\_\_\_\_

Licensee: \_\_\_\_\_ License No. \_\_\_\_\_

Inspection Items	Scheduled for Inspection	Post Inspection Status	Module No.
Management Meeting - Entrance and Exit Interviews (Required)	✓ -	✓	30703B
Program Requirements, MC 2850 (Required)	✓	✓	77710B
Followup on Noncompliance and Deviations	N/A	N/A	92702B
Independent Inspection Effort (Required)	✓	✓	92706B
Transportation			86740B

AREAS INSPECTED AND FINDINGS

Licensee: \_\_\_\_\_ License No: \_\_\_\_\_ Amendment No: \_\_\_\_\_

INSPECTION ITEMS	CRITERIA	FINDING
<i>FU-238 storage in therm electric gen. F-383 - EVHMS AREA</i>		
<b>1. Organization</b>	Lic Cond <u>16</u>	<u>0</u>
Management organization?	Responsible for various sealed sources and calibration use in U.S. Army. CD staff job is record maintained which is done by computer.	
Radiation Protection Organization?		
Scope of Operation?	- Very large and growing RPO has 6 on staff	
NOTES & REMARKS:	2 military techs. SSG. H. SIGNER SGT. T. MORE	
<b>2. Licensee Internal Audits</b>	Lic Cond <u>16</u>	<u>0</u>
Scope and frequency?	✓	Performs 3 types of inspections F-383
Management controls?	Quarterly visits to KEMCON BDOG.	
NOTES & REMARKS:	see attached inventory report Reviewed Radiation Control Committee notes	
<b>3. Training and Instructions to Employees</b>	Lic Cond <u>16</u>	<u>01</u>
Training program, scope and frequency, retraining?	✓	
Required tests administered; scores satisfactory?	✓	no documentation for housekeeping training
Instructions to workers?	✓	19.12
NOTES & REMARKS:	Annual Radiation Safety Training 4/16-87 Radiological Emergency Response Drill Exercise see attached list for details	
<b>4. Radiation Protection Procedures</b>	Lic Cond <u>16</u>	<u>02</u>
Operating & emergency procedures implemented?	✓	
Security?	20.207	
NOTES & REMARKS:	very good	
<b>5. Materials, Facilities and Instruments</b>	Lic Cond <u>16</u>	<u>0</u>
Authorized uses and quantities?	✓	
Restricted areas, posting requirements?	20.203	
Survey instruments & dosimeters; operable, properly calibrated?	✓	
NOTES & REMARKS:		

## AREAS INSPECTED AND FINDINGS

Licensee: \_\_\_\_\_ License No: \_\_\_\_\_ Amendment No: \_\_\_\_\_

INSPECTION ITEM	CRITERIA	FINDING
<b>6. <u>Receipt and Transfer of Materials</u></b>		
Procedures implemented, adequate?	20.205, 71.51	<u>03</u>
Transfer of byproduct material?	30.41	
Control of source material,	40.51, 40.64, 70.42, 70.51, 70.53, 70.54	
Labeling and packaging?	71.5, 49CFR 170-189	
Records of receipt, transfer, storage, survey, and monitoring?	30.51	
Procedures for pickup, receipt, monitoring of packages?	20.205(b)&(c)	
NOTES & REMARKS:		
<hr/>		
<b>7. <u>Personnel Protection - External</u></b>		
Personnel monitoring control; minimize exposures, control of accumulated dose?	20.101, 201.102, 20.202	<u>0</u>
Surveys conducted, adequate?	20.201	
Records of monitoring, surveys, disposals?	20.401, Lic Cond <u>17</u>	
Levels in unrestricted areas?	20.1, 20.105	
NOTES & REMARKS:		
<hr/>		
<b>8. <u>Personnel Protection - Internal</u></b>		
Airborne concentrations in restricted areas?	20.103	<u>0</u>
Exposure of minors?	20.104	
Posting of airborne radioactivity areas?	20.203	
Survey, monitoring bioassay requirements; records?	20.201, 20.401	
Leak tests of sealed sources? <u>SR</u>	Lic Cond <u>13-2</u>	
NOTES & REMARKS: <i>see attached list</i>		

