

# INSTALLATION REPORT OF AUDIT

F2007-0065-FDE000

Military Construction Project Kaiserslautern Military Community
Center (KMCC)
United States Air Forces in Europe
Ramstein AB Germany



European Area Audit Office 22 June 2007

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#### INTRODUCTION

The Kaiserslautern Military Community Center (KMCC) is currently the largest single facility construction project in the Department of Defense. The KMCC will consolidate and expand existing Army and Air Force Exchange Service (AAFES), 435th Air Base Wing Services (435 ABW/SVS), and other non-appropriated fund activities into one location. The KMCC is currently funded at €128,341,080 (\$164.3 million). This total funding amount does not include €13.8 million in European payment in-kind funds associated with the Rhein Main Transition Program (RMTP).

#### **OBJECTIVES**

**(FOUO)** This was a locally initiated audit to determine whether USAFE Civil Engineering personnel exercised effective control over the KMCC military construction project. Specifically, we determined whether personnel properly:

- **(FOUO)** Conducted project planning and architectural design reviews.
- **(FOUO)** Performed pre-solicitation reviews, solicitation and award of contracts, and included all clauses necessary to protect US interests.
- **(FOUO)** Monitored and approved contract change orders and monitored project status to minimize cost and schedule growth.
- **(FOUO)** Monitored and approved contractor payments.
- **(FOUO)** Assessed and pursued Architect-Engineer (A-E) liability.

#### CONCLUSIONS

**(FOUO)** USAFE Civil Engineer personnel could improve control of the KMCC construction project. Specifically:

 (FOUO) USAFE project managers did not conduct thorough project planning or architectural design reviews to verify KMCC contracts met project requirements. Adequate project planning and design reviews ensure communication of US construction planning information

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necessary for the German authorities to properly coordinate construction projects to ensure the optimum use of German design and construction capacities. Further, we conservatively estimate at least 173 change orders reviewed, totaling €5.2 million (\$6.1 million), resulted from the inadequate project planning and construction design and, thus, were preventable. (Tab A, page 1)

- Liegenschafts- und Baubetreuung (LBB), personnel properly performed pre-solicitation reviews, solicitation, and award of the KMCC contracts; however, the LBB did not inform USAFE personnel of the bid date or location of bid opening, or provide copies of the invitations to bid, the potential contractor list, or the results until after the contractor was recommended for selection. Further, USAFE personnel did not ensure the bid process was properly documented. As a result, USAFE personnel did not have the opportunity to reject a contractor or provide evidence to support that rejection prior to selection. Although this procedure had no impact on the KMCC contracts, it represents an internal control problem that should be corrected for future contracts. (Tab B, page 6)
- **(FOUO)** USAFE personnel did not ensure KMCC contracts included all clauses necessary to protect US interests. As a result, neither USAFE nor LBB has assurance the contractor could be held liable if he is found incapable of performing all contract requirements. (Tab B, page 9)
- **(FOUO)** USAFE Project Management Office (PMO) personnel did not properly monitor and approve all construction change orders. As a result, USAFE was not aware of at least €11.9 million (\$13.7 million) in potential construction change orders not yet billed to the government. (Tab C, page 11)

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- (FOUO) USAFE personnel did not effectively monitor the KMCC military construction project status to limit cost and schedule growth. As a result, project costs could increase by more than €15 million (\$17.4 million) over the remaining 35 percent of construction (as of 27 October 2006). In addition, each day the occupancy date is delayed due to schedule growth costs the government \$10,173 to billet personnel off base (more than \$3.7 million per year). Further, the US may be held financially liable for contractor delay claims resulting from improper scheduling. (Tab C, page 15)
- **(FOUO)** USAFE personnel did not properly monitor and approve contractor payments. As a result, KMCC contractors improperly billed and were paid for materials in excess of approved contract quantities, costing over €5.9 million (\$6.7 million) for 248 contract line items on 3 invoices. (Tab D, page 24)
- **(FOUO)** USAFE project management personnel did not assess and pursue A-E contractor liability. Specifically, as of October 2006 there were numerous design deficiencies discovered during the construction of the KMCC that contributed to contract change orders that conservatively could result in USAFE being billed at least ⊕52,954 (\$1.1 million). However, because USAFE did not request the LBB properly assess A-E liability, they may not be able to dispute the quality of A-E services. Request for recoupment for A-E design errors or performance deficiencies could provide the Air Force a potential monetary benefit of at least ⊕52,954 (\$1.1 million). (Tab E, page 29)

#### MANAGEMENT CORRECTIVE ACTION

During the audit, USAFE/A7 management completed 15 corrective actions. Reference tabs for specific actions taken.

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#### RECOMMENDATIONS

We made 19 recommendations to improve the management of construction funds. Reference Tabs A, B, C, D, and E for specific recommendations.

## MANAGEMENT'S RESPONSE

(**FOUO**) Management officials reviewed this report and agreed with the majority of the audit results; however, do not agree that some areas adequately describe actions, conditions, or current situation. Audit believes the management comments to Recommendations C.1 and C.2 are partially responsive. In addition, audit contends that Recommendations C.6, D.1 and D.2 are non-responsive. Therefore, we will elevate the issues in disagreement to the appropriate Air Force level of command for resolution in accordance with AFI 65-301, *Audit Reporting Procedures*. (Reference Appendix II and III for additional management comments)

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This document contains information exempt from mandatory disclosure under the Freedom of Information Act. Exemption 5 applies.

#### **BACKGROUND**

The Auftragsbaugrundsaetze 1975 (ABG-75) Administrative Agreement is a bilateral agreement between the United States Forces and the Federal Republic of Germany (FRG) applicable to all US Forces construction in Germany. In accordance with ABG-75, German authorities plan, execute, and administer construction on behalf of US Forces. Therefore, the ABG-75 requires US Forces coordinate construction planning with the German Government Construction Agency (GGCA) to ensure the optimum use of German design and construction capacities. USAFE Civil Engineer personnel accomplish this coordination annually on USAFE Form 105 (ABG Form 1), *Program of Construction for the US Forces*.

Civil engineer personnel coordinate with German state construction authorities to design, contract for, and perform the construction management of a project in accordance with the ABG-75. The US Army Corps of Engineers (USACE) typically provides oversight for many of the military construction (MILCON) projects in Germany and manages the projects with the LBB on behalf of the Air Force. USAFE or base civil engineer personnel provide input and coordination of project issues with USACE. The USAFE Program Management Branch personnel provide Air Force oversight of LBB-administered contracts for projects that do not have the USACE involvement.

Pre-Design Validation Reviews include a presentation of the timeline for construction, a review of funding documents, validation of scope and functional requirements, approval of infrastructure systems to support the facility, review of comprehensive site plans, proper clearance of environmental concerns, and an adequate budget cost estimate. In addition, the PDVR includes a review of Anti-terrorism/Force Protection criteria, communication requirements and associated technical solutions, special project issues, and the proposed method of execution. All PDVR actions should be complete before starting the project design.

A pre-design conference occurs after the GGCA has accepted the project and includes representatives from the German contracting agent, Landesbetrieb Liegenschafts- und Baubetreuung (LBB); design firms; and all US agencies. Attendees should establish key project milestones including design start, periodic design reviews (i.e., 5-10 percent pre-concept design submittal review, 35 percent concept design review, 90-95 percent final design review, and 100 percent corrected final design), the design completion date and bid advertisement date. When requested by the MAJCOM or functional users or on large projects, an additional concept design review can occur at the 65 percent design stage. This review is to ensure designs meet functional and technical requirements and all comments from the 35 percent review have been appropriately incorporated in the design.

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Modifications (change orders) are negotiated "mini-contracts" which are formalized within the context of the scope of the original contract. They allow equitable adjustments to contract requirements due to changes which include differing site conditions, unforeseen conditions, corrections of errors and omissions (to include design deficiencies), contractor or weather delays, and work suspensions. Modifications frequently add time to the schedule of construction and are expensive because they are not usually competitively bid. The fees paid to the LBB fall into three general categories: administrative, translation, and actual cost for secondary services. They are calculated on separate percentages based on ABG-75 classifications of major or minor construction and are based on final construction costs. For new construction, the administrative compensation fee is 5 percent, and the translation fee is 0.6 percent. Although modifications will be necessary throughout the contract, proper project planning is important to control overall construction costs.

Trade-wise contracts were established to subdivide a large contract into several smaller contracts, thus, allowing smaller contractors who specialize in a certain trade, like stonework, to bid on the project. The benefit of this type of contracting for the KMCC was to limit the need for subcontractors and offer opportunities for small companies who would otherwise not be able to compete for a contract of this magnitude to form a conglomerate by trade. In Germany, tradewise agreements require line-item contracts that specifically list the number of labor hours and material required. Therefore, the project design and schedule must be very specific in order to properly coordinate all contractors involved.

#### (FOUO) AUDIT RESULTS 1 – PROJECT PLANNING/DESIGN REVIEWS

**Condition.** (FOUO) USAFE project managers did not conduct thorough project planning or architectural design reviews to verify KMCC contracts met project requirements. Specifically:

- **(FOUO)** USAFE personnel did not complete ABG Form 1 project planning documents or forward them to the LBB for use in workload planning.
- **(FOUO)** USAFE personnel did not perform pre-design validation reviews.
- **(FOUO)** USAFE personnel did not conduct a 65 percent architectural design review to estimate and mitigate project risk and did not ensure user comments were fully incorporated into subsequent designs.

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#### Cause.

- **(FOUO)** USAFE/A7CCP, Project Management, personnel did not prepare ABG Form 1 documents because USAFE/A7CP, Programs Division, had prepared them in the past, and when USAFE A7, Civil Engineer, reorganized, senior management did not assign this responsibility to the proper office.
- **(FOUO)** USAFE senior management did not establish policy to estimate and mitigate risk and did not provide adequate oversight of the planning procedures.
- **(FOUO)** Project management personnel did not conduct all appropriate architectural design reviews because a senior manager within USAFE/A7 removed the 65 percent review from the review process in an attempt to expedite the design process, although a 65 percent design review was requested by AAFES and the 435 ABW/SVS. In addition, the USAFE Project Manager did not follow up on 35 percent review comments to ensure they were properly incorporated in subsequent designs because the senior management emphasis was on expediting design and schedule rather than ensuring personnel conducted appropriate design reviews.

#### Impact.

- **(FOUO)** Adequate project planning and construction design reviews ensure timely communication of US construction planning information necessary for German authorities to properly coordinate construction projects to ensure the optimum use of German design and construction capacities.
- **(FOUO)** Adequate project planning and architectural design reviews ensure construction plans meet requirements and help limit unexpected cost and schedule growth. An independent review was performed by a qualified architect to determine whether the modifications could have been prevented with proper project planning and architectural design reviews. We conservatively estimate at least 173 change orders reviewed, totaling **5**.2 million (\$6.1 million), were preventable. <sup>1</sup>

<sup>&</sup>lt;sup>1</sup> (**FOUO**) The construction exchange rate for fiscal year 2007 is .8530 to \$1 based on the *Foreign Currency Conversion Rates Effective 1 November 2006*, from the Defense Finance and Accounting Service. This rate was used to convert Euro amount to US dollars throughout this report.

**(FOUO) Management Corrective Actions.** USAFE/A7CCP completed the following corrective actions:

- **(FOUO)** Corrective Action A.1. On 9 November 2006, USAFE/A7CCP established and implemented procedures to provide management oversight of project planning using pre-design validation reviews. In addition, this project planning tool allows project managers to estimate and mitigate risk on all future MILCON projects.
- **(FOUO)** Corrective Action A.2. USAFE/A7CCP established procedures to post key construction documents to a project website to better facilitate KMCC team communication.

(**FOUO**) **Recommendations.** The Director of Mission Support (USAFE/A7) should:

- **(FOUO)** Recommendation A.1. Establish procedures to ensure the Chief of Project Management (USAFE/A7CCP) or the Chief of Programs Division (USAFE/A7CP) properly completes ABG Form 1 project planning documents on all MILCON projects and forwards them to the LBB.
- **(FOUO)** Recommendation A.2. Require project managers to conduct 65 percent design reviews for major construction contracts.
- **(FOUO)** Recommendation A.3. Require project managers to ensure 35 and 65 percent design review comments are incorporated in the project designs prior to contract award.

**(FOUO) Management Comments.** Although management concurred with the audit result and recommendations, additional comments to this result are provided in Appendix II. In response to the audit recommendations, management stated:

- **(FOUO)** Recommendation A.1. "Concur with comment. USAFE/A7CC annually provides copies of the MILCON Future Years Defense Plan to GBB and LBB leadership in lieu of the ABG Form 1. In the future, USAFE/A7CC will prepare ABG Form 1 project planning documents on all MILCON projects and forward them annually to the LBB. Estimated completion date: 30 November 2007.
- **(FOUO)** Recommendation A.2. "Concur. The design review process for each project should be tailored on the basis of complexity, cost, and schedule. ABG-75 provides for some flexibility in coordinating design reviews with German authorities, and the US

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incurs additional costs for the 65 percent design reviews. We will make a conscious management decision for each project; just as was the decision to forego a 65 percent review on the KMCC and conduct weekly coordination meetings in its place. This policy was established in our 19 April 2007 memorandum to the HQ USAFE/A7CCP project managers. Action completed: 19 April 2007. (CLOSED)

• **(FOUO)** Recommendation A.3. "Concur. We will require project managers to ensure design review comments are incorporated into all future project designs through back check reviews by all technical designers. This policy was established in our 19 April 2007 memorandum to the HQ USAFE/A7CCP project managers. Action completed: 19 April 2007. **(CLOSED)**"

**(FOUO) Evaluation of Management Comments.** Management concurred with Recommendation A.2., but their comment is not totally responsive. Management stated that: "We will make a conscious management decision for each project; just as was the decision to forego a 65 percent review on the KMCC and conduct weekly coordination meetings in its place." However, audit agrees that for some projects a 65 percent review may not be necessary. Therefore, management comments addressed the issues presented in the tab and actions taken or planned should correct the problem.

#### **BACKGROUND**

The German contracting agent (LBB) prepares a contract cost estimate for use in bid evaluation, prepares a bid schedule, announces the tender opening, and obtains bids on contracts. The ABG-75, Part II, Article 5, paragraph 5.2 states, "The (US) Forces shall be informed in good time of the date and place of opening of the tenders." Further, it states, "To ensure the timely notification, the US Forces shall be furnished the 'invitation to tender' at the same time as the proposed tenderers." After the LBB evaluates bids received, they notify the US Forces of their recommendation for contract award and for approval or disapproval of the award by the US Forces. Approval authorizes LBB to award a contract for construction services.

Bid process documentation should include the LBB prequalification of construction contractors, should result in a list of sources determined qualified to perform specific construction contracts, and limit offerors to those with proven competence to perform in the required manner. The contract agent and USAFE personnel should maintain records of the contractor's qualifications.

Under German law, liquidated damages are not a precondition for claiming damages. The ABG-75, Part II, Article 4.1, paragraph 4.1.2 states, "Liquidated damages are agreed upon if the contractor is late completing the construction work." Although German courts have ruled against these clauses in the past, liquidated damage clauses are still possible as long as they are in compliance with the Verdingungsordung für Bauleistungen (VOB) and German Civil Code. The US must prove actual damages in order to recover costs in a German court.

#### (FOUO) AUDIT RESULTS 2 – SOLICITATION AND DOCUMENTATION

**(FOUO) Condition.** LBB personnel performed proper pre-solicitation reviews, solicitation and award of the KMCC contracts. However:

- **(FOUO)** The LBB did not inform the US of the bid date or location of bid opening. Also, LBB did not provide copies of the invitations to bid, the potential contractor list, or the results until after the contractor was recommended for selection.
- **(FOUO)** USAFE personnel did not ensure the bid process was properly documented. Specifically, LBB performed a prequalification review, which resulted in a list of qualified construction contractors but did not maintain records of the contractor qualifications. Further, neither the US nor the LBB established a process for the contractors to provide contractor qualifications for US review.

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#### (**FOUO**) Cause. This occurred because:

- **(FOUO)** The LBB personnel stated the contract bid procedures were more secure without US involvement. However, US involvement was required by ABG-75.
- **(FOUO)** The USAFE Project Manager did not request the LBB provide contractor qualification documents in accordance with German contract law.
- **(FOUO)** German contract law does not specifically require LBB to maintain records of the contractor qualifications.
- **(FOUO)** The US did not establish policies or procedures to submit contractor quality, qualification, and timeliness concerns to the LBB.

**(FOUO) Impact.** As a result, the US did not have the opportunity to reject a contractor or provide evidence to support that rejection prior to selection as in accordance with the ABG-75. Therefore, no record exists of US concerns provided for LBB review during contractor selection. Although this had no impact on the KMCC contracts, it represents an internal control problem that should be corrected for future contracts.

#### **(FOUO) Recommendations.** The USAFE/A7 should:

- **(FOUO)** Recommendation B.1. Request the LBB allow joint participation in the contractor prequalification process.
- **(FOUO)** Recommendation B.2. Request the LBB inform the US of the bid date and location of bid opening and provide copies of the invitations to bid, the contractor list, and the results of the tendering.
- **(FOUO)** Recommendation B.3. Request the LBB provide contract bid schedules, recommendations, and contractor qualification documents prior to contract award.
- **(FOUO)** Recommendation B.4. Request the LBB maintain records of contractor qualifications or, alternatively, provide a record to USAFE to maintain in the project file.

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• **(FOUO)** Recommendation B.5. Establish policies or procedures to formally report specific contractor quality, qualification, performance, and timeliness concerns to the LBB.

**(FOUO) Management Comments.** Although management concurred with the audit result and recommendations, additional comments to this result are provided in Appendix II. In response to the audit recommendations, management stated:

- **(FOUO)** Recommendation B.1. "Concur. As we did with the housing program, we will also request the LBB allow joint participation in the contractor prequalification process for future regular MILCON projects. In addition, the US Army Corps of Engineers is in the process of developing a joint agreement with the LBB to solicit construction contract bids using the Best-Value Procurement Method.<sup>2</sup> If they are successful in implementing this initiative, USAFE may also benefit from the changes to the contract bid process, including potential gains in price-performance trade-off. Estimated completion date: 20 July 2007.
- **(FOUO)** Recommendation B.2. "Concur. We will request the LBB inform the US of the bid date and location of bid opening, and provide copies of the invitations to bid, the contractor list, and the results of the tendering. Estimated completion date: 20 July 2007.
- **(FOUO)** Recommendation B.3. "Concur. We will request the LBB provide contract bid schedules, recommendations, and contractor qualifications prior to contract award as part of the ABG Form 4 (tender acceptance form) documentation IAW ABG-75. Estimated completion date: 20 July 2007.
- **(FOUO)** Recommendation B.4. "Concur. We will request the LBB maintain records of contractor qualifications or, alternatively, provide a record to USAFE to maintain in the project file. Estimated completion date: 20 July 2007.
- **(FOUO)** Recommendation B.5. "Concur with comment. Effective procedures were and remain in place for USAFE PMO personnel to identify problems to the LBB and its oversight contractors. USAFE/A7CC routinely sends letters to LBB and GBB expressing

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<sup>&</sup>lt;sup>2</sup> (**FOUO**) Best-Value Procurement Method is defined as a balance between the need to obtain full and open competition and the need to efficiently fulfill the Government's requirements.

dissatisfaction and concern over quality, performance, and timeliness. During the audit, USAFE/A7 began providing more detailed reports to the LBB outlining construction deficiencies (e.g., roof construction and kitchen exhaust duct construction deficiencies). In our opinion, this correspondence sufficiently addressed the recommendation to establish policies or procedures to formally report specific quality, qualification, performance, and timeliness concerns with the LBB. Action completed: 7 December 2006. (CLOSED)"

#### (FOUO) AUDIT RESULTS 3 — CONTRACT AWARD

**(FOUO) Condition.** USAFE personnel did not ensure KMCC contracts included all clauses necessary to protect US interests. Specifically, KMCC contracts did not include liquidated damages clauses. For example, one trade-wise contract was established to consolidate mechanical, electrical, and plumbing requirements. The trade contractor then subcontracted a firm to provide electrical services which totaled a significant amount of the work (roughly 40 percent of the contract requirements); however, no provisions were established in the contract to address potential liabilities if the subcontractor would have been unable to perform as required.<sup>3</sup>

**(FOUO)** Cause. This occurred because USAFE management approved the use of trade-wise contracts versus using a general contractor. Because USAFE was not involved in the subcontracting process, it is unknown why LBB did not ensure contracts included clauses for assessing liquidated damages.

**(FOUO) Impact.** As a result, neither the US nor LBB has assurance the contractors could be held liable if they are incapable of performing all contract requirements. This could result in contractor default and additional charges incurred by the US.

**(FOUO) Recommendation B.6.** USAFE/A7 should jointly establish procedures with the LBB to insert liquidated damages clauses in future trade-wise construction contracts.

**(FOUO) Management Comments.** Although management concurred with the audit result and recommendations, additional comments to this result are provided in Appendix II. In response to the audit recommendation, management stated: "Concur. We will request the LBB to insert

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<sup>&</sup>lt;sup>3</sup> (**FOUO**) Although the VOB states subcontracting is permissible under trade-wise agreements, it does not specifically state this percentage should be limited, as the Federal Acquisition Regulation requirements for US contracts requires subcontracting to be limited to 12 percent.

liquidated damages clauses in future general contractor and trade-wise construction contracts as allowed by ABG-75. Estimated completion date: 30 June 2007."

**(FOUO) Evaluation of Management Comments.** Management stated that management comments addressed the issues presented in the Tab and actions taken or planned should correct the problem.

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#### **BACKGROUND**

User-requested change orders are modifications generated internally and are processed, negotiated, and contracted through the contracting agent (LBB). Construction change orders are generally LBB or contractor-initiated modifications. The GGCA initiates an ABG Form 5, *Change Order Document*, when approved, is recorded as an increase or decrease to the total project obligation amount. Construction change orders initiated by the LBB, construction agent, or contractors but not received or approved by the Air Force are considered missing change orders.

The ABG-75, Part II, Article 7, Paragraph 7.1 states, "No later than 1 month upon receipt of the ABG Form 5, the GGCA shall determine, in accordance with the responsible agency of the US Forces, the course of the requested services and shall furnish the US Forces a time schedule hereon." Also, paragraph 7.6. states, "Within 20 working days after the date for construction commencement has been established, a construction time schedule shall be submitted to the US Forces. In the event of any significant changes in established dates, the monthly construction progress reports required by Article 7.1.7 shall be supplemented by a revised construction time schedule which reflects the most recent status." Article 9, paragraph 9.1. states, "If there is indication that the agreed upon schedules cannot be met for any phase of the project, the Forces and the LBB authorities will notify each other in a timely manner of any pending delay and reasons for the delay and will propose alternative courses of action for consideration and remedying. The same applies for cost growth exceeding the approved amount of funds and/or scope of work."

## (FOUO) AUDIT RESULTS 4 – MISSING CONSTRUCTION CHANGE ORDERS

**(FOUO) Condition.** The USAFE PMO personnel did not properly monitor and approve all construction change orders. Specifically, they did not receive or adequately follow up to ensure the LBB provided 427 of 490 (87 percent) LBB or contractor-initiated change order (CO) documents timely prior to 24 July 2006. (See Table 1)

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#### (FOUO)

(2000)	Number		COs	COs	Value of
COs	of COs	Value	<b>On-Hand</b>	Missing	Missing COs <sup>4</sup>
Lot 1	50	€2,507,715	19	31	€1,851,703
Lot 2	41	1,449,182	2	39	1,095,032
Lot 3	20	868,502	4	16	334,996
Lot 4	21	351,918	2	19	499,512
Lot 5	0	0	0	0	0
Lot 6	45	1,092,345	0	45	1,092,345
Lot 7	24	344,130	0	24	344,130
Lot 8	14	265,825	0	14	265,825
Lot 9 & 10	90	3,027,146	2	88	2,946,114
Lot 11	113	2,278,065	10	103	2,145,448
Lot 12a	8	114,714	0	8	151,014
Lot 12b	0	0	0	0	
Lot 12c	5	42,572	0	5	42,572
Lot 13	4	56,884	0	4	56,884
Lot 14	0	0	0	0	0
Lot 15	0	0	0	0	0
Lot 16	0	0	0	0	0
Lot 17	0	0	0	0	0
Lot 18	0	0	0	0	0
P3L1 Aussenanlage	42	2,630,230	22	20	1,148,752
P3L2 Parkdeck	13	89,797	2	11	Unknown Value
Totals	490	€15,119,025	63	427	€11,974,327
					\$13,734,553

(FOUO) Table 1. Missing Construction Change Orders.

