

GAO

Testimony

Before the Committee on Oversight and
Government Reform, House of
Representatives

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**MILITARY
CONSTRUCTION**

**Observations on
Mismanagement of the
Kaiserslautern Military
Community Center**

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Highlights

Highlights of [GAO-07-1039T](#), a testimony before the Committee on Oversight and Government Reform, House of Representatives

Why GAO Did This Study

According to the Air Force, the Kaiserslautern Military Community Center (KMCC), an over 800,000 square-foot facility, is currently the Department of Defense's largest single-facility project under construction. It is intended to provide lodging, dining, shopping, and entertainment for thousands of U.S. military and civilian personnel and their families in the Kaiserslautern, Germany, area. Initial costs for the KMCC were estimated at about \$150 million, with funding coming from a variety of appropriated and nonappropriated fund sources. The construction for the project, which began in late 2003, was originally scheduled to be completed in early 2006.

This testimony discusses GAO findings to date related to the KMCC. The testimony describes (1) current problems facing the KMCC, (2) causes for identified problems, and (3) the effect of problems identified and their implications for future projects in Germany.

To address our objectives, we interviewed officials from the U.S. Air Force, Army and Air Force Exchange Service, U.S. Army Corps of Engineers, and German government. We also conducted a site visit and reviewed relevant KMCC documents. We plan to continue our work and make recommendations to the Air Force as appropriate.

www.gao.gov/cgi-bin/getrpt?GAO-07-1039T.

To view the full product, including the scope and methodology, click on the link above. For more information, contact Gregory Kutz at (202) 512-7455 or kutzg@gao.gov or Terrell Dorn at (202) 512-6923 or dornt@gao.gov.

MILITARY CONSTRUCTION

Observations on Mismanagement of the Kaiserslautern Military Community Center

What GAO Found

The KMCC project has encountered cost, schedule, and performance problems. Currently neither Landesbetrieb Liegenschafts- und baubetreuung's office in Kaiserslautern (LBB-Kaiserslautern), the German government construction agency in charge of the project, nor the Air Force have a reliable estimated completion date or final cost for the project.

Problems facing KMCC include construction flaws, vandalism of property, repeated work stoppages and slowdowns by contractors, and ongoing criminal investigations. Because of financial problems facing the project, the number of workers on-site has dwindled from several hundred to less than 50, which will likely further delay completion of the project. In addition, the KMCC's multimillion dollar "green" roof is experiencing water leaks, and will likely require the Air Force to spend millions of dollars for its replacement. Below is a picture of damage caused to the building interior from the roof leak.



Source: USAFE.

The KMCC faced a high level of risk from its inception, which was not effectively mitigated by the Air Force. Increased risks included an overseas project controlled by LBB-Kaiserslautern with financial risks borne by the Air Force and its funding partners. Unfortunately, LBB-Kaiserslautern did not effectively manage the design and construction of the project. Rather than increase controls to mitigate project risks, the Air Force provided minimal oversight and in some cases circumvented controls to expedite the invoice payment process in an attempt to complete the project.

Because this project is funded primarily with nonappropriated funds, the likely substantial cost increases in the project will be borne by military servicemembers, civilians and their families. Further, absent better Air Force controls, future projects may experience the same types of heightened risks associated with KMCC.

Mr. Chairman and Members of the Committee:

Thank you for the opportunity to discuss our initial findings related to our audit of the Kaiserslautern Military Community Center (KMCC). The KMCC is one of many projects that were initiated at Ramstein Air Base to upgrade the capabilities of the base as a result of the consolidation of military bases in Europe. According to the Air Force, the KMCC, an 844,000-square-foot facility, is currently the Department of Defense's largest single-facility project. Funding for the project was provided from a variety of sources including nonappropriated funds from the Army and Air Force Exchange Service (AAFES) and Air Force Services Agency,¹ military construction appropriations, and Rhein Main Transition Program funds.² The KMCC 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. The KMCC won the Air Force 2006 Design Award for an outstanding design concept for its environmentally-friendly "green" roof,³ glass domes, and facades allowing maximum light into the facility, and its amenities to the Kaiserslautern military community. Project highlights include a 350-room visiting quarters, sports bar, name brand restaurant, food court, slot machines, and numerous retail businesses. Construction on the KMCC began in November 2003 and the building was planned to be completed in early 2006. This represented an expedited schedule developed to accommodate the need for additional visiting quarters resources resulting from the closure of Rhein Main Air Base in 2005.

