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MILITARY CONSTRUCTION

Kaiserslautern Military Community Center Project Continues to Experience Problems

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Highlights

Highlights of [GAO-08-923T](#), a testimony before the Committee on Oversight and Government Reform, House of Representatives

Why GAO Did This Study

The Kaiserslautern Military Community Center (KMCC) is one of many projects initiated at Ramstein Air Base to upgrade capabilities of the base as a result of the consolidation of military bases in Europe. The KMCC is intended to provide lodging, dining, shopping, and entertainment for thousands of U.S. military and civilian personnel and their families in the area. Construction on the project, which began in late 2003, was originally scheduled to be completed in early 2006. On June 28, 2007, GAO testified that construction deficiencies and mismanagement had drawn into question when the project would be completed and at what cost.

This testimony discusses updated findings related to the KMCC project. The testimony describes (1) the current status of the KMCC construction project, (2) whether oversight and internal control improvements have been made by the Air Force since GAO's last testimony, and (3) if other projects recently completed in the KMCC area have experienced problems similar to those affecting the KMCC.

To address the objectives, GAO interviewed officials from the U.S. Air Force, Army and Air Force Exchange Service (AAFES), Air Force Services Agency, U.S. Army Corps of Engineers, Department of State, and German government. GAO also conducted site visits and reviewed project plans, cost estimates, completion analyses, and other relevant KMCC documents.

To view the full product, including the scope and methodology, click on [GAO-08-923T](#). For more information, contact Gregory Kutz at (202) 512-6722 or kutzg@gao.gov or Terrell Dorn at (202) 512-6923 or dort@gao.gov.

MILITARY CONSTRUCTION

Kaiserslautern Military Community Center Project Continues to Experience Problems

What GAO Found

Approximately 1 year after GAO's June 2007 testimony and over 2 years after the KMCC's originally scheduled construction completion date, the project continues to experience significant cost and schedule uncertainty along with construction quality problems and ongoing criminal investigations. Limited progress has been made on KMCC construction, and there are still no accurate estimates of how much the total project will cost or when it will be completed. Major construction deficiencies GAO reported in 2007 are just now beginning to be corrected. The photos below show that other than floor tiles being installed, the food court area remains essentially the same as in 2007 and still requires finishing work and the installation of restaurants.



May 2007



May 2008

Source: GAO.

In addition, the Air Force does not track the total cost of the KMCC. Specifically, tens of millions of dollars related to design, foreign currency fluctuation, rework, personnel, and furniture and equipment costs are not included in the Air Force's cost estimates. Contingencies to fund items such as repairs to cracking concrete are also not included in the Air Force's estimates. After including all estimated costs, the total cost of the project will likely exceed \$200 million. Project delays have also resulted in additional costs to the U.S. government and lost profit for project funding partners. For example, AAFES estimates that it is losing \$500,000 of profit for each month that the exchange facility is not open.

Although these problems exist, the Air Force has made significant improvements in its oversight and control over the project. For example, the Air Force established standardized policies and procedures for reviewing change orders and invoices. Improvements in controls over payments and change orders have minimized future risks of paying for unapproved work or fraudulent billings for work not performed.

Cost, schedule, and construction deficiencies affected other projects built by German government construction agents in the KMCC area. For example, underground electrical ducts at Ramstein Air Base flood with water causing runway lights to malfunction. A freight terminal on the air base was also built with structural deficiencies that resulted in its temporary evacuation.

Mr. Chairman and Members of the Committee:

Thank you for the opportunity to discuss our findings on the current status of the Kaiserslautern Military Community Center (KMCC) construction project. This testimony is a 1-year update to our testimony before this committee in June 2007,¹ which detailed the problems facing the project. In June 2007, we testified that the KMCC was experiencing cost, schedule, and construction quality problems that raised questions about when the project would be completed and at what cost. At the time of our testimony, there were few workers on-site, the building's roof was leaking, and German police and Air Force Office of Special Investigations (AFOSI) agents were seizing documents as part of ongoing criminal investigations. In addition, the projected total cost of the project had increased substantially because of delays, rework, and the appreciation of the euro versus the U.S. dollar. Our 2007 testimony also detailed construction management failures by the Landesbetrieb Liegenschafts-und Baubetreuung's office in Kaiserslautern (LBB-Kaiserslautern), the German construction agent charged with managing the project for the U.S. forces. In addition, our testimony detailed control weaknesses within the Air Force that contributed to the problems for the project. This testimony provides an update on the status of the KMCC project and its problems, and makes an assessment of whether other construction projects in the area have experienced similar problems.

As we previously reported, the KMCC, an 844,000 square foot facility, is one of many projects that were initiated at Ramstein Air Base to upgrade capabilities of the base as a result of the consolidation of military bases in Europe. It is intended to provide lodging, dining, shopping, and entertainment for over 50,000 U.S. military and civilian personnel and their families in the Kaiserslautern, Germany, area. Project highlights include a 350-room visiting quarters, sports bar, name-brand restaurant, food court, and numerous retail businesses. Funding for the KMCC was provided from a variety of sources including nonappropriated funds from the Army and Air Force Exchange Service (AAFES) and the Air Force Services Agency

¹GAO, *Military Construction: Observations on Mismanagement of the Kaiserslautern Military Community Center*, [GAO-07-1039T](#) (Washington, D.C.: June 28, 2007).

(AFSVA),² military construction appropriations, and the Rhein Main Transition Program (RMTP) funds.³ Construction on the KMCC began in November 2003 and was planned to be completed in early 2006.

