

BRAC ANALYST INFORMATION  
FROM  
RED RIVER ARMY DEPOT



27 JUNE 2005

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27 JUNE 2005  
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2. Candidate #IND-0127B Candidate Recommendation to Realign Red River; SGR Briefing #31, 22 February 2005, Page 44
3. Secretary of the Army Memorandum dated 24 October 2002: Designation of Centers of Industrial and Technical Excellence (CITE)
4. Strength Report dated 31 May 05
5. Certified Data: Questions 501, 503, 504, 506, Red River Army Depot, 12 Commodity Groups
6. Red River Army Depot Response to Additional GAO Questions dated 7 June 2005; Number of People (Perm, OA, Contractors)
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## **Industrial Joint Cross-Service Group (IJCSG)**

### **Meeting Minutes of December 7, 2004**

Mr. Michael Wynne, Under Secretary of Defense for Acquisition, Technology and Logistics, chaired the meeting. The list of attendees is at Attachment 1.

The Chairman opened the meeting. The purpose of this meeting was to review the initial scenarios from each of the subgroups. Mr. Wynne said he signed out the final capacity report and thanked the group for their work. Mr. Wynne also stated that logic may drive one direction while fairness may drive a different direction, i.e., Shipyards may ask Maintenance to do something that appears illogical. Mr. Wynne asked Mr. Orr why the Maintenance subgroup didn't run scenarios closing Warner-Robins or Jacksonville—would there be a question as to whether or not the bases were being protected, or was it driven by logic. Mr. Orr replied that the Maintenance subgroup has a strategy—if the line of thought were continued, then Warner-Robins and Jacksonville and Albany scenarios must be run at each iteration and then the whole equation must be changed.

Mr. Wynne asked the attendees for their views, and RADM Klemm stated that if all installations aren't evaluated equally then the IJCSG is left open to criticism. Working through the iterations takes time, but will it take more time later having to go back and to explain why and answer the commission's questions. Information from the Navy needs to be expedited so it can be processed.

Mr. Motsek briefed the initial Munitions and Armaments scenarios.

Mr. Wynne asked Mr. Orr to determine whether there was any commercial helicopter repair sources/capability. Mr. Motsek stated that the problem is no commercial facility has the capability to perform crash damage repairs, although rotor head repairs are a 50/50 commercial/military mix. Mr. Wynne said to at level look only at the top helicopter OEMs (i.e., Boeing, Bell, Sikorsky) and survey their data.

Mr. Wynne asked the subgroups to dream big because there are best practices all over. As commands come up for review there will be bidding, but the current command structures are not holding and in the future there will probably be commanders from one service and their deputies will be from another service. Best practices are the key, they drive processes. Don't think in terms of traditional service command structures.

Mr. Orr said the Maintenance subgroup was looking at closure scenarios involving Warner-Robins, Jacksonville and Albany. Currently recommendations are strategy driven. Mr. Orr stated that we want to be strategy driven, not data driven.

Mr. Wynne said that the data could be used to run more scenarios. Mr. Orr stated, some recommendations will be cost-based, some risk-based, some utilization-based.

RADM Klemm said they must consider the court of public opinion with the commission and the legislators. Military Value must be included because it is the law, or else they will spend six months justifying what the IJCSG did because they didn't do what the law said. There are different answers in COBRA based on Military Value vice just capacity (i.e., single site rotary wing repairs). It is an immense problem, but the enormous amount of data drives down to Military Value.

Mr. Wynne said that we may end up with a COBRA call later as a result of analysis. He stated "do not back off of the 1.5 capacity." Mr. Wynne said the subgroups could actually run two scenario analyses. Mr. Orr said there is a sound strategy.

1.5  
capacity

Mr. Wynne told the subgroups that if they were writing up the recommended scenarios they should consider rotating commands.

Mr. Orr said that for non-deployable intermediate level maintenance the subgroup would look at what was within 50 miles for a possible move.

Mr. Wynne requested Mr. Orr to take one scenario and draw up a recommendation scenario so the subgroup could gain experience.

RADM Klemm stated that one issue that is a problem with the 1.5 factor is the unique facilities that are already performing at 1.5 (i.e., heat treating, plating, etc.). He said that proper analysis can't be done without breaking out these areas and increasing their capacity and that constraint needed to be priced out.

Mr. Wynne said he was hoping to get to where the subgroups actually settle on what to close and then argue about one or two staying open based on a different set of factors (i.e., Military Value, environmental, unique capability, etc.)

Approved:

  
Mr. Michael Wynne  
Chairman, Industrial Joint Cross-Service Group

Attachments:

1. List of attendees
2. Munitions and Armament
3. Maintenance
4. Ship Overhaul and Repair

**Industrial JCSG Meeting  
December 7, 2004**

**Attendees**

**Members:**

- Michael Wynne, Undersecretary of Defense for Acquisition, Technology and Logistics
- RADM Klemm
- Gray Motsek, Deputy G3, Support Operations, Army Material Command
- Maj Gen Mary Saunders, Defense Logistics Agency
- Mr. Ron Orr, Air Force
- BGen Willie Williams, Director Logistics Plans and Policies, HQMC

**Others:**

- Pete Potochney, OSD BRAC Office
- Alex Yellin, OSD BRAC Office
- Jay Berry, OSD Maintenance Policy, Programs and Resources
- George Kingsley, Defense Logistics Agency
- Steve Krum, NAVSEA
- COL Sarah Smith, OSD Maintenance Policy, Programs and Resources
- Catherine Schneider, DoDIG
- Maj. S. DuBois, HQMC
- Brian Shanley, HQMC
- LtCol Walt Eady, JCS/J4
- Willie Smith, HQ AFSC
- CAPT William Porter, AT&L MA
- RDML Mark Hugel, OPNAV
- Mark VanGilst, HQ USAF/ILMM
- Mr. Dave Pauling, ADUSD (MR&MP)

Attachment 1



# *IJCSG – Maintenance Subgroup*

## Scenarios

- **MX-1.0 Minimize Sites**

- Scenarios (9)

- MX-1.1 Min Site using Workload - Total Capacity at 1.5 (60 hr week)
    - MX-1.2 Min Site using Workload – Max Capacity at 1.0 (40 hr week)
    - MX-1.3 Min Site using Workload - Max Capacity at 1.5 (60 hr week)
    - MX-1.4 Min Site using Core - Max Capacity at 1.5 (60 hr week)
    - MX-1.5 Enabling Min Site using Workload (Close LEAD) - Max Capacity at 1.5 (60 hr week)
    - *MX-1.6 Min Site using Workload (Close Depot Maintenance function at Tinker AFB) - Max Capacity at 1.5 (60 hr week)*
    - *MX-1.7 Min Site using Workload (Close Depot Maintenance function at Hill AFB) - Max Capacity at 1.5 (60 hr week)*
    - MX-1.8 Establish Joint Depot(s) (Based on results from Scenarios)
    - ~~AF Scenario-TBD~~ – None
    - MX 1.9 Navy Scenario Fleet Readiness Center

- **MX-2.0 Consolidate Intermediate Maintenance functions with same commodities**

- Navy Enabling Scenarios IM –E -001 through IM-E003
  - Navy Enabling Scenarios IM –E -004 and IM-E005

(56 Scenario Data Calls have been released as of 3 Dec 2004)



# IJCSG – Maintenance Subgroup

MX 1.5 Enabling - Minimize sites using workload  
– Close Letterkenny Army Depot

<p style="text-align: center;"><b>Scenario Proposal</b></p> <p>Realignments:</p> <ul style="list-style-type: none"> <li>▪ Aviation Workload (NADEP-CP/NI/JAX, OC/WR-ALC) to 2 or 3 sites for each area: Fighter Attack, Other Aircraft, Cargo/Tanker</li> <li>▪ Rotary Workload (CCAD, NADEP-CP) to 1 site</li> <li>▪ Ground Workload (Vehicles: Tracked, Wheeled, Amphibious) 6 locations (ANAD, RRAD, TYAD, RIA,, MCLBA, MCLBB) to 2 or 3 sites</li> <li>▪ Components- Commodities (e.g. landing gear, electronics, etc) at various locations to 2 or 3 sites per commodity</li> <li>▪ Using current workload, commodity approach, consider joint Service solutions Using current workload, commodity approach, consider joint Service solutions</li> </ul>	<p style="text-align: center;"><b>Drivers/Assumptions</b></p> <p>Boundaries:</p> <ul style="list-style-type: none"> <li>▪ Workload moved from closing sites should be moved as a complete unit wherever possible, if not, move a portion of the work to the site with the highest available capacity and remaining is TBD.</li> <li>▪ Based on Maximum Capacity on 1.5 shift/60 hour work week per workstation</li> </ul>
<p style="text-align: center;"><b>Justification/Impact</b></p> <ul style="list-style-type: none"> <li>▪ Increase Joint use through minimizing sites</li> <li>▪ Environmental impacts not known at this time- workload moves</li> <li>▪ Cost/Savings of movements not determined – COBRA</li> <li>▪ Post BRAC recurring costs/savings</li> </ul>	<p style="text-align: center;"><b>Potential Conflicts</b></p> <ul style="list-style-type: none"> <li>▪ USC Title 10 Sec 2466 requirement - 50/50</li> </ul>

- Strategy
- Capacity Analysis / Data Verification
- JCSG Recommended
- De-conflicted w/JCSGs
- COBRA
- Military Value Analysis / Data Verification
- Criteria 6-8 Analysis
- De-conflicted w/Services

## **Industrial Joint Cross-Service Group (IJCSG)**

### **Meeting Minutes of December 14, 2004**

Mr. Michael Wynne, Under Secretary of Defense for Acquisition, Technology and Logistics, chaired the meeting. The list of attendees is at Attachment 1.

The Chairman opened the meeting. The purpose of this meeting was to review further scenarios from each of the subgroups. Mr. Wynne opened the meeting stating that lack of data from the Army is a problem as scenario recommendations must be submitted on/about December 20 and he asked Mr. Motsek for his assistance.

Mr. Motsek briefed the Munitions and Armaments subgroup. He said that he did not think any outstanding data will affect the recommendations based on the existing certified data. He also stated that the recommendations will be refined when any outstanding data is received.

Mr. Wynne said that when the recommendations go up the chain they must have certified, sourced data based on the SOP, etc. The recommendations can be revised based on new certified data. He told the subgroups to construct all candidate recommendations, turn in what recommendations they can, and modify later any recommendations must be modified.

Mr. Orr briefed the Maintenance subgroup. He said the first three depot scenarios are registered. Mr. Orr also said that the data call needed to assess costs went out. Clarifications from the Navy have been requested.

Mr. Wynne tasked Mr. Motsek with drafting the answers to letters stating that he (Mr. Motsek) had forwarded the letters to Mr. Wynne for his consideration. Mr. Wynne stated that all sites are to be treated equally, not on the basis of location, but on the basis of capability.

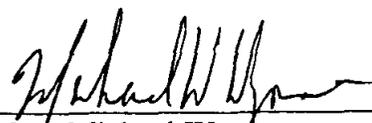
Mr. Orr said that Scenario 1.4 was still being worked. Mr. Orr said that the subgroup is looking to see if any decisions result in adding risk to core requirements versus workload requirements, but that most strategic decisions are complete and need to be costed out.

Mr. Orr stated that commercial sources for Rotary Aircraft repairs don't really exist and recommended that Rotary Aircraft from consideration be removed because the risk is too high.

The Shipyards subgroup briefed their draft candidate recommendations.

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Mr. Wynne said the subgroups should have a holistic plan and then adjust as required.

Approved:   
Mr. Michael Wynne  
Chairman, Industrial Joint Cross-Service Group

Attachments:

1. List of attendees
2. Munitions and Armament
3. Maintenance
4. Ship Overhaul and Repair

**Industrial JCSG Meeting  
December 14, 2004**

**Attendees**

**Members:**

- Michael Wynne, Under Secretary of Defense for Acquisition, Technology and Logistics
- RADM Bill Klemm
- Mr. Ron Orr, Air Force
- Gray Motsek, Deputy G3, Support Operations, Army Material Command
- Maj Gen Mary Saunders, Defense Logistics Agency
- BGen Hank Taylor, JCS/J4
- BGen Willie Williams, Director Logistics Plans and Policies, HQMC

**Others:**

- Pete Potochney, OSD BRAC Office
- Alex Yellin, OSD BRAC Office
- Jay Berry, OSD Maintenance Policy, Programs and Resources
- George Kingsley, Defense Logistics Agency
- Steve Krum, NAVSEA
- COL Sarah Smith, OSD Maintenance Policy, Programs and Resources
- Catherine Schneiter, DoDIG
- Maj. S. DuBois, HQMC
- Brian Shanley, HQMC
- LtCol Walt Eady, JCS/J4
- Willie Smith, HQ AFSC
- CAPT William Porter AT&L MA
- Mark VanGilst, HQ USAF/ILMM
- RDML Mark Hugel, OPNAV
- Mr. Dave Pauling

Attachment 1



# ***IJCSG – Maintenance Subgroup***

## **Scenarios**

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- **MX-1.0 Minimize Sites**

- Scenarios (4)

- MX-1.1 Min Site using Workload - Total Capacity at 1.5 (60 hr week)
  - MX-1.2 Min Site using Workload – Max Capacity at 1.0 (40 hr week)
  - MX-1.3 Min Site using Workload - Max Capacity at 1.5 (60 hr week)
    - Min Site assessing Core - Max Capacity at 1.5 (60 hr week)
  - MX 1.4 Implement Fleet Readiness Center and min site
  - Implementation - Establish Joint Depot(s) (Based on results from Scenarios)

- **MX-2.0 Consolidate Intermediate Maintenance functions with same commodities**

- Navy Enabling Scenarios IM –E -001 through IM-E005

(56 Scenario Data Calls have been released as of 3 Dec 2004)



## ***Risk Assessment 2011/2025***

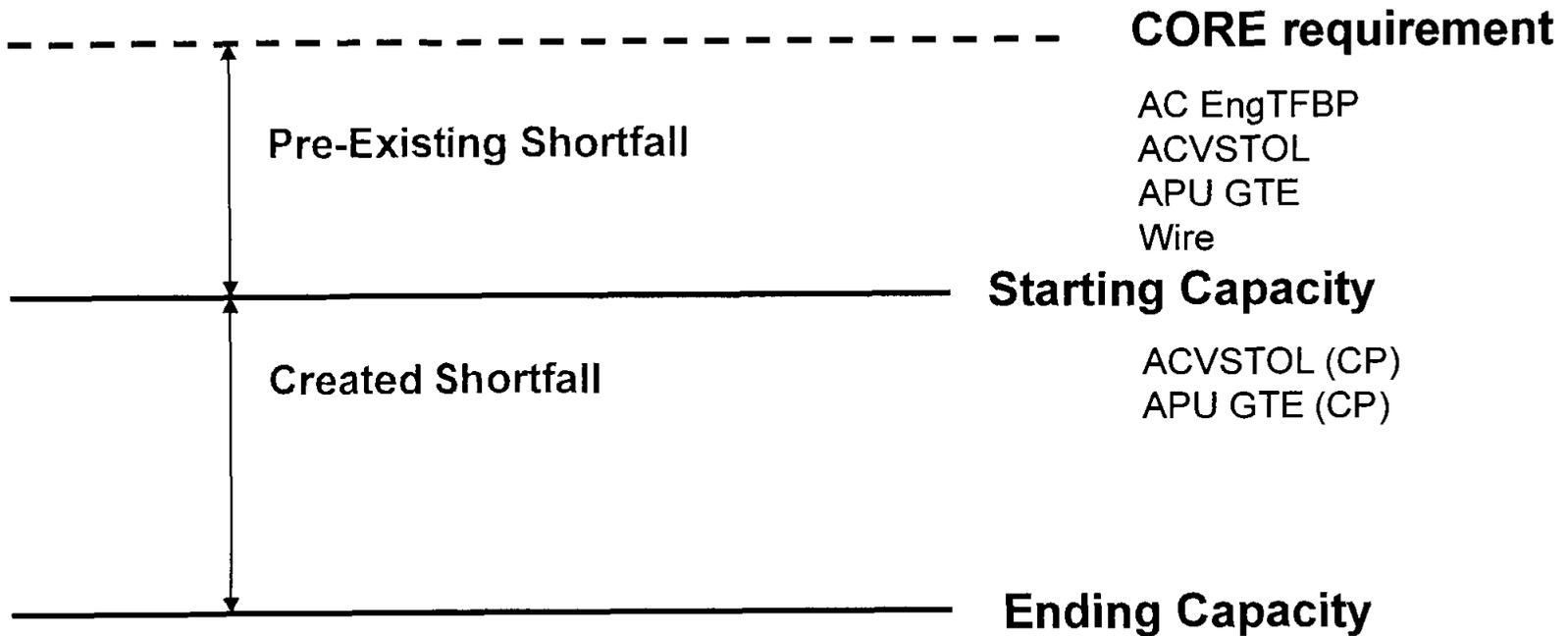
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- Capacity Utilization vs. Core Requirement
- Capacity Utilization vs. Workload
- Not fixing pre-existing risk
- If added risk to core requirement – will “price out” to resolve
- Workload shortfalls identify to Service – future systems used to resolve



# IJCSG Maintenance Subgroup

## CORE Analysis Based on MX1.3

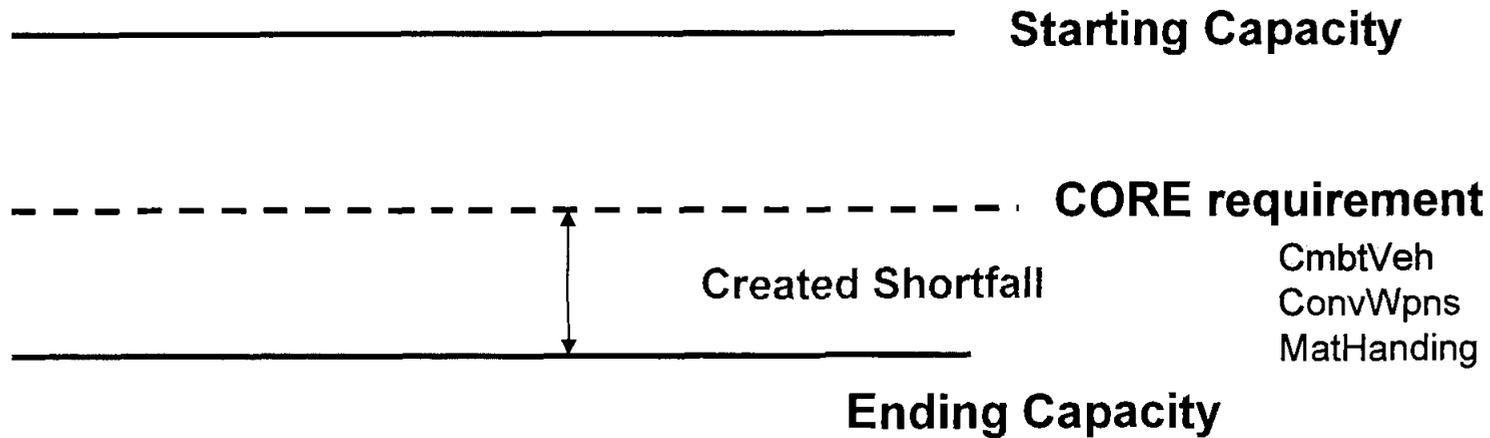




# ***IJCSG Maintenance Subgroup***

## ***CORE Analysis Based on MX1.3***

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**BRAC 2005**  
**Industrial Joint Cross-Service Group (IJCSG)**

**Meeting Minutes of December 21, 2004**

Mr. Michael Wynne, Under Secretary of Defense for Acquisition, Technology and Logistics, chaired the meeting. The list of attendees is at Attachment 1.

The Chairman opened the Industrial JCSG meeting. He thanked everyone for attending. "We're at crunch time!" stated the Chairman who also stated that he is looking for input from each subgroup. Specific recognition of the efforts from the Munitions & Armament and the Ship Repair and Overhaul Subgroups was made by the Chairman.

Mr. Orr briefed the Maintenance status first. A copy of the briefing is at Attachment 2. Mr. Orr stated that he thought there would be only one recommendation from the Maintenance Subgroup and that the heart of the recommendation would come from scenario MX 1.4 with possibly some input from MX 1.3. Mr. Wynne commented that a comparative recommendation may also be needed to look at an alternative universe. A discussion of the status of data ensued as the subgroup is presently waiting for the Services' responses to the data calls. The Chairman requested a status on the data calls that are out. Scenario MX 1.4 was then discussed and statements were made that the data calls were being released between the 21<sup>st</sup> and the 23<sup>rd</sup>. A final comment from Mr. Orr requested concurrence to have a "Red Team," below Secretary Wynne's level, look at the Maintenance Subgroup's approach and ask hard questions of the subgroup members to validate the process. The Chairman concurred with this request.

*Fleet  
Readiness*

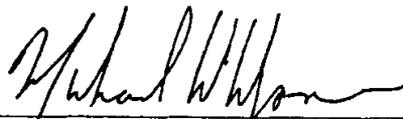
*workload @  
60hr/wk*

Mr. Motsek briefed the Munitions and Armaments status next. A copy of the briefing is at Attachment 3. Handouts were provided for the first five recommended candidates from a total of seventeen for the scenario. The certified data for the five was expected from OSD on the same day as the meeting, 21 Dec 04. A sixth candidate recommendation was expected to be completed on the 22<sup>nd</sup> with all seventeen being completed by Thursday, the 23<sup>rd</sup> of December. The candidate recommendation closing Kansas Army Ammunition Plant was briefed and a provisional acceptance was provided awaiting the receipt of certified data.

RDML Hugel briefed the Ship Overhaul and Repair status last. A copy of the briefing is at Attachment 4. The draft candidate recommendation for scenario number SR-5 was briefed with no issues. A discussion on enabling scenarios ensued with the recommendation from the Chairman and Mr. Potochney that they be pushed through for all reviews up to the ISG level to await input from the Service. A comment was made that the Navy BRAC office is already doing summaries of environmental impacts.

The next Industrial JCSG meeting is scheduled for 8 Jan 05.

Approved: \_\_\_\_\_



Mr. Michael Wynne  
Chairman, Industrial Joint Cross-Service Group

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Attachments:

1. List of attendees
2. Maintenance Subgroup briefing
3. Munitions and Armament Subgroup briefing
4. Ship Overhaul and Repair Subgroup briefing

**Industrial JCSG Meeting  
December 21, 2004**

**Attendees**

**Members:**

- Michael Wynne, Undersecretary of Defense for Acquisition, Technology and Logistics
- RADM Klemm
- Gray Motsek, Deputy G3, Support Operations, Army Material Command
- Maj Gen Mary Saunders, Defense Logistics Agency
- Mr. Ron Orr, Air Force
- BGen Willie Williams, Director Logistics Plans and Policies, HQMC
- RDML Mark Hugel, OPNAV
- Mr. Allen Beckett, US Air Force

**Others:**

- Pete Potochney, OSD BRAC Office
- Alex Yellin, OSD BRAC Office
- Jay Berry, OSD Maintenance Policy, Programs and Resources
- George Kingsley, Defense Logistics Agency
- Steve Krum, NAVSEA
- COL Sarah Smith, OSD Maintenance Policy, Programs and Resources
- Catherine Schneider, DoDIG
- Maj. S. DuBois, HQMC
- Willie Smith, HQ AFSC
- CAPT William Porter, AT&L MA
- Mark VanGilst, HQ USAF/ILMM
- Mr. Dave Pauling, ADUSD (MR&MP)

Attachment 1



# ***IJCSG – Maintenance Subgroup***

## **Scenarios**

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- **MX-1.0 Minimize Sites**

- Scenarios (4)

- MX-1.1 Min Site using Workload - Total Capacity at 1.5 (60 hr week)
  - MX-1.2 Min Site using Workload – Max Capacity at 1.0 (40 hr week)
  - MX-1.3 Min Site using Workload - Max Capacity at 1.5 (60 hr week)
    - Min Site assessing Core - Max Capacity at 1.5 (60 hr week)
  - MX 1.4 Implement Fleet Readiness Center and min site
  - Implementation - Establish Joint Depot(s) (Based on results from Scenarios)

- **MX-2.0 Consolidate Intermediate Maintenance functions with same commodities**

- Navy Enabling Scenarios IM –E -001 through IM-E005

(56 Scenario Data Calls have been released as of 3 Dec 2004)

(5 Scenario Data Calls have been released as of 20 Dec 2004)

(9 Scenario Data Calls to be released as of 21 Dec 2004)



# IJCSG – Maintenance Subgroup

## Scenarios MX 1.1

Scenario ID #	IND JCSG Tracking #	Stakeholder (Service)	SDC To Services	DATA RECEIVED BY JCSG				DATA Problems	(Screen 9) COMMENTS (By SERVICE)
				ARMY	AIR FORCE	NAVY	DLA		
IND-0063	MX 1.1 A	AF, ARMY, NAVY	3-Dec-04	20-Dec-04			N/A	ARMY -(1) Screens" 3-6 Losing" worksheets missing; (2) Screen 5 worksheets (One-Time Losing and Gaining" had data but not inputted into Master Worksheet; (3) MILCON info nto broken down by Action #	ARMY - MILDEP Assumptions - included costs not captured
IND-0064	MX 1.1 B	ARMY	3-Dec-04	20-Dec-04	N/A	N/A	N/A	ARMY -(1) Screens" 3-6 Losing" worksheets missing; (2) Screen 5 worksheets (One-Time Losing and Gaining" had data but not inputted into Master Worksheet; (3) MILCON info nto broken down by Action #	ARMY - MILDEP Assumptions -Recertified data shows no maintenance workload
IND-0065	MX 1.1 C	ARMY, DLA	3-Dec-04	20-Dec-04	N/A	N/A		ARMY -(1) Screens" 3-6 Losing" worksheets missing; (2) Screen 5 worksheets (One-Time Losing and Gaining" had data but not inputted into Master Worksheet; (3) MILCON info nto broken down by Action #	ARMY - MILDEP Assumptions -Recertified data shows no maintenance workload
IND-0066	MX 1.1 D	AF, ARMY	3-Dec-04	20-Dec-04	20-Dec-04	N/A	N/A	ARMY -(1) Screens" 3-6 Losing" worksheets missing; (2) Screen 5 worksheets (One-Time Losing and Gaining" had data but not inputted into Master Worksheet; (3) MILCON info nto broken down by Action #	ARMY - MILDEP Assumptions -Nothing >\$1M; AF- No comment
IND-0067	MX 1.1 E	AF, ARMY, NAVY	3-Dec-04	20-Dec-04			N/A	ARMY -(1) Screens" 3-6 Losing" worksheets missing; (2) Screen 5 worksheets (One-Time Losing and Gaining" had data but not inputted into Master Worksheet; (3) MILCON info nto broken down by Action #	ARMY - MILDEP Assumptions -Nothing >\$1M
IND-0068	MX 1.1 F	AF, ARMY, NAVY	3-Dec-04	20-Dec-04			N/A	ARMY -(1) Screens" 3-6 Losing" worksheets missing; (2) Screen 5 worksheets (One-Time Losing and Gaining" had data but not inputted into Master Worksheet; (3) MILCON info nto broken down by Action #	ARMY - MILDEP Assumptions -Nothing >\$1M
IND-0069	MX 1.1 G	AF, NAVY	3-Dec-04	N/A	20-Dec-04		N/A	AF - Put contractor personnel numbers in Screen 3& 6 rather than Screen 9	AF- No comment

Army – Corrections due for 7 data calls  
 Air Force – Corrections for 1 data call; 3 data calls open  
 Navy – 4 data calls open  
 DLA – 1 data call open



# IJCSG – Maintenance Subgroup

## Scenarios MX 1.2

Scenario ID #	IND JCSG Tracking #	Stakeholder (Service)	SDC To Services	DATA RECEIVED BY JCSG				DATA Problems	(Screen 9) COMMENTS (By SERVICE)
				ARMY	AIR FORCE	NAVY	DLA		
IND-0073	MX 1.2 A	AF, ARMY, NAVY	3-Dec-04	20-Dec-04			N/A	ARMY -(1) Screens" 3-6 Losing" worksheets missing; (2) Screen 5 worksheets (One-Time Losing and Gaining" had data but not inputted into Master Worksheet; (3) MILCON info nto broken down by Action #	ARMY - MILDEP Assumptions - included costs not captured
IND-0074	MX 1.2 B	ARMY	3-Dec-04	20-Dec-04	N/A	N/A	N/A	ARMY -(1) Screens" 3-6 Losing" worksheets missing; (2) Screen 5 worksheets (One-Time Losing and Gaining" had data but not inputted into Master Worksheet; (3) MILCON info nto broken down by Action #	ARMY - MILDEP Assumptions -Recertified data shows no maintenance workload
IND-0075	MX 1.2 C	ARMY, DLA	3-Dec-04	20-Dec-04	N/A	N/A		ARMY -(1) Screens" 3-6 Losing" worksheets missing; (2) Screen 5 worksheets (One-Time Losing and Gaining" had data but not inputted into Master Worksheet; (3) MILCON info nto broken down by Action #	ARMY - MILDEP Assumptions -Recertified data shows no maintenance workload
IND-0076	MX 1.2 D	AF, ARMY	3-Dec-04	Not Recvd	20-Dec-04	N/A	N/A		AF- No comment
IND-0078	MX 1.2 F	NAVY	3-Dec-04	N/A	N/A		N/A		
IND-0079	MX 1.2 G	AF, NAVY	3-Dec-04	N/A	20-Dec-04		N/A	AF - Put contractor personnel numbers in Screen 3& 6 rather than Screen 9	AF- No comment

Army – Corrections due for 3 data calls; 1 data call open  
 Air Force – Corrections for 1 data call; 1 data calls open  
 Navy – 3 data calls open  
 DLA – 1 data call open



# IJCSG – Maintenance Subgroup

## Scenarios MX 1.3

Scenario ID #	IND JCSG Tracking #	Stakeholder (Service)	SDC To Services	DATA RECEIVED BY JCSG				DATA Problems	(Screen 9) COMMENTS (By SERVICE)
				ARMY	AIR FORCE	NAVY	DLA		
IND-0083	MX 1.3 A	AF, ARMY, NAVY	3-Dec-04	20-Dec-04			N/A	ARMY -(1) Screens" 3-6 Losing" worksheets missing; (2) Screen 5 worksheets (One-Time Losing and Gaining" had data but not inputted into Master Worksheet; (3) MILCON info nto broken down by Action #	ARMY - MILDEP Assumptions - included costs not captured
IND-0084	MX 1.3 B	ARMY	3-Dec-04	20-Dec-04	N/A	N/A	N/A	ARMY -(1) Screens" 3-6 Losing" worksheets missing; (2) Screen 5 worksheets (One-Time Losing and Gaining" had data but not inputted into Master Worksheet; (3) MILCON info nto broken down by Action #	ARMY - MILDEP Assumptions -Recertified data shows no maintenance workload
IND-0085	MX 1.3 C	ARMY, DLA	3-Dec-04	20-Dec-04	N/A	N/A		ARMY -(1) Screens" 3-6 Losing" worksheets missing; (2) Screen 5 worksheets (One-Time Losing and Gaining" had data but not inputted into Master Worksheet; (3) MILCON info nto broken down by Action #	ARMY - MILDEP Assumptions -Recertified data shows no maintenance workload
IND-0086	MX 1.3 D	AF, ARMY	3-Dec-04	20-Dec-04	20-Dec-04	N/A	N/A	ARMY -(1) Screens" 3-6 Losing" worksheets missing; (2) Screen 5 worksheets (One-Time Losing and Gaining" had data but not inputted into Master Worksheet; (3) MILCON info nto broken down by Action #	ARMY - MILDEP Assumptions -Nothing >\$1M; AF- No comment
IND-0087	MX 1.3 E	AF, ARMY, NAVY	3-Dec-04	20-Dec-04			N/A	ARMY -(1) Screens" 3-6 Losing" worksheets missing; (2) Screen 5 worksheets (One-Time Losing and Gaining" had data but not inputted into Master Worksheet; (3) MILCON info nto broken down by Action #	ARMY - MILDEP Assumptions -Nothing >\$1M
IND-0088	MX 1.3 F	AF, ARMY, NAVY	3-Dec-04	20-Dec-04			N/A	ARMY -(1) Screens" 3-6 Losing" worksheets missing; (2) Screen 5 worksheets (One-Time Losing and Gaining" had data but not inputted into Master Worksheet; (3) MILCON info nto broken down by Action #	ARMY - MILDEP Assumptions -Nothing >\$1M
IND-0089	MX 1.3 G	AF	3-Dec-04	N/A	20-Dec-04	N/A	N/A	AF - Put contractor personnel numbers in Screen 3& 6 rather than Screen 9	AF- No comment
IND-0090	MX 1.3 H	NAVY	3-Dec-04	N/A	N/A		N/A		
<b>MX 1.3+ CORE REQ</b>									
IND-0083	MX 1.3 Sup1	AF, ARMY, NAVY	20-Dec-04				N/A		
IND-0083	MX 1.3 Sup2	ARMY	20-Dec-04		N/A	N/A	N/A		
IND-0090	MX 1.3H Sup1	NAVY	20-Dec-04	N/A	N/A		N/A		

Army – Corrections due for 6 data calls

Air Force – Corrections for 1 data call; 3 data calls open

Navy – 4 data calls open

DLA – 1 data call open

Draft Deliberative Document – For Discussion Purpose Only

Do Not Release Under FOIA



# IJCSG – Maintenance Subgroup

## Scenarios MX1.4

Scenario ID #	IND JCSG Tracking #	Stakeholder (Service)	SDC To Services	DATA RECEIVED BY JCSG				DATA Problems	(Screen 9) COMMENTS (By SERVICE)
				ARMY	AIR FORCE	NAVY	DLA		
IND-0093	MX 1.4 A	AF, ARMY, NAVY	EST 21-Dec-04				N/A		
IND-0099	MX 1.4 K	NAVY	EST 21-Dec-04	N/A	N/A		N/A		
IND-0100	MX 1.4 L	NAVY	EST 21-Dec-04	N/A	N/A		N/A		
IND-0101	MX 1.4 M	NAVY	EST 21-Dec-04	N/A	N/A		N/A		
IND-0102	MX 1.4 N	NAVY	EST 21-Dec-04	N/A	N/A		N/A		
IND-0103	MX 1.4 O	NAVY	EST 21-Dec-04	N/A	N/A		N/A		
IND-0104	MX 1.4 P	NAVY	EST 21-Dec-04	N/A	N/A		N/A		

## **Industrial Joint Cross-Service Group (IJCSG)**

### **Meeting Minutes of**

**February 10, 2005**

Mr. Michael Wynne, Acting Under Secretary of Defense for Acquisition, Technology and Logistics, chaired the meeting. The list of attendees is at Attachment 1.

The Chairman opened the IJCSG meeting. The purpose of this meeting was to review further scenarios from each of the subgroups. Mr. Wynne said the IEC went well, and warned that the hardest part of the IJCSG's duties was still to come. He said the briefing to the Red Team was well received, the team liked the process, they liked the back room operations and they liked the scenario templates.

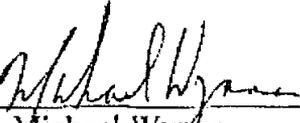
Mr Potochney briefed the post-May timeline and responsibilities of the IJCSG. He emphasized that the Commission will need support after 16 May and that the subgroups needed to think now about who was going to provide that support. Mr Wynne said that if the subgroups are running scenarios for the Commission then they will have to run the main scenarios and also any derivations to show cost savings and Military Value.

Mr. Motsek presented Munitions and Armaments. 13 of 15 recommendations based on 34 scenarios are complete. He said that analysis was continuing on non-operational storage/distribution sites. He discussed a community request for closure of Naval Weapons Station Concord. The IJCSG had determined early in the process that this was an operational base and had agreed to review as a potential wholesale distribution site. The analysis failed to turn up a need for its use as a wholesale site. After some discussion it was decided that the Navy should be advised of the Subgroup's determination and the installation should be remanded to the Navy for review as an operational installation.

Mr Beckett presented Maintenance. One candidate recommendation is being withdrawn because the data on which the recommendation is based was incorrectly reported and has since been corrected. Army and Navy cost data is being verified before the next three candidate recommendations can be briefed to the ISG.

RDML Klemm presented Shipyards. One of the candidate recommendations briefed to the ISG requires a change to PBD 702 in order to be viable. RADM Klemm presented a proposal to develop regional joint readiness centers (based on the Fleet Readiness Center concept) that would combine depot and intermediate level maintenance.

Approved: \_\_\_\_\_



Michael Wynne

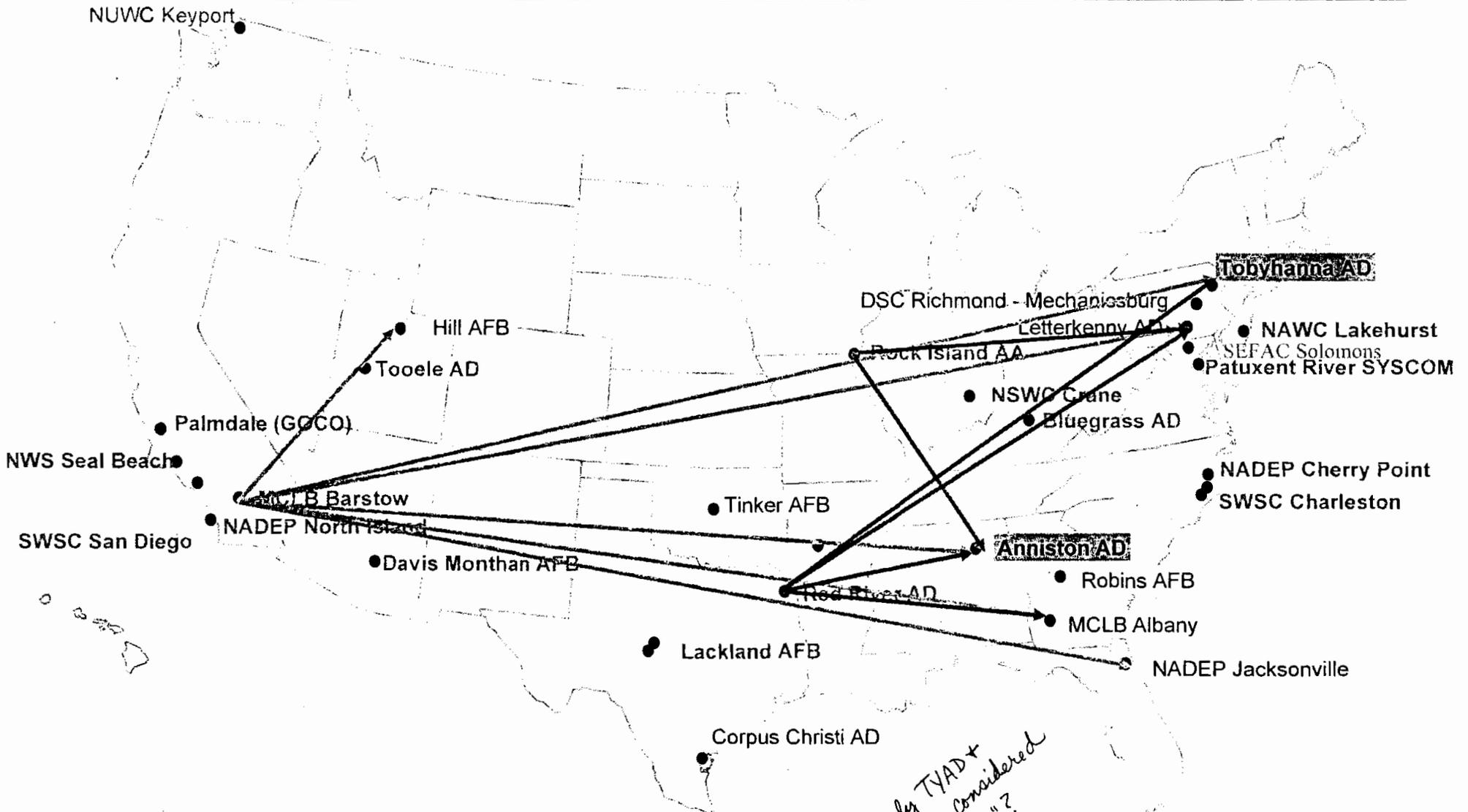
Chairman, Industrial Joint Cross-Service Group

Attachments:

1. List of attendees
2. Meeting presentations

# 28 Major DoD Depot Maintenance Activities

## Work Stations Utilized 60 Hours/Week – Maximum Capacity



*Why only TYAD + ANAD considered "Joint"?*

Joint Depot 



# Candidate # IND-0127 – Red River AD

## Candidate Recommendation

- Recommendation: Disestablishes depot maintenance functions at Red River AD, TX and realigns: Armament and Structural Components, Combat Vehicles, Construction Equipment, Depot Fleet/Field Support, Engines and Transmissions, Fabrication and Manufacturing, Fire Control Systems and Components, and Other to Anniston AD, AL; Construction Equipment, Powertrain Components, and Starters/Generators/Alternators to MLCB Albany, NY; and Tactical Vehicles to Tobyhanna AD, PA; Tactical Missiles and Tactical Vehicles to Letterkenny AD, PA.