## AREAS INSPECTED AND FINDINGS

Licensee: \_\_\_\_\_ License No: \_\_\_\_\_ Amendment No: \_\_\_\_\_

INSPECTION ITEM	CRITERIA	FINDING
<b>9. <u>Effluent Control, Waste Disposal</u></b>		<u>C</u>
Release of effluents?	20.106	
Waste disposal, proper packaging for shipment?	20.301, 20.303, 20.304, 20.305	
Procedures, records?	20.401, Lic Cond <u>16</u>	
NOTES & REMARKS: <i>waste shipments made recent by regarding H-3 decontamination of H-3 all records in order</i>		
<b>10. <u>Transportation</u></b>		<u>N/A</u>
Management controls, audits?		
Selection of packaging?	49 CFR 173.393-5; 10 CFR 71	
Preparation of packages for shipment? Filling and loading, closing, liquids?	49 CFR 172.173 49 CFR 172.300	
Markings & labelling?	49 CFR 172.402, 403	
Monitoring?	49 CFR 173.393	
Shipping papers, loading and placarding of vehicles?	49 CFR 172.200	
Reports of incidents?	49 CFR 171.15, 171.16	
Training program?		
Examination of packages?		
NOTES & REMARKS:		
<b>11. <u>Notifications and Reports</u></b>		<u>C</u>
To individuals?	19.13	
Overexposures, excessive levels and concentrations, incidents?	20.403, 20.405	
Personnel exposures and monitoring, termination reports?	20.407, 20.408	
Theft or loss of licensed materials? <i>NO</i>	20.402	
NOTES & REMARKS:		

AREAS INSPECTED AND FINDINGS

Licenses: \_\_\_\_\_ License No: \_\_\_\_\_ Amendment No: \_\_\_\_\_

INSPECTION ITEM	CRITERIA	FINDING
12. <u>Posting of Notices</u>		<u>C</u>
Part 20, license & documents, procedures, notice of violations? ✓	19.11(a)	
NRC-3? ✓	19.11(c)	
NOTES & REMARKS:		
13. <u>Environmental Monitoring Program</u>		
Implementation of program, scope and frequency as required? ✓	Lic Cond <u>10</u>	<u>C</u>
Records maintained, reviewed by management? ✓		
NOTES & REMARKS:		
14. <u>Emergency Preparedness</u>		
Procedures available for incidents and accidents? ✓	Lic Cond <u>10</u>	<u>C</u>
Training for personnel; coordination with supporting groups and agencies? ✓		
NOTES & REMARKS:		
15. <u>Other License Conditions</u>		

NOTES & REMARKS:

INSPECTION REPORT NUMBER \_\_\_\_\_

Page \_\_\_\_ of \_\_\_\_

777108 - Industrial - Academic

AREAS INSPECTED AND FINDINGS

Licensee: \_\_\_\_\_ License No: \_\_\_\_\_ Amendment No: \_\_\_\_\_

INSPECTION ITEM	CRITERIA	FINDING
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16. Confirmatory Measurements

0

Licensee's surveys verified on sampling basis? 201.105, 20.201

*all measurements in  
unrestricted area = 2 mS/Hr*

NOTES & REMARKS:

NRC Instrument: Ludlum 140 Calibration due date: 12/87

17. Independent Inspection Effort

0

*inspected per 825-OL 2705  
(06) license*

NOTES & REMARKS:

INSPECTION REPORT NUMBER \_\_\_\_\_

Page \_\_\_\_\_ of \_\_\_\_\_

APPENDIX A - DOCUMENTATION OF NONCOMPLIANCE

Licensee: \_\_\_\_\_

License No: \_\_\_\_\_

Reference	Basis for noncompliance
Report item _____ 10 CFR _____ Lic Cond _____ Type n/c _____	
Report item _____ 10 CFR _____ Lic Cond _____ Type n/c _____	
Report item _____ 10 CFR _____ Lic Cond _____ Type n/c _____	
Report item _____ 10 CFR _____ Lic Cond _____ Type n/c _____	
Report item _____ 10 CFR _____ Lic Cond _____ Type n/c _____	
Report item _____ 10 CFR _____ Lic Cond _____ Type n/c _____	





APPENDIX C - SUPPLEMENTARY INFORMATION

Licensee: \_\_\_\_\_ License No: \_\_\_\_\_

- 
- Uncorrected/repeated noncompliance
  - Unusual occurrence, conditions, etc
  - Basis for change of Category or Priority

