



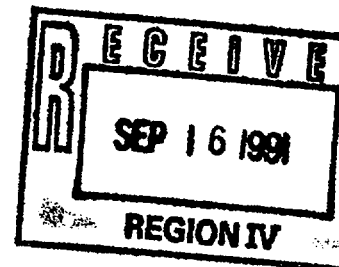
DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR FORCE OFFICE OF MEDICAL SUPPORT
BROOKS AIR FORCE BASE, TEXAS 78235-5000

REPLY TO: SGPR
ATTN OF:

11 SEP 1991

SUBJECT: Air Force RADIAC Instrument Check Sources and Contract
Calibration Laboratory Licensing

TO: USNRC, Region IV
ATTN: Mr. M. Vasquez
611 Ryan Plaza Drive, Suite 400
Arlington TX 76011-4010



1. Reference our recent telephone conversations on this subject. The USAF Radioisotope Committee has discovered that Air Force contractor operated precision measurement and equipment laboratories (PMELs) may not be properly authorized by NRC or Agreement State license to receive certain radioactive sources contained in Air Force Instruments requiring PMEL repair or calibration. These sources are authorized for Air Force use under the Air Force Master Materials License and consist primarily of operational check sources for various radiation detection instrumentation and computation (RADIAC) instruments. The sources are used and controlled within the Air Force by technical orders rather than individual USAF Radioactive Material Permits. The technical orders were reviewed and approved by NRC when sources were originally acquired under the Air Force's specific license no. 42-05834-04, which the Air Force Master Materials License superseded. Also, some instruments use sources containing NRC generally licensed materials having restrictions on transfers to others without specific distribution authority. Transfers of these sources to and from our contractor PMELs is, in some cases, a clear violation of our Master Materials license and, in other cases, possible violation of the General License. Attachment 1 provides information about contractor operated PMELs and attachment 2 identifies the specific radioactive sources which may be involved.

2. Transfers or exchanges of calibration and reference sources controlled within the Air Force by specific USAF Radioactive Material Permit are being properly done. Requirements for contractor licensing were recognized prior to contracting and Air Force users are aware of prerequisites for transfer given by specific Permit Condition.

3. The problem is a direct result of Air Force failure to notify contractors that these sources would have to be included on the contractor's license. Our proposed correction for current contractors is to identify the sources to the contractors and direct them to obtain a license amendment to receive the sources from, and transfer them to, Air Force users. We will also ensure Commands considering future contracting of PMEL operations are

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reminded of licensing requirements for these sources. To the extent practical, we will seek to avoid use of non-exempt instrument check sources in future acquisitions. We intend to notify appropriate Air Force officials, by letter, to require contractors to submit necessary license amendment requests to their licensing agency by 8 Nov 91. We will also remind Commands and users of all stocklisted commodities containing sources requiring a specific license by contractor operated PMELs and suggest they review the need for any adjustments in contractor licensing as a result of scheduled base closures or other anticipated mission changes. We plan to release a letter with these actions by 13 Sep 91 and will provide you a copy.

4. While these actions are being taken, we request NRC approval to allow Air Force PMEL contractors to continue to receive instruments containing these check sources for calibration and return to the using Air Force organizations. We will require written confirmation that contractors have submitted their amendment applications by the established deadline and a copy of the amended license when received to verify proper authorization. If contractors fail to submit license amendment requests by the established deadline, we will take action to recover all Air Force sources not covered by their existing license and suspend any further source transfers to them pending proper licensing. We are concerned that the impact of suspending instrument calibrations pending correction of contractor licensing could adversely affect user readiness and base radiation safety programs. We believe the problem of source transfer and contractor licensing is a technical noncompliance requiring correction but that does not compromise worker or public safety. The contract PMELs are located on Air Force installations and function exactly as they would were they Air Force operated; e.g., operations follow established Air Force technical orders and procedures for safe use of radioactive materials which have been previously reviewed both by the NRC and Air Force Radiolotope Committee and found adequate. Air Force PMELs have a good safety record and have had no incidents involving these sources which have resulted in danger to either workers or the public.

5. A prompt response to our request in paragraph 4 would be appreciated so that we can reflect your decision in our letter directing corrective actions. Please call me at (512) 536-3331 should you have any questions.