### Justification

- Increases depot maintenance capability and capacity utilization.
- Supports the strategy of minimizing sites using maximum capacity at 1.5 shifts
- Supports further consolidation of workload into the Army's Centers for Industrial and Technical Excellence
- Eliminates over 900 thousand square feet of excess industrial space
- Eliminates 30% of duplicate overhead for all realigned workload
- Facilitates future increases in interservice workload

### Military Value

- Overall effect on average Military Value by commodity:
  - Armament and Structural Components increase from 16.85 to 17.46; Combat Vehicles increase from 37.81 to 44.28; Construction Equipment increase from 53.23 to 53.48; Depot Fleet/Field Support (Follower to Combat Vehicles); Engines and Transmissions increase from 46.95 to 49.66
  - Fabrication and Manufacturing increase from 12.90 to 15.82; Fire Control Systems increase from 14.89 to 18.87; Powertrain Components increase from 43.96 to 52.51; Starters/Generators/Alternators decrease from 43.12 to 39.14; Tactical Vehicles increase from 38.72 to 41.92; Tactical Missiles increase from 29.23 to 34.42
- Military judgment: Reduces depot infrastructure and costs. Increases Army and Joint depot utilization

### Payback

- One-time cost: \$93,457K
- Net savings during implementation: \$18,232K
- Annual recurring savings after implementation: -\$17,723K
- Payback time: 2 years
- NPV: \$-179,018K

### Impacts

- Criteria 6: 2929 Jobs lost (1752 Direct; 1177 Indirect); 4.3% of MSA
- Criteria 7: No impact
- Criteria 8: Potential impact on receiving communities.
  - Anniston, Letterkenny, may require Air Conformity Analysis
  - Possible increased noise impacts at Anniston, Letterkenny, Tobyhanna
  - Anniston may require a wastewater upgrade

- ✓ Strategy
- ✓ COBRA

- ✓ Capacity Analysis / Data Verification
- ✓ Military Value Analysis / Data Verification

- ✓ JCSG/MilDep Recommended
- ✓ Criteria 6-8 Analysis

- ✓ De-conflicted w/JCSGs
- ✓ De-conflicted w/MilDeps

**Industrial JCSG Meeting  
February 24, 2005**

**Attendees**

**Members:**

- Michael Wynne, Acting Undersecretary of Defense for Acquisition, Technology and Logistics
- RADM Klemm
- Gray Motsek, Deputy G3, Support Operations, Army Material Command
- Allen Beckett, Deputy Director of Maintenance, Deputy Chief of Staff for Installations and Logistics
- BGen Willie Williams, Director Logistics Plans and Policies, HQMC

**Alternates:**

- Frank O'Rourke, Defense Logistics Agency

**Others:**

- Dave Pauling, ADUSD OSD MPP&R
- Pete Potochney, OSD BRAC Office
- Alex Yellin, OSD BRAC Office
- John Desiderio, OSD BRAC Office
- Jay Berry, OSD Maintenance Policy, Programs and Resources
- George Kingsley, Defense Logistics Agency
- Steve Krum, NAVSEA
- Stu Paul, NAVAIR
- COL Sarah Smith, OSD Maintenance Policy, Programs and Resources
- COL Lou Neeley, Supply and Storage JCSG
- Mark VanGilst, HQ USAF/ILMM
- LtCol Jeff Brock, JS/J4
- Maj. S. DuBois, HQMC
- Shanna Poole, HQMC
- LtCol Walt Eady, JCS/J4
- Willie Smith, HQ AFSC
- COL Gerald Bates, AMC
- CAPT Porter, Mr Wynne's MA
- Douglas Ickes, DODIG
- Robert F. Prinzbach, DODIG

Attachment 1

## **Industrial Joint Cross-Service Group (IJCSG)**

### **Meeting Minutes of February 24, 2005**

Mr. Michael Wynne, Acting Under Secretary of Defense for Acquisition, Technology and Logistics, chaired the meeting. The list of attendees is at Attachment 1.

The Chairman opened the meeting. The stated purpose of this meeting was to review further scenarios from each of the subgroups. Mr. Wynne said the IEC fundamentally wants to start briefing SECDEF, briefing the principals first and then down the chain on the decisions rendered. He said the current timeline overview chart was insufficient and the IEC wants a new chart reflecting the timeline from January 2005 through September 2005.

He stated there were IEC concerns about items with negative returns (i.e., no payback in 21 years) based on an argument brought by Admiral Clark. Mr. Wynne said he explained to Admiral Clark that the situation was all about balance, but he understood the admiral's point. Mr. Wynne said he further explained that there are some scenarios that don't have payback, but would still be worthwhile. Also, adding memo entries for savings anticipated, but not part of the COBRA analysis is not captureable in BRAC sense, but it makes sense to identify. For instance, overseas cost savings can't be counted, only the cost of moving from overseas to CONUS (off-shore to on-shore).

Mr. Wynne suggested the IJCSG to turn their attention from offense to defense and form perimeters. Using an analogy, he stated a group can take a hill, but now other groups' also like that same hill. He said the defensive perimeters must be analytical and the IJCSG must have "Plan Bs" if the hill is taken.

Mr. Wynne noted that there was an attendee from the Supply and Storage JCSG because there is a collegial link with the IJCSG and some overlapping responsibilities.

Mr. Motsek presented Munitions and Armaments. For IND-0014 the sub-group is still looking at two pieces of information: (1) The state will offer a lease, and (2) The environmental issue of moving heavy chromium plating to Rock Island in the middle of the Mississippi River. The state EPA frowns on Rock Island doing any more plating because they are currently grandfathered for the small amount of non-heavy plating they are doing.

RADM Klemm presented Shipyards. A Pro and Con chart and backup charts were presented comparing IND-0055 and IND-0056 and giving the reasons for the sub-group's recommendation.

Mr. Beckett presented Maintenance. Mr. Wynne asked the sub-group to re-look at IND-0127 which showed a 28-year payback and think about the consolidation piece of the scenario. He asked that the sub-group think about whether a 28-year payback is realistic.

Referring to IND-0127A, Brig Gen Williams said the Marine Corps is concerned that the sub-group may not have captured true military readiness and military value based on a peacetime data capture. Mr. Wynne said the scenario has enormous payback quickly and asked everyone to look hard at the scenario. He said the Navy wants cuts, and perhaps the Marine Corps' and Army's excess capacity may just not be properly aligned.

*RRAD closure*

Referring to IND-0127B, Army Materiel Command has concerns about managing risk with 1.5 shifts. Mr. Wynne said that no one manages capacity at one shift except for the government. The number could just as easily be two or three shifts and weekends would be four. Mr. Motsek said that analytics show that you can manage risk at 1.5 shifts, but the results of GWOT say that the analysis is questionable. Mr. Wynne asked Mr. Motsek to get the arguments on both sides, because this is an argument/discussion that has to be aired, and Mr. Wynne won't feel that the IJCSG has done enough if there is no argument.

*Col  
Bates*

The six FRC scenarios were presented. Each scenario is separate and feeds into one large master scenario. Mr. Wynne said that FRC is now a strategy but the question is are all six scenarios contributors to the strategy or are does doing a single one of the six scenarios result in having to do the other five scenarios. If one of the six scenarios is a stand alone, it would be awful if that stand alone would need to be analyzed separately. He said Admiral Clark was very strident about doing stuff that didn't have payback. Mr. Wynne asked "Is each individual intermediate-level maintenance within each of the six FRCs a good decision?" Mr. Potochney said it would depend on how the recommendation was sent over and whether or not the COBRA data can be separated.

Mr. Wynne said the aggregate scenario looked good, but did the scenarios for each individual piece also look good? Mr Potochney said it depends on how to package the strategy to have recommendations on what the IJCSG is trying to do. Mr Potochney said that it was not necessary to run a COBRA on each individual site, only on the six FRCs, however the IJCSG needs to be prepared if the Navy or BRAC Commission want COBRAs on each individual site.

Mr. Wynne addressed the section of IND-0083 that would never have any payback, saying he had no quarrel with the outcome; however, the IJCSG must be prepared to face people with objective means to achieve the outcome. He said leadership must be able to confidently and credibly defend so that they are not embarrassed. He said the IJCSG must go down the line and know that within the cherries are a couple of lemons.

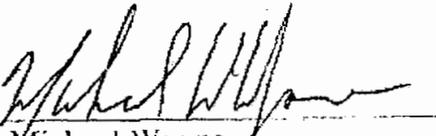
Mr. Wynne asked within all the FRC moves are there any fence line closures or is it all about realignment. The answer from the attendees was that there are no whole base fence line closures, but there will be closures of major maintenance activities.

Mr. Wynne then asked "So, Supply and Storage would have to effectively enable fence line closures. Mr. Beckett replied that the AF is closing and combining wings and not giving all the new wings back their intermediate-level maintenance facilities. The AF is setting up for blended wing maintenance.

*RRAD closure scenario*

Mr. Wynne said that IND-0127A and IND-0127B will continue forward through the ISG because the payback is very good and there doesn't appear to be any impact to military value though resources itself has military value. He wants the Army and Marine Corps to have the correct arguments from the Services at the ISG and will put on hold the IEC to vet out the arguments and adjudicate.

Approved: \_\_\_\_\_



Michael Wynne

Chairman, Industrial Joint Cross-Service Group

Attachments:

1. List of attendees
2. Presentation charts

**BRAC 2005  
Industrial Joint Cross-Service Group (IJCSG)**

**Meeting Minutes of April 14, 2005**

Mr. Michael Wynne, Under Secretary of Defense for Acquisition, Technology and Logistics, chaired the meeting. The list of attendees is at Attachment 1.

The Chairman opened the Industrial JCSG meeting by thanking everyone for their hard work. He stated that the Commission was already starting to work on their schedule and that they'll be asking questions on the procedures and processes of the JCSGs. Once the list of Candidate Recommendations is released the Commission can take up to six weeks to review them.

Mr. Sal Culosi was the first briefer. His topic was the additional savings from overhead that was not already addressed in the COBRA model or by the subgroups. A copy of the briefing is at Attachment 2. In the ensuing discussion, Mr. Culosi identified that GAO statements from previous BRACs show that overhead savings of 50% or more are realized. The following discussion on the subject then commenced:

*need this!*

Mr. Yellin – Mr. Culosi is correct that the consolidation could result in higher savings than what is captured in COBRA. From the last BRAC, information from the closing of 3 NADEPs, and all of the savings from previous BRACs document that the savings are higher.

Mr. Beckett – Why wasn't COBRA model changed to reflect the savings for consolidation?

Mr. Potochney – There are too many variables between the JCSGs to hardwire the COBRA model. The issue was left to the JCSGs to decide how to address and approach it.

Mr. Wynne – We need a factor that can be applied uniformly and conservatively across all of the JCSGs.

RDML Hugel – The methodology being used isn't based on certified data.

*} not certified data.*

Mr. Culosi – Correct. All overhead information has not been asked for in the BRAC process.

Mr. Beckett – The analysis and methodology presented is sound. However, the Commission may not support it because we didn't use certified data. It would be better supported if the GAO backs the process and OSD applies it across all JCSGs.

Mr. Wynne – Does the analysis include mission funded overhead.

Mr. Culosi – No.

*} BASOPs only ??*

Mr. Wynne – If you take the 30% factor and develop a factor against the total cost would that apply to mission funded?

Mr. Culosi – Mission funded would get a pass.

Mr. Wynne – We can't just use the factor for working funded, it must be uniformly applied. We should be able to use relational data that's available but we shouldn't be applying it here but not to others. Maybe apply a .9 factor to mission funded because they are more lean than working capital funded.

The Chairman then asked Mr. Culosi to validate his analysis and make the application applicable to all of the JCSGs. A discussion started on the data used for the analysis – the DMOIR (Depot Maintenance Operations Indications Report). The DMOIR is available for the larger depots but not the smaller, e.g. Lackland. The Chairman stated that the real issue was the smaller ones or "orphans" that must be taken care of. Mr. Pauling stated that they would take back the issue and give the analysis a re-look. He also stated that a decision on the issue wasn't going to be made during the meeting.

Mr. Beckett briefed Maintenance next. A copy of the briefing is at Attachment 3. In the recurring saving slide, the Chairman requested that a range for the annual recurring savings be presented, i.e. 3M – 5M, for the smaller sites such as Lackland. The issue with new data submitted from the Marine Corps was discussed and Barstow's recommendation was briefed last. Mr. Beckett stated that the new data was miss-categorized and Mr. Wynne agreed because there wasn't a MILCON request to build at Barstow. Mr. Wynne also commented that what we're getting is not fitting into the capacity that was reported. The Chairman then recommended that the JCSG be careful with the analysis so that the commission doesn't throw out the new data.

The Munitions brief was presented next by Mr. Motsek. A copy of the briefing is at Attachment 4. During the briefing, two slides were found to need corrections because they stated that the reduction in facilities was 56% and not the real 44% reduction. Mr. Potochney made a comment that slide 22 was a nice wrap up of the subgroup's results. He requested that all of the subgroups present similar information.

RDML Hugel briefed the Ship Repair subgroup's status last. A copy of the briefing is at Attachment 5. The Admiral started his brief by stating that New England could be hit hard from all of the Navy scenarios. He then briefed some changes that were made to IND-0019 and IND-0024 due to data updates. With the briefing of changes to candidate recommendations, the following discussion ensued;

Mr. Potochney – The changes to all candidate recommendations presented were for data changes and not conceptual changes?

Mr. Wynne – The recommendations are on the Secretary's desk. For changes, a slip sheet needs to be added to the package to identify the changes. This process should be used unless a

dramatic change is made to the recommendation. Each data update change to a recommendation does not need to go through the JCSG, ISC, etc. for concurrence.

Mr. Motsek – If the IEC has approved the process and the recommendation, then the data updates don't need to be re-briefed?

Mr. Potochney – The reasons for the data changes must be legitimate. However, significant changes must be re-briefed.

Mr. Wynne – The updated data must be reflected in the recommendations.

RDML Hugel then continued his brief with information on Portsmouth. The slide reflected the results with (red) and without (blue) the additional 30% in overhead savings. Additionally, the Admiral mentioned that the hiring numbers for Norfolk were reduced to leave more places for Portsmouth personnel to move into. The Chairman thought that this approach was a good idea.

A final discussion on the 30% overhead saving factor was reenergized with the Chairman reiterating that he wanted a factor that would be universal across all JCSGs. Mr. Pauling stated that his office would look at it again. At this point, the meeting ended.

Approved: \_\_\_\_\_



Michael Wynne

Chairman, Industrial Joint Cross-Service Group

Attachments:

1. List of attendees
2. Savings From Overhead Not Addressed In COBRA briefing
3. Maintenance Subgroup briefing
4. Munitions and Armament Subgroup briefing
5. Ship Overhaul and Repair Subgroup briefing

**Industrial JCSG Meeting**  
**April 14, 2005**  
**Attendees**

**Members:**

- Michael Wynne, Acting Undersecretary of Defense for Acquisition, Technology and Logistics
- RDML Mark Hugel, OPNAV, N43B
- Gray Motsek, Deputy G3, Support Operations, Army Material Command
- Allen Beckett, Deputy Director of Maintenance, Deputy Chief of Staff for Installations and Logistics
- Maj Gen Mary Saunders, Defense Logistics Agency
- BGen Willie Williams, USMC

**Alternates:**

- Shanna Poole, HQMC

**Others:**

- Dave Pauling, ADUSD OSD MPP&R
- Pete Potochney, OSD BRAC Office
- Alex Yellin, OSD BRAC Office
- John Desiderio, OSD BRAC Office
- Jay Berry, OSD Maintenance Policy, Programs and Resources
- George Kingsley, Defense Logistics Agency
- Frank O'Rourke, Defense Logistics Agency
- Steve Krum, NAVSEA
- Stu Paul, NAVAIR
- Don Fathke, NAVAIR
- COL Sarah Smith, OSD Maintenance Policy, Programs and Resources
- Mark VanGilst, HQ USAF/TLMM
- Don Lucht, AFMC
- Maj. S. DuBois, HQMC
- Willie Smith, HQ AFSC
- CAPT Porter, Mr Wynne's MA
- Douglas Ickes, DODIG
- Sal Culosi, LMI

Attachment 1



# Candidate # IND-0127B – Red River AD

**Candidate Recommendation (abbreviated):** Realign Red River as follows: Armament and Structural Components, Combat Vehicles, Construction Equipment, Depot Fleet/Field Support, Engines and Transmissions, Fabrication and Manufacturing, Fire Control Systems and Components, and Other to Anniston AD, AL; Construction Equipment, Powertrain Components, and Starters/Generators/Alternators to MCLB Albany, GA; Tactical Vehicles to Tobyhanna AD, PA and Letterkenny; and Tactical Missiles to Letterkenny AD, PA.

<u>Justification</u>	<u>Military Value</u>
<p><u>Payback</u></p> <ul style="list-style-type: none"> <li>■ One-time cost: \$248.301M</li> <li>Net implementation cost: \$135.967M</li> <li>Annual recurring savings: \$17.771M</li> <li>Payback period: 13 years</li> <li>20 Yr. NPV (savings): \$42.849M</li> </ul>	<p><u>Impacts</u></p> <ul style="list-style-type: none"> <li>■ Criteria 6: -2929 Jobs (1752 Direct; 1177 Indirect); 4.3%</li> <li>■ Criteria 7: No impact</li> <li>■ Criteria 8: Potential impact: Letterkenny is marginal for non-attainment of Ozone, exceeds PB and SO2.</li> </ul>

- ✓ Strategy
- ✓ COBRA

- ✓ Capacity Analysis / Data Verification
- ✓ Military Value Analysis / Data Verification

- ✓ JCSG/MilDep Recommended
- ✓ Criteria 6-8 Analysis

- ✓ De-conflicted w/JCSGs
- ✓ De-conflicted w/MilDeps



# Candidate # IND-0127B – Red River AD

## Additional Recurring Savings for Overhead

- **Candidate Recommendation (abbreviated):** Realign Red River as follows: Armament and Structural Components, Combat Vehicles, Construction Equipment, Depot Fleet/Field Support, Engines and Transmissions, Fabrication and Manufacturing, Fire Control Systems and Components, and Other to Anniston AD, AL; Construction Equipment, Powertrain Components, and Starters/Generators/Alternators to MCLB Albany, GA; Tactical Vehicles to Tobyhanna AD, PA and Letterkenny; and Tactical Missiles to Letterkenny AD, PA.
- Adds \$7.7M recurring savings starting in FY 08
- Payback from 13 to 8 years (Total Army closure 3 yr)

### Concerns

- This approach can not be used for all recommendations – consistency concern . Can be used on 3 of 11 recommendations
- Data not certified by Services

*Not certified data!*

<u>Payback</u>	
■ One-time cost:	\$248.301M
Net implementation cost:	\$135.967M
Annual recurring savings:	\$17.771M
Payback period:	13 years
20 Yr. NPV (savings):	\$42.849M
<u>Payback With Additional Overhead Savings</u>	
■ One-time cost:	\$248.301M
Net implementation cost:	\$105.131M
Annual recurring savings:	\$25.480M
Payback period:	8 years
20 Yr. NPV (savings):	\$146.314M



# #IND-0111: RED RIVER MUNITIONS CENTER

**Candidate Recommendation:** Realign Red River Munitions Center, TX. Relocate Storage, Demilitarization, and Munitions Maintenance functions to McAlester AAP, OK. Relocate Munitions Maintenance functions to Blue Grass Army Depot, KY.

<u>Justification</u>	<u>Military Value</u>
<ul style="list-style-type: none"> <li>✓ Capacity and capability for Munitions Storage, Demil, and Maintenance exists at numerous munitions sites.</li> <li>✓ Closure reduces redundancy and removes excess from the Industrial Base</li> <li>✓ Allows DoD to create centers of excellence, generate efficiencies and create deployment networks servicing all Services</li> </ul>	<ul style="list-style-type: none"> <li>✓ Red River: Storage/Dist 4<sup>th</sup> of 23; Demil 7<sup>th</sup> of 13; Maintenance 6<sup>th</sup> of 10</li> <li>✓ McAlester: Storage/Dist 1<sup>st</sup> of 23; Demil 3<sup>rd</sup> of 13; Maintenance 4<sup>th</sup> of 10</li> <li>✓ Blue Grass: Maintenance 1<sup>st</sup> of 10</li> </ul>
<u>Payback</u>	<u>Impacts</u>
<ul style="list-style-type: none"> <li>✓ One-Time Cost: \$113.68M</li> <li>✓ Net Implementation Cost: \$76.01M</li> <li>✓ Annual Recurring Savings: \$14.92M</li> <li>✓ Payback Period: 7 Years</li> <li>✓ NPV (savings): \$74.27M</li> </ul>	<ul style="list-style-type: none"> <li>✓ Criterion 6: -207 jobs (124 Direct/83 Indirect); 0.3%</li> <li>✓ Criterion 7: No Issues</li> <li>✓ Criterion 8: Historic, land constraints, and waste mgmt. No impediments.</li> </ul>

- ✓ Strategy
- ✓ Capacity Analysis / Data Verification
- ✓ JCSG/MilDep Recommended
- ✓ De-conflicted w/JCSGs
- ✓ COBRA
- ✓ Military Value Analysis / Data Verification
- ✓ Criteria 6-8 Analysis
- ✓ De-conflicted w/MilDeps

## **Industrial Joint Cross-Service Group (IJCSG)**

### **Meeting Minutes of March 3, 2005**

Mr. Michael Wynne, Under Secretary of Defense for Acquisition, Technology and Logistics, chaired the meeting. The list of attendees is at Attachment I.

The Chairman opened the meeting. The purpose of this meeting was to review further scenarios from each of the subgroups. Mr. Wynne said he will start looking hard at the items/issues previously passed over by the IJCSG.

Mr. Wynne said there will be a virtual IEC meeting on Thursday that will look at all issues of record for both major issues and philosophical issues. This is so the routine maintenance of the IEC doesn't take up all of the scheduled meeting time.

Mr. Wynne introduced RDML Mike Bachman, the new NAVAIR Vice Commander. RDML Bachman briefed his Joint Readiness Centers (JRC) proposal to the IJCSG. He stated, under this concept, depot maintenance is not performed in the confines of a physical depot. It is an Integrated Maintenance Concept (IMC) with depot artisans closer to the fleet.

RDML Bachman said it is not just about maintenance improvements, it is also about linking to Supply Chain Management in a pull model. JRC can be done, but it will take leadership and alignment across all services to make it work for the customer.

Mr. Wynne said even though there is benefit to the JRC construct, we need to sit back and look at customer flow and link customer flow back to maintenance work. JRC would be doing some good things; however, it may sub-optimize some Air Force and Army processes. Try to sell the philosophy (as done with the Navy) to the Air Force and Army and see what their construct of a JRC would look like. Look at the Air Force AEF (and collapsing backshops) construct and see how a JRC would affect Hill, Warner Robins, Kirtland, etc.

Mr. Wynne said the Navy deploys with two levels of maintenance on the carrier, but the Marine Corps can't do that, so we also need to look at the Marine Corps construct. RDML Bachman said the Marine Corps is convinced that if applied correctly and buffers are inserted and patterns are documented they can do pre-positioning and not have to move a huge footprint.

Mr. Beckett said, unlike the Navy, Air Force centralized intermediate capabilities don't deploy.

Mr. Potochney asked how the Working Capital Fund (WCF) would play and how different funding difficulties would be reconciled. RDML Bachman said they (the Navy) were starting to work through those issues with the Comptroller. Mr. Wynne stated that from his perspective, the WCF was more flexible. RDML Bachman said in the past that was true, but PBD 437 changed all that.

Mr. Wynne stated there is a possibility that labor rates in candidate recommendations may be used to strengthen some weaker ideas. There is a pretty consistent outcome, but still can't get comptrollers to agree on a methodology.

Mr. Pauling gave a presentation on a potential methodology to assess cost variability. Mr. Potochney said off-line calculations are allowed as long as they are documented as a footnote in the COBRA. Mr. Wynne instructed the group to find out where there are similar applications. Mr. Berry asked if there would be a problem if the data used is not certified. Mr. Potochney said that it is alright to deduce/make projections based on certified data.

Mr. Wynne asked what the IJCSG thought about the presentation since it "is a bit more esoteric than BRAC." He said, how conservative can we be to get some sense of this without going overboard. Could we go less wrong if we used 30 percent for overhead which is consistent with how we do indirect? Mr. Pauling said yes, that would be consistent. Mr. Potochney said it can be done as long as it is supportable, and Mr. Wynne said to use Mr. Pauling's briefing as support.

Mr. Berry said is 50 percent of indirect personnel acceptable according to the BRAC 95 Commission Report. Mr. Wynne said he doesn't mind criticism for being too conservative. Mr. Potochney said the new COBRA does include recap savings and the IJCSG doesn't want to double count savings and people/personnel billets. Mr. Pauling said he looked at the people and they are not being double counted, but he will continue to look at it.

Mr. Motsek said he wanted to figure out the math behind the presentation and data to be able to do the math. Mr. Wynne said okay, we have been criticized in the past and want to be conservative.

Mr. Wynne said use 30 percent and calculate the results. We need to see if we can apply this process consistently. He stated the process may also have application to other JCSGs. He asked Mr. Potochney to draft guidance that could be used by other JCSGs.

There was additional discussion relating to the timeframes for the consideration of the more controversial issues. It was concluded that many of the "hard issues" had been pushed to the right, but time was getting short and decisions would have to be made.

→ proposed  
RRAD closure

Mr. Motsek said there was a data issue IND-0127B derivative. The data tells you that you can close the installation, but in reality the workload says maybe not. He will work with the Army and the subgroup to resolve. The Marine Corps indicated they are reviewing their Core requirements based on OPlans and recent experience. It was suggested that if significant workload is transferred to an Army installation, joint management would have to be considered.

Approved: Michael Wynne  
Michael Wynne  
Chairman, Industrial Joint Cross-Service Group

Attachments:

1. List of attendees
2. Presentation Charts

**Industrial JCSG Meeting  
March 3, 2005  
Attendees**

**Members:**

- Michael Wynne, Acting Undersecretary of Defense for Acquisition, Technology and Logistics
- RADM Klemm
- Gray Motsek, Deputy G3, Support Operations, Army Material Command
- Allen Beckett, Deputy Director of Maintenance, Deputy Chief of Staff for Installations and Logistics
- Maj Gen Mary Saunders, Defense Logistics Agency

**Alternates:**

- Shanna Poole, HQMC

**Others:**

- RDML Bachman
- RDML Hugel
- Dave Pauling, ADUSD OSD MPP&R
- Pete Potochney, OSD BRAC Office
- Alex Yellin, OSD BRAC Office
- John Desiderio, OSD BRAC Office
- Jay Berry, OSD Maintenance Policy, Programs and Resources
- Maj John Greco III, Defense Logistics Agency
- George Kingsley, Defense Logistics Agency
- Frank O'Rourke, Defense Logistics Agency
- Steve Krum, NAVSEA
- Don Fathke, NAVAIR
- COL Sarah Smith, OSD Maintenance Policy, Programs and Resources
- COL Neeley, Supply and Storage JCSG
- Mark VanGilst, HQ USAF/ILMM
- Maj. S. DuBois, HQMC
- Brian Shanley, HQMC
- LtCol Walt Eady, JCS/J4
- Lt Col Jeff Brock, JCS/JF
- Willie Smith, HQ AFSC
- CAPT Porter, Mr Wynne's MA
- Douglas Ickes, DODIG
- Sal Culosi, LMI

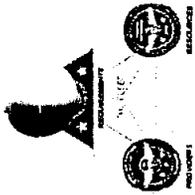
Attachment 1



# CAPACITY ISSUES

- Conflicts with DOD 4151.18H peacetime capacity guidance
- Assumes people are only constraint and that all shops have capacity for expansion
  - Equipment, tooling and facility constraints ignored
  - Existing multi-shift operations not considered
  - Assumes no artisan/skills constraint
- Navy analysis indicates
  - 1.5 shift operation with 50% increase in work will only yield 30% increased throughput with corresponding 20% increase in WIP





# ISSUES

- Capacity Assumptions – *not always valid* 
  - Critical to scenario – based on assumption all work currently at 1.0 levels
  - 1.5 not achievable in all areas without additional investment
  - Lacking investment, cycle time and readiness will be negatively impacted
- Geography – *not considered*
  - Maintenance location impacts response time and readiness
  - Moving Navy off waterfront will impact readiness
  - No base closures result from proposal (limited savings)
- Business model – *not considered*
  - Navy enterprise model achieves greater  savings and associated readiness benefit



# Candidate # IND-0127B – Red River AD

**Candidate Recommendation (abbreviated):** Realign Red River as follows: Armament and Structural Components, Combat Vehicles, Construction Equipment, Depot Fleet/Field Support, Engines and Transmissions, Fabrication and Manufacturing, Fire Control Systems and Components, and Other to Anniston AD, AL; Construction Equipment, Powertrain Components, and Starters/Generators/Alternators to MLCB Albany, NY; Tactical Vehicles to Tobyhanna AD, PA and Letterkenny; and Tactical Missiles to Letterkenny AD, PA.

<u>Justification</u>	<u>Military Value</u>
<p style="text-align: center;"><u>Payback</u></p> <ul style="list-style-type: none"> <li>■ One-time cost: \$194.098M</li> <li>■ Net implementation cost: \$82.409M</li> <li>■ Annual recurring savings: \$21.851M</li> <li>■ Payback period: 7 years</li> <li>■ 20 Yr. NPV (savings): \$124.195M</li> </ul>	<p style="text-align: center;"><u>Impacts</u></p> <ul style="list-style-type: none"> <li>■ Criteria 6: -2929 Jobs (1752 Direct; 1177 Indirect); 4.3%</li> <li>■ Criteria 7: No impact</li> <li>■ Criteria 8: Potential impact: Letterkenny is marginal for non-attainment of Ozone, exceeds PB and SO2.</li> </ul>

- ✓ Strategy
- ✓ COBRA

- ✓ Capacity Analysis / Data Verification
- ✓ Military Value Analysis / Data Verification

- ✓ JCSG/MilDep Recommended
- ✓ Criteria 6-8 Analysis

- ✓ De-conflicted w/JCSGs
- ✓ De-conflicted w/MilDeps

SRG Briefing # 31  
22 FEB 05



SECRETARY OF THE ARMY  
WASHINGTON



OCT 24 1992

MEMORANDUM FOR COMMANDER, U.S. ARMY MATERIEL  
COMMAND, 5001 EISENHOWER AVENUE,  
ALEXANDRIA, VA 22333-0001

SUBJECT: Designation of Centers of Industrial and Technical Excellence  
(CITE)

Based on authority of Title 10, United States Code (U.S.C.), Section 2474, I designate the following depot maintenance activities as CITEs:

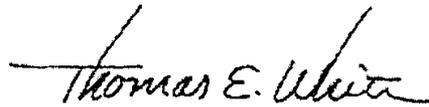
- a. Anniston Army Depot for combat vehicles (except Bradley), artillery, and small caliber weapons.
- b. Corpus Christi Army Depot for rotary wing aircraft (less Avionics).
- c. Letterkenny Army Depot for air defense and tactical missile ground support equipment (less missile guidance and control).
- d. Red River Army Depot for tactical wheeled vehicles, the Small Emplacement Excavator (SEE), Bradley Fighting Vehicle series, Multiple Launch Rocket System chassis, Patriot Missile recertifications, and for rubber products necessary for sustainment and support to the United States and Allied forces and agencies.
- e. Tobyhanna Army Depot for communications and electronics, avionics, and missile guidance and control.

I authorize and encourage each CITE to enter into public-private cooperative arrangements referred to in the statute as "public-private partnerships" to perform work related to the depot maintenance core competencies of the particular CITE. Depot operations will comply with all applicable law, to include Title 10 U.S.C. Section 2208

and Title 22 U.S.C. Section 2770. Further, depots will make their respective capabilities available to all interested contractors to avoid even the perception of exclusive teaming arrangements.

Section 2474(b)(3) requires a report to Congress evaluating the need for loan guarantee authority, similar to our loan guarantee program under Title 10 U.S.C. Section 4555, to facilitate the establishment of public-private partnerships and the achievement of the objectives set forth in Section 2474. Accordingly, the Commander, U.S. Army Materiel Command will take the lead in preparing and submitting this report to the Assistant Secretary of the Army for Acquisition, Logistics and Technology NLT 30 days upon receipt of this letter.

Additionally, the Commander, U.S. Army Materiel Command will notify the Assistant Secretary of the Army for Acquisition, Logistics and Technology, by written correspondence, of all current public-private arrangements NLT 30 days upon receipt of this letter.

  
Thomas E. White

## 31-May-05 Strength Report

TENANT ACTIVITY	CIVILIAN	MILITARY	NAF	TOTAL
UNITED STATES ARMY OCCUPATIONAL HEALTH CLINIC		10		10
ARMY MATERIEL COMMAND LOGISTICS LEADERSHIP CENTER		11		11
DEPARTMENT OF ARMY INTERNS		64		64
DEFENSE REUTILIZATION & MARKETING OFC		4		4
DEFENSE REUTILIZATION & MARKETING SERVICE		1		1
GENERAL SERVICES ADMINISTRATION		1		1
DOCUMENT AUTOMATION & PRODUCTION SERVICES		2		2
USA TEST MEASUREMENT & DIAGNOSTIC EQUIPMENT SUPPORT LABORATORY		10		10
DEFENSE FINANCE & ACCOUNTING SERVICE-INDIANAPOLIS, TECHNOLOGY SERVICES BRANCH 2		3		3
NON-APPROPRIATED FUND FINANCIAL SERVICES		53	158	53
NON-APPROPRIATED FUND - MORALE, WELFARE AND RECREATION & CIVILIAN PERSONNEL OFFICE			23	0
DEFENSE DISTRIBUTION DEPOT-RED RIVER		626	1	627
CORPS OF ENGINEERS		2		2
UNITED STATES ARMY RESERVE 90th REGIMENT SUPPORT COMMAND		1	4	5
RED RIVER MUNITIONS CENTER		111		111
CIVILIAN PERSONNEL ADVISORY CENTER		10		10
<b>TOTAL TENANTS</b>		<b>909</b>	<b>5</b>	<b>181</b>
				<b>914</b>

**Certified Data**  
**Questions 501, 503, 504, 506**  
**Red River Army Depot**  
**12 Commodity Groups**

Depot Level Commodity Groups	Question 501				Question 503				Question 504			Question 506			
	Total Capacity				Maximum Capacity				Core Capability			Total Organic Depot Maint Workload			
	FY03	FY04	FY05	FY09	FY03	FY04	FY05	FY09	FY03	FY05	FY09	FY03	FY04	FY05	FY09
Tactical Vehicles	294.2	665	665	665	437.4	789.7	789.7	789.7	23.8	500	500	277.6	483	345.8	345.8
Combat Vehicles	712.6	946	946	946	1060	1120	1120	1120	557.6	800	800	672.2	695.2	497.8	497.8
Construction Equipment	202.6	316.9	316.9	316.9	301.2	363	363	363	34.1	250	250	191.2	369.7	264.8	264.8
Engines/Transmissions	219.5	252.9	252.9	252.9	326.4	285.7	285.7	285.7	0	250	250	207.1	283.4	202.9	202.9
PowerTain Components	0.4	10.2	10.2	10.2	0.6	12.6	12.6	12.6	0	10	10	0.4	8.2	5.9	5.9
Staters/Altenators/Generators	6.2	2.2	2.2	2.2	9.2	2.4	2.4	2.4	0	2.5	2.5	5.9	2.4	1.7	1.7
Armament and Structural Componenets	7.1	16.8	16.8	16.8	10.6	20.6	20.6	20.6	0	12	12	6.7	12.9	9.2	9.2
Fire Control Systems and Components	5.3	3.6	3.6	3.6	7.9	4.4	4.4	4.4	0	3.5	3.5	4.7	2.9	2.1	2.1
Tactical Missiles	104.5	87.5	87.5	87.5	155.4	101.3	101.3	101.3	132	200	200	209	209	149.6	149.6
Fabrication And Manufacturing	190.4	308.3	308.3	308.3	283.1	345.5	345.5	345.5	135.8	200	200	334.5	404.1	289.4	289.4
Depot Fleet/Field Support	5.3	9.2	9.2	9.2	7.9	10.7	10.7	10.7	0	10	10	2.8	9.1	6.5	6.5
Depot Level Commodity Groups Other	100.4	41.8	41.8	41.8	149.3	44.9	44.9	44.9	60.7	50	50	94.8	59.6	42.6	42.6
<b>Total</b>	<b>1848.5</b>	<b>2660.4</b>	<b>2660.4</b>	<b>2660.4</b>	<b>2748.5</b>	<b>3100.5</b>	<b>3100.5</b>	<b>3100.5</b>	<b>944.0</b>	<b>2288.0</b>	<b>2288.0</b>	<b>2006.9</b>	<b>2539.5</b>	<b>1818.3</b>	<b>1818.3</b>

Red River Army Depot  
 Response to additional GAO questions  
 7 June 2005  
 Number of people (perm, OA, Contractors)

<b>TRMD</b>	
permanent	130
over allocated	16
<b>Total</b>	<b>146</b>

**Position Breakout**

<b>Grade</b>	<b>Position</b>	<b>total # in each position includes OA</b>	
GS 14	Director	1	
GS 13	Supervisory Eq Spec	4	1/OA
GS 12	Supervisory Eq Spec	12	
GS 11	Equipment Spec	36	1/OA
GS 11	Equipment Spec/Cal	1	OA
GS 11	Missile Prog Mgmt Spec	1	OA
GS 11	Management Analyst	1	
GS 9	Budget Analyst	1	
GS 9	Electronics Tech	26	
GS 9	Electronics Tech/Cal	2	
GS 9	Production Control	4	
GS 7	Supply Tech (office Auto)	1	
GS 7	Maint Parts Tech	1	
GS 7	Admin Asst	2	
GS 6	Admin Spt Asst	1	
GS 6	Secretary (Office Auto)	1	
GS 5	Secretary (Office Auto)	1	
GS 5	Supply Tech	1	OA
GS 4	Supply Clerk	1	
GS 4	Clerk	1	OA
WG 11	Electronics Mech	23	2/OA
WG 11	Electronics Mech/Painter	2	
WG 9	Painter	3	1/OA
WG 8	Electronics Worker	5	1/OA
WG 7	Matl Exam & Ident	5	4/OA
WG 5	Electronics Mech Hlpr	1	OA
<b>Sub Total</b>		<b>138</b>	
<b>Vacant</b>			
GS 11	Equipment Spec	3	1/OA
GS 9	Electronic Tech	5	
<b>Total</b>		<b>146</b>	

Red River Army Depot  
Response to additional GAO questions  
7 June 2005

**Bradley Transmissions**

permanent	20
term/temp	15
contractors	5
Total	40

**Rubber Products**

permanent	66
term/temp	23
contractors	26
Total	115

Red River Army Depot  
Response to additional GAO questions  
7 June 2005

Total Civilian Strength as of 31 May 2005	
RRAD	
permanent	1542
temp/term	1062
Total	2604

Currently **88 %** of the total LSI work force at the mobility center supports RRAD

How many people actually moved in BRAC 95 against the number of spaces/persons lost? **15.46%**

**RRMC** has 107 igloos that meet all security requirement for CAT I material storage facilities. Of these 107 igloos, they have 34 that contain CAT II material and 52 that contains CAT I material and 21 that are empty at this time.

## Response to GAO Questions

**Question: Reference unique, special, one-of-a-kind capabilities not found anywhere else within DOD.**

### **PRODUCTION LINES**

**Multiple Launch Rocket System (MLRS)** – Red River Army Depot is the Center for Industrial and Technical Excellence (CITE). Accordingly, RRAD is the only DoD site that is authorized and has performed depot level maintenance, overhaul, and remanufacture of the M993 carrier and M269 launcher.

RRAD's geographical proximity to Camden, AR, site of the Original Equipment Manufacturer, Lockheed Martin, is a distinct advantage and enabler for a successful public private partnership. In addition to the partnership with the Army Depot (RRAD), the Defense Logistics Agency's Defense Distribution Depot serves as the government acceptance point for all systems manufactured by Lockheed.