- Unresolved items
- Inspector's comments

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CECOM RADIOACTIVE  
COMMODITY MANAGEMENT  
AND WIPETEST DATA

DATE YY.MM.DD	TEST 1	TEST 2	TEST 3	TEST 4	LD_UCI	COMMENTS			
** SERIAL # 9056	0511	LONGLEWAY, WALTER			MILLIS, LEWIS E.	COMMANDER	SENECA ARMY DEPOT	ATTN: AMXTH-CE-TO-SE	ROMULUS
86.05.22	LD	LD			0.00007				
86.06.23	LD	LD			0.00007				
86.08.26	LD	LD			0.00001				
86.10.30						FROM SENECA TO TOAD			
86.10.31	LD	LD			0.000001	TRANS FROM TOAD TO SAAD			
86.12.16						TRANS FROM SAAD TO TOAD			
86.12.22						FROM TOAD TO SENECA ARMY DEPOT			
87.01.09						RECEIVED AT SENECA FROM TOAD			
** SERIAL # 9057	0511	WALLACE, CHARLES R.			NO ALTERNATE RPO	CHIEF	US ARMY CAL & REP CTR	ATTN:AMXTH-CW-SA	SACRAMENTO
86.05.05	LD	LD			0.00007				
86.06.27	LD	LD			0.00007				

CS - 478 # → 8/11/87

SC 80 form-c

3P16

### 3 types of inspection - well

- 1) Major disassembly <sup>1 yr</sup>
- 2) Any repairs <sup>1 yr</sup>
- 3) Collisions - 5/10/15 <sup>1 any 3 yr.  
1 any 2 yr.</sup>

N1-C3 → 28-GW22-06

C<sub>600</sub> → USRC 18011 → 8/10/87

87-04 10 me

"C<sub>600</sub> PA 1137 → 8/18/87

3846 CA  
3842 CA  
3843 CA  
NES-303

C<sub>600</sub> - #21 - " "

UDM-1A - CS-127 → 120

" " " 461 # 302 " "

C<sub>600</sub>

C<sub>600</sub> - (copy) → #84 - 8/10/87

UDM2 - #106 → 3/19/87 SR-90 (rent out)

SR-4-90 - 5 4 inci

(E COM SAFETY

Laboratory Analysis Log (Copy Test Log)

