

**BY ORDER OF THE COMMANDER
439TH AIRLIFT WING**

**439TH AIRLIFT WING INSTRUCTION
40-201**



26 MAY 2016

Medical Command

**CONTROL OF IONIZING RADIATION,
ELECTROMAGNETIC FREQUENCY
(EMF) RADIATION, AND LASERS**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction was developed to implement installation specific radiation safety and control requirements at Westover Air Reserve Base (WARB) IAW AFI 40-201, *Managing Radioactive Materials in the US Air Force*; AFI 48-109, *Electromagnetic Field Radiation (EMFR) Occupational and Environmental Health Program*; AFI 48-148, *Ionizing Radiation Protection*, and AFI 48-139, *Laser Radiation Protection Program*. It establishes local procedures for the maintenance of a viable radioactive material and directed energy safety and control program. The major areas of concern associated with industrial and public health shall focus on ionizing radiation, electromagnetic field radiation (EMFR) and light amplification by stimulated emission of radiation (LASER) sources, equipment and/or emitters. Bioenvironmental Engineering/Public Health Services (BE/PHS) personnel, under the direction of the 439th AW Installation Radiation Safety Officer (IRSO), ensure that safety procedures and preventive measures are observed in environments where potential ionizing radiation, EMFR and laser hazards exist and that exposures are prevented and, with respect to ionizing radiation kept as low as reasonably achievable (ALARA). When discussing ionizing radiation, EMFR and laser hazards in general terms, EMFR hazards will be used to streamline this instruction, and it applies to all units assigned or attached to Westover Air Reserve Base (WARB). Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with AFMAN 33-363, *Management of Records*, and disposed of in accordance with the Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS). Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, *Recommendation for Change of Publication*; route

AF Form 847 to 439 MSG/SGPB, 390 Walker Avenue, Box 58, Westover ARB, MA 01022-1532.

SUMMARY OF CHANGES

The revision changes non-ionizing radiation or radio-frequency radiation from the rescinded AFI 48-9 to be encompassed by electromagnetic field radiation (EMFR) IAW AFI 48-109. Additional recommendations include the designation of a Unit Radiation Safety Representative (URSR) at work centers who store, utilize and/or maintain EMFR hazard equipment or radioactive material (RAM). Every effort has been made to include Westover specific requirements associated with the recent update to radioactive material, EMFR and laser regulatory guidance. Establishes and replaces unit radiation safety officer with a unit radiation safety representative (URSR) for work centers who store, utilize and/or maintain EMFR material or equipment as an additional control on WARB above and beyond AF EMFR regulatory guidances.

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1. ALARA. While ALARA principles are generally associated with ionizing radiation, EMFR emitters and laser producing devices are also areas of concern for WARB personnel. Current Air Force policy dictates that all ionizing radiation, EMFR and laser exposures be prevented or kept to an absolute minimum. The following paragraphs outline the procedures used to ensure ionizing radiation, EMFR and laser producing sources, devices and/or equipment are obtained, operated, utilized, stored and disposed of, as applicable, in a manner that will minimize exposure. Therefore, the most stringent safety and health guidelines shall be utilized to prevent

or limit EMR exposures to WARB personnel and the general public. Each workcenter identified in this instruction shall assign a unit radiation safety representative (URSR) as directed by the IRSO. The URSR shall act as the focal point for ionizing radiation, EMF and/or lasers within their unit.

2. Responsibilities.

2.1. IRSO. The IRSO is responsible for ensuring the completion or verification of all surveys, inventories, training and education mentioned in this instruction. The IRSO or designee will perform the surveys and maintain the data in a format consistent with AFI 48-145, *Occupational Health Program* to include data maintenance in DOEHRS-IH. The IRSO shall verify that a URSR has been appointed by the unit commander or supervisor as applicable for all workcenters that store, maintain, use or deploy ionizing radiation sources or equipment, EMFR emitters and laser producing devices. The IRSO briefs supervisors and employees or reviews RAM/EMFR training to ensure reproductive hazards and workplace hazard evaluation for pregnant employees is accomplished. BE/PHS personnel update the WARB RAM/EMFR inventory annually.

