



**Analyses of DoD's
BRAC Recommendations
Concerning
Hawthorne Army Depot,
Kansas Army Ammunition Plant
and
Lone Star Army Ammunition Plant**

Submitted Friday 22 July 2005

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103-06A – General – Community Input
General – Regions – Kansas, Texas, Nevada
BRAC COMMISSION – FY 2005
COFF: _____ DISPOSITION: Permanent

Library Routing Slip 2005 BRAC Commission Materials
Title of Item: Analyses of DoD's BRAC Recommendations
Installation or Community: Hawthorne AD, Kansas AAT & Lone Star AAT
Source: Day & Zimmermann
Certified Material? yes no
Analyst / Provider: Geoff Delgado Date Received: 7/25/05

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1. Hawthorne Army Depot

1.1 Introduction:

The Department of Defense has recommended the closure of Hawthorne Army Depot and the relocation of its munitions storage and demilitarization functions to Tooele Army Depot. To justify its recommendation, the Department provided information and data relevant to operations of both depots. An analysis has been made of the Department's documentation from the viewpoint of Military Value. This section of this report provides the results of that analysis.

1.2 Executive Summary: Military Value Will Be Decreased.

The recommendation to close Hawthorne Army Depot and relocate its functions to Tooele Army Depot is based on inconsistent data, flawed analysis and erroneous beliefs. Closure would exacerbate an already serious shortage of storage capacity, and eliminate a facility that the Army ranks high in its ability to meet future needs. The recommendation is based in part on an erroneous belief, contradicted by the facts and by the Army's judgment, that unspecified "infrastructure problems" exist. The Army judges Hawthorne to have Military Value that is significantly higher than that of Tooele. The conclusion is inescapable that the Department's recommendation will serve to reduce, rather than enhance, Military Value and that the Army's recognition of the inherently superior capabilities of these facilities has been disregarded. Therefore, closure would violate the BRAC principles which require that Military Value be the governing criteria in evaluating facilities.

1.3 Military Value Considerations

Munitions Storage

The Department states that closure of Hawthorne Army Depot will remove excess capacity for storage of munitions, and that improvement will result from relocation of that function to Tooele. A reasonable assessment of even near-term requirements for storage of munitions slated for demilitarization shows the exact opposite to be true. In fact, the Department is facing a shortage of munitions storage capacity that will be costly to resolve. Closure of Hawthorne Army Depot would serve only to exacerbate the situation and add needlessly to costs. Details are provided in Section 1.3.1, page 2.

Examination of the Department's documentation reveals two fundamental problems that invalidate the analysis on which its recommendation is based. First, the analysis is based on data which exhibit great inconsistency, raising questions as to its validity. Second, the analysis is internally self-contradictory, leading to a recommendation that is impossible to implement. Details are provided in Section 1.3.2, page 3.

These fundamental errors in the assessment of munitions storage capacity were made by the Department's BRAC Industrial Joint Cross-Service Group (IJCSG). Had an accurate view been taken, application of the Group's own internal guidelines would have caused immediate termination of consideration of Hawthorne Army Depot as a candidate for closure. Details are provided in Section 1.3.3, page 3.

Infrastructure

The Department states that Hawthorne Army Depot has "infrastructure problems that severely limit the ability to offload." No evidence is presented to support this assertion. To the contrary, Hawthorne infrastructure includes:

- 273 miles of railroad;
- three industrial-sized container loading/offloading pads complete with truck and rail access;
- six industrial-sized loading/offloading docks complete with truck and rail access.

This infrastructure allowed Hawthorne to ship more munitions in support of Desert Storm than any other depot in the entire system.

The only reasonable inference to be drawn is that the IJCSG believes that "problems" are presented by the depot's being served by a single track railroad line. That line has experienced three wash-outs over the past 25 years. Each was of short duration, and none interrupted the movement of munitions. The facts do not support the Department's assertion. No such infrastructure problems exist.

The foregoing erroneous belief clearly distorted the application of military judgment by the IJCSG to the evaluation of Hawthorne. The original determination by the Army of the high Military Value of the depot was overruled, and arbitrarily reduced by the IJCSG. Details are provided in Section 1.3.4, page 4.

1.3.1 Munitions Storage Capacity

1. An official of the Army's Program Executive Office for Ammunition presented a briefing¹ dated May 10, 2005 which discussed challenges being faced in the demilitarization program. Included was a chart² titled "Wholesale Depot Occupancy Profile by Fiscal Year" (copy provided at Appendix, page A-1) showing the requirement for capacity to store munitions slated for demilitarization. Army projections are that the existing capacity of 25 million square feet will be filled in fiscal year 2007. Meeting requirements which are projected to grow even higher in subsequent years is, in the words of the briefing, "not physically possible." The only options are to provide money to build more capacity, or to provide money to demilitarize unneeded munitions more rapidly.

2. Despite this known deficiency, the Department's IJCSG has recommended closure of Hawthorne Army Depot. Such a closure will significantly reduce existing munitions storage capacity in the face of the Army's warning that a storage capacity crisis is looming. The IJCSG recommendation would serve only to exacerbate an already urgent problem, and add even more to the cost of solving that problem.

¹ "Demilitarization Enterprise," PM Demilitarization, PEO Ammunition, 10 May 2005.

² *Op. cit.*, page 10.

1.3.2 Flawed Capacity Analysis

The recommendation to close Hawthorne and relocate munitions storage capacities to Tooele is based on a flawed analysis.