36	TH-3	CHECK SOURCE IN PLAST	Th-232	2.94E-3	BLDG 45	KRONENBERG	U
37	TH-4	METAL SLUGS	Th-232	21.80E-3	BLDG 45		U
38	TH-5	CHECK SOURCE AN/PDR-5&F	Th-232	0.235E-3	BLDG 45		U
39	TH-6	CALIBRATED DISK	Th-232	1E-3	BLDG 45	KRONENBERG	U
41	R-2	MX-1083	Ra-226	<7E-3	BLDG 45		U
42	R-3	MX-1083	Ra-226	<7E-3	BLDG 45		U
43	R-4	MX-1083	Ra-226	<7E-3	BLDG 45		U
44	R-5	3 PIECE CHECK SOURCE SET	Ra-226	<0.574E-3	BLDG 45		U
45	U-1	BLOCK-METAL	U-238	21.20E-3	BLDG 45		U
46	U-2	CALIBRATED DISK	U-238	<1E-3	BLDG 45	SN: 1110	U
47	U-3	FOIL	U-238	2.02E-3	BLDG 45		U
48	U-4	CHECK SOURCE (BAIRD)	U-238	<1E-3	BLDG 45		U
49	PU-1	CHECK SOURCE (CS-1)	Pu-239	<0.02E-3	BLDG 45		U
50	PU-2	CHECK SOURCE	Pu-239	0.53E-3	BLDG 45		U
51	PU-3	CHECK SOURCE	Pu-239	0.57E-3	BLDG 45		U
52	PU-4	AN/UDM-6 (SN:A1002)	Pu-239	1.4E-3	BLDG 45		U
53	PU-5	EBERLINE 94-1 (SN:026)	Pu-239	1.4E-3	BLDG 45		U
54	PU-6	AN/UDM-6 (SN:A1003)	Pu-239	1.4E-3	BLDG 45		U
55	PU-7	AN/UDM-7C (SN:C165)	Pu-239	50.2E-3	BLDG 45		U
56	PU-8	CHECK SOURCE	Pu-239	6.98E-3	BLDG 45		U
57	A-1	SOURCE IN VIAL	Am-241	1.00E-1	BLDG 45		W
58	A-2	SOURCE IN VIAL	Am-241	1.0E-3	BLDG 45		W
59	A-3	VEX (SN:3843)	Am-241	9.90	BLDG 45	EW/RSTA	U
60	A-4	VEX (SN:3841)	Am-241	9.90	BLDG 45	EW/RSTA	U
61	A-5	VEX (SN:3842)	Am-241	9.90	BLDG 45	EW/RSTA	U
62	A-6	CHECK SOURCE (SF01)	Am-241	<0.025E-3	BLDG 45		U
63	A-7	CHECK SOURCE	Am-241	<0.026E-3	BLDG 45		U
65	SET-2	GAMMA CHECK SET	MIXED	<10E-3	BLDG 45	ICNC #11	U
66	SET-3	GAMMA CHECK SET	MIXED	<10E-3	BLDG 45	ICNC #13	U
67	SET-4	BETA CHECK SET	MIXED	<10E-3	BLDG 45	ICNC #12	U
68	SET-5	BETA CHECK SET	MIXED	<10E-3	BLDG 45	ICNC #14	U
69	SET-6	BETA CHECK SET	MIXED	<10E-3	BLDG 45	NEN #16	U
70	SET-7	ALPHA BETA GAMMA CHECK ST	MIXED	<10E-3	BLDG 45	NUCLEUS WAST	U
5	CO-3	AN/UDM-1 (SN:21)	Co-60	83.3	BLDG 401	ISOTOPE RM	U
6	CO-4	GE SOURCE	Co-60	153.24E3	BLDG 401	VAULT	U
7	K-1	MX-7338 (SN:K-2410)	Kr-85	1.67	BLDG 401	VAULT	U
18	S-6	RADIATION AREA MONITOR	Sr-90	0.46E-3	BLDG 401	VAULT CON RM	U
19	S-7	RADIATION AREA MONITOR	Sr-90	0.46E-3	BLDG 401	VAULT AIR VT	U
20	S-8	RADIATION AREA MONITOR	Sr-90	0.46E-3	BLDG 401	VAULT EXP RM	U
21	S-9	RADIATION AREA MONITOR	Sr-90	0.46E-3	BLDG 401	POOL FILTER	U
22	S-10	RADIATION AREA MONITOR	Sr-90	0.46E-3	BLDG 401	POOL RM DOOR	U
26	CS-1	AN/UDM-1A (SN:4223)	Cs-137	63.22E3	BLDG 401	ISOTOPE ROOM	U
27	CS-2	AN/UDM-1A (SN:12)	Cs-137	63.22E3	BLDG 401	ISOTOPE ROOM	U
29	CS-4	AMERSHAM	Cs-137	398.88E3	BLDG 401	VAULT	U
40	R-1	RA-BE NEUTRON SOURCE	Ra-226	19.73	BLDG 401	ISOTOPE ROOM	U
64	SET-1	CHECK SET	MIXED	<10E-3	BLDG 401	NEN #146	U
3	CO-1	SN:2432	Co-57	3.29	EWL 825	EW/RSTA	U
30	CS-5	LOW RANGE SOURCE SN:CS478	Cs-137	3.93	EWL 825	EW/RSTA	U
114	SET-8	GAMMA CHECK SET NEN#156	MIX	1.0E-3	EWL 825	ANSEL-SF	U
92		ATOMIC BATTERY	Pu-238	4.891E4	LEAD PIG		W
90		PICKER SOURCE	Co-60	4.9406E5	LEAD SHIELD		W
13	S-1	AN/UDM-2 (SN:054)	Sr-90	165.56	NRC CORP.	EW/RSTA	U
15	S-3	AN/UDM-2 (SN:029)	Sr-90	165.56	NRC CORP.	EW/RSTA	U
91		POOL IRRADIATOR	Co-60	13331.6E3	POOL		U
10	K-4	MX-7338 (SN:K-475)	Kr-85	1.67	SACRAMENTO	DON CRAWFORD	U
107		FAN MOTOR ASSEMBLY	H-3	1.0E-3	T-383	CONTAMINATED MAT.	W
108		LAB WASTE (L.S.A.)	H-3	1.0E-3	T-383		W
109		URANIUM NITRATE	U-238	1.00E-2	T-383	3 JARS	W
110		THORIUM OXIDE SOLUTION	Th-232	5.0E-3	T-383	PRECIPITATE	W
111		THORIUM SLUG	Th-232	1.0E-3	T-383	IN PIG	W
112		THORIUM POWDER, VIAL	Th-232	1.0E-3	T-383	ET&DL	W
113		URANIUM POWDER, VIAL	U-238	1.0E-3	T-383	ET&DL	W
89		TROXLER METER	Ra-226	2.92	WOOD BOX		W