2.2. Unit Radiation Safety Representatives (URSR). As identified in this instruction a URSR may be assigned as an additional control where the hazards present are not addressed in AF RAM/EMFR regulatory guidance. The URSR ensures all safety, operational and security procedures, notification, reporting and training requirements IAW applicable regulations are adhered to. Notifies the IRSO in the event of any additions, deletions or changes associated RAM/EMFR hazard sources, devices and/or equipment assigned to a workcenter. The URSR is also responsible for notifying the IRSO prior to shipment and/or transfer of any RAM/EMFR items. The URSR also initiates the investigation process for known or potential exposures (incidents) to workers or in the event a device or item is lost, stolen or missing. The URSR shall receive WARB URSR training as identified in this instruction.

2.3. Supervisors. Supervisors shall ensure newly assigned activities that involve RAM/EMFR hazards are reported to the IRSO prior to obtaining said equipment, material and/or devices in accordance with applicable regulatory guidance. Coordinate with Bioenvironmental Engineering/Public Health Services regarding pregnant females who work with ionizing radiation, EMF and/or lasers. Ensure that a URSR has been appointed for those areas identified by the IRSO that store, maintain, use or deploy RAM/EMFR sources, devices and/or equipment. Immediately contact their supervisor and the IRSO for known or potential exposures (incidents) to workers or in the event a device or item is lost, stolen or missing.

2.4. WARB Personnel. WARB employees shall adhere to all security measures, safety controls and audiovisual warning aids designed and/or implemented to prevent access to areas while RAM/EMFR hazards are in use. In addition, it is everyone's responsibility to report the presence of unauthorized personnel in identified restricted areas and workcenters that store, maintain, use or RAM/EMFR producing sources, devices and/or equipment.

3. Radioactive Material Storage Area Procedures. Currently, there is no permitted regulatory radioactive material on WARB and/or used by workcenters or tenant organizations on Westover. However, several organizations store, handle, utilize General Licensed Devices containing RAM and or equipment covered under instruments and articles. Instruments, manufactured articles or major end items constructed of or having RAM as a component part, often assigned a NSN,

normally procured, stored and distributed through USAF and Department of Defense logistical supply systems. Items include but are not limited to such devices as Chemical Agent Detectors, RADIAC sets, Lensatic compasses, dials and gauges. To ensure the highest level of control a URSR may be assigned to these work centers to prevent misuse, improper handling, loss or stolen instruments, manufactured articles. In addition, contractor use of RAM permitted or otherwise occurs on a regular basis and is addressed in section 7 of this AWI.

3.1. Notification. The IRSO shall be notified immediately if an incident involving a radioactive material mishap to include but not limited to: damage, release, unauthorized use or lost, stolen or missing item has occurred.

4. Incoming/Outgoing Radioactive Material Surveys.

4.1. Receipt Survey. All incoming packages containing radioactive materials will be inspected by a qualified individual per Technical Order (T.O.) 00-110N-3, *Requisition, Handling, Storage and Identification of Radioactive Material*. Items destined for WARB arrive at Base Supply. Base Supply will notify BE/PHS, who will perform a radiological survey.

4.2. Procedures. Upon notification by the 439th Logistics Readiness Squadron (439 LRS) Base Operating Support (BOS) Contractor that a package containing radioactive material (RAM) has arrived or is packaged to depart WARB, the following steps must be made to ensure that the RAM is handled properly:

4.2.1. Shipping of non-permitted RAM. The URSR shall notify the IRSO and shipper prior to the shipment of any non-permitted RAM. In addition, the IRSO or designee will be dispatched to survey the package upon notification from Traffic Management Office. The individual performing the survey will note the contents of the package and the maximum emission rate after surveying all sides of the package. The measurements will be taken directly from the surface of the sealed package by the appropriate radiation meter. If applicable, a swipe sample will also be taken and then read with the appropriate radiation meter. If the maximum emission rate or removable surface contamination levels are exceeded, the package will either be repackaged by the shipper until the levels are not exceeded or the RAM can be shipped under the special procedures outlined in 49 CFR 173, *Transportation*. The IRSO in conjunction with the URSR shall obtain written verification that the RAM was received by receiving organization (telephone verification is in accordance with AFI 40-201, *Managing Radioactive Material* in the United States Air Force is acceptable if written verification cannot be obtained).