In addition, we previously reported that the activities of U.S. forces personnel in Germany are to be carried out in accordance with the provisions of the North Atlantic Treaty Organization's Status of Forces Agreement and various implementing agreements. The KMCC, like other military construction projects in Germany, is governed by one such agreement, the Auftragsbaugrundsätze 1975 (ABG-75) Administrative Agreement. ABG-75 provides that U.S. forces are to coordinate construction planning with the German government to ensure the optimum use of German design and construction capacities. For the KMCC, the responsibility for construction resided with LBB-Kaiserslautern, a German government construction agency.

As requested, this testimony updates our findings on the status of the project and problems affecting the KMCC. Specifically, the testimony will describe (1) the current status of the KMCC construction project, including projected costs, projected construction completion dates, and status of ongoing investigations; (2) whether oversight and internal control improvements have been made by the Air Force since our last testimony; and (3) whether other projects recently completed in the KMCC area have experienced problems similar to those affecting the KMCC.

To address our objectives, we conducted interviews with Air Force personnel responsible for the KMCC project. In addition, we interviewed officials from LBB-Kaiserslautern, AAFES, AFSVA, and the U.S. Army Corps of Engineers. We also interviewed officials from the Department of

²AAFES is a joint military activity providing merchandise and services to active duty, guard and reserve members, military retirees, and their families. AAFES uses earnings to improve troops' quality of life and to support morale, welfare, and recreation programs. AFSVA provides combat support and community service programs that enhance the quality of life for Air Force members and their families. AFSVA programs include lodging, youth programs, and sports and fitness programs.

³The closure of the Rhein Main Air Base is part of the RMTP where the United States and Germany agreed to return the base to Germany. In return, Germany allowed the relocation of the base's key airlift capability to Ramstein and Spangdahlem Air Bases. As part of the agreement, the Federal Republic of Germany, federal states of Rheinland-Palatinate and Hessen, city of Frankfurt, and Fraport AG Frankfurt Airport Services Worldwide agreed to provide funds to upgrade the facilities at Ramstein and Spangdahlem Air Bases, including about 14 million euros for the KMCC.

State and officials from the Federal Republic of Germany's construction division. We obtained and reviewed project plans, cost completion analyses, and other relevant documents related to the design and construction of the KMCC. We also compiled Air Force and LBB-Kaiserslautern cost estimates for the various cost elements associated with the KMCC. We physically inspected the KMCC and other recently completed facilities on Ramstein Air Base. See appendix I for more details on our scope and methodology.

Because of ongoing investigations, we were not able to fully explore and discuss the details of fraud investigations with AFOSI and the German police, which limited the scope of our audit work.

We conducted this performance audit from November 2007 through June 2008 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Summary

Approximately 1 year after our initial testimony and over 2 years after the KMCC's originally scheduled construction completion date, the project continues to experience significant cost and schedule uncertainty along with construction quality problems and ongoing criminal investigations. Since our testimony in June 2007, limited progress has been made on KMCC construction, and there are still no accurate estimates of how much the total project will cost or when it will be completed. Delays in reaching completion agreements with major contractors have contributed to the lack of progress over the last year. In addition, major construction deficiencies, such as the leaking roof and improperly installed kitchen exhaust ducts, which we discussed during our initial testimony, are just now beginning to be corrected. For example, in February 2008, a \$2.7 million⁴ contract was awarded for the first of four phases of repair work on the leaking roof, and in May 2008, a \$1.2 million contract was awarded

⁴For all contract and cost amounts accounted for in euros, we converted costs into U.S. dollars at the specific conversion rate estimated by Air Force officials for that specific cost element. In cases where the Air Force did not have a specific conversion rate set for a cost element, we converted the cost at a rate of .66 euros per dollar, which was the most recent conversion rate used by the Air Force for planning purposes.

for the second phase of roof repairs. However, long cracks in concrete floors have been identified since our June 2007 testimony, which raise new concerns about construction quality and could result in additional time and cost to repair. While the number of workers on-site has increased in recent months, it is unclear whether the number and type of workers are sufficient to complete construction by LBB-Kaiserslautern's current projected date of January 2009. This projected date only represents construction completion; however, the facility will not be open to the public for about 4 months following construction completion. Finally, criminal and civil investigations continue to surround the project and indictments are expected, according to AFOSI agents.

There are no accurate estimates of how much the total KMCC project will cost because the Air Force does not track all project costs. While the Air Force actively tracks what it considers to be core construction-related costs, tens of millions of dollars of other project costs are not included in Air Force cost estimates. Specifically, costs that are not included in the estimates are design costs, foreign currency fluctuation costs, costs for roof repair and other rework, personnel costs, and costs for furniture and equipment. Foreign currency fluctuation costs are of particular concern because of the significant appreciation of the euro versus the U.S. dollar since inception of the project. In total, the euro has appreciated 35 percent against the U.S. dollar since construction began on the KMCC in November 2003. In addition, contingencies to fund items such as potential hindrance claims⁵ and repairs to floor cracks are not included in the estimated construction costs for completion. When taking into account all estimated costs, the total cost of the project will likely exceed \$200 million. This figure was derived by consolidating numerous Air Force cost estimates captured in different accounts, such as military construction funds, non-appropriated funds, and operations and maintenance funds. Project delays have also resulted in additional costs to the U.S. government and lost profit for AAFES and AFSVA. For example, AAFES, responsible for management of the new exchange, estimates that it is losing \$500,000 of profit for each month that the exchange facility is not open. In addition, the Air Force also estimates that the U.S. government is paying an additional \$90,000 each month when personnel traveling at the government's expense must stay off base because the hotel portion of the KMCC remains unfinished.

⁵Hindrance claims refer to claims against the United States for additional costs contractors incurred because of interruptions of contractor work.

