



Low Cost 5.56mm Fiberboard Pack  
for Range Fire Training  
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# OUTLINE



- Background
- Benefits
- Current vs. Proposed Configurations
- Cost Savings
- Status
- Summary
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# BACKGROUND



- **In 1996 Marine Corps expressed interest in reducing training ammo costs**
- **Meetings early 1997 between Lake City Army Ammunition Plant (LCAAP), Armament Research Development and Engineering Center (ARDEC) and Industrial Operations Command (IOC) to discuss costs saving measures**
- **Proposed a fiberboard pack to replace metal M2A1/wirebound wood pack for 5.56mm for range fire training**
- **Marine Corps presented with idea and volunteered to do user evaluation on trial basis**
- **800K packed rounds shipped to Camp Lejeune, Camp Pendleton, Paris Island and Quantico in 1997**
- **Marines liked pack with two exceptions:**
  - **Slight modifications needed to increase stability of pallets**  
**Resolved by Tightening box dimensions and improved stretch wrap**
  - **1.4C Interim Hazard Class presented concern; Need 1.4S**  
**Resolved: Final Hazard Classification of 1.4S obtained**
- **Army showed interest**
- **ARDEC, IOC and LCAAP working to field packs**



# BENEFITS



- **Cost savings**
  - **Materials**
  - **Labor**
- **Transportation**
  - **600 lbs. decrease in weight per pallet**
  - **5760 more rounds per pallet**
- **Environmental - Reduced disposal costs**

## Current

- **M2A1 metal cans go to the**
- **Defense Reutilization and Marketing Office (DRMO)**
- **Wood boxes must go to landfill**

## Proposed

- **Fiber boxes are recyclable**

- **Relieves user of burden of collecting/inspecting used ammo cans**



# CONFIGURATIONS

## Current

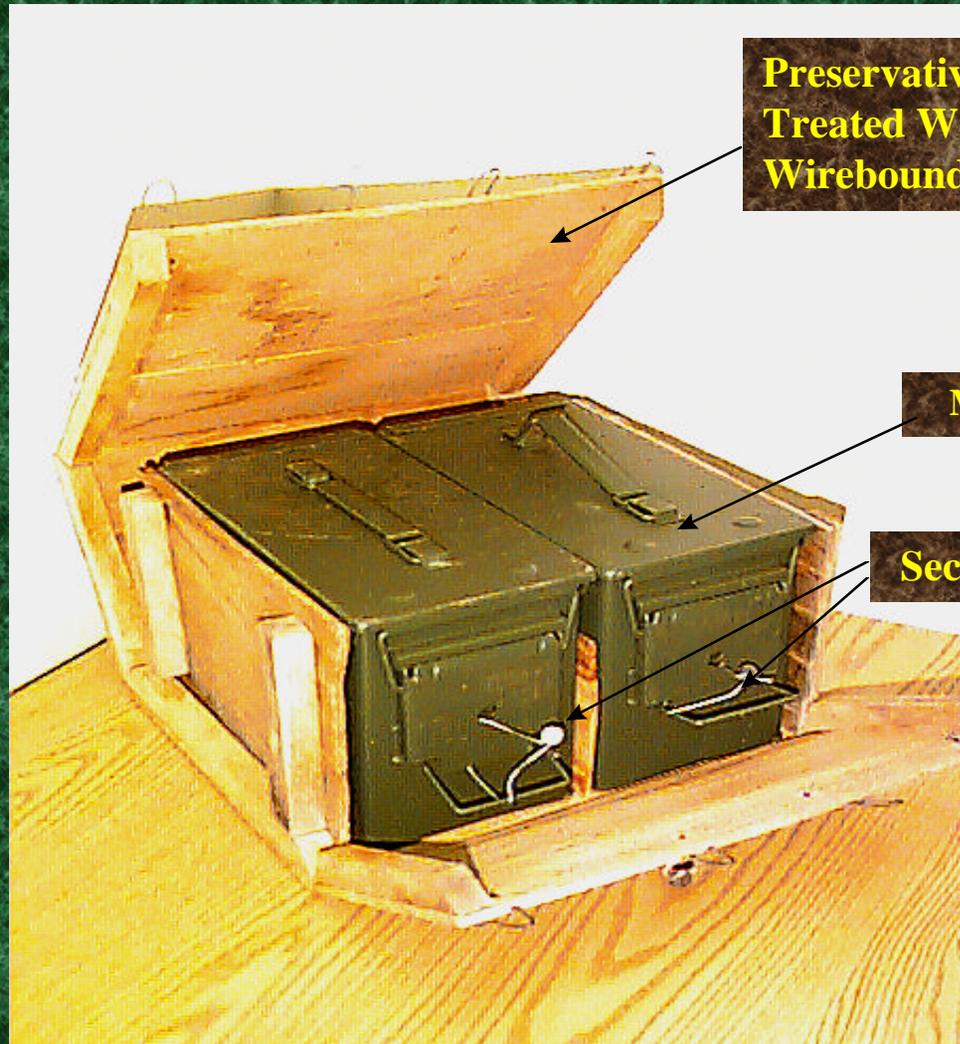
- 10 rds per 10 rd clip ?
- 3 ten rd clips per point protector paperboard carton ?
- **4 point protector cartons per bandoleer ?**
- **7 bandoleers per metal can ?**
- **7 magazine fillers ?**
- 2 cans per wirebound wood box ?
- **1680 rds total per outer wood box ?**
- 48 boxes per pallet ?
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## Proposed