4.2.2. Receipt of non-permitted RAM. The IRSO or designee will be dispatched to survey the package upon notification from Base Supply that the RAM has been received. Base Supply must notify the IRSO or designee within three hours of receipt of the RAM in order to meet the time constraints of 10 CFR 20, *Standards for Protection against Radiation*. The survey of the RAM will be conducted similar to the shipping of the RAM listed above. Appropriate action will be taken if it appears the package was improperly shipped in accordance with 49 CFR 173.

4.2.3. Shipping and receipt of permitted RAM. Personnel owning a RAM permit must follow the permit's requirement and contact the IRSO prior to shipping or within three hours of receiving the permitted RAM.

4.3. Prior to ordering any radioactive material in any quantity, approval must be received from the IRSO. This includes permitted and non-permitted materials.

4.4. Shipment, transfer, disposal or any other movement of RAM on WARB must be accomplished to ensure compliance with Air Force, Federal and the State of Massachusetts guidelines. Contact the IRSO at extension 2918 prior to taking any RAM off of the installation.

5. Swipe Samples.

5.1. All sources which require swipe testing as a part of a RAM/GLD permit will be swiped semiannually (or as directed by manufacturer's guidelines) by the IRSO or designee. On behalf of the owning organization, the IRSO obtains and mails swipe samples to USAFSAMOE, Radioanalytical Lab at Wright Patterson AFB per the applicable end item T.O. Upon receipt of abnormal results, the IRSO will notify the organizational permittee and provide recommendations for corrective actions.

5.2. The IRSO or designee will review the swipe results and provide recommendations for all results not within acceptable limits as identified previously.

6. Medical, Security and Industrial X-Rays.

6.1. BE/PHS surveillance of the Non-Destructive Inspection (NDI) Shop will be scheduled to coincide with routine and/or compliance surveillance whenever possible. All NDI shielded and unshielded sites shall be reviewed annually or sooner if process changes or locations change. Measurements of the shielded facility shall be accomplished within three years of the previous survey unless condition and/or process changes occur. Every effort shall be made by BE/PHS to evaluate new unshielded NDI processes when they occur. NDI personnel perform area monitoring using a Inovision 451-P in addition to personal monitoring using electronic personal dosimeters (EPDs) for all unshielded x-ray operations and provide a summary of their exposure monitoring to BE/PHS. BE/PHS personnel review the NDI shop ionizing radiation training program annually and provide guidance and updates with regards to regulatory requirements and ALARA principles. Based on potential for exposure, NDI personnel are required to participate in the USAF Thermoluminescent Dosimetry (TLD) program. The action investigation level for TLD participants is 35 mREM per quarter. Quarterly and annual TLD reports are recorded provided to participating members by BE/PHS.

6.2. Dental x-ray facilities are operated by 439th Aerospace Medicine Squadron (439 AMDS) personnel in accordance with AFI 47-101, *Dental Program* and AFI 48-148, *Ionizing Radiation Protection*. Measurements of the Dental x-ray facility shall be accomplished within four years of the previous survey unless condition and/or process changes occur. BE/PHS personnel provide annual ionizing radiation training to dental personnel. Based on their potential for exposure dental personnel are not required to participate in the TLD program.

6.3. An annual radiation review of the 439th Civil Engineering Squadron (439 CES)/CED Explosive Ordnance Disposal (EOD) X-ray devices will be scheduled to coincide with the routine or compliance industrial hygiene survey whenever possible. The primary location, associated with worst case exposure, is building 2452 where semi-annual checks are performed. However, depending on the mission, X-ray devices can be used anywhere on the

installation as directed by the installation commander. EOD personnel along with the IRSO will advise the installation commanders on areas to evacuate prior to the use of the device. EOD personnel receive annual ionizing radiation safety training as determined by the IRSO.