The Army reports³ total munitions storage assets of 48,315 thousand square feet (ksf). The IJCSG claims⁴ that same total to be 73,562 ksf, a discrepancy of 52.3%. The Army reports total excess capacity to be 19,195 ksf. The IJCSG claims that same total to be 29,560 ksf, a discrepancy of 54.0% (see below). All of the facilities in the IJCSG analysis are operated by the Army. The Navy and Air Force operate munitions storage facilities of their own. It is possible, but very unlikely, that small amounts of non-Army munitions are stored at Army facilities. However, even if this were true, it would fail to explain the very large discrepancies noted.

More importantly, the same kind of discrepancies exists in the individual capacities reported by the Army⁵ and IJCSG⁶ for Hawthorne and Tooele. The reported figures, in ksf, are:

		Maximum Capacity	Current Usage	Available for Surge/ Excess
Army	Hawthorne	6,303	3,712	? → 2,591
	Tooele	3,250	1,977	→ 1,273
IJCSG	Hawthorne	9,738	5,603	? → 4,135
	Tooele	5,240	3,265	→ 1,975

The recommendation thus requires, if the Army data is used, that munitions stored on 3,712 ksf at Hawthorne somehow be accommodated on 1,273 ksf at Tooele. If the IJCSG data is used, then the IJCSG asserts that munitions stored on 5,603 ksf at Hawthorne can be accommodated on 1,975 ksf at Tooele. The IJCSG did not explain how this is to be accomplished.

1.3.3 Violation of BRAC Principles

The recommendation to close Hawthorne Army Depot is based in part on the erroneous belief that there exists excess capacity for storage of munitions. Analysis by the IJCSG should have revealed the contrary, and should have caused invocation of the Group's internal guidelines to cease further consideration.

At a meeting of the IJCSG on November 18, 2004, a briefing was made by the chairman of the Munitions and Armaments Subgroup. The briefing included a discussion of scenarios which proposed closing two major depots, and of the serious

³ DoD Report to the BRAC Commission, Volume III (Army), page A-89, Table 61.

⁴ IJCSG Munitions/Armaments Capacity Report, Munitions Storage, April 21, 2005.

⁵ *Ibid.*

⁶ *Ibid.*

problems that such closure would create. The official minutes of the meeting⁷ (excerpt provided at Appendix, page A-2) contain these words:

"The group agreed that if a scenario has little merit based on capacity and Military Value analysis, and if military judgment concludes that there are no show stoppers out there that argue for not pursuing analysis further, then the analysis can be terminated prior to analysis under criteria 5-8."

The scenario to close Hawthorne Army Depot has little merit based on capacity (*i.e.*, known shortfalls in the entire system) and Military Value analysis (*i.e.*, the Military Value analysis done by the Army, discussed below in paragraph 1.3.4). Therefore, the IJCSG should have terminated the analysis. It is clear that closure of Hawthorne Army Depot will detract from the Department's ability to perform its mission, in violation of BRAC principles.

1.3.4 Distorted Judgment by IJCSG

The law stipulates that Military Value is the primary consideration for BRAC 2005 decision-making. In compliance, the Army conducted a Military Value Analysis which consisted of evaluation of installations using a model, and of subsequently balancing those analytic outcomes with military judgment. The final result was "a ranking of Army installations from 1 to 97 in terms of value and their ability to support current and future Army requirements."⁸ (Emphasis supplied). **Hawthorne Army Depot was ranked 31, and Tooele Army Depot was ranked 42.** These results were provided to the IJCSG for their consideration.

It should be noted that, in the Army's judgment, only two munitions-related facilities ranked higher than Hawthorne - Anniston Army Depot at 25 of 97, and McAlester Army Ammunition Plant at 27 of 97. It seems highly unlikely that the Army would have featured Hawthorne so prominently in its plans for meeting its current and future requirements if it perceived the installation as having "infrastructure problems that severely limit the ability to offload," as alleged by the IJCSG.

As stated above, the Army's rankings were provided to the IJCSG for their consideration. Briefing materials subsequently prepared by the Munitions and Armaments Subgroup show the Military Values of facilities performing Storage/Distribution functions as being 2 of 23 for Hawthorne and 5 of 23 for Tooele, and the Military Values of facilities performing Demilitarization functions as being 1 of 13 for Hawthorne and 2 of 13 for Tooele. Yet, despite these military judgments by the Army, a briefing chart (copy provided at Appendix, page A-3) presented to a meeting of the IJCSG on January 25, 2005 by the Munitions and Armaments Subgroup contains these words:

⁷ IJCSG Meeting Minutes, November 18, 2004, page 1.

⁸ DoD Report to the BRAC Commission, Volume III (Army), page B-9.

"Military judgment tips scale to Tooele because of support to readiness, accessibility and ease of out-loading."⁹

Clearly, this judgment - inserted in contravention of Army judgment that Hawthorne is the superior choice for meeting its current and future requirements - stems from an erroneous belief infrastructure problems do not exist—a conclusion unsupported by all recent relevant data. On this ground alone, the recommendation to close Hawthorne Army Depot should be disapproved.