RRAD has successfully demonstrated technical competence on the full scope of the system and is considered the subject matter expert on the M270 system. Technical skills while generic in job title assignment (i.e. Heavy Mobile Equipment Mechanic, Electronic Integrated Systems Mechanic, etc.) are specialized and required extensive training and on the job experience to qualify as a MLRS subject matter expert. The knowledge and over 20 years of experience cannot be easily replaced. The gaining installation will incur a substantial learning curve to achieve the same level of competence.

Specialized equipment at RRAD in support of the program is as listed below. The equipment is not duplicated elsewhere in DOD.

- Hydraulic test stations
- Azimuth Drive test stand
- Elevation Actuator test stand
- Cage Alignment Fixture
- Transmission Ball Bore and Ball Bore Matching
- Transmission Dynamometer

Specialized facilities at RRAD in support of the program are as listed below.

- 12 degree slope

**Bradley Fighting Vehicle System (BFVS)** - Red River Army Depot is the Center for Industrial and Technical Excellence (CITE). Accordingly, RRAD is the only DoD site that is authorized and has performed depot level maintenance, overhaul, conversion, and remanufacture of the M2 and M3 BFVS.

RRAD has successfully demonstrated technical competence on the full scope of the system and is considered the subject matter expert on the M2 and M3 system. Technical skills while generic in job title assignment (i.e. Heavy Mobile Equipment Mechanic, Electronic Integrated Systems Mechanic, etc.) are specialized and required extensive training and on the job experience to qualify as a BFVS subject matter expert. The knowledge and over 20 years of experience cannot be easily replaced. The gaining installation will incur a substantial learning curve to achieve the same level of competence.

RRAD's relationship with United Defense L.P., the Original Equipment Manufacturer, is a model public private partnership. Over the last 2 years alone, RRAD and UDLP have partnered on numerous endeavors ranging from joint initiatives for installation of Blue Force Tracking in CONUS and OCONUS, development and proofing of engineering changes to improve system performance and survivability, plus direct support of each other's production lines. Currently, RRAD has personnel on site working on the UD production line and UD has personnel assigned to RRAD provide technical, engineering, and quality support.

The public private partnership between RRAD and UD is a model that demonstrates the success that can be achieved under a mutually beneficial relationship. Twelve contracts for execution in FY06 are currently in negotiation, valued at over \$50M. Contracts and work share arrangements with United Defense for FY05 were valued at over \$30M.

Specialized equipment at RRAD in support of the program is as listed below. The equipment is not duplicated elsewhere in DOD.

- Transmission Ball Bore and Ball Bore Matching
- Transmission Dynamometer
- Turret Collimator and Alignment Stand

Specialized facilities at RRAD in support of the program are as listed below.

- Vibration Isolation Foundation for the Optical Sight Alignment Tower and Turret Test Station

**Heavy Expanded Mobility Tactical Truck (HEMTT)** - Red River Army Depot is the Center for Industrial and Technical Excellence (CITE). Accordingly, RRAD is the only DoD site that is authorized and has performed depot level maintenance, overhaul, conversion, and remanufacture of the HEMTT.

The HEMTT is not just a simple generic tactical vehicle. It is complex and has multiple configurations. Because of the complexity of the system and the lack of available technical data (i.e. intellectual data and Technical Data Package belong to Oshkosh Truck Corporation) it took RRAD almost 2 years to overcome the learning curve and establish technical competency. However, RRAD has successfully demonstrated technical competence on the full scope of the system and is considered the subject matter expert on HEMTT. Man-hours have decreased by over 50% and the cycle time is down from over 100 days to less than 35. The gaining installation will have a similar challenge and will not be able to achieve the mandate for turn around in support of reset operations thus compromising unit readiness and Global War on Terrorism deployment schedules.

**HMPT Bradley Fighting Vehicle Transmission** – The Bradley transmission falls under the scope of the Center for Industrial and Technical Excellence for the Bradley Fighting Vehicle System. RRAD is the only authorized DoD site for repair/overhaul/remanufacture of the transmission. The transmission is a very complex piece of equipment, manufactured to aerospace standards. Tolerances are in the millionths of an inch and the slightest out of tolerance can and does cause catastrophic failure. Specialized processes, clean room environment with controlled temperatures, and computer assisted measurement equipment provide the capability to measure and match sets of balls and ball bearings for the hydraulic blocks. Extensive specialized training and on the job experience were required to establish the subject matter expertise to become proficient and achieve certification. Transferring the equipment does not transfer the knowledge.

Additionally, the process is certified in accordance with United Defense LP manufacturing standards by United Defense. As such, RRAD is providing transmissions in support of the in house production line, field service stocks, and is the provider of choice for United Defense's programs. RRAD is currently under contract with United Defense to provide transmissions for the 1<sup>st</sup> Cavalry Reset, Linebacker, and A3 production contracts.

Under the scope of the public private partnership, United Defense is investing corporate dollars into the RRAD facility and is also purchasing new equipment for use by RRAD. United Defense is also serving as the engineering lead for leaning out the production line and integrating new processes that will ultimately improve the reliability of the transmission. Equipment purchased by United Defense remains as property of United Defense and is not subject to transfer. Additionally, proprietary processes authorized for use by RRAD under the public private partnership remain the sole proprietary ownership of United Defense. Neither the equipment nor the processes are subject to transfer under the recommendation. Accordingly, it is feasible that the capability transferred to ANAD will not meet the requirements of the fleet and may never should United Defense and ANAD not agree to terms of a contractual relationship.

The transmission is the number 1 failure item and the number 1 cost driver for the Bradley. RRAD's capacity of over 100 transmissions per month combined with the capacity of the commercial sector does not meet the demand. Systems are continuously dead lined, non operational, because of the transmission. Even a temporary loss of the organic capability (during transmission) can and will have a far reaching effect on readiness.

Specialized equipment at RRAD in support of the program is as listed below. The equipment is not duplicated elsewhere in DOD.

- Transmission Ball Bore and Ball Bore Matching
- Transmission Dynamometer

**Rubber Products** - Red River Army Depot is the Center for Industrial and Technical Excellence (CITE). RRAD has the only capability within DoD for remanufacture of roadwheel and track. Furthermore, RRAD is the only source for new and remanufactured roadwheels for the M1 Abrams Main Battle Tank. No source other than RRAD, commercial or government is qualified. Therefore sustainment of readiness for the M1 fleet is totally dependent on the ability of RRAD to produce roadwheels.

The rubber products mission is an artisan type process. Utilizing state of the art denuding and vulcanization equipment RRAD artisans skillfully remove worn rubber and apply new rubber to metal surfaces. One secret to the success of RRAD is the rubber compound. It was developed in house and continues to be tweaked and refined to achieve improved wear characteristics and overall quality reliability.

Although, commercial firms have obtained the compound formula and have attempted to replicate RRAD's products, none have achieved success as evidenced by the fact that RRAD remains the sole qualified source for the M1 Abrams roadwheel.

Assuming every person in Rubber Products relocated with the mission (past BRAC actions indicate less than 50% will), relocation of the equipment or purchase of new equipment and stand up of a replicate capability does not guarantee the new site will ever achieve certification. Average cost per attempt at certification is approximately \$300K pass or fail.

As evidenced by the unsuccessful move of tire recapping from Tooele Army Depot to Red River Army Depot under BRAC 93, it is entirely possible a new site may never achieve certification. Even though the equipment and subject matter experts transferred to RRAD, after repeated attempts with no success, it was declared a failure. The equipment was taken down and the DoD lost its only tire recap capability.

Bottom line is DoD has not considered the potential catastrophic consequences of standing down and closing the RRAD rubber products operation. Readiness of the M1 Abrams and other combat systems are at risk and no mitigation is in place. This fact alone attests to the fact that all factors were not considered in the analysis and the JCSG was only focused on maximizing the opportunity for savings (\$\$) through a closure.

Specialized equipment at RRAD in support of the program is as listed below. The equipment is not duplicated elsewhere in DOD.

- Injection Molding Machines for roadwheels and track
- Compression Molding machines for roadwheels and track
- Pin Bushing presses for track
- Pin Insertion presses for track
- Fluidized Beds for denuding (removal of rubber) from roadwheel and track
- Rubber laboratory with capability for chemical compounding and analysis of stock rubber and completed roadwheel and track

**Patriot and HAWK Missile Recertification** - Red River Army Depot is the Center for Industrial and Technical Excellence (CITE). RRAD has the only capability within DoD for recertification and stock pile reliability testing of the Patriot and HAWK missiles.

The operation at RRAD is comprised of three distinctly separate, but linked activities; storage (>2,000 Patriot & >6,000 HAWK), explosive operations, and guidance section recertification. The entire operation is a certified process requiring extensive training, documentation, data collection, and quality audits. Additionally, all data collected is analyzed for fault trends to assess reliability and predict future failures.

The training required for certification of technicians is comprised of classroom and on the job training. For example, a journeyman electronics technician coming on to the program requires an average of 1,350 hours of classroom training prior to certification as a Patriot technician. Assuming that less than 25% of the RRAD employees are willing to transfer with the mission this is a substantial cost for the establishment of the capability at LEAD. Preliminary estimates are it will take up to 5 years for a new site to achieve the same level of technical proficiency as currently exist at RRAD.

Additionally, because the Patriot and HAWK are certified programs, the certification does not transfer with the program. LEAD will be required to establish capability, train the workforce, and demonstrate competency before being accredited with certification. The DoD and FMS customers may experience up to a 2-year delay in the planned recertification programs as a result of the transition. This raises the issue of the potential impact on readiness.

Specialized equipment at RRAD in support of the program is as listed below. The equipment is not duplicated elsewhere in DOD.

Patriot guidance section simulators and analysis test stations  
Patriot safe and arming test stations  
Patriot load/unload equipment  
HAWK guidance section simulators and analysis test stations

## Response to GAO Questions

**Question:** How will the recommendation affect the mission - workload performed at Red River and Anniston - Does Anniston have the capacity to take on Red River work - COBRA indicates that about \$160M in construction is needed - are they going to restore facilities or build new - what are their plans at Anniston?

**This is a four part question:**

**1. How will the recommendation affect the mission?**

The simple answer for Red River is that the mission goes away entirely under this closure recommendation. All existing functions within the confines of the boundaries of Red River cease. The existing mission of the entire defense complex is split and spread over seven different locations not counting the discretionary moves and the smaller tenant organizations that will be disestablished.

On a broader scale, the mission of **depot maintenance for the systems worked at Red River** will be affected tremendously. Red River has the only capability to sustain the current requirements of the war fighter. It will take years of transition planning and much construction before another site can be capable as Red River to perform at our current levels of quality, schedule and cost. There will be a period of Unmitigated Risk associated with this transfer of workload and capability. Red River has several unique overhaul missions that have never been performed by other sites, such as Bradley Fighting Vehicle Series (BFVS), Multiple Launch Rocket System (MLRS), Small Emplacement Excavator (SEE), Patriot Missile Recertification and Rubber Products for roadwheels and track.

**2. Does Anniston have the capacity to take on Red River work?**

The short answer is no. This is where you get into a philosophical discussion over Capacity versus Capability. Even if the number for Capacity indicates that there is sufficient room to move work into Anniston (which they don't) that is only half the story. The real measure of whether Anniston can accept the Red River work is the unique requirements necessary to be able to perform the work of a new capability. The uniqueness of the mission requires new construction, renovation and development of a new capability not already present at Anniston.

**3. Is Anniston going to restore facilities or build new?**

The answer from the Red River perspective is both. They will need to renovate some of the existing shops to accept the workload and in some cases such as Rubber it will require an entirely new start because of the unique requirements of that commodity. Anniston has not shared their plans with Red River at this time so this is somewhat conjecture on the part of Red River. However, we being the technical experts on the

workload under discussion know what the finite requirements entail. The \$160M figure could be a gross understatement of the actual cost. The recommendation for Anniston also shows they are receiving depot maintenance of combat vehicles and other equipment from Rock Island, depot maintenance of other components from Naval Weapons Station Seal Beach, and depot maintenance of engines, transmissions, other components and small arms from Marine Corps Logistics Base Barstow. Collectively, along with Red River workload this will be a challenge for Anniston.

**4. What are the plans at Anniston?**

Anniston has not shared their plans with Red River at this stage. We are in the early stages of developing the Implementation Plans and developing the finite costs associated with Implementation. Red River closure plans must matrix with the Anniston plan to ensure they can accept workload prior to work stoppage on this end.

## Response to GAO Question

**Question:** Discuss the concerns that base officials have with recommendation and its effect. For example the recommendation presumes that baseline depot work would be a 1 and ½ shifts workweek---What are Anniston's views on this concept? How does Anniston's plan to get additional personnel to do the added depot work— what is job market like?

**Response:**

Numerous questions remain regarding the recommendations for closure. Many are the result of insufficient, unclear, or unavailable supporting rationale or documentation being made accessible for review. **These questions include:**

1. Why was the IJCSG Maintenance sub-group's "*strategy to minimize sites*" rather than to maximize the near term readiness support to the soldier (IJCSG report, Chapter III, Analytical Approach, Section C, Scenario Development, page 24) through efficient and effective depot maintenance?
2. Why did the Maintenance sub-group deviate substantially from their stated parameters (IJCSG report, Chapter III, Analytical Approach, Section A, Capacity Analysis, pages 9, 12, and 13) of using DOD 4151.18H standards of one shift for 40 hours per week in order to develop arbitrary and capricious capacity standards of 1.5 shifts or 60 hours per week? Department of Defense policy instructions and guidance for the calculation of capacity and capacity utilization are contained in DOD 4151.18H, the DOD Depot Maintenance Capacity and Utilization Handbook, 24 January 1997 with supplements dated 30 September 1999 and 4 October 2001. In the handbook, a capacity figure indicates the amount of workload in Direct Labor Hours (DLH) that the installation can effectively produce annually on a single shift for 40 hours per week. By calculating capacity at other installations at 1.5 shifts or 60 hours per week, BRAC officials are making the assumption that a DLH of capacity at one installation translates into a DLH at another installation without regard for the capacity of individual common processes required across numerous and varied commodities—

painting, cleaning, paint preparation, etc. Limits and constraints for various common processes were not a visible consideration in the scenario developments that utilized the 1.5 shift parameter.

3. **If the Army's stated intent (Army Analysis and Recommendations, Volume III, Executive Summary, page 9 and Chapter 7.7, Materiel and Logistics, page 60) is to enhance the Centers for Industrial and Technical Excellence (CITE), then why does it openly disregard RRAD's CITE for tactical vehicles, BFVS, MLRS, Rubber Products, and Missile Recertification for Patriot and HAWK?**
4. **The Army's analysis (Army Analysis and Recommendations, Volume III, Appendix A, Section 2.4.6.1 Depot Maintenance, pages A-86 and A-87 and Table 59) of depot maintenance capacity IAW the DOD handbook based on current DLH workload states there is "20 percent excess across the Army, but there is 8 percent shortage at Red River Army Depot." Under the surge category, it reports that "the Army's goal for its five principal depots is a workload of 85 percent capacity based on one shift, eight hours per day, and five days per week. The remaining 15 percent is available to meet surge requirements." Considering the Army needs 15 percent capacity for surge requirements, why close any Army depot when ONLY 20 percent exists among all depot maintenance facilities according to Table 59? The Navy's capacity analysis examination of depot maintenance (Volume IV, Chapter 4, page 28) concluded two functions "demonstrated either little or no excess capacity" that "ranged from 12 percent to 44 percent". Why did Army not arrive at a similar conclusion with only 20 percent excess capacity on a standard work week schedule of 40 hours scenario?**
5. **In speaking of surge requirements and Military Value Criterion 3 or DOD Policy Memorandum Seven (Volume 1, Part 1 of 2, Appendix E, page E-113), the Army's stated parameter for surge (IJCSG report, Section 1, Depot Maintenance function, Surge requirement, page 10) is to progress from the standard "peacetime operations based on 40 hours per week while the wartime operations are based on a 60 hour workweek". By permitting 1.5**

shifts for generating max capacity as stated in #2 above to accommodate workload relocated from other sites, the IJCSG has commandeered the capacity allocated for surge requirements. In order to meet the expressed surge parameter, gaining installations would need to exhibit capacity increases of 120% from current standard work hours (40 hours to 60 hours to 90 hours).

6. The Army analysis (Army Analysis and Recommendations, Volume III, Appendix B, Military Value, Section 3.3 Unique Capabilities, page B-13 and Table 9) removed from consideration in the Military Value Portfolio (MVP) “installations with unique capabilities” and “the Army added a special constraint with a requirement to keep the unique installation. These unique capabilities were identified by the TABS Group subject matter experts in coordination with the JCSG.” Why was RRAD not considered a “unique capability” for M1 roadwheel manufacturing, Patriot recertification, and Bradley transmission Ball Bore matching?
7. What rationale did officials use to generate the conclusion that closure of a facility produces savings of “thirty percent in duplicate overhead costs”?

Obtain views from base and community officials on the economic impact of the recommendations of the local community

## TOTAL DEFENSE COMPLEX

CITY	ST	SALARY	AVG # EMPS	CENSUS BUREAU 2003 POP	PER CAPITA INCOME
TEXARKANA	TX	\$49,608,747.56	798	35,199	\$1,409.38
NEW BOSTON	TX	\$37,694,334.98	613	4,633	\$8,136.05
HOOKS	TX	\$17,726,258.51	301	2,935	\$6,039.61
DE KALB	TX	\$17,624,841.60	286	1,781	\$9,896.04
TEXARKANA	AR	\$16,529,165.83	278	28,900	\$571.94
MAUD	TX	\$7,698,346.07	128	1,018	\$7,562.23
WAKE VILLAGE	TX	\$6,039,244.59	97	5,181	\$1,165.65
NASH	TX	\$5,783,782.86	91	2,180	\$2,653.11
SIMMS	TX	\$5,534,718.31	90		
ATLANTA	TX	\$4,350,099.11	68	5,606	\$775.97
AVERY	TX	\$4,157,956.90	62	448	\$9,281.15
REDWATER	TX	\$3,167,580.71	58	882	\$3,591.36
FOREMAN	AR	\$2,784,405.65	43	1,086	\$2,563.91
ASHDOWN	AR	\$2,645,972.77	43	4,662	\$567.56
FOUKE	AR	\$2,265,512.39	37	844	\$2,684.26
QUEEN CITY	TX	\$2,259,044.48	38	1,586	\$1,424.37
CLARKSVILLE	TX	\$1,770,408.03	28	3,699	\$478.62
NAPLES	TX	\$1,750,628.85	29	1,426	\$1,227.65
ANNONA	TX	\$1,110,723.01	18	270	\$4,113.79
ATLANA	TX	\$862,300.01	22	5,606	\$153.82
LINDEN	TX	\$792,215.06	12	2,198	\$360.43
BLOOMBURG	TX	\$737,099.00	11	371	\$1,986.79
WINTHROP	AR	\$684,791.75	11	183	\$3,742.03
OMAHA	TX	\$672,164.85	12	981	\$685.18
MT PLEASANT	TX	\$649,816.38	11	14,266	\$45.55
HOPE	AR	\$627,555.76	10	10,453	\$60.04
PITTSBURG	TX	\$523,893.02	7	4,370	\$119.88
LEESVILLE	LA	\$495,073.35	5		
DOUGLASSVILLE	TX	\$481,380.78	8		
HORATIO	AR	\$438,124.81	6		
APO	AE	\$409,246.65	13		
HAWORTH	OK	\$399,075.01	6		
DE QUEEN	AR	\$326,711.03	6		
BROKEN BOW	OK	\$323,948.64	5		
BIVINS	TX	\$308,012.24	5		
MARIETTA	TX	\$292,719.35	6		
OGDEN	AR	\$265,926.51	4		

COOKVILLE	TX	\$261,419.12	4
FULTON	AR	\$233,542.15	4
LOCKESBURG	AR	\$219,219.41	3
BOGATA	TX	\$205,365.98	3
IDABEL	OK	\$195,430.37	3
LEWISVILLE	AR	\$180,862.39	2
DETROIT	TX	\$170,100.25	1
DAINGERFIELD	TX	\$168,481.61	3
SLAGLE	LA	\$161,811.19	2
STAMPS	AR	\$159,169.47	2
SHIRLEY	AR	\$154,898.49	1
NASHVILLE	AR	\$152,446.77	3
SHREVEPORT	LA	\$150,452.57	2
GENOA	AR	\$145,940.30	3
DODDRIDGE	AR	\$142,441.72	3
GARLAND CITY	AR	\$135,575.44	3
MINERAL SPGS	AR	\$132,276.96	2
MOUNT VERNON	TX	\$130,641.98	2
WASHINGTON	AR	\$128,453.34	2
KILLEEN	TX	\$128,118.38	1
MC LEOD	TX	\$126,661.56	2
MT VERNON	TX	\$120,278.12	2
ANACOCO	LA	\$116,103.56	2
PINEVILLE	LA	\$115,471.87	1
Wilton	AR	\$115,293.10	3
TYLER	TX	\$112,564.51	2
COPPERAS COVE	TX	\$104,710.39	1
CASON	TX	\$100,702.84	2
MERRYVILLE	LA	\$100,290.39	1
SAN ANTONIO	TX	\$99,154.49	2
LONGVIEW	TX	\$96,118.95	1
PRESCOTT	AR	\$90,574.86	2
HORNBECK	LA	\$88,657.88	1
ALBA	TX	\$82,486.26	1
NEWLLANO	LA	\$81,917.61	1
WILMINGTON	NC	\$78,931.88	1
COUSHATTA	LA	\$78,382.01	1
POWDERLY	TX	\$73,690.54	1
BAGWELL	TX	\$73,679.43	1
LINDALE	TX	\$73,323.71	1
AVINGER	TX	\$72,635.49	2
IDA	LA	\$71,976.77	1
WHITE OAK	TX	\$69,192.20	1
BOSSIER CITY	LA	\$69,053.70	1
FLINT	TX	\$68,668.15	1
TAYLOR	AR	\$66,846.52	1
ALLEENE	AR	\$65,858.85	1
MARSHALL	TX	\$65,781.19	1

CARTHAGE	TX	\$64,759.20	1
FOREST HILL	LA	\$63,647.00	1
SALEM	AR	\$61,429.90	1
LONE STAR	TX	\$60,721.63	1
OZAN	AR	\$59,337.65	1
BEN LOMOND	AR	\$59,117.87	1
ROWLETT	TX	\$57,941.67	1
ADA	OK	\$57,096.04	1
GRAND PRAIRIE	TX	\$55,808.96	1
GRANNIS	AR	\$55,514.57	1
STUART	OK	\$55,225.26	1
TOM	OK	\$51,503.10	1
ROYSE CITY	TX	\$51,498.53	1
VALLIANT	OK	\$49,999.63	1
HINESTON	LA	\$48,995.66	1
PARIS	TX	\$44,860.70	1
WALDO	AR	\$43,640.52	1
GAITHERSBURG	MD	\$42,592.57	1
HUGHES SPGS	TX	\$39,411.06	1
Saratoga	AR	\$37,649.38	1
HURST	TX	\$37,298.04	1
SCROGGINS	TX	\$35,935.34	1
WINNSBORO	TX	\$26,631.13	1
SAN DIEGO	CA	\$23,987.86	1
MCASKILL	AR	\$21,478.93	1
GLADEWATER	TX	\$18,915.00	1
OKOLONA	AR	\$15,500.27	1
OXFORD	AL	\$14,391.15	1
FORT SMITH	AR	\$11,268.21	1
GARLANACITY	AR	\$10,755.35	1
SHAWNEE	OK	\$8,987.64	1
MAGNOLIA	AR	\$8,272.35	1
PRINCETON	LA	\$6,095.44	1
MAUDE	TX	\$5,440.69	1
WHITE HALL	AR	\$4,042.70	1
SUBTOTAL		\$206,937,232.14	3,388
LSI		\$13,524,330.96	357
OTHER		\$35,612,000.00	614
<b>TOTAL</b>		<b>\$256,073,563.10</b>	<b>4359</b>

Figures do not include LSAAP, Camp Stanley and Military

## Response to GAO Question

**Question: What environmental clean-up issues are created by the recommendation, i.e. what, where, how long will it take, and costs?**

1. The Resource Conservation and Recovery Act (RCRA) is the regulation for environmental restoration/clean-up actions at Red River Army Depot (RRAD), enacted by the laws of the State, and enforced by the Texas Commission on Environmental Quality (TCEQ). These regulations (Compliance Plan #50178) are the environmental drivers that require RRAD to conduct investigations to identify any release or potential release of any hazardous materials. Closure of RRAD will accelerate these requirements in order to return parcels of property to a Local Reuse Authority.
2. The data call was requesting a list of environmental actions, the estimated cost, and the locations requiring action to close RRAD with the assumption that the facilities would be returned to a Local Reuse Authority. It is also assumed that an Environmental Baseline Study (EBS) would be completed and what the EBS would show as environmental concerns. Areas of concerns were identified and cost estimates were applied. Locations were identified based on the type process conducted in the past/present and the potential environmental concern. Also, estimated cost were based on the steps required to accomplish clean closure, Remedial Investigation (RI) to determine rate and extent of contamination, Remedial Design (RD) to design a plan of action to clean-up to a regulated standards, Remedial Action Construction (RAC) to let a contract to remove/remediate, and potential Long Term Monitoring (LTM), i.e. ground water monitoring.
3. The OB/OD area is based on historical records and that above ground demolition of ordnance took place at this site; therefore the entire area would require RI for UXO and heavy metal contamination. The 701 igloos will require radiological and other contamination analysis to determine rate and extent of any containment. The cost estimates for de-con noted in the spreadsheet are based on actual cost from Ft. Wingate Depot Activity, NM to de-con their 724 igloos.
4. The Military Munitions Response Program Sites (MMRP) costs are estimates based on a cost estimating program, RACER. These surveys were just completed and will become a part of our Installation Action Plan but, must be accelerated due to closure.
5. Disposal of any un-used hazardous waste after closure is listed and cost derived from actual line item cost in RRAD's disposal contract.
6. De-con of buildings and equipment costs were derived from a recent contract to de-con 6,375 sq. feet at building 493 and applied with some assumptions to area and size.
7. Attached along with this memo is a spreadsheet showing closure cost.
8. POC for this information is Don Moore, extension 4007.

## Environmental Spreadsheet



TAB A

### **GAO Visits to Closing or Realigning Installations**

**Question: Are there other major DOD and non-DOD tenants on the base and what are their concerns and alternate plans?**

**DLA Response:**

As has been the case in previous BRACs, and remains the case this round, DLA's position is if the installation on which they reside is slated for closure, they too will follow suit with their collocated distribution site. As result, there are no alternate plans under consideration. Yet, we are concerned that the required support to our customers, on and off base, does not diminish or impact their operations or readiness. We are attending a DLA Implementation Planning Conference, June 6-8, 2005 that will address these issues and lay the foundation for implementation and continued support throughout the timeline for closure.

## GAO Visits to Closing or Realigning Installations

### **RRMC Response:**

**Questions: Are there compelling reasons why base should be left open or realigned?**

**We believe that RRMC should be left open for the following reasons:**

1. The Army plans to move the storage and maintenance from RRMC and LSAAP to McAlester AAP and Blue Grass AAP. The plan also moves the weapon/cluster bomb function and missile warhead production from Kansas AAP to MCAAP which will require additional storage space. The plan also moves the demil function from RRMC, LSAAP, and Sierra AAP to MCAAP – which will require additional storage space. While the BRAC data shows that MCAAP’s excess capacity is 38%. JMC has confirmed that storage occupancy has increased for MCAAP and Blue Grass to 90% (5% over their desired level) at MCAAP – and 97% for Blue Grass Army Ammunition Plant. Since the BRAC data was gathered, both of these locations have shown a significant increase in storage occupancy. It is our contention that neither MCAAP nor Blue Grass will be able to store all of ammunition items that are proposed to be sent to them. Since RRMC is already on MCAAP’s TDA, by leaving RRMC open, we can provide additional storage capacity that MCAAP needs to facilitate the acceptance of the items proposed by BRAC.

2. Additionally MCAAP has only three CAT I and 47 CAT II igloos. RRMC currently has 107 CAT I and II igloos – of that 82% are currently occupied and would require an estimated 88 CAT I/II igloos at MCAAP. By leaving RRMC open, the need for these additional igloos at MCAAP will be eliminated. (NOTE: CAT I and CAT II igloos require IDS systems installed in each igloo as well as additional separate fencing, lighting, and dual locking systems.)

- **Are there unique, special, one-of-kind capabilities about the activity not found elsewhere?**

- RRMC has the only Chaparral Missile facility in the United States – and our people are only ones with the expertise to maintain this missile system. AMCOM has made a ten-year commitment to FMS customers to provide support and maintenance. This

facility (including a 100,000 Class Clean Room) will have to be duplicated somewhere, the equipment dismantled and moved, restructured, and the expertise regained.

- **What environmental clean-up issues are created by the recommendation, i.e. what, where, how long will it take, and costs?**

There are extensive clean-up issues for Red River Munitions Center that have been addressed by Red River Army Depot.

- **Are there other major DOD and non-DOD tenants on the base and what are their concerns and alternate plans?**

1. Department of the Army – BRAC 2005 – Analyses and Recommendations (Page A-88 and A-89)

Table 61 – Ammunition Storage lists the Army assets, requirements, and excess.

However, the Army included six installations that are closing when they figured their assets. They will not have these assets if they close them. This will drastically reduce the amount of excess capacity that the Army reported. The goal of JMC is to be at 85% capacity (page A-89). Anything above the goal should not be included in excess capacity. In addition, when determining excess ammunition storage space, additional security requirements such as CAT I and CAT II and explosive compatibility issues were not considered. There is also no indication where the retrograde that is currently in Iraq and Afghanistan will be stored when the war is over.

2. In addition to the prior concerns listed, we have Spartan Rocket Motors that cannot be demilled and cannot be moved. We have been actively pursuing this issue for many years with the only decision being that they cannot be moved and cannot be demilitarized. In fact, there are concerns about whether the motors are even stable enough to be tested. This issue is presently being worked by ARDEC at Redstone.

2. In determining excess ammunition storage space, additional security requirements such as CAT I and CAT II and explosive compatibility issues were not considered.

- **What recent investment has been made to the facilities? – What has the base done to improve facility infrastructure?**

1. Improve Lightning Protection System - \$310,000
2. Improve roads, rail, expand two existing outloading pads, and fabricated six Patriot storage sheds – \$8.25M
3. Upgrade and improve earth covered igloos – \$1.2M
4. Outloading Pad adjacent to CAT I storage – \$900,000
5. Upgraded shipping and receiving station – \$98,000
6. Converted missile facility from diesel to natural gas and repaired roof - \$130,000
7. Upgraded storage facilities - \$127,000
8. Paved parking and electrical upgrade at surveillance workshop - \$60,000

- **Is there any significant MILCON planned or started with FY 05 funds— what’s being built and how costly. Is the base expecting to request FY 06 MILCON funds or in POM outyears?**

Administrative Building for RRMC - \$500,000

- **Discuss feasibility of closure/realignment timeframe—identify circumstances that could cause delays.**

Storage availability at receiving site

**Obtain specific data below from appropriate base officials (managers, budget personnel, and/or administrators:**

- **obtain actual and authorized number of civilians and military personnel for FY 2004**

FY04 – Civilians - 123

- **obtain current personnel status as of 4/30/05 ( actual and authorized number of civilians and military)**

Authorized – 115

Actual - 107

- **major one-time costs/savings**
- **unknown**



8 GAO question.xls

TAB B

**Question: Is there any significant MILCON planned or started with FY 05 funds—what's being built and how costly. Is the base expecting to request FY 06 MILCON funds or in POM out years?**

**Response:** Red River is currently working with the USACE, Ft. Worth District on the design of a project titled Maneuver Systems Sustainment Center, a complex which will house all Tactical Wheeled Vehicle Depot Maintenance operations. That design is currently at the 60% completion level with the intent to complete all design work and have the project available for contract announcement by the first quarter of FY06. The construction funds for this project (\$49 M) are currently identified in the FY09 FYDP. Capital equipment requirements for this project (\$12.1 M) are currently identified in the FY06 CIP listing.

This is a modernization project and is not required to accomplish current, planned or any future workload.

There are no other significant MILCON projects started or planned for FY05/06 at RRAD.

## Response to GAO Question

**Question: (If applicable) How many DOD-provided housing units have been privatized? For privatized housing, what are the developer's future plans? Is DOD leasing the land to the developer? N/A**

## Response to GAO Question

**Question: Are there any termination fees that might apply to utility services, BOS contracts, housing privatization, etc?**

Yes, there are possible termination costs for the Wet (water) and Electric contracts. FAR 52.241-10, Termination for Liability and FAR 52.249-2, Termination for Convenience is applicable to the Wet contract. FAR 52.241-10, Termination for Liability and FAR 52.249-4, Termination for Convenience is applicable to the Electric contract. A dollar determination cannot be made at this time.

## GAO visits to Closing or Realigning Installations

**Question:** Discuss Feasibility of closure/realignment timeframe - identify circumstances that could cause delays.

**Discussion:** The BRAC legislation states that you must start the actions to accomplish the recommendation within the first two years after passage of the law and that it must be completed within six years of passage of the law. The Army has directed and has posted that their goal is to close all sites that are announced for closure within four years. Red River can unequivocally state that this cannot be accomplished in four years and there is some question whether it can be done within six years. This statement is made with no consideration given to the environmental cleanup phase.

The most apparent thing that could cause a delay, to those within DOD, is the fact that we are in the middle of a conflict, working to sustain the Warfighter with no end in sight. The Red River level of production and requirements have only increased in the last three years. Red River workload has tripled from FY02 of 1.3M direct labor hours to 4.1M direct labor hours in FY05. Current budget and workload requirements indicate that we will have a workload equal to or greater than our current FY05 workload. The Global War on Terrorism (GWOT) is real and it takes time and money to mitigate the risk while we are in the process of taking down and moving capabilities.

The analysis that has been run to support BRAC is using very dated data. It goes all the way back to FY03 as a baseline for this analysis. The truth changes as we move through time. Transitioning during a time of conflict presents a whole new set of logistic considerations that are not apparent in a number crunching drill, such as the analysis that has just been completed.

Our rubber products operation, that is designed to rebuild roadwheel and track, was embedded in the manufacturing and fabrication commodity during the data calls for BRAC. The analysis looked at bulk labor hours with no consideration for the unique work that is embedded within those hours. Not just anybody can qualify and provide rubber that meets specifications. If it were that easy, there would be multiple sources for all of the rubber components necessary to maintain the fleets. Just building a new facility does not put it on the qualified provider's list. Their processes must be qualified through rigorous testing. The private sector has not been able to accomplish this after many years of failure and a lot of sunk costs on their part. Red River is currently the only source in the entire world for Abrams M1 roadwheels. There is no other source. If this capability is interrupted, the ability to sustain the warfighting fleet is greatly diminished. To mitigate the risk of that happening it is imperative that Anniston build an entire new facility, establish their processes, and qualify their product before any consideration can be given to taking down the capability at Red River. There is a distinct possibility that Anniston can never qualify their processes just as the private sector has never been able to do. Without some intervening circumstances this part of the mission may never reach a point that it can transfer.

## Response to GAO Question

**Question: Discuss any issues concerning property transfer, i.e. lease from state, permit to use, special deed considerations.**

We have seven cemeteries located on RRAD property. They total about 1.26 acres of land.

## Response to GAO Question

**Question: Obtain specific data below from appropriate base officials (managers, budget personnel, and/or administrators:**

Obtain actual and authorized number of civilians and military personnel for FY 2004

- Civilian

Authorized	1,745
Actual Organic	1,966
Actual Contract Labor	461
- Military

Authorized	6
Actual	3

Obtain current personnel status as of 4/30/05 (actual and authorized number of civilians and military)

- Civilian

Authorized	2,246
Actual Organic	2,611
Actual CFT	357
- Military

Authorized	4
Actual	3



TAB C

**RED RIVER ARMY DEPOT**

**Obtain actual vs. required sustainment funding for FYs 2003 and 2004**

**Obtain actual vs. required recapitization (restoration & modernization) funding for FYs 2003 and 2004**

**SUSTAINMENT**

**Facilities Sustainment = Facility Maintenance and Repair Line on the Fund 22.  
Applicable AMS Code - ZGD078**

	<b>BES*</b>	<b>ACTUAL</b>	
<b>FY03</b>	<b>6.855</b>	<b>5.640</b>	<b>1.215</b>
<b>FY04</b>	<b>8.017</b>	<b>5.299</b>	<b>2.718</b>

**RESTORATION & MODERNIZATION**

	<b>BES*</b>	<b>ACTUAL</b>	
<b>FY03</b>	<b>1.465</b>	<b>0.340</b>	<b>1.125</b>
<b>FY04</b>	<b>0.553</b>	<b>0.778</b>	<b>-0.225</b>

**Facilities Restoration & Facilities Modernization are combined on the Fund 22  
as Maintenance Repair and Construction.  
Applicable AMS Code - ZGD076**

**\* BES submissions are from year of execution.**

## Response to GAO Question

### Question: Major one-time costs/savings

Not available at this time. Major one-time costs/savings for BRAC recommendations affecting RRAD and other organizations at the RRAD Industrial Complex were developed in the COBRA. That information has not been made available to the depot at this time.

## Response to GAO Question

**Question: Meet—if possible and time permits—with major DOD and non-DOD tenants or get information from base personnel.**

- Identify tenants.
- Next steps for tenants, i.e remaining at location or relocating and why? N/A
- If staying—who will cover base operating costs? N/A

Response to GAO Question

What environmental clean-up issues are created by the recommendation, i.e. what, where, how long will it take, and costs?