Lawrence Donovan

LAWRENCE DONOVAN, Maj, USAF, BSC 2 Atch
Chief, Licensing Actions 1. Contract PMEL Base List
USAF Radiolotope Committee 2. Source List
Office of the Surgeon General

cc: (See Next Page)

cc: HQ USAF/SGP/LGMM/XO0TT
AFDPRC/PR

Contractor PMELs

<u>Base</u>	<u>Contractor</u>	<u>License No.</u>
Arnold AFB TN	Schneider Services Intl. (Bionetics Corp.)	TN R-16012-E92
Chanute AFB IL	Raytheon Service Co.	NRC 20-26933-01
Columbus AFB MS	Northrup Worldwide Aircraft Services	NRC 23-24979-01
Columbus AFB MS	Dyncorp	NRC 42-27009-01
Lowry AFB CO	Raytheon Service Co.	NRC 20-26933-01
Mather AFB CA	Serv-Air Inc.	NRC 04-20011-01
Maxwell AFB CA	Tri-Services Inc.	NRC 45-24952-01
Patrick AFB FL	Computer Sciences Raytheon Co. (CSR)	NRC 09-25013-01
Sheppard AFB TX	Raytheon Service Co.	NRC 20-26933-01
Vandenberg AFB CA	Simco Electronics	NRC 04-23282-01
Williams AFB AZ	Dyncorp	NRC 42-27009-01

NRC Specifically Licensed Items

<u>Item</u> ¹	<u>NSN</u>	<u>Isotope</u>	<u>Activity</u> ²
Test Sample	6665-00-541-2108	Sr-90	1uCi
Test Sample	6665-00-791-8792	Kr-85	100uCi
Test Sample MX9345/PDR43	6665-00-878-7632	Kr-85	80uCi
Test Sample	6665-00-878-7631	Kr-85	80uCi
Test Sample MX7338/PDR-27	6665-00-832-6159	Kr-85	5mCi

SEP 19 1991

NRC Generally Licensed Items

				<u>General License</u>
Static Meter	6625-01-039-7848	H-3	200mCi	31.5
Static Eliminator	6740-01-021-2064	Po-210	1.0uCi	31.3
Dewpointer	6685-00-790-2819	Am-241	50uCi	31.5
Test Sample	6665-01-163-6722	Th-232	0.5uCi	40.22
RADIAC Set 44ORF	6665-00-780-5507	DU	0.05uCi	40.22
RADIAC Set SM400	6665-01-157-3780	Th-232	0.03uCi	40.22
RADIAC Set AN/PDR56F	6665-01-113-9530	Th-232	0.03uCi	40.22
Test Sample	6665-00-705-5268	Pu-239	0.02uCi	70.19
Test Sample (CS-1)	6665-00-903-7732	Pu-239	0.02uCi	70.19
RADIAC Set PAC 2G	6665-00-581-2227	Pu-239	0.02 uCi	70.19

NOTES:

1. Item name given is to aid in our referencing back to license source documents and may not correspond exactly to item nomenclature.

2. Activity listed is maximum activity authorized in millicuries (mCi), or microCuries (uCi)

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DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR FORCE OFFICE OF MEDICAL SUPPORT
BROOKS AIR FORCE BASE, TEXAS 78235-5000

REPLY TO: SGPR
ATTN OF:

23 SEP 1991

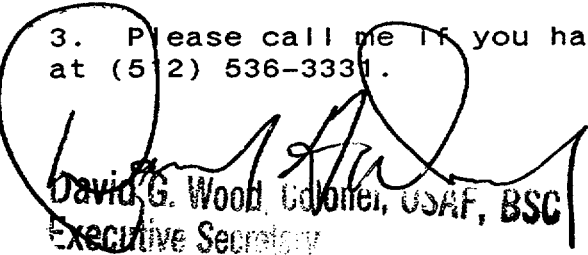
SUBJECT: Nuclear Regulatory Commission (NRC) License Requirements for
Contract Precision Measurement and Equipment Laboratories (PMELs)

TO: USNRC, Region IV
ATTN: Mr. Michael Vasquez
611 Ryan Plaza Drive, Suite 400
Arlington TX 76011-4010

1. Please reference our letter, Air Force RADIAC Instrument Check Sources and Contract Calibration Laboratory Licensing, dated 11 Sep 91 and 20 Sep 91 telecon between Mr. Vasquez, USNRC Region IV, and Col Wood, HQ AFOMS/SGPR.