RADIATION PROTECTION OFFICER  
TRAINING, QUALIFICATIONS  
LOCATIONS

RPO	QUALIFICATIONS/TRAINING	N.G.B. (STATE)	LOCATION N.G.B.-NG 8th ARMY-8	RPO-1 ARPO-2 LRPO-3 ALRPO-
ABNEY, EDWARD	BASIC RAD HEALTH COURSE			
ABRESCH, PAUL L. SP4	RAD CAL CUS COURSE (87.03.23)			3
ACTON, THOMAS J.	CAL CUST COURSE			
ACURI, TONY D.	CAL CUST COURSE			
ADAMS, DENNIS W. CW3	ARNGRPO JUNE 1987	ND	NG	
ADAMS, MAJ NOLAN J	CAL CUST COURSE			
ADRIANCE, DONALD W. SGT	CAL CUST COURSE 87.05.15		EU	4
AFELDT, MAJ RONALD	RAD SAFETY COURSE			
AFTANS, SGT MICHAEL	CAL CUST COURSE			
ALEXANDER, BOBBIE A. SFC	NG RAD PRO OFF COURSE 861024	TX	NG	4
ALLEN, SGT DARNELL	RAD CAL CUST COURSE			
ALTON, JACK E.	7KF3 COURSE			
ANDERSON, ELBERT E.	DEGREE (ON THE JOB)			2
ANDERSON, SP4 GEORGE	RAD CAL CUSTODIAN COURSE			
ANFANG, SGT MIKE	CAL CUST COURSE			
ANTHONY, TIMOTHY	CAL CUST COURSE			
ARCURI, TONY D.	CAL CUST COURSE			
ARLEDGE, MAJ ELZELY J.	RAD SAFETY COURSE			
ARMSTRONG, REX W. SP4	RAD CAL CUS COS (4J-F1/493-F3)			3
ARNETTE, RON	CAL CUST COURSE			
ARNOLD, MERRILL J.	RAD SAFETY COURSE	IN	NG	
ASBURY, FLEMING L JR.	T.I.S.AW			
ASHTON, SP4 RAY C	CAL CUST COURSE			
ASPIRAS, JOHN O	TREASURE ISLAND			
ASPLIN, CHARLES L. SFC	ARNGRPO COURSE 15-19 JUN 1987	ND	NG	
ATTERBURY, JANET E	RAD SAFETY COURSE			
AUSTILL, LYLE L	CAL CUST COURSE			
AUVE, SP4 DENNIS J.	RAD CAL CUST COURSE 850517			
BABER, WILLIAM E.	FIVE WKS OAK RIDGE COURSE			
BACHMANN, MARTIN	RAD CAL CUST COURSE 850517			
BADEGIAN, MARTIN	RAD SAFETY COURSE			
BAILEY, ELMER W JR	REPAIR & CALIBRATION			
BAILEY, JOHN F	CAL CUST COURSE			
BANEY, JOHN A	RADIAC CAL CUST COURSE			
BARKER, SP6 RICHARD	LOWRY AFB COURSE			
BARNETT, SP4 TIMOTHY E.	RAD CAL CUST COURSE 850607			
BARNICKEL, CW2 RICHARD A	RAD SAFETY COURSE	MD	NG	
BARTLETT, MAJ CHARLES	ADV CHEM OFFCS			
BARTLEY, RANDALL L	RAD SAFETY COURSE			
BARZ, SP4 KENNETH S	RAD CAL CUSTODIAN COURSE			
BASCAS, LUIS F	CAL CUST COURSE			
BATES, JAMES E	CAL CUST COURSE			
BATEY, JAMES W.	CHEM RAD CAL CUST COURSE			
BAZEMORE, RANDALL H	7K-F3			
BEARD, WILLIAM D	CAL CUST COURSE			
BEAVER, CW3 RICHARD W	CAL CUST COURSE	IA	NG	
BECHTEL, LTC C.	RAD SAFETY COURSE			
BECHTOLD, MICHAEL, W	RAD SAFETY COURSE			

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7.10.08

RADIATION PROTECTION OFFICER  
TRAINING, QUALIFICATIONS  
LOCATIONS

RPO	QUALIFICATIONS/TRAINING	N.G.B. (STATE)	LOCATION	RPO-1 RPO-2 LRPO-3 ALRPO-4
HEESE, ROBERT SSG	CAL CUS COURSE		EU	4
HEHNING, SGT WILLIAM	RAD SAFETY COURSE			