Although problems exist with the project, the Air Force has made significant improvements in its oversight and internal controls. In June 2007, we reported that Air Force officials did not have adequate or appropriately qualified personnel assigned to the project and did not have effective oversight policies and controls in place. In the last year, the Air Force created the Resident Director's Office (RDO), which centralized management of the KMCC project and established standardized policies and procedures for reviewing invoices and change orders. According to the Air Force, the RDO has 29 personnel, which is a significant increase over the 8 oversight personnel initially assigned to the KMCC project. To minimize future risks of paying for unapproved work or fraudulent billings, the Air Force has also standardized its invoice and change order review processes. Finally, at various times in 2007 and 2008, senior Air Force officials engaged officials from the Department of State and the Federal Republic of Germany in an effort to identify options for generating progress on the project.

Other projects recently completed in the KMCC area have also experienced problems similar to those affecting the KMCC. According to the Air Force, several recent projects built by LBB-Kaiserslautern associated with the RMTP on Ramstein Air Base have experienced significant cost and schedule growth as well as construction deficiencies. For example, the lights on the new south runway built on Ramstein Air Base are affected by a construction defect that allows groundwater to collect in the underground ducts and manholes that contain electrical components used to control the lights. The Air Force has repeatedly lost the capability to operate certain lights as a result of power outages caused by water intrusion to the lighting system and, when power outages occur, has been forced to divert aircraft to other air bases during periods of low visibility. The south runway also suffers from poor water drainage, in general, which at times causes large ponds to form between the south runway and adjacent taxiways. These ponds attract large waterfowl, which pose a safety risk to aircraft using the runway. Another reported example of construction deficiencies is illustrated by the newly constructed freight terminal, which must rely on additional support columns as a precaution to prevent the building's roofs from collapsing. Because of structural integrity issues, 41 additional columns were installed in the freight terminal to provide additional support to the roof.

Progress on the KMCC Has Been Slow, Quality Problems Persist, and Project Costs Are Unknown

Approximately 1 year after our initial testimony and over 2 years after the KMCC's originally scheduled construction completion date, the project continues to experience significant cost and schedule uncertainty along with construction quality problems and ongoing criminal investigations. Since our testimony in June of 2007, limited progress has been made on KMCC construction, and estimates of how much the total project will cost or when it will be completed are uncertain. Total project costs are uncertain because the Air Force does not track all costs associated with the project. Specifically, tens of millions of dollars related to design, foreign currency fluctuation, rework, personnel, and furniture and equipment costs are not included in the Air Force's cost to date or estimate for construction completion of the project. Contingencies to fund items such as potential hindrance claims are also not included in the estimated costs for construction completion.⁶ When including all estimated costs, the total cost of the project will likely exceed \$200 million.

Limited Progress Has Been Made

Over the past year, limited progress has been made on constructing the KMCC, and the project's construction completion date is uncertain. Figures 1 and 2 show comparisons of the project when we visited in 2007 and during our last visit in May 2008. The comparison of the KMCC food court area shows that other than some wall finishes and floor tiles being installed, the area remains essentially the same and still requires finishing work and the installation of the food court restaurants. Overall, relatively few contractor employees were on-site from the time of our initial site visit in May 2007 through early 2008, as LBB-Kaiserslautern experienced repeated delays in reaching agreements with major contractors to return to work. While LBB-Kaiserslautern reached completion agreements with its major contractors in March 2008, and the number of workers on-site has increased since that time, it is not clear if the number and type of workers are sufficient to sustain production and meet LBB-Kaiserslautern's new estimated construction completion date of January 2009. This projected date represents construction completion; however, the facility will not be open to the public for about 4 months following

⁶The German government has loaned the project 25 million euros since our 2007 testimony to finance rework and repairs, prepay invoices, and settle contractor hindrance claims. German officials stated to us that complete reimbursement for this loan from the United States is expected. However, the Air Force contends that it will not pay for any expenses related to rework or repairs to deficient construction. For transparency purposes, we consider that all expenses funded by proceeds from the loan are part of the total project cost regardless of which party is ultimately responsible for financing each specific cost.

construction completion. Moreover, because LBB-Kaiserslautern has not met earlier construction schedules and the estimated construction completion date has continued to slip, we are concerned about LBB-Kaiserslautern's ability to manage actions needed to achieve the January 2009 estimated construction completion date.

Figure 1: Comparison of the KMCC Food Court Area



May 2007

Source: GAO.



May 2008

The comparison of the KMCC name-brand restaurant shows that the restaurant still requires painting, wiring, and other finishing work similar to that needed in 2007.

