



DEPARTMENT OF THE ARMY  
HEADQUARTERS, 35TH AIR DEFENSE ARTILLERY BRIGADE  
UNIT #2075  
APO AP 96278

EAAD-Z

24 June 15

MEMORANDUM FOR All 35th ADA BDE Assigned Soldiers and Civilians

SUBJECT: 35th ADA BDE Policy Letter #10 – Missile Handling and Storage Guidance.

1. References.

- a. 35th ADA BDE Missile Safety SOP, 14 Aug 2012
- b. 35th ADA BDE Readiness SOP, 06 Dec 2013
- c. TM 9-1410-1600-12 WP 0022 00 (Desiccant removal)
- d. TM 9-1440-1600-10 WP 0073 00 (PAC2) and WP 0075 00 (PAC3)(Umbilical cable stowage)
- e. Desiccant Removal Video #5 \\147.242.15.23\BDE Share\1 - Library\ADA Videos\PAC III
- f. Proper Stowage of Umbilical Cables PowerPoint slides: \\147.242.15.23\BDE Share\BDE S-3\EMMO\stowage of cables
- g. TB 9-4935-1600-23-1 (Missile Field Test Set Usage)

2. This policy letter addresses how live missiles will be maintained, handled and stored within 35th ADA BDE.

- a. One PAC-2 and one PAC-3 launcher will have missiles downloaded to accommodate training requirements.
- b. Units will contact the BN Standardizations Officer and the BN BOC prior to offloading live missiles and again when missiles are back on the launcher.
- c. Live PAC-3 missile canisters will not be moved with a forklift. GMT movement is the only authorized method of movement. The exception to this is the movement of the missile canister from the covered or enclosed storage areas to the point that the GMT can safely lift the missile canister.
- d. Reload training utilizing the forklift and PAC-3 MRT's is authorized.
- e. Personnel requirements for any movement of missiles:
  - (1) Certified Missile reload crews will consist of five personnel.

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(2) The Missile Movement Supervisor must be present during all missile handling involving any Patriot training rounds. The purpose of the Missile Movement Supervisor is to observe and monitor missile reload operations to ensure safety is the highest priority. The Missile Movement Supervisor will NOT be part of the reload crew. The Missile Movement Supervisor will be certified IAW the 35th ADA BDE Missile Safety SOP.

(3) The Battery Missile Movement Officer will be physically present during all Missile Handling or Missile Reload Operations with live missiles. Missile Movement Officers and their alternates will be certified IAW the 35th ADA BDE Missile Safety SOP.

(4) Units will immediately report any damage or mishaps that occur or found while handling missiles to their BN Standardizations Officer and BRC.

### 3. Storage environment:

a. Live Missiles will be off-loaded in a temporary storage location. The temporary storage location must be approved by the 35th ADA BDE CDR prior to off-loading missiles.

b. Live Missiles will be properly grounded (-25 OHMs certified ground point).

c. Storage area must have adequate drainage.

d. All downloaded Patriot missiles and training rounds will be elevated by utilizing a single 6x8x8 railroad timber in accordance to DAC storage requirements found in project GM 905-02.

### 4. PAC-3 Missile testing utilizing the Missile Field Test Set (MFT)

a. Operating the MFT: all units will adhere to the guidelines in TB 9-4935-1600-23-1, which provides setup and operational instructions for using the MFT. There are numerous safety precautions that need to be in place when using the MFT; Missile Movement Safety Officer, Battery Warrant Officer and Lockheed Martin PAC3 Rep will be present when using the MFT to test PAC-3 missiles. In addition any Officer or Warrant Officer that is present to supervise the MFT test of the PAC-3 missiles will go through a certification process that ensures that they know how to properly conduct the annual check. BRC and BN Standardizations Warrant Officers will train and be certified to use MFT IOT to facilitate PAC 3 testing. Each BN BRC and Standardizations Officer will supervise the MFT certification process and keep a record of all MFT certifications within their Battalions and submit a copy to the Brigade Standardizations Officer.

b. A service packet will be developed for each missile to track the results of the service conducted. The service packets will be kept on file indefinitely and be readily available for inspection.

c. Frequency of testing PAC-3 missiles with the MFT:

(1) Each PAC-3 missile will be tested using the MFT on an annual basis. More frequent use of the MFT can potentially cause adverse effects to missile reliability and degrade the shelf-life of the PAC-3 missile.

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(2) If there is justifiable rationale, or an evident operational requirement, that a PAC-3 missile needs to be re-tested after the 181 day mark and before the annual date, approval is granted at the Brigade Commander level. TB 9-4935-1600-23-1 directs that PAC-3 missiles will not be tested with the MFT within 180 days from the date of the last test. If a PAC-3 missile is tested within a year of its last MFT test, the unit will inform their BN Standardizations Officer and BRCs. The BN Standardizations Officer and BRC will contact the BDE Standardizations Officer and SPO office who will then report the needed testing to the Brigade Commander.

d. MFT test results will be transferred to disk and sent via SIPR to [usarmy.redstone.amrdec.mbx.airdefense@mail.mil.smil](mailto:usarmy.redstone.amrdec.mbx.airdefense@mail.mil.smil), [usarmy.redstone.peo-ms.mbx.patrioteoc@mail.smil.mil](mailto:usarmy.redstone.peo-ms.mbx.patrioteoc@mail.smil.mil), [phillip.m.burroughs.CIV@mail.smil.mil](mailto:phillip.m.burroughs.CIV@mail.smil.mil) after which the disc will be destroyed.

e. A separate PAC 3 testing tracker will be provided to BDE Standardizations Officer and SPO offices via SIPR IOT to provide oversight to higher echelons. The tracker is provided in the brigade NIPR share drive; [\\147.242.15.23](#) / BDE Share / Bde S-3 / EMMO / Missile testing blank tracker.