Structure for database: D:\UDMFILE3.dbf

Number of data records: 630 → #

Date of last update : 87.10.05

Field	Field Name	Type	Width	Dec
1	PRIRPO	Character	25	
2	SSNUMBER	Character	11	
3	QUALIFICAT	Character	29	
4	ST	Character	2	
5	LO	Character	2	
6	RPO	Character	2	
** Total **			72	

SECTION 3.1.3. NUCLEAR REGULATORY COMMISSION (NRC) LICENSES  
AND D.A. RADIATION AUTHORIZATIONS (DARA)

ISOTOPE	DESCRIPTION	QUANTITY LIMIT PER SOURCE	QUANTITY LIMIT TOTAL
** LICENSE NUMBER, EXPIRATION DATE-YY.MM.DD** 29-01022-06 , <del>87.05.31</del>	<del>AMERSHAM-241</del>	<del>AMERSHAM</del>	35 MILLICURIES
ANY BYPRODUCT	ATOMIC NUMBER 1-83	1 CURIE	10 CURIE
CESIUM-137	SEALED SOURCES	<del>120 CURIES</del>	30 <del>100</del> CURIES
COBALT-60	SEALED SOURCES		30 <del>100</del> CURIES
<del>POLONIUM-210</del>	<del>SEALED SOURCES</del>		<del>1.0 CURIE</del>
<del>PROMETHIUM-147</del>	<del>SEALED SOURCES</del>		<del>5.0 CURIES</del>
STRONTIUM-90	SEALED SOURCES	<del>50 MILLICURIES</del>	5 CURIES
TRITIUM	ACCELERATOR TARGETS	<del>50 CURIES</del>	30 CURIES
<del>TRITIUM</del>	<del>SEALED LIGHT SOURCES</del>		<del>50 CURIES</del>
<del>AMERSHAM</del> U Th	NAT/DEPL NAT		5 KG 10 KG
** LICENSE NUMBER, EXPIRATION DATE-YY.MM.DD** 29-01022-07 , 91.05.31	CESIUM-137	SEALED SOURCE (AMERSHAM)	437 CURIE
COBALT-60	SEALED SOURCE (GE)		225 CURIES
COBALT-60	SEALED SOURCE (PICKER)		698 CURIES
** LICENSE NUMBER, EXPIRATION DATE-YY.MM.DD** 29-01022-08* , 84.01.31	STRONTIUM-90	SEALED SOURCES(AN/UDM-2)	25 MILLICURIES
STRONTIUM-90	SEALED SOURCES(AN/UDM-2)	20 MICROCURIES	100 CURIES
** LICENSE NUMBER, EXPIRATION DATE-YY.MM.DD** 29-01022-10 , 87.07.31	COBALT-60	SEALED SOURCES (POOL SOURCE)	12000 <del>125000</del> CURIES
** LICENSE NUMBER, EXPIRATION DATE-YY.MM.DD** 29-01022-11* , 85.04.30	KRYPTON-85	SEALED SOURCES(MX-7338)	6 MILLICURIES
** LICENSE NUMBER, EXPIRATION DATE-YY.MM.DD** 29-01033 , 88.08.31	AMERICIUM-241	PLATED SOURCE(N.ENGL.NUC.#NES-302S)	50 NANOCURIES

92.06.30

*New license*  
*WJ*  
*HJK*

*Timely*

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CECOM U.S. NUCLEAR REGULATORY COMMISSION (NRC) LICENSES  
(UNDER TIMELY SUBMITTAL)  
FOR INCLUSION INTO CONSOLIDATED LICENSE