	1	2	3	4	5	6	7
Actions to Achieve Closure	FY06	FY07	FY08 (K\$)	FY09 (K\$)	FY10 (K\$)	FY11 (K\$)	Comments
<b>Disposal RCRA Waste &amp; Spec. Waste</b>							
Dispose all waste Haz-Storage Bldg. 479			\$132				
Empty & Dispose Chem. Vats 345, 319, 493			\$180				
Dispose Chem. In parts vats at Lines			\$32				
Dispose Blast Media at location of DICs			\$37				
Pump, Clean & Dispose Oil Water Separators			\$32				
Dispose Paint Booth Filter, coating, paper			\$30				
Misc. Aerosol Cans, Oil Dry, Rags, etc			\$30				
Used oil from Tanks			\$8				
Used Antifreeze			\$4				
Fuels all blends			\$184				
All Other Left Over Misc. Material			\$520				
<b>Sub Total Waste Disposal</b>			<b>\$1,189</b>				Disposal cost are from actual contract O.M.(s) cost
<b>De-Con of Contaminated Equipment &amp; Areas</b>							
Bldg. 319 21 Vats De-con Clean			\$22				
Bldg. 319 Parts cleaning area under vats			\$10				
Bldg. 493 12 Vats De-con Clean			\$13				
Bldg. 345 58 Vats De-con Clean			\$81				
Bldg. 345 E-Plate area under vats			\$26				
Bldg. 345/2 10 Vats De-con Clean			\$11				
Bldg. 345/2 area under parts cleaning vats			\$10				
Bldg. 345 3 Scrubbers De-con Clean			\$9				
Bldg. 371 Battery Shop Acid storage/Use			\$28				
Bldg. 373 Dyno POL meter cells and drainage			\$82				
Bldg. 493 1 Scrubber De-con Clean			\$3				
Equipment in 493			\$25				
411 clean/de-con cutting fluids/POL from floor			\$70				
315 clean/de-con cutting fluids/POL from floor			\$88				Cost taken from studies done by Ft Wingate Depot Activity, Inc.
323 1/3 Bldg sq ft. Cadmium (cad) prep area			\$111				
398 Cadmium contaminated area prep grinding			\$5				
Clean sludge from Coal Pile run-off lagoon			\$32				
345 clean test for any concerns at maint. Area			\$371				
311 X-ray facility de-con/clean			\$5				
229 Misc. Items Blast Bays, Cab, DIC etc			\$96				De-Con cost estimated using recent actual cost from a contract to de-con 6,375 sq ft. @ a cost of \$18,429 or \$2.89/sq ft.
De-Con all Fuel & Used Oil tanks			\$57				
All Other 537545 sq ft.			\$403				
6 floors 702 de-con explosive & lead			\$548				
<b>Sub Total De-Con/Cleaning</b>			<b>\$2,091</b>				
<b>Hazardous Areas Closure Process IAW RCRA</b>							Required by RCRA permit to start Closure Plans to ID Chemicals of Concern, by sampling, borings, wells, etc. to determine rate-and extent, complete affected property report (APAR). Does not include any remediation.
<b>Permit Clean-Up Standards</b>							
Bldg. 293 Permitted Haz-Storage Unit			\$12	\$300	\$300	\$300	
Bldg. 346 Permitted Haz-Storage Unit			\$7	\$300	\$300	\$300	
Bldg. 419 Permitted Haz-Storage Unit			\$24	\$300	\$300	\$300	
Bldg. 406S Solvents							
Bldg. 407 Paint Booth							
Wood Coal Fired Boiler Plant			\$24	\$300	\$300	\$300	
Bldg. 493 COC Heavy Metals			\$870	\$500	\$500	\$500	Assume area of contamination is equal to Maint. Salvage yard.
Bldg. 493 Salvage Yard			\$50	\$63	\$100	\$2,300	
POL main storage			\$0	\$75	\$100	\$100	
ORMO 282 Acres			\$438	\$2,000	\$2,000	\$3,581	
ORMO Salvage Yard			\$10	\$25	\$35	\$800	
Maintenance Salvage Yard			\$50	\$83	\$100	\$2,300	Remedial Investigation (RI), Remedial Design (RD), Remedial Action Construction (RAC) and possible Long Term Monitoring (LTM)
Bldg. 379 Fuel Station			\$8	\$25	\$25	\$189	
Bldg. 414			\$25	\$50	\$50	\$356	
Bldg. 490 B Heavy Eq. Shop and Hardstand			\$25	\$50	\$50	\$238	
Active Rifle Range Closure			\$150	\$250	\$250	\$1,550	
Sheet Range			\$0	\$25	\$25	\$54	
Bldg. 410, Old Rubber Densuring Facility now Fork Shop			\$35	\$25	\$40	\$309	
South Wash Rack Bldg. 292 area			\$15	\$75	\$75	\$194	
500K Above Ground Tank N. of Bldg. 320			\$25	\$50	\$75	\$203	
<b>Asst. Fuel Storage Tanks:</b>							
936, 925, 911, 552N, 552S, & 853, 524 Ver. Tanks			\$10	\$5	\$5	\$25	
Firefighter Training Site			\$10	\$10	\$10	\$20	
DLA Bldg. 541 Vats Blast Bays			\$100	\$50	\$50	\$700	Assume Cost as from Calc. for Bldg. 410 Fork Lift Shop total \$400K next 6 in list.
Bldg. 591 Paint Booths (TCE vats N end)			\$35	\$25	\$40	\$309	
Bldg. 592 Maint. Facilities			\$35	\$25	\$40	\$309	
Bldg. 595 Paint Booths S End Vats Tank dip			\$35	\$25	\$40	\$309	
Bldg. 581N PB, Vats Blast Unit			\$35	\$25	\$40	\$309	
Bldg. 420 Haz. Material Storage			\$35	\$25	\$40	\$309	
Bldg. 427 Haz. Material Storage			\$35	\$25	\$40	\$309	
DLA Storage Gravel Lot South of Boiler Plant			\$5	\$5	\$7	\$30	Soil surveys are complete, cost are for 2-4 years (FY11+) However, now must be accelerated due to base closure Total of -- \$32 MIL including Long Term Monitoring (LTM)
Vehicle Salvage Storage N of Tank 372			\$5	\$5	\$7	\$30	
DLA Wash Rack W of Bldg. 501			\$5	\$5	\$7	\$30	
203 Waste Lagoons N Area, Possible Pink Water, Some Investigation Complete			\$25	\$25	\$50	\$76	
Firefighter Training Site			\$5	\$10	\$5	\$30	
<b>Military Munitions Response Program Sites</b>							
Vulcan Range, RUMS, RC, RA/C, JTM			\$2,050			\$14,788	
Vulcan Range YD			\$1,172			\$2,477	
O-Area X Site			\$400			\$839	
Granada Range			\$959			\$1,283	
NW Surveillance Function Test Range			\$1,013			\$1,334	
SW Surveillance Function Test Range			\$1,135			\$2,194	
Tracer Test Range			\$972			\$1,273	
Reconnaissance & other Contamination Inside Igloo			\$191	\$23	\$188	\$3,100	Cost from area's within cost of program RACER.
<b>Sub Total Clean Up (\$K)</b>			<b>\$10,036</b>	<b>\$4,764</b>	<b>\$5,174</b>	<b>\$43,939</b>	
<b>Grand Total All Clean-Up Cost (\$K)</b>					<b>\$63,913</b>		
<b>Total Disposal Cost Est. (\$K)</b>			<b>\$1,189</b>				
<b>Total De-con Cost Est. (\$K)</b>			<b>\$2,091</b>				
<b>Total Closure Remedial Action Cost (\$K)</b>			<b>\$63,913</b>				
<b>Total All Cost (\$K)</b>			<b>\$37,193</b>				

What recent investment has been made to the facilities? - What has the base done to improve facility infrastructure?				
DATE	Title	Task Order #/Mod #	Cost	Status
25-Aug-99	Pr42-99, Const Hardstand South B407	#005	\$ 213,000.00	Complete
16-Sep-99	Pr 75-95, Paving Areas A, D and G	#006	\$ 2,897,259.05	Complete
16-Sep-99	Pr 76-95, Paving Areas B and E	#007	\$ 1,862,912.14	Complete
16-Sep-99	Pr 77-95, Paving Areas C, F, and H	#008	\$ 2,088,885.46	Complete
23-Sep-99	Pr 15-99, East Gate Beautificaion	#009	\$ 198,865.38	Complete
23-Sep-99	PR 10-95, Missile Sheds in Area "H"	#010	\$ 130,409.97	Complete
			<b>\$ 7,391,332.00</b>	
2-Jan-00	Repair Railroad Tracks, Ammo Area		\$ 57,200.00	Complete
8-Feb-00	PR 40-97, Repair Igloo Slides	#011	\$ 51,612.58	Complete
9-Feb-00	Pr21-00, Exp to Repair 16" Water Line	#012	\$ 2,149.36	Complete
1-Mar-00	Pr20-00, Repl three,12" valves iWTPlant	#013	\$ 7,532.41	Complete
15-Mar-00	Pr20-00, Change in SOW	Mod 1, DO 13	\$ 491.71	Complete
18-Mar-00	Upgrade Heaters, Bldg 473		\$ 18,558.00	Complete
20-Mar-00	Pr20-00, Appears to be the same as Mod 1	Mod 2, DO 13	\$ 491.71	Complete
13-Apr-00	PR 10-95, Missile Sheds in Area "H"	Mod 2, DO 10	\$ 130,409.97	Complete
20-Apr-00	Pr72-99,Const Conc Pads for Radiation Detection Equip	#014	\$ 10,585.72	Complete
20-Apr-00	Pr29-97,Inst Conc Pads at Chipper, Bldg418	#015	\$ 39,658.81	Complete
20-Apr-00	Pr24-00,Repair Pot Holes in AMMO	#017	\$ 24,996.00	Complete
1-May-00	Pr30-00,Overlay Ark Ave from Post 20 to Combat Rd	#018	\$ 54,573.60	Complete
11-May-00	Upgrade HVAC, Bldg 473		\$ 75,000.00	Complete
19-May-00	General Repair & Maintenance Of Depot Railroad Tracks		\$ 28,900.00	Complete
29-Jun-00	Pr20-00, to do work in a confined space, 1 Time Pricing	Mod 3, DO 13	\$ 4,297.88	Complete
14-Aug-00	Pr15-99, to repair drainage and site beautification on both sides of the road	Mod 3, DO 9	\$ 44,906.16	Complete
24-Aug-00	Pr40-97, Add Additional Top Soil	Mod 1, DO 11	\$ 1,180.00	Complete
3-Oct-00	Replace HVAC system, Bldg 315		\$ 144,134.00	Complete
31-Oct-00	Pr36-00,Repair Igloo Slides	#019	\$ 97,729.00	Complete
6-Dec-00	Pr 89-96,Bldg 1172&4 Complex, Repair Parking Lot	#020	\$ 14,190.40	Complete
			<b>\$ 808,597.31</b>	
11-Jan-01	Pr 79-99, B410 & B493, Drain lines	#021	\$ 17,217.43	Complete
18-Jan-01	PR 1-99, Const Foundation for Additional Bldg & Canopy @ Bldg 1172	DO #22	\$ 60,846.74	Complete
23-Apr-01	Pr16-01,Replace 16" Water Valve, Bldg 1191	DO#23	\$ 14,020.68	Complete
25-Apr-01	Repair Generator, Bldg 184	#0001	\$ 197,315.00	Complete
10-May-01	Pr18-01, Repair Busted Sprinkler House at Bldg 429, 561, 594.	DO #24	\$ 11,616.68	Complete
22-May-01	Pr36-00, Add qtys to change method of repair	Mod #3, DO #19	\$ 3,029.34	Complete
24-May-01	Pr17-01, Install RPZ's in Bldg 336	DO #25	\$ 14,798.52	Complete
11-Jun-01	Pr37-01, Repair Chromate and Phosphate Lines NE of Bldg 354	DO #26	\$ 32,030.18	Complete
5-Jul-01	Pr33-01, Repair Igloo Slides in AMMO	DO #27	\$ 17,006.75	Complete
5-Jul-01	Pr33-01, Repair Igloo Slides	DO #27	\$ 17,006.75	Complete
16-Jul-01	Pr37-01, to Pump and Plug Chromate and Phosphate Lines/Manholes	Mod #1, DO #26	\$ 22,997.70	Complete
18-Jul-01	Install Safety Screens on Fans, B345	#0002	\$ 49,280.00	Complete
21-Aug-01	Pr37-01, to Pump/Plug Chromate/Phosphate Lines/Manholes Mod to add additional Line items	Mod #2, DO #26	\$ 6,966.63	Complete
30-Aug-01	Replace Doors, B373	#0003	\$ 19,296.00	Complete
30-Aug-01	Repairs To B468	#0004	\$ 42,055.00	Complete

DATE	Title	Task Order #/Mod #	Cost	Status
31-Aug-01	Install Chain Link Fence B922	#0005	\$ 33,216.00	Complete
5-Sep-01	Mod #1 - TO #2	#0002 - Mod #1	\$ 7,187.00	Complete
12-Sep-01	Pr53-01, Repair Ave K, I, Texas	DO #28	\$ 300,000.00	Complete
19-Sep-01	Repair Roof Leaks, B470	#0007	\$ 6,946.00	Complete
20-Sep-01	Mod #1 - TO #4	#0004 - Mod #1	\$ 5,242.00	Complete
27-Sep-01	Pr75-95, Repair Roads and Aprons in AMMO - final insp. 19 Dec 02	DO #29	\$ 631,991.59	Complete
9-Oct-01	Pr53-01, Repair Concrete Joints on Ave K	DO #30	\$ 10,524.61	Complete
14-Nov-01	Pr73-99, Construct Pedestrian Steps, Bldg 441N	DO #31	\$ 3,908.02	Complete
23-Nov-01	Mod #2 - TO #4	#0004 - Mod #2	\$ 1,509.00	Complete
13-Dec-01	Mod #1 - TO #5	#0005 - Mod #1	\$ 1,601.00	Complete
			<b>\$ 1,527,608.62</b>	
11-Feb-02	Improve Vent/Air Flow in N End of B323	#0008	\$ 35,703.00	Complete
11-Feb-02	Repair Roof F377	#0009	\$ 54,994.00	Complete
1-Mar-02	Mod #1 - TO #1	#0001 - Mod #1	\$ 78,946.00	Complete
15-Mar-02	Remove Trailer House Attch B366	#0010	\$ 6,169.00	Complete
26-Mar-02	Rpl Heat/AC B388	#0011	\$ 11,058.00	Complete
2-Apr-02	Rpr Dyno Exh B373	#0012	\$ 188,760.00	Complete
2-Apr-02	Rpl Roof B468	#0013	\$ 129,521.00	Complete
2-Apr-02	Rpr Detr Roof, B325	#0014	\$ 26,745.00	Complete
2-Apr-02	Rpr Waste Drain Piping/Culvert B373	#0015	\$ 99,690.00	Complete
29-May-02	Pr58-02, Install Reflective Markers & Paint Pedestrian Crossings	DO #32	\$ 6,852.16	Complete
29-May-02	Pr84-02, Repair Asphalt at Bldg's 336 & 333	DO #33	\$ 7,158.94	Complete
29-May-02	Pr88-02, Repair Gas Line from the NE Corner of Bldg 591 to Bldg 578	DO #35	\$ 16,540.32	Complete
29-May-02	Pr87-02, Repair Bridges on West Patrol Road	DO #36	\$ 95,928.05	Complete
29-May-02	Pr14-03, Repair Gas Line and Valves North of Bldg 315	DO #37	\$ 4,037.78	Complete
29-May-02	Pr21-03, Repair Gas Lines at Bldgs 34, 40, & 57A	DO #38	\$ 5,325.50	Complete
29-May-02	Pr24-03, Repair Gas Lines at Bldgs 655 and 1142	DO #39	\$ 11,596.02	Complete
29-May-02	Pr21-01, Repair Igloo Slides in AMMO	DO #40	\$ 189,063.00	Complete
13-Jun-02	Rpl Plmbg & Ele Sve, R12, B1116	#0016	\$ 77,682.00	Complete
27-Jun-02	Constr Metal Canopy N B323	#0019	\$ 193,015.00	Complete
18-Jul-02	Renovations to B592	#0021	\$ 57,971.00	Complete
26-Aug-02	Mod #1 - TO #12	#0012 - Mod #1	\$ 3,246.00	Complete
3-Sep-02	Mod #1 - TO #21	#0021 - Mod #1	\$ 2,236.00	Complete
4-Oct-02	Rpl Gates/Fence DRMO	#0027	\$ 93,115.00	Complete
7-Oct-02	Mod #1 - TO #16	#0016 - Mod #1	\$ 29,049.00	Complete
28-Oct-02	Mod #1 - TO #15	#0015 - Mod #1	\$ 41,390.00	Complete
			<b>\$ 1,466,791.77</b>	
17-Jan-03	Mod #1 - TO #0028	#0028 - Mod #1 FWCoE	\$ 26,203.00	Complete
30-Jan-03	Mod #2 - TO #16	#0016 - Mod #2	\$ 10,913.00	Complete
27-Feb-03	Repair Roof-Bldg 406	#0034	\$ 111,359.00	Complete
25-Mar-03	Concrete Repair POL&345	#0035	\$ 157,857.00	Complete
4-Apr-03	Mod #2 - TO#27	#0027 - Mod #2	\$ 9,550.00	Complete
17-Apr-03	Install Sewage Meter, LSAAP	#0036	\$ 77,114.00	Complete
1-May-03	Repair Gas Line, Buildings 655 and 1142	24-03	\$ 11,596.00	Complete
2-May-03	Repair Roof, Bldg 345	#0038	\$ 86,458.00	Complete

DATE	Title	Task Order #/Mod #	Cost	Status
24-Jun-03	Install Ceiling & Lights, Hydr., 345	#0039	\$ 257,571.00	Complete
1-Aug-03	Replace Roof Section, B 493	#0040	\$ 72,943.00	Complete
15-Aug-03	Install Roof Mounted AC, B345	#0041	\$ 28,289.00	Complete
10-Sep-03	Construct Badge & ID Bldg	#0042	\$ 381,663.00	Complete
10-Sep-03	Repair Roof, Bldg 343	#0043	\$ 5,142.00	Complete
17-Sep-03	Replace Entire Roof, Bldg 328	#0044	\$ 13,579.00	Complete
25-Sep-03	Upgrade RRAD's Perimeter Fence	#0045	\$ 834,118.00	Complete
26-Sep-03	Repair Domestic Hot & Cold Water, Q20	#0046	\$ 33,430.00	Complete
14-Oct-03	Repair Leaks in Igloos	#0048	\$ 121,974.00	Complete
15-Nov-03	Upgrade ISA Room, B1174	#0049	\$ 24,920.00	Complete
12-Dec-03	Repair Concrete Floor, B345	#0050	\$ 110,800.00	Complete
			<b>\$ 2,376,479.00</b>	
5-Jan-04	Replace Roof, Bldg 184	#0051	\$ 118,773.00	Complete
5-Jan-04	Renovations to Admin, B473	#0052	\$ 59,331.00	Complete
5-Jan-04	Repair Leaking Roof, B336	#0053	\$ 123,147.00	Complete
28-Jan-04	Mod #1, TO 0049	#0049	\$ 68,851.00	Complete
2-Mar-04	Pr87-02, Repair Culverts on Igloo Road B1	DO #34	\$ 14,515.13	Awarded
11-Mar-04	Repair South End Roof, Bldg 493	#0054	\$ 299,866.00	Complete
19-Apr-04	Replace Outlet Manifold & Baghouse Roof Vents at Boiler House	#0055	\$ 45,507.00	Complete
19-Apr-04	Overlay, Pave, Stripe Storage and Parking Lot Areas around Bldgs 322 & 473	#0056	\$ 240,771.00	Active
22-Apr-04	Modify Bldg 945 for Patriot Operations	#0057	\$ 20,432.00	Active
7-May-04	Refurbish Union Office, Bldg 321/2	#0058	\$ 34,155.00	Complete
7-May-04	Repair Roof, Bldg 592	#0059	\$ 21,545.00	Active
14-May-04	Baghouse/Eductors Bldgs 359,359A,364,&493	#0060	\$ 59,878.00	Active
17-May-04	Install Natural Gas Line & Replace Heater, Bldg 939	#0061	\$ 247,322.00	Active
1-Jun-04	Mod #2, TO 0049	#0049	\$ 2,462.00	Complete
29-Jun-04	Mod #1, TO 0053	#0053	\$ 8,648.00	Complete
19-Jul-04	Mod #1, TO 0055	#0055	\$ 2,738.00	Complete
7-Sep-04	Install Industrial Waste Line, Bldg 493	#0062	\$ 93,024.00	Active
8-Sep-04	Remediation of Oily Waste, Bldg 373	#0063	\$ 412,831.00	Active
14-Oct-04	Renovate Refrigeration System, Ammo	#0064	\$ 58,048.00	Active
26-Oct-04	Repair Warehouses DRMO	#0065	\$ 1,388,230.00	Active
16-Nov-04	Security Lighting and Gate, DRMO	#0066	\$ 163,523.00	Active
17-Dec-04	Mod #1, TO 0061	#0061	\$ 11,971.00	Active
			<b>\$ 3,496,668.13</b>	
6-Jan-05	Replacement of Five Unit Heaters, 1116	#0067	\$ 22,628.00	Active
6-Jan-05	Repair Roof, Bldg 373	#0068	\$ 81,408.00	Active
28-Feb-05	Construct Office Area in Bldg 323S	#0069	\$ 55,000.00	Active
28-Feb-05	Cosntruct Mens Change Room, 323	#0070	\$ 75,000.00	Active
25-Mar-05	Mod #3, TO#42	#0042	\$ 38,799.00	Active
31-Mar-05	Repair Lightning Protection Systems	#0071	\$ 297,655.00	Active
	Replace Condensitate Tank, Bldg 336	34-00	\$ 40,000.00	
	Replace Sewer Force Main, Area K	37-00	\$ 50,000.00	
			<b>\$ 660,490.00</b>	

DATE	Title	Task Order #/Mod #	Cost	Status
	Forestry Cost		\$ 298,000.00	
	Environmental Cost/Infrastructure cost		\$ 1,294,599.00	
		TOTAL	\$ 19,317,466.83	

Quantity	Equipment #	Compression Track Block Molds	Costs
12	1	Design/Fabricate/Install	\$120,000

<b>Total Costs</b>	<b>\$1,440,000</b>
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Quantity	Equipment #	Hydraulic Power Supply	Costs
1	1	Min Requirements / Low Bid	\$30,000

<b>Total Costs</b>	<b>\$30,000</b>
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Quantity	Equipment #	T-107 Block Molds	Costs
8	1	Min Requirements / Low Bid	\$41,000

<b>Total Costs</b>	<b>\$328,000</b>
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Quantity	Equipment #	T-142 Block Molds	Costs
4	1	Min Requirements / Low Bid	\$37,000

<b>Total Costs</b>	<b>\$148,000</b>
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Quantity	Equipment #	Drum Tester	Costs
1	2	Min Requirements / Low Bid	\$170,000

<b>Total Costs</b>	<b>\$170,000</b>
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Quantity	Equipment #	Track Shoe Adhesive Tester	Costs
1	2	Min Requirements / Low Bid	\$85,000

<b>Total Costs</b>	<b>\$85,000</b>
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Quantity	Equipment #	Single Pin Assembly Tables	Costs
12	3	Design/Fabricate/Install	\$9,300

<b>Total Costs</b>	<b>\$111,600</b>
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Quantity	Equipment #	Single Pin Bushing Assembly Press	Costs
4	4	Design/Fabricate/Install	\$85,000

<b>Total Costs</b>	<b>\$340,000</b>
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Quantity	Equipment #	Double Pin Bushing Assembly Press	Costs
2	4	Design/Fabricate/Install	\$85,000

<b>Total Costs</b>	<b>\$170,000</b>
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Quantity	Equipment #	Hydraulic Units	Costs
6	4	Min Requirements / Low Bid	\$12,000

<b>Total Costs</b>	<b>\$72,000</b>
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Quantity	Equipment #	Push Out Press	Costs

2	4	<b>Design/Fabricate/Install</b>	\$85,000
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<b>Total Costs</b>	<b>\$170,000</b>
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Quantity	Equipment #	<b>CARC Paint Line</b>	Costs
1	5	<b>Design/Fabricate/Install</b>	\$110,000

<b>Total Costs</b>	<b>\$110,000</b>
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Quantity	Equipment #	<b>Roadwheel Injection Press (600 Ton)</b>	Costs
3	6	<b>Best Value Contract</b>	\$510,000

<b>Total Costs</b>	<b>\$1,530,000</b>
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Quantity	Equipment #	<b>M1, M88 Molds &amp; Preheaters</b>	Costs
3	6	<b>Design/Fabricate/Install</b>	\$130,000

<b>Total Costs</b>	<b>\$390,000</b>
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Quantity	Equipment #	<b>Roadwheel Injection Press (400 Ton)</b>	Costs
4	6	<b>Best Value Contract</b>	\$485,000

<b>Total Costs</b>	<b>\$1,940,000</b>
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Quantity	Equipment #	<b>BFV, M113 Molds &amp; Preheaters</b>	Costs
4	6	<b>Design/Fabricate/Install</b>	\$105,000

<b>Total Costs</b>	<b>\$420,000</b>
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Quantity	Equipment #	<b>Roadwheel Injection Press (250 Ton)</b>	Costs
10	7	<b>Best Value Contract</b>	\$420,000

<b>Total Costs</b>	<b>\$4,200,000</b>
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Quantity	Equipment #	<b>Single Pin 60/40 Molds</b>	Costs
10	7	<b>Design/Fabricate/Install</b>	\$130,000

<b>Total Costs</b>	<b>\$1,300,000</b>
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Quantity	Equipment #	<b>System Chiller</b>	Costs
4	7	<b>Best Value Contract</b>	\$25,000

<b>Total Costs</b>	<b>\$100,000</b>
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Quantity	Equipment #	<b>Track Shoe Adhesive Booth</b>	Costs
1	8	<b>Min Requirements / Low Bid</b>	\$32,000

<b>Total Costs</b>	<b>\$32,000</b>
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Quantity	Equipment #	Drying Oven	Costs
1	9	Min Requirements / Low Bid	\$20,000

<b>Total Costs</b>	<b>\$20,000</b>
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Quantity	Equipment #	Roadwheel Compression Press	Costs
7	10	Design/Fabricate/Install	\$80,000

<b>Total Costs</b>	<b>\$560,000</b>
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Quantity	Equipment #	Idler Wheel Compression Press	Costs
3	10	Design/Fabricate/Install	\$45,000

<b>Total Costs</b>	<b>\$135,000</b>
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Quantity	Equipment #	Double Idler Compression Press	Costs
1	10	Design/Fabricate/Install	\$65,000

<b>Total Costs</b>	<b>\$65,000</b>
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Quantity	Equipment #	Conveyors	Costs
1	10	Min Requirements / Low Bid	\$10,000

<b>Total Costs</b>	<b>\$10,000</b>
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Quantity	Equipment #	Hydraulic Power Supply	Costs
1	10	Min Requirements / Low Bid	\$30,000

<b>Total Costs</b>	<b>\$30,000</b>
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Quantity	Equipment #	Roadwheel Adhesive Booth with Dyer	Costs
2	11	Min Requirements / Low Bid	\$21,000

<b>Total Costs</b>	<b>\$42,000</b>
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Quantity	Equipment #	Hand Blast Cabinet	Costs
2	11	Min Requirements / Low Bid	\$34,000

<b>Total Costs</b>	<b>\$68,000</b>
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Quantity	Equipment #	Pre-Form Hot Knife	Costs
1	11	Design/Fabricate/Install	\$10,000

<b>Total Costs</b>	<b>\$10,000</b>
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Quantity	Equipment #	Pre-Form Sticher	Costs
1	11	Design/Fabricate/Install	\$10,000

<b>Total Costs</b>	<b>\$10,000</b>
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Quantity	Equipment #	Trk/Whl Pass Through Abrasive Cleaner	Costs

2	12	<b>Min Requirements / Low Bid</b>	\$235,000
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<b>Total Costs</b>	<b>\$470,000</b>
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Quantity	Equipment #	<b>Power &amp; Free Material Handler</b>	Costs
1	12	<b>Min Requirements / Low Bid</b>	\$150,000

<b>Total Costs</b>	<b>\$150,000</b>
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Quantity	Equipment #	<b>Roadwheel Mechanical Denuder</b>	Costs
3	13	<b>Design/Fabricate/Install</b>	\$250,000

<b>Total Costs</b>	<b>\$750,000</b>
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**Alternative: Upgrade the Fluidized Bed to process T6 aluminum M1 roadwheels and denude all roadwheels in the bed. The upgrade is estimated at \$130,000. This would save an estimated \$620,000 and streamline the denuding process in accordance with LEAN principles.**

Quantity	Equipment #	<b>Fume Scrubber</b>	Costs
1	13	<b>Min Requirements / Low Bid</b>	\$40,000

<b>Total Costs</b>	<b>\$40,000</b>
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Quantity	Equipment #	<b>T107/T142 Disassembly</b>	Costs
1	14	<b>Design/Fabricate/Install</b>	\$83,000

<b>Total Costs</b>	<b>\$83,000</b>
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Quantity	Equipment #	<b>T107/T142 Disassembly Conveyor</b>	Costs
1	14	<b>Min Requirements / Low Bid</b>	\$45,000

<b>Total Costs</b>	<b>\$45,000</b>
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Quantity	Equipment #	<b>T130 Roll Up Table</b>	Costs
1	15	<b>Design/Fabricate/Install</b>	\$6,000

<b>Total Costs</b>	<b>\$6,000</b>
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Quantity	Equipment #	<b>Submerged Arc Welder System</b>	Costs
2	16	<b>Design/Fabricate/Install</b>	\$33,000

<b>Total Costs</b>	<b>\$66,000</b>
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Quantity	Equipment #	<b>36" Bullard lathe</b>	Costs
1	16	<b>Design/Fabricate/Install</b>	\$220,000

<b>Total Costs</b>	<b>\$220,000</b>
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**Probably not replaceable: This is a Heavy Duty Vertical Turning Lathe Expect to buy a machine tool costing over \$200,000. Alternative: Purchase a used or rebuilt machine.**

Quantity	Equipment #	Hardware Reclamation	Costs
1	17	Min Requirements / Low Bid	\$65,000

<b>Total Costs</b>	<b>\$65,000</b>
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Quantity	Equipment #	Tumble Blast Abrasive Cleaner	Costs
2	18	Min Requirements / Low Bid	\$100,000

<b>Total Costs</b>	<b>\$200,000</b>
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Quantity	Equipment #	SpinTrack Abrasive Cleaner	Costs
2	18	Min Requirements / Low Bid	\$180,000

<b>Total Costs</b>	<b>\$360,000</b>
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Quantity	Equipment #	Single Pin Disassembly	Costs
1	19	Design/Fabricate/Install	\$6,000

<b>Total Costs</b>	<b>\$6,000</b>
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Quantity	Equipment #	Fluidized bed Denuding System	Costs
1	20	Design/Fabricate/Install	\$5,600,000

<b>Total Costs</b>	<b>\$5,600,000</b>
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**Purchased without the equipment enclosure.  
Enclosure is included in the building construction.**

Quantity	Equipment #	5 Ton Bridge Crane	Costs
5	21	Min Requirements / Low Bid	\$21,000

<b>Total Costs</b>	<b>\$105,000</b>
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Quantity	Equipment #	Pneumatic Hoists/Trolley	Costs
26	21	Min Requirements / Low Bid	\$2,500

<b>Total Costs</b>	<b>\$65,000</b>
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Quantity	Equipment #	Jib Cranes	Costs
26	21	Min Requirements / Low Bid	\$1,400

<b>Total Costs</b>	<b>\$36,400</b>
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Quantity	Equipment #	Single/Double Pin Track Preservation	Costs
1	22	Min Requirements / Low Bid	\$120,000

<b>Total Costs</b>	<b>\$120,000</b>
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Quantity	Equipment #	Single/Double Pin Track Preservation	Costs
1	23	Min Requirements / Low Bid	\$625,000

<b>Total Costs</b>	<b>\$625,000</b>
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Quantity	Equipment #	Rubber laboratory	Costs
1	24	Min Requirements / Low Bid	\$473,000

<b>Total Costs</b>	<b>\$473,000</b>
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Quantity	Equipment #	Steam Autoclave	Costs
1	25	Relocate	\$14,400

<b>Total Costs</b>	<b>\$14,400</b>
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Quantity	Equipment #	Tool Room	Costs
1	26	Min Requirements / Low Bid	\$386,000

<b>Total Costs</b>	<b>\$386,000</b>
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Quantity	Equipment #	Material Handling Equipment	Costs
1	27	Min Requirements / Low Bid	\$245,000

<b>Total Costs</b>	<b>\$245,000</b>
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Quantity	Equipment #	Office Equipment	Costs
1	28	Min Requirements / Low Bid	\$48,600

<b>Total Costs</b>	<b>\$48,600</b>
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Quantity	Equipment #	Air Compressors	Costs
2	30	Min Requirements / Low Bid	\$50,000

<b>Total Costs</b>	<b>\$100,000</b>
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<b>\$24,316,000</b>
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Quantity	Equipment #	<b>Compression Track Block Molds</b>	Costs
12	1	<b>Design/Fabricate/Install</b>	\$120,000

<b>Total Costs</b>	<b>\$1,440,000</b>
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Quantity	Equipment #	<b>Hydraulic Power Supply</b>	Costs
1	1	<b>Min Requirements / Low Bid</b>	\$30,000

<b>Total Costs</b>	<b>\$30,000</b>
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Quantity	Equipment #	<b>T-107 Block Molds</b>	Costs
8	1	<b>Min Requirements / Low Bid</b>	\$41,000

<b>Total Costs</b>	<b>\$328,000</b>
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Quantity	Equipment #	<b>T-142 Block Molds</b>	Costs
4	1	<b>Min Requirements / Low Bid</b>	\$37,000

<b>Total Costs</b>	<b>\$148,000</b>
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Quantity	Equipment #	<b>Drum Tester</b>	Costs
1	2	<b>Min Requirements / Low Bid</b>	\$170,000

<b>Total Costs</b>	<b>\$170,000</b>
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Quantity	Equipment #	<b>Track Shoe Adhesive Tester</b>	Costs
1	2	<b>Min Requirements / Low Bid</b>	\$85,000

<b>Total Costs</b>	<b>\$85,000</b>
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Quantity	Equipment #	<b>Single Pin Assembly Tables</b>	Costs
12	3	<b>Design/Fabricate/Install</b>	\$9,300

<b>Total Costs</b>	<b>\$111,600</b>
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Quantity	Equipment #	<b>Single Pin Bushing Assembly Press</b>	Costs
4	4	<b>Design/Fabricate/Install</b>	\$85,000

<b>Total Costs</b>	<b>\$340,000</b>
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Quantity	Equipment #	<b>Double Pin Bushing Assembly Press</b>	Costs
2	4	<b>Design/Fabricate/Install</b>	\$85,000

<b>Total Costs</b>	<b>\$170,000</b>
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Quantity	Equipment #	<b>Hydraulic Units</b>	Costs
6	4	<b>Min Requirements / Low Bid</b>	\$12,000

<b>Total Costs</b>	<b>\$72,000</b>
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Quantity	Equipment #	<b>Push Out Press</b>	Costs
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2	4	<b>Design/Fabricate/Install</b>	\$85,000
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<b>Total Costs</b>	<b>\$170,000</b>
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Quantity	Equipment #	<b>CARC Paint Line</b>	Costs
1	5	<b>Design/Fabricate/Install</b>	\$110,000

<b>Total Costs</b>	<b>\$110,000</b>
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Quantity	Equipment #	<b>Roadwheel Injection Press (600 Ton)</b>	Costs
3	6	<b>Best Value Contract</b>	\$510,000

<b>Total Costs</b>	<b>\$1,530,000</b>
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Quantity	Equipment #	<b>M1, M88 Molds &amp; Preheaters</b>	Costs
3	6	<b>Design/Fabricate/Install</b>	\$130,000

<b>Total Costs</b>	<b>\$390,000</b>
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Quantity	Equipment #	<b>Roadwheel Injection Press (400 Ton)</b>	Costs
4	6	<b>Best Value Contract</b>	\$485,000

<b>Total Costs</b>	<b>\$1,940,000</b>
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Quantity	Equipment #	<b>BFV, M113 Molds &amp; Preheaters</b>	Costs
4	6	<b>Design/Fabricate/Install</b>	\$105,000

<b>Total Costs</b>	<b>\$420,000</b>
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Quantity	Equipment #	<b>Roadwheel Injection Press (250 Ton)</b>	Costs
10	7	<b>Best Value Contract</b>	\$420,000

<b>Total Costs</b>	<b>\$4,200,000</b>
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Quantity	Equipment #	<b>Single Pin 60/40 Molds</b>	Costs
10	7	<b>Design/Fabricate/Install</b>	\$130,000

<b>Total Costs</b>	<b>\$1,300,000</b>
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Quantity	Equipment #	<b>System Chiller</b>	Costs
4	7	<b>Best Value Contract</b>	\$25,000

<b>Total Costs</b>	<b>\$100,000</b>
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Quantity	Equipment #	<b>Track Shoe Adhesive Booth</b>	Costs
1	8	<b>Min Requirements / Low Bid</b>	\$32,000

<b>Total Costs</b>	<b>\$32,000</b>
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Quantity	Equipment #	Drying Oven	Costs
1	9	Min Requirements / Low Bid	\$20,000

<b>Total Costs</b>	<b>\$20,000</b>
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Quantity	Equipment #	Roadwheel Compression Press	Costs
7	10	Design/Fabricate/Install	\$80,000

<b>Total Costs</b>	<b>\$560,000</b>
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Quantity	Equipment #	Idler Wheel Compression Press	Costs
3	10	Design/Fabricate/Install	\$45,000

<b>Total Costs</b>	<b>\$135,000</b>
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Quantity	Equipment #	Double Idler Compression Press	Costs
1	10	Design/Fabricate/Install	\$65,000

<b>Total Costs</b>	<b>\$65,000</b>
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Quantity	Equipment #	Conveyors	Costs
1	10	Min Requirements / Low Bid	\$10,000

<b>Total Costs</b>	<b>\$10,000</b>
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Quantity	Equipment #	Hydraulic Power Supply	Costs
1	10	Min Requirements / Low Bid	\$30,000

<b>Total Costs</b>	<b>\$30,000</b>
--------------------	-----------------

Quantity	Equipment #	Roadwheel Adhesive Booth with Dyer	Costs
2	11	Min Requirements / Low Bid	\$21,000

<b>Total Costs</b>	<b>\$42,000</b>
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Quantity	Equipment #	Hand Blast Cabinet	Costs
2	11	Min Requirements / Low Bid	\$34,000

<b>Total Costs</b>	<b>\$68,000</b>
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Quantity	Equipment #	Pre-Form Hot Knife	Costs
1	11	Design/Fabricate/Install	\$10,000

<b>Total Costs</b>	<b>\$10,000</b>
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Quantity	Equipment #	Pre-Form Sticher	Costs
1	11	Design/Fabricate/Install	\$10,000

<b>Total Costs</b>	<b>\$10,000</b>
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Quantity	Equipment #	Trk/Whl Pass Through Abrasive Cleaner	Costs

2	12	<b>Min Requirements / Low Bid</b>	\$235,000
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<b>Total Costs</b>	<b>\$470,000</b>
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Quantity	Equipment #	<b>Power &amp; Free Material Handler</b>	Costs
1	12	<b>Min Requirements / Low Bid</b>	\$150,000

<b>Total Costs</b>	<b>\$150,000</b>
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Quantity	Equipment #	<b>Roadwheel Mechanical Denuder</b>	Costs
3	13	<b>Design/Fabricate/Install</b>	\$250,000

<b>Total Costs</b>	<b>\$750,000</b>
--------------------	------------------

**Alternative: Upgrade the Fluidized Bed to process T6 aluminum M1 roadwheels and denude all roadwheels in the bed. The upgrade is estimated at \$130,000. This would save an estimated \$620,000 and streamline the denuding process in accordance with LEAN principles.**

Quantity	Equipment #	<b>Fume Scrubber</b>	Costs
1	13	<b>Min Requirements / Low Bid</b>	\$40,000

<b>Total Costs</b>	<b>\$40,000</b>
--------------------	-----------------

Quantity	Equipment #	<b>T107/T142 Disassembly</b>	Costs
1	14	<b>Design/Fabricate/Install</b>	\$83,000

<b>Total Costs</b>	<b>\$83,000</b>
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Quantity	Equipment #	<b>T107/T142 Disassembly Conveyor</b>	Costs
1	14	<b>Min Requirements / Low Bid</b>	\$45,000

<b>Total Costs</b>	<b>\$45,000</b>
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Quantity	Equipment #	<b>T130 Roll Up Table</b>	Costs
1	15	<b>Design/Fabricate/Install</b>	\$6,000

<b>Total Costs</b>	<b>\$6,000</b>
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Quantity	Equipment #	<b>Submerged Arc Welder System</b>	Costs
2	16	<b>Design/Fabricate/Install</b>	\$33,000

<b>Total Costs</b>	<b>\$66,000</b>
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Quantity	Equipment #	<b>36" Bullard lathe</b>	Costs
1	16	<b>Design/Fabricate/Install</b>	\$220,000

<b>Total Costs</b>	<b>\$220,000</b>
--------------------	------------------

**Probably not replaceable: This is a Heavy Duty Vertical Turning Lathe Expect to buy a machine tool costing over \$200,000. Alternative: Purchase a used or rebuilt machine.**

Quantity	Equipment #	Hardware Reclamation	Costs
1	17	Min Requirements / Low Bid	\$65,000

<b>Total Costs</b>	<b>\$65,000</b>
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Quantity	Equipment #	Tumble Blast Abrasive Cleaner	Costs
2	18	Min Requirements / Low Bid	\$100,000

<b>Total Costs</b>	<b>\$200,000</b>
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Quantity	Equipment #	SpinTrack Abrasive Cleaner	Costs
2	18	Min Requirements / Low Bid	\$180,000

<b>Total Costs</b>	<b>\$360,000</b>
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Quantity	Equipment #	Single Pin Disassembly	Costs
1	19	Design/Fabricate/Install	\$6,000

<b>Total Costs</b>	<b>\$6,000</b>
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Quantity	Equipment #	Fluidized bed Denuding System	Costs
1	20	Design/Fabricate/Install	\$5,600,000

<b>Total Costs</b>	<b>\$5,600,000</b>
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**Purchased without the equipment enclosure.  
Enclosure is included in the building construction.**

Quantity	Equipment #	5 Ton Bridge Crane	Costs
5	21	Min Requirements / Low Bid	\$21,000

<b>Total Costs</b>	<b>\$105,000</b>
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Quantity	Equipment #	Pneumatic Hoists/Trolley	Costs
26	21	Min Requirements / Low Bid	\$2,500

<b>Total Costs</b>	<b>\$65,000</b>
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Quantity	Equipment #	Jib Cranes	Costs
26	21	Min Requirements / Low Bid	\$1,400

<b>Total Costs</b>	<b>\$36,400</b>
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Quantity	Equipment #	Single/Double Pin Track Preservation	Costs
1	22	Min Requirements / Low Bid	\$120,000

<b>Total Costs</b>	<b>\$120,000</b>
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Quantity	Equipment #	Single/Double Pin Track Preservation	Costs
1	23	Min Requirements / Low Bid	\$625,000

<b>Total Costs</b>	<b>\$625,000</b>
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Quantity	Equipment #	Rubber laboratory	Costs
1	24	Min Requirements / Low Bid	\$473,000

<b>Total Costs</b>	<b>\$473,000</b>
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Quantity	Equipment #	Steam Autoclave	Costs
1	25	Relocate	\$14,400

<b>Total Costs</b>	<b>\$14,400</b>
--------------------	-----------------

Quantity	Equipment #	Tool Room	Costs
1	26	Min Requirements / Low Bid	\$386,000

<b>Total Costs</b>	<b>\$386,000</b>
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Quantity	Equipment #	Material Handling Equipment	Costs
1	27	Min Requirements / Low Bid	\$245,000

<b>Total Costs</b>	<b>\$245,000</b>
--------------------	------------------

Quantity	Equipment #	Office Equipment	Costs
1	28	Min Requirements / Low Bid	\$48,600

<b>Total Costs</b>	<b>\$48,600</b>
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Quantity	Equipment #	Air Compressors	Costs
2	30	Min Requirements / Low Bid	\$50,000

<b>Total Costs</b>	<b>\$100,000</b>
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<b>\$24,316,000</b>
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Item Description	Cost Estimate	
AE Design	\$1,750,000	Contract for Construction Design
COE	\$125,000	COE Project Oversight
Main Building	\$15,900,000	New Building
Asset Storage Hardstand	\$525,000	Track / Roadwheel storage and staging (225' x 300')
Employee Parking Lot	\$150,000	120 minimum space capacity
Fluidized Bed Enclosure	\$675,000	New Enclosure
Storage Warehouse	\$360,000	Remove if sufficient storage capably is available
Loading Dock	\$8,000	Needed for load/unload operations
Packaged Boilers	\$650,000	Remove if sufficient steam capably is available
Air Compressor	\$100,000	Required building service
Industrial Waste Line	Insufficient Data for Estimate	Required service to existing waste facility
<p style="text-align: right;"><b>Construction Cost</b></p>	<b>\$20,243,000</b>	
DECON/Building 493	<b>\$908,024</b>	Costs to Repair Environmental Damage
BRAC 2005 Building Closure - Minimum Scenario	<b>\$309,141</b>	
New Rubber Products Air Permit	<b>\$202,825</b>	Costs to Establish a New Air Permit

Purchased Equipment	\$24,316,000	Estimated Costs for Process Equipment
Piping / Headers (steam, water, air) +Insulation	\$521,000	Service from building utilities to equipment
Electrical Power	\$294,000	Service from building power bus to equipment
<b>Equipment Installed</b>	<b>\$25,131,000</b>	
<b>New Rubber Products TOTAL COSTS</b>	<b>\$46,793,990</b>	

<b>Description</b>	<b>Costs</b>
Air Permits	<b>\$202,825</b>
Chemical Vats	\$12,600
Equipment	\$25,025
Building Cleanup	\$870,399
DECON/Building 493	<b>\$908,024</b>
Building 493 BRAC 2005 closure under RCRA Subtitle D	
<b>Maximum Environmental Decontamination</b>	
Pre-Study (CS) - \$13,960	\$13,754
Study (RFI/CMS) - \$295,181	\$285,945
31 year long term monitoring (LTM) - \$1,222,535	\$1,222,535
Design (DES) - \$44,809	\$44,809
Remedial Action (CMI(C) (Capital) - \$1,094,767	\$1,094,767
	\$2,661,810
<b>Total Project Costs Corrected for Escalation Factors</b>	<b>\$3,256,484</b>
<b>Minimum Environmental Decontamination</b>	
Pre-Study (CS) - \$13,960	\$13,754
Study (RFI/CMS) - \$295,181	\$285,945
	\$299,699
<b>Total Project Costs Corrected for Escalation Factors</b>	<b>\$309,141</b>
<b>MAXIMUM SCENARIO</b>	<b>\$4,164,508</b>
<b>MINIMUM SCENARIO</b>	<b>\$1,217,165</b>

<b>Intangibles associated with relocation</b>	<b>Comments</b>
Lost production	
Lost experienced operators	
Debugging	
Quality affects from new employees	

# **BASE REALIGNMENT AND CLOSURE**

## **RUBBER PRODUCTS FACILITY**

### **RELOCATION STUDY**

#### **WHITE PAPER**

##### **Scope:**

Present a plan and cost estimate scenario to build a Rubber Products Track & Roadwheel Production Facility located at the Anniston Army Depot in Anniston Alabama. The new production shop is to be identical to the existing Rubber Products Shop located at Red River Army Depot, Texarkana, Texas. The new facility will include the main manufacturing building that houses the process equipment, a hard stand used to stage track shoe and roadwheel assets, employee parking lot, loading dock, 25 foot concrete access road around the building perimeter, storage warehouse, and fluidized bed annex building. The utilities needed to support the manufacturing plant include 125 psi steam service, phosphate/chromate industrial waste treatment, 100 psi dried air, 65 psi water main, and 3000 KVA 480/277 electrical power service. The purpose for this construction effort is based on the BRAC recommendation to close Red River Army Depot and relocate its mission to another depot. The issues involved with the processes used to rebuild track and roadwheels by their very nature are complex and not easily replicated. For this reason, the certifications involved with the manufacture of these products require that if the manufacturing process is moved to another location or significantly changed in any way, the QPL certification process must be repeated. Additionally the M1 roadwheel drawing is sole sourced to RRAD will also have to be re-qualified. This process includes first article tests and field testing at the Yuma Proving Grounds. A significant question to be answered is, What are the consequences for the Army if certification at the designated depot does not occur in a timely manner? Since there can not be absolute assurance of re-qualification, a plan must be presented that insures a continuous supply of rebuild track shoes and roadwheels for the Army.