Regarding the foregoing, it is reasonable to infer that the confidence of the IJCSG in its military judgment, as applied to Hawthorne, was not high. Indeed, a review of all briefing materials posted in the Department's on-line data base reveals that the statement quoted above did not appear in briefing materials used subsequent to January 25, 2005. For example, the briefing of the Munitions and Armaments Subgroup¹⁰ to the IJCSG on April 14, 2005, contains the same chart as previously cited (copy provided at Appendix, page A-4), but with the military judgment statement deleted, and with changed dollar amounts which showed that the expected payback was less than had previously been stated.

Another important consideration is this: in its evaluation of the Military Value of its installations, the Army rated their Logistics Capability as a separate element.¹¹ The score given to Hawthorne was 1.11, causing it to be ranked 35 out of 97. It seems highly unlikely, therefore, that the Army perceives there to be "infrastructure problems" that would limit Hawthorne's ability to support readiness. Further, the same Army evaluation ranked Tooele as having a Logistics Capability score of 0.62 (56% of that of Hawthorne) and a ranking of 45 out of 97.

According to several of its own documents and briefings, the Army judges Hawthorne to have Military Value that is significantly higher than that of Tooele. The conclusion is inescapable that the Department's recommendation will serve to reduce, rather than enhance, Military Value and that the Army's recognition of the inherently superior capabilities of these facilities has been disregarded.

⁹ IJCSG Minutes, January 25, 2005, Munitions & Armaments Briefing, page 7.

¹⁰ IJCSG Minutes, April 14, 2005, Munitions & Armaments Briefing, page 26.

¹¹ DoD Report to the BRAC Commission, Volume III (Army), page B-19.

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2. Kansas Army Ammunition Plant

2.1 Introduction:

An analysis has been made of the comparative costs of two courses of action for the future of Kansas Army Ammunition Plant.

1. Closure of the facility and the transfer of its functions to four other locations, as has been recommended by the Department of Defense in BRAC 2005.
2. Transfer of the facility and all of its equipment to a Local Redevelopment Authority which would continue to contract with a private contractor to operate the facility. This option is consistent with the preferred approach of the Commissioners of Labette County, Kansas as briefed to the BRAC on July 13, 2005.

This section of this report provides the results of that analysis.

2.2 Executive Summary: Transfer to LRA Is More Cost-Effective

The Department's recommendation to close Kansas AAP does not provide the best value to the taxpayer. The attached cost analysis demonstrates that a far better course is to transfer the facility and all of its equipment to a LRA in Labette County. The relevant comparisons produced by this analysis show that transfer would cost \$22.9 million less for one-time implementation, save \$22.9 million more during the implementation period, achieve the start of payback two years sooner, and save \$21.6 million more in net present value over 20 years.

2.3 Details of Cost Analysis:

Following are the details of an analysis of the relative costs and savings of transfer of the facility and all of its equipment to a LRA in Labette County vs. closure of Kansas Army Ammunition Plant. The cost figures used in the analysis are those contained in the published COBRA reports¹² that were used by the Department to justify its recommendation to close the facility and relocate its functions to other facilities.

One-Time Costs

Transfer to a LRA in Labette County avoids nearly all of the one-time costs of closure of Kansas AAP and the relocation of its functions to four other facilities. The analysis retains those one-time costs that would be incurred under either scenario, and removes those that will no longer be incurred when transfer is implemented. These unnecessary costs include: removal, transport and installation of equipment; closure of buildings; decontamination of equipment and facilities; construction of new buildings and facilities; facilities upgrades; tooling upgrades; and, environmental impact statements at locations other than Kansas AAP. Table 2.4.1, page 8, displays the one-time costs of transfer and of closure. Transfer to a LRA in Labette County would cost \$2.3 million, whereas closure would cost \$25.1 million.

¹² All the cites of COBRA in this section refer to the document posted in the DoD on-line data base: COBRA REALIGNMENT SUMMARY REPORT (COBRA v6.10), Option Package Name: IND 0106 Close Kansas AAP, Data As Of 5/4/2005, Report Created 5/4/2005.

Recurring Costs

The recurring costs and savings attributed to operations at Kansas AAP remain the same with closure and with transfer to a LRA in Labette County. In either case, federal government support comes to an end and the resulting savings are realized.

Net Costs

The Department's COBRA computed annual net costs for the period 2006-2011 by summation of one-time costs and recurring costs. Table 2.4.2, page 9, uses the one-time costs displayed on Table 2.4.1 and the recurring costs used by COBRA to compute net costs for the transfer and closure options. During the implementation period, transfer to a LRA in Labette County produces net savings of \$25.0 million and closure produces net savings of \$2.1 million.

Net Present Value

The Department's COBRA computed the net present value of savings for the 20 year period 2006-2025. Table 2.4.3, page 10, provides a comparison of net present value of the two options. The analysis uses the same present value factors as were used by COBRA. Transfer to a LRA in Labette County produces savings with a net present value of \$123.0 million and closure produces savings with a net present value of \$101.4 million.

Payback

Table 2.4.4, page 11, summarizes the totals provided in the preceding tables. Transfer would cost \$22.9 million less to implement than closure, would produce \$21.6 million more in net present value savings over 20 years, and would produce payback on implementation costs two years sooner. Transfer of the facility and all of its equipment to a LRA in Labette County is clearly more cost effective than closure.