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ISOTOPE	DESCRIPTION	QUANTITY LIMIT PER SOURCE	QUANTITY LIMIT TOTAL
** LICENSE NUMBER, EXPIRATION DATE-YY.MM.DD** 29-01022-08*, 84.01.31 STRONTIUM-90	SEALED SOURCES(AN/UDM-2)	25 MILLICURIES	100 CURIES
STRONTIUM-90	SEALED SOURCES(AN/UDM-2)	20 MICROCURIES	20 MILLICURIES
** LICENSE NUMBER, EXPIRATION DATE-YY.MM.DD** 29-01022-11*, 85.04.30 KRYPTON-85	SEALED SOURCES(MX-7338)	6 MILLICURIES	90 CURIES
② ** LICENSE NUMBER, EXPIRATION DATE-YY.MM.DD** SMB-1300* , 87.03.31 THORIUM-232	FLUORIDE COATED OPTICS <i>Hard Carbon</i>	2 GRAMS	40 KILOGRAMS
** LICENSE NUMBER, EXPIRATION DATE-YY.MM.DD** SNM-1327* , 89.04.30 PLUTONIUM-239	SEALED SOURCES(EBERLINE #CS-1)	10 NANOCURIES	1 GRAM
** LICENSE NUMBER, EXPIRATION DATE-YY.MM.DD** SNM-1896* , 87.04.30 PLUTONIUM-239	ALPHA SOURCE SETS(AN/UDM-7C)	819 MICROGRAMS	0.246 GRAMS
** LICENSE NUMBER, EXPIRATION DATE-YY.MM.DD** SNM-1900* , 87.07.31 PLUTONIUM-239	ALPHA SOURCE SETS(AN/UDM-6)	23 MICROGRAMS	0.0115 GRAMS
** LICENSE NUMBER, EXPIRATION DATE-YY.MM.DD** SUB-1150* , 89.04.30 THORIUM-230	PLATED SOURCES (EBERLINE #CS-12)	20 NANOCURIES	
THORIUM-232	SEALED SOURCES(NUC.RES.CORP.#B1093)	300 NANOCURIES	2.76 KILOGRAMS

87.04.14

CECOM U.S. NUCLEAR REGULATORY COMMISSION (NRC) LICENSES  
AND D.A. RADIATION AUTHORIZATIONS (DARA)

ISOTOPE	<i>EVANS</i> DESCRIPTION	QUANTITY LIMIT PER SOURCE	QUANTITY LIMIT TOTAL
** LICENSE NUMBER, EXPIRATION DATE-YY.MM.DD** SNM-1323 PLUTONIUM-238	SEALD SOURCES , 87.10.31	10 GRAMS	50 GRAMS
<del>** LICENSE NUMBER, EXPIRATION DATE-YY.MM.DD** SNM-1327* PLUTONIUM-239</del>	<del>SEALD SOURCES (EBERLINE #CS-1) , 89.04.30</del>	<del>10 NANOCURIES</del>	<del>1 GRAM</del>
<del>** LICENSE NUMBER, EXPIRATION DATE-YY.MM.DD** SNM-1896* PLUTONIUM-239</del>	<del>ALPHA SOURCE SETS (AN/UDM-7C) , 87.04.30</del>	<del>819 MICROGRAMS</del>	<del>0.246 GRAMS</del>
<del>** LICENSE NUMBER, EXPIRATION DATE-YY.MM.DD** SNM-1900* PLUTONIUM-239</del>	<del>ALPHA SOURCE SETS (AN/UDM-6) , 87.07.31</del>	<del>23 MICROGRAMS</del>	<del>0.0115 GRAMS</del>
** LICENSE NUMBER, EXPIRATION DATE-YY.MM.DD** SUB-1150* THORIUM-230	PLATED SOURCES (EBERLINE #CS-12) , 89.04.30	20 NANOCURIES	
THORIUM-232	SEALD SOURCES (NUC.RES.CORP.#B1093)	300 NANOCURIES	2.76 KILOGRAMS

CECOM U.S. NUCLEAR REGULATORY COMMISSION (NRC) LICENSES  
AND D.A. RADIATION AUTHORIZATIONS (DARA)