##### **Methodology:**

To condense the decision information presented in this paper, summary statements are used to arrange data for easy reference. A top down approach is used that starts with the building construction funds and progresses down through the equipment level to final closure / decontamination of the Red River Army Depot, Rubber Products Facility. The paper reports the kind of basic information necessary to evaluate the feasibility of construction of a sister Rubber Products Facility at another location. Due to the short time frame allowed to complete this task, estimates based on experience and previous projects are

used in lieu of actual quotes for the majority of items and tasks. The information presented is not complete and could be improved upon. An Excel Spreadsheet and Project Manager Timeline accompanies this paper. They provide more detailed information.

### **Assumptions:**

Most cost estimates have been made based on the experience of the Rubber Products support personnel from Production Engineering Division, Design Engineering Branch. There are many pieces of specialized production equipment that have been designed and build at RRAD and are not available as commercial items. We have tried to limit one's natural tendency to inflate figures and time frames. This information is the result of engineering estimates. In some instances, historical information was used as a basis for an estimate. The data can be relied on to provide reasonable estimates of the time and costs associated with the effort. However, the data is not presented as completely accurate information based on auditable facts. In every case, reasonable times and costs are used to define a middle of the road solution.

### **Cautions:**

The transition between the existing shop and the newly certified shop must be carefully managed in order to minimize lost production and insure acceptable quality level. As with any organization, there are SOPs and P&Is, Mil Specs, Job Descriptions, etc.; however, there is a large amount of "How-To-Do-It" that must be carried over to the new shop. Every effort must be made to bring this expertise to the new shop. There are approximately 38 critical positions in the work force, every effort should be made to insure that these positions are filled by experienced Rubber Products employees. Without these individuals, the learning curve to successful operation of the facility will be very steep. Some additional areas of concern that should be given consideration are as follows:

Splitting of the existing work force between the new and old shops during the pilot operation phase, (see timeline for details).

Filling of positions left vacant due to individuals that will retire or decline to relocate.

Developing and implementing a comprehensive training program to insure that all new employees can adequately perform the duties of their position.

Establishing a product backlog to carry over during the transition between shops.

### MCA Funds Available

#### Project Scope

Site Survey, (Environmental Assessment, Security, Communication)

Assume that the normal 1391 document fund submission and authorization cycle is shortened to a maximum of six months.

Assume that IMA, AMCOM, TACOM project prioritization is shortened by OSD.

Assume FYDP for MCA funds is assigned within six months of funds approval.

Scope and Technical Information to COE

### First Project Year

Early Planning

### Second Project Year

AE Contract Award (\$1,750,000, Use existing Rubber Products COE design specifications as basic model for the new facility)

COE Oversight = \$125,000

Detail Design Package

Pre-final and Final

Obligate Funds

### Third Year

COE – Construction Team

Begin Construction

Start Request Process for Rubber Products Operational Air Permit

### Building Construction (\$20,243,000, 13 months to complete building)

125,000 sf @ \$125/sf = \$15,625,000

Dirt work = (select fill 4 ft deep) \$250,000

Hardstand = \$525,000

Parking Lot = \$150,000

Package Boiler = \$650,000 Installed

Air Supply Compressor = \$100,000 Installed

Industrial Waste Line =

Fluidized Bed Facility (15,000 sf @ \$45/sf = \$675,000) Includes Dirt Work

Storage Warehouse (9,000 sf @ \$40/sf = \$360,000) Includes Dirt work

Loading Dock (12'x40'x5') @ \$80/cf = \$8,000

### Equipment (\$25,154,400, see spreadsheet for details)

Assume that normal “full and open” contracting methods will be used to procure equipment. In order to insure that new equipment meets all existing requirements, Best Value Contracting procedures will be used on all critical equipment systems. All the remaining equipment will be contracted using “Minimum Requirements and Low Bid” procedures. It is unknown if CIP funds will or can be used

### New Equipment Procurement

Injection Molding Presses (6 &7 ) Critical

Fluidized Bed (20) *Critical*  
CARC Paint Line (5)  
Track Shoe Adhesive Line (8)  
Roadwheel Adhesive Line (11)  
Track Shoe & Roadwheel Pass Through Abrasive Line (12)  
Track Shoe & Roadwheel Abrasive Line (18)  
Submerged Arc Welding Line (16)  
Cleaning & Coating System (23)  
Rubber Laboratory (24)  
Tool Room (26)  
Grinding & Threading Line (17)  
Roadwheel Drum Tester (2)  
Hoist / Bridge Crain (21)  
Track Shoe Preservation (22)  
Material Handler Equipment (27)

#### New Equipment Design/Fabricate/Install

Track Shoe Compression Block Mold Press (1)  
Roadwheel Compression Mold Press (10)  
Double Pin Disassembly Press (14)  
Single Pin Disassembly Press (19)  
Double Pin Bushing Press (4)  
Single Pin Bushing Press (4)  
Mechanical Denuders (13)  
Eight Shoe Section Track Shoe Assembly Tables (3)  
Single Pin Roll Assembly Tables (15)

#### Install Equipment

Provide utility connection from building main utility supply to equipment.

#### In-Plant Equipment Acceptance Testing

Conduct Equipment Acceptance Testing for each System or piece of Equipment listed above. Test crew consisting of six (6) Rubber Workers, one (1) Inspector

#### Process Start-Up

The following is presented as a base line of minimum workforce requirements. It is understood that there are many possible scenarios.

Start Up Crew should consist of six (6) Rubber Workers, two (2) Millwrights, one (1) Electrician, and one (1) Engineer to operate all processes at anticipated throughputs.

#### Fluidized Bed Air Permit Certification

Stack Emissions sampling for compliance with the minimum requirements of the Air Permit = \$18,000 for two (2) days of certification testing.

#### Process Validation

Validation Crew consisting of Injection Mold Process Technician, two (2) Rubber Works, and one (1) Millwright

### Process Certification

One (1) Inspector  
First Article for Track Shoes and Roadwheels

### Yuma Field Test Certification

M1 Roadwheel  
T-107 Track Shoe  
T-154 Track Shoe

### Staffing New Rubber Products

An unofficial canvas of Supervisors and Lead Men at the time of the BRAC announcement has provided the following: The division chief and two of the three shift supervisors will not relocate. Almost all of the lead men will retire rather than relocate. If Rubber Products is moved to ANAD, unless specific action is taken, the shop will begin operation with inexperienced leadership. This extreme lack of experience will certainly impact the initial startup of the shop and could result in sub-standard quality of the track shoe and roadwheel products. Therefore it is vitally important that the replacement workforce be adequately trained. It is not practical at this time to develop the estimate of the costs and time involved due to the unknowns. However, some tasks can be anticipated that are listed below.

- Canvas Rubber Products work force for willingness to relocate
- Determine work force TDA and initiate action to fill positions
- Depending on the number of critical positions not filled by RRAD employees, plan to schedule training at Rubber Products RRAD. One (1) to two (2) months of mentored specific process training is necessary for the following processes:

Injection Molding Presses  
Product Inspection (Quality Control)  
Rubber Laboratory (Quality Assurance)  
Fluidized Bed Operator  
Bushing Assembly Press  
Roadwheel Build-up  
M88 Submerged Arc Welding

### Bring New Facility On-Line

Three months Pilot Operation  
Facility Production Evaluation  
Continue Pilot Operational Period or Retire RRAD Rubber Products

Environmental (\$1,217,165 Minimum Closure Costs - \$4,164,508 Maximum closure Costs) There no appropriate method to estimate the extent of contamination around and under the building slab. Based on the types of processes used for production over the 21 year life to the building and grounds, a minimum contamination cost scenario is presented along with a serious contamination maximum cost scenario.

Decontamination/Clean Hazardous Areas and Begin Closure Process IAW RCRA  
Subtitle D

Building 493 Cleanup plus equipment decontamination = \$908,024

Building 493 BRAC 2005 closure under RCRA Subtitle D

**Minimum** costs are associated with a marginally contaminated area. Based on a two year project consisting of a \$13,960 Pre-Study (CS) and a \$295,181 Study (RFI/CMS), the total cost is \$309,142.

**Maximum** costs are associated with a seriously contaminated area. Based of a 33 year program consisting of the following:

- Pre-Study (CS) - \$13,960
- Study (RFI/CMS) - \$295,181
- 31 year long term monitoring (LTM) - \$1,222,535
- Design (DES) - \$44,809
- Remedial Action (CMI(C) (Capital) - \$1,094,767
- Total Project Costs Corrected for Escalation Factors = \$3,256,484

# **BASE REALIGNMENT AND CLOSURE**

## **RUBBER PRODUCTS FACILITY**

### **RELOCATION STUDY**

#### **WHITE PAPER**

##### **Scope:**

Present a plan and cost estimate scenario to build a Rubber Products Track & Roadwheel Production Facility located at the Anniston Army Depot in Anniston Alabama. The new production shop is to be identical to the existing Rubber Products Shop located at Red River Army Depot, Texarkana, Texas. The new facility will include the main manufacturing building that houses the process equipment, a hard stand used to stage track shoe and roadwheel assets, employee parking lot, loading dock, 25 foot concrete access road around the building perimeter, storage warehouse, and fluidized bed annex building. The utilities needed to support the manufacturing plant include 125 psi steam service, phosphate/chromate industrial waste treatment, 100 psi dried air, 65 psi water main, and 3000 KVA 480/277 electrical power service. The purpose for this construction effort is based on the BRAC recommendation to close Red River Army Depot and relocate its mission to another depot. The issues involved with the processes used to rebuild track and roadwheels by their very nature are complex and not easily replicated. For this reason, the certifications involved with the manufacture of these products require that if the manufacturing process is moved to another location or significantly changed in any way, the QPL certification process must be repeated. Additionally the M1 roadwheel drawing is sole sourced to RRAD will also have to be re-qualified. This process includes first article tests and field testing at the Yuma Proving Grounds. A significant question to be answered is, What are the consequences for the Army if certification at the designated depot does not occur in a timely manner? Since there can not be absolute assurance of re-qualification, a plan must be presented that insures a continuous supply of rebuild track shoes and roadwheels for the Army.

##### **Methodology:**

To condense the decision information presented in this paper, summary statements are used to arrange data for easy reference. A top down approach is used that starts with the building construction funds and progresses down through the equipment level to final closure / decontamination of the Red River Army Depot, Rubber Products Facility. The paper reports the kind of basic information necessary to evaluate the feasibility of construction of a sister Rubber Products Facility at another location. Due to the short time frame allowed to complete this task, estimates based on experience and previous projects are

used in lieu of actual quotes for the majority of items and tasks. The information presented is not complete and could be improved upon. An Excel Spreadsheet and Project Manager Timeline accompanies this paper. They provide more detailed information.

### **Assumptions:**

Most cost estimates have been made based on the experience of the Rubber Products support personnel from Production Engineering Division, Design Engineering Branch. There are many pieces of specialized production equipment that have been designed and build at RRAD and are not available as commercial items. We have tried to limit one's natural tendency to inflate figures and time frames. This information is the result of engineering estimates. In some instances, historical information was used as a basis for an estimate. The data can be relied on to provide reasonable estimates of the time and costs associated with the effort. However, the data is not presented as completely accurate information based on auditable facts. In every case, reasonable times and costs are used to define a middle of the road solution.

### **Cautions:**

The transition between the existing shop and the newly certified shop must be carefully managed in order to minimize lost production and insure acceptable quality level. As with any organization, there are SOPs and P&Is, Mil Specs, Job Descriptions, etc.; however, there is a large amount of "How-To-Do-It" that must be carried over to the new shop. Every effort must be made to bring this expertise to the new shop. There are approximately 38 critical positions in the work force, every effort should be made to insure that these positions are filled by experienced Rubber Products employees. Without these individuals, the learning curve to successful operation of the facility will be very steep. Some additional areas of concern that should be given consideration are as follows:

Splitting of the existing work force between the new and old shops during the pilot operation phase, (see timeline for details).

Filling of positions left vacant due to individuals that will retire or decline to relocate.

Developing and implementing a comprehensive training program to insure that all new employees can adequately perform the duties of their position.

Establishing a product backlog to carry over during the transition between shops.

MCA Funds Available

Project Scope

Site Survey, (Environmental Assessment, Security, Communication)

Assume that the normal 1391 document fund submission and authorization cycle is shortened to a maximum of six months.

Assume that IMA, AMCOM, TACOM project prioritization is shortened by OSD.

Assume FYDP for MCA funds is assigned within six months of funds approval.

Scope and Technical Information to COE

First Project Year

Early Planning

Second Project Year

AE Contract Award (\$1,750,000, Use existing Rubber Products COE design specifications as basic model for the new facility)

COE Oversight = \$125,000

Detail Design Package

Pre-final and Final

Obligate Funds

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**TRANSFER  
OF TACTICAL MISSILES  
TO LEAD FROM RRAD  
(PATRIOT/HAWK)**

**2005 BRAC**

# ISSUE

## **2005 BASE CLOSURE ANNOUNCEMENT:**

TRANSFER OF THEATER READINESS MONITORING DIRECTORATE (TRMD),  
THEATER READINESS MONITORING FACILITY/PATRIOT MISSILE FACILITY  
(TRMF/PMF) TO LETTERKENNY ARMY DEPOT (LEAD)

## BOTTOM LINE

- **SIGNIFICANT NEGATIVE IMPACTS ASSOCIATED WITH RELOCATING PATRIOT/HAWK MISSILE RECERTIFICATION EFFORT:**

\* **Cost = \$147.44M to relocate missiles and recertification operation**

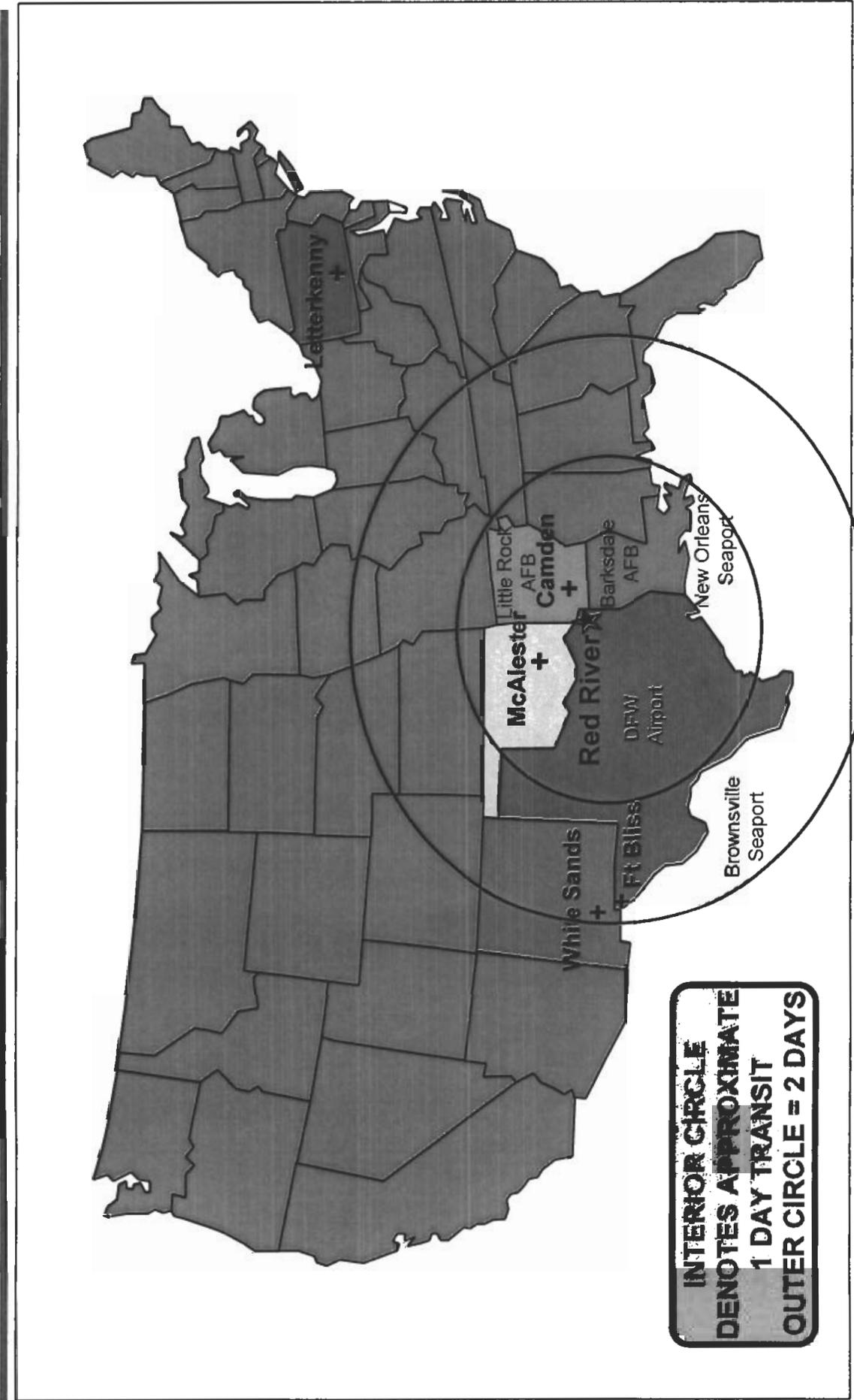
\* **Readiness =**

**Certification of 1007 U.S. and FMS PATRIOT AND 316 FMS HAWK missiles will expire during transfer period rendering the missiles non-operational  
No wartime surge capability for up to 5 years after relocation**

\* **Technical Risk =**

**Workforce must be certified to process a PATRIOT/HAWK Certified Round  
75% of workforce must be trained/certified  
Proficiency degraded for up to 5 years during learning curve**

# MISSILE TRANSIT AREAS



# ASSUMPTIONS

- **ASSUMPTIONS:**

- **Transfer of Function:** Equipment and Personnel will be transferred
- Approximately 25 percent of personnel will actually move (based on past history)
- New 70,000 sq ft building at LEAD to support processing of PATRIOT/HAWK missiles
- New 80ft igloos at LEAD to support storage of PATRIOT/HAWK missiles
- FY09 RRAD shutdown, FY10 LEAD startup

# IMPACTS

- **SIGNIFICANT IMPACT TO THREE (3) AREAS:**

- **COST**

- Disestablishment and Re-Establishment of missile recertification facilities and equipment

- Construction/Refurbishment of buildings/facilities at LEAD

- Construction of igloos for PATRIOT/HAWK missiles

- Missile transportation

- Training of new work force

- **READINESS**

- 2-year delay in Recertification/Upgrade of U.S. Army missiles

- 2-year delay in Recertification/Upgrade of Foreign Military Sales (FMS) missiles

- **TECHNICAL RISK**

- Disruption of recertification operations will have significant negative impact on the proficiency of operations for up to 5 years

# PATRIOT MISSILE WORKLOAD

<b>U.S. PATRIOT</b>	<b>FY05</b>	<b>FY06</b>	<b>FY07</b>	<b>FY08</b>	<b>FY09</b>	<b>FY10</b>	<b>FY11</b>	<b>FY12</b>	<b>FY13</b>
<b>MTS DISASSEMBLY</b>									
PAC-2	92	102	89	102	116	124	131	138	
GEM	108	32							
<b>MTS REASSEMBLY/RECERTIFICATION</b>									
PAC-2	162	92	102	89	102	116	124	131	138
GEM	62	108	32						
<b>SRT</b>									
PAC-2	18	17	33	34	17	17	16	17	
GEM	18	16			17	16	17	16	34
<b>REPAIR</b>	170	117	85	95	110	129	129	124	88
<b>O-RING</b>	323	286	171	129	142	180	180	142	142
<b>TOTAL</b>	<b>953</b>	<b>770</b>	<b>512</b>	<b>449</b>	<b>504</b>	<b>582</b>	<b>597</b>	<b>568</b>	<b>402</b>

<b>FMS PATRIOT*</b>	<b>FY05</b>	<b>FY06</b>	<b>FY07</b>	<b>FY08</b>	<b>FY09</b>	<b>FY10</b>	<b>FY11</b>	<b>FY12</b>	<b>FY13</b>
<b>RECERTIFICATION</b>	11	12	143	159	203	177	69	30	0
<b>SRT</b>	11	11	10	11	11	11	11	11	11
<b>REPAIR</b>	17	18	67	67	76	94	45	27	14
<b>TOTAL</b>	<b>39</b>	<b>41</b>	<b>220</b>	<b>237</b>	<b>290</b>	<b>282</b>	<b>125</b>	<b>68</b>	<b>25</b>

\* Israel, Kingdom of Saudi Arabia, Kuwait, Taiwan combined

# HAWK MISSILE WORKLOAD

<b>FMS HAWK*</b>	<b>FY05</b>	<b>FY06</b>	<b>FY07</b>	<b>FY08</b>	<b>FY09</b>	<b>FY10</b>	<b>FY11</b>	<b>FY12</b>	<b>FY13</b>
TEARDOWN	30	50	50	50	50	50	50	50	50
RECERTIFICATION	144	240	240	240	240	240	240	242	217
<b>TOTAL</b>	<b>174</b>	<b>290</b>	<b>290</b>	<b>290</b>	<b>290</b>	<b>290</b>	<b>290</b>	<b>292</b>	<b>267</b>

\* Bahrain, Taiwan, Turkey, Egypt, Kuwait, Spain, Saudi Arabia, Jordan combined

# COST

ELEMENT	COST FACTOR	COST ESTIMATE (\$M)
Equipment Move	Disassembly, packaging, transportation of test equipment, tools, fixtures and spare parts.	\$6.86
Construction/Refurbishment of operations buildings	70,000 sq ft (minimum) to meet recertification processing and inert storage.	\$12.74
Construction of new standard 80ft Igloos	Storage for 2200 PATRIOT (28 per igloo) and 6328 HAWK (45 per igloo) missiles require 220 igloos at a cost of \$510,000 each. Assumes 600 PAC-3 missiles will be added from production.	\$112.20
Missile Transportation	803 truckloads at a cost per truckload of \$5,101. (8 PATRIOT, 12 HAWK per truck)	\$4.10
Training of new work force	It is expected that only 25 percent of workforce will transfer with facility. 8 classes, 10 students each for 9 months at \$26,000 per student. Cost estimate includes student salaries (1350 hrs per student X \$87.61 per hour).	\$11.54
<b>TOTAL</b>		<b>\$147.44</b>

# READINESS

- **PATRIOT (assumes FY09-10 shutdown)**

- 569 U.S. missiles require recertification, Stockpile Reliability Testing (SRT), or repair during a 18-24 month shutdown. Missiles programmed will not be recertified and will be placed in non-operational condition code.
- 438 FMS missiles require recertification, SRT or repair during a 18-24 month shutdown. Missiles programmed will not be recertified and will be placed in non-operational condition code.

Extremely critical to FMS community due to smaller missile densities.

- **HAWK**

- 316 FMS missiles require recertification during a 18-24 month shutdown. Missiles programmed will not be recertified and will be placed in non-operational condition code.

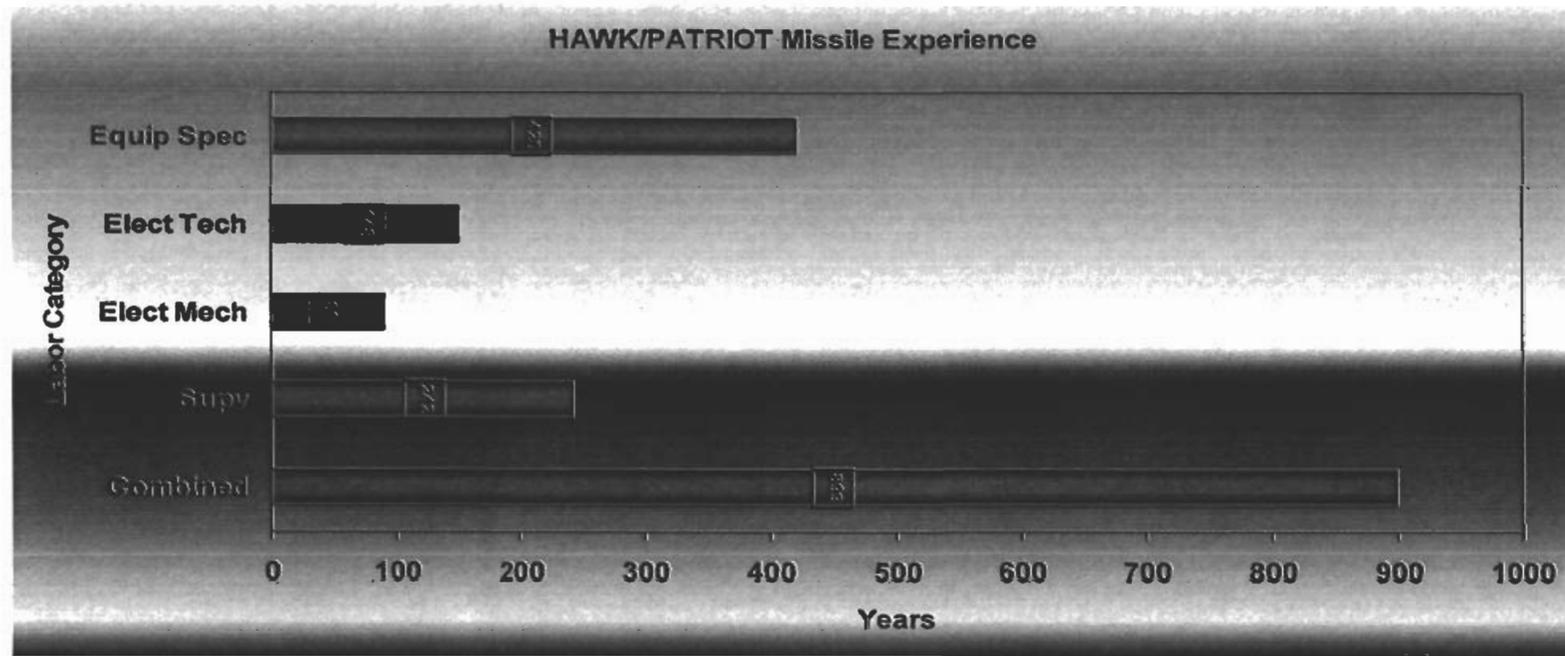
- **REDUCED WARTIME SURGE CAPABILITY FOR UP TO 5 YEARS**

**INTERNATIONAL AGREEMENTS IN PLACE TO SUPPORT FMS COMMUNITY**

# TECHNICAL RISK

- **DIMINISHED TECHNICAL PROFICIENCY FOR UP TO 5 YEARS**

- 75 percent new workforce
- Existing proficiency achieved on continuous operations since 1971 (HAWK), 1987 (PATRIOT)
- Extended learning curve
- Lower throughput during learning curve
- Time required to achieve full proficiency will limit wartime surge capability



**TRANSFER  
OF TACTICAL MISSILES  
TO LEAD FROM RRAD  
(PATRIOT/HAWK)**

**2005 BRAC**

# ISSUE

## **2005 BASE CLOSURE ANNOUNCEMENT:**

TRANSFER OF THEATER READINESS MONITORING DIRECTORATE (TRMD),  
THEATER READINESS MONITORING FACILITY/PATRIOT MISSILE FACILITY  
(TRMF/PMF) TO LETTERKENNY ARMY DEPOT (LEAD)

# BOTTOM LINE

- **SIGNIFICANT NEGATIVE IMPACTS ASSOCIATED WITH RELOCATING PATRIOT/HAWK MISSILE RECERTIFICATION EFFORT:**

- \* **Cost = \$149.30M to relocate missiles and recertification operation**

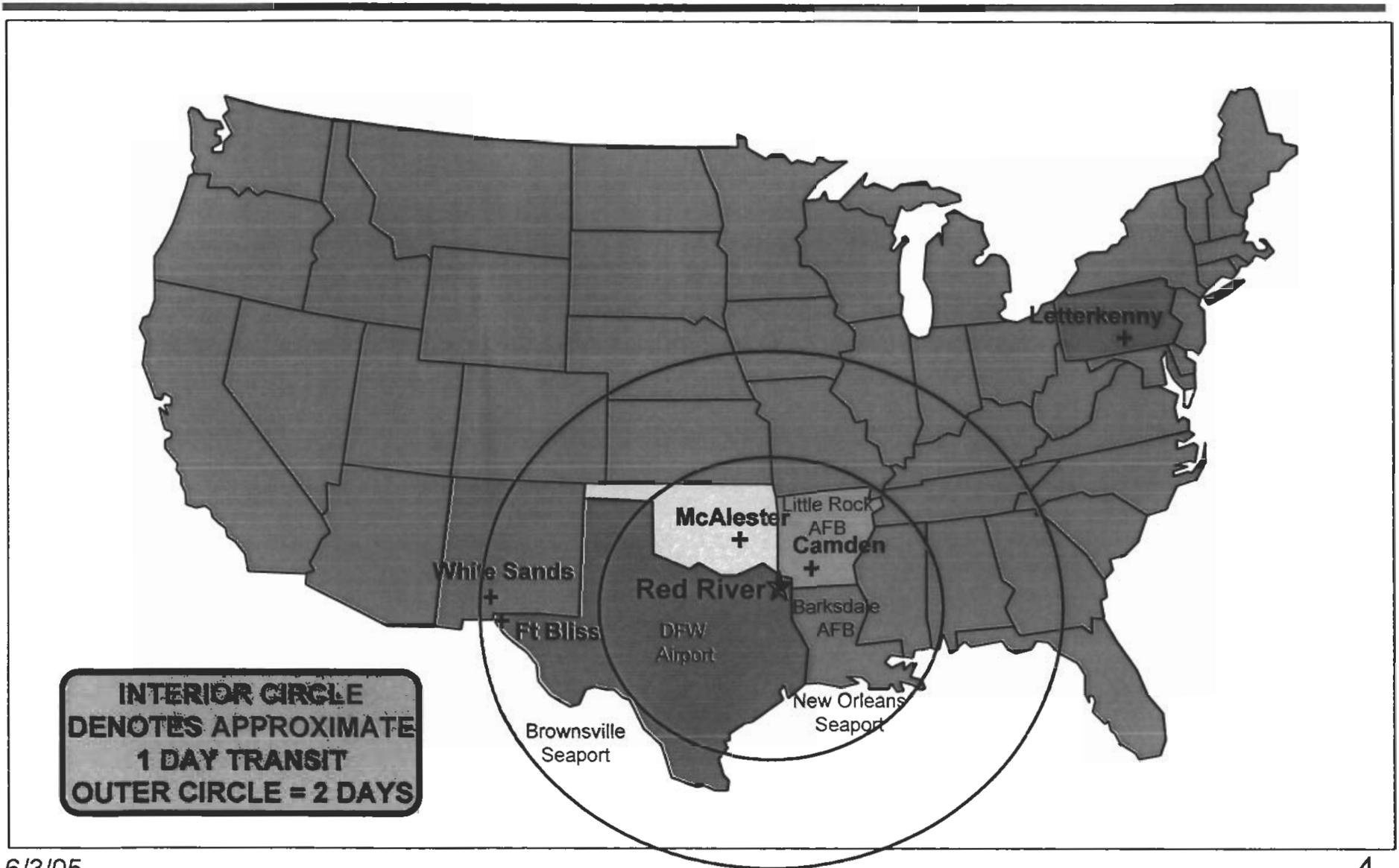
- \* **Readiness =**

- Certification of 1007 U.S. and FMS PATRIOT AND 316 FMS HAWK missiles will expire during transfer period rendering the missiles non-operational**
  - No wartime surge capability for up to 5 years after relocation**
  - Recertification delays due to transportation to/from McAlester**

- \* **Technical Risk =**

- Workforce must be certified to process a PATRIOT/HAWK Certified Round**
  - 75% of workforce must be trained/certified**
  - Proficiency degraded for up to 5 years during learning curve**
  - High probability of damage due to multiple movements of missiles to/from McAlester**

# MISSILE TRANSIT AREAS



# ASSUMPTIONS

- **ASSUMPTIONS:**

- **Transfer of Function:** Equipment and Personnel will be transferred
- Approximately 25 percent of personnel will actually move (based on past history)
- New 70,000 sq ft building at LEAD to support processing of PATRIOT/HAWK missiles
- New 80ft igloos at McAlester Army Ammunition Plant to support storage of PATRIOT/HAWK missiles
- Transportation of PATRIOT/HAWK missiles to/from McAlester to LEAD for recertification
- FY09 RRAD shutdown, FY10 LEAD startup

# IMPACTS

- **SIGNIFICANT IMPACT TO THREE (3) AREAS:**

- **COST**

- Disestablishment and Re-Establishment of missile recertification facilities and equipment

- Construction/Refurbishment of buildings/facilities at LEAD

- Construction of igloos for PATRIOT/HAWK missiles

- Missile transportation

- Training of new work force

- **READINESS**

- 2-year delay in Recertification/Upgrade of U.S. Army missiles

- 2-year delay in Recertification/Upgrade of Foreign Military Sales (FMS) missiles

- **TECHNICAL RISK**

- Disruption of recertification operations will have significant negative impact on the proficiency of operations for up to 5 years

# PATRIOT MISSILE WORKLOAD

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MTS REASSEMBLY/RECERTIFICATION									
PAC-2	162	92	102	89	102	116	124	131	138
GEM	62	108	32						
SRT									
PAC-2	18	17	33	34	17	17	16	17	
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REPAIR	170	117	85	95	110	129	129	124	88
O-RING	323	286	171	129	142	180	180	142	142
TOTAL	953	770	512	449	504	582	597	568	402

FMS PATRIOT*	FY05	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13
RECERTIFICATION	11	12	143	159	203	177	69	30	0
SRT	11	11	10	11	11	11	11	11	11
REPAIR	17	18	67	67	76	94	45	27	14
TOTAL	39	41	220	237	290	282	125	68	25

\* Israel, Kingdom of Saudi Arabia, Kuwait, Taiwan combined

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RECERTIFICATION	144	240	240	240	240	240	240	242	217
<b>TOTAL</b>	<b>174</b>	<b>290</b>	<b>290</b>	<b>290</b>	<b>290</b>	<b>290</b>	<b>290</b>	<b>292</b>	<b>267</b>

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# COST

ELEMENT	COST FACTOR	COST ESTIMATE (\$M)
Equipment Move	Disassembly, packaging, transportation of test equipment, tools, fixtures and spare parts.	\$6.86
Construction/Refurbishment of operations buildings	70,000 sq ft (minimum) to meet recertification processing and inert storage.	\$12.74
Construction of new standard 80ft Igloos	Storage for 2200 PATRIOT (28 per igloo) and 6328 HAWK (45 per igloo) missiles require 220 igloos at a cost of \$510,000 each. Assumes 600 PAC-3 missiles will be added from production.	\$112.20
Missile Transportation to McAlester	803 truckloads at a cost per truckload of \$3,945. (8 PATRIOT, 12 HAWK per truck)	\$3.17
Missile Transportation to LEAD-round trip from McAlester	FY09-13 workload; 2032 PATRIOT, 1429 HAWK missiles. 274 truckloads at a cost of \$10,200 each.	\$2.79
Training of new work force	It is expected that only 25 percent of workforce will transfer with facility. 8 classes, 10 students each for 9 months at \$26,000 per student. Cost estimate includes student salaries (1350 hrs per student X \$87.61 per hour).	\$11.54
<b>TOTAL</b>		<b>\$149.30</b>

# READINESS

- **PATRIOT (assumes FY09-10 shutdown)**

- 569 U.S. missiles require recertification, Stockpile Reliability Testing (SRT), or repair during a 18-24 month shutdown. Missiles programmed will not be recertified and will be placed in non-operational condition code.
- 438 FMS missiles require recertification, SRT or repair during a 18-24 month shutdown. Missiles programmed will not be recertified and will be placed in non-operational condition code.