(FOUO) Cause. This occurred because:

- **(FOUO)** USAFE PMO personnel did not effectively establish construction change order review processes to ensure change orders were valid, authorized, and within project scope prior to payment.
- **(FOUO)** USAFE personnel did not request notification of construction change orders from the LBB prior to change order implementation per the ABG-75 and German law

<sup>&</sup>lt;sup>4</sup> (FOUO) As of 20 September 2006.

(the Vergabe-und Vertragsordnung für Bauleistungen [VOB]) because this is how construction change orders were historically handled on this project.

• **(FOUO)** The LBB did not provide notification of construction change orders or ABG Form 5 documents in a timely manner because they stated they were short personnel to perform the document processing. Further, USAFE did not raise this issue to the Geschäftsbereich Bundesbau (GBB) for resolution.<sup>5</sup>

**(FOUO) Impact.** As a result, USAFE was not able to validate at least €1.9 million (\$13.7 million) in construction change orders for which the contractor could potentially bill and receive payment.

#### (FOUO) Management Corrective Actions.

- **(FOUO)** Corrective Action C.1. On 6 September 2006, USAFE/A7CCP formalized its change order review process to include a Change Order Review Board and weekly review of user-requested and construction change orders, including appropriate cost estimates, cost increases, and schedule delays. Additionally, a formalized user-requested change order approval process began in January 2006 when the user-requested change orders increased to six user requested changes. This process was ended in July 2006 (when construction was approximately 60 to 65 percent complete) to minimize the impact of user requested changes to planned construction activities.
- **(FOUO)** Corrective Action C.2. On 22 December 2006, USAFE/A7 requested the LBB provide outstanding ABG Form 5 documents immediately. In addition, management requested the LBB adhere to ABG-75, specifically for notification and written approval of change orders prior to implementation for all future changes.

<sup>&</sup>lt;sup>5</sup> (**FOUO**) The Geschäftsbereich Bundesbau (GBB) of the Land Rheinland-Pfalz is the German Federal Construction Division which represents the building administration of Rheinland-Pfalz as well as the public builder. The GBB provides standardized rules for project management, handles public relations, performs valuation, and monitors infrastructure of the US Forces, NATO, and allied forces. The GBB oversees the LBBs, but is not in the direct reporting chain of command.

#### **(FOUO) Recommendations.** The USAFE/A7 should:

- **(FOUO)** Recommendation C.1. Review and validate contractor invoices with approved ABG Form 5 documents to ensure requested payments are valid, authorized, and within project scope in accordance with the ABG-75, VOB, and US Code. Only pay outstanding invoices USAFE PMO personnel can validate with approved ABG Form 4 (contract) and ABG Form 5 (change order) documents to confirm the invoiced services are complete, authorized, and within project scope.
- **(FOUO)** Recommendation C.2. Proceed with partial invoice payments for valid and authorized line items based on a thorough review of all invoiced line items with contracted quantities and with approved ABG Form 5 documents.
- **(FOUO)** Recommendation C.3. Request a meeting with the GBB to review and evaluate existing ABG-75 guidance to address methods to better provide, review, and dispute modification documents and associated invoices. Audit suggests USAFE should propose an amendment to the ABG-75 placing financial liability on the LBB for any interest or penalties incurred as a result of US Forces not paying outstanding invoices until modification documentation is provided and properly evaluated. Upon agreement of an acceptable method, jointly propose changes to the ABG-75 through diplomatic representatives from both governments to improve the construction contract modification and invoice review processes.

**(FOUO) Management Comments.** Although management concurred with the audit result and intent of the recommendations, additional comments to this result are provided in Appendix II. In response to the audit recommendations, management stated:

- **(FOUO)** Recommendation C.1. "Concur with comment. We will continue to review and validate contractor invoices to ensure requested payments are valid, authorized, and within project scope in accordance with the ABG-75, VOB, US Code, and the Grassley Amendment to Public Law 103-335. When available, an approved ABG 5 will be the basis for verification. When an ABG Form 5 is not yet available, USAFE will require LBB to provide a full explanation of the change and why it was required, as outlined in USAFE/A7's 2 November 2006 memorandum to LBB which was coordinated by the USAFE/JA staff. Action completed: 2 November 2006. **(CLOSED)**
- **(FOUO)** Recommendation C.2. "Concur. We will proceed with partial invoice payments for valid and authorized line items based on a thorough review of all invoiced

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line items with contracted quantities and with approved ABG Form 4 and ABG Form 5 modification documents. The only exception is the current backlog of change orders (549) identified prior to 2 November 2006. For these change orders, USAFE has agreed (with concurrence of the USAFE/JA staff) to process payment provided LBB certifies in writing that the work was 1) necessary, 2) properly performed, and 3) fairly and reasonably priced. As an additional measure, USAFE/A7CCP personnel require LBB provide a full explanation of invoiced changes not supported by an approved ABG Form 5 document. Action completed: 2 November 2006. (CLOSED)

• **(FOUO)** Recommendation C.3. "Concur. The USAFE Vice Commander is the appropriate official to request a meeting with IMCOM-Europe to review and evaluate existing ABG-75 guidance to address methods to better provide, review, and dispute modification documents and associated invoices. The USAFE/A7 will propose an amendment to the ABG-75 placing financial liability on the LBB for any interest or penalties incurred as a result of US Forces not paying outstanding invoices until modification documentation is provided in enough time to be properly evaluated. Estimated completion date: 30 June 2007."

#### (FOUO) AUDIT RESULTS 5 – COST AND SCHEDULE GROWTH

**(FOUO) Condition.** USAFE personnel did not effectively monitor the KMCC military construction project changes to limit cost and schedule growth. Specifically:

- **(FOUO)** USAFE personnel did not track construction change order amounts, description, resulting projected schedule delays, or costs.
- **(FOUO)** The LBB provided a construction schedule at project initiation; however, construction delays, primarily due to the numerous change orders, resulted in schedule shifting which affected future construction milestone dates.<sup>6</sup>

(**FOUO**) Cause. This occurred because:

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<sup>&</sup>lt;sup>6</sup> (FOUO) The majority of construction change orders were quantity changes and not scope changes.

- **(FOUO)** The USAFE Project Manager did not verify design review comments were appropriately incorporated in project designs.
- **(FOUO)** Construction began before designs were completed.
- **(FOUO)** The LBB recommended and a USAFE senior manager approved the use of trade-wise agreements, essentially forcing the LBB to act as a general contractor without implied general contractor authority or liability.
- **(FOUO)** The LBB hired the design contractors to perform construction management duties. This action did not allow a proper separation of duties that would normally result in an independent review of construction costs and schedule concerns.
- **(FOUO)** USAFE/A7 management did not implement internal controls to obtain and review construction change orders prior to implementation. Specifically, personnel did not review and validate cost estimates or justifications for the aforementioned 427 construction change orders before implementation. (See Table 1, page 12)
- **(FOUO)** The LBB did not provide ABG Forms 5 to support construction change orders in a timely manner.
- **(FOUO)** Management did not establish procedures directing project managers to review and validate cost estimates.
- **(FOUO)** Neither LBB nor construction managers met with USAFE nor contractor personnel to discuss construction task sequencing as schedule changes occurred.

#### (FOUO) Impact.

• (FOUO) The KMCC project authorization was originally approved at \$115.3 million, plus €13.8 million (\$15.8 million) of Rhein-Main Transition Program (RMTP) funding provided by our German partners.<sup>7</sup> As of January 2006, the KMCC project authorization was increased to \$164.3 million (excluding RMTP funds). The resulting total cost,

<sup>&</sup>lt;sup>7</sup> (**FOUO**) The construction exchange rates for these funds ranged from 0.72 to 1.1916 (for each US dollar) due to the different submission dates of the DD Form 1391s, *Military Construction Project Data*.

including change orders, as of September 2006 was approximately \$168.4 million (€146.8 million). Further, if the current trend continues, audit estimates the project cost will increase by another \$17.4 million (€15 million) for a total of \$185.8 million (€162 million) over the remaining 35 percent of construction.

- **(FOUO)** Properly reviewing and validating cost estimates and justifications for change orders is necessary to ensure funds are available and to help prevent unneeded project changes.
- **(FOUO)** The KMCC project has missed its original beneficial occupancy dates (BODs) for the Visiting Quarters (VQ) and the KMCC Mall.<sup>8</sup> As of this date, the BODs are undeterminable. The cost to billet personnel off the installation each day the VQ BOD is delayed is approximately \$10,173, resulting in more than \$3.7 million per year.<sup>9</sup> Further, the US may be held financially liable for contractor delay claims resulting from improper scheduling.

**(FOUO) Management Corrective Actions.** USAFE/A7CCP implemented the following management corrective actions:

- **(FOUO)** Corrective Action C.3. On 30 October 2006, USAFE/A7CCP supplemented an existing process to track all change order amounts, descriptions, and costs to monitor trends in cost and schedule growth, by including a spreadsheet to track anticipated modifications.
- **(FOUO)** Corrective Action C.4. On 22 July 2006, USAFE/A7CCP obtained permission to hire a contractor claims analyst and established procedures for the claims analyst to

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<sup>&</sup>lt;sup>8</sup> (**FOUO**) The original pre-award/planned BOD for the VQ was 31 December 2005; The original pre-award/planned BOD for the Mall was 15 June 2006.

<sup>&</sup>lt;sup>9</sup> (FOUO) The Air Force incurs a cost to lodge official travel personnel at commercial operations off the installation, thereby, greatly increasing government travel costs. Local lodging rates range between €50 and €100 per night. Using the average of €75 Euro (or \$98.00 per night) off-base and the average on-base rate of \$42 we would save approximately \$56 per night for 182 rooms or \$10,173 per day if the VQ was open. These figures are based on the 435 SVS non-availability information for May through October 2006 and do not include additional transportation and incidental costs. In addition, this does not include lost revenues that could have been generated from billeting space available travelers.

document schedule delays and evaluate contractor delay claims. USAFE/A7CCP received funding to proceed with this hiring action on 22 November 2006.

- **(FOUO)** Corrective Action C.5. On 19 September 2006, USAFE/A7CCP established procedures for the claims analyst to use the schedule delay list to elevate contractor delay claim concerns to the LBB and refute invoices resulting from scheduling deficiencies.
- **(FOUO)** Corrective Action C.6. Project managers have been and will continue to review and validate cost estimates on all change orders processed on an ABG Form 5. For all future change orders, LBB will be providing pre-information (on a one-page form) on change orders for approval as directed by USAFE/A7 in a 2 November 2006 memorandum.

**(FOUO) Audit Comment.** A recommendation to require the USAFE Project Manager ensures design review comments are appropriately incorporated in future project designs and construction does not begin before design reviews are completed is addressed in Tab A.

#### (**FOUO**) **Recommendations.** The USAFE/A7 should:

- **(FOUO)** Recommendation C.4. Evaluate the risks of contracting by estimated quantities before agreeing to trade-wise agreements and accepting the resulting role of the GGCA to act as a general contractor without implied general contractor authority.
- **(FOUO)** Recommendation C.5. Ensure design contractors hired to perform construction management duties maintain a proper separation of duties that would result in an independent review of construction costs and schedule concerns.
- **(FOUO)** Recommendation C.6. Implement internal controls to review construction change orders prior to implementation.
- **(FOUO)** Recommendation C.7. Request the LBB and construction managers meet with USAFE or contractor personnel to ensure proper and effective construction task sequencing as schedule changes occur.

**(FOUO)** Management Comments. Although management concurred with the audit result and intent of the recommendations, additional comments to this result are provided in Appendix II. In response to the audit recommendations, management stated:

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- **(FOUO)** Recommendation C.4. "Concur. USAFE/A7CC carefully considers the risks of contracting by estimated quantities before agreeing to trade-wise agreements and accepting the resulting role of the GGCA to act as a general contractor without implied general contractor authority. USAFE regularly communicates in a variety of forums its policy against accepting use of trade contracts on any future project. Action completed: 16 January 2007. **(CLOSED)**
- (FOUO) Recommendation C.5. "Concur. USAFE/A7CC will enforce that LBB ensures design contractors hired to also perform construction management duties establish a proper separation of duties that would result in an independent review of construction costs and schedule concerns. We pay LBB a substantial amount of money to perform the construction management duties outlined in ABG-75. To the extent LBB hires contractors to perform oversight duties not specifically required of LBB, then we don't see that as improper. If we do see that such contractors are not properly performing their duties, or that a conflict of interest arises then we agree that the US should call those deficiencies to LBB's attention and demand corrective action as we did with the former construction manager for the KMCC project—resulting in their removal as construction manager by the LBB on 26 September 2006. Action completed: 26 September 2006. (CLOSED)
- **(FOUO)** Recommendation C.6. "Concur. USAFE/A7CC will maintain existing internal controls to obtain and review construction change orders prior to implementation. Again, the US cannot direct the contractors in any regard because the US contract is with the LBB, not the individual contractors. The record shows A7CC has since at least March 2006 regularly emphasized to LBB the criticality of processing modifications in a timely manner so we can review prior to implementation. Action completed: 19 October 2006. **(CLOSED)**
- **(FOUO)** Recommendation C.7. "Concur. We will request the LBB and construction managers meet with USAFE or contractor personnel to ensure proper and effective construction task sequencing as schedule changes occur. Action completed: 11 October 2006. **(CLOSED)**"

**(FOUO) Evaluation of Management Comments.** Although management concurred with the audit results and recommendations, they have not taken (or do not plan to take) action which we believe will correct the deficiencies; therefore, management comments to Recommendations C.1 and C.2 are partially responsive, and C.6 is non-responsive to the issues raised in the report. We

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will elevate the issues in disagreement to the appropriate Air Force level of command for resolution in accordance with AFI 65-301. Specifically:

- **(FOUO)** Recommendation C.1.
  - o **(FOUO)** Management Comments. "Concur with comment. We will continue to review and validate contractor invoices to ensure requested payments are valid, authorized, and within project scope in accordance with the ABG-75, VOB, US Code, and the Grassley Amendment to Public Law 103-335. When available, an approved ABG Form 5 will be the basis for verification. When an ABG Form 5 is not yet available, USAFE will require LBB to provide a full explanation of the change and why it was required, as outlined in USAFE/A7's 2 November 2006 memorandum to LBB, which was coordinated by the USAFE/JA staff."
  - o (FOUO) Audit Response. Audit contends that management's comments are partially responsive to the issue raised, and the action planned should correct part of the problem identified. Specifically, management agreed to review and validate contractor invoices to ensure requested payments are valid, authorized, and within project scope. However, management's policy to review and validate contractor invoices without an approved ABG Form 4 or ABG Form 5 based on LBB's written assurance is non-responsive to the audit recommendation. An approved obligating document is required, except in an emergency situation, in order to match an invoice disbursement with the obligation, as defined in the DoD Financial Management Regulation. Further, the US should not be held financially liable for change orders for which they did not give prior approval. Audit contends management should not make payments on invoices for which they cannot validate the invoice with an approved ABG Form 4 and/or 5 to confirm it is valid, authorized, and within project scope by in accordance with the ABG-75, VOB, and US Code.

#### • **(FOUO)** Recommendation C.2.

o **(FOUO)** Management Comments. "Concur. We will proceed with partial invoice payments for valid and authorized line items based on a thorough review of all invoiced line items with contracted quantities and with approved ABG Form 4 and ABG Form 5 modification documents. The only exception is the current backlog of change orders (549) identified prior to 2 November 2006. For these change orders, USAFE has agreed (with concurrence of the USAFE/JA staff) to process payment provided LBB certifies in writing that the work was 1) necessary, 2)

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properly performed, and 3) fairly and reasonably priced. As an additional measure, USAFE/A7CCP personnel require LBB provide a full explanation of invoiced changes not supported by an approved ABG 5 document."

(FOUO) Audit Response. Audit contends that management comments are partially responsive to the issue raised, and the action planned should correct part of the problem identified. Specifically, management agreed to review and validate invoice payments for valid and authorized line items based on a thorough review of all invoiced line items with contracted quantities and with approved ABG Form 4 and ABG Form 5 modification documents. However, the ABG Form 5, Change Order Document, is required in order to match an invoice disbursement with the obligation, as defined in the DoD Financial Management Regulation. In addition, the ABG-75, Part II, Section A, Article 4, paragraph 2.2 of the Implementing Instructions states, "The realization of changes under 2.1 always require a change request (ABG Form 5 Part I or 5 A) and an order of the US Forces by use of ABG Form 5 Part II." Further, the US should not be held financially liable for change orders for which they did not approve prior to the contractor performing the work. Audit contends management should not make payments on invoices for which they cannot validate the invoice with an approved ABG Form 4 and/or 5 to confirm it is valid, authorized, and within project scope by in accordance with the ABG-75, VOB, and US Code. This includes partial invoice payments. If management continues to make payments without proper invoice validation with the modification document as they propose in their alternative action to request LBB make a "full explanation" of the change order requirements as opposed to validating them with approved ABG Form 4s and/or ABG 5s, they may be in violation of the ABG-75, VOB, and US Code, and may be held pecuniarily liable. As a result, audit concludes management agreed with our audit results but proposed alternative corrective actions that we find non-responsive and will not correct issues identified.

#### • **(FOUO)** Recommendation C.6.

O (FOUO) Management Comments. "Concur. USAFE/A7CC will maintain existing internal controls to obtain and review construction change orders prior to implementation. Again, the US cannot direct the contractors in any regard because the US contract is with the LBB, not the individual contractors. The record shows A7CC has since at least March 2006 regularly emphasized to LBB the criticality of processing modifications in a timely manner so we can review prior to implementation."

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o (FOUO) Audit Response. Audit contends that management comments are non-responsive to the issues raised in the report, and management does not plan to take action to correct the problems noted. Audit determined personnel did not review and validate cost estimates or justifications for the aforementioned 427 construction change orders. (See Table 1, page 12) Further, the LBB did not provide ABG Forms 5 to support construction change orders in a timely manner. Thus, audit disagrees that existing internal controls to obtain and review construction change orders prior to change order implementation were effectively implemented prior to the audit. Further, USAFE did not provide any evidence to validate their statement that adequate internal controls over construction change orders were in place since the project start.

#### **BACKGROUND**

The contractor submits their accounting documents and quantity determinations to the GGCA (LBB) and the construction manager for review. The LBB's contracted construction management personnel review the documentation and assign an apportionment cost to the applicable users. Personnel forward this documentation to the GGCA for preparation of the ABG Form 8, Construction Costs, to invoice for construction completed. Construction management personnel review the ABG Form 8 and invoice prior to returning it to the GGCA. The GGCA submits invoices and apportionment costs directly to USAFE/A7. The civil engineer is required to validate each invoice, certify it for payment, and deliver it to the user designated in the Military Interdepartmental Purchase Request (MIPR) or funding agreement. Payments should be made within 30 days; however, ABG-75 payments are not subject to the Prompt Payment Act and, therefore, do not accrue automatic interest penalties. Payments for goods or services not received, excessive quantities of labor or material, or for construction work completed as a result of a construction change order but not approved by the Air Force are considered improper payments. The US government must request reimbursement of overpayments to the LBB because there is no contract between the US government and the contractors hired by the LBB. Prior to payment of the final invoice, the LBB should adequately adjust the next cumulative invoice from the contractor for overpayments substantiated to the LBB in accordance with the VOB. Once the final invoice has been paid, the LBB must file a claim with the contractor for any substantiated overpayment.

The ABG-75 Part II, Article 4, paragraph 4.4 states, "Measures changing or affecting the scope, quality or cost of construction works from that specified by the Forces shall require the prior consent of the Forces." Article 12, paragraph 12.3 of the ABG-75 states, "The contract amounts (Article 7.1.6) may not be committed or exceeded unless written approval of the Forces has been obtained." The "contract amounts" within the meaning of Article 12.3 and the "amounts approved" within the meaning of Article 12.5 are those amounts which the US Forces confirmed as established on Part II of ABG Forms 4/5." Paragraph 12.5 states "Any costs in excess of the amount approved by the Forces (Article 12.3) will not be borne by them unless their prior approval for these additional funds has been obtained."

The 31 United States Code Section 3528, *Responsibilities and Relief from Liability of Certifying Officials*, states an official certifying a voucher is responsible for: (1) information stated in the certificate, voucher, and supporting records; (2) the computation of a certified voucher under this section and Section 3325 of this title; (3) the legality of a proposed payment under the appropriation or fund involved; and (4) repaying a payment that is determined illegal, improper, or incorrect because of an inaccurate or misleading certificate, prohibited by law, or that does not

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represent a legal obligation under the appropriation or fund involved. Further, Section 8137 of Public Law 103-335 requires the Secretary of Defense to match disbursements to specific obligations prior to disbursement.

German contract law (VOB), Part B, §2, paragraph 6(1) states, "If the contractor is called upon to undertake work not provided for in the original contract, then he shall be entitled to receive special remuneration for it. He is, however, required to notify the client of his claim before proceeding to execute the work." Further, Part B, §2, paragraph 6(2) states, "Whenever possible, the sum due shall be agreed before execution of the work." Paragraph 8(1) states, "Work executed by the contractor without instructions to do so, or as an unauthorized departure from the provisions of the contract, will not be remunerated." Further, Part B, §2, paragraph 8(2) states, "However, the contractor is entitled to receive remuneration for such work if the client subsequently accepts it. He is also entitled to remuneration if the work was necessary for completion of the contract, might be deemed to comply with the presumed intention of the client, and if the latter was given notice of it without delay."

#### (FOUO) AUDIT RESULTS 6 – IMPROPER PAYMENTS

**(FOUO) Condition.** USAFE personnel did not properly monitor and approve contractor payments. Specifically, KMCC contractors improperly billed the US (who paid) for materials in excess of approved contract quantities. During the audit, the quality assurance evaluators conducted a review of three previously approved invoices and identified quantity overruns of €5,913,588.<sup>10</sup>

(FOUO) Cause. This condition occurred because:

- **(FOUO)** USAFE/A7CCP management indicated that although they did not feel the payments were improper, these partial payments were made under intense pressure from the German contracting agency (LBB). For example, the LBB frequently discussed the possibility of the contractor walking off of the job unless the partial payments were made.
- **(FOUO)** Construction managers did not properly validate contractor invoices with contract and change order specifications and actual contractor work completed before forwarding the invoices to USAFE personnel for payment.

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<sup>&</sup>lt;sup>10</sup> (**FOUO**) USAFE did not receive change order documentation for €3,172,625 (52 percent) of these payments.

- **(FOUO)** In addition, USAFE PMO personnel did not implement established invoice review procedures to validate contractor invoices with contract and change order specifications and actual contractor work completed prior to authorizing payment.
- (FOUO) USAFE/A7 also did not properly appoint certifying and accountable officials.

**(FOUO) Impact.** As a result, USAFE personnel improperly paid KMCC contractors over €5.9 million (\$6.7 million) for 248 contract line items on 3 invoices. If personnel do not properly monitor and approve contractor invoices through comparisons with modification documents to ensure requested payments are valid, authorized, and within project scope, they may be in violation of the ABG-75 agreement, German contract law (VOB), and Section 8137 of Public Law 103-335 and could be held pecuniarily liable for improper payments made.

**(FOUO) Audit Comment.** Partial payments are appropriate if they can be supported by a valid obligating document. We did not claim a potential monetary benefit for the quantity overruns because the LBB is in the process of preparing obligation documentation for the identified quantity overruns. The issue of improper payments has been coordinated with the Air Force Office of Special Investigations.

**(FOUO) Management Corrective Actions.** USAFE/A7CCP implemented the following corrective action:

- **(FOUO)** Corrective Action D.1. During the audit, the project management personnel noted inadequacies with the LBB invoice review process. As a result, USAFE/A7CCP implemented significant changes to the invoice review process. Process changes include identifying to the LBB invoices submitted: 1) without approved change orders, 2) which include quantities in excess of contracted amounts, and 3) which request payment for work not yet accomplished.
- **(FOUO)** Corrective Action D.2. On 17 May 2007 USAFE/A7C appointed accountable officials for contractor invoices associated with this construction project. The appointment letters notify the individuals of pecuniary liability for illegal, improper, or incorrect payments that may result from the negligent performance of duties. In addition, the appointment letters include references to required training materials and related official guidance. Finally, the individuals were required to sign DD Forms 577, *Appointment/Termination Record*.