ISOTOPE	DESCRIPTION	QUANTITY LIMIT PER SOURCE	QUANTITY LIMIT TOTAL
** LICENSE NUMBER, EXPIRATION DATE-YY.MM.DD** A29-10-01 , 84.01.30 COBALT-57	SEALED MOSSBAUER SOURCE	3 MICROCURIES	100 MILLICURIES
EUROPIUM-149	SAMARIUM MATRIX-MOSSBAUER	1 MILLICURIE	50 MILLICURIES
PLUTONIUM-239	ALPHA CHECK SOURCES	2.0 MICROCURIES	5 MILLICURIES
POLONIUM-210	SEALED SOURCE, STATIC ELIMINATOR	10 MICROCURIES	500 MICROCURIES
RADIUM-226	GAMMA CHECK SOURCE, MX1083	10 MICROCURIES	7 MILLICURIES
RADIUM-226	RA-BE SEALED NEUTRON SOURCE		20 MILLICURIES
RADIUM-226	RA-BE TROXLER MODEL 2184		3 MILLICURIES
RADIUM-226	SEALED GAMMA SOURCE		1 MILLICURIE
RADIUM-226	SEALED GAMMA SOURCE		10 MILLICURIE
RADIUM-226	SEALED SOURCE, VICTOREEN #540		1 MILLICURIE
<i>W.</i> ** LICENSE NUMBER, EXPIRATION DATE-YY.MM.DD** A29-10-06 , 89.05.30 <u>RADIUM-226</u>	RADIUM PAINTED COMMODITIES		
<i>W.</i> ** LICENSE NUMBER, EXPIRATION DATE-YY.MM.DD** A29-10-10 , 89.05.31 PROMETHIUM-147	ELEC.TUBES,SURGE ARREST	30 MICROCURIES	300 MILLICURIES
TRITIUM	ELEC.TUBES,TR LIMITERS,SURGE ARREST	150 MILLICURIES	46.0 CURIES
<del>** LICENSE NUMBER, EXPIRATION DATE-YY.MM.DD** A29-10-12 , 89.10.31 THORIUM-232</del>	<del>THORIATED GLASS, FIBER OPTIC PLATES</del>	<del>30% BY WEIGHT</del>	<del>245 MILLICURIES</del>
<del>** LICENSE NUMBER, EXPIRATION DATE-YY.MM.DD** SMB-1183 , 84.06.30 THORIUM-232</del>	<del>ANY FORM</del>		<del>22 POUNDS</del>
<del>URANIUM</del>	<del>NATURAL/DEPLETED</del>		<del>16 POUNDS = 06</del>
<del>** LICENSE NUMBER, EXPIRATION DATE-YY.MM.DD** SMB-1300* , 87.03.31 THORIUM-232</del>	<del>FLUORIDE COATED OPTICS</del>	<del>2 GRAMS</del>	<del>40 KILOGRAMS</del>

ISOTOPE	DESCRIPTION	PER SOURCE	TOTAL
** LICENSE NUMBER, EXPIRATION DATE-YY.MM.DD** 29-01022-06 , 87.05.31 AMERICIUM-241	ANY FORM		35 MILLICURIES
ANY BYPRODUCT	ATOMIC NUMBER 1-83	1 CURIE	6 CURIE
CESIUM-137	SEALED SOURCES	120 CURIES	400 CURIES
COBALT-60	SEALED SOURCES		100 CURIES
POLONIUM-210	SEALED SOURCES		1. CURIE
PROMETHIUM-147	SEALED SOURCES		1.2 CURIES
STRONTIUM-90	SEALED SOURCES	80 MILLICURIES	5 CURIES
TRITIUM	ACCELERATOR TARGETS	30 CURIES	300 CURIES
TRITIUM	SEALED LIGHT SOURCES		60 CURIES
<i>URANIUM</i>	<i>NA7/DEP</i>		<i>16 160</i>
** LICENSE NUMBER, EXPIRATION DATE-YY.MM.DD** 29-01022-07 , 91.05.31 CESIUM-137	SEALED SOURCE (AMERSHAM)		437 CURIE
COBALT-60	SEALED SOURCE (GE)		225 CURIES
COBALT-60	SEALED SOURCE (PICKER)		698 CURIES
<del>** LICENSE NUMBER, EXPIRATION DATE-YY.MM.DD** 29-01022-08** , 84.01.31</del>	<del>STRONTIUM-90</del>	<del>SEALED SOURCES (AN/UDM-2)</del>	<del>25 MILLICURIES</del> 100 CURIES
<del>STRONTIUM-90</del>	<del>SEALED SOURCES (AN/UDM-2)</del>	<del>20 MICROCURIES</del>	<del>20 MILLICURIES</del>
** LICENSE NUMBER, EXPIRATION DATE-YY.MM.DD** 29-01022-10 , 87.07.31 COBALT-60	SEALED SOURCES (POOL SOURCE) <i>TINELY SUB.</i>		125000 CURIES
<del>** LICENSE NUMBER, EXPIRATION DATE-YY.MM.DD** 29-01022-11* , 85.04.30</del>	<del>KRYPTON-85</del>	<del>SEALED SOURCES (MX-7338)</del>	<del>6 MILLICURIES</del> 90 CURIES
** LICENSE NUMBER, EXPIRATION DATE-YY.MM.DD** 29-010 <sup>22</sup> <del>22</del> -13 , 88.08.31 AMERICIUM-241	PLATED SOURCE (N. ENGL. NUC. #NES-302S)	50 NANOCURIES	(2 sources)
		<i>TERMINATE</i>	