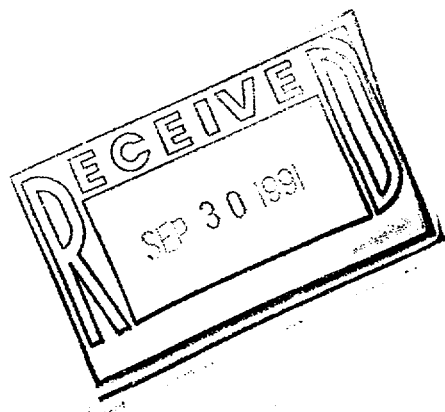
2. Attached is a copy of the letter implementing corrective actions as proposed in our 11 Sep 91 correspondence. Please note that we have adjusted suspense dates by one week as agreed in our 20 Sep 91 telecon since the dates originally outlined were predicated on an earlier release date for the attached.

3. Please call me if you have any questions. I can be reached at (512) 536-3331.


David G. Wood, Colonel, USAF, BSC
Executive Secretary
USAF Radiological Committee
Office of the Surgeon General

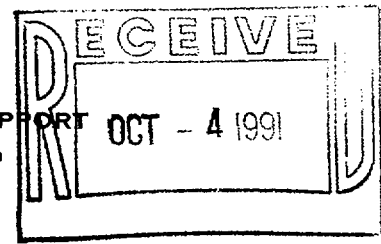
1 Atch
HQ AFOMS/SGPR Ltr, 20 Sep 91

cc: HQ USAF/SGP/XOOTT/LGMM
AFDPRC/PR





DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR FORCE OFFICE OF MEDICAL SUPPORT
BROOKS AIR FORCE BASE, TEXAS 78235-5000



REPLY TO: SGPR
ATTN OF:

20 SEP 1991

SUBJECT: Nuclear Regulatory Commission (NRC) License Requirements for
Contract Precision Measurement and Equipment Laboratories (PMELs)

TO: HQ AU/LGM HQ AFLC/LGM HQ AFRES/LGM HQ TAC/LGM
HQ ATC/LGM HQ SAC/LGM HQ MAC/LEM NGB/LGM
HQ PACAF/LGM HQ USAFE/LGM HQ USAFA/LG HQ AFSC/LGM
HQ AFSPACECOM/LKL AFOTEC/LGM AFSOC/LGM ESC/LGM

(PMEL Managers)

1. The USAF Radioisotope Committee has discovered that Air Force contractor operated PMELs may not be properly authorized by NRC or Agreement State license to receive certain radioactive sources contained in Air Force instruments requiring PMEL repair or calibration. These sources are authorized by NRC for Air Force use under the Air Force Master Materials License and consist primarily of operational check sources for various radiation detection instrumentation and computation (RADIAC) instruments. The sources are used and controlled within the Air Force by end item technical order rather than individual USAF Radioactive Material Permits. Their transfer outside the Air Force, except to persons specifically licensed by NRC to possess/use such items, is a violation of the Air Force Master License. In addition, some instruments may contain NRC generally licensed sources which can only be transferred to a recipient holding a specific license. Transfers or exchanges of calibration and reference sources controlled within the Air Force by specific USAF Radioactive Material Permit are apparently being properly made. Requirements for contractor licensing for these sources were recognized prior to contracting.

2. Attachment 1 lists sources and end items which may contain sources typically used or serviced by PMELs which must be authorized by a specific NRC or Agreement State license.

