

AMC Consolidated
Radioactive Commodity
Program Review
Checklist



January 1997

I. MANAGEMENT.

PERSONNEL INTERVIEWED/MET:

Applicable program elements reviewed:

M8A1/M43A1_____	UDM-2_____	MgTh/NiTh_____	Ra-226 Commodities_____
CAM_____	UDM-6_____	DU Ammo_____	Industrial X-Ray_____
Tritium Sources_____	ThFl_____	Electron Tubes_____	Combustor Liners_____
MC-1_____	LAW_____		

- Yes No NA 1. Has the Commander adopted a formal RPP policy document? **(AR 385-11, para 1-20d)(NGR 385-11, para 1-4a)(10 CFR 20.1101(a))**
Title/Date:_____
- Yes No NA 2. Has the Commander provided and maintained adequate resources for the RPP to ensure safety of personnel, property, and the environment? **(AR 385-11, para 1-20b)(NGR 385-11, para 1-4)**
- Yes No NA 3. Is a Radiation Protection Officer (RPO) designated in writing (appointing orders) by the Commander? **(AR 385-11, para 1-20d)(NGR 385-11, para 1-9c)**
- Yes No NA 4. Is an Alternate RPO (ARPO) designated in writing (appointing orders) by the Commander? **(AR 385-11, para 1-20d)(NGR 385-11, para 1-9c)**
- Yes No NA 5. Does the RPO and ARPO have sufficient education or training as required for the position? **(AR 385-11, para 1-27j)(AR 40-5, para 9-4b(1)) (NGR 385-11, para 1-4d(10))(NRC Licenses)**
- Yes No NA 6. Is an annual physical inventory of radioactive materials (to include ICRIs) maintained for 3 years or as specified by the applicable license? **(AR 385-11, para 2-11)(NGR 385-11, para 2-4(d))(10 CFR 20.2103)**
- Yes No NA 7. Is an inventory of ionizing radiation producing devices maintained?
(AR 385-11, para 1-20b)(AR 40-5, para 9-9a(2))
- Yes No NA 8. Are radiation files maintained IAW AR 25-400-2 MARKS and the provisions of 10 CFR, as applicable? **(AR 25-400-2)(10 CFR 20)**
- Yes No NA 9. Has an annual review of the RPP content and implementation been performed? **(10 CFR 20.1101c)**
- Yes No NA 10. Has training, including instruction consistent with 10 CFR 19.12, NRC Regulatory Guides 8.9, 8.10, and 29 CFR, been conducted within the last 18 months? **(10 CFR 19)(29 CFR)(NRC Licenses)**
- Yes No NA 11. Has the local fire department been notified of the location and types of radioactive materials and procedures for fighting fires next to or involving radioactive materials? Has this notification been kept up to date? **(AR 385-11, para 5-7c)**
- Yes No NA 12. Are inventories maintained for radioactive materials pending disposal? **(AR 385-11, para 2-11)**
- Yes No NA 13. Does the Local RPO (LRPO) maintain Standing Operating Procedures

(SOPs) or equivalent for ongoing operations involving radiation sources? (10 CFR 19.11)(AR 40-5, para 9-9a(2)(a))(AR 385-11, para 1-26)

- Yes No NA 14. Are all radiation accidents/incidents reported in accordance with AR 385-40?
- Yes No NA 15. Are records showing results of surveys and calibrations maintained and retained on file for minimum period of 3 years? (10 CFR 20.2103(a))
- Yes No NA 16. Does the installation have an RCC established as required? (AR 40-14, para 2-5a(4))(AR 385-11, para 1-25)
- Yes No NA 17. Has a Dosimetry program (internal/external) been implemented? (AR 40-14)(DA PAM 40-18)(10 CFR 20.1502)

II. TRANSPORTATION and STORAGE.

PERSONNEL INTERVIEWED/MET:

- Yes No NA 1. Is an inventory of radioactive materials maintained for 5 years or as specified by the applicable license? Records may be centrally maintained. (AR 385-11, 2-11)(NGR 385-11, 2-4(d))(10 CFR 20.2102)
- Yes No NA 2. Are radiation files maintained IAW AR 25-400-2 MARKS and the provisions of 10 CFR, as applicable? (AR 25-400-2)(10 CFR 20)
- Yes No NA 3. Has training, including instruction consistent with 10 CFR 19.12, NRC Regulatory Guides 8.9, 8.10, and 29 CFR, been conducted within the last 18 months? (10 CFR 19)(29 CFR)(NRC Licenses)
- Yes No NA 4. Has the local fire department been notified of the location and types of radioactive materials and procedures for fighting fires next to or involving radioactive materials? Has this notification been kept up to date? (AR 385-11, para 5-7c)
- Yes No NA 5. Are inventories maintained for radioactive materials pending disposal? (10 CFR 20.2108)(10 CFR 20, Appendix F)(AR 385-11, para 5-11b)
- Yes No NA 6. Does the local RPO maintain SOPs or equivalent for ongoing operations involving radioactive material? (10 CFR 19.11)(AR 40-5, para 9-9a(2)(a))(AR 385-11, para 1-26)
- Yes No NA 7. Are records showing results of surveys and calibrations maintained and retained on file for minimum period of 3 years? (10 CFR 20.2103(a))
- Yes No NA 8. Has a Dosimetry program (internal/external) been implemented? (AR 40-14)(DA PAM 40-18)(10 CFR 20.1502)
- Yes No NA 9. Does the storage location have a published SOP for radioactive commodities? _____ (AR 40-5, para 9-9a(2a))
- Yes No NA 10. Is the instrumentation adequate to properly perform routine radiation surveys? (NGR 385-11, para 1-9b(3))(AMCR 385-25)
- Yes No NA 11. Is the instrumentation properly calibrated for ACTIVE use? (TB 43-180)
- Yes No NA 12. Is a DA Label 80 with a current calibration date placed in a conspicuous location on the instrument? (AR 40-5, para 9-8a(3))

- Yes No NA 13. Are personnel aware of the requirement to prohibit radioactive materials from the Defense Reutilization and Marketing Office (DRMO)? **(AR 700-64, para 5-15)(NGR 385-11, para 5-5 c and e)**
- Yes No NA 14. Do turn-in documents for materiel generally considered to be radioactive indicate that radioactive items are free of radioactive material/contamination prior to turn-in at the DRMO? **(AR 700-64, para 5-15)**
- Yes No NA 15. Are procedures available to properly receive and open packages of radioactive materials? **(10 CFR 20.1906)**
- Yes No NA 16. Are surveys of outgoing and incoming shipment packages performed and results documented and maintained on file? (Incoming surveys not required IAW 10 CFR 20.1906 if less than Type A quantities, special form or gas.) **(AR 385-11, para 1-28b)(AMCR 385-25, 33)(NGB 385-11, para 4-1a)**
- Yes No NA 17. Are copies of the Radioactive Material Movement Form (RMMF) given to the local Transportation Officer and a copy included with the shipping records? **(AR 385-11, para 1-28b)(AMCR 385-25, 33)(NGR 385-11, para 4-1a)**
- Yes No NA 18. Are quarterly health physics surveys (consisting of radiation levels and spreadable contamination swipes) performed in areas where radioactive materials are used/stored? **(AR 385-11, para 1-26c)(AR 700-64, para 5-9c)(10 CFR 20.1501)**
- Yes No NA 19. Are the health physics surveys accurately documented? (Drawing of area, types of sources, background reading, radiation levels, type of measurement, instrument, instrument calibration date, emergency points of contact, recorder.) **(10 CFR 20.2103)**
- Yes No NA 20. Are surveys sufficiently comprehensive to meet the requirements of 10 CFR 20.1302 and 10 CFR 20.1501 (e.g. are dose rates in unrestricted areas compliant with applicable dose limits for members of the public)? **(10 CFR 20.1302)(10 CFR 20.1501)**
- Yes No NA 21. Are radioactive materials (stored in unrestricted areas) secure from unauthorized access? If not, is the radioactive material under constant surveillance and immediate control? (Also applicable to materials pending shipment.) **(10 CFR 20.1801 & 1802)**
- Yes No NA 22. Is the storage facility constructed of fire retardant materials and/or protected by a fire sprinkler system or otherwise under the control of rapid fire department response? **(AR 40-5, para 9-9b(5))**
- Yes No NA 23. Is Smoking, Eating, Drinking, Chewing Gum, tobacco or applying cosmetics prohibited in the radiation controlled area? **(AR 40-5, para 9-9b(4))**
- Yes No NA 24. Are radioactive material storage areas posted as radiation controlled areas? **(10 CFR 20.1902)**
25. Are copies of the following posted for review near the radiation controlled area?
- Yes No NA a. Appropriate radiation signs?
- Yes No NA b. List of individual(s) and telephone number(s) to notify in the event of an emergency? **(AR 40-5, para 9-9a(5)(e))**
26. Are copies of the following posted for review near the radiation controlled area or at a location frequented by all employees?
- Yes No NA a. Form NRC 3, Notice to Employees? **(10 CFR 19.11b, c, d)**
- Yes No NA b. Section 206 of the Energy Reorganization Act of 1974? **(10 CFR 21.6)**

- Yes No NA c. NRC License? (10 CFR 19.11)
27. Are copies of the following posted or available for review near the radiation controlled area? (10 CFR 21.6(a))(NGB 385-11, para 1-12g)
- Yes No NA a. Local SOPs? (10 CFR 19.11)
- Yes No NA b. 10 CFR Parts 19,20,21? (10 CFR 19.11(b))
- Yes No NA c. All reported violations from the NRC, and USACHPPM? (10 CFR 19.11)
- Yes No NA 28. If 28 a thru c above are not posted for review, is a notice posted to describe the location of these documents and a POC? (10 CFR 21.6(b))
- Yes No NA 29. Have employees received an annual briefing (not to exceed 18 months) with regard to radiation hazards/biological effects? (NRC Regulatory Guides 8.10, 8.13 and 8.29)(10 CFR 19)(TB 385-4, para 1-6b)
- Yes No NA 30. Have all workers received initial radiation safety instruction? (10 CFR 19.12)

III. MAINTENANCE.

Refer to the commodity section for requirements applicable to maintenance of those commodities.