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#### **(FOUO) Recommendations.** USAFE/A7 should:

- **(FOUO)** Recommendation D.1. Request the LBB review construction managers' contractor invoice validations to verify invoices are properly validated with contract and change order specifications and contractor work.
- **(FOUO)** Recommendation D.2. Implement established invoice review procedures to ensure invoices are validated with contract and change order specifications, and that work is completed prior to payment.

**(FOUO) Management Comments.** Management concurred with the audit result and recommendations. Additional comments to this result are provided in Appendix II.

- **(FOUO)** Recommendation D.1. "Concur. Since 13 November 2006, LBB had agreed to review construction managers' contractor invoice validation to ensure invoices are properly validated with contract and change order specifications and contractor work. USAFE has LBB provide invoices accompanied with statements signed by both the senior project manager and project engineer certifying each invoice has been reviewed for accuracy that the work was 1) necessary, 2) properly performed, and 3) fairly and reasonably priced. Action completed: 13 November 2006. **(CLOSED)**
- (**FOUO**) Recommendation D.2. "Concur. Since the beginning of the project, USAFE/A7CCP personnel established procedures for invoice review. This review was accomplished concurrent with invoice processing, and if discrepancies were found, they could be adjusted prior to LBB issuing payment to the contractor. However, once we deemed these procedures insufficient in July 2006, we added a validation for change orders to ensure USAFE has approved all invoice change orders. Should the invoice include one of the 549 backlogged change orders without an approved ABG Form 5, USAFE/A7CCP personnel require LBB to provide a full explanation of the changes being invoiced. Since September 2006, invoice review is now accomplished prior to USAFE processing invoices for payment. If errors are suspected, USAFE/A7CCP demands a full explanation of the discrepancy prior to payment. If there is no resolution, USAFE/A7CCP downward adjusts the current partial invoice by the appropriate amount. In September/October 2006, the Project Management Office performed a lineby-line review of the invoices identified in the audit condition. As a result, we were able to validate that all items were completed and necessary for the project. Action completed: 5 October 2006. (CLOSED)"

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(**FOUO**) **Evaluation of Management Comments.** Management concurred with the audit results and recommendations. However, they have not taken (or do not plan to take) action which we believe will correct the deficiencies noted in recommendations. Therefore, management comments to recommendations are non-responsive to the issues raised in the report. We will elevate the issues in disagreement to the appropriate Air Force level of command for resolution in accordance with AFI 65-301. Specifically:

#### • **(FOUO)** Recommendation D.1

- o **(FOUO)** Management Comments. "Concur. Since 13 November 2006, LBB had agreed to review construction managers' contractor invoice validation to ensure invoices are properly validated with contract and change order specifications and contractor work. USAFE has LBB provide invoices accompanied with statements signed by both the senior project manager and project engineer certifying each invoice has been reviewed for accuracy that the work was 1) necessary, 2) properly performed, and 3) fairly and reasonably priced."
- O (FOUO) Audit Response. Audit contends that although management concurred with our audit results and recommendation, they do not plan to take action which we believe will correct the deficiency; therefore, the management comments are not responsive to the issues raised in the report. Specifically, proper invoice validation includes verifying the invoice against an approved obligation document in addition to reviewing the steps that USAFE has required of LBB. Except in limited situations, an obligation document will be approved prior to the work being accomplished. Upon review of management's response, audit concludes management agreed with our audit results, but we find the proposed alternative actions non-responsive to the issue identified as actions planned will not correct issues identified.

#### • **(FOUO)** Recommendation D.2.

O (FOUO) Management Comments. "Concur. Since the beginning of the project, USAFE/A7CCP personnel have been checking LBB validated/certified invoices to verify work was accomplished according to contract price and quantity. As of July 2006, we have added a validation for change orders to ensure USAFE has approved all invoice change orders. Should the invoice include one of the 549 backlogged change orders without an approved ABG Form 5, USAFE/A7CCP personnel require LBB to provide a full explanation of the changes being invoiced. Since September 2006, invoice review is now accomplished prior to USAFE processing invoices for

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payment. If errors are suspected, USAFE/A7CCP demands a full explanation of the discrepancy prior to payment. If there is no resolution, USAFE/A7CCP downward adjusts the current partial invoice by the appropriate amount. The Project Management Office performed a line-by-line review of the invoices referenced in the audit condition. As a result, we were able to validate that all items were completed and necessary for the project."

(FOUO) Audit Response. Audit contends that although management concurred with our audit results and recommendation, they do not plan to take action which we believe will correct the deficiency; therefore, the management comments are not responsive to the issues raised in the report. Specifically, USAFE/A7CCP personnel have not been properly reviewing LBB validated/certified invoices to verify work was accomplished according to contract price and quantity "since the beginning of the project" per their statement. Specifically, during the audit the auditor obtained modifications, invoices, and invoice validations from Program Management Office personnel. At the request of the auditor, the quality assurance evaluators applied the new invoice review process (established in September 2006) to previously approved invoices in order to quantify the magnitude of the problem. The quality assurance evaluators compared the quantities and services received with the items billed. The auditor then compared the paid invoices and the associated modification documents to the quality assurance evaluator's assessment to determine if invoice payments exceeded the amounts approved in the modification. The auditor then calculated the difference between the invoices paid and the validated amounts. The improper payments occurred because construction managers did not properly validate contractor invoices with contract and modification specifications and actual contractor work completed prior to authorizing payment. In addition, if management continues to make payments without proper invoice validation with the modification document, as they propose in their alternative action to request LBB make a "full explanation" of the change order requirements as opposed to validating them with approved ABG Form 4s and/or ABG Form 5s, they may be in violation of the ABG-75, VOB, and US Code and may be held pecuniarily liable. As a result, audit concludes management agreed with our audit results, but we find the proposed alternative actions non-responsive to the issue identified as actions planned will not correct issues identified.

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#### **BACKGROUND**

The Architect-Engineer (A-E) contractor is responsible for the professional quality, technical accuracy, and coordination of all services required under their contracts. Typical examples of Architect-Engineer (A-E) liability are an A-E design error or deficiency, or modification of an ongoing construction contract required due to a design-related failure after construction requiring rework. An A-E firm may also be liable for Government damages arising from failure to design within the funding limitations or to comply with the contract schedule or technical provisions. In all such instances, the contracting agent should consider the extent to which the architectengineer contractor may be reasonably liable and enforce the liability and collect the amount due, if the recoverable cost will exceed the administrative cost involved or is otherwise in the Government's interest. The Government is entitled to seek recovery of damages resulting from any type of negligence, non-performance, or breach of contract terms. It is not necessary that the deficiency be corrected for the Government to recover damages. It is only necessary to show that the Government has incurred damages, or will in the future. The US government must submit an assessment of identified A-E liability issues to the LBB because there is no contract between the US government and the contractors hired by the LBB. The LBB may then request recoupment from the design contractor for substantiated instances of A-E design error or deficiencies.

#### (FOUO) AUDIT RESULTS 7 – ARCHITECT-ENGINEER LIABILITY

**(FOUO) Condition.** USAFE project management personnel did not assess and pursue A-E contractor liability. Specifically, USAFE did not request the LBB assess liability for 21 deficiencies confirmed by an independent expert as design errors which could have been prevented. (See Table 2)

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Modification Number	Reason	Expert Assessment of Cause	Cost
TYMINOT	Subframe mounted to accommodate glass	Should have been coordinated and	0000
3	on main steel beams.	resolved per the original design.	<b>€</b> 59,224
N/A <sup>11</sup>	Subframe mounted to accommodate glass on main steel beams.	Should have been coordinated and resolved per the original design.	100,051
45	Concrete slab grinded down for cable ducts.	Lack of coordination of design requirements with contractors.	148,736
47	Enlarging escalator pit.	Escalator designed at too steep of an angle.	66,301
52	Increasing height of door opening.	Door installation schedule not properly coordinated with other design drawings and schedule.	15,000
28	Damaged conduit in concrete columns.	Requirements not identified in design; lack of proper coordination between construction management team.	10,000
N/A	Core drillings into concrete floor slab.	Lack of coordination between the A-E and mechanical, engineering, and plumbing (MEP) contractor consultants.	140,000
N/A	Core drillings into masonry wall.	Lack of coordination between the A-E and MEP contractor consultants.	5,000
N/A	Core drillings into concrete floor slab.	Lack of coordination between the A-E and MEP contractor consultants.	5,000
N/A	Core drillings into concrete floor slab.	Lack of coordination between the A-E and MEP contractor consultants.	7,500
	Concrete slab grinded to allow room for channels for electrical lines.	Lack of coordination between the A-E and MEP contractor	
N/A		consultants.	40,000
N/A	Rework of light openings in ceiling.	Wrong dimensions in design for lighting cut outs.	10,000

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 $<sup>^{11}</sup>$  (FOUO) This amount is an estimate for the remaining rework required as a result of the design error listed above; therefore, it is not counted as a separate design error.

	Brick wall above doors removed.	Lack of coordination between the A-E and MEP contractor	
N/A		consultants.	8,640
	Excessive core drillings and saw cuttings	Lack of coordination between the	- 7
	required.	A-E and MEP contractor	
N/A		consultants.	27,500
	Two sets of parapet walls cut away to	Lack of coordination between the	
27/1	allow for rainwater runoff.	A-E and MEP contractor	
N/A	****	consultants.	5,000
	Wall detail incomplete causing problems	Incomplete design and tardiness of	
N/A	for ceiling contractor.	completed design.	15,000
	Large number of installed doors cut out of	Door installation schedule not	
	wall opening and reinstalled at correct	properly coordinated with other	
	height; door jam rust proofing damaged	design drawings and schedule.	
N/A	as a result.		10,000
	Numerous door openings appear to have	Door installation schedule not	
	been reworked.	properly coordinated with other	
N/A		design drawings and schedule.	Unknown
	Escalator opening too small.	Escalator technical requirements	
		not properly incorporated into the	
N/A		design.	Unknown
N/A	Wrong screed epoxy resin on floors.	Lack of coordination of design	200,000
IN/A	Expansion joint for the floor finishes.	requirements with contractors.  Lack of coordination of design	200,000
N/A	Expansion joint for the floor finishes.	requirements with contractors.	80,000
- "	Additional steel support required for	HVAC technical requirements	
	excessive HVAC equipment.	not properly incorporated into	
N/A		design.	Unknown
		Total Cost of Design Errors	€952,954
			\$1,093,038

(FOUO) Table 2. Design Deficiencies.

(FOUO) Cause. This condition occurred because:

- **(FOUO)** USAFE/A7CCP personnel did not establish A-E liability assessment policy and procedures, provide training, implement detection controls, or provide management oversight required to identify design errors and report them to the LBB.
- **(FOUO)** A-E contractors were also selected as construction managers and, therefore, not independent.

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# (FOUO) Impact.

- **(FOUO)** Because USAFE did not request the LBB properly assess A-E liability, they may not be able to dispute the quality of A-E services and products. Further, USAFE cannot verify investigations and recovery actions will be pursued in a cost-effective and timely manner to mitigate damages, minimize administrative costs, strengthen the likelihood for full recovery, and allow the reuse of project funds.
- **(FOUO)** Design deficiencies discovered during the construction of the KMCC contributed to contract change orders for which we conservatively estimate USAFE may be billed at least ⊕52,954 (\$1.1 million).¹² Request for recoupment of identified funds due to A-E design errors or performance deficiencies will provide the Air Force a one-time potential monetary benefit of at least ⊕52,954 (\$1.1 million) by reducing current funded contract requirement.

**(FOUO) Management Corrective Actions.** USAFE/A7CCP implemented the following corrective actions:

- **(FOUO)** Corrective Action E.1. Project management personnel in USAFE/A7CCP implemented an internal version of the proposed ABG Form 5B document to track future change orders. The US Army Corps of Engineers proposed ABG Form 5B is currently pending review at the Construction Working Group.
- **(FOUO)** Corrective Action E.2. On 26 September 2006, the LBB removed the construction agent from the KMCC construction management position for lack of performance of construction management.
- **(FOUO)** Corrective Action E.3. On 12 October 2006, the USAFE/CV met with Rhineland-Palatinate State Secretary Messal and other senior GBB/LBB officials to address ways to expedite processing of late contractor invoices. As a result of these discussions, GBB has provided the US written assurance that US acceptance of invoiced amounts in no way constitutes US approval of individual change orders. The GBB further assured exceptional measures from the US to process several invoices, which had

<sup>&</sup>lt;sup>12</sup> (FOUO) USAFE received five change orders to correct design deficiencies (totaling €386,682 [\$515,331]) and audit obtained cost estimates for the 16 remaining deficiencies without modification documents (totaling €566,272 [\$754,671]).

been waiting clarification or additional information related to pending change orders or exceedance of line item quantities could be later pursued for assessment of A-E liability if required.

- **(FOUO)** Corrective Action E.4. On 28 November 2006, USAFE/A7CCP formalized a policy and procedures to notify the construction manager and LBB of potential A-E liability.
- (FOUO) Corrective Action E.5. On 22 November 2006, USAFE received funding to hire a construction claims analyst to review, notify, and request LBB assessment of potential A-E liability concerns. The construction claims analyst computed the initial estimate of damages for A-E errors or omission at €2,892,500 (approximately \$3.9 million). Personnel are pursing recovery of the damages, and these funds will be used to reduce future obligations on this project.
- **(FOUO) Audit Comment.** Based on management's response to Recommendation C.5 to ensure design contractors hired to perform construction management duties maintain a proper separation of duties that would result in an independent review of construction costs and schedule concerns, we do need a recommendation addressing the second cause of this audit result.
- **(FOUO) Recommendation E.1.** USAFE/A7 should implement established internal controls over invoice processing to detect and report mischarging for change orders. Specifically, require personnel to validate invoices prior to payment.
- (FOUO) Management Comments. Although management concurred with the audit result and recommendation, additional comments to this result are provided in Appendix II. In response to the audit recommendation, management stated, "Concur. Internal controls have been in effect since at least 6 September 2006 to review invoice processing to detect and report mischarging for user-initiated (and constructive) change orders. Personnel are required to validate all invoices prior to payment. Action completed: 6 September 2006. (CLOSED)"
- **(FOUO) Evaluation of Management Comments.** Management comments addressed the issues presented in the tab and actions taken or planned should correct the problem.

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# (FOUO) AUDIT SCOPE

**(FOUO) Audit Coverage.** To evaluate the management of construction funds, we reviewed transactions and documentation dated between 12 August 1991 and 17 May 2007. We performed this audit from 13 June 2006 to 27 October 2006 and provided the draft report to management on 7 December 2006.

- **(FOUO)** To determine whether personnel performed project planning and construction design to meet contract requirements, we:
  - o **(FOUO)** Interviewed the ABG-75 specialist to determine if USAFE prepares the ABG Form 1 project planning document and whether that document is provided to LBB as specified in the ABG-75.
  - o (FOUO) Searched the KMCC and other Ramstein and Spangdahlem AB project files for a copy of an ABG Form 1 listing the project as planned.
  - o **(FOUO)** Reviewed all contract files for evidence of planning, predesign meetings, and use of project planning tools. Specifically, we obtained and reviewed the draft version of the Project Management Plan. We also obtained and reviewed DD Forms 448, *Military Interdepartmental Purchase Requests*, identifying additional project costs, evidence of the 35 percent design review, the request for the 65 percent design review, the Requirements Document, LBB's suggestion to remove the 65 percent design review on 22 May 2003 to discuss the project time schedule, the LBB's official statement of 65 percent design review removal on 10 June 2003, a confirmation of the LBB's official statement of 65 percent design review removal in meeting minutes from the 10 June 2003 meeting, evidence of the 95 percent review, and the resulting 100 percent design review. In addition, the auditor reviewed meeting minutes from the predesign conference.
- **(FOUO)** To determine whether personnel performed pre-solicitation reviews and ensured proper solicitation and award of MILCON contracts, we:
  - o **(FOUO)** Interviewed KMCC project personnel, including USAFE, US Army Corps of Engineers (USACE), LBB, and other related personnel, to determine whether personnel conducted appropriate market research prior to starting KMCC construction. We performed a review of LBB price estimates, price lists, historical average lists, and methods to estimate costs of materials and services without

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performing market research. In addition, we interviewed personnel to determine whether USAFE conducted market research before soliciting offers for acquisitions that led to a consolidation of contract requirements.

- o (FOUO) Determined if personnel provided accurate independent US Government estimates of the cost of architect-engineer services to the contracting agent by obtained and reviewed supporting documentation. We interviewed LBB and USAFE personnel to determine the cost estimation process prior to contract bid. We also requested personnel provide cost estimates from USACE or USAFE that provide evidence of the cost for USACE services on the KMCC.
- O (FOUO) Interviewed USAFE, USACE, and LBB personnel to determine whether construction agents participated in the construction contract negotiations and whether agreements covered all elements necessary for the construction required by laws, regulations, and customs of the United States and German government. We further obtained and reviewed supporting documents.
- o **(FOUO)** Reviewed hard copy ABG Form 4 documents including contract specifications and supporting information.
- (FOUO) Discussed with LBB personnel the contracting process and whether statements of work were required by German contract law. We reviewed appropriate regulations and obtained and reviewed the original KMCC design requirements document.
- (FOUO) Interviewed USAFE and LBB personnel to determine if project oversight of
  presolicitation procedures ensured contracting documents included a request for
  proposal and reviewed hard copy proposal sheets.
- o (FOUO) Interviewed USAFE and LBB personnel to identify and document the prequalification process, reviewed prequalification documents on file at the LBB, reviewed appropriate regulations, interviewed USAFE and LBB personnel to determine the documentation prepared, obtained, and maintained to document contractor qualifications, and determined the LBB does not maintain documentation to validate whether they comply with the requirement to obtain, review, and prequalify contractors based on the VOB.

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- O (FOUO) Interviewed personnel to determine how the contracting agent determined the contractor was capable of performing all contracted items since the LBB could not provide preaward surveys or other documentation for audit's review and reviewed appropriate regulations and supporting documentation. In addition, we interviewed USAFE and LBB personnel to determine if construction contracts of \$1,000,000 or more awarded to large business firms had approved subcontracting plans prior to award of a contract.
- o **(FOUO)** Interviewed USAFE and LBB personnel to determine if contracts were properly solicited by using a bid schedule and to determine how the low bidder was evaluated and/or selected.
- o **(FOUO)** Reviewed the ABG Form 3 document presented by USAFE and DD Forms 1391 to determine the original cost estimate and the amount underestimated and reviewed the exchange rate.
- o (FOUO) Interviewed USAFE and LBB personnel to determine the current subcontracting practices and obtained supporting evidence of subcontracting significant portions of construction work. In addition, we reviewed ABG 4 contract documents and supporting specifications to determine whether contracts limited contractors to a percentage of subcontracting. We interviewed LBB personnel to determine why percentages of subcontracting limitations were not expressed in ABG Form 4 documents.
- o **(FOUO)** We obtained a list of subcontractors, interviewed USAFE and LBB personnel to determine why subcontracting plans were not provided to USAFE. We reviewed supporting documents and regulations. We interviewed USAFE and LBB personnel to determine the impact of using trade-wise agreements without ensuring liquidated damages assessment clauses were included in the contracts.
- o **(FOUO)** Identified and reviewed 32 contracts in place as of 20 September 2006. We documented the total cost of the 32 contracts issued (€110,975,898) (\$130,100,701) and noted the contract award dates. We then interviewed LBB and USAFE personnel to confirm the number of KMCC contracts.
- **(FOUO)** To determine whether personnel effectively monitored, documented, recorded, and reported construction contract changes to limit cost and time growth, we:

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- o **(FOUO)** Determined the total number of project change orders to date (as of 20 September 2006) by obtaining the user-initiated change order register and documentation to support all change orders on hand with the LBB and USAFE. We reviewed each description and determined whether it was sufficient to determine the reason for the change.
- o **(FOUO)** Obtained a flowchart of the modification review process and interviewed personnel to determine whether the established process was effectively implemented. We interviewed KMCC personnel to determine if personnel reviewed change orders prior to implementation.
- (FOUO) Obtained and reviewed project folders for 100 percent of KMCC change orders and determined whether the executed change orders exceeded the Congressional 25 percent cost-growth limitation.<sup>13</sup>
- o **(FOUO)** Reviewed supporting documentation for each project change order and determined whether project change orders reason codes were consistent with supporting documentation.
- o **(FOUO)** Reviewed logs, notes, pictures, and memos on file and determined whether personnel conducted site visits and maintained adequate documentation.
- o **(FOUO)** Interviewed personnel to determine if USAFE Civil Engineer management provided adequate management oversight on MILCON projects that required subsequent change orders. In addition, we interviewed personnel to determine how USAFE maintains visibility over project change orders to include change orders initiated by the construction agent and what local procedures and management reviews existed.
- o **(FOUO)** Interviewed personnel to determine if a construction schedule was prepared and obtained and reviewed copies of the KMCC construction schedules. We reviewed project change orders and noted those causing schedule growth.
- o **(FOUO)** Interviewed personnel and reviewed documentation on hand to determine whether USAFE established procedures directing project managers to review and

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<sup>13 (</sup>FOUO) Cost growth exceeding 25 percent requires Congressional reporting.

validate cost estimates. We reviewed the requirements document, dated 10 May 2003, for the original design requirements and the current list of user-initiated change orders. In addition, we attended the KMCC Financial Working Group and construction working group meetings at the KMCC construction site.

- **(FOUO)** To determine if personnel properly monitored and approved contractor payments, we:
  - o (FOUO) Interviewed USAFE and LBB personnel to determine whether there was evidence of improper payments. We interviewed personnel to identify local procedures and management reviews, obtained invoices, viewed contract specification folders in the on-site project management office, and compared invoices to modification documents, contract specifications, and any other supporting documentation. We calculated the difference between payments and amounts approved by contracted quality assurance evaluators.
  - o (FOUO) Interviewed USAFE and LBB personnel to determine if they were aware of contractors billing for services they were not contracted to provide. We then compared modification documents to contracts to identify any services or materials that do not appear to be related to the completion of the contracted requirements and discussed discrepancies with the project manager. We interviewed USAFE and LBB personnel to determine if personnel established appropriate controls to detect and report mischarging for user-initiated change orders.
- **(FOUO)** To determine if USAFE personnel assessed and pursued architect-engineer (A-E) liability, we:
  - o (FOUO) Interviewed LBB personnel to determine if they require the architect-engineer contractor to design the project so that construction costs will not exceed a contractually specified dollar limit. We determined LBB actions if the price of construction proposed in response to an LBB solicitation exceeded the construction funding limitation in the architect-engineer contract. Further, we determined if policies and procedures were established requiring USAFE or LBB personnel to conduct A-E liability reviews.
  - o **(FOUO)** Interviewed USAFE and LBB personnel to determine whether LBB awarded contracts for A-E services in addition to construction services. We further interviewed USAFE and LBB personnel to determine if A-E firms were properly

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selected for A-E contracts. We then reviewed LBB documents to confirm that the LBB evaluates A-E firms' (1) professional qualifications necessary for satisfactory performance of required services; (2) specialized experience and technical competence in the type of work required, including, experience in energy conservation, pollution prevention, waste reduction, and the use of recovered materials; (3) capacity to accomplish the work in the required time; (4) past performance on contracts with Government agencies and private industry in terms of cost control, quality of work, and compliance with performance schedules; (5) location in the general geographical area of the project and knowledge of the locality of the project; provided, that application of this criterion leaves an appropriate number of qualified firms, given the nature and size of the project; and (6) acceptability under other appropriate evaluation criteria.