- 10 rds per 10 rd clip
- 3 ten rd clips per point protector paperboard carton
- **30 point protector cartons per inner fiberboard box**
- N/A
- N/A
- 2 inner boxes per outer shrinkwrapped fiberboard box
- **1800 rds total per outer box**
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- 48 outer boxes per pallet
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# Military Level A Ammunition Pack



**Preservative  
Treated Wood  
Wirebound Box**

**M2A1 Metal Container**

**Security Seals**



# Fiberboard Training Pack



**Outer Fiberboard Carton**

**Point Protectors**

**Strap**

**Security Tape**

**Shrinkwrap**

**Inner Fiberboard Carton**





# COST SAVINGS

## Packaging Production Costs Only

- **Total Production of 5.56mm Crtg, M193/M855 in CY99 is 226 Million**
- **CY99 savings if 50% packed in low cost fiberboard ? \$2.2M**

	<b>Current</b>	<b>Proposed</b>	<b>Savings</b>
Labor Costs/1000 rds	\$4.20	\$1.73	\$2.47
Material Cost/1000 rds	\$29.91	\$12.27	\$17.64
<b>Total</b>	<b>\$34.11</b>	<b>\$14.00</b>	<b>\$20.11</b>
Investment Cost ? \$973K (Cost to Purchase and Install Automated Packaging Machinery at the load plant)			

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- **Currently Approximately 90% of Ammo Purchased is Expended in Training. Range Fire Training Accounts for Bulk of Usage**





# COST SAVINGS

## Other Cost Considerations

- **ADDITIONAL COST SAVINGS - To be Quantified In Production**
  - Potential Savings in Shipping (Less Weight) and Disposal Costs At Training Sites
  - Plan to Employ “Just in Time” Shipments. Training Packs Can Be Delivered Direct to User Saving Depot Storage and Handling Costs
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- **COSTS OF USING TRAINING PACK - To Be Quantified, Should be Much Less Than Cost Savings.**
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- Costs to Inventory new NSNs & DODICs Needed to Manage Inventory
- Cost Increase For Tactical Pack Due to Loss of Economy of Scale
- Loss of DRMO Sales of Used M2A1 Containers/Bandoleers
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- **LESS BURDEN ON SOLDIER**
  - Eliminates Need to Collect/Inspect/Ship Used Ammo Cans, Bandoleers, and Wirebound Boxes
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# STATUS



- Plant facilitization is in process. Effort should be completed by end of CY99.
- Anticipated buys of \$60M for year 00
  - \$45M Marine Corps
  - \$15M Army



# SUMMARY



- Fiberboard pack will provide reduced cost training to the user
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- Addresses Marine Corps and Army's concern for cost reductions
  - Responds to customer needs
- ARDEC, LCAAP and IOC moving forward to implement low cost packs NLT 2000
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- If successful, fiberboard packs can be applied to other training rounds with additional savings