¹AAFES is a joint military activity providing merchandise and services to active duty, guard and reserve members, military retirees, and their families. AAFES utilizes earnings to improve troops' quality of life and to support morale, welfare, and recreation programs. Air Force Services Agency provides combat support and community service programs that enhance the quality of life for Air Force members and their families. Air Force Service Agency programs include lodging, youth programs, and sports and fitness programs

²The closure of the Rhein Main Air base is part of the Rhein Main Transition Program 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 KMCC.

³According to a USAFE official, for KMMC, green roof refers to an environmentally engineered roof whereby soil and vegetation are placed on the roof of a structure in order to provide a reduction in energy costs, reduce water runoff, and offset the forest area cleared for a project.

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 (NATO) Status of Forces Agreement (SOFA), the German Supplementary Agreement (SA) to the NATO SOFA, and the various administrative agreements that implement these two agreements. The KMCC, like other military projects constructed in Germany, is governed by one such agreement, the Auftragsbaugrundsätze 1975 (ABG-75) Administrative Agreement. ABG-75 establishes specific procedures for construction of military projects, including the KMCC, in Germany. 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 the Landesbetrieb Liegenschafts- und Baubetreuung office in Kaiserslautern (LBB-Kaiserslautern), a German government construction agency.

As requested, this testimony highlights the findings to date from our audit of the KMCC. Specifically, the testimony will describe (1) the current problems facing the KMCC, (2) the causes for identified problems, and (3) the effect of problems identified and their implications for future projects in Germany.

To address our objectives, we conducted interviews with officials from the U.S. Air Force, including U.S. Air Forces in Europe (USAFE) personnel responsible for the KMCC project and Air Force Services Agency. In addition, we interviewed officials from LBB-Kaiserslautern, AAFES, and the U.S. Army Corps of Engineers (USACE). We also obtained and reviewed project plans, cost estimates, and other relevant documents related to the design and construction of the KMCC. We physically inspected the KMCC and viewed the current status of the project. Our audit work was performed between May and June 2007 in accordance with generally accepted government auditing standards.

Summary

The KMCC project has encountered cost, schedule, and performance problems. Factors contributing to problems facing the KMCC include construction flaws, vandalism of property, contractor work stoppages and slowdowns resulting from delays in payments, and an ongoing fraud investigation. Originally scheduled to be completed over a year ago, continuing KMCC construction and financing problems are likely to delay its completion. In fact, problems are so severe that neither officials from LBB-Kaiserslautern nor the Air Force can now forecast the completion date of the project. Original cost estimates for the project totaled

approximately \$150 million. However current cost estimates total approximately \$200 million and will likely increase in the future. Cost increases have been compounded because of the significant appreciation of the euro versus the U.S. dollar since inception of the project. The KMCC is also experiencing numerous performance problems resulting from design flaws, ineffective construction management, and substandard workmanship. For example, the KMCC's multimillion dollar roof is experiencing water leaks, which according to Air Force officials will likely require its replacement at a cost of millions of dollars. In addition, the Air Force delayed payments to some contractors because contractor invoices were for contracts which had already reached their contract cost ceiling. Because of the delay in payments, contractors drastically decreased their workforce from several hundred workers per day to about 50.

Finally, project management of both LBB-Kaiserslautern and the Air Force have experienced significant changes including: (1) replacement of LBB-Kaiserslautern project managers, (2) firing of LBB-Kaiserslautern's construction management contractor, and (3) resignation of a senior Air Force civilian working on the project. In addition, several Air Force and LBB-Kaiserslautern personnel involved in the management of the KMCC are currently under investigation by Air Force Office of Special Investigations (AFOSI) and German police.