- o (FOUO) Interviewed USAFE and LBB personnel and reviewed hard copy documents to determine if design competition was used in the KMCC project. We further reviewed A-E contractor statements of work, interviewed USAFE and LBB personnel to determine if selection authorities held discussions with at least three of the most highly qualified firms regarding concepts and discussed the relative utility of alternative methods and feasible ways to prescribe the use of recovered materials and achieve waste reduction and energy efficiency in facility design, and determined through discussions with USAFE and LBB personnel who was responsible for selecting A-E firms and whether this person reviewed DD Forms 2631 or SF Forms 1421, Performance Evaluations (Architect-Engineer), to evaluate past performance of the contractor performance.
- o (FOUO) Interviewed USAFE and LBB personnel to determine the justification for selecting the specific A-E firms, interviewed USAFE and LBB personnel to determine whether there appeared to be undue influence exercised during A-E firm selection, and requested documentation to substantiate concerns with chosen A-E firms.
- o **(FOUO)** Interviewed personnel to determine whether an independent Government estimate of the cost of A-E services was prepared and furnished to the contracting agent (the LBB) before commencing negotiations for each proposed contract or contract change order expected to exceed \$100,000 and obtained and reviewed cost estimates on user-initiated change orders.

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- o **(FOUO)** Reviewed ABG Form 4 documents and contract specifications to determine if evidence is present to confirm a contractual release from A-E liability.
- o **(FOUO)** Interviewed USAFE and LBB personnel to determine whether personnel established appropriate controls to detect and report design deficiencies, were trained to identify design deficiencies, provided appropriate oversight of A-E design and contracting procedures to prevent unnecessary design deficiencies, were trained to review change orders to identify and report potential A-E liability, and provided appropriate oversight of A-E design liability procedures. We also discussed whether controls were in place to prevent contract agents and construction agents from conspiring to add change orders to increase costs above the contracted amount.
- o **(FOUO)** Interviewed USAFE and LBB personnel to determine whether policies and procedures are in place to require personnel to hold A-E contractors responsible for the professional quality, technical accuracy, and coordination of all services required under their contracts. In addition, we performed escorted walk-through of the KMCC and obtained specific evidence of design errors presented in discrepancy reports.
- o (FOUO) Obtained construction designs, specifications, and additional supporting evidence for design deficiencies identified; consulted a subject-matter expert to review the designs, specifications, and supporting documentation to validate which change orders were, in fact, design deficiencies; determined the number and type of design flaws; determined if design flaws could have been avoided; determined if design errors had modification documents; documented the cost of the change orders associated with the design; and obtained two estimates of potential rework costs for design errors without modification documents. We determined the most conservative cost estimate based on the contractor estimates provided and summed the estimated costs for design deficiencies.
- o **(FOUO)** Interviewed personnel to determine why A-E liabilities were not properly assessed and obtained and reviewed supporting documents.
- **(FOUO)** We reviewed German contract law (VOB), the Auftragsbaugrundsaetze 1975 (ABG-75), and other supporting laws and regulations as required.

**(FOUO) Sampling Methodology.** We used judgmental samples and computer-assisted auditing tools and techniques (CAATTs) to analyze data in this audit.

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- **(FOUO)** <u>Sampling</u>. We obtained the ACES-PM (Automated Civil Engineering System—Project Module) Weekly Status Reports-Construction as of 16 May 2006 to determine the number of open USAFE MILCON projects. We then judgmentally selected the KMCC construction project for detailed review.
- (FOUO) <u>CAATTs</u>. We used CAATTs to perform analysis of MILCON project data. We obtained reports from the ACES-PM, Commanders Resource Integration System (CRIS), the General Accounting & Finance System (GAFS), the Corps of Engineers Financial Management System (CEFMS), the Corps of Engineers Project Management Information System (PROMIS), the Corps of Engineers Programs and Projects Delivery System (PPDS), and the Corps of Engineers Resource Management System (RMS). We then sorted, filtered, queried, subtotaled, and compared the data as necessary to determine the magnitude and history of project authorizations, obligations, unpaid obligations, commitments, firm and pending change orders, construction status, and invoices.

(FOUO) Data Reliability. We relied on information from ACES-PM, CRIS, GAFS, CEFMS, PROMIS, PPDS, and the RMS for our audit conclusions. We did not evaluate the systems' general and application controls. However, we established the data's reliability by comparing data from ACES-PM, to CRIS, US Army Corps of Engineers, and USAFE reports. We then further compared these reports with construction contracts, change orders, invoices, and other available manual records. Through these reviews and discussions with responsible personnel, we concluded the data were reliable to support audit conclusions and recommendations.

**(FOUO) Auditing Standards.** We conducted this audit in accordance with generally accepted government auditing standards and, accordingly, included tests of user-initiated controls related to construction and funds management.

**(FOUO) Discussion with Responsible Officials.** We discussed/coordinated this report with the USAFE Director, Mission Support; USAFE Civil Engineer; USAFE Civil Engineer Chief, Program Management; and other interested officials. We received management's formal comments on 16 January 2007 and worked with management to get additional comments that were provided on 8 June 2007.

#### PRIOR AUDIT COVERAGE

Our review of audit files and contact with the audit focal point disclosed no air force audit agency; inspector general, department of defense; US Government Accountability Office; or

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public accountant audit reports were issued to USAFE within the last 5 years related to our audit objectives.

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COMMENT	RESPONSE
LOCATION	
Executive Summary, Objectives, Bullet 5	<b>(FOUO) USAFE/JAI:</b> Assessment and pursuance of A-E (and contractor) liability may be requested by US personnel, but nevertheless is the responsibility of LBB, Article 7.1.9.3 ABG-75.
	(FOUO) AFAA: In our opinion, USAFE/A7 should make an initial assessment of whether a change order resulted from A-E liability to determine whether to pursue it with the LBB. Not performing the initial assessment could make it more difficult to contest or refute change orders for which the US should not be held responsible. Although audit does not discount the LBB's role in assessing and pursuing A-E liability; if USAFE does not perform their initial assessment and request the LBB assess and pursue liability, there is an increased risk that the US will make the payment for the change order. Finally, requesting an A-E liability assessment at the time it is discovered is especially important due to the personnel turnover experienced during a construction project of this size.
Executive Summary, Conclusions, Bullet 3	<b>(FOUO) USAFE/A7:</b> The clause referred to here is liquidated damages. Despite the absence of specific contractual liquidated damages clause, LBB and the US Government still have recourse to pursue recovery of damages. This is further explained in Audit Result 7.
	(FOUO) Additionally, the legal assurance that the contractor will be held liable if it cannot perform its contract requirements is not related to any specific clause, but to the main contract. This is an enforceable contract by LBB according to the VOB. In addition to the VOB, there are also areas in the VOL (Vetragverlezung), Deutsches Institut für Normung (DIN) standards and German case law that enforce performance standards. If a contractor cannot perform its work, the LBB will contract someone else to perform the work and bill the original contractor for that portion of the work. These two issues should not be combined.
	<b>(FOUO) AFAA:</b> The ABG-75, Part II, Article 4.1, paragraph 4.1.2 states, "Liquidated damages are agreed upon if the contractor is late completing the construction work." Unlike US contracting

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**Appendix II** 

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This document contains information exempt from mandatory disclosure under the Freedom of Information Act. Exemption 5 applies.

procedures, the ABG-75 does not require the inclusion of these clauses; however, the VOB (German contract law) does require them to pursue liability.

**(FOUO)** Audit found no evidence of liquidated damages clauses in KMCC contracts and confirmed with the LBB that such clauses were not requested by the US government. Further, the LBB confirmed liquidated damages clauses are normally inserted in trade-wise contracts in accordance with the VOB. Specifically:

- **(FOUO)** The VOB Part B, §5, paragraph 4 states, "If the contractor delays the start of work, or if he does not complete it on time, or if he does not meet his commitments under No. 3 above (detailing the required number of workers, equipment, materials, or components to execute work), the client may, if he maintains the contract, seek damages in accordance with §6, paragraph 6, or set the contractor a reasonable term for the fulfillment of the contract and serve notice of his intention to withdraw the contract id, on expiration of the term, the contract has not been duly fulfilled (cf. §8, No. 3)." Further, the VOB Part B, §6, details the LBB's actions in regard to contractor obstruction and interruption of work.
- **(FOUO)** The ABG-75, Part II, Section A. Execution, Article 4.1, paragraph 2 states, "Liquidated damages are agreed upon if the contractor is late completing the construction work. Such damages will be at the rate of one-tenth of one percent of the final construction contract amount for each workday (i.e. calendar days excluding Sundays and German holidays) of delay, but in no event exceed a total of 10 percent of the contract amount."
- **(FOUO)** The LBB personnel stated, "The LBB uses a paragraph reference to the liquidated damages in their contracts. Specifically, the LBB would have to prove the contractors were behind contracted schedules. Further, if the contractors agree to provide assurances they will fulfill the contract through the warranty period, the LBB will only pursue liquidated damages for hindrances by other contractors. In this process, the LBB evaluates alleged hindrances and when necessary, takes liable contractors to court using the hindered

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contractors' calculations and statements of overhead." However, they cannot complete this action unless specific clauses are included in the contracts.

(FOUO) An e-mail dated 9 January 2006 from USAFE CV and USAFE A7/CC validated USAFE's oversight in liquidated damages clauses. Specifically, it validated USAFE did not ensure the LBB inserted liquidated damages clauses in the KMCC contract. Audit notes this condition occurred because USAFE management did not provide appropriate oversight to ensure US interests were protected through LBB insertion of liquidated damages clauses in KMCC contracts.

(FOUO) We did not audit contractor performance and contractor replacement and, therefore, did not evaluate the VOL. Instead, we evaluated KMCC contracts for clauses that protect US interests. As stated above, the VOB provides for liquidated damages clauses and specifically states how the LBB should pursue damages related to this area. Audit did not find any reference to the liquidated damages claims relating specifically to the contract, vice the required clause, in the VOB, per management's comments nor did management provide any reference material to substantiate this.

# Executive Summary, Conclusions, Bullet 4

**(FOUO) USAFE/A7:** For clarification, these construction change orders being referred to here are change orders that have been approved by LBB for the contractor to do work for which paperwork had not yet been sent to the US Forces.

**(FOUO) AFAA:** Tab C addresses both missing change orders, and cost and schedule growth.

(**FOUO**) ABG-75, Part II, Section A, Article 4, paragraph 2.2 of the Implementing Instructions states, "The realization of changes under 2.1 always require a change request (ABG Form 5 Part I or 5 A) and an order of the US Forces by use of ABG Form 5 Part II." USAFEI 65-106, paragraph 2.1.3, states the GGCA initiates ABG Form 5, Change Order Document, (see also paragraph 3.4.3). The ABG Form 5 is a modification to the ABG Form 4 and constitutes an increase or

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decrease to the recorded undelivered order outstanding (UOO). The ABG Form 5 can be initiated from either a US Forces requested change via the ABG Form 5A (USAFE Form 87) or by the German authorities, in which case only the ABG Form 5 is prepared.

(FOUO) USAFEI 32-1006 states, USAFE Form 87, Construction Change Request, ABG Form 5A, Change Request, is used by USAFE, base civil engineers (BCE) and the US Corps of Engineers (USACE) to request a modification, addition, stop, continuation, cancellation of construction obligation, or deobligation of funds on a construction contract or project according to the indirect procedure. These modifications are termed internal modifications and are commitments for accounting purposes, as documented in paragraph 2.4.2 of USAFEI 65-106. External modifications (or construction change orders) are change orders to construction contracts that were initiated by the contracting agent (LBB), construction agent, or contractors.

**(FOUO)** In both situations, when the change order is approved, this form is recorded as an increase or decrease in the obligation and reverses the previous commitment, as documented in paragraph 2.4.3 of USAFEI 65-106. Missing modifications are change orders to construction contracts that were initiated by the contracting agent (LBB), construction agent, or contractors that the AF did not receive and for which the AF did not give prior approval.

(**FOUO**) The ABG-75 Part II, Article 4, paragraph 4.4 states, "Measures changing or affecting the scope, quality or cost of construction works from that specified by the Forces shall require the prior consent of the Forces." Article 12, paragraph 12.3 of the ABG-75 states, "The contract amounts (Article 7.1.6) may not be committed or exceeded unless written approval of the Forces has been obtained. The "contract amounts" within the meaning of Article 12.3 and the "amounts approved" within the meaning of Article 12.5 are those amounts which the US Forces confirmed as established on part II of ABG Forms 4/5." Paragraph 12.5 states, "Any costs in excess of the amount approved by the Forces (Article 12.3) will not be borne by them unless their prior approval for these additional funds has been obtained."

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**(FOUO)** Audit contends USAFE did not properly monitor and approve change orders in both the sense that were not aware of and did not request missing change orders (427 of 490 LBB- or contractorgenerated change orders) and that they did not monitor cost and schedule growth as a result of the significant number of change orders.

# Executive Summary, Conclusions, Bullet 4

**(FOUO) USAFE/A7:** All contractor invoices are reviewed by both USAFE and PMO personnel for accuracy and against the current contract amount. Additionally, change orders (when submitted) are fully evaluated and not approved until all information is included. The problem is that the US cannot evaluate change orders not yet submitted for review. This issue is further explained in Audit Result 4.

**(FOUO) AFAA:** In our opinion, the USAFE/A7 and PMO personnel did not establish sufficient internal controls to ensure invoices were properly validated with obligating documents (change orders) (refer to Tab C, Audit Results 6). Specifically, PMO personnel did not implement established invoice review procedures to validate contractor invoices with contract and change order specifications and actual contractor work completed prior to authorizing payment. In addition, USAFE/A7 did not properly appoint certifying and accountable officials.

(**FOUO**) However, this audit result discusses change orders themselves, not the resulting invoices. Audit determined the PMO did not effectively implement established construction change order review processes to ensure change orders were valid, authorized, and within project scope prior to payment. Specifically, in accordance with paragraph 2.1.3 of USAFEI 65-106, the LBB issues ABG Form 8, *Construction Costs*, to invoice for construction completed (See paragraph 2.4.7).

**(FOUO)** USAFEI 65-106, paragraph 5.6 states, "The GGCA submits invoices (ABG Form 8 or 9) directly to the HQ USAFE/CE (A7 under the current organizational structure). The civil engineer is required to validate each invoice, certify it for payment, and deliver it to the NAF activity designated in the MIPR or funding agreement."

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	(FOUO) Audit agrees USAFE cannot review change orders not yet submitted by LBB but contends making payments on invoices without proper obligating documents (the ABG Form 5 Change Order Document) results in improper payments. Improper payments are payments made on contractor invoices for contract construction work completed for which the AF did not give prior approval and was not notified change orders were required and for which the AF did not have obligating documents prior to disbursement. As previously stated, improper payments may be in violation of the ABG-75 Administrative Agreement, German contract law, and Section 8137 of Public Law 103-335 and could be held pecuniarily liable as a result.
Executive Summary, Conclusions, Bullet 5	(FOUO) USAFE/A7: The final cost projection for the project is still under the original DD 1391 Programmed Amount authorized by Congress. USAFE/A7 agrees that the US Government will expend additional resources to billet personnel off base. Because of this, USAFE leadership has been actively pursuing the schedule issue with the German Government. This issue is further explained in Audit Result 5.  (FOUO) AFAA: As of September 2006, audit projected the cost at €146,845,349 (\$168,431,615). This is still under the budgeted
	amount. However, the final cost is yet to be determined.
Executive Summary, Conclusions, Bullet 6	(FOUO) USAFE A7: Partial payments have been made to contractors for work that LBB has certified as completed. Where we have found or been made aware that the contractors have improperly billed the US, USAFE has downward adjusted the first possible partial payment (current partial payment if caught in time). This issue is further explained in Audit Result 6. In no case have erroneous payments exceeded the total amount of obligated funds on the contract.
	(FOUO) AFAA: LBB certifications did not meet the DoD or ABG-75 standards for obligating documents without the provision of the ABG Form 5, Change Order Document. Audit contends that making even partial payments for invoices without the appropriate obligating documents constitutes improper payments. As stated previously,

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	USAFE personnel may be held pecuniarily liable for improper payments.
Executive Summary, Conclusions, Bullet 7	(FOUO) USAFE/A7: According to ABG-75, A-E liability requires proof that errors were the fault of the designer and that the errors were negligent and caused harm. This process will occur concurrent or subsequent to construction work. As stated in Corrective Action E.3., it is clear that USAFE has not waived its right to pursue A-E liability, and in fact has acquired contract support of a German claims consulting firm to assist USAFE/A7C in a comprehensive effort to pursue claims against LBB's Construction Manager, including the area of A-E liability. A-E liability has to be proven, as is the case in the US, likely in the courts or through binding arbitration, and in the meantime we need to complete the construction. Further information regarding efforts taken by USAFE/A7CC to ensure A-E liability is properly documented and pursued is included in Audit Result 7 and paragraph 4 of the A7CC Response in Appendix III of this report.  (FOUO) AFAA: Audit agrees USAFE has not waived its right to pursue A-E liability. Audit confirmed potential A-E liability concerns with an independent expert and contends USAFE would better pursue A-E liability by requesting the LBB assess and pursue A-E liability now rather than waiting until the final payment is made or taking no action at all. USAFE/A7CCP's decision to hire a contract claims consultant to identify liability issues is discussed in Corrective Action E.5.
Executive Summary, Management's Response	(FOUO) USAFE/JAI: To provide the level of control over the contracting process this report suggests USAFE should be exercising would require the addition of numerous personnel to essentially do what we're already paying LBB to do on our behalf. Given the current budget climate and the ongoing AF transformation such an increase in personnel is unlikely. If we wish to relieve LBB of those responsibilities and assume them for ourselves then we will need to amend the ABG-75 agreement. Even assuming all the parties would be agreeable, such a process would take years. If we wish to do away with the concept of indirect contracting then we will need the consent of all the parties to the Supplementary Agreement to the NATO SOFA (UK, FR, NL, BE, CN, US and FRG) along with the blessing of the

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US State Department. The chances of that happening are slim.

(FOUO) AFAA: The KMCC project is the largest construction project within DoD. If a construction project is of sufficient size to warrant the additional personnel, perhaps USAFE should consider adding personnel to improve internal controls. We cannot make recommendations to the LBB. All issues contained in this report and the resulting recommendations address USAFE internal control issues. Audit does not suggest USAFE should amend the ABG-75 to relieve LBB of their responsibilities, particularly when constructing a project of this magnitude. Given the internal control weaknesses identified during this audit, we conclude such a management decision could be detrimental to the AF and AF funds.

# Tab A, Project Planning and Construction Design, Background, Paragraph 5

**(FOUO) USAFE/A7:** For clarification, line-item contracts stipulate that the contractor is only paid for work actually accomplished by line items (i.e., number of manholes installed or linear meters of cable). If the contract was written for 200 manholes and the contractor only installed 100, we would only be billed for 100 and the labor to install just the 100. The reverse is also true, if the contractor must install 250, they will be able to bill the US for the additional 50 after authorized by a change order.

(**FOUO**) As the RMTP VQ project was integrated into the KMCC project, that portion of the VQ funding came from the RMTP funding partners. Breaking the project into strategic pieces was part of the "fast tracking" concept for the execution of the KMCC. However, the German authorities insisted on contracting more trade lots than was envisioned by USAFE/A7CC, citing VOB laws concerning limits to the amount of work that could be subcontracted by any given trade lot contractor.

**(FOUO) AFAA:** The agreement to use trade-wise contracts forced the use of line-item contracting. Although line-item contracting is more prevalent in German construction, it is still optional, and the LBB confirmed the US could have requested a general contractor and lump sum contracts instead. Thus this decision should have been very carefully considered before it was agreed to and implemented.

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**(FOUO)** Audit did not identify any documentation to confirm that the LBB cited VOB laws concerning limits to the amount of work subcontracted. The documentation in the KMCC files disclosed tradewise contracts were thought to eliminate the need for subcontractors. The details behind the strategic contract portions should have been properly coordinated and documented prior to USAFE agreeing on the contracting method.

Tab A, Project Planning and Construction Design, Audit Result 1, Condition, Bullet 1 (FOUO) USAFE/A7: This project was integrally linked to the original RMTP program, and the German authorities were aware of the project as early as end of calendar year 1999. The project was slow to develop with design and construction starting in 2003, giving LBB ample time to plan the workload. The project was initiated by an office other than USAFE/A7 and therefore these types of documents would have been completed by them. When USAFE/CV transferred the project to USAFE/A7C, we were forced into the fast-track method of design-build procurement to meet the requirements of the new mission upon the closure of Rhein Main AB. We feel the absence of an ABG Form 1 did not play a significant role in the challenges faced by the project execution team. The purpose of the ABG Form 1 is simply to allow the German construction agencies to properly staff their organizations' workload. This function is fulfilled when project programming information is conveyed at annual planning conferences held in conjunction with the various LBBs. According to the ABG 75. Paragraph 18.a, projects not included in the annual submission for program coordination, but for which ABG 2 and/or ABG 3 actions have been initiated do not require ABG Form 1 submission.

**(FOUO) AFAA:** Presentation of the ABG Form 1 to the LBB provides the German authorities with documentation to use in the determination of whether construction will affect public interests. This form is used to notify the Federal Ministries for Transportation, Construction, and Finance. Given the past communication problems between the US Forces and LBB, this could have been used as an opportunity to improve these relationships and possibly the outcome of this major project.

**(FOUO)** Article 3 of the ABG-75 requires the US coordinate projects with the German government to allow the German Government

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Construction Agency (GGCA) to structure their organization workload. Coordination is accomplished annually by HQ USAFE on USAFE Form 105 (ABG Form 1), *Program of Construction for the US Forces*. USAFE personnel then prepare DD Form 1391, *Military Construction Project Data*, to request Congressional project funding. USAFEI 32-1006 states the US Forces initiate design and construction of properly approved projects on the USAFE Form 95 (ABG Form 3), *Intergovernmental Construction Order*, which begins the design process. The ABG Form 3 document should include a statement of work or requirements document detailing the work required in both German and English and appropriate site plans and vicinity maps. This form is also submitted to the GGCA but is done at the time the design process begins.

(FOUO) USAFE did not have evidence on file to verify their claim that the LBB was aware of the project prior to the ABG Form 3 submission, and audit was not provided documentation to support USAFE's claim that KMCC project programming information was conveyed at any annual planning conference. Further, considering the time constraints USAFE cites in this project, the LBB should have been provided notice for planning purposes to properly estimate their design expenses based on the project magnitude and to coordinate their workload prior to design start.

Tab A, Project Planning and Construction Design, Audit Result 1, Condition, Bullet 2 **(FOUO) USAFE/A7:** Feasibility reviews were performed prior to and during the design stage. Additionally, there were a series of pre-design meetings held after LBB contracted with construction manager as the design agent. Some but not all of the concerns addressed above were covered through the course of these reviews and meetings. Please provide the requirement defining pre-design validation reviews because this is a term unfamiliar to MILCON practice.

**(FOUO) AFAA:** Audit found no evidence of feasibility reviews that met the best practice standard of pre-design validation reviews. The USAFE/A7CCP provided an example of the pre-design validation review process conducted at AETC as an example of a best management practice currently in use. This cause was included at the

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request of A7CCP in order to include a recommendation to use PDVRs in the future. Tab A. **(FOUO) USAFE/A7:** USAFE conducted monthly design reviews **Project Planning and** with AAFES, USAFE Services, Base, LBB, Corps of Engineers, and Construction Design, the A-E of record. Some of these reviews lasted an entire week. Due Audit Result 1, to the complexity of this project, USAFE/A7CC conducted these Condition, frequent design reviews in lieu of the typical 30-60-90 percent design reviews. This approach provided users enhanced opportunity for **Bullet 3** review, and therefore USAFE/A7CC disagrees with the finding that USAFE did not conduct all appropriate architectural design reviews. However, despite all these design reviews, the fact still remains that several comments were not incorporated into the contract documents. (**FOUO**) Due to the complexity of the project (i.e., contract specifications for the mechanical, electrical, plumbing contract is 10.000+ pages) even if USAFE had held a traditional 65 percent design review, it is very likely that the same problems would have occurred. (FOUO) AFAA: The design process consists of four design conferences. They are the KVM-Bau (5 - 10 percent pre-concept design submittal), HU-Bau (35 percent concept design review), AFU-Bau I (90-95 percent final design review), and AFU-Bau II (100 percent corrected final design, tender action package). When requested by the MAJCOM or functional users or on large projects, an additional HU-Bau concept design review can occur at the 65 percent design stage. This is to ensure designs meet functional and technical requirements and all comments from the 35 percent review have been appropriately incorporated in the design. This additional review would allow for a more detailed technical review of open concerns not yet corrected in the designs. The coordination of design review comments is a USAFE project manager responsibility. (**FOUO**) During our review, we obtained evidence of both the 35 and 95 percent reviews. This evidence included meeting minutes of the 35 and 95 percent design reviews, copies of unincorporated comments

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to the design reviews, and documentation supporting the LBB and

management's decision to remove the 65 percent design review to expedite the design process.