IV. COMMODITIES. Refer to applicable appendix.

- APPENDIX A-----AN/UDM-2, RADIAC CALIBRATOR SET
- APPENDIX B-----AN/UDM-6, RADIAC CALIBRATOR SET
- APPENDIX C-----M43A1 CHEMICAL AGENT DETECTOR (CAD)
- APPENDIX D-----CHEMICAL AGENT MONITOR (CAM)
- APPENDIX E-----TRITIUM (H-3) FIRE CONTROL DEVICES
- APPENDIX F-----TRITIUM (H-3) DEPOT MAINTENANCE AND STORAGE
- APPENDIX G-----TESTER DENSITY AND MOISTURE, CAMPBELL PACIFIC MODEL MC-1
- APPENDIX H-----M1 SERIES HEAVY DEPLETED URANIUM (DU) ARMOR ABRAMS TANK
- APPENDIX I-----LICENSE REQUIREMENTS OF STB-1433 FOR MAINTENANCE OF
MAGNESIUM/THORIUM ALLOY AIRCRAFT ENGINE PARTS
- APPENDIX J-----DU AMMUNITION STORAGE REQUIREMENTS
- APPENDIX K-----THORIUM FLUORIDE COATED OPTICS (CECOM NRC LICENSE
29-01022-14)
- APPENDIX L-----AVIATION AND TROOP COMMAND (ATCOM) INDUSTRIAL RADIOGRAPHIC
EQUIPMENT
- APPENDIX M-----ELECTRON TUBES
- APPENDIX N-----RADIUM USED IN RADIOLUMINESCENT DEVICES,
CECOM DARA A29-10-06
- APPENDIX O-----ATCOM RADIUM (Ra-226) COMMODITIES
- APPENDIX P-----THORIUM COMBUSTOR LINERS, TACOM DARA A21-12-05
- APPENDIX Q-----VEHICLE RADIUM DIALS/GAUGES, TACOM DARA A21-12-04
- APPENDIX R-----M97 EXPLOSIVE DETECTOR, ACALA DARA A12-88-05

APPENDIX S-----M11 PISTOL, ARMAMENT AND CHEMICAL ACQUISITION AND
LOGISTICS

ACTIVITY (ACALA) DARA A12-93-01

APPENDIX T-----M72A2 LIGHT ANTITANK WEAPON, NRC LICENSE 12-00722-07

APPENDIX A

CECOM NRC LICENSE 29-01022-14
AN/UDM-2, RADIAC Calibrator Set
LIN: C75606, NSN: 6665-00-179-9037, TM 11-6665-227-12

PERSONNEL INTERVIEWED/MET:

- Yes No NA 1. Does the Calibration facility have a published SOP?
(AR 40-5, 9-9a(2a)) (TM 11-6665-227-12)
-
- SN: _____
- Yes No NA 2. Does the Local RPO (LRPO) maintain a copy of the SOP?
(AR 40-5, 9-9a(2a))
- Yes No NA 3. Is an LRPO designated in writing by the local Commander?
(AR 385-11, 1-20d)(NGR 385-11, 1-9c)
- Yes No NA 4. Is an Alternate LRPO designated in writing by the local Commander?
(AR 385-11, 1-20d)(NGR 385-11, 1-9c)
- Yes No NA 5. Do the LRPOs have at least 40 hours of approved radiation
education and training? (AR 385-11, 1-20b)(NGR 385-11, 1-9b)
- Yes No NA 6. Are radiation files maintained IAW AR 25-400-2 MARKS?
(AR 25-400-2, 385-11)
- Yes No NA 7. Is the local Fire Department notified in writing of the
radioactive material storage location? (AR 385-11, 5-7c) (NGR 385-
11, 1-12i)(AR 40-5, 9-9b(5))(29 CFR 1900)
- Yes No NA 8. Are source leak tests performed every 6 months as required and
results maintained for 5 years? (AR 385-11)
- Yes No NA 9. Is the instrumentation adequate to properly perform routine
radiation surveys? (NGR 385-11, 1-9b(3))(AMCR 385-25, 29)
- Yes No NA 10. Are AN/PDR-27s, AN/VDR-2s, or equivalent used at all times to
monitor the AN/UDM-2 calibration area? (TB 11-6665-227-12)
- Yes No NA 11. Is the instrumentation properly calibrated for ACTIVE use? (TB 43-
180)
- Yes No NA 12. Is a DA Label 80 with a current calibration date placed in a
conspicuous location on the portable survey instrument?
(AR 40-5 9-8a(3))
- Yes No NA 13. Is the TLD storage location approved in writing by the RPO?
(DA Pam 40-18, 3-4e)
- Yes No NA 14. Is the Dosimetry Custodian designated in writing by the
commander/RPO? (AR 40-14, 6-1)(AR 40-14, 2-5a(9))
- Yes No NA 15. Are radioactive materials (stored in unrestricted areas) secure
from unauthorized access? If not, is the radioactive material
under constant surveillance and immediate control? (10 CFR 20.1801
& 1802)

- Yes No NA 16. Is the storage facility and/or container constructed of fire retardant materials? **(AR 40-5, 9-9b(5))**
- Yes No NA 17. Is the storage facility and/or container locked? **(TB 11-6665-227-12)**
- Yes No NA 18. Are monthly health physics surveys performed of the storage location? **(TB 11-6665-227-12)**
- Yes No NA 19. Are the health physics surveys accurately documented? (Drawing of area, types of sources, background reading, radiation levels, type of measurement, instrument, instrument calibration date, emergency points of contact, recorder.) **(AR 700-64, 5-9c)(AMCR 385-25, 17)**
- Yes No NA 20. Do health physics surveys include survey points in unrestricted areas adjacent to the radiation controlled area? **(10 CFR 20.1301)**
- Yes No NA 21. Do the unrestricted area health physics survey points indicate background radiation levels? **(10 CFR 20.1301)**
- Yes No NA 22. Have radiation workers been briefed on the hazards of exposure to radiation and radioactive material prior to entry into the radiation controlled area? (presence of radiation, health hazards, minimizing exposure, appropriate response to warnings/alarms, report of exposure, use of protective clothing and equipment.) **(10 CFR 19.12)(TB 11-6665-227-12)**
- Yes No NA 23. Is Smoking, Eating, Drinking, Chewing Gum, tobacco, or applying cosmetics prohibited in the radiation controlled area? **(AR 40-5, 9-9b(4))**
- Yes No NA 24. Are storage areas and/or containers posted as radiation controlled areas? **(10 CFR 20.1902)**
25. Are copies of the following posted for review near the radiation controlled area?
- Yes No NA a. Appropriate radiation signs?
- Yes No NA b. List of individual(s) and telephone number(s) to notify in the event of an emergency? **(AR 40-5 9-9a(5)(e))**
- Yes No NA c. NRC License 29-01022-14? **(TB 11-6665-227-12)**
26. Are copies of the following posted for review near the radiation controlled area or at a location frequented by all employees?
- Yes No NA a. Form NRC 3, Notice to Employees? **(10 CFR 19.11b, c, d)**
- Yes No NA b. Section 206 of the Energy Reorganization Act of 1974? **(10 CFR 21.6)**
27. Are copies of the following posted or available for review near the radiation controlled area? **(10 CFR 21.6(a))(NGB 385-11, 1-12g)**
- Yes No NA a. Local Standard Operating Procedures? **(10 CFR 19.11)**
- Yes No NA b. 10 CFR Parts 19,20,21? **(10 CFR 19.11)**
- Yes No NA c. All reported violations from the NRC? **(10 CFR 19.11)**
- Yes No NA 28. If 27 a thru c above are not posted for review, is a notice posted to describe the location of these documents and a POC? **(10 CFR 21.6(b))**
- Yes No NA 29. Do AN/UDM-2 operators use wrist or finger dosimeters? **(TB 11-6665-227-12)**

- Yes No NA 30. Are Automated Dosimetry Records (ADRs) and DD Form 1952 prepared and maintained for each person occupationally exposed to ionizing radiation? **(AR 40-14, 6-4 and App. B)**
- Yes No NA 31. Is the annual summary of the ADRs maintained permanently in the individuals' medical file? **(AR 40-14, 6-6)**
- Yes No NA 32. Has the RPO provided the individual with a copy of the annual summary of the ADRs? **(10 CFR 19)**
- Yes No NA 33. Are ADRs reviewed and filed at the dosimeter exchange frequency by the Dosimetry Custodian? **(AR 40-14, 6-3)**
- Yes No NA 34. Does the RPO review, sign and date personnel ADRs? **(DA Pam 40-18, 4-3b)**
- Yes No NA 35. Is all previous/current occupational exposure data obtained from outside employment, previous organization, or administrative doses and forwarded to the Central Dosimetry Record Repository? **(AR 40-14, 2-5a(10))**
- Yes No NA 36. Does each dosimeter display some temporary means of individual identification? **(DA Pam 40-18, 3-4d)**
- Yes No NA 37. Are dosimeters worn above the waist, below the shoulders and outside the clothing? **(DA Pam 40-18, 3-4b)**
- Yes No NA 38. Do radiation workers (those on a Dosimetry program) receive annual briefings regarding radiation hazards/biological effects? **(10 CFR 19.12)(Statement DD Form 1952)(NRC Reg. Guides 8.10, 8.13 and 8.29)**
- Yes No NA 39. Has a Charge out Record (OF 23), or other flag, been placed in each record maintained separately from the health record or civilian employee medical files? **(AR 40-66)**
- Yes No NA 40. Has the local medical authority addressed the need for medical examinations of radiation workers? **(AR 40-5, 5-9)**

APPENDIX B

CECOM NRC LICENSE 29-01022-14
AN/UDM-6 RADIAC Calibrator Set
LIN: C74507, NSN: 6665-00-767-7497, TM 11-6665-248-10

PERSONNEL INTERVIEWED/MET:

- Yes No NA 1. Does the Calibrator Location have a published SOP?
(AR 40-5, 9-9a(2a))

SN: _____
- Yes No NA 2. Does the Local RPO (LRPO) maintain a copy of the SOP?
(AR 40-5, 9-9a(2a))
- Yes No NA 3. Is an LRPO designated in writing by the local Commander?
(AR 385-11, 1-20d)(NGR 385-11, 1-9c)
- Yes No NA 4. Is an Alternate LRPO designated in writing by the local Commander?
(AR 385-11, 1-20d)(NGR 385-11, 1-9c)
- Yes No NA 5. Do the LRPOs have education and training commensurate with the
radioactive materials? (AR 385-11, 1-20b)(NGR 385-11,
1-9b)
- Yes No NA 6. Are radiation files maintained IAW AR 25-400-2 MARKS?
(AR 25-400-2, 385-11)
- Yes No NA 7. Is the local Fire Department notified in writing of the
radioactive material storage area? (AR 385-11, 5-7c)(NGR 385-11,
1-12i)(AR 40-5, 9-9b(5))(29 CFR 1900)
- Yes No NA 8. Are source leak tests performed every 3 months as required and
results maintained for 5 years? (AR 385-11)
- Yes No NA 9. Is the instrumentation adequate to properly perform routine
radiation surveys? (NGR 385-11, 1-9b(3))(AMCR 385-25, 29)
- Yes No NA 10. Is the instrumentation properly calibrated for ACTIVE use?
(TB 43-180)
- Yes No NA 11. Is a DA Label 80 with a current calibration date placed in a
conspicuous location on the instrument? (AR 40-5, 9-8a(3))
- Yes No NA 12. Are radioactive materials (stored in unrestricted areas) secure
from unauthorized access? If not, is the radioactive material
under constant surveillance and immediate control? (10 CFR 20.1801
& 1802)
- Yes No NA 13. Is the storage facility and/or container constructed of fire
retardant materials? (AR 40-5 9-9b(5))
- Yes No NA 14. Are quarterly health physics surveys for contamination performed
of the storage location? (AR 700-64, 5-9c)(AR 385-11, 1-26c)
- Yes No NA 15. Are the health physics surveys accurately documented? (Drawing of
area, types of sources, background reading, radiation levels, type

of measurement, instrument, instrument calibration date, emergency points of contact, recorder.) (AR 700-64, 5-9c)(AMCR 385-25, 17)