Figure 2: Comparison of the KMCC Name-Brand Restaurant



May 2007

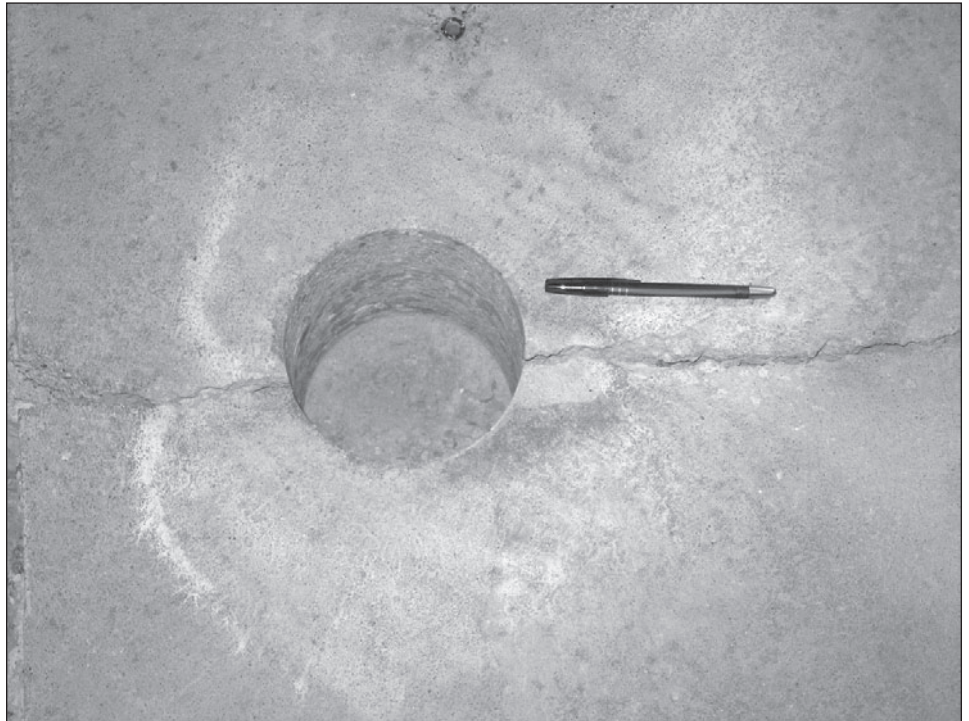
Source: GAO.



May 2008

In addition, major construction deficiency problems, such as the leaking roof and improperly installed kitchen exhaust ducts, which we discussed in our 2007 testimony, are just now being repaired. For example, contracts were recently awarded for the first two of four phases of repair work on the leaking roof, and most of the deficient ductwork has been removed. However, additional problems, such as several long cracks in the concrete floor of the AAFES store, have been identified by the Air Force since our last testimony. LBB-Kaiserslautern has retained an expert consultant to investigate the floor cracks, and the consultant's report recommends that joints be cut into the floor to control further cracking. The actual scope of the floor repair work and associated cost and schedule impacts are not known at this time. Figure 3 shows an example of these cracks. The pen in the photograph is provided for scale.

Figure 3: Example of Floor Cracks in the KMCC



Source: GAO.

Final Costs of the KMCC Project Are Still Unknown

Because the Air Force does not track the total cost of the KMCC project, there are no accurate estimates of how much the total KMCC project will cost. Cost estimates provided by the Air Force primarily include core construction-related costs and do not account for millions of dollars in other costs related to the KMCC project. When all project-related costs are taken into account, the total cost for the project will likely exceed \$200 million.⁷ This figure was derived by consolidating numerous Air Force cost estimates captured in different accounts, such as military construction funds (MILCON), non-appropriated funds, and operations and maintenance funds. According to Air Force officials, approximately \$121 million has been spent on core construction-related costs for the KMCC as

⁷Estimates for each independent cost element were developed by the Air Force and German government officials; however, our review of these estimates in aggregate resulted in confidence that the overall project cost will likely exceed \$200 million.

of March 31, 2008. In addition, Air Force officials estimate that an additional \$41 million in construction-related costs are required to complete the project. However, this estimate only relates to those costs that the Air Force tracks for reporting purposes. Not included in the Air Force's estimate are design costs, costs of rework to repair known construction deficiencies, foreign currency fluctuation costs, costs for furniture and equipment, some costs for secondary services,⁸ and costs for the numerous Air Force personnel reassigned from other projects in order to help manage the KMCC construction project. For example, the Air Force cost estimate does not fully reflect the effect of the weakening dollar compared to the euro because payments from MILCON funded project components to cover losses due to foreign currency fluctuation are drawn from a separate account that the Air Force does not track as part of this project. Table 1 shows the Air Force cost estimate for core construction-related expenses along with additional costs associated with the project. As the table shows, an accurate estimate on the total cost of the project is not possible because of a number of unknown expenses, such as the Air Force's liability for contractor hindrance claims.

⁸Secondary services, also called soft costs, include work performed by construction inspectors who are responsible for ensuring that installed work meets the terms of the contract and checking that invoices correctly reflect the work performed. Secondary services also include consulting and logistical support services.

Table 1: KMCC Estimated Project Costs

Cost Component (dollars in millions)	Air Force/ LBB-Kaiserslautern cost estimate
Air Force estimated construction costs	
Construction costs paid ^{a, b}	121.7
Construction costs to complete the project ^{a, b}	41.2
Project costs not included in Air Force construction cost estimates	
Additional roof repair costs	10.8
Additional kitchen duct repair costs	1.2
Secondary services	5.7
MILCON foreign currency fluctuation costs	8.6
Design costs ^b	8.4
Furniture and equipment ^b	16.3
Total quantifiable costs	213.9
Unquantifiable costs	
Contractor hindrance claims	Unknown
Repairs to cracking concrete	Unknown
Air Force staffing to manage the KMCC	Unknown
Total project cost	Unknown

Source: Air Force (for all quantifiable project costs).

^aConstruction costs include costs for construction contracts; certain secondary services; contingency costs; and supervision, inspection, and overhead provided by LBB-Kaiserslautern.

^bCost component was included in original project documents submitted to Congress disclosing appropriated and nonappropriated funds estimates.

Additional clarification on selected project costs not included in the Air Force’s construction cost estimate is provided below.

- **Construction deficiency repairs.** Deficient construction has been identified on major building components, including the roof and kitchen exhaust ducts. LBB-Kaiserslautern is taking steps to contract for repairs to correct these deficiencies.
- **Roof damage.** Significant sections of the roof require repair or replacement. The current plan is to complete repairs to the roof in four phases. The first phase of repairs is expected to cost \$2.7 million and is included in the Air Force’s construction cost estimate, which according to the Air Force is being paid for primarily with funds withheld from

the original roof contractor. Costs for repair phases two through four are estimated by the Air Force to cost about \$10.8 million and are not included in its construction cost estimate. U.S. government funds remaining from the original roof contract are being used to fund the majority of phase one repairs; therefore, the phase one repair cost is reflected in the Air Force's construction cost estimate. Funds for repair phases two through four are initially being funded by the German government, and the Air Force excludes these costs in its construction costs to complete the project.