3. For HQ ATC, HQ AFSPACECOM, HQ AU, and HQ AFSC.

a. Take immediate action to ensure that contractor operated PMELs within your Commands are properly licensed by NRC or an Agreement State for all Air Force radioactive sources or equipment items containing such sources that the PMELs may be required to use or support. Contractors must advise the NRC or State why the amendment is being submitted and request expedited review (attach a copy of this letter). Licensing information for completion of items 6 through 9 of NRC Form 313 or State equivalent is given at attachment 2. Contractor licenses must

specifically authorize the return of generally licensed sources received from the Air Force to the Air Force. The NRC has agreed to allow normal calibration operations to continue subject to prompt action by contractors to obtain proper license. Therefore, contractor license amendment applications must be sent to the licensing NRC Region or Agreement State by 15 Nov 91.

b. Provide written confirmation that contractor amendment requests have been submitted to HQ AFOMS/SGPR, Brooks AFB TX 78235-5000 by 21 Nov 91.

c. Have contractors provide HQ AFOMS/SGPR a copy of their amended NRC or Agreement State license through the base radiation safety officer as soon as it is received from the licensing agency.

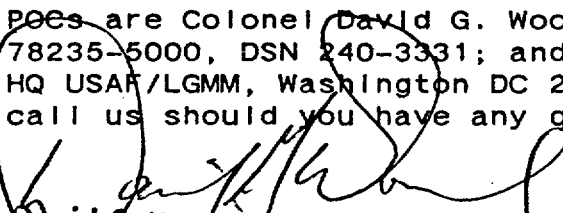
4. For all.

a. Effective immediately, specifically or generally licensed sources identified in attachment 1 shall not be transferred outside the Air Force, except as provided for in paragraph 3 to Air Force contractor operated PMELs, without verifying the recipient is properly licensed to receive the sources in question. A record of such verification and source transfer shall be kept by the using agency for three years from the date of transfer.

b. If a license amendment application has not been sent by a PMEL contractor to the NRC or State licensing agency by 15 Nov 91, all sources for which the contractor is not currently licensed are to be returned to the Air Force user owning the source and no instruments containing sources for which the contractor is not licensed will be sent to the contractor for calibration.

c. Please review attachment 1 and present, or planned, contract PMEL operations against scheduled base closures and other mission realignments and ensure any needed changes in PMEL contractor licenses are obtained.

5. This is a coordinated HQ AFOMS/SGPR and HQ USAF/LGMM letter. POCs are Colonel David G. Wood, HQ AFOMS/SGPR, Brooks AFB, TX 78235-5000, DSN 240-3331; and Lieutenant Colonel Joann Rodefer, HQ USAF/LGMM, Washington DC 20330-5130, DSN 227-1052. Please call us should you have any questions concerning this matter.


David G. Wood, Colonel, USAF, BSC
Executive Secretary
USAF Radioisotope Committee
Office of the Surgeon General

2 Atch
1. Commodity Listing
2. Licensing Information

cc: See Distribution List

NRC Specifically Licensed Items

<u>Item</u> ¹	<u>NSN</u>	<u>Isotope</u>	<u>Activity</u> ²
Test Sample (AN/UDM-7)	6665-00-361-1816	Pu-239	90uCi ³
Test Sample (AN/UDM-7C)	6665-01-084-7777	Pu-239	90uCi ³
Test Sample (AN/UDM-6)	6665-00-767-7497	Pu-239	2uCi ³
Test Sample (UDM-1A)	6665-00-556-8825	Cs-137	130Ci ³
RADIACmeter (Shepherd 81-10)	6665-01-279-7879	Cs-137	160Ci ³
RADIACmeter (P/N 81-150-155)	6665-01-279-7879	Cs-137	160Ci ³
Test Sample (D0062)	6665-00-819-6606	Cs-137	130mCi ³
Test Sample	6665-00-541-2108	Sr-90	1uCi
RADIAC Set AN/PDR39	6665-00-526-5336	(Contains 6665-00-541-2108)	
RADIAC Set AN/PDR39	6665-00-526-8648	(Contains 6665-00-541-2108)	
RADIAC Set AN/PDR54	6665-00-815-6111	(Contains 6665-00-541-2108)	
Test Sample	6665-00-791-8792	Kr-85	100uCi
Test Sample MX2608/PDR43; MX9345/PDR43	6665-00-878-7632	Kr-85	80uCi
RADIAC Set AN/PDR43F	6665-01-116-7260	(Contains 6665-00-878-7632)	
RADIAC Set AN/PDR43	6665-00-106-7554	(Contains 6665-00-878-7632)	
RADIAC Set AN/PDR43	6665-00-690-5279	(Contains 6665-00-878-7632)	
RADIAC Set AN/PDR43D	6665-00-738-5867	(Contains 6665-00-878-7632)	
RADIAC Set AN/PDR-43	6665-00-580-9646	(Contains 6665-00-878-7632)	
RADIAC Set PAC 2G	6665-00-581-2227	Pu-239	0.02 uCi
Test Sample	6665-00-878-7631	Kr-85	80uCi
RADIAC Set 506B AN/PDR43B	6665-00-474-4186	(Contains 6665-00-878-7631)	
RADIAC Set AN/PDR43D	6665-00-738-5867	(Contains 6665-00-878-7631)	
RADIAC Set AN/PDR43PARENPD	6665-00-879-4054	(Contains 6665-00-878-7631)	
RADIAC Set NRC-C-4399	6665-00-036-7815	(Contains 6665-00-878-7631)	
RADIAC Set AN/PDR43	6665-01-080-4167	(Contains 6665-00-878-7631)	
Test Sample MX7338/PDR-27	6665-00-832-6159	Kr-85	5mCi
RADIAC Set AN/PDR27G	6665-00-543-1443	(Contains 6665-00-832-6159)	
RADIAC Set AN/PDR27E	6665-00-526-8649	(Contains 6665-00-832-6159 or 6665-00-171-4317)	
RADIAC Set AN/PDR27G	6665-00-543-1443	(Contains 6665-00-832-6159 or 6665-00-171-4317)	
RADIAC Set AN/PDR27C	6665-00-561-5787	(Contains 6665-00-832-6159 or 6665-00-171-4317)	