6.4. GLDs stored, maintained or used by various WARB work-centers are identified in the BE/PHS EMR Inventory. BE/PHS personnel under the direction of the IRSO perform swipe testing of all GLD's every six months or IAW Manufacturers guidelines. The samples are swiped in accordance with manufacturer's guidelines and sent to USAFSAMOE, Radioanalytical Lab at Wright Patterson AFB for analysis. Upon receipt of abnormal results, the IRSO shall forward a copy of the results, perform an investigation and provide health and safety recommendations to prevent future occurrences. All copies of the swipe sample results must be

6.5. The 42nd Aerial Port Squadron (42 APS) uses an x-ray scanner for luggage and packages of personnel approved to fly military air. The Supply BOS contractor uses an x-ray scanner for packages delivered through the mail or approved carrier system. BE/PHS personnel provide training to 42 APS, 58th Aerial Port Squadron (58 APS) passenger terminal personnel and perform an annual scatter survey of their x-ray scanner located in Hangar 3. The BOS scanner located in base supply is maintained through contract, including annual scatter radiation surveys and individuals receive training from the x-ray scanner maintenance sub-contractor.

7. Contractor Use of Radioactive Material.

7.1. The 439 Airlift Wing Commander (439 AW/CC) has designated the IRSO or alternate as the approval authority for bringing radioactive material onto WARB.

7.2. Contractor use of radioactive material must be approved by the Installation or alternate IRSO prior to bringing the equipment on base IAW AFI 40-201. These requirements are relayed to contractors via statements of work (SOW) and during the pre-construction conference established by Contracting (439 CONF/LGC). To help ensure all regulatory requirements are met, BE/PHS personnel provide education and training during ESOHC and Wing Staff meetings periodically.

7.3. When a contractor brings radioactive material onto WARB, the site, source, license and individual proof of training shall be provided to the IRSO at least 30 days prior to bringing radioactive material on base. All radioactive material events are documented by BE/PHS personnel.

8. Storage Areas for GLD's, instruments and manufactured articles.

8.1. Building 2510 - SFS (439 SFS): Lensatic Compasses.

8.2. Building 7087 - Aircrew Flight Equipment, 337 Airlift Squadron/DOL. Storage of lensatic compasses allowed only (Tritium (H3)). The compasses are non-permitted RAM.

8.3. Building 2450 - 439 CES: Storage of lensatic compasses allowed only (Tritium (H3)). The compasses are non-permitted RAM.

8.4. Building 1301 - HAZMAT Pharmacy- Temporary storage of radioactive material such as lensatic compasses, radioactive LOX gauges, spark gaps etc. that are awaiting disposal/recycling disposition.

8.5. Building 2235- BE/PHS personnel store check sources for the SAM-935 and one (1) ADM-300 E kit.

8.6. Building 7072, NDI: NDI maintains, stores and utilizes six SM-400, RADIAC meters; each meter contains a Thorium 232 check source.

9. Electromagnetic Frequency Radiation (EMFR). BE/PHS personnel evaluate all EMFR emitters to determine the hazards and recommend controls in accordance with AFOSH Standard 48-9, *Radiofrequency Radiation Safety Program*. All EMFR emitters are identified on the BE/PHS EMFR inventory; however, only those work-centers with EMFR emitters of concern are addressed in this instruction. Detailed theoretical and measurement data is available for review in the electronic AF industrial hygiene management system (DOEHRS IH). The following is a summary of workcenters, emitters, and special considerations:

9.1. 439 MXS/MXMVC and 439 AMXS/MXAA. (C-5A/B Communication and Navigation). Communications/Navigation personnel maintain, operate and repair 8-various C-5B EMF emitters. EMFR emitters are maintained in controlled environments, the flight line or building 2426, utilizing adequate safety and security controls to prevent exposures to workers and ambient personnel. 439 MXS/MXMVC and AMXS/MXAA supervision develop and implement BE/PHS approved training to all 439 MXS and 439 AMXS communication/navigation personnel every 12 months. The 439 MXS/MXMVC has an assigned URSR who acts as the focal point for all matters regarding EMFR safety and incident notification. BE/PHS performs initial measurements and semiannual EMFR checks for all 439 MXS/MXMVC emitters. The Maintenance Communications and Navigation section provides EMFR training to include reproductive hazards to all applicable MXS/AMXS personnel. A URSR has been assigned to act as a focal point for all known or suspected incidents.