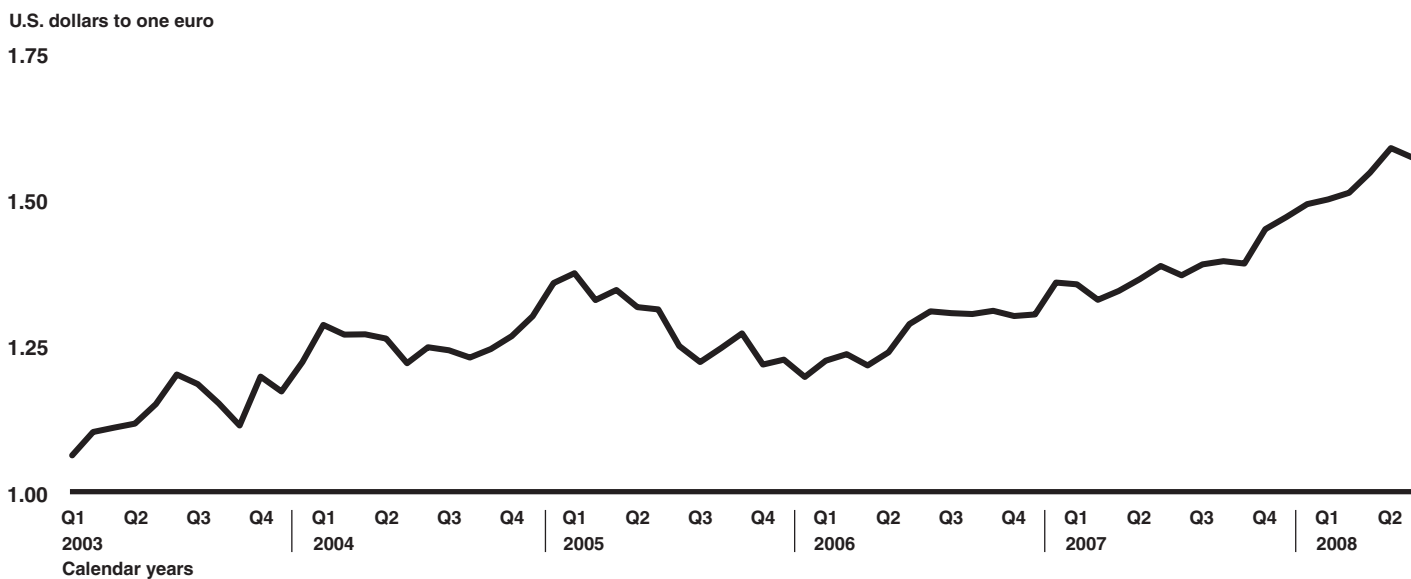
- **Kitchen exhaust ducts.** The kitchen exhaust ducts installed in the KMCC do not comply with U.S. National Fire Protection Association standards specified by the Air Force. LBB-Kaiserslautern has completed the design for repairs to the exhaust ducts and is negotiating with its contractor a final price for their installation. The estimated installation cost is approximately \$1.8 million. In early 2007, the Air Force agreed to pay for \$600,000 of the rework and has included that amount in its construction cost estimate, but has not included the rest of the repair cost as part its construction cost estimate.
- **Secondary services.** As the project has progressed, the Air Force has retained several contractor personnel to provide construction inspection, engineering, consulting, and other secondary services. For example, since January 2005 the Air Force has contracted for construction inspectors who are responsible for, among other things, ensuring that installed work meets the terms of the contract and checking that invoices correctly reflect the work performed. The cost for most of these secondary services is not included in the Air Force's construction cost estimate. Air Force officials indicated that some of the Air Force's technical consultants were also supporting other projects, but that the majority of their work involved support on the KMCC. Since the majority of work performed under these secondary services contracts relates to the KMCC project, we have included the cost of these contracts in the Air Force's estimate.

Foreign currency fluctuation. Since the start of the project in 2003, the euro has appreciated 35 percent relative to the U.S. dollar. Because KMCC contractors are paid in euros but KMCC project funds are budgeted in dollars, the Air Force is susceptible to paying more when the dollar loses value. In addition, this risk has been magnified by the 2-year delay in completion of the project. Since the June 2007 testimony alone, the euro has appreciated by 15 percent, from \$1.35 to \$1.55. As a result of the devaluation of the dollar, nonappropriated fund payers (AAFES and AFSVA) have paid about \$31.9 million in foreign currency fluctuation expenses, and appropriated MILCON funds have paid \$8.6 million since

the project's inception. The Air Force includes nonappropriated fund foreign currency fluctuation costs in its construction cost estimates. However, because MILCON foreign currency fluctuation costs are paid from a separate account, the effect of foreign currency fluctuation is not reflected in the Air Force's construction cost estimate.⁹ Therefore we have included in the estimate based on the Air Force's reported numbers the actual foreign currency fluctuation costs paid to date associated with MILCON funds. In addition, the Air Force also did not include an allowance for future foreign currency fluctuation costs associated with MILCON funding. Based on the trend of the strengthening euro, these foreign currency fluctuation costs will only increase as MILCON expenses increase. Figure 4 shows the trend in the strengthening of the euro against the U.S. dollar over the past several years.

⁹Costs associated with foreign currency fluctuation for appropriated MILCON funds are paid from a central MILCON foreign currency fluctuation account and are not charged directly to projects.