2.4.1

KANSAS AAP - COMPARISON OF ONE-TIME COSTS
(in \$K)

CLOSURE

One-Time Costs	2006	2007	2008	2009	2010	2011	Total
O&M							
Civilian Salary	0	0	0	184	0	0	184
Civilian Moving	0	0	0	71	0	0	71
Unemployment	0	0	0	13	0	0	13
Other	264	198	148	470	0	0	1,081
OTHER							
Environmental	0	1,300	0	4,150	0	0	5,450
One-Time	0	16,650	0	1,700	0	0	18,350
Total	264	18,148	148	6,589	0	0	25,149

TRANSFER

One-Time Costs	2006	2007	2008	2009	2010	2011	Total
O&M							
Civilian Salary	0	0	0	184	0	0	184
Civilian Moving	0	0	0	71	0	0	71
Unemployment	0	0	0	13	0	0	13
Other	264	198	148	111	0	0	721
OTHER							
Environmental	0	1,300	0	0	0	0	1,300
One-Time	0	0	0	0	0	0	0
Total	264	1,498	148	379	0	0	2,289

Table 2.4.1

2.4.2

KANSAS AAP - COMPARISON OF NET COSTS
(in \$K)

CLOSURE

	2006	2007	2008	2009	2010	2011	Total	Beyond
One-Time Cost	264	18,148	148	6,589	0	0	25,149	0
Net Recurring Cost	0	0	0	8,919	-9,185	-9,185	-27,289	-10,279
Total Net Cost	264	18,148	148	-2,330	-9,185	-9,185	-2,140	-10,279

TRANSFER

	2006	2007	2008	2009	2010	2011	Total	Beyond
One-Time Cost	264	1,498	148	379	0	0	2,289	0
Net Recurring Cost	0	0	0	-8,919	-9,185	-9,185	-27,289	-10,279
Total Net Cost	264	1,498	148	-8,540	-9,185	-9,185	-25,000	-10,279

Table 2.4.2

2.4.3 KANSAS AAP - COMPARISON OF NET PRESENT VALUE

Year	CLOSURE			TRANSFER		
	Cost (\$K)	Adjusted Cost (\$K)	Net Present Value (\$K)	Cost (\$K)	Adjusted Cost (\$K)	Net Present Value (\$K)
2006	264	261	261	264	261	261
2007	18,148	17,412	17,673	1,498	1,437	1,698
2008	148	139	17,812	148	138	1,836
2009	-2,330	-2,116	15,696	-8,540	-7,753	-5,917
2110	-9,185	-8,112	7,584	-9,185	-8,112	-14,029
2111	-9,185	-7,891	-307	-9,185	-7,891	-21,920
2112	-10,279	-8,590	-8,898	-10,279	-8,590	-30,510
2113	-10,279	-8,356	-17,254	-10,279	-8,356	-38,866
2114	-10,279	-8,129	-25,383	-10,279	-8,129	-46,995
2115	-10,279	-7,907	-33,291	-10,279	-7,907	-54,902
2116	-10,279	-7,692	-40,983	-10,279	-7,692	-62,594
2117	-10,279	-7,483	-48,465	-10,279	-7,483	-70,077
2118	-10,279	-7,279	-55,744	-10,279	-7,279	-77,356
2119	-10,279	-7,080	-62,824	-10,279	-7,080	-84,436
2020	-10,279	-6,888	-69,712	-10,279	-6,888	-91,324
2021	-10,279	-6,700	-76,412	-10,279	-6,700	-98,024
2022	-10,279	-6,518	-82,930	-10,279	-6,518	-104,542
2023	-10,279	-6,340	-89,270	-10,279	-6,340	-110,882
2024	-10,279	-6,167	-95,437	-10,279	-6,167	-117,049
2025	-10,279	-5,999	-101,436	-10,279	-5,999	-123,048

Table 2.4.3

2.4.4**KANSAS AAP - COMPARISON OF PAYBACK**

This table summarizes the results of the analysis provided by Tables 2.4.1, 2.4.2, and 2.4.3. The Transfer option is clearly more cost effective than closure.

	CLOSURE	TRANSFER	ADDED SAVINGS
Total One-Time Cost	\$25,149 K	\$2.289 K	-\$22,860 K
Net Cost during Implementation Period	- \$2,140 K	-\$25,000 K	-\$22,860 K
Annual Recurring Savings	-\$10,279 K	-\$10,279 K	Wash
Year That Payback Begins	2011	2009	Payback begins 2 years earlier
Net Present Value Over 20 Years	-\$101,436 K	-\$123,048 K	-\$21,612 K

Table 2.4.4

2.5 Unrecognized Problems

It is important to note that the Department's analysis incorporates a number of highly dubious, but unstated, assumptions. These are reflected in the costs and savings that are claimed to result from closure of Kansas AAP. A more realistic view would have yielded COBRA outputs showing higher costs and lower savings.

The basic problem is this: all industrial experience shows that it is not possible to dismantle a production facility, move and install the equipment at another place, and resume production without encountering delays and added costs. Start-up at the new facility always entails unanticipated installation problems, initially high and unacceptable scrap rates, higher than expected training requirements, and other challenges. All these add to the costs that are ultimately accrued. A rule of thumb used by some is to budget an added factor of 30% in recognition of unknown but real implementation problems to be faced. The COBRA does not include anticipation of these re-start costs.

The foregoing is true when a production line is moved to a facility engaged in like production. Even greater problems, and added costs, can be expected when the receiving facility lacks experience. One of the Air Force's critical programs, the Sensor Fuzed Weapon, has never been produced anywhere but at Kansas AAP. The expectation, incorporated in the Department's COBRA, that relocation will cost a total of \$675,000 at the receiving facility is not credible.