9.2. 439th Operations Support Squadron Airfield Communication Maintenance (439 OSS/SCM). 439 OSS/SCM personnel are responsible for maintaining and repairing Air Traffic Control, landing assistance systems, communications and weather equipment. There are eight EMFR emitters that are checked quarterly by BE/PHS personnel; these emitters are in controlled areas and are not accessible to the general public. BE/PHS personnel provide EMFR training to 439 OSS/SCM every 12 months in conjunction with routine or compliance surveillance. The 439 OSS/SCM has an assigned URSR who acts as the focal point for all known or suspected incidents.

9.3. 439 AES. The 439 AES Communication Section has one satellite communication package, the TT-3720A Explorer 700, a lower tier EMFR emitter. 439 AES Communication supervisors provide EMFR training, to include fetal and reproduction hazards, to unit personnel annually. The 439 AES Commander will assign a URSR who acts as the focal point for all matters regarding EMFR safety and incident notification.

10. Lasers. BE/PHS personnel evaluate all industrial Class 3 and 4 lasers utilized by WARB employees in accordance with AFI 48-139, *Laser Radiation Protection Program*. All lasers are identified on the WARB EMFR Inventory maintained by BE/PHS. The following is a list of industrial work centers that store, utilize, or maintain lasers of concern at Westover:

10.1. 439 SFS/SFTC. The Combat Arms Training Managers (CATM) periodically train personnel on small arms using the SETS laser system which is a class 3A system. CATM

personnel also use and train personnel on the safety procedures for the PAC 4 and laser grip aiming system which are a class 3B lasers. CATM personnel operate both systems in accordance with all applicable Air Force and manufacture guidelines. BE/PHS personnel provide initial Class II Laser Safety training to newly assigned CATM personnel. The CATM supervisor provides annual Laser Safety Awareness refresher training to all required SFS personnel. A URSR has been assigned to act as a focal point for all known or suspected incidents.

10.2. 439 MSG/CEX (Emergency Management). The 439 MSG/CEX workcenter maintains an AHURA, First Defender, unknown chemical identification device. The First Defender is a Class 3b laser and full-time civilian as well as 439 CES/CEX reservists receive initial and annual training. A URSR has been assigned to act as a focal point for all known or suspected incidents.

10.3. Class 4 Embedded or Interlocked Lasers. There are three units assigned to Westover who utilize and maintain Class 4 embedded and/or interlocked lasers; 439 AMXS/Support, 439 MXS/ELEN, and the 439 MSG/SV FAMCAMP. These lasers are inherently safe when operated properly; therefore, they are treated similar to 3a and below laser classifications. However, BE/PHS personnel provide initial training to all personnel assigned to utilize the above respective lasers.

10.4. 439 AMXS: The unit's ECM section maintains the Large Aircraft Infrared Countermeasures (LAIRCM) system.

10.4.1. LAIRCM: This system is a class 4 infrared laser system, the most hazardous classification for a laser. The safety and control measures for this system must be followed at all times in order to provide proper protection during the LAIRCM operation. Any concerns or questions on laser operation and safety should be directed to the Installation Radiation Safety Officer, 439 MSG/SGPB.

10.4.2. Vehicles and unauthorized personnel not directly involved with the LAIRCM system operational check will remain outside of the safety zone around the aircraft. A safety zone will be cordoned off in accordance with the hazard zone drawing in Technical Order 1C-5A-2-8-4, section 3. Open beam paths shall be clearly identified and shall not cross populated areas, traffic paths, unauthorized airspace, or enter into any other unauthorized space.

10.4.3. During periods of laser activity, a LAIRCM team supervisor will be stationed on the aircraft flightdeck to monitor the LAIRCM systems controls ensuring that should any aircraft, vehicle, or other personnel enter the LAIRCM Nominal Hazard Safety Zone that the LAIRCM system will be placed to the "OFF" position. The Avionics technician in the cockpit will be the LAIRCM team supervisor and will be in constant radio contact with the Maintenance Operations Center (MOC).