Figure 4: Currency Exchange Rates for Euros since 2003



In addition to the estimated expenses listed above, there are still a number of significant costs associated with project completion that have not been estimated. These items include potential hindrance claims, repair of cracking concrete, and Air Force personnel costs for staff needed to manage the KMCC’s construction. Depending on the resolution of these unknown costs, the total cost of the KMCC project could increase substantially before completion.

- Hindrance claims.** As a result of delays to the project, the Air Force expects that contractors will submit claims for additional costs incurred from being hindered in their performance. As of June 1, 2008, LBB-Kaiserslautern had forwarded change order requests for contractor hindrances totaling \$8.2 million (5.4 million euros) to the Air Force. However, the Air Force has denied the requests because it contends that they are not substantiated. In anticipation of contractors making formal hindrance claims—that must meet a prescribed legal standard and would be adjudicated through the German courts—the Air Force has retained a consultant¹⁰ to evaluate the history of the

¹⁰The cost of this claims consultant is included in the secondary services cost estimate.

project and prepare the Air Force's claims defense strategy.¹¹ At this time, the Air Force's potential exposure to claims is unknown.

- **Concrete cracking.** Long cracks have been identified by the Air Force at various locations on concrete floors of the KMCC subsequent to our 2007 site visit. A German court appointed an expert consultant to determine the severity of the cracks and identify their causes. The consultant's report, issued in March 2008, indicates that joints will need to be cut into the floor to keep additional cracks from occurring. LBB-Kaiserslautern subsequently initiated design work to detail the scope of the repairs. The Air Force expects that LBB-Kaiserslautern will award a contract for the repairs in July 2008. At this time, the cost of repairs is unknown. (See fig. 3 for an example of these cracks).
- **Air Force personnel costs for staff managing the KMCC.** According to the Air Force, a team of 29 military, civilian, and contractor personnel manage the KMCC construction project. They are responsible for financial management, claims management, design and construction management, and stakeholder operations. This team comprises 6 military officers and enlisted personnel, 10 civil service employees, and 13 contracted employees. The cost of the salaries and benefits for military and civil service employees who have been reassigned from other projects to assist in managing the KMCC project since its inception in 2003 is a real cost of the project but is not included in the Air Force's overall cost estimate. This cost is difficult to quantify because the military and civilian personnel occasionally work on other projects, and it is not clear how their time is apportioned among projects.

Federal Republic of Germany funds. The extent to which project cost increases will be borne by the Air Force and its funding partners is unknown because of uncertainties regarding the \$37.9 million (25 million euros) committed by the German government for the project. The German government allocated \$15.2 million (10 million euros) to pay contractors' invoices against change orders that had not yet been approved by the Air Force. According to the Air Force, only \$8.6 million (5.7 million euros) were actually expended by LBB-Kaiserslautern prior to the funds expiring at the end of calendar year 2007. According to the German officials, this initial \$8.6 million amounts to a loan, and the Air Force stated that it will

¹¹The consultant is also investigating if there are areas where the Air Force may be able to recover costs for problems caused by designer or contractor errors.

reimburse this amount when it approves the change orders and makes payment against the associated invoices. The additional \$22.7 million (15 million euros) are planned to be used by LBB-Kaiserslautern to fund contracts for rework items, such as roof repairs and kitchen exhaust duct replacement, and may also be used to settle contractor hindrance claims. In discussions with us, German officials characterized the \$22.7 million (15 million euros) as a loan as well and said that they expected full repayment of funds. However, Air Force officials contended that they will only pay for valid work under the original KMCC contract and will not pay for rework. In light of these opposing views, for transparency purposes, all expenses paid from the German funds are incorporated into the total project cost regardless of which party is ultimately responsible for financing them.

Delayed Completion Has Caused Opportunity Costs to Grow

As a result of the delayed KMCC project completion, AFSVA and AAFES, two major funding sources for the project, have experienced negative financial effects. Both AFSVA and AAFES invested in the project with the expectation of returns being generated in early 2006, the project's original construction completion date. However, the delayed completion has resulted in lost profits and in turn reduced the amount of funds AAFES and AFSVA can provide to military communities for morale, welfare, and recreation. For example, AAFES estimates that every month the KMCC's opening is delayed, AAFES loses approximately \$500,000 in net profits from stores such as the base exchange and food court restaurants. In total, AAFES estimates it will have lost more than \$14 million in net profits by the time construction is estimated to be completed in January 2009. Also, the unavailability of the 350 hotel rooms to be completed in the KMCC Visitors Quarters results in the U.S. government paying more for lodging on the local economy. According to an Air Force estimate, on average each month that the opening of the hotel is delayed results in the U.S. government paying an additional \$90,000 for off-base lodging of displaced personnel¹² traveling at the government's expense. Estimated increases in off-base housing costs will total \$2.9 million dollars if construction is completed in January 2009.

¹²Displaced personnel include military and civilian personnel in temporary duty status from the Air Force and other agencies, as well as contractors who are eligible for military lodging.

Criminal and Civil Investigations Continue to Surround the KMCC and Other Projects

In our June 2007 testimony, we reported that several Air Force and LBB-Kaiserslautern personnel involved in management of the KMCC and other RMTP projects were under investigation by AFOSI and German police for a variety of issues, both criminal and civil. AFOSI officials stated that the cases have matured significantly since that time; however, formal indictments have not yet been made. Because the investigations are still active, AFOSI is limited as to the information it can disclose. However officials did state that investigations involve U.S. military and civilian employees, employees of LBB-Kaiserslautern, and KMCC trade contractors. These individuals are being investigated for offenses such as dereliction of duty and bribery.