Another consideration is this: the production of munitions is inherently a difficult and dangerous business. Relocation of a production capability would require a level of competence in planning and execution commensurate with that difficulty and danger. Modernization of the nation's munitions industrial base, which required the kinds of skills needed to relocate facilities, last took place over 20 years ago, with the final actions completed in 1983. As a result, today there is virtually no experience in government or industry relevant to the relocation of major munitions production facilities. That circumstance demands caution and the recognition that relocating a munitions facility entails much more than picking up equipment and moving it to another building in another state.

Our analysis shows the transfer of Kansas AAP and all of its equipment to be far more cost effective than closure, even using the Department's cost figures. Had the very real problems noted above been reflected in the analysis, the claimed costs of closure would have been higher and the claimed savings lower. In that case, the demonstrated superiority of the cost effectiveness of transfer over closure would have been even greater.



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3. Lone Star Army Ammunition Plant

3.1 Introduction:

An analysis has been made of the comparative costs of two courses of action for the future of Lone Star Army Ammunition Plant.

1. Closure of the facility and the transfer of its functions to four other locations, as has been recommended by the Department of Defense in BRAC 2005.
2. Transfer of ownership to a Local Redevelopment Authority which would continue to contract with a private contractor to operate the facility.

This section of this report provides the results of that analysis.

3.2 Executive Summary: Transfer to LRA Is More Cost-Effective

The Department's recommendation to close Lone Star AAP does not provide the best value to the taxpayer. The attached cost analysis demonstrates that a far better course is to transfer the facility and all of its equipment to a LRA. The relevant comparisons produced by this analysis show that transfer costs \$25.1 million less for one-time implementation, saves \$25.1 million more during the implementation period, achieves the start of payback three years sooner, and saves \$23.7 million more in net present value over 20 years.

3.3 Details of Cost Analysis

Following are the details of an analysis of the relative costs and savings of transfer vs. closure of Lone Star Army Ammunition Plant. The cost figures used in the analysis are those contained in the published COBRA reports¹³ that were used by the Department to justify its recommendation to close the facility and relocate its functions to other facilities.

One-Time Costs

Transfer of the facility and all of its equipment avoids nearly all of the one-time costs of closure of Lone Star AAP and the relocation of its functions to four other facilities. The analysis retains those one-time costs that would be incurred under either scenario, and removes those that will no longer be incurred when transfer is implemented. These unnecessary costs include: removal, transport and installation of equipment; pack, transport and receipt of stock; closure of buildings; provision of new facilities; upgrade of existing facilities; tooling upgrades; and, environmental impact statements at locations other than Lone Star AAP. Table 3.4.1, page 15, displays the one-time costs of transfer and of closure. Transfer costs are \$3.8 million and closure costs are \$29.0 million.

¹³ All the cites of COBRA in this section refer to the document posted in the DoD on-line data base: COBRA REALIGNMENT SUMMARY REPORT (COBRA v6.10), Option Package Name: IND 0122 Close Lone Star AAP, Data As Of 5/2/2005, Report Created 5/2/2005.

Recurring Costs

The recurring costs and savings attributed to operations at Lone Star AAP remain the same with closure and with transfer. In either case, government support comes to an end and the resulting savings are realized.

Net Costs

The Department's COBRA computed the annual net costs for the period 2006-2011 by summation of one-time costs and recurring costs. Table 3.4.2, page 16, uses the one-time costs displayed on Table 3.4.1 and the recurring costs used by COBRA to compute net costs for the transfer and closure options. During the implementation period, transfer produces net savings of \$20.5 million, while closure produces net costs of \$4.7 million.

Net Present Value

The Department's COBRA computed the net present value of savings for the 20 year period 2006-2025. Table 3.4.3, page 17 provides a comparison of net present value of the two options. The analysis uses the same present value factors as were used by COBRA. Transfer produces savings with a net present value of \$187.9 million, while closure produces savings with a net present value of \$164.2 million.

Payback

Table 3.4.4, page 18, summarizes the totals provided on the preceding charts. Transfer costs \$25.1 million less to implement than closure, produces \$23.7 million more in net present value savings over 20 years, and produces payback on implementation costs three years sooner. Transfer of the facility and all of its equipment is clearly more cost effective than closure.

3.4.1 LONE STAR AAP - COMPARISON OF ONE-TIME COSTS
(in \$K)

CLOSURE

One-Time Costs	2006	2007	2008	2009	2010	2011	Total
O&M							
Civilian Salary	0	0	0	127	0	299	426
Civilian Moving	0	0	0	71	0	71	142
Unemployment	0	0	0	9	0	22	31
Other	583	437	4,802	497	184	515	7,021
MIL PERS							
Other	0	0	0	10	0	10	21
OTHER							
Environmental	0	4,050	0	0	0	1300	5,350
One-Time	0	13,384	0	2,600	0	0	15,984
Total	583	17,871	4,802	3,314	184	2,217	28,975

TRANSFER

One-Time Costs	2006	2007	2008	2009	2010	2011	Total
O&M							
Civilian Salary	0	0	0	127	0	299	426
Civilian Moving	0	0	0	71	0	71	142
Unemployment	0	0	0	9	0	22	31
Other	583	437	328	246	184	138	1,916
MIL PERS							
Other	0	0	0	10	0	10	21
OTHER							
Environmental	0	1,300	0	0	0	0	1,300
One-Time	0	0	0	0	0	0	0
Total	583	1,737	328	463	184	540	3,836