2. Activity listed is maximum activity authorized in Curies (CI), millicuries (mCI), or microCuries (uCI)

3. USAF Radioactive Material Permit issued to all users. These items should not be at issue since we believe that existing contract PMELs have appropriate license for these sources. They are included for completeness and you should review future needs in light of base closures and mission alignments and timely notifications to PMELs contractors

4. Replacement item for the AN/UDM-7C (Stocklisting and Acceptance Testing in progress).

5. Item should not be in inventory; replacement was the UDM-6

6665-00-878-7632 and 6665-00-878-7631

Kr-85 in sealed sources (Test Samples MX9345/PDR43 and MX2608/PDR43) not exceed 80 microCuries per source for use as Internal check source in AN/PDR-43 RADIAC sets

6665-00-581-2227

Pu-239 plated source not to exceed 0.02 microCuries per source for use in RADIAC set PAC 2G (NSN 6665-00-5821-2227)

6665-00-083-9483

Pu-239 in CS-2 Instrument calibrator sealed sources (Test Sample NSN 6665-00-083-9483) not to exceed 2 microCuries for Instrument calibration

6665-00-832-6159

Kr-85 for use in sealed Test Sample Type MX7338/PDR-27 (NSN 6665-00-832-6159) not to exceed 5 millicuries per source for use as Instrument check sources

6665-01-114-0073

Am-241 in Amersham foil source Model AMM1001 for use in D5-15-8105 Cell (NSN 6665-01-114-0073) not to exceed 250 microCuries per source for use as a Component of M43A1 Detector Unit, M8A1 Automatic Chemical Agent Alarm (6665-01-199-4153)

6665-01-199-4153

Nickel 63 for use in E.I. Du Pont (New England Nuclear) Model NER004R (NSN 6665-01-199-4153) not to exceed 15 millicuries per source for use in Chemical Agent Monitor (CAM)

Pu-238 in Amersham Test Sample PPRX-1178 not to exceed 50 microCuries for use in calibration

Tritium contained in Self Powered Lighting Model CAN-45-3 not to exceed 1.1 Curies for use in Beta Light Comparator

NRC Generally Licensed Items

6685-00-790-2819

Am-241 used in Amersham Model AMM foil not to exceed 50 microCuries in Alnor Dewpointer Model 7300 (NSN 6685-00-790-2819)

6665-01-163-6722

Th-232 sealed source contained in Test Sample NSN 6665-01-163-6722 not to exceed 0.5 microCuries for use as Instrument operational reference source

6665-00-780-5507

Depleted Uranium sealed source contained in RADIAC Set 440RF (NSN 6665-000-780-5507) not to exceed 0.05 microCuries as Instrument operational reference source