(**FOUO**) Specifically, the auditor obtained and reviewed DD Forms 448 (military interdepartmental purchase requests) identifying additional project costs, evidence of the 35 percent design review, the request for the 65 percent design review, requirements document, the LBB's suggestion to remove the 65 percent design review (22 May 2003 discussion of the project time schedule), the LBB's official statement of 65 percent design review removal (10 June 2003 meeting minutes), evidence of the 95 percent review, and the resulting 100 percent design review. In addition, the auditor reviewed hard-copy meeting minutes from the pre-design charrette. We did find evidence of any other design charettes.

**(FOUO)** As a result, we conclude no evidence exists to support management's statement that they conducted frequent design reviews in lieu of the typical 30-60-90 percent design reviews. Further, we contend that the 65 percent review was more important due to the detailed nature of the specifications for the KMCC contracts, particularly the 10,000+ pages for the MEP contract.

Tab A, Project Planning and Construction Design, Audit Result 1, Condition, Bullet 3 **(FOUO) USAFE/A7:** By far the most prevalent design errors encountered on this project involve inaccurate quantity estimates—very detailed material take-offs that are well beyond the scope of Air Force design reviews which focus on functionality and constructability. Verification of quantity estimates is the responsibility of the A-E designer and construction agent.

**(FOUO) AFAA:** Audit disagrees with this comment. Although quantity overruns were prevalent in the KMCC project, during the audit fieldwork, audit identified several examples of design errors and subsequent change orders that were not related to quantity estimates.

**(FOUO)** For example, the glass domes modification was a direct result of the missing design review. The design called for steel frame domes in which glass would be laid. However, the contractor determined additional tonnage for the strengthening of steel was

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required. The additional steel prevented the glass from sitting properly inside the dome, thus an additional superstructure had to be built and placed over the original dome in order for the glass to fit properly. This modification is one that should have been prevented by a thorough technical design review. The escalators, elevators, and bolts are also examples of these types of modifications.

(**FOUO**) Further, the design review comments were not incorporated; therefore, the designs did not have clear specifications even after the 35 percent review, which resulted in more change orders later in the project. For example, the core drillings were supposed to be sealed closed, but this was not written in the specifications; therefore, a change order had to be created to address the additional cost to the contractor. Because this work would have to be done whether in the specifications or not, the resulting mod must be paid by USAFE, and this is not a design deficiency for which the A-E contractor is liable.

(FOUO) Finally, a senior USAFE manager confirmed audit's concerns over not conducting 65 percent design reviews when he provided a letter from USAFE/A7, dated 4 Jan 06, to the CENAU/DE (COE). This letter documented USAFE's acknowledgement of design deficiency change orders and requested the Corps of Engineer's assistance in conducting independent constructability reviews and 65 percent design reviews on all future projects. He further confirmed he personally "pulled the 65 percent design review because LBB was behind schedule in design preparation and the US emphasis was on the schedule of this project" in a discussion with the auditors. In addition, he stated the original project manager "instituted a design charette at the 65 percent stage instead of the normal on board" review." However, he declined to provide information or documentation to support this review.

Tab A, Project Planning and Construction Design, Audit Result 1, Cause, Bullet 1 (FOUO) USAFE/A7: During the time the ABG Form 1, (*Program of Construction Projects for the US Forces in the Federal Republic of Germany*) should have been prepared; the KMCC project was managed by another organization within USAFE (but outside the A7 Directorate). USAFE/A7 officials dispute that its absence from the ABG Form 1 project listing in any way affected this project due to the

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high visibility it received by linkage to the RMTP. This finding does not appear to bear any relevance to the substance of this report. An ABG Form 1 is used to notify MOC of upcoming work so that the workload is known and resources can be assigned to cover that workload. Because LBB was well informed of this significant project, an ABG Form 1 was not required. Since it was part of the RMTP and planning for this project had gone on for some time, LBB and GBB authorities were fully aware of the project during planning phases.

**(FOUO) 435 CEG:** The ABG Form 1 is simply an announcement to the German government of proposed US Forces design and construction for the coming years. The form is filed annually and used by the German Government to adjust its resources to accomplish US Forces work. It is also an opportunity for US Forces to signal which projects they would like to accomplish via direct method.

**(FOUO) AFAA:** Article 3 of the ABG-75 requires the US coordinate projects with the German government to allow the German Government Construction Agency (GGCA) to structure their organization workload. Coordination is accomplished annually by HQ USAFE on USAFE Form 105 (ABG Form 1), *Program of Construction for the US Forces.* USAFE personnel then prepare DD Form 1391, *Military Construction Project Data*, to request Congressional project funding.

**(FOUO)** USAFEI 32-1006 states the US Forces initiate design and construction of properly approved projects on the USAFE Form 95 (ABG Form 3), *Intergovernmental Construction Order*, which begins the design process. The ABG Form 3 document should include a statement of work or requirements document detailing the work required in both German and English and appropriate site plans and vicinity maps. This form is also submitted to the GGCA but is done at the time the design process begins.

**(FOUO)** During the audit fieldwork, the auditor searched the KMCC project files for a copy of an ABG Form 1 or any other form of documentation listing the project was planned. The auditor did not identify any such document. Therefore, audit concludes USAFE did

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not have evidence on file to verify their claim that the LBB was aware of the project prior to the ABG Form 3 submission, and audit was not provided documentation to support USAFE's claim that KMCC project programming information was conveyed at any annual planning conference.

(FOUO) Considering the time constraints USAFE cites in this project, the LBB should have been provided notice for planning purposes to properly estimate their design expenses based on the project magnitude and to coordinate their workload prior to design start. Audit discussed this concern with the ABG-75 Specialist, who confirmed USAFE has not prepared the required ABG Form 1 document detailing the construction workload in the last 7 years. The ABG-75 Specialist confirmed this document was historically prepared by the A7 Programming Division. Regardless of the initiating construction management office, USAFE/A7 was the original and appropriate office to complete this documentation and report it to the LBB. The USAFE and LBB can use this document as a management tool to assist in estimating the number of personnel required to manage the construction project, to include the volume of projected construction work.

Tab A, Project Planning and Construction Design, Audit Result 1, Cause, Bullet 2 (FOUO) USAFE/A7 & JAI: While USAFE recognized some of the key project risks during the planning phases, required completion date for the facility dictated that some calculated risks be taken; however, USAFE/A7CC did establish weekly design meetings and assisted the AF Services agency in setting up constructability reviews for technical issues associated with the VO. The LBB implemented trade lots contracts for the entire RMTP program as a condition of the German funding involved. As a result of political considerations (protection of smaller local companies) trade lots contracts are the rule under German contracting law. General contracting is the exception, requiring detailed justification. During the main KMCC contracting period LBB was under extreme political pressure to use trade lots, due to the overall slow construction business in Germany. While construction by trade lots is not preferred by the US for vertical construction, it is not an unfamiliar method of contracting to the German government and the LBB.

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(FOUO) AFAA: Audit notes the VQ does not constitute the entire KMCC project. Audit did not find documentation to support this statement nor did management provide any. Further, the Corps of Engineers confirmed the Passenger Terminal Annex project (also RMTP) was awarded to a general contractor and was not done by trade agreements. Audit notes the VOB allows for consolidation of contract requirements, in VOB Part A, Section 1, §4, paragraph 3 states, "For financial or technical reasons, two or more trade lots may be combined under one award." However, the LBB confirmed USAFE could have required LBB to contract a general contractor.

**(FOUO)** The Ramstein Southside Fitness Center is an example of a project originally planned to use unit priced contracts, which was changed to lump sum contracting per USAFE's request. Detailed justification was not a factor in choosing the contracting method in this project. We found no evidence that USAFE attempted to prepare general contractor justification for the KMCC project.

**(FOUO)** Audit agrees trade-wise contracts do not constitute unfamiliar contracting methodology for Germany or the LBB. However, audit does not agree familiarity justifies the lack of effort in requesting or obtaining a general contractor and contends it instead was not in the best long-term interest for the KMCC project.

Tab A, Project Planning and Construction Design, Audit Result 1, Cause, Bullet 3 **(FOUO) USAFE/A7C:** Due to the complexity of the project and to provide greater opportunities for coordination, the 65 percent design was replaced with monthly design review meetings. This revised process allowed for technical reviews beyond the typical 35-65-95 percent design submittal phases. Two design submittals were accomplished: Afu Bau (35 percent) and Hau Bau (95 percent).

**(FOUO)** Including a 65 percent design submittal would have cost the US Government approximately \$350K and the Project Delivery Team decided to hold monthly design reviews in lieu of the single 65 percent design review, thus saving \$350K. None of the change orders encountered to date would likely have been avoided through the addition of a 65 percent design review.

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**(FOUO) AFAA:** Audit contends USAFE personnel did not conduct all appropriate architectural design reviews to estimate and mitigate project risk and did not ensure user design review comments were fully incorporated into subsequent designs.

**(FOUO)** Audit obtained evidence of both the 35 and 95 percent reviews. This evidence included meeting minutes of the 35 and 95 percent design reviews, copies of unincorporated comments to the design reviews, and documentation supporting the LBB and management's decision to remove the 65 percent design review to "expedite" the design process. Specifically, the auditor obtained and reviewed

- **(FOUO)** DD Forms 448 (MIPRs) identifying additional project costs
- **(FOUO)** Evidence of the 35 percent design review
- (FOUO) The request for the 65 percent design review
- **(FOUO)** Requirements document
- **(FOUO)** LBB's suggestion to remove the 65 percent design review in a 22 May 2003 to discuss the project time schedule
- **(FOUO)** LBB's official statement of 65 percent design review removal on 10 June 2003
- **(FOUO)** Confirmation of the LBB's official statement of 65 percent design review removal in meeting minutes from the 10 June 2003 meeting
- **(FOUO)** Evidence of the 95 percent review
- **(FOUO)** 100 percent design review
- **(FOUO)** Meeting minutes from the predesign charrette

**(FOUO)** Based on the documentation reviewed, audit was unable to validate management's assertion that their actions improved opportunities for coordination and technical reviews beyond the typical 35-65-95 percent design submittal phases. As a result, we cannot confirm the cost estimate management provides for the 65 percent design review or the Project Delivery Team's decision as stated above.

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**(FOUO)** During the audit, several examples of design errors and subsequent change orders were identified that were not related to quantity estimates. Refer to our response to Tab A, Project Planning and Construction Design, Condition, Bullet 3 above.

**(FOUO)** Audit contends this evidence supports USAFE/A7 management could have prevented some change orders if they had not removed the 65 percent design review from the design process.

# Tab A, Project Planning and Construction Design, Audit Result 1, Impact, Bullet 1

**(FOUO) USAFE/A7:** The German government was fully aware of the KMCC project and the timeline of construction and therefore we disagree with this impact. Had the German government not been aware of this project, we would agree with this statement.

**(FOUO) AFAA:** Based on the information reviewed during the audit, we disagree that the German government was fully aware of the KMCC project and the resulting construction timelines prior to the ABG Form 3 document submitted for the project and contend that the notification was not sufficient to allow the LBB to allocate appropriate resources for a project of this size, scope, and complexity.

# Tab A, Project Planning and Construction Design, Audit Result 1, Impact, Bullet 2

(FOUO) USAFE/A7: As stated in the introduction, we disagree with the cost information provided in this audit. Although we have already experienced 5 percent cost growth from basic contract awards, we are not expected to exceed the programmed amount for the project. Our final cost estimate for the facility is €32.1M (~20 percent cost growth from basic contract awards) which is still under the programmed amount of €132.5M. Regarding the schedule growth, please refer to Audit Result 5. Additionally, we still contend that had the 65 percent design review been performed, the number of change orders would not have significantly changed due to the complexity of this particular project.

**(FOUO)** In reference to the change orders, although some of them could have been avoided, it is not accurate to say that costs associated with these changes were preventable due to the line-item contracting method. This project incurred unusually high cost growth, perhaps

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attributable in part to its fast-track construction process. Major rework including escalator foundations, door opening lintels, and floor electrical outlets could possibly been prevented had more time been available for design phase.

**(FOUO)** While the modifications could have been avoided, because the project is a line-item contract, these modifications would have been included in the line-item contract costs and therefore it is not accurate to say that the costs associated with these changes were avoidable.

**(FOUO) AFAA:** We calculated the cost growth based on estimated contract costs for the original 12 KMCC trade-wise contracts. Specifically, the percent cost growth was calculated based on the original estimated construction cost (ABG Form 4s on file for the original 12 trade-wise contracts) plus all known ABG Form 4s, ABG Form 5s, and pending change orders (internal and external) to the date of the calculation (September 2006). Further, the original project cost, as approved by Congress in 2003, was \$115,300,000. USAFE exceeded this amount when the original 12 ABG Form 4 documents were estimated. To illustrate:

## (FOUO)

Original ABG 4s	118,682,821.26 €
ABG 5s on Original ABG 4s	15,019,569.04 €
% Growth	12.66%
ABG 4s resulting	9,993,406.25 €
from Changes	
ABG 5s on ABG4s resulting	3,149,552.55 €
from Changes	
<b>Total Cost of Project</b>	146,845,349.10 €
Total ABG 5s	18,169,121.59 €
<b>Total Cost of Changes</b>	28,162,527.84 €
<b>Total % Cost Growth</b>	23.73%

**(FOUO)** To determine whether change orders were preventable, we requested USAFE/A7CCP evaluate the LBB's list of change orders and identify whether change orders were a result of engineering changes, items missing from contacts specifications, user-requested

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changes, miscellaneous change reasons, differing site conditions, value-engineering changes, or administrative changes. We included in the preventable category only change orders for items completely missing from the specifications (versus quantity concerns), user-requested changes, miscellaneous, and administrative changes. We did not include engineering changes, value-engineering changes, or differing site conditions.

**(FOUO)** Audit agrees line-item contracting means the US should only pay for work completed. Certainly all line-item contracts will have some change orders. However, line-item contracting is not the cause for the preventable change orders identified in this audit result – the design not being technically sound was cause for additional change orders. Specifically, had the original design been properly reviewed and review comments properly incorporated, the project would not have incurred many of the change orders identified.

(FOUO) As outlined in Audit Result 7: "USAFE did not request the LBB assess liability for 21 deficiencies confirmed by an independent expert as design errors which could have been prevented if USAFE performed proper design planning and conducted all design reviews." Design deficiencies discovered during the construction of the KMCC contributed to contract change orders for which we conservatively estimate USAFE may be billed at least €952,954 (\$1.1 million). These 20 items resulted in change orders or expected billable costs to USAFE and are a good example of how appropriate design reviews and design comment incorporation leads to saving the government money.

**(FOUO)** Management contradicts their previous statements that the 65 percent design review was not necessary. If management agrees they needed more time in the design phase, the 65 percent design review should have not been removed to expedite the design process as management previously.

(FOUO) We agree that some changes are not preventable and believe the distribution above most accurately reflects that statement it accounts for unpreventable change orders and all those marked as questionable in management's change order review. Moreover,

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	USAFE/A7 identified these change orders as preventable during the audit.
Tab B, Solicitation and Award, Background, Paragraph 2	(FOUO) USAFE/A7: USAFE/A7CC worked with LBB to try to gain as much information as possible concerning its recommendation of contractors; however, neither the ABG-75 nor VOB require this information be provided to the sending state forces. Much of this information was relayed verbally, in closed discussions between senior officials because of the political and public climate during the execution of the KMCC. LBB-Kaiserslautern (KL) was under intense scrutiny over its contracting and evaluation procedures, and written or e-mail correspondence was curtailed to protect contract sensitive information. The potential that protests from contractors could delay the project indefinitely was a continual risk understood by leadership of all parties; especially due to recent legal rulings requiring two-week's notification to unsuccessful bidders in order to allow them to protest award decisions.  (FOUO) All proposed contracting actions were required to be reviewed by GBB lawyers prior to submitting the ABG 4 to the Air Force recommending award of the contracts to specific contractors.  (FOUO) The ABG-75 requires the LBB comply with German contracting laws and procedures; including determining whether a contractor was capable of completing the work required; the US could raise concerns, but had very limited influence on contractor selection unless USAFE could prove beyond doubt a particular contractor was incapable of completing the work. As an example, in July 2006 USAFE/A7CC provided LBB detailed concerns with one contractor on several recent projects on Ramstein AB in an (unsuccessful) attempt to have the firm barred from future work on base.  (FOUO) AFAA: Regardless of the method used, the contract agent and USAFE personnel should maintain records of the contractor's qualifications. In this section of the Background, we are only stating the contract agent and USAFE personnel should maintain records of the contractor's qualifications as a management best practice.

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(FOUO) We did not review if all proposed contracting actions were reviewed by GBB lawyers prior to submitting the ABG Form 4 to the Air Force as part of this audit. In addition, we did not identify nor did management provide any documented evidence to show USAFE collected or reported contractor concerns outside of verbal, weekly meetings with the LBB. In our opinion, these meetings did not result in actions to correct concerns identified. As such, audit made an audit comment to address this issue and a subsequent recommendation to more formally address this concern.

(FOUO) Audit notes that the July 2006 USAFE/A7CC memorandum to LBB was written during the audit and occurred on another construction project, not the KMCC. While this action may be a partial management corrective action in addressing the concern, management also stated they were not successful. Since audit is not familiar with the project or contractor mentioned and management did not provide evidence of their claim, audit cannot determine why this action was unsuccessful.

# Tab B, Solicitation and Award, Background, Paragraph 2

**(FOUO) 435 CEG:** In the US and in accordance with the FAR, the Contracting Officer notifies parties of the bid opening date, time, and location but that invitation is not to have customers object, select or recommend how selection is made. That decision is the Contracting Officer's decision. This is no different than contracting in Germany. The LBB as the Contracting Officer has the sole responsibility to determine if the bid is fair, company is competent technically, and able to perform the work.

(FOUO) AFAA: While the Federal Acquisition Regulation (FAR) provides excellent guidance for construction contracting, it is not applicable in the German construction process, since the GGCA officially performs the contract negotiations and award. While we agree the LBB acting as the contract agent on behalf of the US has the responsibility to determine fair bids, technical competency, and capability of the contractor:

• ABG-75, Article 5, paragraph 5.1 states, "The Forces may request deletions, additions or substitutions to be made (to the tender list). The German authorities shall check the capacity

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and expertise as well as the financial reliability and technical capabilities of all firms nominated by German authorities and, if requested, those nominated by the Forces. The German authorities shall conform with regulations for awarding contracts for Federal building. The Forces' recommendations shall be compiled with in so far as they do not contravene these regulations. If they do contravene these regulations, the German authorities shall inform the Forces in writing giving the reasons for their objections to the Forces' recommendations."

• **(FOUO)** ABG-75, Article 5, Paragraph 5.3 states, "The Forces may reject, through the German authorities, any tender in so far as this rejection is not in conflict with German law."

**(FOUO)** Therefore, if the LBB does not inform the US Forces of the tender date and place of opening of tenders, provide copies of the invitations to tender at the same time as the proposed tenderers, the tender list, or the results of the tendering until after the contractor is selected (i.e., with the ABG Form 4 document listing the recommended tenderer/contractor), the US is not being afforded the opportunity to participate in the bid process or contractor selection process and cannot, therefore, reject a potential tenderer or provide evidence to support that rejection prior to the contract action.

**(FOUO)** Audit agrees in accordance with the ABG-75, Article 10, paragraph 10.1.5. the US Forces submit "their concurrence in the award of contract(s)...by return of ABG Form 4 with completed Part II."

(FOUO) In our opinion, if the US Forces do not agree with the LBB's selection of a contractor, they have an opportunity to refuse the contractor by not submitting the ABG Form 4 section II completed. However, if this refusal is not in compliance with German laws, the LBB will be forced to select the contractor, regardless of the US opposition to the contractor. The point here is that there is no established process or procedures for the US to submit contractor quality, qualification, and timeliness concerns to the LBB, other than verbally. Thus, the US and the LBB must come to an agreement on

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	the best way for the US to report these concerns, and must gain German legal approval for the best way to pursue eliminating a contractor from the bid process if the US has due cause for not desiring to work with the contractor (i.e., the contractor is unable to accomplish the work, does not have the appropriate credentials, or is in some way not competent to perform the work required).
Tab B, Solicitation and Award,	<b>(FOUO) Army Corps of Engineers:</b> The VOB does not allow us to do best source selections as we do in the United States.
Background, Paragraph 2	(FOUO) AFAA: We agree; however, we are not recommending best value source selections. Management stated in their comments to Recommendation B.1., "The US Army Corps of Engineers is in the process of developing a joint agreement with the LBB to solicit construction contract bids using the Best-Value Procurement Method. If the Corps is successful in implementing this initiative, USAFE may also benefit from the changes to the contract bid process, including potential gains in price-performance trade-off."
Tab B, Solicitation and Award, Background, Paragraph 3	(FOUO) USAFE/A7: Liquidated damages would have to be evaluated by LBB to determine if this stipulation is in accordance to VOB. Liquidated damages will however be pursued within the scope of the comprehensive claims analysis being undertaken by USAFE/A7CC. This is described in some detail in the USAFE/A7CC Response to Audit Findings (Appendix II). Bottom line is that USAFE/A7CC will work with LBB in evaluating contractor delays and pursuing damages resulting from inadequate or negligent contractor performance.
	( <b>FOUO</b> ) Below is an excerpt prepared for USAFE senior leadership prior to July 2006 outlining the process for pursuing liquidated damages:
	(FOUO) "We can have liquidated damage (LD) clauses in our contracts for poor performance. The ABG-75 is the administrative agreement between the German Federal Ministry and the US Forces governing the execution of construction of the sending states in Germany. Provisions for

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LDs are included in the ABG-75 if the contractor is late completing the construction work. Such damages are assessed at the rate of one-tenth of one percent of the final construction contract amount for each work-day of delay, but are limited to no more than 5 percent of the final contract amount.

(FOUO) When the liquidated damages verbiage is included in the preliminary remarks of a bid package, the LBB can pursue LDs with no proof of actual damages by the US. If the clause was not included, the US can still pursue damages by proving actual financial losses. We've learned recently that the LBB has stopped including this clause and we're pushing this issue with them on the Indoor Swimming Pool project. The clause was not included in any of the KMCC contracts or the Fitness Center project; however this doesn't preclude the LBB from pursuing damages from the contractor where we can prove actual damages.

**(FOUO)** Based on our own experience along with the European District of the Army Corps of Engineers, pursuit of LDs presents a lesser threat to German contractors over what is typically experienced stateside. The biggest challenge in successfully pursuing LDs is the number of modifications typically required over the course of construction that are related to design errors/omissions, changed conditions, or user changes. All modifications must be negotiated and finalized before assessing the actual final contract completion date from which LDs would start. As the number of changes grow, the credibility of the LBB's position concerning the government position of true schedule decreases significantly if challenged in court. Secondly, the LBB must repeatedly notify contractors about poor performance during a contract and provide opportunities for remedy in order to successfully pursue LDs. The LBB has issued such notifications on the fitness center and on the KMCC MEP contracts. Even with measurable losses documented at the NCO Club, as well as notifications to the contractor; we're currently still working with LBB to resolve all outstanding modifications so that they can pursue LDs."

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**(FOUO) AFAA:** Regarding the liquidated damage clauses, audit agrees there are differences between construction in the US and in Germany. This includes the methodology behind pursuing liquidated damages. However, these differences should not significantly impact USAFE/A7's ability to properly report and request assessment of potential damages.

**(FOUO)** Audit notes management's excerpt was transcribed from an e-mail dated 9 January 2006 from USAFE CV and USAFE A7/CC discussing liquidated damages. It validates USAFE did not make sure the LBB inserted liquidated damages clauses in the KMCC or Fitness Center contracts. However, it does not provide evidence of pursuit of damages through the appropriate channels.

(**FOUO**) Audit agrees the proposed action contained in management's response to Recommendation B.6 should assist in correcting the condition identified. Specifically, management stated:

- **(FOUO)** "We will request LBB to insert liquidated damages clauses in future General contractor and trade-wise construction contracts as allowed by ABG-75."
- **(FOUO)** "This matter will be explored thoroughly by the construction claims consultant A7CC acquired 13 December 2006 under contract through AFCEE. HQ USAFE/A7CC is committed to holding A-E firms responsible for the quality of their work and will aggressively pursue recovery of damages from negligence or breach of contractual duty where economically justified and in the best interests of the Government. Recovery actions will be pursued in close coordination with USAFE leadership, including JA and A7K contracting staff, employing litigation or political settlement as necessary to protect US interests. Pursuit of recovery will be conducted within the overall construct of the ABG-75 agreement and the VOB."