Extremely critical to FMS community due to smaller missile densities.

- **HAWK**

- 316 FMS missiles require recertification during a 18-24 month shutdown. Missiles programmed will not be recertified and will be placed in non-operational condition code.

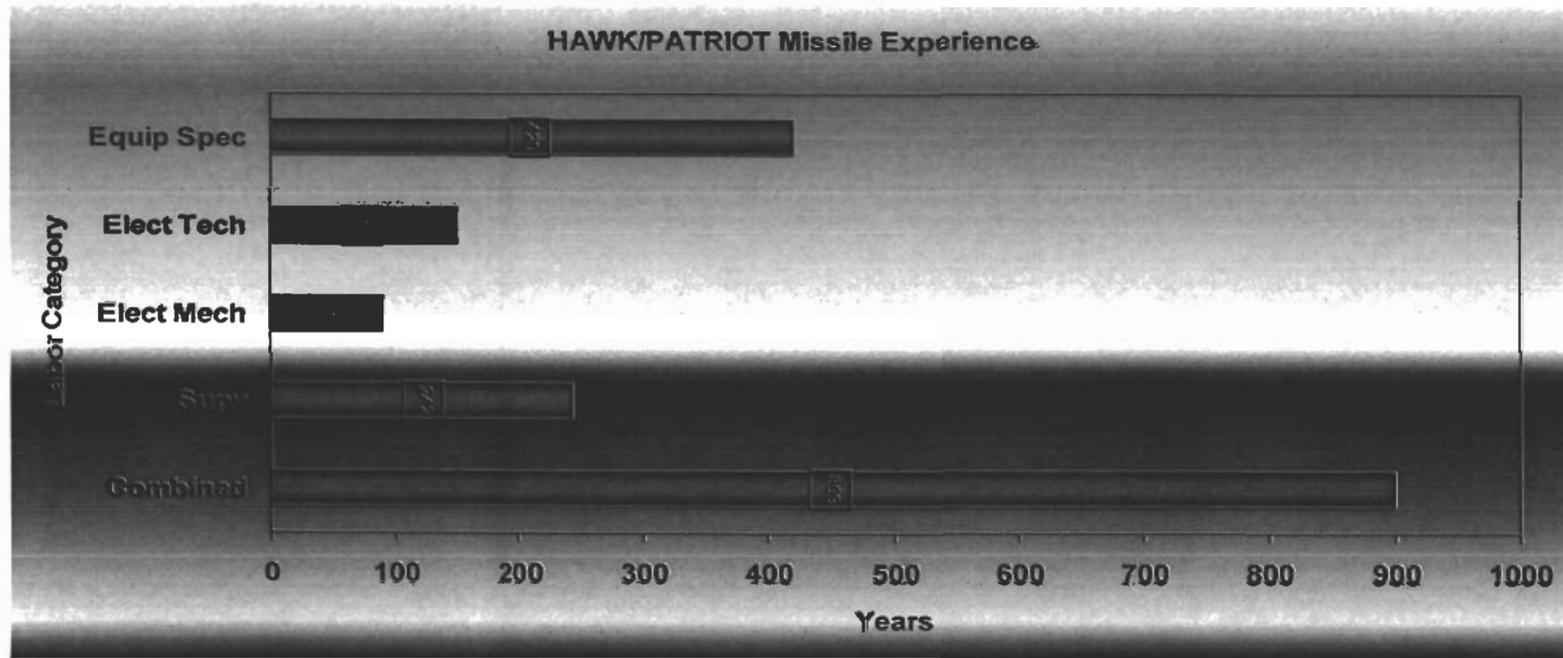
- **REDUCED WARTIME SURGE CAPABILITY FOR UP TO 5 YEARS**

**INTERNATIONAL AGREEMENTS IN PLACE TO SUPPORT FMS COMMUNITY**

# TECHNICAL RISK

- **DIMINISHED TECHNICAL PROFICIENCY FOR UP TO 5 YEARS**

- 75 percent new workforce
- Existing proficiency achieved on continuous operations since 1971 (HAWK), 1987 (PATRIOT)
- Extended learning curve
- Lower throughput during learning curve
- Time required to achieve full proficiency will limit wartime surge capability





# RED RIVER MUNITIONS CENTER

ISO 90012000 Registered

**Commander: COL Gary Carney**

**Munitions Center Director: Harrell Hignight**

*“Explosive Support thru Quality Workmanship”*



# RRMC MISSION

- ✓ **Mission:** Support the joint warfighter by executing efficient and safe receipt, issue, storage, demil, renovation and maintenance of conventional munitions and missiles within cost and on schedule.
- ✓ **Vision:** Become the DoD Center of Expertise for maintaining stockpile and providing missiles and munitions to the war fighter safely and securely.



# What We Do

- ✓ **Upgrade Maverick for Air Force**
- ✓ **Renovate Chaparral missile for FMS customers**
- ✓ **X-ray fuzes, rocket motors, and mortars**
- ✓ **Conduct grenade renovation for Army, Navy and Marine Corp**
- ✓ **Storage and transportation support**
- ✓ **DOD power projection mission for munitions outload – 133 containers per day**

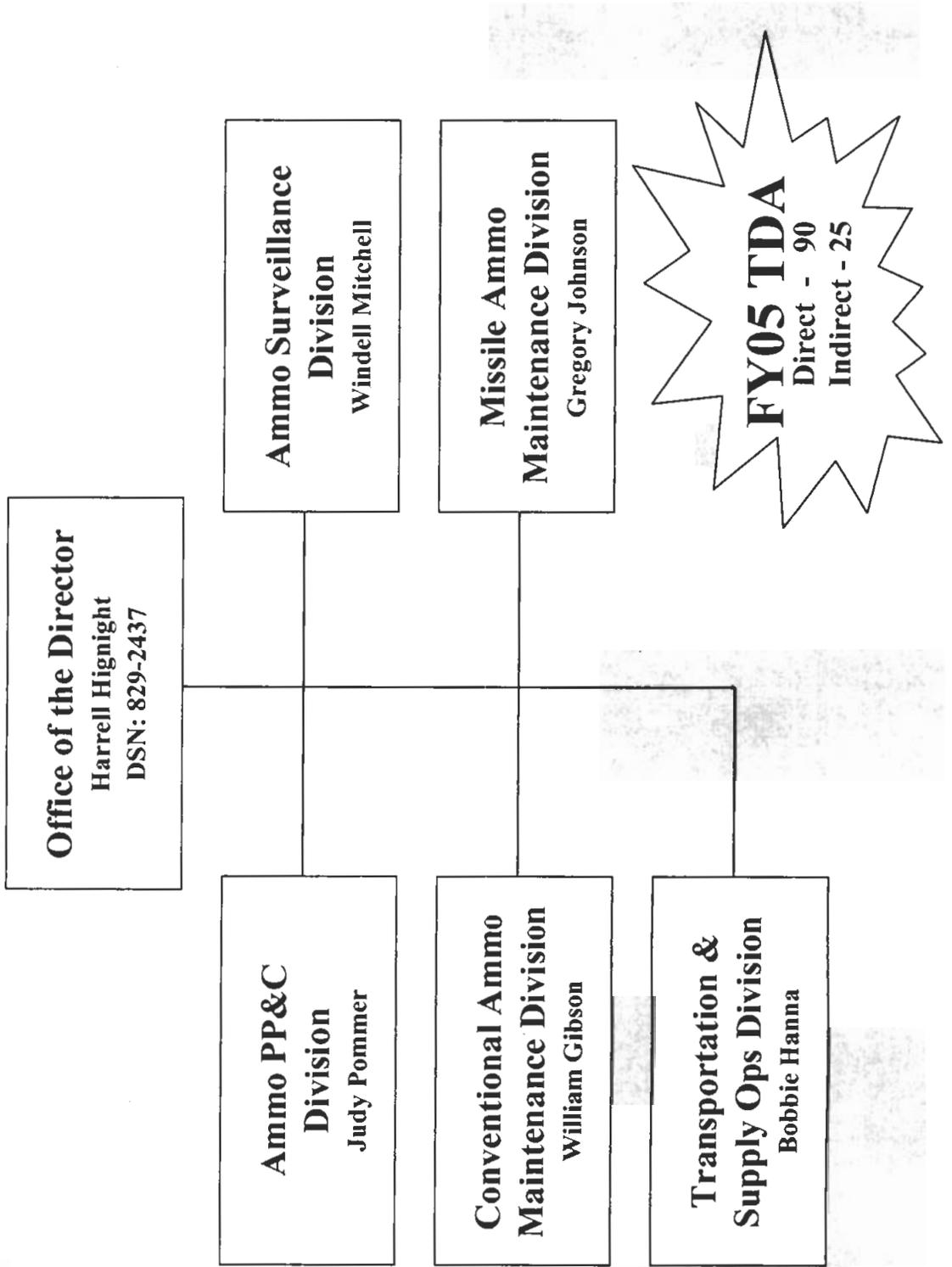


# Partnering

- ✓ **Theater Readiness Monitoring Directorate (RRAD)**
  - **Patriot Missile Reset**
  - **Storage and Transportation**
- ✓ **Hill AFB and Raytheon**
  - **Test , modify, upgrade, store and ship Maverick missile**
- ✓ **Warner Robins Air Force Base**
  - **Maintain accurate database on Maverick missiles**
- ✓ **Lockheed Martin**
  - **PAC3 software upgrade**
- ✓ **Air Force and Defense Distribution Depot – Red River**
  - **F16 Peace Sky**



# Red River Munitions Center





# RRMC Organizations



## *Ammo Production Planning and Control Division*

**Plan, develop, coordinate, and control ammunition workload and funding, systems, policies and procedures.**

## *Ammo Surveillance Division*

**Direct, control, monitor, and evaluate the ammunition surveillance program for ammunition, explosives, and guided missiles.**





# RRMC Organizations



## *Conventional Ammo Maintenance Division*

Perform maintenance on conventional ammunition. Open burn, open detonate conventional ammunition, missiles, and missile components and static fire missile motors.

## *Missile Ammo Maintenance Division*

Perform maintenance and provide technical assistance on a variety of guided missile systems.





# RRMC Organizations



## Transportation & Supply Operations Division

Receive, store, issue, and move conventional, missile, and related ammunition items.





# Primary Customers

**Marine Corp**

**Joint Munitions  
Command**

**Army**

**Red River Army Depot**

**Aviation Missile  
Command**

**Air Force**

**Navy**

**Directorate of  
Theater Readiness  
Monitoring**



***The Soldier in the Field***



# Customer Focus

- ✓ Send QASAS to Kuwait and Iraq to work side by side with the soldier
- ✓ Visit major customers quarterly
- ✓ Attend semiannual in-process reviews and conferences to discuss current and future requirements
- ✓ Respond to customers' needs
  - Meet with contractors
  - Provide technical support (CONUS & OCONUS)
- ✓ Host meetings and site visits on depot for customers
- ✓ Provide home phone numbers to meet emergency workload requirements during non-duty hours
- ✓ Maintain highly skilled, well-trained workforce
- ✓ Develop process improvements
- ✓ Train FMS customers both on depot and in country
- ✓ Send out customer surveys for off-depot and depot customers



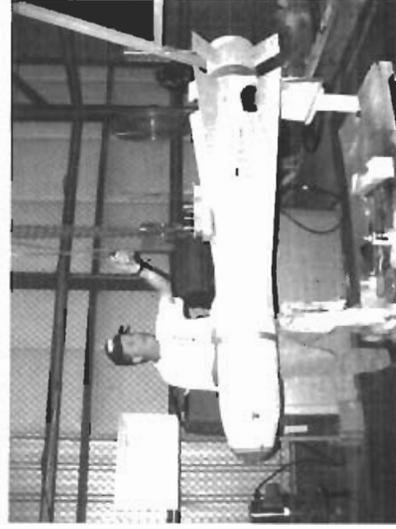
# Major Missions



Conventional  
Maintenance  
Demilitarization



Supply  
Receipt  
Storage  
Shipping



Missile  
Maintenance  
Demilitarization





# Safety

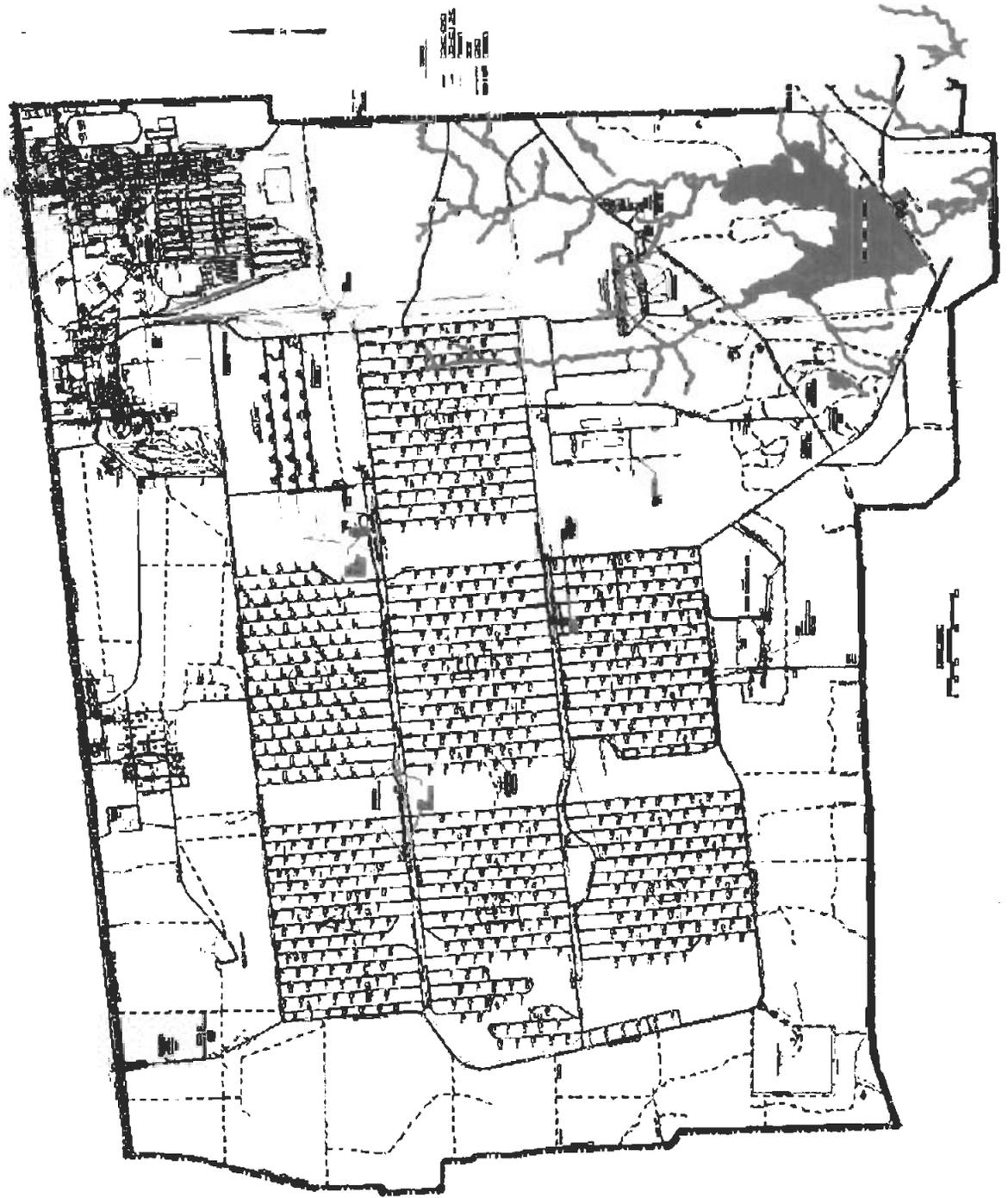
**Explosive Certification  
Training**

**Safety Emphasized in  
SOP and on the Job**

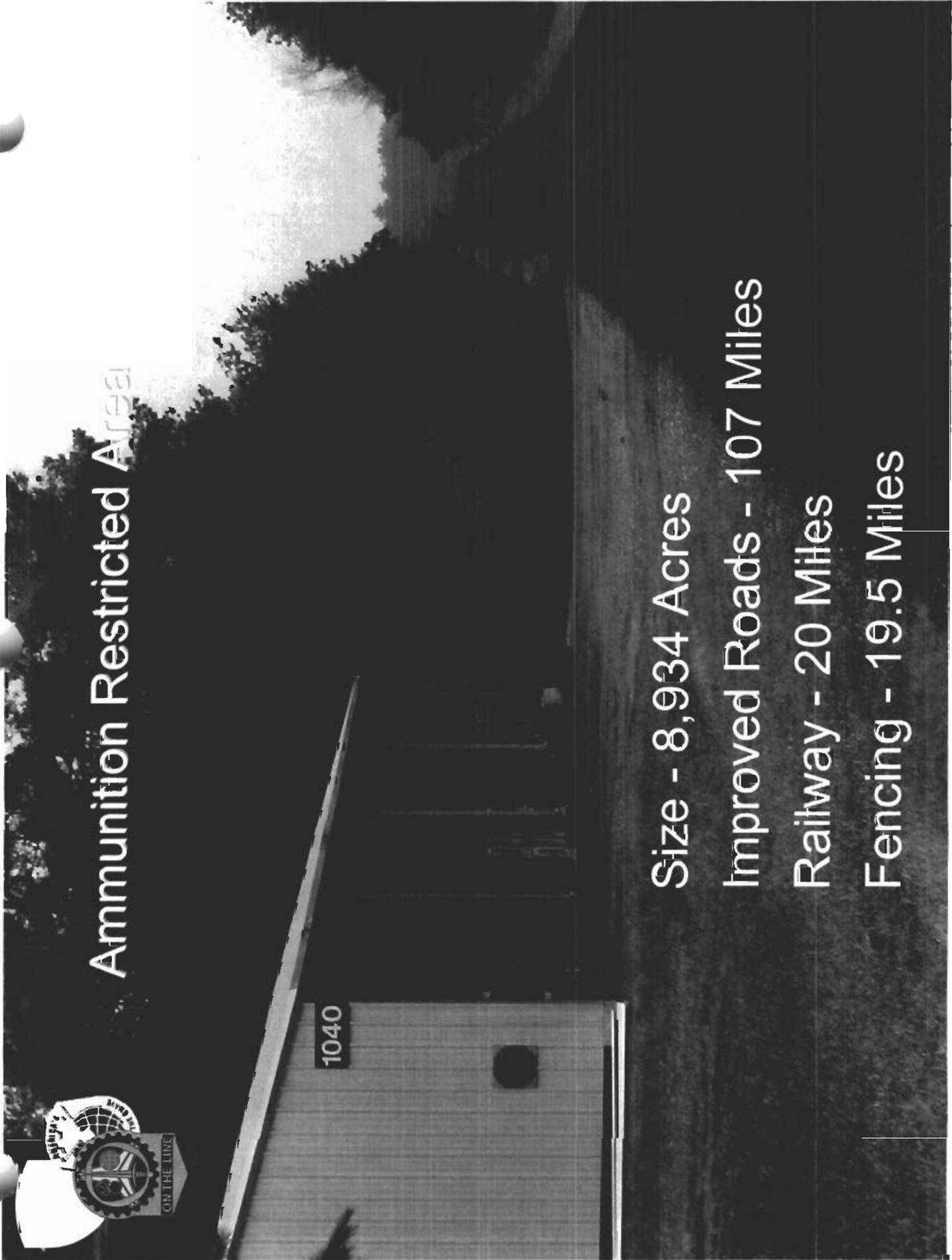
**Safety Included in Weekly  
Planning Meeting**

**Periodic Site Inspections  
Industrial Safety**

# Red River Munitions Center



# Ammunition Restricted Area



Size - 8,934 Acres

Improved Roads - 107 Miles

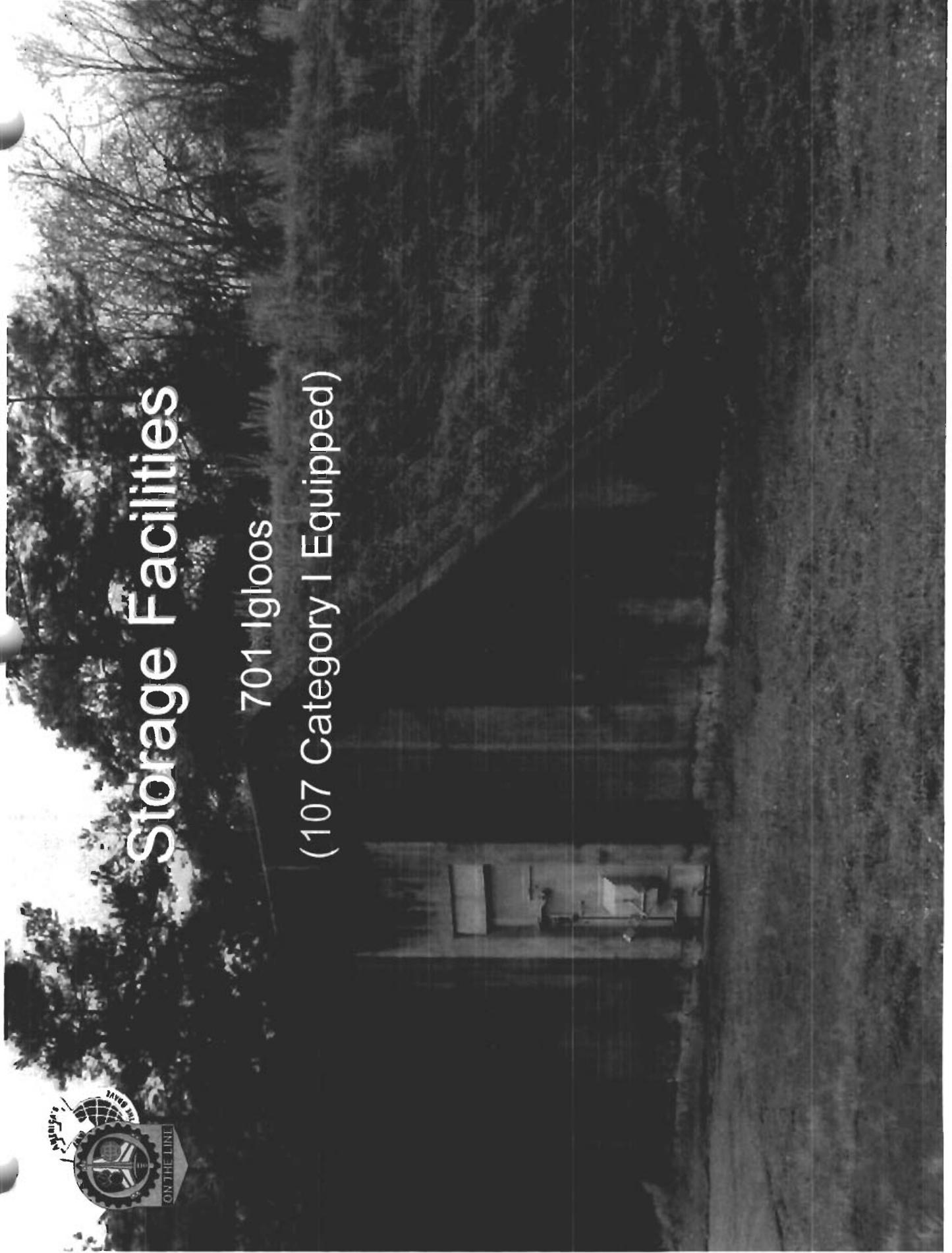
Railway - 20 Miles

Fencing - 19.5 Miles



# Storage Facilities

701 Igloos  
(107 Category I Equipped)

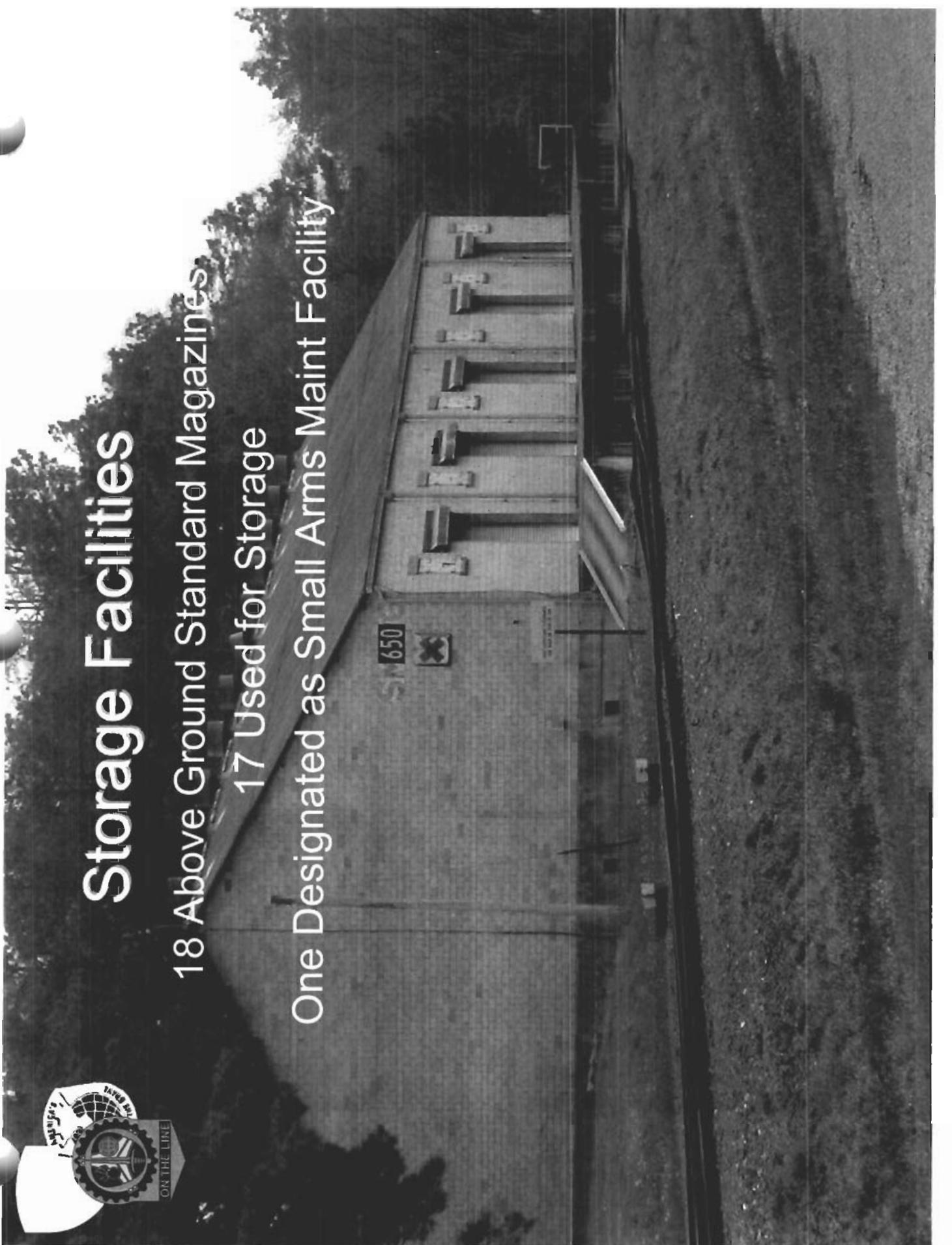


# Storage Facilities

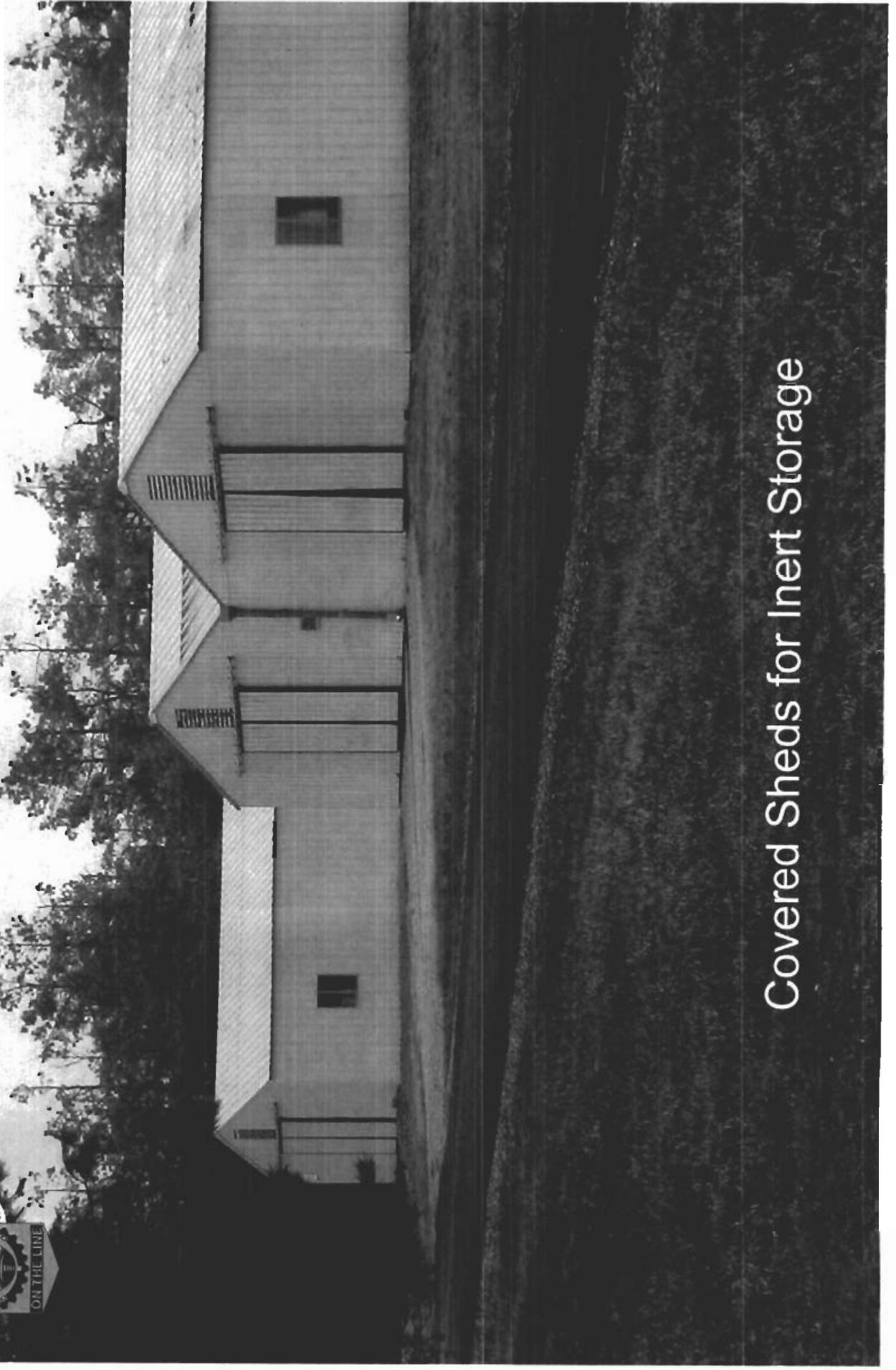
18 Above Ground Standard Magazines

17 Used for Storage

One Designated as Small Arms Maint Facility



# Storage Facilities



Covered Sheds for Inert Storage

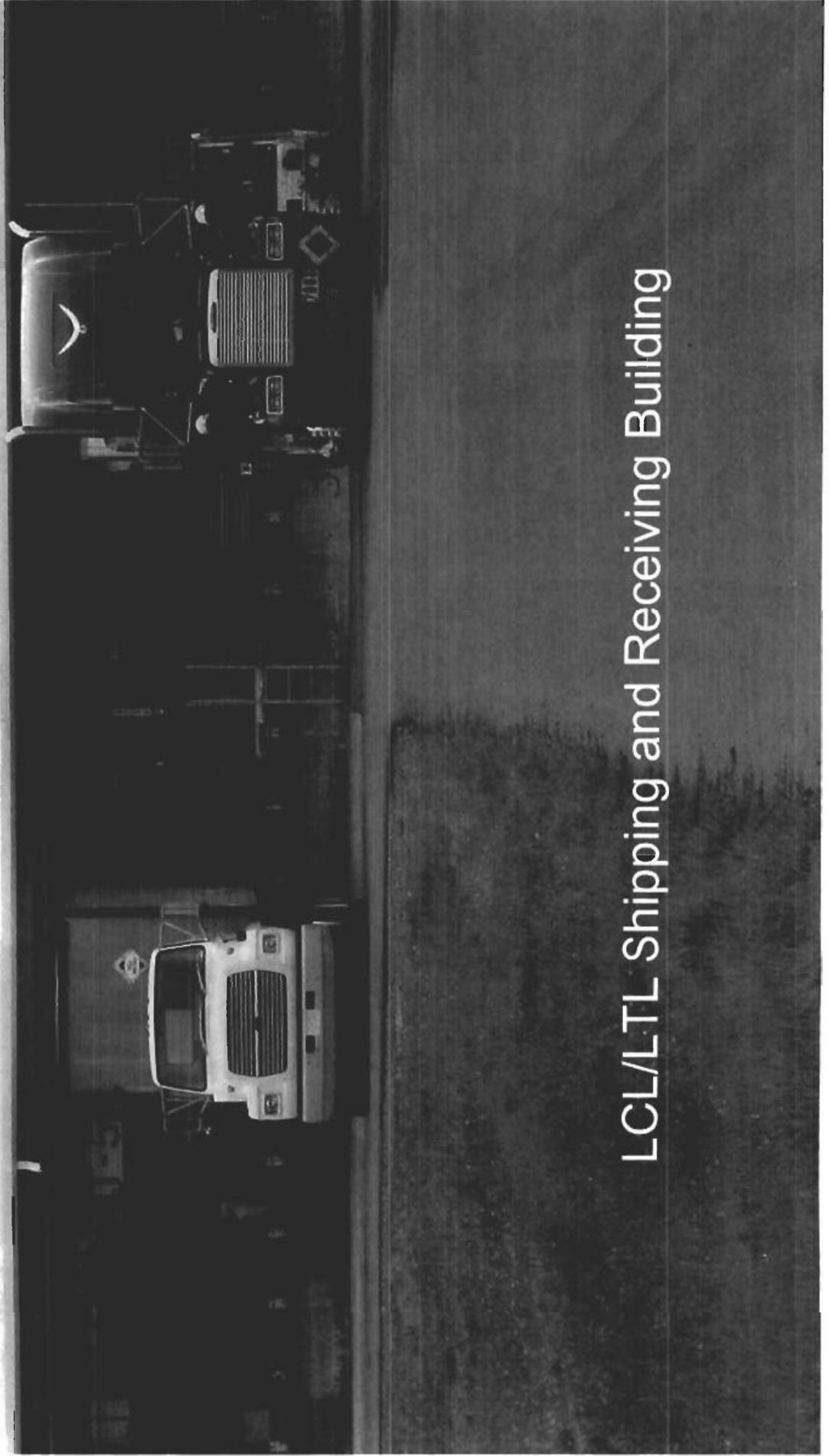
# Storage Facilities

Ten Covered Sheds for Patriot Missile Storage

1040



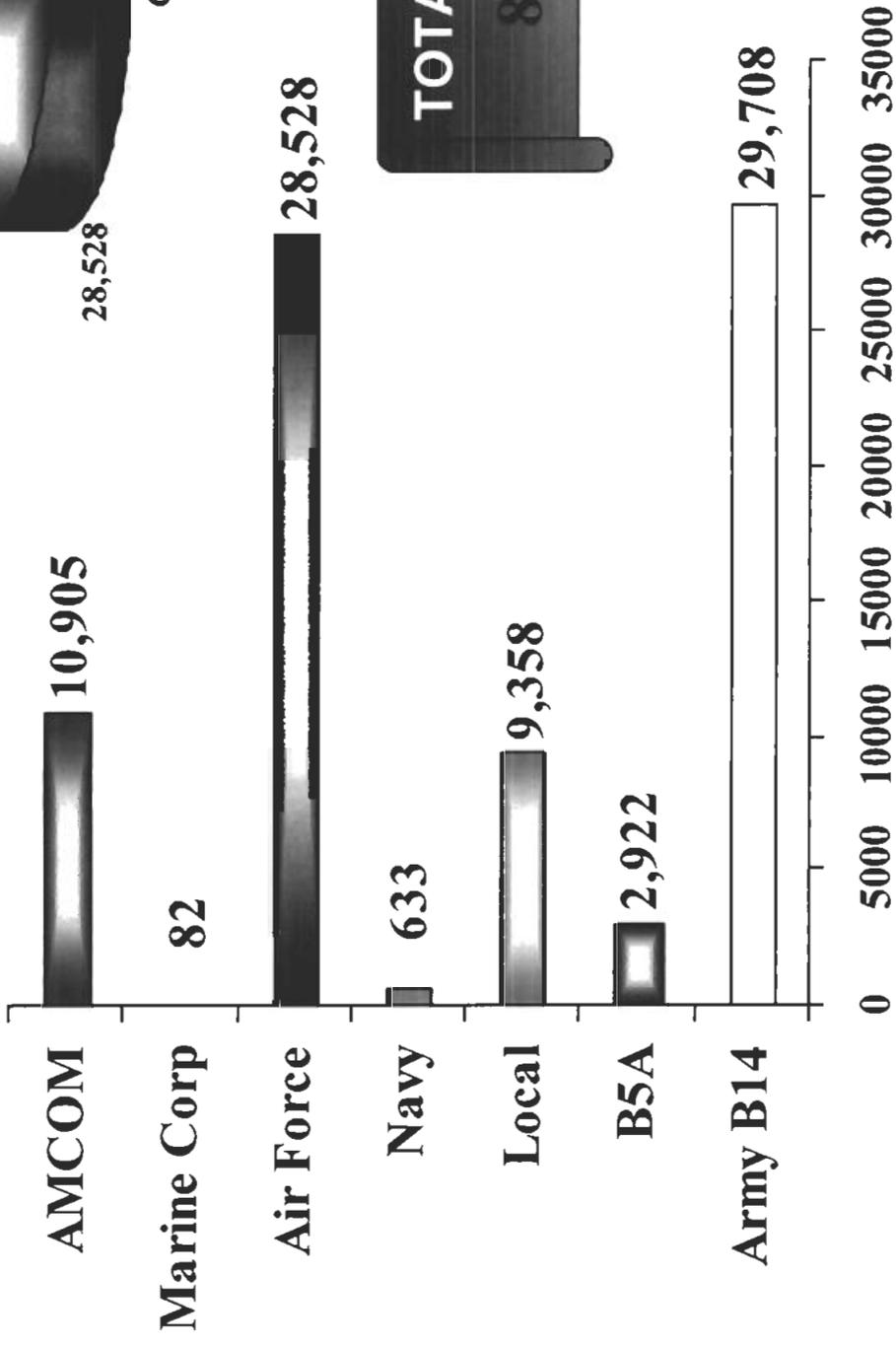
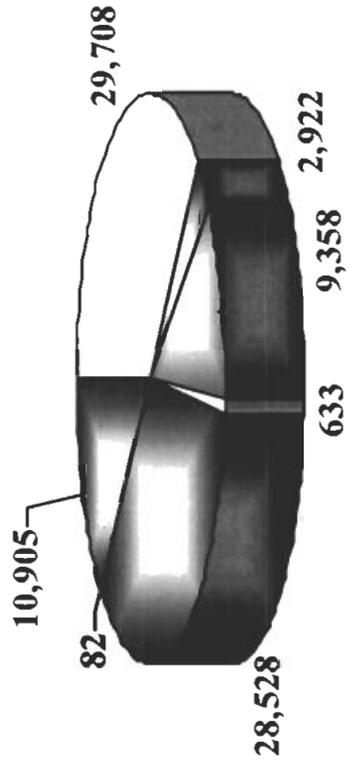
# Storage Facilities



LCL/LTL Shipping and Receiving Building



# Inventory by Customer



**TOTAL TONNAGE**  
82,136

**\$6B**  
Inventory

# FY 05 Workload

- ✓ Missile
  - Chaparral
  - Patriot
  - Stinger
  - Maverick
  - Hawk
- ✓ Demil
  - Patriot Components
  - Maverick Components
  - Shillelagh Missiles
  - Stinger
  - Hawk Rocket Motor
- ✓ Conventional
  - M67 Grenade Bar Coding Effort
  - X-Ray M213 Fuze
  - 155mm Projectile
- ✓ Shipping and Receiving
  - Storage Operations
  - Reworking
- ✓ Inventory
  - Bar Coding Effort
  - 100% Inventory





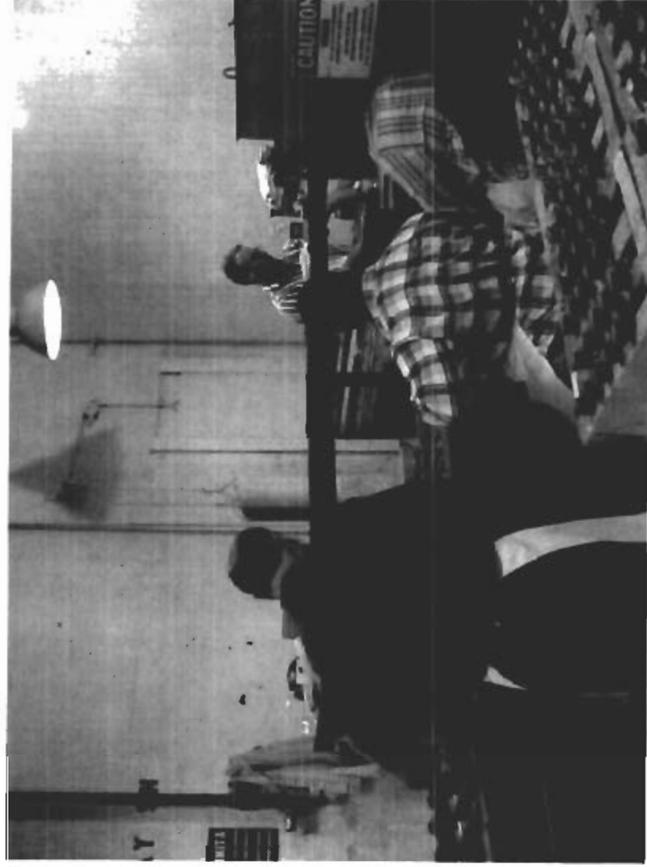
# Missile Workload

Chaparral  
Patriot  
Stinger  
Maverick  
Hawk  
Shillelagh  
AGM 142/E





# Conventional Ammo Workload



**Renovate M67 Grenade  
Army**

**Renovate 155MM**

**X-ray M213 Fuse**

**2.75 inch rocket**

# Demil Workload

**Maverick Components - 132 Stons  
(OD)**

**Miscellaneous Demil - 260 Stons  
(OB/OD)**

**Patriot Components -281 Stons  
(OD)**

**Patriot Rocket Motors - 90 Stons**

**Stinger- 30 Stons**

**Rocket HE 66MM - 67 Stons**

**Hawk Rocket Motors - 42 Stons**

**Gator Mines - 378 Stons**





# RRMC Initiatives

Value Engineering

Lean

ISO 9002

R3/R4 Large Rocket Motors



# Philosophy of Operations

**Sensitive to Customers' Needs**



**Process Oriented, Continuous Improvement**

**Highly Skilled, Well-Trained Workforce**

**Focus on Teamwork**

**Quality of Life For Members**





# PAC-3 Product Office Certificate of Appreciation



Presented to

*Harrell Hignight*

*In recognition of your outstanding support  
to the Army's only combat proven,  
Hit to Kill, Air and Missile Defense System,  
PAC-3*

Date

*LTC Troy E. Trulock  
Product Manager*

# Certificate of Quality System Assessment

American Quality Assessors, AQA, a provider of ISO 9000/Q9000  
third party quality system registration and accredited by the  
American National Accreditation Program for  
Registrars of Quality Systems, ANSI-RAB, attests that:

Red River Munitions Center  
100 Main Drive Building 184  
Texarkana, TX 75507

with a scope of :

The storage, demilitarization, renovation, modification, maintenance and  
shipment of non-nuclear, conventional and guided missile munitions.