Table 3.4.1

3.4.2 LONE STAR AAP - COMPARISON OF NET COSTS

CLOSURE

	2006	2007	2008	2009	2010	2011	Total	Beyond
One-Time Cost	583	17,871	4,802	3,314	184	2,217	28,975	0
Net Recurring Cost	0	0	0	-4,319	-4,614	-15,380	-24,314	-17,311
Total Net Cost	583	17,871	4,802	-1,005	-4,430	-13,163	4,661	-17,311

TRANSFER

	2006	2007	2008	2009	2010	2011	Total	Beyond
One-Time Cost	583	1,737	328	463	184	540	3,836	0
Net Recurring Cost	0	0	0	-4,319	-4,614	-15,380	-24,314	-17,311
Total Net Cost	583	1,737	328	-3,856	-4,430	-14,840	-20,478	-17,311

Table 3.4.2

3.4.3 LONE STAR AAP - COMPARISON OF NET PRESENT VALUE

Year	CLOSURE			TRANSFER		
	Cost (\$K)	Adjusted Cost (\$K)	Net Present Value (\$K)	Cost (\$K)	Adjusted Cost (\$K)	Net Present Value (\$K)
2006	583	575	575	583	575	575
2007	17,871	17,146	17,721	1,737	1,667	2,242
2008	4,802	4,482	22,203	328	306	2,548
2009	-1,004	-912	21,291	-3,856	-3,501	-953
2110	-4,430	-3,912	17,379	-4,430	-3,912	-4,865
2111	-13,161	-11,307	6,072	-14,840	-12,744	-17,614
2112	-17,311	-14,466	-8,394	-17,311	-14,466	-32,080
2113	-17,311	-14,072	-22,466	-17,311	-14,072	-46,152
2114	-17,311	-13,689	-36,155	-17,311	-13,689	-59,841
2115	-17,311	-13,316	-49,472	-17,311	-13,316	-73,157
2116	-17,311	-12,953	-62,425	-17,311	-12,953	-86,110
2117	-17,311	-12,601	-75,026	-17,311	-12,601	-98,711
2118	-17,311	-12,257	-87,283	-17,311	-12,257	-110,968
2119	-17,311	-11,924	-99,207	-17,311	-11,924	-122,892
2020	-17,311	-11,599	-110,806	-17,311	-11,599	-134,491
2021	-17,311	-11,283	-122,089	-17,311	-11,283	-145,774
2022	-17,311	-10,976	-133,064	-17,311	-10,976	-156,750
2023	-17,311	-10,677	-143,741	-17,311	-10,677	-167,427
2024	-17,311	-10,386	-154,127	-17,311	-10,386	-177,813
2025	-17,311	-10,103	-164,230	-17,311	-10,103	-187,916

Table 3.4.3

3.4.4 LONE STAR AAP - COMPARISON OF PAYBACK

This table summarizes the results of the analysis provided by Tables 3.4.1, 3.4.2 and 3.4.3. The Transfer option is clearly more cost effective than closure.

	CLOSURE	TRANSFER	ADDED SAVINGS
Total One-Time Cost	\$28,975 K	\$3,836 K	-\$25,139 K
Net Cost during Implementation Period	\$4,661 K	-\$20,478 K	-\$25,139 K
Annual Recurring Savings	-\$17,311 K	-\$17,311 K	Wash
Year That Payback Begins	2012	2009	Payback begins 3 years earlier
Net Present Value Over 20 Years	-\$164,230 K	-\$187,916 K	-\$23,686 K

3.5 Unrecognized Problems

It is important to note that the Department's analysis incorporates a number of highly dubious, but unstated, assumptions. These are reflected in the costs and savings that are claimed to result from closure of Lone Star AAP. A more realistic view would have yielded COBRA outputs showing higher costs and lower savings.

The basic problem is this: all industrial experience shows that it is not possible to dismantle a production facility, move and install the equipment at another place, and resume production without encountering delays and added costs. Start-up at the new facility always entails unanticipated installation problems, initially high and unacceptable scrap rates, higher than expected training requirements, and other challenges. All these add to the costs that are ultimately accrued. A rule of thumb used by some is to budget an added factor of 30% in recognition of unknown but real implementation problems to be faced. The COBRA does not include anticipation of these re-start costs.

Another consideration is this: the production of munitions is inherently a difficult and dangerous business. Relocation of a production capability would require a level of competence in planning and execution commensurate with that difficulty and danger. Modernization of the nation's munitions industrial base, which required the kinds of skills needed to relocate facilities, last took place over 20 years ago, with the final actions completed in 1983. As a result, today there is virtually no experience in government or industry relevant to the relocation of major munitions production facilities. That circumstance demands caution, and the recognition that relocating a munitions facility entails much more than picking up equipment and moving it to another building in another state.

Our analysis shows the transfer of Lone Star AAP and all of its equipment to be far more cost effective than closure, even using the Department's cost figures. Had the very real problems noted above been reflected in those costs, the claimed costs and savings would have been adversely affected. In that case, the demonstrated superiority of the cost effectiveness of transfer over closure would have been even greater.



4

4



4 Draft Language

The Commission may wish to review the following draft language, respectfully provided for its consideration, in preparing the report of its findings and recommendations.