**(FOUO)** We agree these actions are warranted and should help with the identification of potential damages. Audit further agrees in

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Tab B, Solicitation and Award, Audit Result 2, Condition, Bullet 1	management's proposed pursuit of damages through the appropriate channels. We conclude management's comments, when implemented, will sufficiently address the audit result identified.  (FOUO) USAFE/A7: ABG-75 does not offer this option to the US It is an LBB process; and although the US asked to participate, we were not given the opportunity. We are however allowed to attend bid openings and review potential bid lists, and have done so. Bottom line is that historically the US has had minimal influence approving potential bidders.
	(FOUO) AFAA: The ABG-75, Part II, Article 5, paragraph 5.2 states, "The Forces shall be informed in good time of the date and place of opening of the tenders." Further, it states "To ensure the timely notification, the US Forces shall be furnished the "invitation to tender" at the same time as the proposed tenderers." Further, German contract law (the VOB), Part A, Section 1, §10, paragraph 1(a) states, "The tender documents include the letter of invitation (call for tenders), conditions of application, and the contract documents." This description could be reasonably substituted for the US FAR requirement for a Request for Proposal. Therefore, audit concludes the ABG-75 and German contract law both offer the US the opportunity to participate in the bid process.
	(FOUO) The issue discussed in this condition statement is that LBB did not perform to the level required of their role in the bid process as defined by the ABG-75 and the VOB. Further, they did not provide copies of the documentation, as required by the aforementioned regulations. Had the US requested to participate in the LBB bid process and requested resulting documentation, this would have indicated to the LBB that they wanted to be more involved in the contractor selection process, as provided by the ABG-75 and the VOB.
Tab B, Solicitation and Award,	<b>(FOUO) USAFE/A7:</b> As stated above, LBB was under intense scrutiny with all proposed award actions requiring GBB approval before submitting to the US for approval. Although there were discussions

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## Audit Result 2, Condition, Bullet 2

between USAFE/A7CC and GBB officials once all German contract award evaluations were complete, this is an LBB process and the ABG-75 does not afford the US the opportunity to participate in contractor evaluations, despite our request to do so.

**(FOUO)** The GBB, not USAFE, was held accountable for compliance with German contracting law, and therefore it took considerably more time than we anticipated in reviewing and approving award recommendations. The excerpt below is from a briefing addressing this topic:

(FOUO) We do not use best value contracts in Germany due to German contracting laws; however we do have some options to improve our chances for success on projects. The typical construction contract through LBB is awarded to the low bidder deemed acceptable during LBB's technical and cost evaluation. LBB does evaluate proposals and eliminates bidders that it assesses as incapable of performing the work or where technical/cost proposal is in obvious error. With the recent investigations ongoing with LBB-KL, these evaluations are under intense scrutiny and all proposed awards are forwarded to GBB for approval.

(**FOUO**) Our best opportunity for success is through using selective bidder lists for our contracts. The selective bidders, typically about eight, are pre-qualified; awards are still based on low bid. Our housing program has enjoyed success using this process. The Ministry of Construction and GBB resist using selective bidders lists exclusively on our projects and entertain only those projects that are mission critical such as the 16 AF Air Operations Center; or on housing, where delays to any single phase of construction impacts subsequent phases.

**(FOUO) AFAA:** The US participation in the bid process is authorized, as promulgated by the ABG-75 and the VOB. The LBB's investigation resulting in "intense scrutiny" does not release them from their responsibility to obtain and maintain records of contractor qualifications. Further, audit found no evidence USAFE requested this documentation. USAFE/A7 would benefit from the provision of

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contractor qualifications both when validating whether contractors are competent and qualified to perform contracted work and when writing rebuttals to contractor selection in accordance with the ABG Form 4 process. Therefore, audit maintains its position that USAFE personnel did not ensure the bid process was properly documented.

**(FOUO)** Management did not provide documentation related to the housing program for audit review at any time during or following the audit. As a result, audit cannot validate the document excerpt or its source or purpose. As a result, we can only make an assessment based on known data obtained during the audit.

# Tab B, Solicitation and Award, Audit Result 2, Cause, Bullet 2

**(FOUO) USAFE/JAI:** LBB is required to examine bidder qualifications at public/open solicitations prior to the invitation to tender, VOB/A Section 25, Para 2. For details on the foreseen US involvement the examination and selection process see ABG 75, Article 5 plus the Implementing Instructions hereto. The German authorities shall furnish the US Forces timely information on the number and names of the proposed tenderers. No further details on which documentation must be provided is provided for in current agreements.

**(FOUO) AFAA:** Audit agrees the LBB is required to examine bidder qualifications in accordance with the VOB, Part A:

- **(FOUO)** Section 1, §8, paragraph 5(2) states, "Clients are entitled to require candidates or bidders to submit appropriate certificates issued by the responsible authorities or to make corresponding declarations" of their competence, efficiency, and reliability.
- **(FOUO)** Part II of the ABG-75, Article 5, paragraph 5.1 states, whereas, "The method of invitation to tender for construction works shall be agreed between the German authorities and the Forces." "The Forces may request deletions, additions or substitutions to be made. The German authorities shall check the financial reliability and technical capabilities of all firms nominated by German authorities and, if requested, those nominated by the Forces. The German authorities shall

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conform with regulations for awarding contracts for Federal building. The Forces' recommendations shall be compiled in so far as they do not contravene these regulations. If they do contravene these regulations, the German authorities shall inform the Forces in writing giving the reasons for their objections to the Forces' recommendations."

- o **(FOUO)** Paragraph 5.3 states, "The Forces may reject, through the German authorities, any tender in so far as this rejection is not in conflict with German Law."
- o (FOUO) LBB personnel validated if the US Forces believe the contractor selected is not reliable, the only way to request the bid not be accepted is to refuse to sign the ABG Form 4 document accepting the tenderer and provide an explanation of the reasons why not. This could potentially lead to litigation and the LBB would prefer to write additional qualifications into a contractor's contract requirements rather than proceed to litigation. This is because there are certain stipulations in the VOB in which the LBB can turn down a bid, and if the US's request not to select the contractor does not meet these legal requirements, the LBB would be required to select the contractor.
- o **(FOUO)** LBB personnel further confirmed the US currently does not provide information to the LBB on quality concerns. Further, the US and the LBB did not establish a process for the contractor to provide qualifications for US review, other than that stated in the VOB, Part A, Section 1, §8, paragraph 5(2).

**(FOUO)** Therefore, audit concludes USAFE cannot reasonably contest the competency of a contractor without first knowing their specific qualifications, which would be provided by LBB, since there are currently no methods to otherwise obtain the information.

Tab B,

(FOUO) USAFE/A7 & 435 CEG: Ongoing, long-term discussions

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# Solicitation and Award, Audit Result 2, Cause, Bullet 4

over proposed amendments to the ABG-75 have addressed the need for LBB contractor source selection criteria to include contractor past performance evaluations. This continuing effort affecting all sending state forces goes well beyond the purview of this audit. We have offered for LBB's consideration insight into the best value procurement methodologies DOD employs for awarding contracts including objective contractor source selection criteria. However, even if given the opportunity, USAFE is not in a suitable position to evaluate German contractors.

(FOUO) AFAA: Audit contends this cause applies as much to identifying to the LBB and managing problems with contractors' and construction managers' (CMs) management of construction projects as it does to document submissions to LBB recommending selecting or rejecting contractors during the bid process. Although USAFE cited numerous concerns with contractors and CMs, during our audit fieldwork we did not identify any record of USAFE's previous concerns with contractors was on file with the LBB for their review during contractor selection. If contractor qualifications and concerns with contractor performance are not properly documented, neither USAFE nor the contract agent has adequate assurance the contractor could be held liable if he is found incapable of performing all contracted items. This could result in contractor default and/or additional charges to the government to re-solicit contracts or further subcontract original project requirements.

# Tab B, Solicitation and Award, Audit Result 2, Impact

(FOUO) USAFE/JAI: Article 5.2 ABG 75 provides for the following: In the case of limited invitations to tender or open invitations to tender at the request of the Forces, the number and names of proposed tenderers for each tender action are to be agreed between the German authorities and the Forces. The Forces may request deletions, additions or substitutions to be made. The German authorities shall check the capacity and expertise as well as the financial reliability and technical capabilities of all firms nominated by German authorities and, if requested, those nominated by the Forces. The German authorities shall conform with regulations for awarding contracts for Federal building. The Forces' recommendations shall be complied with in so far as they do not contravene these regulations. If

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they do contravene these regulations, the German authorities shall inform the Forces in writing giving the reasons for their objections to the Forces' recommendations.

**(FOUO) USAFE/A7:** Although the US has the right to reject the selection of a particular contractor, USAFE has been unsuccessful in this process on recent projects even when past performance was well documented. Specifically, USAFE/A7CC formally submitted to LBB in July 2006 details of repeated poor performance of one contractor on several Ramstein AB projects, but we were still unsuccessful in denying that firm future work on base.

(FOUO) AFAA: Audit agrees the LBB is required to examine bidder qualifications in accordance with the VOB, Part A, Section 1, §8, paragraph 5(2) states, "Clients are entitled to require candidates or bidders to submit appropriate certificates issued by the responsible authorities or to make corresponding declarations" of their competence, efficiency, and reliability. However, as management discloses above, Part II of the ABG-75, Article 5, paragraph 5.1 states, whereas "The method of invitation to tender for construction works shall be agreed between the German authorities and the Forces. The Forces may request deletions, additions or substitutions to be made. The German authorities shall check the financial reliability and technical capabilities of all firms nominated by German authorities and, if requested, those nominated by the Forces. The German authorities shall conform with regulations for awarding contracts for Federal building. The Forces' recommendations shall be compiled in so far as they do not contravene these regulations. If they do contravene these regulations, the German authorities shall inform the Forces in writing giving the reasons for their objections to the Forces' recommendations." Further, paragraph 5.3 states, "The Forces may reject, through the German authorities, any tender in so far as this rejection is not in conflict with German Law."

**(FOUO)** LBB personnel validated if the US Forces believe the contractor selected is not reliable, the only way to request the bid not be accepted is to refuse to sign the ABG Form 4 document accepting the tenderer and provide an explanation of the reasons why not. This

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could potentially lead to litigation, and the LBB would prefer to write additional qualifications into a contractor's contract requirements rather than proceed to litigation. This is because there are certain stipulations in the VOB in which the LBB can turn down a bid, and if the US's request not to select the contractor does not meet these legal requirements, the LBB would be required to select the contractor. LBB personnel further confirmed in August 2006 the US currently does not provide information to the LBB on quality concerns. Further, the US and the LBB did not establish a process for the contractors to provide qualifications for US review, other than that stated in the VOB, Part A, Section 1, §8, paragraph 5(2).

**(FOUO)** Therefore, audit concludes USAFE cannot reasonably contest the competency of a contractor without first knowing their specific qualifications, which would be provided by LBB, since there are currently no methods to otherwise obtain the information.

# Tab B, Solicitation and Award, Audit Result 2, Recommendation B.1

**(FOUO) 435 CEG:** Nowhere does the ABG-75 allow for joint participation in the source selection or prequalification. The agreement does provide for US to be present during bid opening but not as a voice of agreement or dissent. The only opportunity to reject is when LBB makes a tender offer on an ABG 4 and then that could be overruled if GBB believes this violates German law.

(FOUO) AFAA: The ABG-75, Part II, Article 5, paragraph 5.2 states, "The Forces shall be informed in good time of the date and place of opening of the tenders." Further, it states, "To ensure the timely notification, the US Forces shall be furnished the "invitation to tender" at the same time as the proposed tenderers." Further, German contract law (the VOB), Part A, Section 1, §10, paragraph 1(a) states "The tender documents include the letter of invitation (call for tenders), conditions of application, and the contract documents." This description could be reasonably substituted for the US FAR requirement for a Request for Proposal. Therefore, audit concludes the ABG-75 and German contract law both offer the US the opportunity to participate in the bid process.

Tab B,

(FOUO) 435 CEG: LBB maintains these records and we have them

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# Solicitation and Award, Audit Result 2, Recommendation B.5

with the ABG 4s.

**(FOUO) AFAA:** Qualification surveys are completed by the contract agent to determine and evaluate the technical, production, quality assurance, and financial capabilities of the contractor and to determine accounting services and related internal controls. In addition, the qualifications survey would normally include an evaluation of property control, transportation, packaging, security clearance capability, safety, and environmental and engineering controls.

(FOUO) Audit validated the contract agent (LBB) determines the contractor is capable of performing all contracted items by performing this survey, but they do not maintain records of the contractor's qualifications because the VOB does not specifically require them to do so. Further, the US and the LBB do not have an established process for the contractor to provide qualifications for US review, other than that stated in the VOB, Part A, Section 1, §8, paragraph 5(2) states, "Clients are entitled to require candidates or bidders to submit appropriate certificates issued by the responsible authorities or to make corresponding declarations" (of their competence, efficiency, and reliability).

(FOUO) USAFE did not request contractor qualification documents. The ABG Form 4 document does not meet all requirements of a typical qualification survey, as outlined above. This pre-solicitation survey should be completed far before the bid process commences. Finally, if contractor qualifications and concerns with contractor performance are not properly documented, neither USAFE nor the contracting agent has adequate assurance the contractor could be held liable if he is found incapable of performing all contracted items. This could result in contractor default and/or additional charges to the government to re-solicit contracts or further subcontract original project requirements.

## Tab B, Solicitation and

**(FOUO) USAFE/A7:** See the earlier comments on liquidated damages and the point that they can be enforced with or without

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## Award, Audit Result 3, Condition

clauses. A7CC is focusing on having LBB document delays and financial impacts from poor performance in the areas of design and scheduling to pass onto the Construction Management. In regard to the liability of subcontractors, this is not required. LBB is required by VOB to hold the main contractor responsible for completion of the work, regardless if a subcontractor is used or not. If the main contractor is unable to perform part of its work, the LBB will contract with another company to perform the work and then bill the main contractor for that portion of the work in accordance with VOB. This actually occurred when one of the contractors declared bankruptcy and LBB then acted as general contractor to complete the work.

(FOUO) AFAA: The ABG-75, Part II, Article 4.1, paragraph 4.1.2 states, "Liquidated damages are agreed upon if the contractor is late completing the construction work." Unlike US contracting procedures, the ABG-75 does not require the inclusion of this clause; however, the VOB (German contract law) does require them to pursue liability. Audit found no evidence of liquidated damages clauses in KMCC contracts and confirmed with the LBB that this clause was not requested by the US government.

(FOUO) The LBB confirmed liquidated damages clauses should be inserted in trade-wise contracts in accordance with the VOB. Specifically, the VOB Part B, §5, paragraph 4 states, "If the contractor delays the start of work, or if he does not complete it on time, or if he does not meet his commitments under No. 3 above (detailing the required number of workers, equipment, materials, or components to execute work), the client may, if he maintains the contract, seek damages in accordance with §6, paragraph 6, or set the contractor a reasonable term for the fulfillment of the contract and serve notice of his intention to withdraw the contract id, on expiration of the term, the contract has not been duly fulfilled (cf. §8, No. 3)."

(**FOUO**) The VOB Part B, §6, details the LBB's actions in regard to contractor obstruction and interruption of work. In addition, the ABG-75, Part II, Section A. Execution, Article 4.1, paragraph 2 states, "Liquidated damages are agreed upon if the contractor is late completing the construction work. Such damages will be at the rate of one-tenth of one percent of the final construction contract amount for

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each workday (i.e. calendar days excluding Sundays and German holidays) of delay, but in no event exceed a total of 10 percent of the contract amount."

**(FOUO)** LBB personnel stated, "The LBB uses a paragraph reference to the liquidated damages in their contracts. Specifically, the LBB would have to prove the contractors were behind contracted schedules. Further, if the contractors agree to provide assurances they will fulfill the contract through the warranty period, the LBB will only pursue liquidated damages for hindrances by other contractors. In this process, the LBB evaluates alleged hindrances and when necessary, takes liable contractors to court using the hindered contractors' calculations and statements of overhead."

(FOUO) Audit found no evidence suggesting otherwise, nor did management provide any. An e-mail dated 9 January 2006 from USAFE CV and USAFE A7/CC validated USAFE's lack of oversight in liquidated damages clauses. Specifically, it validated USAFE did not make sure the LBB inserted liquidated damages clauses in the KMCC or Fitness Center contracts. Audit notes this condition occurred because USAFE management did not provide appropriate oversight to ensure US interests were protected through LBB insertion of liquidated damages clauses in KMCC contracts.

# Tab B, Solicitation and Award, Audit Result 3, Cause

**(FOUO) USAFE/A7:** Neither of these observations is the reason liquidated damages have not yet been pursued. This wording suggests a single USAFE senior manager approved the decision to use trade contracts versus a general contractor. A previous program manager advises that this decision was not made in a vacuum and, based on the RMTP program which used no general contracts because of German financing; we do not believe general contracts could have been awarded on this project.

**(FOUO)** Liquidated damages have no relation to the use of general contractor or trade contracts. Liquidated damages can still be pursued against LBB for inadequate performance of its responsibilities of design and construction management by way of A-E liability.

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**(FOUO) AFAA:** There was no legal requirement to solicit the KMCC contracts as trade-wise agreements and limiting or eliminating the need for subcontractors was a concern for both security and invoice review processes. The design of the project began in May 2003, prior to the ABG Form 3 document submitted by the US Forces in October 2003. The US leadership requested the construction shell start first in August 2004, which resulted in a trade contract issued. Once contracted, the shell construction began November 2004.

(FOUO) According to a senior USAFE manager, USAFE leadership wanted to perform infrastructure work while still in the design phase. This contracting method could be done either with a general contractor or through trade-wise contracts. The decision was recommended by LBB based on the size of the contract. Further, the LBB and the original Project Manager agreed the use of trade-wise agreements would eliminate the need for subcontractors; thus, the LBB confirmed this was the best way to offer opportunities for small companies who would otherwise not be able to compete for a contract of this magnitude to form a conglomerate by trade. Finally, a senior USAFE manager stated he agreed to the use of trade-wise contracts based on this understanding.

(**FOUO**) We did not identify facts to substantiate the RMTP financing agreement required the use of trade-wise contracts. The Passenger Terminal Annex was an RMTP project done using a general contractor. In our opinion, the use of a general contractor would have provided the avenue to pursue concerns with subcontractor performance through the prime contractor, whereas the absence of liquidated damages clauses in trade-wise contracts did not allow the LBB to pursue concerns with trade contractors.

**(FOUO)** We agree that liquidated damages can still be pursued against LBB for inadequate performance of its responsibilities of design and construction management; however, we recommend that USAFE/A7 should jointly establish procedures with the LBB to insert liquidated damages clauses in future trade-wise construction contracts.

Tab B,

(FOUO) USAFE/JAI: There can not be such thing as full legal

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# Solicitation and Award, Audit Result 3, Impact

assurance the contractor could be held liable. There will always be a certain amount of risk involved. In fact there is no more assurance contractors will be held liable under the terms of the ABG-75 and German court action than there is if this was a project being executed in the US IAW the Federal Acquisition Regulation and US law. The mere fact the US makes a claim for some sort of breach by a given contractor does not guarantee a finding in favor of the US Contractors here have most of the same defenses and counterclaims they would have in the US and an equal right to present them to a court of law. To expect a guarantee that the US claim (even when made by the German government on our behalf) would prevail indicates unfamiliarity with the judicial process in general. And even should the US claim prevail, there is nothing neither the US nor the FRG could do to prevent a contractor from declaring bankruptcy and seeking protection against financial liability. Those are risks the US encounters in every contract it enters into, regardless of location.

(FOUO) AFAA: Audit does not expect a guarantee that the US claim would prevail in a German court of law. Neither the US Air Force, nor its auditors, can force the LBB to pursue damages and neither has control over the proceedings and determinations of the German court system. However, audit can and does recommend the US request LBB pursue damages for suspected liability, as is prudent and required in accordance with Department of Defense Financial Management Regulations (DoD FMR). The risks mentioned by the USAFE/JAI do no prevent USAFE from following proper and prudent procedures in accordance with US and German Laws and the DoD FMR.

# Tab C, Construction Change Orders and Cost and Schedule Growth, Background, Paragraph 1

**(FOUO) USAFE/A7:** Construction change orders are required to follow an approval process as outlined in both VOB and ABG-75. A simplified ABG-75 process for change order approval is outlined in Appendix III, Attachment 5. USAFE does approve construction change orders in accordance with the ABG-75 process.

**(FOUO) AFAA:** Missing modifications are change orders to construction contracts that were initiated by the contracting agent (LBB), construction agent, or contractors that the AF did not receive

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and for which the AF did not give prior approval. The ABG-75 Part II states:

- **(FOUO)** Article 4, paragraph 4.4: "Measures changing or affecting the scope, quality or cost of construction works from that specified by the Forces shall require the prior consent of the Forces."
- **(FOUO)** Article 12, paragraph 12.3: "The contract amounts (Article 7.1.6) may not be committed or exceeded unless written approval of the Forces has been obtained. The "contract amounts" within the meaning of Article 12.3 and the "amounts approved" within the meaning of Article 12.5 are those amounts which the US Forces confirmed as established on part II of ABG Forms 4/5."
- **(FOUO)** Article 12, paragraph 12.5 states "Any costs in excess of the amount approved by the Forces (Article 12.3) will not be borne by them unless their prior approval for these additional funds has been obtained."

(**FOUO**) In our opinion, USAFE did not properly monitor and approve change orders. For example, personnel were not aware of and did not obtain missing change orders (427 or 490 LBB- or contractorgenerated change orders) and approve construction change orders in accordance with the ABG-75 process.

# Tab C, Construction Change Orders and Cost and Schedule Growth, Background, Paragraph 2

**(FOUO) USAFE/A7:** Since early in the construction, LBB has not provided USAFE notification of change orders prior to implementation. This situation was the topic of several discussions and verbal requests to LBB since September 2006, and when results were not forthcoming, USAFE/A7 sent a memo 2 November 2006 to LBB requesting adherence with ABG-75, specifically for notification and written approval of change orders prior to implementation for all future changes.

(FOUO) AFAA: German contract law (VOB) states:

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- **(FOUO)** Part B, §2, paragraph 6(1): "If the contractor is called upon to undertake work not provided for in the original contract, then he shall be entitled to receive special remuneration for it. He is, however, required to notify the client of his claim before proceeding to execute the work."
- **(FOUO)** Part B, §2, paragraph 6(2): "Whenever possible, the sum due shall be agreed before execution of the work."
- **(FOUO)** Part B, §2, paragraph 8(1): "Work executed by the contractor without instructions to do so, or as an unauthorized departure from the provisions of the contract, will not be remunerated."
- **(FOUO)** Part B, §2, paragraph 8(2): "However, the contractor is entitled to receive remuneration for such work is the client subsequently accepts it. He is also entitled to remuneration if the work was necessary for completion of the contract, might be deemed to comply with the presumed intention of the client, and if the latter was given notice of it without delay."

(FOUO) Audit agrees prior to the audit documentation support request on 24 July 2006, LBB did not provide change order documentation to USAFE in a timely manner. This information was provided in the cause to this audit result. However, the ABG-75 Part II, Article 4, paragraph 4.4 states "Measures changing or affecting the scope, quality or cost of construction works from that specified by the Forces shall require the prior consent of the Forces."

(FOUO) Further, when audit informed USAFE they were not receiving the LBB- or contractor-initiated change orders during the audit, USAFE did not raise this issue to the Geschäftsbereich Bundesbau (GBB) for resolution. The USAFE personnel contributed to problems with the change order process. Specifically, the PMO did not effectively implement established construction change order review processes to ensure change orders were valid, authorized, and within project scope. Further, USAFE did not request notification of construction change orders from the LBB prior to change order implementation per the ABG-75 and German law (the Vergabe- und

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Vertragsordnung für Bauleistungen (VOB)) because this is how construction change orders were historically handled on this project to date.