- Yes No NA 16. Is Smoking, Eating, Drinking, Chewing Gum, tobacco, or applying cosmetics prohibited in the radiation controlled area? (AR 40-5, 9-9b(4))
- Yes No NA 17. Are radioactive material storage areas posted as radiation controlled areas? (10 CFR 20.1902)
18. Are copies of the following posted for review near the radiation controlled area?
- Yes No NA a. Appropriate radiation signs?
Yes No NA b. List of individual(s) and telephone number(s) to notify in the event of an emergency? (AR 40-5, 9-9a(5)(e))
19. Are copies of the following posted for review near the radiation controlled area or at a location frequented by all employees?
- Yes No NA a. Form NRC 3, Notice to Employees? (10 CFR 19.11b, c, d)
Yes No NA b. Section 206 of the Energy Reorganization Act of 1974? (10 CFR 21.6)
Yes No NA c. NRC License? (10 CFR 19.11)
20. Are copies of the following posted or available for review near the radiation controlled area? (10 CFR 21.6(a))(NGB 385-11, 1-12g)
- Yes No NA a. Local Standard Operating Procedures? (10 CFR 19.11)
Yes No NA b. 10 CFR Parts 19,20,21? (10 CFR 19.11)
Yes No NA c. All reported violations from the NRC? (10 CFR 19.11)
- Yes No NA 21. If 20 a thru c above are not posted for review, is a notice posted to describe the location of these documents and a POC? (10 CFR 21.6(b))

APPENDIX C

ACALA NRC LICENSE 12-00722-13
M43A1 Chemical Agent Detector (CAD)
M8A1 LIN: A32355, NSN: 6665-01-105-5623

PERSONNEL INTERVIEWED/MET:

A. DOD Radiation Testing and Tracking System (RATTS).

- Yes No NA 1. Is there a M8A1 & CAM serialization officer assigned? **(AR 710-4)**
- Yes No NA 2. Are M8A1 & CAM Serialization records maintained IAW AR 710-4?
(AR 710-4)
- Yes No NA 3. Are M8A1 & CAM shipping records maintained for 2 years?
(AR 710-4)
- Yes No NA 4. Are procedures in place so that detectors will be wipe tested when
due even if not notified by ACALA? **(L/C supp F Item 10-2)**
- Yes No NA 5. Are transaction reports submitted to the DOD RATTS for:
- a. Inventory loss?
 - b. Suspected loss or theft?
 - c. Receipt?
 - d. Shipment?
 - e. Demilitarization?
 - f. Unfavorable wipe test report?
 - g. Removal of cell module from detector?
 - h. Insertion of a cell module into a detector?
(TM 3-6665-312-30)

B. MAINTENANCE.

- Yes No NA 1. Does the M8A1 facility have a published
SOP? _____
(AR 40-5, 9-9a(2a))
- Yes No NA 2. Does the Local RPO maintain a copy of the SOP? **(AR 40-5, 9-9a(2a))**
- Yes No NA 3. Are procedures in place to notify the ACALA RSO when discrepancies
are discovered in the physical inventory?
- Yes No NA 4. Are M43A1 Users properly trained? **(ACALA NRC License)**
- Yes No NA 5. Is an annual physical inventory of M8A1's performed and results
maintained for 5 years? **(AR 710-3)(AR 385-11, 2-11)(NGR 385-11, 2-
4(d))(10 CFR 20.2102)**
6. Does the M43A1 Inventory include:
- Yes No NA a. Serial Number of M43A1 Cell Module?
 - Yes No NA b. Serial Number of M43A1?
 - Yes No NA c. Field Unit's Address (UIC)?
7. Are M43A1 field storage area(s) properly posted? (Other posting
are exempt by ACALA NRC License.)
- Yes No NA a. Caution - Radioactive Material Sign?
 - Yes No NA b. The M8A1/M43A1 Technical Manual? **(TM 3-6665-312-12&P)**

- Yes No NA 8. Are M8A1 annual source leak tests performed? **(ACALA License)**
- Yes No NA 9. Are leak tests performed prior to any maintenance? **(ACALA License)**
- Yes No NA 10. Are source leak tests forwarded to ACALA for analysis? **(ACALA License Message)**
- Yes No NA 11. Is the work area properly prepared?
- Yes No NA 12. Bench(s) covered with Kraft paper?
- Yes No NA 13. Is paper secured to work surface with tape?
- Yes No NA 14. Are all seams sealed with tape?
(TM 3-6665-312-30, para 2-1, ch 2)
- Yes No NA 15. Are disposable gloves worn? **(TM 3-6665-312-30, para 2-1b, ch 2)**
- Yes No NA 16. Is work area wiped and the wipe surveyed with an Alpha meter at the end of each day maintenance operations are performed? (If area reads over 200 cpm above background, area must be considered contaminated.) **(TM 3-6665-312-30, para 2-1(note), ch 2)**
- Yes No NA 17. Is an outlet filter used when in an enclosed area?
a. How often is filter disposed of?
b. What kind of waste?
(TM 3-6665-312-12, para 2-10 & 4-13)
- Yes No NA 18. Are hands washed at the end of maintenance or testing?
a. Use soft soap?
b. Wash for 2 minutes?
(TM 3-6665-312-30, para 2-1b)
- Yes No NA 19. Have maintenance personnel received 8 hours training covering:
a. Hazards of Americium 241 (Am 241)?
b. Units of radiation?
c. Biological effects?
d. Detection instrumentation?
e. Wipe testing?
f. Serial number tracking?
g. Emergency procedures?
(L/C supp D, item 8-2)
- Yes No NA 20. Are radioactive sources secured against unauthorized use?
(L/C Supp E, item 9)
- Yes No NA 21. Do maintenance personnel use portable Alpha detection equipment or take wipe tests of maintenance area daily? **(TM 3-6665-312-30)(L/C Supp E, Item)**
- Yes No NA 22. Do maintenance personnel have an appropriate radiation meter capable of detecting Alpha? **(L/C supp D)**
- Yes No NA 23. Are depot level storage areas monitored with portable equipment monthly? **(L/C supp E, item 9-2)**
- Yes No NA 24. Are surveys above background by 200 CPM? **(TM 3-6665-312-30, para 2-1b)**

C. USER.

- Yes No NA 1. Have user personnel received 2 hours training covering:
a. Radiation Safety?
b. Emergency procedures?
c. Maintenance restrictions?
d. Serial number tracking?

- Yes No NA 2. Is an outlet filter used when in an enclosed area?
- a. How often is filter disposed of?
 - b. What kind of waste?
(TM 3-6665-312-12, para 2-10 & 4-13)
- Yes No NA 3. Are M43A1 field storage area(s) properly posted? (Other posting are exempt by ACALA NRC License)
- a. Caution - Radioactive Material Sign?
 - b. The M8A1/M43A1 Technical Manual? **(TM 3-6665-312-12&P)**

APPENDIX D

ACALA NRC LICENSE 12-00722-14
Chemical Agent Monitor (CAM)
CAM LIN: C05701, NSN: 6665-01-199-4153

PERSONNEL INTERVIEWED/MET:

A. DOD Radiation Testing and Tracking System (RATTS).

- Yes No NA 1. Is there a M8A1 & CAM serialization officer assigned?
(AR 710-4)
- Yes No NA 2. Are M8A1 & CAM Serialization records properly maintained?
(AR 710-4)
- Yes No NA 3. Are M8A1 & CAM shipping records maintained for 2 years?
(AR 710-4)
- Yes No NA 4. Are procedures in place so that the CAM will be wipe tested when
due even if not notified by ACALA? (L/C supp F, Item 10-2)
- Yes No NA 5. Are transaction reports submitted to the DODRATTS for:
- a. Inventory loss?
 - b. Suspected loss or theft?
 - c. Receipt?
 - d. Shipment?
 - e. Demilitarization?
 - f. Unfavorable wipe test report?
 - g. Replacement of drift tube module?
- (TM 3-6665-331-23&P)

B. MAINTENANCE.

- Yes No NA 1. Does the CAM have a published SOP? _____
(AR 40-5, 9-9a(2a))
- Yes No NA 2. Does the Local RPO maintain a copy of the SOP?
(AR 40-5, 9-9a(2a))
- Yes No NA 3. Are procedures in place to notify the ACALA when discrepancies are
discovered in the physical inventory?
- Yes No NA 4. Are CAM Users properly trained? (ACALA NRC License)
- Yes No NA 5. Is an annual physical inventory of CAMs performed and results
maintained for 5 years? (AR 710-3)(AR 385-11, 2-11)(NGR 385-11, 2-
4(d))(10 CFR 20.2102)
6. Does the CAM Inventory include:
- Yes No NA a. Serial Number of CAM Drift Tube Module?
Yes No NA b. Serial Number of CAM?
Yes No NA c. Field Unit's Address (UIC)?
- Yes No NA 7. Are CAM field storage area(s) properly posted? (Other posting are
exempt by ACALA NRC License.)
- Yes No NA a. Caution - Radioactive Material Sign?
Yes No NA b. The CAM Technical Manual? (TM 3-6665-331-23&P)