10.4.4. When lasers are being activated during the operational check, authorized personnel inside the hazard zone will wear ANSI Z136.1-2007 approved laser protective goggles and clothing to cover as much of exposed skin as possible to include long sleeved shirt or outer garment.

10.4.5. Personnel operating the equipment will take every precaution to prevent laser beams from extending into any runway, taxiway, movement area, or towards any person,

vehicle, or building. If no ramp position is available, testing may take place in the next best location, with the supervisor shutting down the ops check to safe mode when aircraft or personnel approach the safety area.

10.4.6. Unexpected Conditions. Any unusual or unexpected occurrences that affect the safety of personnel and/or aircraft will be grounds for immediate suspension or termination of the operation. The operation will not continue until the condition is remedied. The team supervisor will be the responsible individual to determine if the operation can be continued safely. The operation will not continue until the team supervisor gives their approval.

10.4.7. Aircraft Parking Locations: System operational checks requiring laser activation can be accomplished on parking spots 1-15 on East Ramp. If required, alternate locations will be coordinated between MXG, MOC, Control Tower, Bioenvironmental Engineering, Wing Safety, Command Post, Security Forces and Fire Department prior to system operation checks.

10.4.8. System Operational Check: For the specific step-by-step procedures to operational check the LAIRCM system, refer to T.O. 1C-5A-2-8-4, section 3.

10.4.8.1. Nominal Hazard Zone (NHZ). The NHZ for the C-5 configuration will be cordoned off in accordance with T.O. 1C-5A-2-8-4, section 3. The maintenance team will cordon off the NHZ area with a minimum of 4 each laser warning signs, with one each at the front of the NHZ spaced evenly, one each at the each wing tip spaced evenly, and one each at the tail of the aircraft, spaced evenly, to secure the area of operation prior to start of the operational check. The team will remain vigilant throughout the operation to ensure unauthorized personnel, vehicles or aircraft do not enter the marked off area during the operation. The safety cones and laser warning signs will remain around the aircraft until the check is completed.

10.4.8.2. Maintenance Team. The team will consist of at least three team members. Two fully qualified avionics technicians with the Air Force Specialty Code (AFSC) of 2A5X3C, one of which will be the LAIRCM team supervisor. The third member will perform safety observer duties. Additional avionics technicians and/or safety observers may be required depending on the extent of the required testing.

10.4.8.3. Operational Check Notification. The LAIRCM team supervisor will notify MOC of the start of the LAIRCM operational check. MOC will then comply with the LAIRCM maintenance notification checklist. The notification checklist will include the Control Tower, Bioenvironmental Engineering, Wing Safety, Command Post, Security Forces, and Fire Department, informing them that a LAIRCM system operational check involving lasers will be conducted and to avoid movement into or near the testing area. MOC will also broadcast a wavering tone, followed by an announcement for all unnecessary personnel and vehicles to remain clear of the area. The LAIRCM team supervisor will notify MOC when the LAIRCM system operational check is complete. MOC will then inform the affected offices on the LAIRCM checklist that the operation is complete.

10.4.9. Safety Briefing. The LAIRCM team supervisor will conduct a safety briefing prior to the starting of the system operational check and be responsible for the entire task.

No step within the task shall be performed until a specific request is made by the LAIRCM team supervisor. The safety briefing will contain as a minimum:

10.4.9.1. Assigned tasks and responsibilities to all maintenance personnel involved in the task.

10.4.9.2. A review of the LAIRCM safety warnings listed in the T.O. 1C-5A-2-8-4, section 3.

10.4.9.3. Any specific safety requirement to include personal protection equipment such as approved ANSI Z136.1-2007 laser protective goggles and adequate clothing for the lasers being tested.

10.4.9.4. Review of applicable aircraft system interfaces such as the ALE-47, Countermeasure Dispenser System.

10.4.10. Emergency Procedures. The procedures will contain as a minimum:

10.4.10.1. Evacuation route, distance, and location.

10.4.10.2. Procedures in case of fire.

10.4.10.3. Procedures for notification during an emergency. The LAIRCM team supervisor will notify MOC by radio and communicate the nature of the emergency.