**(FOUO)** Though management stated they requested adherence to the ABG-75, audit notes the 2 November 2006 memorandum states, "USAFE will continue to pay invoices submitted by LBB without an accompanying ABG Form 5 document so long as LBB has verified in writing that the work was necessary, properly performed, and at a fair and reasonable price." Audit notes the ABG Form 5 document is the obligating document required for the change order.

(**FOUO**) Audit reiterates Article 12, paragraph 12.3 of the ABG-75 states, "The contract amounts (Article 7.1.6) may not be committed or exceeded unless written approval of the Forces has been obtained. The "contract amounts" within the meaning of Article 12.3 and the "amounts approved" within the meaning of Article 12.5 are those amounts which the US Forces confirmed as established on part II of ABG Forms 4/5." Without an obligating document, paying invoices for amounts not validated is considered an improper payment, as outlined in Audit Results 6. Further, paragraph 12.5 states, "Any costs in excess of the amount approved by the Forces (Article 12.3) will not be borne by them unless their prior approval for these additional funds has been obtained."

**(FOUO)** Considering USAFE was not aware of these construction change orders, and audit found no evidence of prior approval for them to be processed, audit concludes the costs should not be borne by the US, in accordance with the ABG-75.

Tab C, Construction Change Orders and Cost and Schedule Growth, Audit Result 4, Condition **(FOUO) USAFE/A7:** PMO evaluated all change orders that were submitted to USAFE. Additionally, USAFE tracked all processed change orders in a spreadsheet. The US has been unable to review and validate all contractor change orders only because LBB did not and has not provided the change order documentation in a timely manner to keep pace with construction progress. USAFE/A7CC personnel had repeatedly requested change order paperwork be submitted immediately. This was repeated and documented in the weekly

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KMCC working group meeting minutes as early as December 2005 and also discussed in the weekly KMCC Update to USAFE/A7 since 28 March 2006. The magnitude of the problem with change order processing was first noted by USAFE on 20 July 2006 when a list was received of 395 change orders in various stages of LBB processing. Since that time, we have aggressively engaged with LBB to expedite the processing of these change orders.

**(FOUO)** This issue has even been discussed with the Ministry of Finance by senior USAFE leadership. As an additional control measure, USAFE added an "anticipated" modification section to the tracking spreadsheet.

(FOUO) AFAA: In our opinion, we determined the PMO did not effectively implement established construction change order review processes to ensure change orders were valid, authorized, and within project scope prior to payment. For instance, a review of USAFE policies and procedures revealed USAFE did not establish procedures directing project managers or other personnel to review and validate cost estimates. In addition, USAFE personnel did not review and validate all contractor invoices with modification documents to ensure requested payments were valid, authorized, and within project scope. Thus, they did not evaluate all change orders submitted.

(**FOUO**) Our review of KMCC project files disclosed the Project Manager tracked only internally-generated change orders prior to the audit's discovery of missing change orders. Upon audit's request, the LBB provided a spreadsheet documenting not only the change orders requested to 20 July 2006, but also all pending change orders known at that time. Audit concludes had USAFE requested this document, they could have better tracked the change orders and potential cost growth. This would also have served as a means to track missing ABG Form 5 documents. USAFE has pursued only verbal or written notification of change orders, and has not required actual obligating documents requiring US approval.

Tab C, Construction Change **(FOUO) USAFE/A7:** PMO procedures were developed early in construction phase to review ABG-5s and provide feedback prior to

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Orders and Cost and Schedule Growth, Audit Result 4, Cause, Bullet 1 approval. LBB did not initially provide all contractors requested change orders because it first wanted to validate them before providing to the US, as many contractor requests for increases were found to be invalid. As stated above, USAFE has adopted new procedures to rectify this for future change orders.

(FOUO) AFAA: In our opinion, the procedures were established but not effectively implemented. Specifically, although established procedures called for PMO review of all ABG Form 5 documents prior to construction work, USAFE did not require LBB to provide documents and did not provide any evidence to prove they were aware of construction change orders prior to or after change order implementation.

(FOUO) Though management stated they requested LBB adherence to the ABG-75, audit notes the 2 November 2006 memorandum states: "USAFE will continue to pay invoices submitted by LBB without an accompanying ABG Form 5 document so long as LBB has verified in writing that the work was necessary, properly performed, and at a fair and reasonable price." The ABG Form 5 document is the obligating document required for the change order.

(**FOUO**) Audit reiterates Article 12, paragraph 12.3 of the ABG-75 states: "The contract amounts (Article 7.1.6) may not be committed or exceeded unless written approval of the Forces has been obtained. The "contract amounts" within the meaning of Article 12.3 and the "amounts approved" within the meaning of Article 12.5 are those amounts which the US Forces confirmed as established on part II of ABG Forms 4/5." Without an obligating document, paying invoices for amounts not validated is considered an improper payment, as outlined in Audit Results 6. Further, paragraph 12.5 states "Any costs in excess of the amount approved by the Forces (Article 12.3) will not be borne by them unless their prior approval for these additional funds has been obtained."

(FOUO) Given that USAFE was not aware of these

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	construction change orders, and audit found no evidence of prior approval for them to be processed, audit concludes the new procedures proposed by management will not correct the deficiency and the costs should not be borne by the US, in accordance with the ABG-75.
Tab C, Construction Change Orders and Cost and Schedule Growth, Audit Result 4, Cause, Bullet 2	(FOUO) USAFE/A7: On 20 July 2006, USAFE received the first written evidence that LBB had not been following ABG-75. Upon receipt of this evidence, USAFE aggressively pursued resolving this past deficiency and has since rectified this situation for future change orders. Previous program manager supports the present management contention that repeated requests for notification of change orders were made to LBB as well as GBB.  (FOUO) AFAA: Refer to our response to Audit Result 4, Cause,
Tab C, Construction Change Orders and Cost and Schedule Growth, Audit Result 4, Cause, Bullet 3	(FOUO) USAFE/A7: USAFE/A7CC's previous program manager contends that the issue of timely construction change orders was addressed on several occasions with GBB, State Ministry of Finance and LBB Zentrale. LBB has promised increased staffing to process modifications more quickly, and has committed to clearing the backlog of pending contract change orders by 31 March 2007.  (FOUO) AFAA: Audit did not identify and management did not provide any evidence to support this statement.
Tab C, Construction Change Orders and Cost and Schedule Growth, Audit Result 4, Impact	(FOUO) USAFE/A7: Although USAFE has not received all outstanding change orders from LBB, every invoice is carefully reviewed in its entirety and USAFE personnel require a full explanation of any unprocessed change orders that are being billed for in accordance with USAFE/JA guidance. For more on the payment portion of this issue, refer to Audit Result 6.  (FOUO) AFAA: Audit results do not support this statement. For
	example, Audit Result 6 disclosed that PMO personnel did not implement established invoice review procedures to validate contractor invoices with contract and change order specifications and

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actual contractor work completed prior to authorizing payment. Specifically, USAFE personnel did not review and validate contractor invoices with modification documents to ensure requested payments were valid, authorized, and within project scope.

• (FOUO) 31 United States Code Section 3528, Responsibilities and Relief From Liability of Certifying Officials, requires a certifying official certifying a voucher be responsible for (1) information stated in the certificate, voucher, and supporting records; (2) the computation of a certified voucher under this section and section 3325 of this title; (3) the legality of a proposed payment under the appropriation or fund involved; and (4) repaying a payment that is determined illegal, improper, or incorrect because of an inaccurate or misleading certificate, prohibited by law, or that does not represent a legal obligation under the appropriation or fund involved. Section 8137 of Public Law 103-335 requires the Secretary of Defense to match DOD disbursements to specific obligations at the responsible accounting station, prior to disbursement.

(FOUO) If personnel do not review and validate contractor invoices with modification documents to ensure requested payments were valid, authorized, and within project scope, they are authorizing a payment for which they do not have a matching obligating document, and they may be in violation of the ABG-75 agreement, German contract law (VOB), and Section 8137 of Public Law 103-335 requiring the Secretary of Defense to match DOD disbursements to specific obligations at the responsible accounting station, prior to disbursement and could be held pecuniarily liable for improper payments made as result.

# Tab C, Construction Change Orders and Cost and Schedule Growth, Audit Result 5, Condition

**(FOUO) USAFE/A7:** As with any construction project, cost and schedule growth negatively affect the perception of control of the project. The USAFE project management team has effectively monitored the construction project to limit cost and schedule growth.

**(FOUO) AFAA:** In our opinion, the project has not been effectively monitored to limit cost and schedule growth. Refer to audit results

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	provided in Tab C of this report of audit.
Tab C, Construction Change Orders and Cost and Schedule Growth, Audit Result 5, Condition, Bullet 1	(FOUO) USAFE/A7: Construction change orders have always been tracked upon receipt of an ABG-5 document when approved by LBB. Additionally, user-requested change orders were monitored from the time it was first known that a change was required. Since September 2006, an additional tracking system was set up to track new change orders that LBB has not yet approved which we track as "anticipated."
	(FOUO) AFAA: Audit notes USAFE personnel did not track construction (externally-generated) change order amounts, description, resulting projected schedule delays, or costs prior to September 2006, as management confirms in their response above. Since only 87 of 638 (13.64 percent) total change orders (as of September 2006) were user-requested, audit concludes USAFE did not effectively monitor the construction project to limit cost growth.
Tab C, Construction Change Orders and Cost and Schedule Growth, Audit Result 5,	<b>(FOUO) USAFE/A7:</b> Although cost and schedule growth could be loosely tied back to design reviews by the need for change orders that could have potentially been avoided, this cause seems to be an overstatement for this audit result.
Cause, Bullet 1	(FOUO) AFAA: Audit stated the condition was that USAFE personnel did not effectively monitor the KMCC military construction project to limit cost growth. To effectively monitor cost growth, USAFE must also effectively monitor change orders, both user-requested and those that are initiated by the LBB, contractors, and construction managers. Since only 87 of 638 (13.64 percent) total change orders (as of September 2006) were user-requested, audit concludes USAFE did not effectively monitor the construction project to limit cost growth.
	(FOUO) To test this theory, we determined whether change orders were preventable. We requested USAFE/A7CCP evaluate the LBB's list of change orders and identify whether change orders were a result of engineering changes, items missing from contacts specifications, user-requested changes, miscellaneous change reasons, differing site conditions, value-engineering changes, or administrative changes.

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**(FOUO)** We included in the preventable category only change orders for items completely missing from the specifications, user-requested changes, miscellaneous, and administrative changes. We did not include engineering changes, value-engineering changes, or differing site conditions.

**(FOUO)** Audit agrees some changes are not preventable and believes the distribution above most accurately reflects that statement in that it accounts for unpreventable change orders and all those marked as questionable in management's change order review. Moreover, management identified these change orders as preventable.

(**FOUO**) We agree line-item contracting means the US should only pay for work completed and that all line-item contracts will have some change orders. However, line-item contracting is not the cause for the preventable change orders identified in this finding – the design not being technically sound was cause for additional change orders, as identified by the change orders as a result of missing specification items. Specifically, had the original design been properly reviewed and review comments properly incorporated, the project would not have incurred many of the change orders identified.

Tab C, Construction Change Orders and Cost and Schedule Growth, Audit Result 5, Cause, Bullets 2 & 3 **(FOUO) USAFE/A7:** In retrospect, we agree that this could have contributed to some of the cost growth; however, the deliberate decision during acquisition strategy development to fast-track the project was driven by the RMTP and mission requirements.

(FOUO) Approval of the use of trade contracts was agreed to at senior leader level weighing options available and under the political/legal restrictions of the LBB and GBB regarding VOB contracting requirements. LBB contracted a construction manager for the KMCC. USAFE/A7 concurs that based on this project, LBB is not set up to act as a general contractor, however, they were successful over the previous several years with the management of the RMTP program and there was no evidence at that time to suggest that they would not be capable.

**(FOUO) AFAA:** There was no legal requirement to solicit the KMCC contracts as trade-wise agreements. The US leadership

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requested the construction shell start first in August 2004, before the design completion, which resulted in a trade contract issued. This contracting method could be done either with a general contractor or through trade-wise contracts. As previously stated, audit identified several examples of design errors and subsequent change orders related to the lack of incorporation of design review comments.

# Tab C, Construction Change Orders and Cost and Schedule Growth, Audit Result 5, Cause, Bullet 4

**(FOUO) USAFE/A7:** The use of one firm serving as both construction manager (CM) and designer of record is not uncommon and is essentially design-build contracting—a prevalent and growing method of construction delivery. A key concern with the KMCC project is that LBB provides insufficient oversight of its CM who is widely acknowledged to have performed poorly. In fact, on 26 September 2006 LBB had to relieve this firm of much of its CM agent pecuniarily responsibilities.

(FOUO) AFAA: Audit agrees the use of one firm serving as both CM and designer of record is not uncommon and is essentially designbuild contracting. Audit concluded based on this understanding that the KMCC project was a hybrid construction project based on the design-build concept, using the construction management design build methodology and competitive bidding, but without using a general contractor. This is because the contract laws in Germany require the Bauamts to contract for construction and do not allow the construction manager to act as a general contractor who both designs the project and solicits bids from subcontractors and suppliers. Thus, the construction manager has little control or authority over subcontractors because they do not have the same authority as a general contractor would normally employ. Audit did not evaluate whether LBB provided insufficient oversight of its construction manager, and audit did not determine, nor did management provide, any evidence to support CM was widely acknowledged to have performed poorly.

**(FOUO)** Audit confirms that the LBB relieved the firm of their construction management duties in September 2006. The LBB hired the design contractors to perform construction management duties and this action did not allow a proper separation of duties, that would normally result in an independent review of construction costs and

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Tab C, Construction Change Orders and Cost and Schedule Growth, Audit Result 5, Cause,	schedule concerns, in light of the fact there was no general contractor liability or authority, as stated in the last cause.  (FOUO) USAFE/A7: PMO responsibilities included reviewing ABG 5s to validate work and costs for reasonableness; this cause results solely from LBB not processing ABG 5s in a timely manner, which is a repeat observation. For full explanation refer to Audit Result 4.
Bullets 5 & 6	<b>(FOUO) AFAA:</b> Refer Audit Results 4 and Audit Results 6 for internal control weaknesses identified during the audit.
Tab C, Construction Change Orders and Cost and Schedule Growth,	<b>(FOUO) USAFE/A7:</b> PMO had this charter and sufficient qualified internal staff and contract personnel to accomplish cost reviews, and they continue to perform this function for all modifications.
Audit Result 5, Cause, Bullet 7	<b>(FOUO) AFAA:</b> Although the PMO had an established process to review change orders, they did not effectively implement internal controls sufficient to accomplish effective cost reviews.
	(FOUO) Further, a review of USAFE policies and procedures revealed USAFE did not establish procedures directing project managers or other personnel to review and validate cost estimates as part of the change order process. In addition, USAFE personnel did not review and validate all contractor invoices with modification documents to ensure requested payments were valid, authorized, and within project scope.
	(FOUO) A review of KMCC project files disclosed the Project Manager tracked only internally-generated change orders prior to the audit's discovery of missing change orders. Thus, they did not evaluate all change orders as claimed and will require additional corrective action. Simply continuing to perform the current process would not meet the definition of due diligence in cost reviews.
Tab C, Construction Change Orders and Cost and	(FOUO) USAFE/A7: LBB orchestrates weekly construction meetings with all contractors and PMO attends to maintain awareness of construction progress and pertinent schedule issues. Based on these

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Schedule Growth, Audit Result 5, Cause, Bullet 8 meetings, USAFE/A7 has demanded schedules at LBB, LBB-Zentrale, GBB, and State Ministry of Finance levels. Despite continuing pressure from USAFE at all levels, LBB has failed to date to provide a valid, approved and contractually binding construction schedule.

(FOUO) AFAA: Audit obtained copies of the KMCC construction schedule for the Mall and VQ sections of the KMCC dated 19 and 26 July 2006, respectively. A review of the construction schedules validated the LBB-hired scheduler only listed contractor scheduled tasks by the number of days allocated to complete the projects. However, the schedules did appear to take into consideration the order of contractor tasks and how a delay in one area would affect other contractors. Numerous schedule delays are shown where the scheduler shifted the accomplishment dates from the planned beginning and ending dates to their actual dates. Audit did not find evidence to support LBB requiring contractors to meet project schedule deadlines or LBB/construction manager meetings with contractors to coordinate construction task timelines. In addition, we obtained copies of letters between the LBB and USAFE documenting schedule slippage on the KMCC Mall and VQ.

**(FOUO)** This condition occurred because neither the construction schedules nor LBB policies required the construction manager to ensure contractors adhere to scheduled timelines. Further, neither LBB nor construction managers held meetings with contractors to coordinate construction task sequencing, prior to the audit.

**(FOUO)** Finally, LBB personnel did not timely notify USAFE personnel of schedule changes. Audit discussed this concern with management on 26 November 2006.

**(FOUO)** USAFE/A7CCP stated the most prominent cause of this concern was, "Neither LBB nor construction managers met with USAFE or contractor personnel to discuss construction task sequencing as schedule changes occurred." As a result, the KMCC project has slipped from its original beneficial occupancy dates (BODs). Moreover, schedule timeliness helps minimize resulting contractor delay claims.

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	(FOUO) Audit did not identify and management did not provide evidence to support management's statement that "LBB orchestrates weekly construction meetings with all contractors and PMO attends to maintain awareness of construction progress and pertinent schedule issues". However, audit does agree "despite continuing pressure from USAFELBB has failedto provide a valid, approved and contractually binding construction schedule."
Tab C, Construction Change Orders and Cost and Schedule Growth, Audit Result 5, Impact, Bullet 2	(FOUO) USAFE/A7: Since 2 November 2006, USAFE has been provided a single page form as prescribed by the memo from USAFE/A7 to LBB for all future change orders. PMO acknowledges and determines if the change order is required for the completion of the project and signs the form if it is.  (FOUO) AFAA: This action was noted in Management Corrective Action C.6.
Tab C, Construction Change Orders and Cost and Schedule Growth, Audit Result 5, Impact, Bullet 3	(FOUO) USAFE/A7: The original schedule of 28 April 2006 and 15 September 2006 represented a very aggressive schedule. In fact, the USAF completion goal for a project \$20 million or more is 27 months. Based on the November 2004 groundbreaking, the USAF "Dirtkicker" goal would have been February 2007 for completion of the facility. Given that the construction value of this facility is more than eight times the basis of that "Dirtkicker" metric suggests how optimistic the original schedule was. All that said, having a contractual schedule is imperative to overall construction management and essential to maintaining cost and schedule discipline. USAFE/A7 staff continues to actively pursue a project schedule from LBB-KL and GBB, although we have yet to receive a valid schedule from which LBB can commit contractors.
	(FOUO) AFAA: In our opinion, the aggressiveness of the schedule was immaterial to the impact stated. The LBB and construction manager did not meet with USAFE or contractor personnel to discuss construction task sequencing as schedule changes occurred as a result

<sup>&</sup>lt;sup>14</sup> (FOUO) Post award/target beneficial occupancy dates (BOD)

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	of multiple change orders.
Tab D, Contractor Payments, Background, Paragraph 1	<b>(FOUO) USAFE/A7:</b> USAFE agrees in principle that payment for goods not received is an improper payment. Excessive quantities and change orders are all validated to ensure work was 1) necessary, 2) properly performed, and 3) fairly and reasonably priced prior to processing payment in accordance with USAFE/JA staff recommendation.
	<b>(FOUO) AFAA:</b> Refer to Audit Results 4. In our opinion, management did not properly review and validate change orders prior to implementation. Further, audit determined in Audit Results 6 that management did not properly review and validate the associated cost estimates.
	(FOUO) The ABG-75, Part II, Section A, Article 4, paragraph 2.2 of the Implementing Instructions states, "The realization of changes under 2.1 always require a change request (ABG Form 5 Part I or 5 A) and an order of the US Forces by use of ABG Form 5 Part II."
	<b>(FOUO)</b> As previously stated in audit's response to management's comments on Recommendation C.3., the ABG Form 5, <i>Change Order Document</i> , is the obligating document required in order to match an invoice disbursement with the obligation, as defined in the DoD FMR.
	(FOUO) Further, the US should not be held financially liable for change orders for which they did not prior approve. Audit contends management should not make payments on invoices for which they cannot validate the invoice with an approved ABG Form 4 or 5 to confirm it is valid, authorized, and within project scope in accordance with the ABG-75, VOB, and US Code. Excessive quantities are not an exception to this rule.
	(FOUO) If management continues to make payments without proper invoice validation with the modification documents, as they propose to request LBB make a "full explanation" of the change order requirements as opposed to validating them with approved ABG 4s and 5s, they may be in violation of the ABG-75, VOB, US Code, and may be held pecuniarily liable.

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Tab D,
<b>Contractor Payments,</b>
Audit Results 6,
Cause,
Bullet 2

**(FOUO) USAFE/A7:** From the beginning of construction, invoices were reviewed concurrent with invoice processing in order to process payment within the allotted time. If errors were suspected, they were corrected in the subsequent partial invoice. Since 1 September 2006, invoice review is now accomplished prior to USAFE processing for payment.

(FOUO) AFAA: This cause statement refers to the invoice validation required to be performed by KMCC construction managers, not to USAFE actions. If USAFE was, in fact, reviewing invoices, per their statement, they knowingly proceeded with improper payments in spite of identifying errors and claim to have pursued offsetting adjustments in future invoices. Audit reiterates paying invoices without proper invoice validation results in improper payments and certifying and approving officials may be held pecuniarily liable. Further, USAFE did not establish internal controls sufficient to prevent change orders resulting from design errors. Thus, contractors aware of the lack of internal controls could potentially invoice for other items, such as line-item quantity increases or potential A-E liability-related change orders. If management provides evidence of this corrective action, audit will document it appropriately.

# Tab D, Contractor Payments, Audit Results 6, Cause, Bullet 3

(FOUO) USAFE/A7: USAFE reviews contractor invoices against pending or completed contract modifications in every instance in which such documentation is available. In the absence of such documentation, USAFE has LBB provide invoices accompanied with statements signed by both the senior project manager and project engineer certifying that each invoice has been reviewed for accuracy that the work was 1) necessary, 2) properly performed, and 3) fairly and reasonably priced, as coordinated with the USAFE/JA staff. PMO personnel check that the invoices include only work accomplished according to the contract price and quantity.

**(FOUO) AFAA:** Management has agreed to review and validate invoice payments for valid and authorized line items based on a thorough review of all invoiced line items with contracted quantities and with approved ABG Form 4 and ABG Form 5 modification

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documents. However, the ABG Form 5, *Change Order Document*, is the obligating document required in order to match an invoice disbursement with the obligation, as defined in the DoD FMR, as stated in audit's previous comments. In addition, the ABG-75, Part II, Section A, Article 4, paragraph 2.2 of the Implementing Instructions states, "The realization of changes under 2.1 always require a change request (ABG 5 Part I or 5 A) and an order of the US Forces by use of ABG Form 5 Part II." Further, the US should not be held financially liable for change orders for which they did not prior approve.

(**FOUO**) Audit contends management should not make payments on invoices for which they cannot validate the invoice with an approved ABG Form 4 and/or 5 to confirm it is valid, authorized, and within project scope in accordance with the ABG-75, VOB, and US Code. This includes partial invoice payments. If management continues to make payments without proper invoice validation with the modification document, as they propose in their alternative action to request LBB make a "full explanation" of the change order requirements as opposed to validating them with approved ABG Forms 4 and/or ABG Forms 5, they may be in violation of the ABG-75, VOB, US Code, and may be held pecuniarily liable.

# Tab D, Contractor Payments, Audit Results 6, Cause, Bullets 3 & 4

**(FOUO) USAFE/A7:** PMO provides a review or check of the LBB validated/certified invoice. This included a review of specifications, spot-check of quantities being billed, and ensuring work was completed.

**(FOUO)** Certifying and accountable officials have been designated and working since the out-set of the project.

**(FOUO) AFAA:** During the audit, we found evidence USAFE did not review invoices with both contractor and change order specifications and actual work completed.