- Yes No NA 8. Are CAM annual source leak tests performed? (**ACALA License**)
- Yes No NA 9. Are leak tests performed prior to any maintenance?
(**ACALA License**)
- Yes No NA 10. Are source leak tests forwarded to an authorized Test Laboratory for analysis? (**ACALA License Message**)
- Yes No NA 11. Are disposable gloves worn?
(**TM 3-6665-331-23&P, para 3-7**)
- Yes No NA 12. Is work area wiped and the wipe surveyed with a Beta meter at the end of each day maintenance operations are performed? (If wipe reads over twice background, the area must be considered contaminated.) (**TM 3-6665-331-23&P, para 3-16**)
- Yes No NA 13. Are hands washed at the end of maintenance or testing?
a. Use soft soap?
b. Wash for 2 minutes?
(**Good Health Physics Practice**)
- Yes No NA 14. Have maintenance personnel received 8 hours training covering:
a. Hazards of Nickel 63 (Ni 63)?
b. Units of radiation?
c. Biological effects?
d. Detection instrumentation?
e. Wipe testing?
f. Serial number tracking?
g. Emergency procedures?
(**L/C supp D, item 8, para 2**)
- Yes No NA 15. Are radioactive sources secured against unauthorized use?
(**L/C Supp E, item 9**)
- Yes No NA 16. Do maintenance personnel have appropriate radiation meters capable of detecting Beta radiation? (**L/C Supp E, Item 9-3**)
- Yes No NA 17. Are depot level storage areas monitored with portable equipment monthly? (**L/C supp E, item 9-2**)
- C. USER.
- Yes No NA 1. Are users familiar with the contents of the technical manual, TM 3-6665-331-23&P?
- Yes No NA 2. Are CAM field storage area(s) properly posted? (Other posting are exempt by ACALA NRC License.)
a. Caution - Radioactive Material Sign?
b. The CAM Technical Manual? (**TM 3-6665-331-23&P**)

APPENDIX E

ACALA NRC LICENSE 12-00722-06
TRITIUM (H3) FIRE CONTROL DEVICES

PERSONNEL INTERVIEWED/MET:

- Yes No NA 1. Is the work site a controlled area?
Yes No NA 2. Limited access? Secured?
Yes No NA 3. Under constant surveillance?
(10 CFR 20.1801, 1802)(License (L/C) Supp E, item 9)
- Yes No NA 4. Has the fire department been kept apprised by letter/memo of radioactive materials on site, to include the following?
a. Geographic location (Bldg., room, etc.)?
b. Type of radiation (Alpha, Beta, Gamma)?
c. Quantity?
(AR 385-4, para 5-7c)(AR 710-3)
5. Are copies of the following posted for review near the radiation controlled area or at a location frequented by all employees?
Yes No NA a. Form NRC 3, Notice to Employees? **(10 CFR 19.11b, c, d)**
Yes No NA b. Section 206 of the Energy Reorganization Act of 1974? **(10 CFR 21.6)**
Yes No NA c. NRC License? **(10 CFR 19.11)**
d. Notices stating: No Eating, Drinking, Smoking, Chewing Gum, or Applying Cosmetics?
6. Are copies of the following posted or available for review near the radiation controlled area?
(10 CFR 21.6(a))(NGB 385-11, 1-12g)
Yes No NA a. Local Standing Operating Procedures (SOPs)? **(10 CFR 19.11)**
Yes No NA b. 10 CFR Parts 19,20,21? **(10 CFR 19.11b)**
Yes No NA c. All reported violations from the NRC and CHPPM?
(10 CFR 19.11)(10 CFR 20.1901, 20.1902)(L/C Supp E, item-9)
- Yes No NA 7. Does the facility have an SOP defining the following?
Yes No NA a. Limits of storage of H3?
Yes No NA b. Spare parts stored in a separate non-occupied well vented area?
Yes No NA c. Reports to ACALA Radiation Safety Officer (RSO) on loss, theft, unplanned contamination events, fire, or explosion of licensed material?
Yes No NA d. Approved in writing by Commanding Officer?
Yes No NA e. Approved in writing by Radiation Protection Officer (RPO)?
(Memo 26 Aug 92 AMSMC-SFC)(TB 385-4, pp 5-4)
- Yes No NA 8. Are work surfaces covered with Kraft paper?
(License Supp E, item-9 & TM)
- Yes No NA 9. Is required Kraft paper replaced at least quarterly? **(L/C Supp E, Item-9)**
- Yes No NA 10. Are nitrogen gas gauges capable of measuring 3 PSI? **(TM 750-116)**

- Yes No NA 11. Is the radioactive waste associated with the operation in a waste container?
- Yes No NA a. Inventory?
 Yes No NA b. Painted properly? (yellow is advised)
 Yes No NA c. Marked with trefoil Radioactive material signs?
 Yes No NA d. Plastic bag liner?
(TM 3-261, Chap 4)
- Are tritium storage/work/user areas monitored in a timely fashion?
- a. Field users storage ----- Quarterly?
 b. DS/GS work areas and storage ----- Quarterly?
 c. H3 Instrument Repair Room (TIRR) --- Monthly?
(26 August 1992 memo)
- Yes No NA 12. Are survey records maintained? Do they include:
- a. Date of survey?
 b. NRC license number?
 c. Name of person making survey?
 d. Drawing of area with survey points?
 e. Background level?
 f. Type of source? (M43A1, CAM, Tritium, etc.)
 g. Type of measurement (alpha, beta, gamma.)
 h. Radiation levels indicated, w/unit of measurement? (mr/hr, cpm, etc.)
 i. Type of instrument used for survey?
 j. Serial number of instrument used?
 k. Calibration due date?
 l. Signature of person making survey?
NOTE: All surveys are conducted under worst case conditions.
(10 CFR 20.1501, 20.2103, L/C)
- Yes No NA 13. Is wipe test of work area done quarterly?
- Yes No NA a. Records retained for 2 years?
 Yes No NA b. Does wipe test record verify levels of less than 400 dpm/cm?
(L/C Supp E, Item 9)(Memo 26 Aug 92 AMSMC-SFS)
- Yes No NA 14. Are indoor Tritium (H3) work areas wipe tested quarterly?
(L/C Supp E, item 9)(Memo 26 Aug 92 AMSMC-SFS)
- NOTE:** Storage Requirements:
 a. No greater than a ratio of 1 curie per cubic foot (e.g. 1000 curies per 1000 cubic feet).
 b. Maximum of 1000 Ci of indoor storage.
 c. Maximum of 2,500 Ci with approval of ACALA RSO.
- Yes No NA 15. Have maintenance personnel had annual training? To include:
- a. Hazards of Tritium (H3)?
 b. Emergency procedures?
 c. Biological effects?
(10 CFR 19.12)(NRC regulatory guide 8.10, 8.13)(TB 385-4, para 1-6)
- Yes No NA 16. Is training documented? Record of training will include:
- a. Brief outline of instruction.
 b. List of personnel.
 c. Date presented.
(L/C supp D, item 8)
- NOTE:** Training (minimum)
 a. All personnel who use Tritium..... 1 hr.

- b. Repair personnel 4 hrs.
- c. Local Radiation Protection Officer (LRPO)..... 8 hrs.

- Yes No NA 17. Is Tritium material (including waste) stored properly?
(Tritium will be stored outside in a segregated area away from
personnel.) (**Memo 26 Aug 92 AMSMC-SFS**)
- Yes No NA 18. Does the repair room have proper air exchange? (12 air
exchanges/24 Hrs.) (**L/C supp E, item 9**)
- Yes No NA 19. Does the arms room storage meet the ventilation requirements for
Tritium (H3)? (12 exchanges/24 Hrs.) (**L/C supp E, item 9**)
- Yes No NA 20. Are protective rubber gloves being worn during wipe tests and/or
maintenance of H3 items? (**TM for item**)
- Yes No NA 21. Is eating, drinking, smoking taking place in area? (**L/C Supp E,
item-9 (10a)**)

APPENDIX F

ACALA NRC LICENSE 12-00722-06
TRITIUM (H3) Depot Maintenance and Storage

PERSONNEL INTERVIEWED/MET:

- Yes No NA 1. Are "Radioactive Material" signs posted at storage areas? (10 CFR 20.1902)
- Yes No NA 2. Has an annual report been sent to ACALA showing status of compliance to 40 CFR part 61 subpart I based on quantity of broken sources received and processed? Has the average annual leak rate been determined using the records of fire control devices processed during year with broken tritium sources? (Note: Report due by 15 February each year.) (L/C supp, item 10)
- Yes No NA 3. Are surveys of maintenance areas performed monthly? Documented? (L/C Supp E, item 9-2b)
- Yes No NA 4. Are survey records maintained? Do they include:
- a. Test results?
 - b. Instrument used for calibration?
 - c. Serial number of instrument?
 - d. Name of surveyor?
 - e. Date of survey?
 - f. Corrective actions, if any?
- (L/C Supp E, item 9-2b)(10 CFR 20.1501 & 20.2103)
- Yes No NA 5. Do depot emergency procedures include procedures for handling H3 emergencies, including a requirement to Bioassay for H3? (local SOP)(L/C, item 10-d2)
- Yes No NA 6. Are fume hoods used when replacing or removing H3 vials or any disassembly? (Depot maintenance facilities only.) (L/C Supp E, item 9-2b)
- Yes No NA 7. Is the standard met for the amount of air moved by hoods? (100 linear feet per minute) (L/C Supp E, item 9-3)
- Yes No NA 8. Is the tritium air monitor always on in depot maintenance repair area? (Upper limit of 5.0E6 uCi/ml.)(Meter will read 5 uCi/m cubed.) (Depot maintenance facilities only.) (L/C Supp E, item 9-2b)
- Yes No NA 9. Are areas limited to as few radiation sources as absolutely needed with no more than 1000 Ci of H3 in one room? (L/C supp E, item 9)
- Yes No NA 10. Are H-3 storage locations well ventilated? (L/C Supp E, item 9)
- Yes No NA 11. Are signs posted "Caution Radioactive Material"? (10 CFR 20.1901 & 20.1902)
- Yes No NA 12. Is each depot storage quantity of 10,000 Ci stored with a separation and/or by a fire proof wall or a distance of 10 feet? (L/C Supp E, item 9-2a)

- Yes No NA 13. Does each storage area (room) have a calibrated air monitor, set at 5×10^6 uCi/cc (Check DA Label 80 on device.)(Device may read 5uCi/m cubed.)
Note: TB 43-180 says 360 days (M) interval at a "P" level license says 90 day (C) interval local calibration. (L/C Supp E, item 9-2c)(TB 43-180, para 6a)
- Yes No NA 14. Are radioactive sources secured? (10 CFR 20.1801)
- Yes No NA 15. Do designated depot storage facilities have a liquid scintillation system for analysis of wipes and smears? (L/C Supp E, item 9-2c)
- Yes No NA 16. Has the fire department been kept apprised by letter/memo, of radioactive materials on site, to include the following?
 a. Geographic location (bldg, room, etc.)?
 b. Type of radiation (alpha, beta, Gamma)?
 c. Quantity?
 (AR 385-11, para 7c)
- Yes No NA 17. Has the average annual leak rate been determined using the records of fire control devices processed during year with broken tritium sources? (L/C Supp F, item 10, 10-10)
- Yes No NA 18. Are spare parts stored in a separate, non-occupied and well ventilated storage area? (Memo 26 Aug 92 AMSMC-SFS, "Procedures for Handling Tritium Devices")

