



# RED RIVER ARMY DEPOT UP-ARMORED HIGH MOBILITY MULTIPURPOSE WHEELED VEHICLE (UAH)/HEAT

## INSTALLATION PROFILE:

Red River Army Depot (RRAD) is the Army's Center of Industrial and Technical Excellence (CITE) for the Bradley Fighting Vehicle System (BFVS), Multiple Launch Rocket System (MLRS) chassis, Tactical Wheeled Vehicles (TWV), Small Emplacement Excavator, Rubber Products, and Missile Recertification. RRAD is the premier remanufacturing facility for the Department of Defense (DoD) in maintenance, repair, and overhaul.

- Located 15 miles west of Texarkana, Texas
- 18,316 acre site
- 1+ million square footage of production space

## VISION:

Our Best, Nothing Less, for the Warfighter.

## MISSION:

- Conduct Ground Combat and Tactical Systems Sustainment Maintenance Operations, Air Defense Systems Certification and Related Support Services Worldwide for the US Armed Forces and Allied/Friendly Nations
- Provide Essential Base Support Services to Red River Industrial Complex Missions
- Be an Active and Viable Partner in Bowie County, the Greater Texarkana Community, and the Four States Area

## PEOPLE:

- Approximately 5,256 RRAD members (civilian, military, contractor).
- Sixteen permanent Lean Core team members and 24 Lean employees assigned to the Maintenance work force.

## SAFETY:

- RRAD's safety improvements resulted in removal from the DoD top 40 list of most unsafe Army Installations.
- Reduced Total Case Incident Rate by 24%. This is 20% below the AMC goal of 4.5 and is 64% below the industry benchmark of 9.8.
- Reduced Lost Time Case Incident Rate by 27%. This is 22% below the AMC goal of 1.4 and is 80% below the industry benchmark of 5.5.
- Reduced UAH/HEAT recordable injuries from FY07 to FY08 by 90%.

## ACHIEVEMENTS AND AWARDS:

- 2008 Shingo Silver and Bronze Medallion
- 2007 Shingo Gold and Silver Medallion
- 2007 Theodore Roosevelt Compensation Award
- 2006 Shingo Silver Medallion
- 2006 Secretary of Defense Robert T. Mason Award for Depot Maintenance Excellence
- 2006 U.S. Army Material Command Value Engineering Award
- 2006 BAE Systems, Ground Systems Division, Bronze Chairman's Award
- DoD Customer of the Year awarded by Defense Logistics Agency (DLA) Business Alliance
- ISO 9001-2000 Registration
- ISO 14001 Registration
- Conducted 128 Lean events during FY08
- UAH achieved a value engineering savings of \$2,163,701 for FY08 production.

# RED RIVER ARMY DEPOT

## UAH/HEAT

**UAH:** The UAH is an Up-Armored High Mobility Multi-Wheeled Vehicle that provides ballistic, artillery, and mine blast protection to the war fighter. The principal modifications to the UAH include an armor package, high capacity brakes, upgraded suspension and lift points, a reinforced frame, and a large capacity air conditioning unit. The weapon mount, located on the roof of the vehicle, is adaptable to mount either the M60, 7.62mm machine gun; M2 .50 caliber machine gun; or the MK 19 Grenade Launcher. The weapons platform can be traversed 360 degrees. This configuration of the UAH is equipped with the self-recovery winch.

**HEAT:** The HMMWV Egress Army Trainer (HEAT) is a training device that consists of an UAH cabin with gunner's turret on top, that can be spun around and then stopped at uncomfortable angles so that soldiers can train to quickly exit an upended vehicle. The HEAT is made from scrap UAHs that have been battle damaged beyond repair. In some cases, it requires multiple UAH cabins to make one HEAT trainer.

**PROCESSES:** During the past three years, the UAH production area was transformed into a one-piece flow operation by incorporating Lean doctrine and techniques. When an UAH arrives at RRAD for reset, the vehicle is disassembled to the base frame. The vehicle goes through a multi-cell production line. The vehicle is put through an assembly line and rebuilt to the highest, newest standards available. Using Lean tools, RRAD is able to produce UAH vehicles in less production time and space. This has enhanced the depot's capability to adapt to an increase or decrease in the customer demand.

**PROCESSES CONTINUED:** The Depot has recently implemented the Red River Operating System which standardizes work for every process. This approach guarantees the seamless integration of Lean strategy at every level.

**QUALITY:** By implementing process improvements initiated by the employees, the UAH Division reduced rework from FY06 to FY08 by 58%.

**DELIVERY:** RRAD delivery was at 100% of asset requirements to Defense Logistics Agency (DLA) in FY06, FY07, FY08. From DLA delivery to the War Fighter was 95% on time.

**PRODUCTIVITY:** UAH production increased by 736% from FY06 to FY08.

UAH man hours per asset decreased from 848.62 hours in FY06 to 550.89 hours in FY08, resulting in a 35% improvement.

UAH flow days have decreased from an average of 27 calendar days at the beginning of the Lean journey to an average of 20 calendar days in FY08 resulting in a 26% reduction.

RRAD currently repairs the M1114 version of the UAH. The Army tentatively plans to remanufacture 400 M1114 UAHs at RRAD during FY09. Due to the availability of assets and the emergence of the M1151, it is unsure how many M1114s the UAH Line will produce in FY09, but it is certain the UAH value stream will produce a critical mission vehicle in support of the GWOT.

### CONTACT INFORMATION:

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