**(FOUO)** Specifically, the auditor obtained invoices, viewed contract specification folders in the on-site PMO office, and compared invoices to modification documents, contract specs, and any other supporting documentation. Audit then compared paid invoices and the associated

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modification documents received with the invoice validation done by contracted quality assurance evaluators (QAEs) to determine if any invoice payments exceeded the amounts approved in the modification document. Audit then calculated the difference between invoices paid and the validated amounts. Specifically, one contracted QAE firm provides invoice-checking services, including reviewing specifications from the original contract and making sure the US is not over-billed on modifications. QAE personnel stated they generally stop payments if they receive the invoice prior to payment and can prove the contractor is over-billing. However, the QAE stated they were not receiving the invoices prior to payment.

(**FOUO**) For example, one contractor processed a change order through LBB for €77.373.51 for building works and supplies, change order number 51, on Lot 1, Phase 3 (construction of the shell). However, in the invoice number 27, page 182, you can see the contractor invoiced for €134,112.50 for change order number 51. The construction manager "validated" €121,634.12. However, QAE personnel could only validate €77,166.15 in accordance with both the original contract specs and the mod specs. Thus, the invoice was paid for €121,634.12 instead of the €77,166.15 the QAE validated primarily because the invoice was paid prior to the QAE's review, resulting in an overpayment to the contractor of €44,467.97.

(**FOUO**) This occurred because there was no established process within USAFE to report discrepancies in the invoice billings. Specifically, although USAFE had an avenue to identify the overcharging, they did not have a process in place to report this concern to LBB for resolution. However, there is a problem in the PMO change order and invoice processes where one individual receiving change orders and invoices and another providing them to the contracted QAE are not doing so in time for the QAE to perform their review. Often the invoices are paid before received and no modifications have been received for invoices.

**(FOUO)** Finally, management did not properly appoint certifying and accountable officials. The USAFE/A7CCP stated the following in a 22 January 2007 e-mail to the auditor: "I've never known MILCON PMs to receive any kind of appointment letter—here or at AETC. We

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are not technically contracting officials merely provide oversight, so there is no need for the standard COR letter." Further discussion with management disclosed that in their opinion, the certifying and approving official duties did not need to be officially assigned.

# Tab E, Architect-Engineer Liability, Condition

(FOUO) USAFE/A7: Design errors are a fact of every construction project. Given the magnitude and complexity of this project, many more design errors have been encountered on this project than is typically the case. USAFE has and will continue to assess each possible design error and is currently classifying every change order with a root cause for future evaluation and possible execution of A-E liability. According to ABG-75, Article 17, "the Forces shall bear costs resulting from the removal of damages or deficiencies for which the (construction) contractors are not liable..." Further, Article 18 outlines "...costs, shall not be borne by the Forces if they are paid by a third party or if they are proved to be the fault of officials or employees of the German authorities or other persons engaged by them (in this case the AE-firm)." "Proved" is not something that can be instantly done and therefore USAFE/A7CC has hired an expert claims analysis consultant to assess and build "proof" for each design deficiency or error.

**(FOUO) AFAA:** Audit agrees design errors will occur on typical construction projects. However, design errors can be limited by effective communication when defining facility requirements, reviewing/approving an A-E firm's concept, and during the design review process. They can also be limited by implementing internal controls such as proper design reviews and incorporating design review comments in subsequent designs.

**(FOUO)** When design errors are encountered during construction, they must be properly recorded and evaluated to determine whether USAFE should forward the issue for LBB assessment of liability. Prior to the audit, USAFE did not have a policy or procedures in place to identify, refer, and track potential A-E liability concerns to the LBB, as stated in the cause section of this audit result. Until USAFE takes appropriate action to identify and report potential A-E liability concerns, they cannot support whether they believe the contractor

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Tab E, Architect-Engineer Liability, Cause,	should be held liable for the potential resulting costs nor can the LBB assess liability. Audit does not recommend USAFE "prove" the liability; rather, audit recommends USAFE should identify and report concerns for LBB assessment.  (FOUO) USAFE/A7: Agree that LBB has not exercised sufficient oversight to ensure separation of potentially conflicting interests by the construction manager.
Bullet 2	(FOUO) AFAA: Audit notes the LBB is not solely responsible for the oversight in this instance. Specifically, USAFE also has responsibility to maintain internal controls sufficient to at least identify potential conflicts of interest and report them to the LBB. This could be done through the change order or invoice review processes or could be identified in daily construction site concerns.
Tab E, Architect-Engineer Liability, Impact, Bullet 1	(FOUO) USAFE/JAI: Under German law, the Government has 2 years from the date of contract completion in which to file a lawsuit to recover damages for breach of contract. The auditors apparently think the pursuit of damages is contemporaneous with the construction process. In fact the US has ample time in which to investigate and assess potential contractor liability and request LBB take legal action on our behalf.
	(FOUO) AFAA: In our opinion, requesting an A-E liability assessment at the time it is discovered is especially important due to the personnel turnover experienced during a construction project of this size. If A-E liability concerns are not properly investigated as soon as possible after they occur, the LBB may not be able to conduct a proper investigation into their occurrence. Audit recognizes USAFE can take and present photo evidence of the concerns to LBB; however, every opportunity should be made to allow the LBB ample time to investigate the concern as soon as possible, as the US chances of assessment of A-E firm liability increase with the ability to show LBB the errors in an on-site inspection of the error.
Tab E,	(FOUO) USAFE/A7: According to ABG-75 Article 17, USAFE

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Architect-Engineer	may be billed for this work. USAFE will then be pursuing
Liability,	reimbursement in accordance with Article 18.
Impact,	
Bullet 1	(FOUO) AFAA: ABG-75 Article 17 states, "The Forces shall bear the costs resulting from the removal of damages or deficiencies for which the contractor is not liable," and further states, "The approval of the Forces shall be obtained before repairs are undertaken." Audit reiterates if USAFE reported potential A-E liability concerns in a timelier manner than the two-year time frame they propose, they should not be billed for these items in accordance with Article 17.

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#### 1. **(FOUO)** General Observations

(FOUO) In preparing this response, USAFE/A7CC consulted with key managers responsible for USAFE military construction (MILCON) execution over the last several years. The consensus of these managers is that the audit does not take into account the operational conditions under which MILCON is managed in the Federal Republic of Germany. US construction is executed within the framework of ABG-75, an agreement defining the process, roles and responsibilities of constructing facilities in this host nation. Due to the unique relationships involved in the process of delivering military construction under the ABG-75, current and past program managers familiar with MILCON execution in Germany believe the audit does not accurately reflect roles and responsibilities, and the limited control wielded by the US in the process. This response will attempt to clarify those agent/customer roles and responsibilities essential to understanding how the KMCC project arrived at its present state, and more importantly, what remedies have been put in place to rescue the project to realize a successful outcome.

(**FOUO**) Two general observations about the audit -- first, the report focuses on symptoms and not underlying root causes, and second, it deals with financial issues in most cases long since resolved or remedied. Paragraph 5 of this response addresses some of the issues and concerns of those charged with overseeing delivery of the KMCC, identifying root causes of the poor execution of the KMCC and opportunities to improve project efficiency and progress. This kind of constructive analysis is essential in identifying reasons for weak project execution and means for corrective action.

**(FOUO)** While A7CC staff agree with most findings and the desired results the auditors seek with their recommendations, these audit recommendations in most cases address:

- **(FOUO)** Procedures A7CC already has in place either in effect since the start of construction, or put in place as management corrections during the audit
- **(FOUO)** Procedures beyond A7CC control those which LBB controls, so that the US is in a position to request action from LBB (many recommendations have to do with procurement of design and construction, over which we have limited leverage despite our efforts to exercise appropriate influence)

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- **(FOUO)** Findings resulting from deliberate decisions made during project planning in the 2002-03 timeframe, pre-dating current project managers (e.g., fast-track design and construction, and omitting the 65 percent design review)
- **(FOUO)** Findings that do not present a complete picture in terms of the US role of construction oversight and the LBB role as construction agent (many of the detailed design error findings are errors A7 staff might have caught, but MAJCOM A7s do not have the role, or staffing, to perform detailed technical design reviews. This role belongs to the construction agent pursuant to DOD Instruction 4270.5, *Military Construction Responsibilities*, and we pay the agent to do that work.) In the instance of KMCC, LBB is our design and construction agent and many of the issues raised concern its execution of the project on our behalf.

## 2. (FOUO) Construction under ABG-75

(FOUO) Significant differences exist in methods and practices of construction between US and Germany. In general, German federal construction law shields contractors from much of the risk routinely borne by US construction firms; therefore, owners have less leverage and recourse than provided for under the FAR. Leverage such as specified liquidated damages, incentives for early completion, performance evaluations, and others are unavailable to this project. The audit does not acknowledge these business realities.

(**FOUO**) The US is bound by Article 49 of the FRG Supplementary Agreement to the NATO Status of Forces Agreement, which gives the German government the right to construct all US facilities here with the exception of certain limited categories. ABG-75 is the administrative agreement which sets forth the procedures of contract performance and applies to all sending state forces in Germany for their construction projects. The agreement is between the Federal Minister for Regional Planning, Building and Urban Development and the sending state forces. Dispensing with the ABG 75 or even changing the agreement requires a joint effort by all sending state forces.

3. **(FOUO)** Rules of Engagement for Invoice Payments

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(**FOUO**) Finding the right balance between protecting US interests and ensuring construction progress remains the key project issue confronting A7C staff. Maintaining this balance involves complex financial, legal, contracting, and management considerations. In aggregate, the staff contends the present course strikes a proper balance given all elements impacting the project, including the significant cost to the US of work stoppages. The audit does not address the wider implications and context of this challenge. For example, in reviewing the "rules of engagement" policy for partial payment invoices absent complete change order documentation from LBB, A7 and JA staff evaluated these risk factors in developing invoice processing guidelines:

**(FOUO)** <u>ISSUE</u>: Should US make partial payment for contract work-in-place without complete change order documentation from LBB?

#### (FOUO) PRO

- 1. (FOUO) Keeps contractors solvent and working
- 2. **(FOUO)** Strengthens LBB's authority in new position as CM (since dismissal of former CM)
- 3. (FOUO) Poses minimal financial risk to US
- 4. **(FOUO)** Involves only line item estimated quantity variations
- 5. **(FOUO)** Partial payment only—not final (we cap partial payments at 95 percent of contract value)
- 6. **(FOUO)** Payment proposed only for those proposed modifications reviewed and estimated by LBB and verified by the PMO QA team
- 7. (FOUO) Lagging documentation not contractor's fault
- 8. (FOUO) Minimizes potential risk of interest payments on completed work
- 9. **(FOUO)** Demonstrates US willingness to partner with LBB to resolve financial and contractual issues

#### (FOUO) CON

- 1. (FOUO) Contrary to ABG agreement and good business practice
- 2. **(FOUO)** Irregularity sets bad precedent
- 3. (FOUO) Gives LBB tacit approval for "no notice" changes
- 4. **(FOUO)** Concedes one US tool to force LBB's contract admin to "keep pace" with construction progress

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- 5. (FOUO) Temporarily weakens US control of project
- 6. (FOUO) Requires the burden of increased US vigilance in overseeing the work

(FOUO) PMO and USAFE/A7CC staff review of invoices slightly changed as a result of PMO's discovery in July 2006 that contractors were invoicing for change orders that had not yet been approved. Prior to this time, the invoices were processed during a concurrent invoice review. Since that time, the invoice review is fully completed and a full explanation by LBB is required for all change orders that have not yet been approved by USAFE. Additionally, we now require a letter from LBB stating that all work in the invoice was: 1) necessary, 2) properly performed, and 3) fairly and reasonably priced. Only when these actions are complete does USAFE process the invoice for payment. If USAFE suspects any incorrect information in an invoice, they immediately notify LBB and withhold payment until the issue is resolved or adjusted on the invoice.

# 4. **(FOUO)** Pursuit of A-E Liability

(**FOUO**) The audit report findings regarding A-E liability neglect the wider issue of construction manager (CM) due diligence. As auditors are aware, since September 2006 A7CC has actively pursued a comprehensive and aggressive strategy to recover damages resulting from chronic mismanagement of the KMCC project. A-E liability is only one component of the larger issue of professional due diligence since the same firm acts as both designer and CM. This matter will be explored thoroughly by the construction claims consultant A7CC acquired 13 December 2006 under contract through AFCEE.

**(FOUO)** HQ USAFE/A7CC is committed to holding A-E firms responsible for the quality of their work and will aggressively pursue recovery of damages from negligence or breach of contractual duty where economically justified and in the best interests of the Government. Recovery actions will be pursued in close coordination with USAFE leadership, including JA and A7K contracting staff, employing litigation or political settlement as necessary to protect US interests. Pursuit of recovery will be conducted within the overall construct of the ABG-75 agreement and the VOB.

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(**FOUO**) A7CC reviews and screens each ABG 5 contract modification received from LBB for potential A-E liability. The subject is again addressed during change order technical negotiations. Since 21 September 2006, completed and pending modifications have been reviewed and categorized in the project's change order register by code into ten root causes (including among these design deficiency related to possible A-E liability), and six classes based on initial assessment of fiscal responsibility (Attachment 10). It must be noted however that 97 percent of the change cost growth on the KMCC derives from variations in estimated contract quantities, not surprising considering the MEP trades contracts alone contain over 18,000 separate line items in 10,000 pages.

**(FOUO)** Three conditions must be satisfied for an A-E firm to be liable for damages:

- a) (**FOUO**) Did the firm make an error or omission in its design product?
- b) (**FOUO**) Did the error or omission result from negligence?
- c) (**FOUO**) Has the Government been harmed as a result of the error or omission?

(**FOUO**) LBB recognizes that its CM agent has in many regards failed to satisfactorily or properly fulfill its pecuniary responsibilities in managing delivery of the KMCC project. A comprehensive analysis of CM performance will address the full range of CM agent responsibilities and activities such as quality control, submittals processing, project scheduling, and trades coordination. A-E liability must be pursued within the wider context of this overarching effort, not on the limited basis of each individual construction modification as the audit recommends.

**(FOUO)** Given the magnitude and extent of this project's management problems, one may anticipate claims settlement will eventually be resolved pursuant to Article 40.2 of ABG-75 through negotiations between German Government construction authorities and senior US representatives. A7CC begins preparations of the technical basis of the case to support those future negotiations on 10 January 2007 with the 'kick-off' meeting with claims consultant and his firm. This highly qualified firm specializing in German construction contracting and claims management has been procured to pursue *comprehensive* remedy for mismanagement of this project.

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**(FOUO)** The following extract from a 6 September 2006 briefing and consultant contract Statement of Work outlines the scope of the consultant support to KMCC:

- (FOUO) Technical and cost analysis of contract modifications and claims
- (FOUO) Analysis of delay claims for 'hindrances', obstructions or interruption of work
- (FOUO) Analysis of schedule and other impacts of user requested changes
- **(FOUO)** Support negotiating claims costs and terms
- (FOUO) Documentation of project contract status and progress
- **(FOUO)** Preparation of arguments in defense of US actions and interests
- **(FOUO)** Expert witness representation in possible mediation and/or litigation
- **(FOUO)** Comprehensive review of LBB contracting processes and management practices

(FOUO) As our agent in executing this project, LBB's interests should be viewed as congruent with ours in pursuing recovery from damages resulting from negligent construction management. A7CC's claims consultant will work in collaboration with the entire project delivery team, including LBB, to access and analyze project documentation including proposed schedules, modifications, submittal registers, technical meeting minutes, Requests for Information, daily inspection logs, and contract correspondence. Cooperation between the US and LBB should leverage actions seeking recovery from the CM. The need for this specialized support is evidenced by the fact that we have already received notice of a potential €2.2 million delay claim from one of the trades.

**(FOUO)** A-E liability determination is an area within the purview of the professional engineering, contracting and legal disciplines. Financial accounting of potential liability is only a small, initial part of the process to help identify the source and extent of possible harm.

5. (FOUO) Opportunities to Improve Project Efficiency and Progress – The Way Ahead

**(FOUO)** Again, the focus of the audit is limited to a review of the *symptoms* of project mismanagement—it does not explore root causes of that mismanagement or offer constructive proposals to rectify problems or improve the present situation.

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(**FOUO**) Any constructive analysis of the deficiencies and difficulties of the KMCC project execution must include a review of the challenges faced by LBB-KL and its contracted Construction Manager. The following overarching concerns with LBB project execution have been discussed within A7 staff since at least Aug 06 as opportunities to improve project efficiency. They are provided here as examples of management approaches being explored to try to improve project delivery:

- (FOUO) Reinforce LBB's authority as Construction Manager
  - **(FOUO)** On-site effort not orchestrated by a project management organization empowered to control work activities
    - (FOUO) Little evidence of effective, authoritative management
  - **(FOUO)** Work of 28 independent sub-contractors not subordinate to an integrated, coordinated project execution plan
  - (FOUO) Inadequate on-site QC inspection contributes to damaged work and rework
    - (FOUO) Recent example is forklifts damaging raised flooring
    - (FOUO) Another key example is non-compliant kitchen exhaust ducting
- **(FOUO)** Immediately augment on-site technical support
  - **(FOUO)** Incomplete plans and conflicts between technical disciplines resulting in extensive rework
  - **(FOUO)** Finish trades delayed due to incomplete design information
  - (FOUO) Absence of final electrical rough-in designs continues to plague overall project progress
    - (FOUO) Magnitude of problem appears to be under-estimated by LBB
- **(FOUO)** Develop and adhere to a realistic/accurate project schedule
  - **(FOUO)** Ineffective project schedule prolongs work effort and contributes to extended overhead costs
  - (FOUO) Key project management tool remains underutilized
  - (FOUO) Complicates ability to justify or defend delay claims
  - (FOUO) Sub-contractors not bound contractually to any integrated schedule
    - (FOUO) No incentives/disincentives for schedule adherence

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- **(FOUO)** The A-E of Record and Contract Manager denies responsibility for project scheduling or schedule enforcement
- (FOUO) US provided feedback in August on means to expedite project schedule
- **(FOUO)** Respond faster to contractor Requests for Information (RFIs)
  - **(FOUO)** Absence of Submittals & RFI Registers to monitor status and suspense of deliverables
  - **(FOUO)** The Quality Assurance Evaluator has specific examples illustrating impacts of delays in response to sub-contractor inquiries
    - (FOUO) Project schedule not linked to key submittals due dates
    - (FOUO) Letter to LBB being prepared requesting submittal and RFI logs
      - (FOUO) Furnishes sample register information proposed for use
      - (FOUO) Asks if US needs to provide any further technical information
    - (FOUO) Web-site established by US to enhance project communication

#### 6. (FOUO) Current Critical Project Issues:

(FOUO) KMCC's most critical issues share as their most promising solution that GBB-Mainz and the Rhineland-Palatinate Ministry of Finance become directly engaged in the project to reinforce the leadership of LBB-KL. The Kaiserslautern bauamt is simply overwhelmed by the magnitude and complexity of the KMCC project. Additional augmentation of LBB's project management staff is needed immediately to clear the sizable backlog of contract change orders. The project is jeopardized by weak project leadership, contract administration and technical direction which still lag the construction effort. This inaction delays progress and increases cost. Lack of urgency and weak Quality Control and schedule coordination pervade the job site.

(FOUO) Relieving the Construction Manager in September 2006 of much of its contractual authority for project management forced LBB in mid-construction to expand its management team to "pick up the pieces"—a demanding task under the best conditions. A 'task force' level of effort is now needed by LBB to turn things around, and get the project back on track. The central authorities (project engineer and superintendent) charged with orchestrating and directing this project do not appear to command the degree of authority needed to "make things happen". (FOUO) Project management is hampered by contract agreements relieving contractors of much

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of the risk they bear as the norm in US contracting. However, while most of KMCC's contractors are competent and capable craftsmen providing a good quality product, they appear to have lost confidence in the project management team's ability. This is why GBB and the State Ministry of Finance must now take responsibility to step in and rescue the project.

**(FOUO)** Senior USAFE staff identified at the end of CY06 the following issues critical to KMCC success:

- a) **(FOUO)** Payment of invoices/availability of funds: USAFE has been asked by GBB/LBB to provide MILCON and NAF funds for change orders on the basis of cost estimates as guided by ABG-75 procedure. To date this has been rejected by USAFE having assumed the position that funds are made available only once invoice has been negotiated with contractor. To bridge invoice payment gaps and avoid work stoppage, Rhineland-Palatinate State Ministry of Finance (SMOF) set aside in Oct  $06 \in 4$  M and just recently another  $\in 1.3$  M.
- (FOUO) A7CC maintains that the FAR will not permit increases in contract ceilings without fully negotiated and documented contract modifications. Since this project is financed with a mix of Services, AAFES and MILCON, formal procedures are particularly critical to secure additional funding from NAF and AAFES. Prudent business practice does not allow contract amounts to be adjusted solely on the basis of estimated or projected cost.
- b) (FOUO) <u>Verification/approval of invoices</u>: SMOF is looking for avenues to reduce the time currently required to verify invoices by LBB/USAFE. Problems are often caused by time consuming research involving external contributors; determination of real-time construction status, and review procedures. Parallel USAFE/LBB steps to obtain information more expeditiously and joint verification procedures could be envisioned by SMOF.
- (**FOUO**) In an effort to accelerate invoice processing, effective 13 November 2006, A7CC began accepting invoices accompanied by a letter from LBB's project manager and project engineer attesting that the invoiced work meets three conditions: 1) work was necessary, 2) properly performed, and 3) at a fair and reasonable price. The US initiated invoice meetings with LBB where it was suggested that parallel LBB/A7CC review of invoices could accelerate

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the review process, and still hold that parallel reviews offer an opportunity to speed invoice processing.

- c) (FOUO) Processing of change orders: It is intended to process all change orders by end of March 07. By mid-January, LBB, in coordination with GBB, will present a procedure on how to realize this step and a plan how the LBB project team will be enlarged to accomplished with this task. USAFE will be asked to contribute suggestions on how to streamline the congested change order process. The goal must be to pay bills on time and USAFE is encouraged to develop a procedure that allows funds to be provided in a timely manner even when facing exhausted financial sources/reaching contract ceiling.
- **(FOUO)** USAFE/A7CC is poised for an increased quantity of change orders. We will continue to fully review each change order and categorize the root cause. Additionally, if additional documentation is required, we will not approve the change order until this additional documentation is received.

#### 7. **(FOUO)** Lessons Learned from KMCC

(**FOUO**) In an effort to cooperate with the audit process, key lessons learned were shared with the auditors in early December 2006. These lessons were discussed with auditors because of their value and application in future USAFE projects and are presented here for review:

- **(FOUO)** Pre-design Planning and Acquisition Strategies:
  - o (FOUO) Estimated quantity contracts are inappropriate for vertical construction
  - o (FOUO) Trades contracts are inappropriate for complex construction
  - o **(FOUO)** Construction Manager and A-E Designer must be independent (unless contracted as Design-Build project)
  - o (**FOUO**) Service Agents provide valuable support to MILCON
  - o (FOUO) Complete designs prior to awarding construction contracts
  - o (FOUO) Project Management Plans are a vital tool to manage risk
  - o **(FOUO)** Liquidated Damages provisions best leverage to force schedule adherence
- **(FOUO)** Construction Contract Administration:

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- o **(FOUO)** Modifications need to be submitted timely and in pace with construction
- o **(FOUO)** QA oversight staff should be resourced based on project size and complexity

# 8. (FOUO) Summary

(FOUO) A7CC staff cooperated fully with the auditors in the shared goal of seeking workable solutions to KMCC's vexing issues. The auditors' fresh insight and perspectives to this project's many challenges were welcomed. Every available project document was provided and staff openly communicated the project's complex issues and challenges. Despite these efforts, much of that dialog is absent from the report as it focuses on symptoms and past causes to the neglect of wider management issues related to oversight of a complex project within the framework of ABG-75. The audit focuses on problems either remedied months ago or beyond A7 control, yet it is received with sincere interest in exploring every possible avenue to best assure this project's successful delivery. In every instance, A7 staff has acted to protect the best interests of the US while maintaining project progress. Talented and dedicated people in the Project Management Office work diligently to find solutions to this project's very demanding problems—and nothing in the report contradicts this.

(**FOUO**) This response briefly addresses some of management's concerns regarding root causes of the poor project execution and offers some opportunities to pursue regaining schedule. Significant problems urgently confront the KMCC. Exceptional measures are required to keep contractors working and maintaining progress. The KMCC presents no clear, easy choices and little middle ground, and challenges the best professional judgment of a variety of disciplines. These are the issues USAFE leadership and A7CC project managers confront daily in ensuring this project's successful delivery in 2007.

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