10.4.10.4. Medical Considerations: Personnel require initial and annual laser eye exams due to their potential exposure during this process.

10.4.11. Training: Occupational health training for this section will be conducted during annual block training and AMXS as required for newcomers.

10.5. Multi-Purpose Electro-Optical End to End Tester (MEON): This tester is used in conjunction with the LAIRCM. The MEON produces both infrared and ultraviolet eye hazards. Separate notification and emergency procedures are not required for this device since it is used in conjunction with the LAIRCM. This is a class 3B laser.

10.5.1. Controls (Distance): Although this device is listed as not hazardous, it is recommended, by the manufacturer, that a hazard distance of one meter from the transmitting end of the device be observed at all times.

10.5.2. MEON Range Finder: This device contains a class 3B laser. However the laser the housed inside the equipment and workers do not have exposure to the unprotected laser light. This control makes this device a class 1 laser. No other controls are required.

10.6. The AMXS supervisor is responsible for developing and providing LAIRCM specific laser safety training to all ECM workers and assists the IRSO with the development and training of general awareness LAIRCM laser training to all Maintenance personnel. The IRSO develops and provides or verifies general awareness LAIRCM training has been accomplished by all organizations who routinely travel and/or perform work on the Flightline. A URSR has been assigned to act as a focal point for all known or suspected incidents.

11. Record Keeping.

11.1. Training documents for each respective workcenter are maintained as directed by the most stringent regulation. These records will be kept electronically in DOEHRS-IH or other approved electronic records management system.

11.2. TLD records will be maintained in accordance with AFMAN 48-125, *Personnel Ionizing Radiation Dosimetry*. The TLD forms, AF Form 1523, *The Personnel Dosimetry Listing*, are maintained in BE/PHS, Building 2235, file plan.

11.3. Records involving the investigation of radiation incidents/accidents will be maintained electronically in DOEHRS-IH or other approved electronic records management system.

12. Emergency Procedures.

12.1. When personnel feel that they have been potentially exposed to an EMR hazard, intentional or unintentional, they are to contact their supervisor and URSR, if applicable, immediately. The supervisor and/or URSR in turn will contact the IRSO at extension 557-2918 or 557-2447. Coordination for medical evaluation will be accomplished immediately and in accordance with WARB medical emergency procedures.

12.2. The IRSO will interview all personnel involved in the incident and reconstruct the scenario with the assistance of shop personnel, supervision and the URSR, if applicable. The reconstruction will help to determine the intensity and duration of the exposure. The survey will be conducted by the IRSO or EMR specialist from AFIOH/SDRR, Wright-Patterson AFB, OH depending on the scenario. Higher Headquarter reporting will be accomplished through the 439 AW/Command Post and all applicable incident reports will be filed with the appropriate agencies.

JAY D. JENSEN, Colonel, USAF
Commander

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

AFMAN 33-363, *Management of Records*, 1 March 2008, Incorporating change 28 January 2015

AFI 40-201, *Managing Radioactive Materials in the US Air Force*, 17 September 2014

AFI 47-101, *Managing Air Force Dental Services*, 20 February 2014

AFMAN 48-125, *Personnel Ionizing Radiation Dosimetry*, 4 October 2011

AFI 48-148, *Ionizing Radiation Protection*, 20 November 2014

AFI 48-109, *Electromagnetic Field Radiation (EMFR) Occupational and Environmental Health Program*, 1 August 2014

AFI 48-139, *Laser Radiation Protection Program*, 30 September 2011

Title 10, Code of Federal Regulations, (10 CFR), *Standard for Protection against Radiation*, 21 May 1991

AFI 48-145, *Occupational and Environmental Health Program*, 22 July 2014

T.O. 00-11ON-3, *Requisition, Handling, Storage and Identification of Radioactive Material* 49
CFG 171, *Transportation*

AFOSH Standard 48-9, *Radiofrequency Radiation Safety Program*

Adopted Forms

AF Form 847, *Recommendation for Change Of Publication*

AF Form 1523, *The Personnel Dosimetry Listing*