The causes for the current problems facing the KMCC stem from risks associated with overseas construction, failures by LBB-Kaiserslautern to effectively perform its construction management duties, and failures by the Air Force to institute effective controls to mitigate project risks. Overseas construction projects pose additional risk due to differences in languages, laws, construction standards, and currency fluctuations when costs are denominated in the host country's currency. Almost all U.S. military construction in Germany must be done within the framework of ABG-75. ABG-75 largely gives the German government contracting agency control over projects and contractors while financial risks are borne by, in this case, the Air Force and its funding partners. ABG-75 generally gives the German government the authority to contract and manage construction of most U.S. facilities in Germany through what is called indirect contracting.⁴ In addition, ABG-75 requires the U.S. government to

⁴According to ABG-75, indirect contracting means the planning, execution, and administration of construction works are performed by the German government on behalf of the U.S. forces.

pay the German government construction agency a percentage fee based on the cost of the contract.⁵ As a result, German government construction agencies do not have an incentive to control costs because each dollar increase in the project costs results in increased fees for the German government construction agents.⁶

In addition, LBB-Kaiserslautern did not effectively manage the KMCC project. The failures included LBB-Kaiserslautern's inability to maintain and implement a valid, updated construction schedule and to effectively coordinate work between multiple contractors. LBB-Kaiserslautern, and its architect-engineer contractor JSK, also did not adequately design the project prior to construction. Because of the poor design, Air Force officials estimate that millions of dollars of changes and rework were necessary as of June 2007. For example, the Air Force noted in the design review phase that KMCC's kitchen exhaust ducts as designed did not meet U.S. fire safety standards. However, because the Air Force design comment was not incorporated by LBB-Kaiserslautern, hundreds of thousands of dollars of rework on the KMCC's exhaust ducts will be necessary. In addition, LBB-Kaiserslautern acknowledged that it was vastly understaffed to effectively manage a project the size of the KMCC. This understaffing resulted in LBB-Kaiserslautern being unable to process the large number of change orders that arose from the project. According to Air Force officials, this resulted in work related to more than 400 contract changes being billed to the Air Force without supporting documentation.⁷

Despite the high risks surrounding the KMCC, Air Force officials failed to institute effective management oversight and controls in order to mitigate the high risk from the project. Had LBB-Kaiserslautern done an effective job of managing the project, the lack of Air Force controls would have been mitigated. Unfortunately, as stated above, LBB-Kaiserslautern did not

⁵Thus, the total cost for the KMCC is the cost of the contracts that the German government construction agent negotiated with contractors for constructing the building plus the fee for the German government construction agent.

⁶LBB-Kaiserslautern for the KMCC is reimbursed 5.6 percent of the total cost of the project as its fee for managing the construction on behalf of the U.S. forces.

⁷The 400 contract changes refer to changes in the project that were approved by LBB-Kaiserslautern, but have not been submitted to the Air Force. The extent of documentation provided to the Air Force justifying the need for the changes has been limited to a one-line description. Although requested, LBB-Kaiserslautern did not provide any additional documentation to us to substantiate the existence or justification for these changes.

manage the project effectively and therefore increased the importance of effective Air Force controls. Normally the Air Force hires USACE to oversee projects in Germany to provide assurance that construction, procurement, and financial controls are in place and U.S. interests are protected. However, for the KMCC, the Air Force elected not to use USACE,⁸ and subsequently did not institute sufficient controls of their own to mitigate the project risks. The Air Force did not have sufficient staffing to oversee the project, given its complexity. According to Air Force officials, they initially had about 8 personnel on the project but have recently increased staff to 17 personnel. However, the Air Force still does not have experts, such as contracting officers or certifying officials, on-site to provide assurance that all requirements of the contract are met. As a result, the Air Force did not properly review many invoices prior to payment—tasks that a contracting officer or certifying official would be expected to perform. In addition, because of internal demands to complete the project on an expedited basis to accommodate needs rising from the closure of Rhein Main Air Base, the Air Force instituted processes that circumvent its main controls for monitoring costs associated with the project. Although ABG-75 allows all U.S. forces the right to reject invoices for which the contract or change order were not previously approved, Air Force project management instructed its staff to approve invoices that included items listed on certain change orders that had not been submitted to or approved by the Air Force. In addition, the Air Force instructed its staff to approve invoices where quantity limitations specified in the contracts were exceeded as long as LBB-Kaiserslautern provided a form letter stating the price was fair and the work was necessary. Therefore, despite risks associated with the KMCC, the Air Force elected to reduce controls instead of increasing their oversight of the project.