The Air Force Has Improved Controls over the KMCC Project

The Air Force has made significant improvements in its oversight and internal controls over the KMCC project. As stated in the June 2007 testimony, the Air Force had failed to institute effective management oversight and internal controls in order to mitigate the high risk of the project. Specifically, the Air Force lacked standardized policies, did not have sufficient staffing to oversee the project, was not thoroughly reviewing invoices, and was approving change orders and payments on the project without proper documentation. In the last year, the Air Force created the RDO, which centralized management oversight of the KMCC project and brought together appropriate personnel specializing in financial management, claims management, design and construction management, and stakeholder operations. The Air Force has also standardized its invoice and change order review processes to minimize future risks of paying for unapproved work. The Air Force trained and appointed certifying officers and accountable officials for the KMCC project to ensure that personnel authorizing payments are aware of their fiduciary responsibilities. Finally, during 2007, senior officials within the Air Force engaged officials from the Department of State and the Federal Republic of Germany in an effort to encourage progress on the project.

Establishment of the RDO and Improvements in Invoice and Change Order Reviews

In August 2007, the Air Force established the RDO to centralize control over all aspects of the KMCC project. According to the Air Force, the RDO has 29 personnel, which is a significant increase from the 8 oversight personnel initially assigned to the KMCC project. These 29 personnel are 6 military officers and enlisted personnel, 10 civil service employees,¹³ and

¹³As previously discussed, salary and benefit costs for the military and civil service employees are not included in the overall project costs.

13 contracted employees. The RDO is divided into four branches: financial controls, ABG-75 administration, engineering, and operations/quality assurance. The Air Force also standardized policies and procedures for the four RDO branches, which are documented in an official operating instruction manual for the KMCC project. The documented policies were a measurable improvement from the one-page flowchart used during our last visit in 2007. As part of the establishment of the RDO, the Air Force also appointed and trained 9 certifying officers and accountable officials. Certifying officers are responsible for certifying vouchers for payment. Accountable officials provide source information to a certifying officer to support a decision to certify a voucher for payment or to disburse funds. Appointment and training of these types of officials are key to ensuring that appropriate controls are in place over payments made by the Air Force. The RDO also includes 6 quality assurance engineers and technicians responsible for performing technical reviews of designs and conducting daily surveillance of the work site.

Since creating the RDO, the Air Force has also improved its review process for invoices. During our initial visit last year, we reported how Air Force management instructed its staff to certify for payment invoices with items included in unapproved change orders and items that exceeded quantity limitations specified in contracts. The Air Force has since revised its policy and now rejects invoices for quantities in excess of contracted amounts and also rejects invoices with items included in unapproved change orders. For example, if the Air Force receives an invoice that contains charges for items contained in unapproved project change orders, the Air Force will reject the invoice and refuse payment until LBB-Kaiserslautern submits an invoice that only lists items that have been approved by the Air Force. In addition, the Air Force has gone back on prior invoices and recouped amounts previously paid in excess of contracted quantities.

Involvement of Senior Air Force Officials

Beyond improvements over internal controls and the establishment of the RDO, senior Air Force, Department of State, and German government officials have also increased oversight of the project. Beginning in August 2007, the U.S. Air Forces in Europe Vice Commander, the U.S. Ambassador to Germany, and the heads of the German Ministry of Construction and the German Ministry of Finance started meeting regularly to discuss problems facing the KMCC. These repeated meetings between U.S. and German officials prompted the German government to provide \$37.9 million (25 million euros) to the project for backlogged change orders and repair work. According to the Air Force, German support is essential for a

successful completion of the KMCC project. The Air Force's expectation is that by maintaining strong relationships among senior officials, it will ensure that those running the KMCC project are able to better organize, prioritize, and execute the project. Unfortunately, this joint effort has not yet expedited KMCC construction to an acceptable pace according to Air Force officials.

Other Recent U.S. Projects on Ramstein Air Base Have Experienced Similar Problems

Other projects recently completed in the KMCC area managed by LBB-Kaiserslautern have experienced problems similar to those affecting the KMCC. Air Force officials report that several recent projects on Ramstein Air Base experienced cost and schedule growth, including projects that were delivered by LBB-Kaiserslautern months after the planned delivery dates. In addition, several projects were delivered with construction flaws that have caused flights to be diverted and have affected the processing of freight shipments. According to the Air Force, it has experienced fewer problems with less sophisticated projects, such as the construction of more than 1,000 new military family housing units in the KMCC area and the construction of an indoor pool on Ramstein Air Base, that were managed by LBB-Kaiserslautern. However, construction of these projects is not comparable to the scope and complexity of constructing the KMCC building, runways, and other operational facilities.

Cost and Schedule Growth of Other Projects

Numerous recent projects associated with the RMTP built on Ramstein Air Base by LBB-Kaiserslautern have experienced significant cost growth, according to the Air Force. Several of these projects have also not received final bills from LBB-Kaiserslautern despite being turned over to the United States more than a year ago. Therefore, the final costs of the projects are still unknown. In addition, many of the same group of projects managed by LBB-Kaiserslautern also experienced significant schedule growth according to the Air Force, including projects that were delivered months after their scheduled completion dates.

Construction Deficiencies of Other Recently Completed Projects

Construction deficiencies experienced on several of the RMTP projects built by LBB-Kaiserslautern add to the concerns associated with cost and schedule growth. Specifically, there have been several projects where faulty construction has resulted in safety concerns, building evacuations, and potentially reduced useful lives of facilities. Below are examples of such problems.