APPENDIX G

TESTER DENSITY AND MOISTURE
CAMPBELL PACIFIC MODEL MC-1
NSN 6635-01-030-6896, LIN WO2673

PERSONNEL INTERVIEWED/MET:

A. MANAGEMENT.

- Yes No NA 1. Is the LRPO/LRSO and ALRPO/ALRSO designated in writing by the using unit or installation commander? **(TM 5-6635-386-12&P, Para 4-9(c))**
LRPO/LRSO Name and Phone # _____
ALRPO/ALRSO Name and Phone # _____
- Yes No NA 2. Are the LRPO/LRSO and the ALRPO/ALRSO trained and certified to perform their assigned duties? **(TM 5-6635-386-12&P, Para 4-9(c))**
- Yes No NA 3. Are changes in the duty appointment of the LRPO/LRSO and ALRPO/ALRSO forwarded through the MACOM Radiation Control Officer (RCO) to TACOM? **(TM 5-6635-386-12&P, Para 4-8(b) & 4-9(I))**

B. EQUIPMENT OPERATIONS.

- Yes No NA 1. Are school trained operators assigned to the unit?
(TM 5-6635-386-12&P, Para 4-6(d) & 4-12(a))
- Yes No NA 2. Are the operators provided periodic refresher training?
- Yes No NA 3. Are a list of operators, copies of training certifications and notice of changes to assigned operators reported through channels for units who are without trained and appointed LRPOs/LRSOs, through the MACOM RCO to TACOM semiannually or when changes occur?
(TM 5-6635-386-12&P, Para 4-8(a) & 4-9(i))
Operator's Name _____
Operator's Phone # _____

C. RADIATION PROGRAM.

- Yes No NA 1. Has the local Fire Department been advised, in writing, of the type, quantity and location of radioactive materials stored by the unit and a written copy maintained?
(TM 5-6635-386-12&P, Para 4-19(c))
- Yes No NA 2. Does the unit have a current Standing Operating Procedure (SOP) for use, storage, transportation and maintenance of the tester(s)?
(TM 5-6635-386-12&P, Para 4-10(c) & 4-19(a)(5))
- Yes No NA 3. Are the LRPOs/LRSOs and Operators familiar with TM 5-6635-386-12&P? **(NRC License 21-01222-05)**
- Yes No NA 4. Is the tester under control at all times and do only tester school trained personnel operate or maintain it? **(NRC License 21-01222-05)(TM 5-6635-386-12&P, Para 4-12(C) & (d))**
- Yes No NA 5. Are all personnel working with or around the tester provided annual radiation awareness and safety training? **(10 CFR 19.12)**

- Yes No NA 6. Is TACOM notified through the MACOM RCO and provided appropriate documentation of tester missions involving the storage of testers outside the normal unit tester location? **(TM 5-6635-386-12&P, Para 4-10(f) & 4-24(e))**
- Yes No NA 7. Is smoking, eating or drinking prohibited in the tester storage area or while handling the tester? **(TM 5-6635-386-12&P, Page b)**
- Yes No NA 8. Are all accidents/incidents (loss, tester damage/defects, radiation leaks, fire & explosion, personnel overexposures) reported through command channels through the MACOM RCO to TACOM immediately? **(TM 5-6635-386-12&P, Para 4-10(d), 4-10(j), 4-25(i), 4-29(b)(2), 4-30(c), 4-31(a)(5) & (b)(4) & 4-33(d))**

D. INVENTORIES/RECORDS.

- Yes No NA 1. Is the serialized inventory of the testers maintained at the lowest level and reported through command channels, through the MACOM RCO, to TACOM semiannually? **(TM 5-6635-386-12&P, Para 4-19(e))**
- Yes No NA 2. Are all records of actions (e.g. survey/inspection/leak test reports) involving the tester maintained in accordance with the Army "MARKS" System? **(AR 25-400)**
- Yes No NA 3. Are copies of the tester's user log (DA Form 5449-R) maintained? **(TM 5-6635-386-12&P, Para 4-12(b))**
- Yes No NA 4. Does each tester have a TM 5-6635-386-12&P? **(NRC License 21-01222-05)**

E. LEAK TESTS AND SURVEYS.

- Yes No NA 1. Are leak tests performed every six months (approximately January and July)? **(TM 5-6635-386-12&P, Para 4-25(a) & (b))**
Date of the leak test _____
- Yes No NA 2. Are radiation surveys of the storage area performed prior to initial storage of tester, after initial establishment, once per quarter thereafter, when changes occur and prior to release of storage area for non-radioactive use? **(TM 5-6635-386-12&P, Para 4-10(f), 4-17(c) & (d), 4-23, & 4-24(e))**
- Yes No NA 3. Are requests for changes in tester storage area forwarded through the MACOM RCO to TACOM, with supporting documentation, for approval? **(TM 5-6635-386-12&P, Para 4-10(f), 4-23, & 4-24(e))**
- Yes No NA 4. Is the following information included on each radiation survey? **(TM 5-6635-386-12&P, Para 4-23)**
- a. Sketch of the storage area showing tester location and adjacent offices and buildings?
 - b. Recorded levels of radiation and locations of the survey readings?
 - c. Distances from the tester to the survey locations?
 - d. Location of the radiation caution sign(s)?
 - e. Survey instrument used and date of calibration?
 - f. Name of surveyor?

g. Date of survey and purpose (i.e., background only, initial, quarterly, storage change or release of area)?

h. Statement that the documents specified in paragraph 4-19(a) of the TM are posted on the entranceway or in close proximity to the tester storage area?

i. Deficiencies, hazards and corrective actions planned or taken?

Yes No NA 5. Is appropriate RADIAC Equipment available, operational, and calibrated IAW TB 43-180? **(TM 5-6635-386-12&P, Para 4-10(1), 4-17(b))(TB 43-180)**

F. POSTING.

Yes No NA 1. Are current copies of the following information conspicuously posted in areas where radioactive materials are used or stored and in radioactive work areas (e.g. storage area entrance)? **(TM 5-6635-386-12&P, Para 4-19(a))**

a. Nuclear Regulatory Commission (NRC) Form 3, Notice to Employees?

b. Section 206 of the Energy Reorganization Act of 1974 **(Public Law 93-438)**?

c. "Caution Radioactive Material" sign?

d. Unit Radiation Safety SOP? (A notice can be posted in lieu of the document, which states where it can be reviewed.)

e. Copy of Title 10 Code of Federal Regulations, Part 19, 20 and 21? (A notice can be posted in lieu of the documents, which states where it can be reviewed.)

f. Copy of Nuclear Regulatory Commission (NRC) License 21-01222-05? (A notice can be posted in lieu of the document, which states where it can be reviewed.)

g. Copy of notices of violations or existing hazards?

G. RADIOACTIVE STORAGE AREAS.

Yes No NA 1. Unoccupied Storage Areas.

a. Is the area secured, isolated and free from fire or flooding hazards and exposure to other hazardous materials? **(TM 5-6635-386-12&P, Para 4-17(a))**

b. Are the radiation levels inside the area less than 2.5 mrem/hr or 0.025 mSv/hr? **(TM 5-6635-386-12&P, Para 4-17(e))**

c. Are appropriate warning signs and other documentation prominently posted? **(TM 5-6635-386-12&P, Para 4-19(a))**

Yes No NA 2. Occupied Storage Areas.

a. Is the tester stored inside a locked metal storage cabinet? **(TM 5-6635-386-12&P, Para 4-18(b)(1))**

b. Are radiation caution signs posted on the storage cabinets and on the entrance door to the storage area? **(TM 5-6635-386-12&P, Para 4-18(b)(3))**

c. Is a two meter exclusion area established and clearly delineated around the tester storage area?

(TM 5-6635-386-12&P, Para. 4-18(b)(4)).

d. Are the radiation levels outside the exclusion area less than 0.25 mrem/hr or .0025 mSv/hr? (TM 5-6635-386-12&P, Para 4-18(a))

e. Is the storage area located as far as possible from personnel work stations? (e.g. supply area or weapon storage or weapon storage area, empty room.) (TM 5-6635-386-12&P, Para 4-18(b)(2))

H. REPAIR AND MAINTENANCE.

Yes No NA 1. Is tester maintenance done in accordance with TM 5-6635-386-12&P? (Neither the operator nor the LRPO/LRSO is authorized to repair the tester.) (TM 5-6635-386-12&P, Section III, Para 4-35 &36)

I. TESTER TRANSFER AND DISPOSAL.

Yes No NA 1. Is prior approval obtained from the MACOM RCO and TACOM when transporting the tester from one unit to another, even within the same command, and when requesting disposal instructions? (The tester shall never be conveyed to the property disposal office.) (TM 5-6635-386-12&P, Para 4-9(h))

Yes No NA 2. Is the MACOM RCO and TACOM notified when the tester is unserviceable, or is in excess of the amount required by the unit? (TM 5-6635-386-12&P, Para 4-13)

J. TRANSPORTATION.

Yes No NA 1. Is a letter of Instruction for Movement of the Tester prepared for vehicle movements? (TM 5-6635-386-12&P, Para 4-20(a))

Yes No NA 2. Are all tester movements by air done by commercial or military non- passenger aircraft? (TM 5-6635-386-12&P, Para 4-22)

K. DOSIMETRY/MEDICAL SURVEILLANCE.

Yes No NA 1. Has the unit established a dosimetry program for LRPO/LRSO, ALRPO/ALRSO, Tester Operators, and other Radiation workers? (TM 5-6635-386-12&P, Para 4-15 & AR 40-14, Para. 2-5(a)(2))
How many people? _____

Yes No NA 2. Are the Thermoluminescent Dosimeters (TLDs) worn when operating the tester, upon entering the tester storage area and at other times as directed by LRPO/LRSO? (TM 5-6635-386-12&P, Section II & Para 4-15)

Yes No NA 3. Has the unit established a medical surveillance program for all personnel identified as radiation workers? (AR 40-14, Para. 4-4.)