The retrofit and rebuilding of assigned missile munitions.

has established a quality management system that is in compliance  
with the International Quality System Standard ISO 9001 and Q9001 - 2000.

*"Further clarifications regarding the scope of this certificate and the applicability of  
ISO 9001:2000 requirements may be obtained by consulting the organization."*

September 27, 2002

Registration Date

1636

Certificate No.

September 27, 2005

Registration Period Ending

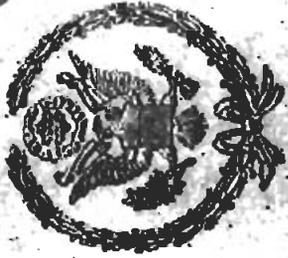


Executive Director, AQA



1105 Belleview Ave., Columbia, SC 29201  
Phone (800) 281-4384





# DEPARTMENT OF THE ARMY

## CERTIFICATE OF APPRECIATION

AWARDED TO  
**RRMC TEAM**

for outstanding results on assessment and follow-up of GAO Report on transportation security of munitions. Red River has an outstanding TO and staff with great attitudes. They were all well organized and understood what needed to be done. They have made great strides since early July to comply with deficiencies found at JMC installations by GAO. Your professionalism and devotion to duty are commendable and in keeping with the pride in workmanship that is always evident at the Red River Munitions Center. Your contributions to the success of MCAAP are sincerely appreciated.

1 November 2003

A handwritten signature in cursive script, reading "Donna R. Adam".

**Donna R. Adam**  
Civilian Deputy

# Red River Munitions Center

## Value to the Force

Red River Munitions Center (RRMC) is truly a joint-service provider. We provide storage, shipping, demilitarization, surveillance, and ammunition maintenance support to the Marine Corp, Joint Munitions Command, Army, Aviation Missile Command, Air Force, Navy and our host depot, Red River Army Depot. For many years we have worked under the core concept equipping and training our employees with multi-skilled expertise. Because we are able to shift our personnel where we need them, we have been able to maintain a very lean but very ready and skilled workforce that is able to surge to meet the warfighters' needs without additional personnel or lost time.

### Direct Support to the Warfighter

RRMC has provided surveillance personnel to work side-by-side with the soldier in Kuwait and in Iraq. With their munitions explosive expertise, our Quality Assurance Specialists (Ammunition Surveillance) have been a valuable asset to the soldier in the field. The Munitions Center has also provided personnel support in other conflicts such as Desert Shield and Desert Storm. We have also provided assistance during natural disasters throughout the nation by sending members to work along side relief workers.

### Munitions Storage and Shipping

RRMC has an excellent storage facility. Spanning over 8,934 acres, we have 107 miles of improved roads, twenty miles of railroad, 701 earth covered igloos, 18 above ground standard magazines, 35 improved Y-sites, and ten covered sheds designated for Patriot Storage. One hundred seven of our earth covered igloos are equipped to hold either CAT I or CAT II storage. Currently we have 56 igloos that contain CAT I stock and 34 that contain CAT II stock. CAT I storage requires extra fencing, extra security devices, additional lighting and intrusion detection systems on each igloo. We currently store in excess of five billion dollars worth of ammunition for the various branches that we serve.

Ranked fourth among twenty-three installations in military value for storage, RRMC takes great pride in providing outstanding support to our customers. Our members are dedicated to the cause and are ready to respond to emergency calls for ammunition support to the warfighter. Typically, we can have a crew on site within thirty minutes of the time we receive the call.

The Munitions Center has provided ammunition to the warfighter in all recent conflicts. We shipped in excess of 44,800 short tons during Desert Shield/Desert Storm. We received back and stored in excess of 100,000 short tons when the war was over. We have shipped in excess of 12,000 short tons in support of Operation Iraqi Freedom thus far. We expect that when the war is over, the retrograde will be similar to what it was during Desert Shield/Desert Storm.

## Missile Maintenance

Our missile maintenance facility is equipped to test, inspect, and repair a variety of missiles and components. The facility is equipped with a mean-time between failure test chamber that essentially is a unit that bakes, shakes, and freezes components or units to test and verify the life cycle of the unit. This has enabled us to determine that some missiles may be retained and used longer than originally thought. RRMC is eager to work with our partners and customers to provide ammunition to the warfighter on time and in excellent condition. For example, we recently worked with Lockheed Martin to upgrade the software in the PAC 3 Patriot missile.

## Chaparral Missile

Red River Munitions Center has the only Chaparral Missile Facility in the United States. Our missile facility has 19,500 SF and is climate controlled with thirteen bays divided by twelve inch reinforced concrete walls. It contains over \$30M worth of test equipment. It contains a 100,000 class laminar flow clean room. Our electronic integrated systems mechanics are well trained in missile maintenance. We are capable of complete overhaul of the Chaparral missile. AMCOM has made a multi-year commitment to FMS customers to provide support and maintenance of the Chaparral missile. We are the only organization with both the facility and expertise to provide this service.

## Maverick Missile

RRMC is the only munitions center providing Maverick missile certification. We work closely with Hill AFB and Raytheon to test, modify, minor repair, store and ship the Maverick Missile. We work with Warner Robbins AFB to maintain an accurate database of Maverick missile information. The Maverick missile team was one of the first in the nation to receive the Hammer Award presented by the Vice President of the United States for excellent service in missile maintenance.

## Stinger Missile

RRMC stores and performs storage monitoring inspections on the Stinger Missile. We also reconfigure the Stinger and inspect the BCU. There are four different configurations of the Stinger, and our personnel are highly skilled to configure the missile according to the customers needs. We fabricated and fielded the Stinger trainer missile and trainer gripstock. This has saved taxpayer dollars. We also complete modification of the tactical gripstock. Accountability of the Stinger missiles is critically important, and we are meticulous to keep accurate accountability and control.

RRMC is currently working on a plan to partner with Raytheon on the Stinger Missile Enhanced Stock Pile Reliability Program. This program promises to be a long term productive relationship with Raytheon that will benefit our primary customer – the warfighter.

## Air Force Peace Sky

One of the newest missions of RRMC is the F-16 Peace Sky Program. RRMC and DDRT-Red River will work jointly to provide this service to the Air Force. The two organizations are responsible for receipt and storage and will be the consolidation shipping point where materiel will be temporarily stored, containerized and readied for shipment when required. DDRT will store the inert parts and RRMC will store the explosive items. The Red River Munitions Center will also need to oversee and coordinate special shipments coming directly from other Depots, AF locations and or vendors to the port of debarkation.

## Conventional Ammunition

RRMC is equipped and trained to x-ray and renovate M67 hand grenades. In support of Operation Enduring Freedom, we surged to increase our renovation of M67 hand grenades by 10,000 rounds per month with no additional personnel in order to meet the requirements of the Army, Navy, and Marines. We also perform 2.75 rocket motor upgrade from Mod 1 to Mod 4 latest configuration. We have developed a procedure to convert Code H (unserviceable) rockets to Code-A rockets that can be used by the soldier in the field. We are also trained and equipped to perform maintenance on the 155, the 105, and various other munitions and small arms.

## Demilitarization

The demolition ground at RRMC covers 45 acres. We have a high explosive burning area with large rocket motor static burning silos and three flashing trays. We also have a powder burning field with nine sites that contain eighteen trays. We have an in-ground firing bunker equipped with surveillance cameras that allow us to view all fields from that one site. We also have two service bunkers at the site equipped with IDS.

RRMC is working to gain funds to implement a large rocket motor grind out system for Hawk, Patriot, and MLRS rocket motors. This is an environmentally friendly way to reclaim propellant to be used for commercial market such as mining industry. This will eliminate open burning/static firing of rocket motors.

## Support to Theater Readiness Monitoring Directorate (TRMD)

RRMC and RRAD work hand in hand to provide Patriot missiles to the warfighter. RRMC provides storage, cyclic inspections, transportation and shipping of the Patriot missiles. RRMC has also partnered with TRMD traveling overseas to support the Patriot reset program. Plans are being formulated between the two organizations to work together on the Hawk Missile with RRMC providing assembly and disassembly services. Because of the synergy between RRMC and RRAD, we have been able to answer emergency calls for Patriot missiles with a 48-hour turn around time.

## Support to Red River Army Depot

RRMC is proud to provide support services to our host depot, Red River Army Depot. In addition to providing support to TRMD, RRMC provides a transportation officer and transportation services for RRAD. Because we are co-located, we can provide transportation services quickly to support the warfighter. We also provide rail support for both RRAD and DDRT-Red River. Additionally, RRMC paints component parts and missile containers for RRAD. In the spirit of cross-functional synergy, the depot also provides us many services to RRMC such as environmental, safety, security, etc.

## ISO 9001:2000 Certification

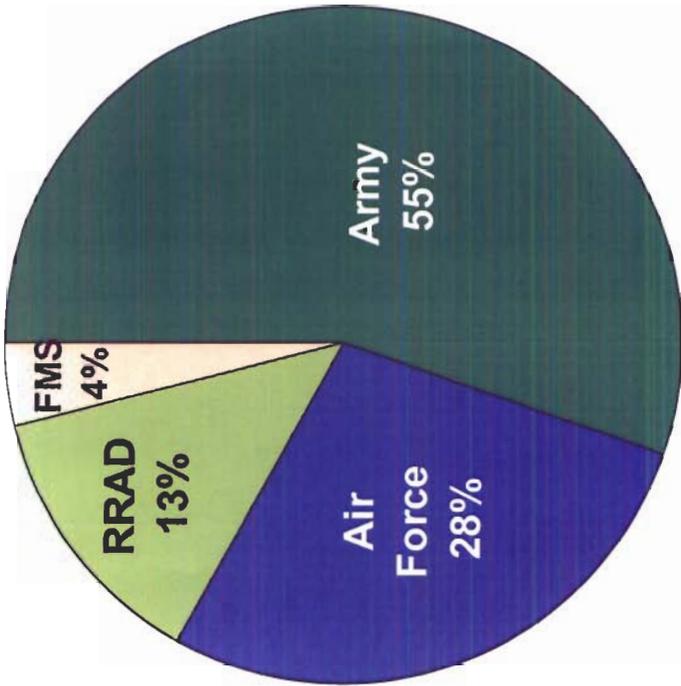
RRMC was the first Munitions Center to achieve ISO 9000 registration. We were registered six years ago to the 1994 standard and re-registered to the 2000 standard three years ago. We have had no major findings in our surveillance audits since registration and only two minor findings during the six years we have been registered. We continue to maintain a high standard of quality for the service that we provide our customers. In a recent command assessment, the team said, "RRMC has established an excellent, comprehensive QMS that could be used as an example for other installations in establishing an ISO-certifiable QMS." We were also the first to achieve (CP)<sup>2</sup> certification – the Army's much stricter equivalent of ISO 9000.

## LEAN

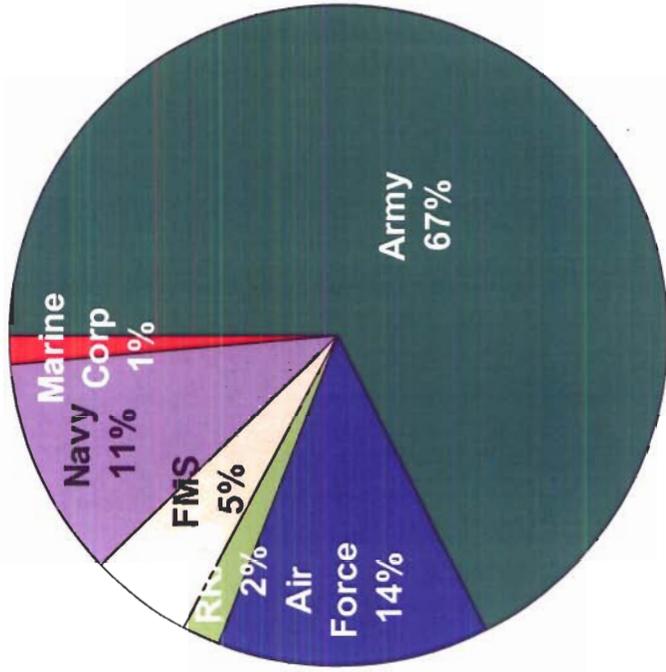
RRMC has embraced the LEAN concept and applied those concepts to our processes. In a recent LEAN event, we were able to streamline the administrative portion of the shipping and receiving process. The receiving process was reduced from 21 steps to 10 steps, reducing the flow time by 84%. The receiving process was reduced from 32 steps to 15 steps which reduced the flow time by 76%.

# Red River Munitions Center Workload

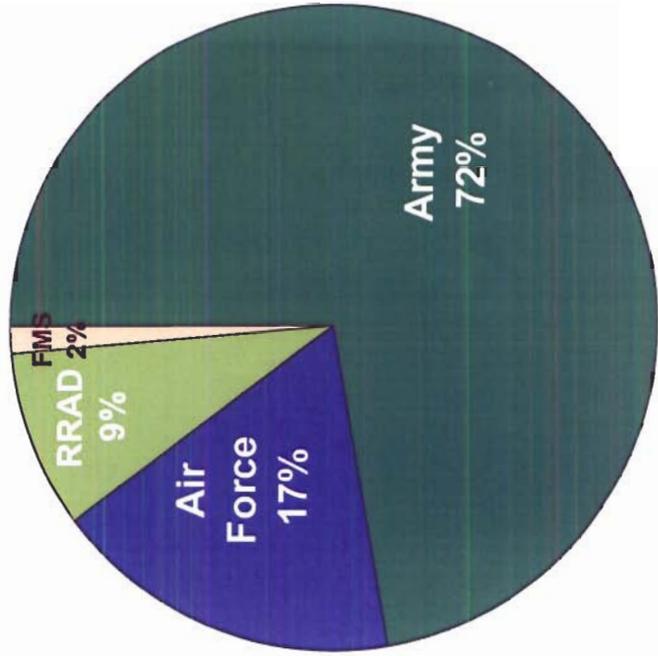
FY05



FY03

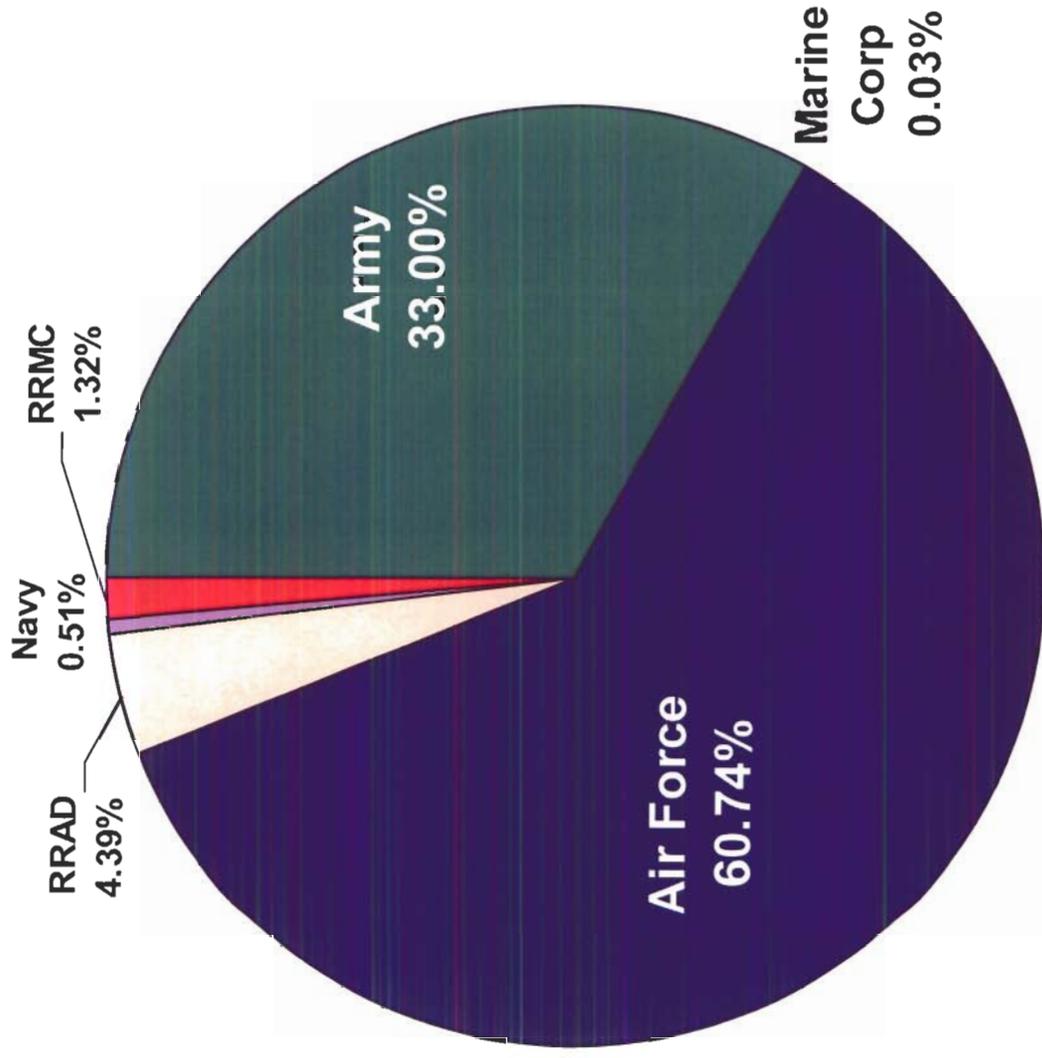


FY04



# Red River Munitions Center

## Storage by Service



## ***Data flawed for munitions storage***

The Army Report says that the Army has 49,393 KSF in assets. Their requirement is 29,949 KSF – leaving an excess of 19,445 KSF. However, when determining available assets, the Army included installations that are closing/realigning when they figured their assets. They will not have these assets if they close them and cannot be included as available assets. These include Hawthorne's 6,303 KSF, Kansas's 939 KSF, Lone Star's 902 KSF, Mississippi's 105 KSF, Newport's 12 KSF, Pueblo's 1475 KSF, Red River's 1,801 KSF, and Sierra's 4,537 KSF - reducing the available capacity by 16,074 KSF. The actual available assets should be 33,319 KSF. The goal of Joint Munitions Command (JMC) is to be at 85% capacity (page A-89). Anything above the goal should not be considered as excess capacity. 85% of 33,319 KSF is **28,321 KSF**. The only change in the requirements should at the chemical plants which will close when the demilitarization is complete. This leaves a total **requirement of 29,228 KSF**. If the JMC goal is met, the available space is LESS than the requirements. There is no evidence that this takes into consideration additional security requirements such as explosive compatibility and Category I and Category II storage. Another important consideration is where the retrograde that is currently in Iraq and Afghanistan will be stored when the war is over.

## Munitions Storage Capacity

SITE	FUNCTION	CAPACITY*	CURRENT USAGE*	AVAILABLE*
ANNISTON	MC	1990	1404	587
BLUEGRASS	MC	3966	3173	793
CRANE	PROD	4892	3515	1377
HOLSTON AAP	PROD	203	45	158
IOWA AAP	PROD	1143	503	639
LAKE CITY	PROD	942	942	0
LETTERKENNY	MC	2343	1404	939
LOUISIANA	PROD	350	270	80
MCAAP	PROD	6925	4240	2686
MILAN	PROD	2169	590	1579
PINE BLUFF	PROD	3970	3702	268
RADFORD	PROD	461	321	140
TOOELE	MC	3250	1977	1273
<b>TOTAL</b>		<b>49393</b>	<b>29949</b>	<b>19445</b>

<b>Assets After BRAC**</b>	<b>33319</b>		
<b>Less 15%***</b>	<b>4998</b>		
<b>Actual Assets</b>	<b>28321</b>		
<b>Requirements</b>		<b>29949</b>	
<b>Requirements without chemical</b>		<b>29228</b>	
<b>Assets/Requirements (rqmts less ch</b>	<b>28321</b>	<b>29228</b>	<b>-907</b>

\*KSF

\*\*Current assets minus assets that will be lost during BRAC (includes those gained by Tooele from Deseret when they close)

\*\*\*JMC Storage Goal 85%

## ***Explanation of Munitions Storage Chart***

The chart quotes the Army numbers for Ammunition Storage (see Table 61 – Ammunition Storage – Army Analyses and Recommendations). The sites highlighted in red are sites that are scheduled for closure or realignment as follows:

**Deseret Chemical Depot:** Deseret is scheduled for closure by BRAC. In addition DA-BRAC 2005-Analyses and Recommendations Page A-88 says, "...and the four chemical demilitarization sites, which will close at the completion of the Chem Demil mission."

The storage igloos and magazines will transfer to Tooele Army Depot.

**Hawthorne Army Depot:** Closed by BRAC

**Kansas AAP:** Closed by BRAC

**Lone Star AAP:** Closed by BRAC

**Mississippi AAP:** Closed by BRAC

**Newport Chemical Depot:** Newport is scheduled for closure by BRAC. In addition DA-BRAC 2005-Analyses and Recommendations Page A-88 says, "...and the four chemical demilitarization sites, which will close at the completion of the Chem Demil mission."

**Pueblo Chemical Depot:** DA-BRAC 2005-Analyses and Recommendations Page A-88 says, "...and the four chemical demilitarization sites, which will close at the completion of the Chem Demil mission."

**Red River:** Closed by BRAC

**Sierra Army Depot:** Sierra is being realigned and the munitions storage function is moving to Tooele Army Depot.

**Umatilla Army Chemical Depot:** Umatilla is scheduled for closure by BRAC. In addition DA-BRAC 2005-Analyses and Recommendations Page A-88 says, "...and the four chemical demilitarization sites, which will close at the completion of the Chem Demil mission."

### **LOGIC:**

1. When determining available assets, the Army included installations that are closing when they figured their assets. They will not have these assets if they close them and cannot be included as available assets. Rather than 49,393 KSF, they will actually have 33,319 KSF after BRAC. ( $49,393 - 16,074 = 33,319$ ) Note: This total includes the assets that Tooele will get from Deseret.

2. The goal of JMC is to be filled at 85% capacity (Army Analyses and Recommendations – page A-89). If you subtract 15% so that capacity will be at 85%, the **remaining assets equal 28,321 KSF.**

3. The requirements will remain the same – **29949 KSF.** The stock at the sites slated to be closed will have to be moved to the remaining sites. The requirements exceed the capacity. Perhaps, the requirements at the chemical plants will be depleted. Even deducting those requirements (547+12+162=721) the requirements will still be **29228 KSF which still exceeds the assets 907 KSF.**

4. None of these figures takes into consideration security and safety concerns such as storage compatibility, CAT I, and CAT II. There are also no references to retrograde that will be returned when the war is over.

# Munitions Storage

Org Name	Total Capacity	Maxim. Capacity	Current Usage	Ready to Surge Capacity	Available Surge/Excess Capacity
ANNISTON ARMY DEPOT	1,990.0	1,990.0	1,403.5	0	586.5
BLUE GRASS ARMY DEPOT	3,965.9	3,965.9	3,173.3	0	792.6
CRANE ARMY AMMUNITION ACTIVITY	4,891.6	4,891.6	3,514.7	0	1,376.9
DESERET CHEMICAL DEPOT	717.0	717.0	547.0	0	170.0
HAWTHORNE ARMY DEPOT	6,303.0	6,303.0	3,712.0	0	2,591.0
HOLSTON AAP	202.9	202.9	45.3	0	157.6
IOWA AAP	1,142.6	1,142.6	503.4	0	639.3
KANSAS ARMY AMMUNITION PLANT	938.9	938.9	661.3	0	277.6
LAKE CITY AAP	941.6	941.6	941.6	0	0
LETTERKENNY ARMY DEPOT	2,343.1	2,343.1	1,403.7	0	939.4
LONE STAR AAP	901.9	901.9	721.6	0	180.4
LOUISIANA AAP	350.0	350.0	270.4	0	79.6
MCALESTER AAP	6,925.4	6,925.4	4,239.7	0	2,685.7
MILAN AAP	2,168.9	2,168.9	590.3	0	1,578.6
MISSISSIPPI AAP	105.4	105.4	0	0	105.4
NEWPORT CHEM DEPOT	11.6	11.6	11.6	0	0
PINE BLUFF ARSENAL	3,970.1	3,970.1	3,701.9	0	268.2
PUEBLO CHEM DEPOT	1,475.2	1,475.2	161.6	0	1,313.6
RADFORD AAP	460.6	460.6	320.8	0	139.8
RED RIVER ARMY DEPOT	1,800.7	1,800.7	1,202.6	0	598.1
SIERRA ARMY DEPOT	4,536.7	4,536.7	845.4	0	3,691.3
TOOELE ARMY DEPOT	3,250.1	3,250.1	1,977.0	0	1,273.1
UMATILLA CHEM DEPOT	0	0	0	0	0

Each manufacturing center is Joint in nature. TABS collected data on FY 03 direct labor hours (DLHs) from these manufacturing centers and compared that data to the Total Capacity Index in order to determine the excess capacity. The Capacity Index was calculated in accordance with the DOD Depot Maintenance Capacity and Utilization Measurement Handbook, DOD 4151.18H. As shown in Table B-14, the manufacturing centers display about 69 percent excess capacity; none of the installations are in a deficit.

Armament Production			
Installations	Assets	Excess/Shortage	Summary
Pine Bluff Arsenal	2,341	2,341	✓ 69 % excess capacity; none of the installations are in a deficit
Rock Island Arsenal	1,759	1,117	
Lima Tank Plant	867	281	
Watervliet Arsenal	641	421	
Anniston AD	379	0	
Tooele AD	105	45	
Others (2)	26	1	
Total	6,119	4,206	

**Table 60. Armament Production**

**Surge:** The Army has excess armament production capacity and can meet surge requirements through additional funding for multiple shifts.

In the opinion of the BRAC SRG, surge capacity is required due to the importance of armament production, but the Industrial JCSG will determine actual requirements.

**Implications:** The excess means that the FY03 workload at these centers was assessed and judged to be less than maximum capacity. The potential exists to reshape these manufacturing centers around the core capability and divest of excess infrastructure.

**2.4.6.3. Ammunition Storage**

Most Army ammunition production facilities have limited storage and distribution for ammunition. The Army has 13 Army production facilities based on the Army Stationing Strategy dated 5 August 2003. The Army has seven munitions centers: Blue Grass Army Depot, Hawthorne Army Depot, Tooele Army Depot, and the four chemical demilitarization sites, which will close at the completion of the Chem Demil mission. It should be noted that there are three other munitions centers located as tenants at Anniston Army Depot, Letterkenny Army Depot, and Red River Army Depot. The Joint Munitions Command (JMC) considers Blue Grass Army Depot, Hawthorne Army Depot, Tooele Army Depot, and the three munitions centers located at depots as storage and distribution centers. Storage and distribution includes receipt, storage, issue, maintenance, surveillance, and demilitarization of munitions.

Not counting installation level ammunition storage facilities the Army has 20 installations with ammunition storage. Two of these installations have requirements equal to assets. The remaining 18 installations have assets, 47,373KSF, which exceed the requirement of 28,178 KSF, leaving an excess of 19,195 KSF.

Ammunition Storage			
Installations	Assets	Excess/Shortage	Summary
McAlester AAP	6,925	2,686	✓ Army assets total 48,315 KSF
Hawthorne AD	6,303	2,591	✓ Army requirement is 29,120 KSF
Crane AD	4,892	1,377	✓ Army excess totals 19,195 KSF
Sierra AD	4,537	3,691	✓ 2 installations have requirements equal to assets.
Pine Buff Arsenal	3,970	268	✓ The remaining 18 installations have assets of 47,313 KSF with requirements of 28,178 KSF
Bluegrass AD	3,966	793	
Tooele AD	3,250	1,273	
Letterkenny AD	2,343	939	
Milan AAP	2,169	1,579	
Anniston AD	1,990	587	
Red River AD	1,801	598	
Pueblo CD	1,475	1,314	
Others (8)	4,694	1,500	
Total	48,315	19,195	

**Table 61. Ammunition Storage**

**Surge:** The Army has excess ammunition storage capability above the installation. Some excess should be maintained to meet unexpected surge requirements.

In the opinion of the BRAC SRG, surge capacity is required due to the importance of ammunition storage, but the Industrial JCSG will determine actual requirements.

**Implications:** The JMC goal is to be filled at 85% capacity. End state is to structure a Joint distribution network that will enhance the strategic mobility/deployability of the Warfighter, reduce the sustainment footprint, and reduce the cost of logistics while maintaining warfighting capability and readiness. These goals imply the ability to consolidate and divest of excess infrastructure.

2.4.7. C4I/ Headquarters

2.4.7.1. General Administrative Space

General administrative buildings provide space for all administrative functions in Tables of Organization and Equipment (TOE) and Tables of Distribution and Allowance (TDA) units not provided by other facilities. Courtrooms for maneuver units are included in this facility as well as the majority of space for the garrison staff and military school faculty. Space is provided at 162 square feet per authorized person. With permanent assets of 36,281 KSF and requirements of 34,588 KSF, the Army appears to have an excess of 1,693 KSF. The Army has fifty-one installations with excess admin space totaling 6,500 KSF and thirty-five other installations with shortages totaling 4,807 KSF. Much of the excess is at depot and industrial installations with little capability to support for maneuver units. In terms of shortage, Fort Bragg, a maneuver installation has 24 percent of the Army general admin space shortage. Most of the installations that could support additional maneuver-unit stationing are already deficient in general admin space and would require MILCON to support new missions.

TABLE C3.T1. Storage Compatibility Mixing Chart

CG	A	B	C	D	E	F	G	H	J	K	L	N	S
A	X	Z											
B	Z	X	Z	Z	Z	Z	Z					X	X
C		Z	X	X	X	Z	Z					X	X
D		Z	X	X	X	Z	Z					X	X
E		Z	X	X	X	Z	Z					X	X
F		Z	Z	Z	Z	X	Z					Z	X
G		Z	Z	Z	Z	Z	X					Z	X
H								X					X
J									X				X
K										Z			X
L													
N		X	X	X	X	Z	Z					X	X
S		X	X	X	X	X	X	X	X			X	X

## Notes:

- 1 An "X" at an intersection indicates that the groups may be combined in storage. Otherwise, mixing is either prohibited or restricted per Note 2 below.
- 2 A "Z" at an intersection indicates that when warranted by operational considerations or magazine non-availability, and when safety is not sacrificed, mixed storage of limited quantities of some items from different groups may be approved by the DoD Components. Such approval documentation must be kept on site. Component approval of mixed storage in compliance with Z intersections does not require a waiver or exemption. Mixed storage of items within groups where no X or Z exists at that pair's intersection beyond the prohibitions and limitations of note 7 below, however, requires an approved waiver or exemption. Examples of acceptable storage combinations are:
  - a. HD 1.1A initiating explosives with HD 1.1B fuzes not containing two or more effective protective features.
  - b. HD 1.3C bulk propellants or bagged propelling charges with HD 1.3G pyrotechnic substances.
- 3 Equal numbers of separately packaged components of hazard classified complete rounds of any single type of AE may be stored together. When so stored, compatibility is that of the complete round.
- 4 CG K requires not only separate storage from other groups, but also may require separate storage within the group. The controlling DoD Component will determine which items under CG K may be stored together and those that must be stored separately. Such documentation must be kept on site.
- 5 AE classed outside Class 1 may be assigned the same CG as Class 1 AE containing similar hazard features, but where the explosive hazard predominates. Non-Class 1 AE and Class 1 AE assigned the same CG may be stored together.
- 6 The DoD Components may authorize AE designated "Practice" or "Training" by nomenclature, regardless of the CG assigned, to be stored with the tactical AE it simulates. Such documentation must be kept on site.
- 7 The DoD Components may authorize the mixing of CG, except items in CG A, K and L, in limited quantities generally of 1,000 lb (454 kg) total NEWQD or less. Such documentation must be kept on site.
- 8 For purposes of mixing, all AE must be packaged in its standard storage and shipping container. AE containers will not be opened for issuing items from storage locations. Outer containers may be opened in storage locations for inventorying and for magazines storing only HD 1.4 items, unpacking, inspecting, and repackaging the HD 1.4 ammunition.
- 9 When using the "Z" mixing authorized by Note 2 for articles of either CG B or CG F, each will be segregated in storage from articles of other CG by means that prevent propagation of CG B or CG F articles to articles of other CG.
- 10 If dissimilar HD 1.6N AE are mixed together and have not been tested to ensure non-propagation, the mixed AE are individually considered to be HD 1.2.1 D or HD 1.2.2 D based on their NEWQD or overriding fragmentation characteristics for purposes of transportation and storage. When mixing CG N AE with CG B through CG G or with CG S, see subparagraphs C9.2.2.1.1, C9.2.2.4, C9.2.2.10, and C9.2.2.11 to determine the HD for the mixture.

articles contain only EIDS and demonstrate (through test results) a negligible probability of accidental initiation or propagation. These materials are assigned HD 1.6.

*c.* Quantity-distance application:

- (1) Quantity-distance separations for HD 1.6 ammunition and explosives will be based on table 5-18. This information is detailed in table 4-2.
- (2) Inhabited building distance (IBD) for bulk HD 1.6 explosives will be based on chapter 5.

#### 4-3. Storage principles

*a.* The highest degree of safety in ammunition and explosives storage could be assured if each item were stored separately. However, such ideal storage generally is not feasible. A proper balance of safety and other factors frequently requires mixing of several types of ammunition and explosives in storage.

*b.* Ammunition and explosives may not be stored together with dissimilar materials or items that present additional hazards. Examples are mixed storage of ammunition and explosives with flammable or combustible materials, acids, or corrosives.

*c.* All ammunition and explosives items are assigned to one of 13 storage compatibility groups (SCGs), based on the similarity of characteristics, properties, and accident effects potential. Items in each individual SCG can be stored together without increasing significantly either the probability of an accident or, for a given quantity, the magnitude of the effects of such an accident. Considerations used in assigning SCGs include but are not limited to the following:

- (1) Chemical and physical properties.
- (2) Design characteristics.
- (3) Inner and outer packing configurations.
- (4) Quantity-distance division.
- (5) Net explosive weight.
- (6) Rate of deterioration.
- (7) Sensitivity to initiation.
- (8) Effects of deflagration, explosion, or detonation.

*d.* When such mixed storage will facilitate safe operations and promote overall storage efficiency, ammunition and explosives may be mixed in storage, provided they are compatible. Assignment of items of SCGs requiring separate storage will be minimized consistent with actual hazards presented and not based on administrative considerations or end use.

*e.* Ammunition and explosives in substandard or damaged packaging, in a suspect condition, or with characteristics that increase the risk in storage will be stored separately.

#### 4-4. Mixed storage

*a.* Table 4-3 shows how different SCGs of ammunition and explosives can be mixed in storage. Exceptions are listed in b, below.

*b.* Certain locations within the United States, its territories, and possessions designated by the Army and with site approval from the DDESB to store ammunition in rapid response configurations and Basic Load Ammunition Holding Areas (BLAHA) outside the United States are authorized to store ammunition without regard to compatibility. The maximum net explosive quantity (NEQ) at any of these locations storing mixed compatibility ammunition must not exceed 4000 kg (8820 pounds NEW) calculated in accordance with paragraph 14-2d of this pamphlet.

#### 4-5. Storage compatibility groups

*a. Assignment.* Ammunition and explosives are assigned to one of 13 SCGs as follows:

(1) *Group A.* Bulk initiating explosives that have the necessary sensitivity to heat, friction, or percussion to make them suitable for use as initiating elements in an explosives train. Examples are wet lead azide, wet lead styphnate, wet mercury fulminate, wet tetracene, dry cyclonite (RDX), and dry pentaerythritol tetranitrate (PETN).

(2) *Group B.* Detonators and similar initiating devices not containing two or more independent safety features. Items containing initiating explosives that are designed to initiate or continue the functioning of an explosives train. Examples are detonators, blasting caps, small arms primers, and fuzes.

(3) *Group C.* Bulk propellants, propelling charges, and devices containing propellant with or without their own means of ignition. Items that, upon initiation, will deflagrate, explode, or detonate. Examples are single-, double-, triple-base and composite propellants, rocket motors (solid propellant), and ammunition with inert projectiles.

(4) *Group D.* Black powder, high explosives (HE), and ammunition containing HE without its own means of initiation and without propelling charge, or a device containing an initiating explosives and containing two or more independent safety features. Ammunition and explosives that can be expected to explode or detonate when any given item or component thereof is initiated except for devices containing initiating explosives with independent safety

features. Examples are bulk trinitrotoluene (TNT), Composition B, black powder, wet RDX or PETN, bombs, projectiles, cluster bomb units (CBUs), depth charges, and torpedo warheads.

(5) *Group E.* Ammunition containing HE without its own means of initiation and with propelling charge (other than one containing a flammable or hypergolic liquid). Ammunition or devices containing HE and containing propelling charges. Examples are artillery ammunition, rockets, or guided missiles.