-
- **South runway.** This runway was recently built on Ramstein Air Base in order to upgrade the base's capabilities in support of overseas missions, including those in Iraq and Afghanistan. However, the runway lights are adversely affected by a construction defect that allows groundwater to collect in the underground ducts and manholes that contain electrical components used to control the lights. The intrusion of water has damaged electrical components resulting in power outages to the lights. These lights are crucial for operations because they allow aircraft to land during times of extremely limited visibility. According to the Air Force, because of the lighting failures, aircraft could not land during periods of limited visibility from November through December 2007 and flights were diverted to other bases in Europe. Portable lights have been used to temporarily resolve the problem. Additionally, water is pumped from the manholes as an ongoing maintenance activity that according to Air Force officials, has cost about \$65,000 to date. Finally, during rainy periods, several large ponds developed between the south runway and adjacent runways and taxiways because of poor water drainage. These ponds, which were several acres in total area during our visit in March 2008, have attracted large waterfowl, which pose a safety hazard to aircraft using the runway. Figure 5 shows one of these large ponds. Studies and court actions are currently under way to resolve these issues.

Figure 5: Example of Large Pond Next to Ramstein's South Runway



Source: GAO.

- **Freight terminal.** This large 100,000 square foot material handling facility was constructed to assist in processing freight shipments to and from overseas locations. However, deficiencies with the structural steel that frames the freight terminal required evacuation of the building until additional support columns could be installed. According to the Air Force, because of material fabrication issues, insufficient welds, and undersized connections, the steel structure that supports the freight terminal building was determined to be at risk of collapsing. As an interim safety measure, 41 additional support columns were installed to bolster the structural integrity of the facility. According to the Air Force, these additional supports effectively reduce the open area in the center of the facility and affect freight processing operations. For example, forklifts are restricted in maneuvering and cannot access certain areas. Figure 6 shows an example of the additional support columns installed within the freight terminal building. A permanent resolution will be determined by legal proceedings that are currently ongoing in the German courts. In addition, officials were concerned that a building attached to the freight terminal was also structurally deficient as a result of potentially insufficient welds

on the structural steel. Because of these concerns, the building was evacuated from July through September 2007 while additional support columns were installed. An inspection completed in March 2008 confirmed that the structural steel was, in fact, installed correctly and that the building is not at risk of collapsing. The attached building is currently being used as intended.

Figure 6: Example of Additional Support Column Installed in the Freight Terminal



Source: GAO.

- **Hot cargo pad.** A large concrete area intended to be used for loading live munitions onto aircraft destined for overseas locations such as Iraq and Afghanistan was recently built near the Ramstein Air Base runway. However, when building the concrete pad, contractors did not install dowels between adjacent concrete slabs as is typically done in this type of construction. Because the dowels were not installed, Air Force officials stated that differential settling of the concrete slabs could result in damage to the cargo pad and reduce its useful life. The Air Force is currently

negotiating with LBB-Kaiserslautern to determine what, if any, actions will be taken to address this issue. While this does not represent a safety risk, the reduced life span of the cargo pad could result in the Air Force spending money for repair or replacement earlier than would normally be expected.

Concluding Comments

Although the Air Force has made measurable improvements in its oversight and control of the KMCC since our last testimony, the project remains at risk because of schedule and cost uncertainties. With few visible changes, no reliable construction completion date, rising repair costs, and continuing construction quality problems, the KMCC will continue to be a high-risk project. Even after the KMCC is completed and open, it will likely take years before all issues related to this project, including litigation and potential construction quality problems, are resolved.

Mr. Chairman and Members of the Committee, this concludes our statement. We would be pleased to answer any questions that you or other members of the committee may have at this time.

GAO Contacts

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Appendix I: Scope and Methodology

To determine the current status of the Kaiserslautern Military Community Center (KMCC) construction project, including projected costs, cost completion analyses, projected construction completion dates, and status of ongoing investigations, we interviewed officials from the Air Force at Ramstein Air Base in Germany, the Army and Air Force Exchange Service (AAFES), the Air Force Services Agency (AFSVA), the U.S. Army Corps of Engineers (USACE), the Air Force Audit Agency, the Air Force Office of Special Investigations (AFOSI), and the Department of State. In addition, we interviewed officials from Landesbetrieb Liegenschafts- und Baubetreuung office in Kaiserslautern (LBB-Kaiserslautern), the German government construction agency; the Federal Republic of Germany's construction division; and the German police. We physically inspected the KMCC facility with an Air Force project manager and observed construction deficiencies. We also reviewed financial records and statements in the form of contracts, change orders, and invoices to the extent that they were available. We also compiled Air Force and LBB-Kaiserslautern cost estimates for the various cost elements associated with the KMCC project.

To determine whether oversight and internal control improvements have been made by the Air Force since our last testimony, we interviewed Air Force officials from the KMCC Resident Director's Office. We also interviewed officials from LBB-Kaiserslautern, AAFES, AFSVA, AFOSI and the Air Force Audit Agency. We obtained and reviewed project management plans, standardized policies and procedures, cost estimates, training materials for certifying officers and accountable officials, and other relevant documents related to project management.

To determine if other projects recently completed in the KMCC area have experienced problems similar to those affecting the KMCC, we interviewed Air Force officials regarding their construction projects in Germany. We also conducted interviews with other organizations, including USACE, AFOSI, LBB-Kaiserslautern, and the Air Force Center for Engineering and the Environment to understand the cost, schedule, and construction flaws experienced by other military construction projects in the KMCC area and how they may affect the viability of future construction projects. We also reviewed available technical expert reports documenting construction deficiencies associated with these projects.

Because of ongoing investigations, we were not able to fully explore and discuss the details of fraud investigations with AFOSI and the German police, which limited the scope of our audit.

We conducted this performance audit from November 2007 through June 2008 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

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