Yes No NA 4. Is an individual designated (in writing) by the commander as the "Custodian of Records" to prepare and maintain radiation exposure records? (TM 5-6635-386-12&P, Para 4-16(a))(AR 40-14, Para(s) 2-5(c)(9) & 6-1)

- Yes No NA 5. Is the DD Form 1141, Record of Occupational Exposure to Ionizing Radiation, or electronic equivalent, prepared and maintained for each radiation worker? **(AR 40-14, Para(s) 6-3(a) & 6-4)**
- Yes No NA 6. Is the DD Form 1141 or electronic equivalent reviewed and annotated quarterly by the LRPO/LRSO? **(AR 40-14, Para 6-3(c))(DA Pam 40-18, Para 4-3(a)(3))**
- Yes No NA 7. Are corrections (i.e. to names, birth dates, social security numbers and exposure data, etc.) made to the DD Form 1141 or electronic equivalent by written correspondence to AIRDC? **(DA Pam 40-18, Para. 4-3(b))**
- Yes No NA 8. Are sufficient TLDs procured for radiation workers and at least two extras for visitors or emergencies? (Wrist TLDs and Neutron badges are not required.) **(TM 5-6635-386-12&P, Para 4-15)**
- Yes No NA 9. Has the TLD storage location been reviewed and approved in writing by the LRPO/LRSO? **(AR 40-14, Para. 4-1)(DA Pam 40-18, 3-4(e))**
- Yes No NA 10. Is the DD Form 1952, Dosimeter Application and Record of Occupational Radiation Exposure, or electronic equivalent prepared and maintained for each radiation worker? **(AR 40-14, Para. 6-2, 6-4, Appendix B Para. B-1)**
- Yes No NA 11. Are dosimeters exchanged out monthly for all radiation workers? **(NRC License 21-01222-05)**
- Yes No NA 12. Has an OF 23, Charge out Record been placed in each official medical record, where radiation exposure records are maintained independently from an employee's official medical records? **(AR 40-14, Para 6-7(c))**
- Yes No NA 13. Are procedures established with the supporting MEDDAC to conduct bioassays of personnel exposed to above normal tester user exposure levels or radioactive air contaminants? **(AR 40-14, Para. 4-4(b))**
- Yes No NA 14. Does each TLD display some temporary means of individual identification? **(AR 40-14, Para 3-4(d)(1))**
- Yes No NA 15. Is each radiation worker (LRPO, LRSO, ALRPO, ALRSO and Operator) advised annually in writing of their radiation dose presented by the AIRDC computerized Dosimetry report (Titled NRC Form 5)? **(AR 40-14, Para 6-6(a))**
- Yes No NA 16. Are Dosimetry/exposure records maintained separately from employee official medical records merged into the medical records, upon termination of the individual from the radiation protection program? **(AR 40-14, Para. 6-7)**

APPENDIX H

TACOM NRC LICENSE SUB 1536
M1 SERIES HEAVY (DU) ARMOR ABRAMS TANK
M1A1 NSN 2350-01-087-1095 & LIN T13168
M1A2 NSN 2350-01-328-5964 & LIN T13305
TURRET SERIAL NUMBER ENDS IN U

PERSONNEL INTERVIEWED/MET:

A. REQUIRED MANUALS

- Yes No NA 1. Are all personnel familiar with the warning statement in the vehicle manuals on the Heavy or Depleted Uranium (DU) Armor? **(NRC License SUB 1536)**
- Yes No NA 2. Does the unit have TB 9-1300-278, "Guidelines for Safe Response to Handling, Storage and Transportation Accidents Involving Army Tank Munitions or Armor which contain DU" and the Abrams Security Classification Guide? **(NRC License SUB 1536)**
- Yes No NA 3. Are all personnel familiar with TB 9-1300-278 and the Abrams Security Classification Guide? **(NRC License SUB 1536)**

B. LICENSE CONDITIONS.

- Yes No NA 1. Are contractor facilities and operations who work with the heavy armor tank, Nuclear Regulatory Commission (NRC) licensed to receive, possess, store, use or transport the Heavy Armor Tank? (Storage of DU Armor Packages Outside the Turret is Not Authorized) **(NRC License SUB 1536)**

C. MAINTENANCE/OVERHAUL OPERATIONS.

- Yes No NA 1. Are all appropriate personnel aware of the license not authorizing work on and penetration of the DU Armor (which is located in the turret; also, that 5 Tanks at Army schools have the DU in the hull)? **(NRC License SUB 1536)**
- Yes No NA 2. Are all personnel aware of the license not covering depot maintenance/overhaul/operations/activities involving the DU Armor? **(NRC License SUB 1536)**

D. TRANSPORTATION.

- Yes No NA 1. When shipping Heavy Armor Tanks, does the shipping documentation contain the required information under 49 CFR 173.424 (excepted articles containing natural uranium or thorium)? **(NRC License SUB 1536)**
- Yes No NA 2. Is the transportation officer coordinated with for all shipments of the heavy armor tank? **(NRC License SUB 1536)**

APPENDIX I

ATCOM NRC LICENSE STB-1433
License Requirement of STB-1433
for
Maintenance of Magnesium-Thorium Alloy Aircraft Engine Parts

PERSONNEL INTERVIEWED/MET:

- Yes No NA 1. Is licensed maintenance limited to Aviation Intermediate Maintenance (AVIM) and only those Aviation Unit Maintenance (AVUM) units specifically authorized in writing? **(NRC License STB-1433)**
- Yes No NA 2. Is maintenance limited to those procedures specifically called out in the license? (Authorized maintenance includes hand filing, hand sanding, hand retapping of threads, chemical removal of and treatment of corrosion, reapplication of protective coatings, and drilling. Prohibited procedures include all operations involving machine tools except drilling.) **(NRC License STB-1433)**
- Yes No NA 3. Is instruction provided to aviation maintenance personnel prior to their authorization to perform licensed maintenance? **(NRC License STB-1433)**
- Yes No NA 4. Is annual retraining provided at intervals not to exceed 18 months and documentation provided to ATCOM as to the names and dates required training was conducted? **(NRC License STB-1433)**
- Yes No NA 5. Are all chips and filings disposed of as radioactive (pyrophoric) waste? **(NRC License STB-1433)**
- Yes No NA 6. Are all unserviceable, non-repairable parts disposed of as radioactive waste (without use of demilitarization procedures which are otherwise not authorized by the license)? **(NRC License STB-1433)**

APPENDIX J

IOC NRC LICENSE NUMBER SUC-1380
DEPLETED URANIUM (DU) AMMUNITION STORAGE REQUIREMENTS

PERSONNEL INTERVIEWED/MET:

- Yes No NA 1. Is there a Radiation Protection Officer (RPO) appointed in writing? (The RPO must be trained in the hazards of DU. The 3-week Army Radiological Safety Course offered at U.S. Army Chemical School, Fort McClellan, AL, or equivalent education/experience, as specified in the license, qualifies a person to be an RPO.) The RPO should be provided annual training. **(NRC License SUC-1380)**
- Yes No NA 2. Are adequate resources provided to the RPO and the radiation safety program to ensure compliance with license conditions? (Resources include reference material, wipe test material, and instrumentation. Examples of references include, but are not limited to, Title 10 and Title 49 Code of Federal Regulations (CFR), and Army publications such as AR 385-11, 1 May 1980, Ionizing Radiation Protection (Licensing, Control, and Radiation Safety); AR 40-14, 30 June 1995, Occupational Ionizing Radiation Personnel Dosimetry, and DA Pamphlet 40-18, 30 June 1995, Personnel Dosimetry Guidance and Dose Recording Procedures for Personnel Occupationally Exposed to Ionizing Radiation; TB 43-0116, 1 August 1993, Identification of Radioactive Items in the Army; IOC Pam 385-1, 15 June 1987, Handbook for Disposal of Unwanted Radioactive Material.) **(NRC License SUC-1380)**
- Yes No NA 3. Is adequate time provided to the RPO and the radiation safety program to ensure compliance with license conditions? If the RPO performs other duties, radiation duties must take precedence. **(AR 385-11)**
- Yes No NA 4. Is there at least one RPO and alternate RPO for the radiation safety program to ensure compliance with license conditions? If the RPO performs other duties, radiation duties must take precedence. **(AR 385-11)**
- Yes No NA 5. Is the following radiation detection equipment, or equivalent, as specified by the license, kept on post?
a. Two or more Beta-gamma survey meters AN/PDR 27?
b. Alpha survey meter AN/PDR 60? (These instruments must be calibrated at specific intervals and records must be kept.) **(NRC License SUC-1380)**
- Yes No NA 6. Are inventory records checked and recorded annually to verify that the installation DU storage limit is not exceeded? A record of such inventory checks must be kept. **(NRC License SUC-1380)**
- Yes No NA 7. Are inventory spot checks performed on structures that store DU ammunition? A convenient time is when DU ammunitions moved in or out of those structures. Records must be kept. **(NRC License SUC-1380)**
- Yes No NA 8. Is the installation fire department and security office kept informed of where DU ammunition is stored? **(AR 40-5, Chapter 9)**

- Yes No NA 9. If the installation does not have the proper lab equipment (flow proportional counter, or equivalent) to analyze wipe samples, is another qualified lab designated for this work? **(NRC License SUC-1380)**
- Yes No NA 10. Is a copy of the U.S. Industrial Operations Command's (IOC's) Nuclear Regulatory Commission license (SUC-1380), for the storage of DU ammunition, maintained at the installation? The installation RPO and alternate must be familiar with what is, and what is not, allowed by the license. **(NRC License SUC-1380)**
- Yes No NA 11. Is a copy of TB-9-1300-278, 28 September 1990, Guidelines for Safe Response to Handling, Storage, and Transportation Accidents Involving Army Tank Munitions or Armor Which Contain Depleted Uranium, which addresses accident scenarios involving DU, kept at the installation? **(NRC License SUC-1380)**
- Yes No NA 12. Are structures storing DU ammunition posted with radiation signs ("Caution, Radioactive Materials,") IAW Title 10 CFR 20.1902(e)?
- Yes No NA 13. Are the posting requirements of Titles 10 CFR 19.11 met? Documents required to be posted must be located where DU ammunition workers can read them. Good locations for these documents are; next to where the keys are kept for the storage area; where quality assurance personnel inspect ammunition; and shipping/receiving locations. Otherwise, instructions must be provided explaining where they can be viewed.
- Yes No NA 14. Do the DU workers and emergency responders receive annual radiation training? The local RPO can provide this training. Records must be kept. The DU worker training should, as a minimum, include: why the Army uses DU; the hazards of DU; the rights of the worker; and what to do in an emergency. **(NRC License SUC 1380)**
- Yes No NA 15. Are the physical security measures for DU Ammunition in place according to the license provisions? For the most part, physical security provisions for DU ammunition are the same as for other types of conventional ammunition. These include: DU ammunition must be kept in secure storage structures, these structures must be located inside fenced areas, these fenced areas must be posted against unauthorized entry, DU ammunition must be kept under constant surveillance if it is out of storage and outside of the fenced area, the keys to the ammunition storage area and to the structures themselves must be restricted to as small a group as possible, and ammunition storage areas must be periodically patrolled by security.
- Yes No NA 16. For DU Maintenance operations--Are DU ammunition wipe samples taken if there is visible indication of damage or corrosion on the rounds when being inspected? Wipe tests can be accomplished by the RPO or by the local Quality Assurance Specialist in Ammunition Surveillance according to procedures in the appendices to SB 742-1, 12 November 1990, Ammunition Surveillance Procedures. **(SB 742-1)**
- Yes No NA 17. Do inspections of structures storing DU ammunition include radiation instrument surveys? A convenient time is when DU ammunition is moved in or out of those storage structures. Records must be kept. **(NRC License SUC 1380)**
- Yes No NA 18. Are surveys to check for contamination performed at locations where DU ammunition rounds are maintained and shipped, such as the quality assurance workshop? This survey will be performed monthly. During months when DU ammunition rounds are not being handled, this survey need not be performed. When performed, this

survey will include the taking of smears. Records must be kept.
(NRC License SUC-1380)