#### 5. Missile Desiccant Change

a. All desiccant changes will require direct supervision and direct procedural oversight from the Battery Patriot System Technician performing removal and replacement of desiccant for ATM2 canisters. This process starts with the gathering of materials and ends with the last bolt being properly torqued. The Battery Patriot System Technician must be certified by the BN Standardizations Officer or Munitions LAR in order to inspect the ATM2 canister. A memorandum for record prepared out by the Battery Patriot System Technician verifying proper ATM2 desiccant removal and replacement (see Encl) to be included in the service packet, the memorandum will be signed by the Battery Patriot System Technician, and the Battery Commander. Once completed, the MFR will be kept on file with the Battalion Standardizations Officer indefinitely and be readily available for inspection.

b. When a DHI reading is 31 or above wait 96 to 120 hours at the Battery Patriot System Technicians discretion to observe the DHI reading again. If the DHI reading is found to be 30 or below on the follow on reading then continue to monitor the missile as normal to ensure a constant "We fight tonight" readiness. If the reading maintains a 31 or higher reading then change the desiccant within 7 days. The Battery Commander will be informed when a DHI reading of 31 or over is observed.

c. The Battery Patriot System Technician will maintain accountability of all materials needed to complete ATM2 desiccant removal and replacement. The Battery Patriot System Technician will maintain sufficient materials to replace desiccant for 8x ATM2 canisters at all times.

d. Units will immediately report any damage found or mishaps that occur while changing Desiccant to their BN Standardizations Officer and BRC.

e. Based on TM 9-1410-1600-12 missile desiccant checks are to be conducted monthly.

d. Identification of damage missiles/canisters during desiccant change requires immediate reporting to the chain of command. The chain of command will initiate a commander's inquiry

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on the incident. Pending the initial results and the commander's discretion of the inquiry a FLIPL and/or formal 15-6 Investigation will be initiated to determine negligence/liability and root causes of the damaged canister.

6. Safety requirements:

a. Commander's Missile Handling Safety Checklist will be IAW the 35th ADA BDE Missile Safety SOP.

b. Commander's Risk Assessment will be IAW the 35th ADA BDE Missile Safety SOP.

c. Missile Reload Safety Brief will be IAW the 35th ADA BDE Missile Safety SOP.

d. Immediately report any canister damage to the BN Standardizations Officer /BN S3 and BN BRC/BN XO who will then notify the BDE Standardizations Officer /BDE S3 and BDE SPO/BDE DCO.

7. Training Requirements:

a. Within 30 days of arriving on peninsula all 14As serving in a Platoon Leader position, all 140E's regardless of position, all 14Ts, all 14A(CPTs) prior to the assumption of Command of a Fire Unit, 14E system maintainers and Evaluations team members will conduct the following training:

(1) PAC-3 desiccant removal

(2) PAC-2/3 Umbilical cable stowage

(3) Ammunition Handler/Transportation course

(4) In lieu of Ammunition Handler/Transportation course SM's can complete Explosive Safety Training, IAW DA Pam 385-64, para 1-8 and table 1-1.

b. PAC-3 desiccant removal training will be conducted utilizing PAC-3 Missile Round Trainers (MRT). All training will be conducted IAW TM 9-1410-1600-12 WP 0022 00. All personnel will watch the desiccant removal video on the BDE share drive prior to conducting the training. Recertification is required quarterly.

c. PAC-2/3 umbilical cable stowage training will be conducted IAW TM 9-1440-1600-10 WP 0073 00 (PAC2) and WP 0076 01 (PAC3). All personnel will review "proper stowage of umbilical cables" power point slides on the BDE share drive. Recertification is required monthly.

d. The Munitions LAR can be scheduled to conduct the Ammunition Handler/ Transportation course in country. This method is highly encouraged due to the tailoring of the course to the KTO regulations and specifics. A certificate of completion will be printed and maintained in the assigned unit orderly room and by the Explosive Safety Officer. Recertification is required annually.

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e. Prior to and at the end of PAC-3 Launching Station March Order and Emplacement or Missile Reload the operators will ensure that the cables are stowed properly and IAW the TM.

f. If multiple crews are utilizing the same launching station the 35<sup>th</sup> BDE LS training changeover checklist must be completed and verified by PLT Sergeant or above prior to the next crew continuing training.

g. Units will immediately report any damage to umbilical cables/ J-Box that occur or found during training to Battalion BRC, Standardizations Officer and Brigade BOC.

h. This training is required to perform any launcher, reload or missile specific tasks. Without the designated training, damage to the launching station or missile canister is possible.

8. External resources are available for help with missile safety, upon request. All external resources (i.e. Munitions LAR and Lockheed Martin FSR) will be coordinated through the BDE Standardizations Officer or the BDE Missile Maintenance Technician.

9. POC for this action is the Brigade Standardizations Officer at DSN 784-7870 or the BDE Electronic Missile Maintenance Technician at DSN 784-1482/3737.



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Commanding