(6) *Group F.* Ammunition containing HE with its own means of initiation and with propelling charge (other than one containing a flammable or hypergolic liquid) or without a propelling charge. Examples are grenades, sounding devices, and similar items having an in-line explosives train in the initiator.

(7) *Group G.* Fireworks, illuminating, incendiary, and smoke, including hexachloroethane (HC) or tear-producing munitions other than those munitions that are water activated or which contain white phosphorous (WP) or flammable liquid or gel. Ammunition that, upon functioning, results in an incendiary, illumination, lachrymatory, smoke, or sound effect. Examples are flares, signals, incendiary or illuminating ammunition, and other smoke or tear-producing devices.

(8) *Group H.* Ammunition containing both explosives and WP or other pyrophoric material. Ammunition in this group contains fillers which are spontaneously flammable when exposed to the atmosphere. Examples are WP, plasticized white phosphorous (PWP), or other ammunition containing pyrophoric material.

(9) *Group J.* Ammunition containing both explosives and flammable liquids or gels. Ammunition in this group contains flammable liquids or gels other than those which are spontaneously flammable when exposed to water or the atmosphere. Examples are liquid- or gel-filled incendiary ammunition, fuel-air explosives (FAE) devices, flammable liquid-fueled missiles, and torpedoes.

(10) *Group K.* Ammunition containing both explosives and toxic chemical agents. Ammunition in this group contains chemicals specifically designed for incapacitating effects more severe than lachrymation. Examples are artillery or mortar ammunition (fuzed or unfuzed), grenades, and rockets or bombs filled with a lethal or incapacitating chemical agent. (See note 5, fig. 4-1.)

(11) *Group L.* Ammunition not included in other compatibility groups. Ammunition having characteristics that do not permit storage with dissimilar ammunition belong in this group. Examples are water-activated devices, prepackaged hypergolic liquid-fueled rocket engines, certain FAE devices, triethylaluminum (TEA), and damaged or suspect ammunition of any group. Types presenting similar hazards may be stored together but not mixed with other groups.

(12) *Group N.* Ammunition containing only EIDS. Examples are bombs and warheads.

(13) *Group S.* Ammunition presenting no significant hazard. Ammunition so packaged or designed that any hazardous effects arising from accidental functioning are confined within the package unless the package has been degraded by fire, in which case all blast or projection effects are limited to the extent that they do not hinder firefighting significantly. Examples are thermal batteries, explosives switches or valves, and other ammunition items packaged to meet the criteria of this group.

*b. Means of initiation.* As used in this standard, the phrase "with its own means of initiation" indicates that the ammunition has its normal initiating device assembled to it, and this device would present a significant risk during storage. However, the phrase does not apply when the initiating device is packaged in a manner that eliminates the risk of causing detonation of the ammunition if the initiating device functioned accidentally, or when fuzed end items are configured and packaged to prevent arming of the fuzed end items. The initiating device may be assembled to the ammunition provided its safety features preclude initiation or detonation of the explosives filler of the end item during an accidental functioning of the initiating device.

#### **4-6. Class 1 or 6 chemical agent hazards or combined chemical agent and explosives hazards**

*a.* Items in these classes are chemical agent-filled ammunition, chemical agents, and chemical agent-filled components. Depending upon the type of agent, its persistency, toxicity, or other characteristics, the primary safety considerations may be the area of agent dispersal rather than blast or fragment considerations.

*b.* Items that contain only toxic chemical components are assigned to HD 6.1. Items that contain both explosives and toxic chemical components are included in UN Class 1, ammunition and explosives, as appropriate. HD 6.1 requirements also shall be applied so that the explosives and toxic chemical hazards both are considered.

#### **4-7. Underground storage**

Ammunition with smoke producing, incendiary, flammable liquid or toxic chemical agent fillers may be stored in single chamber underground facilities but shall not be stored in multi-chamber facilities. Other than this restriction, ammunition and explosives of all compatibility groups may be placed in underground storage in compatible combinations as permitted above.

Red River Munitions Center  
Information Given to GAO

## Questions asked by GAO

### **Are there compelling reasons why base should be left open or realigned?**

While the BRAC data shows that McAlester Army Ammunition Plant's (MCAAP) excess capacity is 4,115,100 SF, Joint Munitions Command (JMC) has confirmed (in a phone conversation on 2 Jun 05) that excess capacity is currently 1,032,745 SF at MCAAP (putting them at 90% of their capacity) and 198,376 SF at Blue Grass Army Ammunition Plant (putting them at 97% of their capacity). Since the BRAC data were gathered, both of these locations have shown a significant increase in storage occupancy and both are now well over the optimum level set by JMC. It appears that neither MCAAP nor Blue Grass will be able to store all of ammunition items that are proposed to be sent to them. The Army plans to move the storage and maintenance from Red River Munitions Center (RRMC) and Lone Star Army Ammunition Plant (LSAAP) to MCAAP and Blue Grass AAP. This alone equates to a 2,557,400 SF additional storage requirement – more than either site could take if they were to store at 100%. The plan also moves the weapon/cluster bomb function and missile warhead production from Kansas AAP to MCAAP which will require additional storage space. The plan also moves the demil function from RRMC, LSAAP, and Sierra AAP to MCAAP – which will require additional storage space until the items can be demilitarized. (See Appendix A)

Additionally MCAAP has only three CAT I and 47 CAT II igloos. RRMC currently has 107 CAT I and II igloos – of that 82% are currently occupied and would require an estimated 88 CAT I/II igloos at MCAAP. (NOTE: CAT I and CAT II igloos require IDS systems installed in each igloo as well as additional separate fencing, lighting, and dual locking systems.) The Army Plan does not call for any additional facilities to be built at MCAAP. Nor are there dollars allocated for upgrade of facilities to meet CAT I and II standards. (See Appendix B taken from AR 190-11 about CAT I and II requirements)

### **Are there unique, special, one-of-a-kind capabilities about the activity not found elsewhere?**

RRMC has the only Chaparral Missile facility in the United States – and our people are only ones with the expertise to maintain this missile system. AMCOM has made a multi-year commitment to FMS customers to provide support and maintenance. This facility (including a 100,000 Class Clean Room) will have to be duplicated somewhere, the equipment dismantled and moved, restructured, and the expertise regained. Approximate

cost to replicate the facility is in excess of \$3M. It is uncertain whether the equipment will tolerate a move.

A study was conducted in 1991 and 1992 to move the Chaparral missile to Letterkenny Army Depot. Ultimately it was decided that it was not cost effective to move the missile program. Cost at that time (1992) to move the program (less facility cost) was \$3,928,753. Using the Consumer Price Index Inflation calculator, current cost would be approximately \$5,320,545.

**What environmental clean-up issues are created by the recommendation, i.e. what, where, how long will it take, and costs?**

There are extensive clean-up issues for Red River Munitions Center that have been addressed by Red River Army Depot.

**Are there other major DOD and non-DOD tenants on the base and what are their concerns and alternate plans?**

These are Red River Munitions Center's concerns:

(1) The Army Report says that the Army has 49,393 KSF in assets for ammunition storage. Their requirement is 29,949 KSF – leaving an excess of 19,445 KSF. However, when determining available assets, the Army included installations that are closing/realigning when they figured their assets. They will not have these assets if they close them and cannot be included as available assets. These include Hawthorne's 6,303 KSF, Kansas's 939 KSF, Lone Star's 902 KSF, Mississippi's 105 KSF, Newport's 12 KSF, Pueblo's 1475 KSF, Red River's 1,801 KSF, and Sierra's 4,537 KSF - reducing the available capacity by 16,074 KSF. The actual available assets should be 33,319 KSF. The goal of Joint Munitions Command (JMC) is to be at 85% capacity (page A-89, Army BRAC 2005 Analyses and Recommendations). Anything above the goal should not be considered as excess capacity. 85% of 33,319 KSF is **28,321 KSF**. The only change in the requirements should be at the chemical plants which will close when the demilitarization is complete. This leaves a total **requirement of 29,228 KSF**. If the JMC goal is met, the available space is LESS than the requirements. There is no evidence that this takes into consideration additional security requirements such as explosive compatibility and Category I and Category II storage. Another important consideration is where the retrograde that is currently in Iraq and Afghanistan will be stored when the war is over. See chart with explanation at Appendix C.

(2) We have Spartan Rocket Motors that cannot be demilled and cannot be moved. We have been actively pursuing this issue for many years with the only decision being that they cannot be moved and cannot be demilitarized. In fact, there are concerns about whether the motors are even stable enough to be tested. This issue has been included as a material weakness in our management control report and is presently being worked by ARDEC at Redstone.

(3) The report shows that no positions from the Red River Munitions Center will transfer to MCAAP or BlueGrass. (Criterion 5 – Cobra.doc – Page 55) However, RRMC employees are on the MCAAP TDA. MCAAP does not show a loss of employees. The data says (Criterion 5 – Cobra.doc Page 57) that 54 slots were eliminated from RRMC – but RRMC is not on RRAD's numbers to eliminate.

(4) RRMC provides critical support for RRAD's Theatre Readiness Monitoring Directorate. RRMC provides storage, cyclic inspections, transportation and shipping of the Patriot missiles. By being co-located, RRMC and RRAD working together have been able to answer emergency calls for Patriot missiles and have them to the port in less than 48 hours.

**What recent investment has been made to the facilities? – What has the base done to improve facility infrastructure?**

- Improve Lightning Protection System - \$310,000
- Improve roads, rail, expand two existing outloading pads, and fabricated six Patriot storage sheds – \$8.25M
- Upgrade and improve earth covered igloos – \$1.2M
- Outloading Pad adjacent to CAT I storage – \$900,000
- Upgraded shipping and receiving station – \$98,000
- Converted missile facility from diesel to natural gas and repaired roof - \$130,000
- Upgraded storage facilities - \$127,000
- Paved parking and electrical upgrade at surveillance workshop - \$60,000

**Is there any significant MILCON planned or started with FY 05 funds—what's being built and how costly. Is the base expecting to request FY 06 MILCON funds or in POM outyears?**

- Administrative Building for RRMC - \$500,000

**Discuss feasibility of closure/realignment timeframe—identify circumstances that could cause delays.**

Lack of storage space at receiving facilities could cause delays.

**Other Data:**

FY04 Civilians - 123

Current personnel status as of 4/30/05

Authorized – 115

Actual – 107

## EXCESS STORAGE CAPACITY UPDATE

### MCALESTER AAP STORAGE CAPACITY (BRAC data)

TOTAL STORAGE CAPACITY	10,637,100 SF
TOTAL EXCESS CAPACITY	4,115,100 SF
PERCENT CAPACITY NOT UTILIZED	38.7%

### MCALESTER AAP STORAGE CAPACITY (JMC – 4/30/05)

TOTAL STORAGE CAPACITY	10,637,100 SF
TOTAL EXCESS CAPACITY	1,032,745 SF
PERCENT CAPACITY NOT UTILIZED	9.7%

### BLUE GRASS AAP STORAGE CAPACITY (BRAC data)

TOTAL STORAGE CAPACITY	6,021,000 SF
TOTAL EXCESS CAPACITY	1,203,600 SF
PERCENT CAPACITY NOT UTILIZED	20%

### BLUE GRASS AAP STORAGE CAPACITY (JMC – 4/30/05)

TOTAL STORAGE CAPACITY	6,021,000 SF
TOTAL EXCESS CAPACITY	198,376 SF
PERCENT CAPACITY NOT UTILIZED	3.3%

### LETTERKENNY STORAGE CAPACITY (BRAC data)

TOTAL STORAGE CAPACITY	3,613,400 SF
TOTAL EXCESS CAPACITY	1,141,200 SF
PERCENT CAPACITY NOT UTILIZED	31.6%

### LETTERKENNY STORAGE CAPACITY (JMC 4/30/05)

TOTAL STORAGE CAPACITY	3,613,400 SF
TOTAL EXCESS CAPACITY	667,584 SF
PERCENT CAPACITY NOT UTILIZED	18%

### RED RIVER STORAGE CAPACITY (BRAC data)

TOTAL STORAGE CAPACITY	2,747,600 SF
TOTAL CURRENT USAGE	1,732,900 SF
TOTAL EXCESS CAPACITY	1,014,700 SF
PERCENT CAPACITY NOT UTILIZED	36.9%

**RED RIVER STORAGE CAPACITY (JMC 4/30/05)**

TOTAL STORAGE CAPACITY	2,747,600 SF
TOTAL CURRENT USAGE	2,083,452 SF
TOTAL EXCESS CAPACITY	664,148 SF

PERCENT CAPACITY NOT UTILIZED 24%

**LONE STAR STORAGE CAPACITY (BRAC data)**

TOTAL STORAGE CAPACITY	1,030,600 SF
TOTAL CURRENT USAGE	824,500 SF
TOTAL EXCESS CAPACITY	206,100 SF

PERCENT CAPACITY NOT UTILIZED 20%

NO CURRENT DATA AVAILABLE ON LONE STAR

Army Regulation 190–11  
Military Police

# Physical Security of Arms, Ammunition, and Explosives

Headquarters  
Department of the Army  
Washington, DC  
12 February 1998

## UNCLASSIFIED

*d.* Sensitive or critical items or equipment should be stored in inner zones of an installation. This may require inventory, segregation, and restorage, where practical by risk categories.

*e.* Security protection requirements for AA&E will be based on the highest category item stored in magazines or other structures.

### 3–6. Intrusion Detection Systems

The IDS is an essential part of the physical security system. IDS consists of the combination of electronic components, including sensors, control units, transmission lines, and monitoring units integrated to be capable of detecting one or more types of intrusion into an area protected by the system. IDS includes both interior and exterior systems. The system will report directly to an alarm monitoring station. The system will be an approved DOD standardized system or a MACOM approved commercial system.

*a.* IDS will include a central control station where alarms will sound and from which a response force can be dispatched. An alarm bell located only at the protected location is not acceptable. The IDS will be designed to cause an alarm to sound at the central control panel whenever the system is turned off or malfunctions. Some means of communication will be provided between the protected areas and the monitoring area to coordinate status changes. Telephone communication should be considered. On and off, access, and secure switches not located at a central control station will be located within the alarmed area. The response force should respond to an activated alarm as soon as possible, but in no case may arrival at the scene exceed 15 minutes. Facilities off military installations, will have a local alarm in addition to monitoring capability. Alarm circuitry that requires alarm signals to be cleared either by the central control station alarm monitor or by entering the protected area will be used. Use of alarm delay switches at RC facilities is discouraged. AA&E storage facilities (other than bulk storage facilities) that require IDS will be protected by at least two types of sensors, one of which is a volumetric sensor. Additional levels of protection, when practical, are encouraged (e.g., duress signaling components) and will be considered for Category I and II arms storage facilities.

*b.* Facilities having IDS will have signs prominently displayed announcing the presence of IDS. They will be affixed at eye level, when possible, on the exterior of each interior wall that contains an entrance to the protected area. They will be affixed on exterior walls only when the exterior wall contains an entrance to the protected area. Specifications for IDS signs are per appendix F.

*c.* IDS will include a protected, independent, backup power supply that will provide a minimum of 4 hours of uninterrupted power, or other duration as outlined in the site survey.

*d.* Where an IDS is used in civilian communities, arrangements will be made to connect alarms to civil police headquarters, private security companies, or a monitoring service from which immediate response can be directed in case of unauthorized entry.

(1) A commercial answering service is not authorized.

(2) Coordination is required with civil authorities to ensure a response force can be directed to respond immediately.

A daily log will be maintained of all alarms received, and at a minimum will include—

(1) The nature of the alarm; for example, intrusion system failure or nuisance alarm.

(2) The date and time the alarm was received.

(3) The location, and action taken in response to the alarm.

*f.* Logs will be maintained for a minimum of 90 days and will be reviewed periodically to identify, monitor, and

correct IDS reliability problems.

(1) DA Form 4930-R (Alarm/Intrusion Detection Record), may be used to record alarms received. DA Form 4930-R will be locally reproduced on 8 1/2 x 11-inch paper. A copy for reproduction purposes is located at the back of this handbook.

(2) Computer generated printout of alarms may be used as a substitute provided all required information has been included or supplemental information is included in a log.

Serious or recurring problem areas will be described in writing and sent through command channels to CDR, U.S. Army Belvoir R&D Center, ATTN: AMCPM-PSE, Fort Belvoir, VA 22060-5606.

g. Transmission lines for the alarm circuits will have line supervision (connecting lines will be electrically supervised to detect evidence of tampering or malfunction and any visible lines must be inspected weekly) or two independent means of alarm signal transmission from the alarm area to the monitoring station must be provided. One of the two independent means of alarm signal transmission must be either a long-range radio or cellular telephone link. Two undedicated, hardwire telephone links are not acceptable. The dual transmission equipment must continuously monitor the integrity of both the telephone wire line and cellular or long range radio links. Upon loss of either communication path, the system must immediately initiate notification to the monitoring facility via the other communication link. Because of the criticality of the information to be transmitted, the dual transmission equipment must be able to seize control of the communication links, even if that link is already in use. Physical protection of both communication links is critical. Therefore, the hardware communication links is critical. Therefore, the hardware communications link will be enclosed in metallic conduit from the protected area to wherever the communication is made to the telephone network. Communications equipment, including cellular equipment, will be mounted in tamper protected enclosures. Communications equipment, including cellular antennas where possible, will be located within

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## Chapter 5

### Protection of Nonnuclear Missiles, Rockets, Ammunition and Explosives

#### 5-1. General

Nonnuclear missiles, rockets, ammunition, and explosives listed in appendix B will be protected in accordance with this chapter. Individuals issued or in possession of missiles, rockets, ammunition, or explosives are responsible for security of such property while it is charged or entrusted to their care. All unused ammunition and explosives will be turned in to the proper authority per AR 710-2, paragraph 2-52. Ammunition and explosives deployed in the field for training or operational purposes will be protected at all times as prescribed in paragraph 2-5. Missiles, rockets, ammunition, and explosive items installed in vehicles and aircraft are considered in use and will be protected as part of overall system in which they are installed. Other criteria in this chapter does not apply to such missiles, rockets, ammunition, and explosive items. Commanders will ensure that necessary security measures are taken to protect ammunition and explosives stored in vehicles and aircraft as prescribed in paragraphs 5-3 and 5-4. (See app H for AA&E physical security standards at contractor facilities).

#### 5-2. Bulk storage areas

##### a. Category I and Category II.

(1) *Bulk storage.* Bulk storage areas are considered to be depot activities, prestock points, and ammunition supply points at which bulk quantities of missiles, rockets, ammunition, and explosives are stored. Storage is usually in original containers. Storage structures acceptable for storage of Category I and II ammunition and explosives are those earth-covered magazines and igloos listed AR 385-64, paragraphs 1 through 12 and appendix A. Commanders may permit storage of missiles, rockets, ammunition, or explosives in other types of structures that provide the necessary delay time equivalent to earth covered magazines and igloos and if all other requirements of AR 385-64 are met.

##### (2) *Supplemental controls.*

(a) *IDS.* Category I and II storage facilities and structures will be protected by IDS. Facilities without an operational IDS will have armed guards posted 24 hours a day to maintain constant, unobstructed observation of the storage structures, prevent any unauthorized access to the protected structure, make known any unauthorized access to the structure.

(b) *Security patrols.* Storage facilities and structures will be checked by a security patrol periodically as dictated by any threat and by the vulnerability of the facility. Checks will be conducted on an irregular basis during nonduty hours. For Category I and II facilities protected by an operational IDS, the intervals between checks will be once every 2 hours. For facilities without an operational IDS, the intervals between checks will be hourly for Category I and once every two hours for Category II facilities.

##### b. Category III and IV

(1) *Bulk Storage.* Ammunition and explosives listed under Category III and IV will be stored in structures that meet the criteria in appendix G, or in structures which provide delay time which meets or exceeds that criteria as certified by qualified engineer personnel.

IDS. IDS is optional for Category III and IV facilities and structures. New IDS will not be programmed for Category III and IV facilities (structures) unless it is determined necessary based on an assessment of the local threats, vulnerabilities, and cost effectiveness.

(3) *Security patrols.* Storage facilities and structures will be checked by a security patrol periodically as dictated by

any threat and by the vulnerability of the facility. For Category III and IV facilities protected by an operational IDS, the intervals between checks will be 72 hours and once every 48 hours for facilities not protected by an operational IDS.

(4) Inert and expended launcher tubes, inert mines, and inert rocket launcher training devices, and practice rockets are vulnerable to pilferage, misuse, or possible conversion to live ammunition. Such items will be clearly marked according to AR 385-65, paragraph 4, to prevent accidental turn-in, or turn-in as live fire residue. Those items that can be converted to operable weapons will be accounted for and secured as Category IV live ammunition and explosives.

*c. Rescinded.*

### **5-3. Fences**

*a.* Categories I and II missile, rocket, ammunition, and explosive storage areas will be surrounded with security fencing constructed and configured as set forth below. New chain link fencing will not be programmed for Category III and IV storage facilities unless it is determined necessary based on an assessment of local threats, vulnerabilities, and cost effectiveness. COE drawing STD 40-16-08 depicts chain link fence construction standards.

*b.* Fence fabric will be of chain link (galvanized, aluminized, or plastic coated woven steel) 2-inch square mesh 9-gauge diameter wire, including coating. In Europe, fencing may be North Atlantic Treaty Organization (NATO) Standard Designed Fencing (2.5-3mm gauge, 76mm grid opening, 2 meter height, and 3.76 meter post separation).

*c.* Posts, bracing's, and other structural members will be located on the inside of the fence fabric. Galvanized steel 25 AR 190-11 • 12 February 1998

or aluminum tie-wires equal in gauge to fencing will be used to secure the fence fabric to posts and other structural members.

*d.* The minimum height of the fence fabric will be 6 feet without an outrigger (COE drawing STD 40-16-08, Type FE-5).

*e.* The bottom of the fence fabric will extend to within 2 inches of firm ground. Surfaces will be stabilized in areas where loose sand, shifting soils, or surface waters may cause erosion and thereby assist an intruder in penetrating the area. Where surface stabilization is not possible, or is impracticable, concrete curbs, sills, or other similar type anchoring devices, extending below ground level will be provided.

*f.* Modifications to chain link fencing will not be made to conform to the requirements of this paragraph if the existing fencing provides an equivalent or greater penetration resistance, as determined by the commander concerned.

*g.* The barrier will have a minimum number of vehicular and pedestrian gates, consistent with the operational requirements. These gates will be structurally comparable, provide penetration resistance equivalent to the adjacent fence, and be designed so that the traffic through them will be under the positive control of the security force. Unless manned 24 hours a day, gates will be provided with an approved lock. Hinge pins and hardware will be welded or otherwise modified to prevent easy removal.

*h.* Drainage structures and water passages penetrating the barrier be barred to provide penetration resistance equivalent to the fence itself. Openings to the drainage structures having a cross-sectional area greater than 96 square inches, and a smallest dimension greater than 6 inches will be protected by securely fastened welded bar grills. As an alternative, drainage structures may be constructed of multiple pipes, each pipe having a diameter of 10 inches or less, joined to each other and to the drainage culvert. Multiple pipes of this diameter may also be placed and secured in the "in-flow" end of the drainage culvert to prevent intrusion into the area.

*i.* Building walls may be incorporated into the barrier system if they provide penetration resistance equivalent to the perimeter barrier and are subject to observation.

*j.* If practicable, clear zones will extend 12 feet on the outside and 30 feet on the inside of the perimeter fence. Clear zones for Categories I and II AA&E will be free of all obstacles, topographical features, and vegetation exceeding 8 inches in height which reduce the effectiveness of the physical barrier, impede observation, or provide cover and concealment of an intruder. Clear zones for Categories III and IV AA&E will be free of obstacles, topographical features, and vegetation which reduce the effectiveness of the physical barrier.

(1) Vegetation or topographical features which must be retained in clear zones for erosion control, passive defense, or for legal reasons will be trimmed or pruned to eliminate concealment and checked by security patrols at irregular intervals.

(2) Perimeter light poles, fire hydrants, steam pipes, or other similar objects; barricades for explosives safety purposes; and entry control buildings within the clear zone that represent no aid to circumvent the perimeter barrier or do not provide concealment to an intruder do not violate the requirements of clear zones.

*k.* Fencing needs will be evaluated and determined for each installation on a case-by-case basis. The installation of new security fencing around an outer perimeter may not be cost effective. The following will be considered:

(1) If the storage area perimeter has adequate security fencing, fencing of inner zones may not be required.

(2) If the storage area outer perimeter has barbed wire fencing or no fencing, security fencing of inner zone storage areas may be more practical and cost effective.

If the storage area outer perimeter is partially fenced, it may be more cost effective to complete the loop rather than to install fencing around inner zone storage areas.

(4) If natural barriers, such as mountains, cliffs, rivers, seas, or other difficult-to-traverse terrain, form portions of the perimeter and provide equivalent or more security than fencing, security fencing of inner zone storage areas may

not be required.

#### **5-4. Security lighting**

a. Security lighting will be provided for Category I and II storage facilities. New security lighting systems will not be programmed for Category III and IV facilities unless determined necessary based on an assessment of the local threats and vulnerabilities. Security lighting requirements will conform to ammunition and safety requirements per AR 85-64, paragraphs 1 through 12 and appendix A. However, existing security lighting for Category III and IV storage facilities will not be removed solely to comply with this paragraph. Security lighting will—

- (1) Be provided for exterior doors of all Category I and II items storage rooms and magazines.
- (2) Have switches for exterior lights installed so that they are not accessible to unauthorized individuals.
- (3) Have all exterior lights covered with wire mesh screen that will prevent their being broken by thrown objects. Vandal resistant lenses may be used instead of wire mesh screen.
- (4) Be provided for motor pools, hangars, and outdoor parking areas for vehicles and aircraft that have Category I and II ammunition and explosives stored on board, and for such items located in open storage areas.
- (5) Be provided along storage site perimeter barriers determined necessary by the Commander. Commanders will determine perimeter lighting needs depending on the threat, perimeter extremities, and surveillance capabilities.

b. Field manual (FM) 19-30, chapter 6, will be used as a guide in deciding lighting descriptions, layouts, lighting

patterns, and minimum protective lighting intensities and requirements. COE drawing STD 40-04-08 depicts a typical design for a conventional ammunition storage area security lighting system.

c. Emergency lighting and standby power are not required, but will be considered when the threat and vulnerability warrant.

#### **5-5. Guard protection and surveillance**

Protection and surveillance by guards or other personnel together with other physical security measures will be established for facilities or temporary open storage areas as set forth in this regulation and otherwise as needed to ensure protection at the facilities. At a minimum, entrance and exit points into magazine and holding areas where vehicles, railcars or aircraft with missiles, rockets, ammunition or explosives aboard are parked, will be controlled by guards or other personnel. When duty personnel are not present or IDS or closed circuit television are not used, enough security patrols will be provided to allow physical inspection of each aircraft, railcar, or vehicle at a frequency determined by the commander concerned, based on the category of AA&E, the threat, and the location.

#### **5-6. Locks and keys**

a. *Locks.* A class 5 steel vault door with a built-in, 3-position, dial-type, changeable combination lock or a key operated high security padlock and hasp will be used on doors to structures housing classified material per AR 380-5, chapter 5. Otherwise, each ammunition magazine or room constructed in accordance with chapter 4 will be secured with an approved high security padlock and high security hasp. Storage facility hasps and locking hardware will provide comparable protection to that afforded by the locks approved or other high security locking hardware. See the consolidated glossary, for list of approved DA locks and hasps. Facilities in which aircraft or vehicles are stored with ammunition aboard will be secured with an approved security padlock. See paragraph 3-8, for further guidance.

b. *Key and lock control.* Key and lock control will be established in accordance with paragraph 3-8. Use of master key system or multiple key system is prohibited.

c. *Category I Storage Facilities.*

- (1) Doors used for access to Category I storage facilities will be locked with a high security padlock and hasp and one secondary padlock (medium or low security).
- (2) Access to, or possession of, both keys to Category I storage facilities by one person is prohibited. A key control system will be established so that no one will be allowed to interchange access to keys to installed "A" "B" locks.
- (3) Key control officers and locksmiths will not be authorized access to information concerning the specific locations of installed locks protecting Category I structures at the site (for example, specific storage igloos within a site).
- (4) Keys and locks subject to the two person rule will not be placed in use at the facility by the key control officer. Such keys and locks will be placed in use by the respective key control custodians. Additionally, the key control officer is not authorized access to such keys while the locks are in use under the two person rule.
- (5) The rotation of padlocks will not be required when two locks are installed on each Category I structure and a system is set up for separating these locks into "A" and "B" locks. Personnel will be identified and authorized access only to either "A" or "B" keys or locks, but not both. The system will preclude an individual from interchanging access to the "A" and "B" keys.

#### **5-7. Communications**

Reliable and efficient primary and backup means of external and internal communications, at least one of which is radio, will be established at magazine areas to permit notification of emergency conditions. The communication system will be easily accessible to guard and security personnel on their posts and will be tested daily by supervisory security personnel. The backup system will be of a mode other than that of the primary communication system. Both primary and backup guard (security) communications will be tested at least once during each shift.

#### **5-8. Protection of missiles, rockets, ammunition, and explosives at unit level**

a. Unit level stocks are those stored in basic load quantities (quantities stored in tactical configuration for readiness

and emergency purposes) or which are on hand for operational and training purposes.

*b.* A typical facility for storage of operational quantities of ammunition would be a building used to store ammunition on a rifle range or a military police or guard (security) arms room. Such facilities will comply with the requirements for unit arms rooms, paragraph 4-2 or paragraph 5-2, for bulk ammunition storage magazines.

*c.* The following are minimum requirements for safeguarding and maintaining unit level stocks:

) Depending upon tactical and contingency considerations, unit level stocks will be stored in ammunition storage rooms or magazines that are equivalent to the structural standards prescribed in paragraph 5-2.

*(a)* Commanders may authorize in writing the storage of small quantities of ammunition in unit arms storage rooms. The authorization will be posted in the arms room. Storage will be consistent with operational requirements. Ammunition authorized for storage in unit arms storage rooms will be stored in containers. Ammunition will be secured in banded crates, or in approved metal containers, or cabinets that are approved standard issue, commercial, or approved

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Appendix C

SITE	FUNCTION	CAPACITY*	CURRENT USAGE*	AVAILABLE*
ANNISTON	MC	1990	1404	587
BLUEGRASS	MC	3966	3173	793
CRANE	PROD	4892	3515	1377
HOLSTON AAP	PROD	203	45	158
IOWA AAP	PROD	1143	503	639
LAKE CITY	PROD	942	942	0
LETTERKENNY	MC	2343	1404	939
LOUISIANA	PROD	350	270	80
MCAAP	PROD	6925	4240	2686
MILAN	PROD	2169	590	1579
PINE BLUFF	PROD	3970	3702	268
RADFORD	PROD	461	321	140
TOOELE	MC	3250	1977	1273
<b>TOTAL</b>		<b>49393</b>	<b>29949</b>	<b>19445</b>

<b>Assets After BRAC**</b>	<b>33319</b>		
<b>Less 15%***</b>	<b>4998</b>		
<b>Actual Assets</b>	<b>28321</b>		
<b>Requirements</b>		<b>29949</b>	
<b>Requirements without chemical Assets/Requirements (rqmts less chemicals)</b>	<b>28321</b>	<b>29228</b>	<b>-907</b>

## ***Explanation of Munitions Storage Chart***

The chart quotes the Army numbers for Ammunition Storage (see Table 61 – Ammunition Storage – Army Analyses and Recommendations). The sites highlighted in red are sites that are scheduled for closure or realignment as follows:

**Deseret Chemical Depot:** Deseret is scheduled for closure by BRAC. In addition DA-BRAC 2005-Analyses and Recommendations Page A-88 says, "...and the four chemical demilitarization sites, which will close at the completion of the Chem Demil mission." The storage igloos and magazines will transfer to Tooele Army Depot.

**Hawthorne Army Depot:** Closed by BRAC

**Kansas AAP:** Closed by BRAC

**Lone Star AAP:** Closed by BRAC

**Mississippi AAP:** Closed by BRAC

**Newport Chemical Depot:** Newport is scheduled for closure by BRAC. In addition DA-BRAC 2005-Analyses and Recommendations Page A-88 says, "...and the four chemical demilitarization sites, which will close at the completion of the Chem Demil mission."

**Pueblo Chemical Depot:** DA-BRAC 2005-Analyses and Recommendations Page A-88 says, "...and the four chemical demilitarization sites, which will close at the completion of the Chem Demil mission."

**Red River:** Closed by BRAC

**Sierra Army Depot:** Sierra is being realigned and the munitions storage function is moving to Tooele Army Depot.

**Umatilla Army Chemical Depot:** Umatilla is scheduled for closure by BRAC. In addition DA-BRAC 2005-Analyses and Recommendations Page A-88 says, "...and the four chemical demilitarization sites, which will close at the completion of the Chem Demil mission."

### **LOGIC:**

1. When determining available assets, the Army included installations that are closing when they figured their assets. They will not have these assets if they close them and cannot be included as available assets. Rather than 49,393 KSF, they will actually have 33,319 KSF after BRAC. ( $49,393 - 16,074 = 33,319$ ) Note: This total includes the assets that Tooele will get from Deseret.
2. The goal of JMC is to be filled at 85% capacity (Army Analyses and Recommendations – Page A-89). If you subtract 15% so that capacity will be at 85%, the **remaining assets equal 3,321 KSF.**

3. The requirements will remain the same – **29949 KSF**. The stock at the sites slated to be closed will have to be moved to the remaining sites. The requirements exceed the capacity. Perhaps, the requirements at the chemical plants will be depleted. Even deducting those requirements ( $547+12+162=721$ ) the requirements will still be **29228 KSF which still exceeds the assets 907 KSF**.

4. None of these figures takes into consideration security and safety concerns such as storage compatibility, CAT I, and CAT II. There are also no references to retrograde that will be returned when the war is over.

#3

CONTRACT	NOUN	START DATE	END DATE	AVG REV	FED JOBS
W911RQ-05-G-0001	Bradley Fighting Vehicle System (BFVS-FOV)	3/21/2005	3/20/2010	60,000,000.00	1200
W911RQ-05-C-DS01	Bradley Transmission	10/21/2004	4/21/2005	284,875.15	2
W911RQ-05-C-DS03	Bradley Direct Sales Contract	2/28/2005	2/27/2006	174,160.10	2
W911RQ-05-C-DS04	Bradley Inspection Assistance & Phase I Teardown	5/31/2005	10/1/2006	10,000,000.00	60
W911RQ-05-C-DS05	Bradley Remanufacture of components	6/2/2005	12/31/2006	12,000,000.00	400
W911RQ-05-C-DS06	Bradley Remanufacture of Turret Drive Systems and Guns	6/2/2005	12/31/2006	5,000,000.00	80
W911RQ-05-G-0001	Bradley RESET of Turret Drive Systems	7/5/2005	12/31/2006	6,000,000.00	7
W911RQ-05-G-0001	Bradley RESET of Turret Drive Systems	7/5/2005	12/31/2006	3,764.91	1
W911RQ-05-G-0001	Bradley RESET components	7/18/2005	12/31/2006	8,000,000.00	48
W911RQ-05-G-0001	Bradley RESET components	7/5/2005	12/31/2006	140,000.00	2
W911RQ-05-G-0001	Bradley Remanufacture of components	7/18/2005	12/31/2006	11,000,000.00	400
W911RQ-05-G-0001	Bradley Assemble, Test, Inspect Guns	7/18/2005	12/31/2006	6,000,000.00	25
W911RQ-05-G-0001	Bradley Field Service Technical & Functional Support	7/18/2005	12/31/2006	200,000.00	2
W911RQ-05-G-0001	Bradley RESET of Turret Drive Systems	7/18/2005	12/31/2006	6,000,000.00	35
W911RQ-05-G-0001	Bradley Transmission	7/18/2005	12/31/2006	800,000.00	5
W911RQ-05-G-0001	Bradley Assemble, Test, Inspect Guns	7/18/2005	12/31/2006	2,000,000.00	60
W911RQ-05-G-0001	Linebacker & MUA RESET Program	7/27/2005	12/31/2006	1,200,000.00	25
W911RQ-05-G-0001	A3 Battle Damage Program	8/1/2005	12/31/2006	700,000.00	20
W911RQ-05-C-DS07	Consultion Service	7/12/2005	7/11/2006	21,806.44	5
W911RQ-05-G-DS02	Depot Test Track Use	4/8/2005	4/6/2006	21,806.44	2
W911RQ-05-G-DS02	Engine oil & Transmission oil sample testing	4/8/2005	4/6/2006	3,456.00	1
W911RQ-05-G-DS02	Blanket Ordering Agreement - services and/or available facilities	4/8/2005	4/7/2010	50,000.00	3
W911RQ-05-C-DS02	Bradley HMPT First Article Testing	not yet started	1/12/2006	15,255.00	1

Industrial Joint Cross Service Group Final Report, May 10, 2005, Section III Analytical Approach/Analysis, para a. Capacity Analysis, page 14 states:

**Maximum Capacity.** Maximum Capacity is defined as maximum workload that could be performed assuming:

- (a) No additional major Military Construction in addition to that already funded through the FY 2004 Appropriations Act
- (b) Capacity measured on a 40 hour work week baseline
- (c) Skilled workforce is available
- (d) Support equipment/workstations transferred with workload
- (e) Existing work continues to be performed
- (f) Underutilized facilities/space can only be counted once for an optimal work mix.

... The range for the potential excess capacity was determined by subtracting the higher number between Total Workload and Service Core from the Total Capacity and the Maximum Capacity reported.

LEAD	SOURCE: IJCSG - DEPOT MAINTENANCE CAPACITY ANALYSIS RPT						
	CUR CAP	ADD'L FY05 DLH+ CUR USE	CUR CORE REQT	MAX CAP	MAX CAP * 1.5	+/- CAP @ MAX	+/- CAP @ 1.5 MAX
Tactical Missiles	1040.6	1302.5	776.0	1387.9	2081.9	85.4	779.4
Tactical Vehicles	149.5	929.2	99.1	199.3	299.0	-729.9	-630.3
<b>Site Total</b>	<b>1190.1</b>	<b>2231.7</b>	<b>875.1</b>	<b>1587.2</b>	<b>2380.8</b>	<b>-644.5</b>	<b>149.1</b>
<b>Percent of Capacity NOT Utilized</b>				<b>-40.6%</b>	<b>6.3%</b>		
<b>Percent of Capacity Utilized</b>				<b>140.6%</b>	<b>93.7%</b>		

CATEGORY	SOURCE: IJCSG - DEPOT MAINTENANCE CAPACITY ANALYSIS RPT						
	CUR CAP DLH K	ADD'L FY05 DLH+ CUR USE	CUR CORE REQT	MAX CAP	MAX CAP * 1.5	+/- CAP @ MAX	+/- CAP @ 1.5 MAX
Aircraft Ordnance Equipment Components	0.0	0.0	2.0	0.0	0.0	-2.0	-2.0
Aircraft Other Components	1.5	0.8	0.0	1.5	2.3	0.7	1.5
Combat Vehicles	1689.6	2809.0	3347.6	1797.0	2695.5	-1550.6	-652.1
Construction Equipment	130.4	238.1	0.0	130.4	195.6	-107.7	-42.5
Depot Fleet/Field Support	147.6	207.8	130.0	147.6	221.4	-60.2	13.6
Engines/Transmissions	622.4	1062.2	0.0	622.4	933.6	-439.8	-128.6
Fire Control Systems & Components	107.4	129.9	0.0	107.4	161.1	-22.5	31.2
Generators	7.7	4.5	0.0	7.7	11.6	3.2	7.1
Ground Support Equipment	82.9	22.8	0.0	82.9	124.4	60.1	101.6
Other	23.5	100.0	40.3	23.5	35.3	-76.5	-64.8
Other Components	915.9	798.8	0.0	915.9	1373.9	117.1	575.1
Small Arms/Personal Weapons	322.2	223.9	238.9	322.2	483.3	83.3	244.4
Tactical Vehicles	16.9	26.0	0.0	16.9	25.4	-9.1	-0.7
Armament & Structural Components		10.3			0.0	-10.3	-10.3
Fabrication & Manufacturing		368.4			0.0	-368.4	-368.4
<b>Site Total</b>	<b>4068.0</b>	<b>6002.5</b>	<b>3758.8</b>	<b>4175.4</b>	<b>6263.1</b>	<b>-1827.1</b>	<b>260.7</b>
<b>Percent of Capacity NOT Utilized</b>				<b>-43.8%</b>	<b>4.2%</b>		
<b>Percent of Capacity Utilized</b>				<b>143.8%</b>	<b>95.8%</b>		