- Yes No NA 19. Was there (is there planned) an initial (baseline) radiation survey performed before DU ammunition is placed inside? Records must be kept. **(NRC License SUC-1380)**
- Yes No NA 20. Are termination surveys performed for structures which will no longer be used to store or handle DU ammunition? This survey will be completed before the structure is used for another purpose. **(NRC License SUC-1380)**
- Yes No NA 21. Are any other operations except storage and limited maintenance performed on DU ammunition at this installation? The DU ammunition cannot be demilitarized, disassembled, test fired, burned or buried under the provisions of IOC's license. Contact HQ, IOC, AMSIO-DMW, DSN 793-0338/2969/ 1766, for further information. **(NRC License SUC-1380)**
- Yes No NA 22. Is the Installation RPO, and the IOC RPO, consulted before any render-safe procedures or movement of DU rounds are performed by EOD personnel? Disposition instructions for the DU projectile will be provided by IOC. **(SUC-1380)**
- Yes No NA 23. Are shipping and receiving of DU ammunition accomplished according to the rules and regulations of the CFRs and applicable Army regulations? All required paperwork must be filled out and copies kept. **(NRC License SUC-1380)**
- Yes No NA 24. The IOC license does not require personnel dosimetry for workers handling 105 mm and 120 mm DU tank ammunition.
- Yes No NA 25. Is a decontamination plan in place with properly trained personnel to handle potential contamination incidents? **(NRC License SUC-1380)**
- Yes No NA 26. Is an emergency plan in place, and are emergency drills depicting credible emergency scenarios conducted at least once a year? Records must be kept. **(NRC License SUC-1380)**
- Yes No NA 27. Is an installation radiation safety regulation in place? **(NRC License SUC-1380)**
- Yes No NA 28. Are standard operating procedures written for work activities that involve DU ammunition, such as receiving, shipping, inspecting, on-site transportation, and performing minor maintenance operations? **(AR 40-5, Chapter 9)**
- Yes No NA 29. Is the IOC Rad Waste Office notified immediately in the event DU ammunition is involved in a fire, involved in an accident, functioned in or outside of a weapon system, or lost? The requirement is in addition to reporting emergencies through the chain-of-command. Telephone numbers are: 793-0338/2969/1766, or commercial (309) 782-0338/2969/ 1766. **(NRC License SUC-1380)**
- Yes No NA 30. Is radioactive material shipped to, and received by, an installation that has the proper NRC license? **(NRC License SUC-1380)**
- Yes No NA 31. Is the principle of keeping radiation exposures as-low-as-reasonably-achievable followed at all times? **(NRC License SUC-1380)**

APPENDIX K

CECOM NRC License 29-01022-14
THORIUM FLUORIDE COATED OPTICS

PERSONNEL INTERVIEWED/MET:

Maintenance.

- Yes No NA 1. Does the facility have a published SOP for handling radioactive commodities? (AR 40-5, 9-92a(2a))(TB 385-4, 5-6)
- Yes No NA 2. Is the SOP approved by the RPO? (TB 385-4,5-7a)
- Yes No NA 3. Does the maintenance facility have a radioactive material storage area?
- Yes No NA 4. Is the local Fire Department notified in writing of the radioactive material use/storage area? (AR 385-11, 5-7c)(NGR 385-11, 1-4f(9))(29 CFR 1900)
- Yes No NA 5. Are quarterly health physics surveys (to include spreadable contamination swipes) performed in areas where radioactive materials are used/stored? (AR 385-11, 1-26c)(AR 700-64, 5-9c)
- Yes No NA 6. Are the health physics surveys accurately documented? (Drawing of area, types of sources, background reading, radiation levels, type of measurement, instrument, instrument calibration date, emergency points of contact, recorder, background readings in unrestricted areas.) (AR 700-64, 5-9c) (AMCR 385-25,17) (10 CFR 20.1301)
- Yes No NA 7. Are radioactive materials (stored in unrestricted areas) secure from unauthorized access? If not, is the radioactive material under constant surveillance and immediate control? (10 CFR 20.1801 & 1802)
- Yes No NA 8. Is the storage facility constructed of fire retardant materials? (AR 40-5, 9-9b(5))
- Yes No NA 9. Is smoking, eating, drinking, chewing gum or tobacco, or applying cosmetics, prohibited in the radiation controlled area? (AR 40-5, 9-9b(4))
- Yes No NA 10. Are radioactive material storage areas posted as radiation controlled areas? (10 CFR 20.1902)
- Yes No NA 11. Are copies of the following posted for review near the radiation controlled area?
- a. Appropriate radiation signs?
 - b. List of individual(s) and telephone number(s) to notify in the event of an emergency? (AR 40-5,9-9a(5)(e))
- Yes No NA 12. Are copies of the following posted for review near the radiation controlled area or at a location frequented by all employees?
- a. Form NRC 3, notice to Employees? (10 CFR 19.11 b, c, d)

b. Section 206 of the Energy Reorganization Act of 1974?
(10 CFR 19.11)

APPENDIX L

ATCOM INDUSTRIAL RADIOGRAPHIC EQUIPMENT

PERSONNEL INTERVIEWED/MET:

- Yes No NA 1. Has the organization/installation Commander established, in writing, a formal radiation safety program consistent with Federal and Army regulations and TM 55-1500-335-23? (TM 55-1500-335-23, Sec IX, para 9-5.a.1)
- Yes No NA 2. Does the radiation safety program for X-radiography include sufficient controls to assure that restricted areas are adequately marked and controlled and that all essential procedural controls have been implemented to assure that all radiation exposures are maintained "as low as reasonable achievable"? (TM 55-1500-335-23, Sec IX, para 9.5.a.1)
- Yes No NA 3. Has the radiation safety program been coordinated with the installation RPO to enable performance of his accomplishment? (TM 55-1500-335-23, Sec IX, para 9-9b(12), AR 40-5)
- Yes No NA 4. Is a qualified RPO designated in writing by the local Commander? (TM 55-1500-335-23, Sec IX, para 9-5.a.3)
- Yes No NA 5. Is a qualified Alternate RPO designated in writing by the local Commander? (TM 55-1500-335-23, Sec IX, para 9-5.a.3)
- Yes No NA 6. Do the Local RPOs have education and training commensurate with the radiation hazards involved as defined in the TM? (TM 55-1500-335-23, Sec IX, para 9-5.a.3)
- Yes No NA 7. Has a radiation dosimetry program been established? (TM 55-1500-335-23, Sec IX, para 9-5.a.4, Ref 1)
- Yes No NA 8. Is there a dosimetry program for minors and declared pregnant women workers who may receive (in one year) greater than 10 percent of the standard doses? (10 CFR 20.1502)
- Yes No NA 9. Are TLDs used by all personnel who enter the radiography work area? (10 CFR 20.1502)
- Yes No NA 10. Is the annual summary of the Automated Dosimetry Records (ADRs) maintained permanently in the individuals' medical file? (AR 40-14, 6-4)
- Yes No NA 11. Has the RPO provided the individual with a copy of the annual summary of the ADRs? (10 CFR 19)
- Yes No NA 12. Are ADRs reviewed and filed by the Dosimetry Custodian? (AR 40-14, 6-3)
- Yes No NA 13. Does the RPO review, sign and date personnel ADRs? (DA Pam 40-18, 4-3(b))
- Yes No NA 14. Is the TLD storage location approved in writing by the RPO? (DA Pam 40-18, 3-4e)

- Yes No NA 15. Is the Dosimetry Custodian designated in writing by the Commander/RPO? (AR 40-14, 6-1)(AR 40-14, 2-5a(9))
- Yes No NA 16. Are ADRs and DD Form 1952 prepared and maintained for each person occupationally exposed to ionizing radiation? (AR 40-14, 6-4 and App. B)
- Yes No NA 17. Is all previous/current occupational exposure data obtained from outside employment, previous organization, or administrative doses and forwarded to the Central Dosimetry Record Repository? (AR 40-14, 2-5a(10))
- Yes No NA 18. Does each dosimeter display some temporary means of individual identification? (DA Pam 40-18, 3-4d)
- Yes No NA 19. Do radiation workers (those on a dosimetry program) and ancillary personnel receive applicable initial instruction and annual retraining briefings regarding radiation hazards/biological effects? (10 CFR 19.12)(Statement on DD Form 1952)(NRC Reg Guides 8.10, 8.13, and 8.29)
- Yes No NA 20. Has a Charge out Record (OF 23) been placed in each record maintained separately from the health record or civilian employee medical files? (AR 40-66)
- Yes No NA 21. Has the local medical authority addressed medical examinations for radiation workers under the health hazard surveillance program? (pre-placement, termination, periodic and incident) (AR 40-5, 5-9)
- Yes No NA 22. Has the Commander appointed a Radiation Control Committee? (TM 55-1500-335-23, para 9-5.a.5)
- Yes No NA 23. Were plans and specifications for construction of new facilities or modifications of other facilities reviewed by a qualified expert and copies of such surveys provided to MACOM headquarters and to applicable National Inventory Control Point (NICP) for standardized X-ray machines? (TM 55-1500-335-23, Sec IX, para 9-5.a.6)
- Yes No NA 24. Have procedures been developed to mitigate the effects of accidents and incidents and are individuals designated, in writing, to receive notice in the event that accidents or incidents are reported? (TM 55-1500-335-23, Sec IX, para 9-5.a.7)
- Yes No NA 25. Are only qualified operators allowed to operate radiographic equipment? (TM 55-1500-335-23, Sec IX, para 9-5.a.8)
- Yes No NA 26. Do operators perform "daily preoperational/operational/post-operational" checks on the equipment and surveys to ensure radiation safety? (TM 55-1500-335-23, Sec IX, para 9-5.a.8)
- Yes No NA 27. Are at least two survey meters designed for x-ray measurement placed in use for all unshielded x-radiography operations to properly perform routine radiation surveys? (TM 55-1500-335-23, Sec IX, para 9-5.a.9)
- Yes No NA 28. Is the instrumentation properly calibrated for Active use? (TB 43-180)
- Yes No NA 29. Is the DA Label 80 with a current calibration date placed in a conspicuous location on the instrument? (AR 40-5, 9-8a(3))