4.1 Hawthorne Army Depot

DRAFT

DRAFT

DRAFT

"Commission Findings

The Commission found that the Military Value assigned by the Department to this Army facility does not accurately reflect its value, and differs significantly from the Military Value assigned by the Army. The Commission found that closure of the facility will significantly diminish munitions storage capacity, a capacity that is already nearly full. The Commission found that inadequate consideration had been given to the difficulty and high cost of relocating the capabilities of the Department's highest-rated demilitarization facility to another location. The Commission found that inadequate consideration had been given to the difficulty, time and cost of obtaining the environmental impact statements, permits and waivers required to relocate demilitarization capabilities to the receiving locations.

Commission Recommendation

The Commission finds that the Secretary of Defense deviated substantially from Final Selection 1, 3 and 8. Therefore, the Commission recommends that Hawthorne Army Depot be retained and that the functions performed there continue without interruption. The Commission finds this recommendation is consistent with the long-term force-structure plan and Final Selection."

4.2 Kansas Army Ammunition Plant

DRAFT

DRAFT

DRAFT

"Commission Findings

The Commission found that the Department did not evaluate an option which produces more savings than the option of closing the facility. Transfer of the facility and all of its equipment to a Local Redevelopment Authority will have one-time costs that are \$22.9 million less than the recommended option, and in a 20 year period will increase net present value savings by \$21.6 million over the recommended option. A significant added benefit is retention of a cost-competitive munitions-producing facility which remains available should unforeseen circumstances demand increased production.

Commission Recommendation

The Commission recommends that appropriate steps be taken to transfer Kansas Army Ammunition Plant and all of its equipment to a Local Redevelopment Authority in Labette County, with the intention that the Local Redevelopment Authority will contract with a private firm to operate the facility. The

Commission finds this recommendation is consistent with the long-term force-structure plan and final criteria."

4.2 Lone Star Army Ammunition Plant

DRAFT

DRAFT

DRAFT

Commission Findings

The Commission found that the Department did not evaluate an option which produces more savings than the option of closing the facility. Transfer of the facility and all of its equipment to a Local Redevelopment Authority will have one-time costs that are \$25.1 million less than the recommended option, and in a 20 year period will increase net present value savings by \$23.7 million over the DoD recommended option of closure. A significant added benefit is retention of a cost-competitive munitions-producing facility which remains available should unforeseen circumstances demand increased production.

Commission Recommendation

The Commission recommends that appropriate steps be taken to transfer Lone Star Army Ammunition Plant and all of its equipment to a Local Redevelopment Authority, with the intention that the Local Redevelopment Authority will contract with a private firm to operate the facility. The Commission finds this recommendation is consistent with the long-term force-structure plan and final criteria."

Appendix

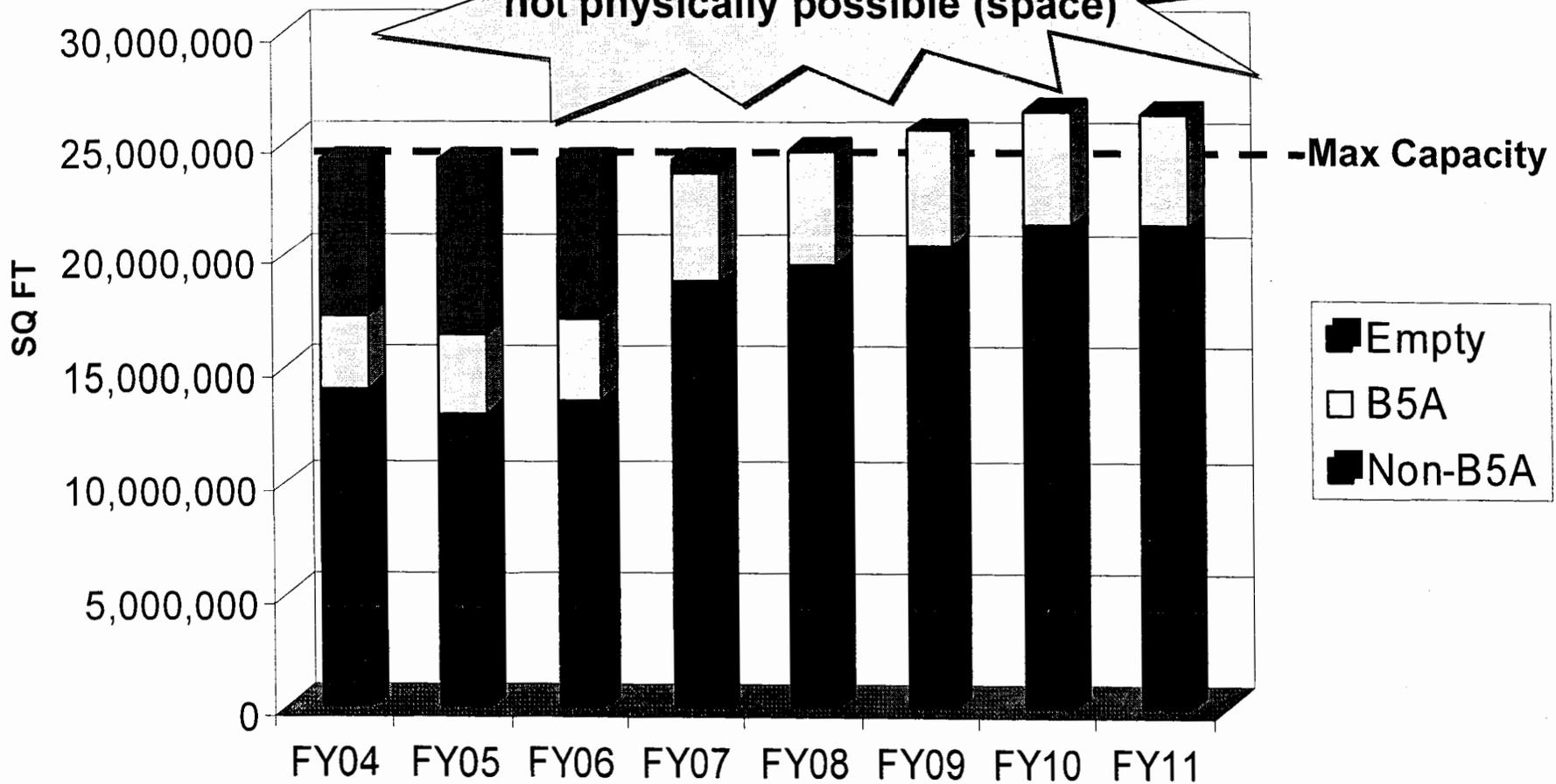
A.1 Chart: "Wholesale Depot Occupancy Profile by Fiscal Year".....	A-1
A.2 IJCSG Meeting Minutes, November 18, 2004, page 1.....	A-2
A-3 IJCSG Minutes, January 25, 2005, Munitions & Armaments Briefing, page 7.....	A-3
A-4 IJCSG Minutes, April 14, 2005, Munitions & Armaments Briefing, page 26.....	A-4