6665-01-157-3780

Th-232 test sample (NSN 6665-01-157-5291) contained in RADIAC Set SM400 (NSN 6665-01-157-3780) not to exceed 0.03 microCuries for use as Instrument operational reference source

6665-01-113-9530

Th-232 sealed source contained in RADIAC set AN/PDR56F (NSN 6665-01-113-9530) not to exceed 0.03 microCuries as Instrument operational reference source

6665-00-705-5268

Pu-239 sealed source (Test Sample NSN 6665-00-705-5268) not to exceed 0.02 microCuries for use as Instrument operational reference source

6665-00-903-7732

Pu-239 sealed source contained in Eberline model Number CS-1 (Test Sample CS-1; NSN 6665-00-903-7732) not to exceed 0.02 microCuries for use as Instrument operational reference source

Items Containing Radium

665-00-171-4317

Ra-226 sealed Ampule Wand Test Sample (NSN 6665-00-171-4317) not to exceed 7 microCuries for use as an instrument operational reference source

Ra-226 used in Radum Chemical Co. Model LAS 204-1A or Amersham Model RAM.X452 foil not to exceed 7 microCuries in Alnor Dewpointer Model 7300 (NSN 6685-00-790-2819)

DISTRIBUTION LIST:

4960 ABG/SGPB
Arnold AFB TN 37389-5000

Chanute TTC Hosp/SGPB
Chanute AFB IL 61868-5300

3345 CMS/MAY
Chanute AFB IL 61868-5000

14 FTW/LGM
Columbus AFB MS 39701-5000

USAF Hosp/SGPB
Columbus AFB MS 39701-5300

3420 TCHTG/TTMZM
Lowry AFB CO 80230-5100

USAF Clinic/SGPB
Lowry AFB CO 80230-5300

LTTC/LGM
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Lowry AFB CO 80230-5300

323 FTW/LGM
Mather AFB, California 95655-5000

USAF Hosp/SGPB
Mather AFB CA 95655-5300

ESMC/SGPH
Patrick AFB FL 32925-6005

ESMC/SGPB
Patrick AFB FL 32925-5300

1040 SSG/DW
Patrick AFB FL 32925-6005

Sheppard TTC Hosp/SGPB
Sheppard AFB TX 76311-5300

3750 ABG/CXD
Sheppard AFB TX 76311-5000

USAF Hosp/SGB
Vandenberg AFB CA 93437-5300

DISTRIBUTION LIST: (continued)

Western Space and Missile Center (WSMC)/CV
Vandenberg AFB CA 93437-6021

82 FTW/LGM
Williams AFB AZ 85240-5000

USAF Hosp/SGPB
Williams AFB AZ 85240-5300

State of Tennessee Dept of Health
Division of Radiological Health
TERRA Bldg 150 9th Avenue N.
Nashville TN 37219-5404

AFDPRC/PR
Lowry AFB CO 80330-5000

AL/OEB
Brooks AFB TX 78235-5000

AGMC/MLEP
Newark AFB OH 43057-5475

AGMC/MLLN
Newark AFB OH 43057-5475

AURH/SGPB
Maxwell AFB, Alabama 36112-5304

HQ USAF Academy/SGPB
Colorado Springs, Colorado 80840-5470

HQ AFLC/SGBE
Wright-Patterson AFB, Ohio 45433-5001

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Langley AFB, Virginia 23665-5578

HQ SAC/SGPB
Offutt AFB, Nebraska 68113-5001

DISTRIBUTION LIST: (continued)

HQ AFSPACECOM/SGB
Peterson AFB, Colorado 80914-5001

HQ PACAF/SGPB
Hickam AFB, Hawaii 96853-5001

HQ USAFE/SGPA
APO New York 09094-5001

HQ AFRES/SGB
Robins AFB, Georgia 31098-6001

ANGSC/SGB
Building 3500
Andrews AFB, Maryland 20331-6008

HQ ESC/SG
San Antonio, Texas 78243-5000

HQ USAF/SGP
Boiling AFB DC 20332-6188

HQ AFIA/SG2R
Norton AFB, California 92409-7001

AF/LGMM
The Pentagon
Room 4A280
Washington DC 20330-5130

HQ USAF/XOOTT
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Washington DC 20330-5054

USNRC, Region IV
Arlington TX 76011-4010