- Yes No NA 30. Does the Commander perform, or cause to be performed, an annual quality assurance audit/self-assessment of the organization's Radiation Protection Program? **(TM 55-1500-335-23, Sec IX, para 9-5.a.10)**
- Yes No NA 31. Has the Commander appointed, in writing, a qualified radiographer to ensure compliance with all aspects of the Radiation Protection Program (RPP)? **(TM 55-1500-335-23, Sec IX, para 9.5.a.11)**
- Yes No NA 32. Does the RPP assure that radiography operations are not conducted on non-Army property without verification that such operation is properly licensed by, and in full compliance with, applicable state and local regulations and laws? **(TM 55-1500-335-23, Sec IX, par 9-5.a.12)**
- Yes No NA 33. Does the training program mandate and document annual safety retraining of at least eight hours for radiographers? **(TM 55-1500-335-23, Sec X, Para 9-9.b)**

APPENDIX M

Electron Tubes

PERSONNEL INTERVIEWED/MET:

- | | | | | |
|-----|----|----|----|--|
| Yes | No | NA | 1. | Electron tubes containing more than 10 uCi of material will be managed IAW a DARA. (AR 385-11) |
| Yes | No | NA | 2. | Electron tubes marked as containing radioactive material will be disposed of as radioactive waste. (AR 385-11) |
| Yes | No | NA | 3. | Electron tubes not marked as containing radioactive material will be disposed of through normal disposal procedures. |

APPENDIX N

RADIUM USED IN RADIOLUMINESCENT DEVICES
CECOM DARA A29-10-06

PERSONNEL INTERVIEWED/MET:

- Yes No NA 1. Does the maintenance facility have a published Standing Operating Procedure (SOP) for handling radioactive commodities? (AR 40-5, 9-9a(2a))(TB 385-4, 5-6)
- Yes No NA 2. Is the SOP approved by the RPO? (TB 385-4, 5-7a)
- Yes No NA 3. Does the maintenance facility have a radioactive material storage area?
- Yes No NA 4. Is the local Fire Department notified in writing of the radioactive material use/storage area? (AR 385-11, 5-7c)(NGR 385-11, 1-4f(9))(29 CFR 1900)
- Yes No NA 5. Are quarterly health physics surveys (to include spreadable contamination swipes) performed in areas where radioactive materials are used/stored? (AR 385-11, 1-26c)(AR 700-64, 5-9c)
- Yes No NA 6. Are health physics surveys accurately documented? (Drawing of area, types of sources, background reading, radiation levels, type of measurement, instrument, instrument calibration date, emergency points of contact, recorder, background readings in unrestricted areas.) (AR 700-64, 5-9c)(AMCR 385-25,17)(10 CFR 20.1301)
- Yes No NA 7. Are radioactive materials (stored in unrestricted areas) secure from unauthorized access? If not, is the radioactive material under constant surveillance and immediate control? (10 CFR 20.1801 & 1802)
- Yes No NA 8. Is the storage facility constructed of fire retardant materials? (AR 40-5, 9-9b(5))
- Yes No NA 9. Is smoking, eating, drinking, chewing gum or tobacco, or applying cosmetics prohibited in the radiation controlled area? (AR 40-5, 9-9b(4))
- Yes No NA 10. Are copies of the following posted for review near the radiation controlled area?
- a. Appropriate radiation signs?
 - b. List of individual(s) and telephone number(s) to notify in the event of an emergency? (AR 40-5,9-9a(5)(e))
- Yes No NA 12. Are copies of the local SOP posted or available for review near the radiation controlled area? (AR 40-5, 9-9a(2a))

APPENDIX 0

ATCOM RADIUM (Ra-226) COMMODITIES

PERSONNEL INTERVIEWED/MET:

Yes No NA 1. All ATCOM managed commodities containing radium are obsolete without regard to serviceability and will be disposed of as radioactive waste.

APPENDIX P

TACOM DARA A21-12-05
Combustor Liner
NSN 2835-01-076-6092

PERSONNEL INTERVIEWED/MET:

A. MANAGEMENT.

Yes No NA 1. Are all appropriate personnel aware of the liner being radioactive (containing Thorium 232)? (TB 43-0216 and DARA A21-12-05)

B. HANDLING/MAINTENANCE.

Yes No NA 1. Are all appropriate personnel aware that it is prohibited to repair or treat/process physically, chemically or metallurgically the combustor liner? (TB 43-0216, Para. 6-15(a), and DARA A21-12-05)

Yes No NA 2. Are appropriate personnel aware of the requirement to ship and dispose of the liner at a depot/specialized activity level, in accordance with AR 385-11, AR 700-64 and any other pertinent regulations? (TB 43-0216, Para. 6-16, and DARA A21-12-05)

C. EMERGENCIES.

Yes No NA 1. Are all accidents/incidents involving the liner reported through command channels to TACOM immediately? (DARA A21-12-05)

APPENDIX Q

TACOM DARA A21-12-04
Vehicle Radium Dials/Gauges

PERSONNEL INTERVIEWED/MET:

A. MAINTENANCE/HANDLING GUIDANCE.

- Yes No NA 1. Are personnel aware of the requirement to immediately report damaged/defective radium dials/gauges to the local RPO? (TB 43-0216, Para. 6-8(a)(1) and DARA A21-12-04)
- Yes No NA 2. Are personnel aware that maintenance, disassembly, or repair of Radium dials/gauges are not authorized? (TB 43-0216, Para. 6-8(a)(2) and DARA A21-12-04)
- Yes No NA 3. Are Radium dials/gauges removed & tagged with the notations Radium & its radioactivity, when its defective, or have radiation levels greater than 0.2 mrem/hr at one inch, or before turning in the vehicles to property disposal offices, or before using vehicles for other than their intended purpose (i.e., target practice, museum display, etc.)? (TB 43-0216, Para. 6-8(a)(5) and DARA A21-12-04)
- Yes No NA 4. Are vehicles dials/gauges surveyed to determine if they are Radium by survey instrument and TB 43-0216, prior to vehicle maintenance, prior to turn-in of vehicles to property disposal offices, or prior to other than its intended purpose, (i.e. target practice, museum display, etc.)? (TB 43-0216, Para. 6-8(1)(6) and DARA A21-12-04)
- Yes No NA 5. If Radium dials/gauges cannot be removed as a whole unit, has the local RPO been notified for procedures and monitoring? (TB 43-0216, Para. 6-8(a)(4) and DARA A21-12-04)
- Yes No NA 6. Are vehicle replacement dials/gauges nonradioactive? (TB 43-0216, Para. 6- 8(c)(5) and DARA A21-12-04)
- Yes No NA 7. Do installations/facilities notify the local RPO before starting overhaul operations on vehicles that contain, or may contain, Radium dials/gauges? (TB 43-0216, Para. 6-8(c)(1) and DARA A21-12-04)

B. STORAGE.

- Yes No NA 1. Are storage areas for Radium dials/gauges controlled (separated from flammables and secured) and well ventilated? (TB 43-0216, Para. 6-9(a) and DARA A21-12-04)
- Yes No NA 2. Are Radium dials/gauges storage areas approved of by the local RPO, to ensure the areas are posted with required signs, that personnel, if required, wear appropriate dosimetry and that control measures are in place? (TB 43-0216, Para. 6-9 and DARA A21-12-04)

C. TRANSPORTATION.

Yes No NA 1. Are Radium dials/gauges transported in accordance with 49 CFR and State regulations? (TB 43-0216, Para. 6-10 and DARA A21-12-04)

Yes No NA 2. Are shipments of Radium dials/gauges coordinated through the transportation officer and the local RPO? (TB 43-0216, Para. 6-10 and DARA A21-12-04)

D. DISPOSAL.

Yes No NA 1. Are Radium dials/gauges disposed of as radioactive waste in accordance with AR 385-11? (TB 43-0216, Para. 6-11(b) and DARA A21-12-04)

E. EMERGENCIES.

Yes No NA 1. Are accidents/incidents involving Radium dials/gauges reported through command channels to TACOM immediately? (DARA A21-12-04)

APPENDIX R

**ACALA DARA A12-88-05
M97 Explosive Detector
NSN 6665-01-267-8124**

PERSONNEL INTERVIEWED/MET:

This item contains 20 mCi of Nickel-63 in two sources. The item is no longer being used. Any person who has one of these items should turn it into the installation RPO for disposal.

The item manager for this item is Ms. Karen Chrisman, AMSTA-AC-CTT, DSN 793-5142. The item manager should be provided paperwork that shows item is excess and will provide disposition instructions.

APPENDIX S

ACALA DARA A12-93-01
M11 Pistol
NSN 1005-01-340-0096

PERSONNEL INTERVIEWED/MET:

This item contains 54 mCi of tritium in three sources, one in the front sight (1005-01-359-8429), and two in the rear sight (1005-01-359-8431).

This exempt licensed item has no special storage requirements, but disposal of the sights must be as radioactive waste.

APPENDIX T

IOC NRC License 12-00722-07
M72A2 Light Antitank Weapon (LAW)

PERSONNEL INTERVIEWED/MET:

- Yes No NA 1. Does the installation have an assigned Radiation Protection Officer (RPO) and alternate? **(AR 385-11, AR 40-14)**
- Yes No NA 2. Are they adequately trained for their positions? **(AR 385-11, 1-27j)**
- Yes No NA 3. For user locations/installations, if no RPO is identified, is there an NBC Officer or other responsible individual knowledgeable regarding the requirements of the license? **(NRC License 12-00722-07)**
- Yes No NA 4. Does the installation possess a copy of NRC license 12-00722-07, to include the most current license amendment? **(10 CFR Part 19)**
- Yes No NA 5. Does the installation maintain a current inventory of radioactive items to include the LAWs? **(NRC License 12-00722-07)(AR 385-11, 2-11)**
- Yes No NA 6. Are personnel who handle the LAWs, or must work in the area where they are stored, aware/knowledgeable of the hazards associated with the devices? Is the training documented? **(NRC License 12-00722-07)**
- Yes No NA 7. Are the LAWs stored in an approved ammunition storage area? **(NRC License 12-00722-07)**
- Yes No NA 8. Is the storage structure that contains LAWs posted with a radioactive material sign IAW 10 CFR 20? **(10 CFR Part 20)**
- Yes No NA 9. Are additional postings required by 10 CFR 19 posted in an area accessible to all personnel (NRC Form 3, Section 206, etc.)? **(10 CFR Part 19)**
- Yes No NA 10. Is the two-man rule in effect for entry into LAW storage structures? **(NRC License 12-00722-07)**
- Yes No NA 11. Are the structures that contain LAWs surveyed on an annual basis? **(NRC License 12-00722-07)**
- Yes No NA 12. Are the sights from spent LAWs retrieved and disposed of as low level radioactive waste? **(NRC License 12-00722-07)**