Wholesale Depot Occupancy Profile by Fiscal Year



Storage fiscally possible (\$)
 But
 not physically possible (space)



A-1

Industrial Joint Cross-Service Group (IJCSG)

Meeting Minutes of November 18, 2004

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 nineteenth IJCSG meeting by stating that scenarios were on the agenda and that is important to get these purified as soon as possible. Other opening remarks included the general following points:

- We should be closing out our capacity analysis report as soon as possible. Where we need additional data clarifications from the Services, we need to resolve that quickly - hopefully receiving those clarifications by the end of this week.
- Continue our progress on the military value analysis.
- Register scenarios in the tracking tool as they get approved by the group and prepare scenario data calls to support them.
- Mr. Beckett indicated that the Air Force intends to nominate him to Mr. Wynne as Mr. Orr's replacement on the IJCSG.

Mr. Motsek briefed the status of his capacity and military value analyses and scenario development. As requested in the previous IJCSG meeting, he briefed scenarios which closed his two major depots, McAlester and Crane Army Ammunition Plants. Closing these depots resulted in major problems as indicated on the attached slides, including the creation of single points of failure, limited rail access for distribution, reduction in Navy and Air Force readiness, loss of economic benefit of reselling white phosphorus from demilitarization operations and other negative impacts. The group agreed that if a scenario has little merit based on capacity and military value analysis, and if military judgment concludes that there are show stoppers out there that argue for not pursuing the analysis further, then the analysis can be terminated prior to analysis under criteria 5-8. The group decided that, based on these negative impacts and unless other substantive issues surface that require additional analysis, it seemed logical that the closure of McAlester and Crane Army Ammunition Plants present unacceptable show stoppers and that further analysis of these closure scenarios was not necessary.

As requested in the previous IJCSG, RADM Klemm briefed scenarios which closed each of the four Shipyards, one at a time: Norfolk, Puget Sound, Pearl Harbor and Portsmouth. Closing either of the two largest shipyards, Norfolk or Puget Sound, was determined to have little merit for several reasons: 1) use of the Optimization Model determined that closure of either shipyard would leave 4 million direct labor hours of workload annually that cannot be absorbed by the other three shipyards; [REDACTED]



#IND-0108: HAWTHORNE ARMY DEPOT

Candidate Recommendation: Close Hawthorne Army Depot, NV. Relocate Storage and Demilitarization functions to Tooele Army Depot, UT.

<u>Justification</u>		<u>Military Value</u>
<ul style="list-style-type: none"> ✓ Capacity and capability for Storage and Demil exists at numerous munitions sites. ✓ Closure reduces redundancy and removes excess from the Industrial Base ✓ Allows DoD to create centers of excellence and establish deployment networks that support readiness for all Services 		<ul style="list-style-type: none"> ✓ Hawthorne: Storage/Dist, 2nd of 23; Demil 1st of 13 ✓ Tooele: Storage/Dist 5th of 23; Demil 2nd of 13 ✓ Military judgment tips scale to Toole because of support to readiness, accessibility and ease of out-loading.
<u>Payback</u>		<u>Impacts</u>
<ul style="list-style-type: none"> ✓ One-Time Cost: \$100.98M ✓ Net Implementation Savings: \$139.42M ✓ Annual Recurring Savings: \$74.98M ✓ Payback Period: Immediately ✓ NPV (savings): \$833.75M 	<ul style="list-style-type: none"> ✓ Criterion 6: -146 jobs (86 Direct, 60 Indirect); 0.06% ✓ Criterion 7: No Issues ✓ Criterion 8: Air quality, historic, land constraints, threatened species, water, and waste mgmt. No impediments. 	

A-3

- ✓ 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