Cost increases and schedule delays will most significantly affect AAFES and the Air Force Services Agency, the primary funding sources for the project. For example, according to an AAFES official, recent estimates by AAFES, the largest contributor to the KMCC, forecast its portion of the total KMCC cost will end up doubling its original cost estimate. As a result, the reduction in AAFES return on investment from the KMCC caused by escalating costs may reduce profits and thus may diminish future funding of morale, welfare, and recreational activities for U.S. service members. In

⁸Air Force officials stated that they did not use USACE because of the limited amount of military construction funds associated with the KMCC project and additional costs associated with using USACE.

addition, as a result of the higher KMCC costs, AAFES and the Air Force Services Agency are also likely to have less funding for their other planned capital projects, such as the construction or renovation of their stores. Also, because of the delay in the completion of the visiting quarters portion of the KMCC, which was needed to accommodate the additional quarters requirements arising from the closure of Rhein Main Air Base, service members in transit to and from other locations, such as Iraq and Afghanistan, may also be forced to stay off-base, at additional cost to the government. Finally, Air Force officials estimate there is at least \$400 million in additional operations and maintenance projects and military construction projects planned in Germany over the next 5 fiscal years. Absent better Air Force controls, these projects may experience the same types of heightened risks associated with KMCC.

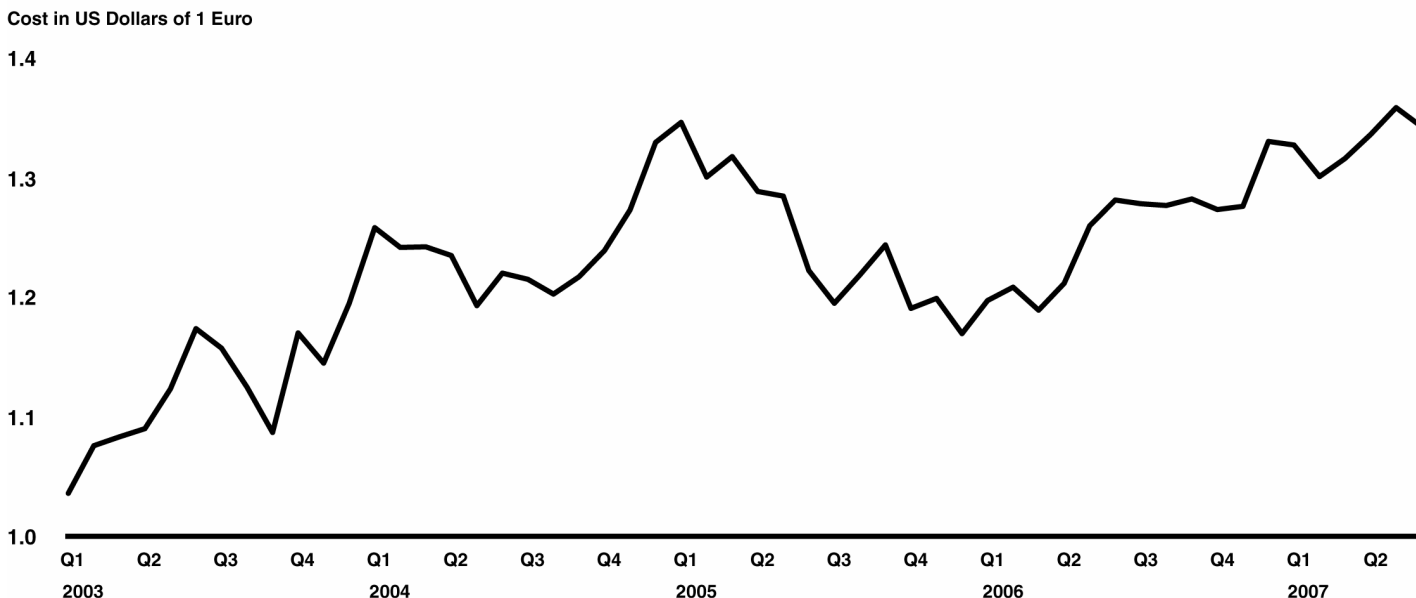
KMCC Currently Experiencing Substantial Cost, Schedule, and Performance Problems

The KMCC currently faces significant cost, schedule, and performance problems, and it is unclear as to when the project will be completed and at what cost. Despite being originally scheduled to open in early 2006, neither LBB-Kaiserslautern nor the Air Force can estimate a completion date for the project because of the widespread construction management problems. In addition, estimated costs associated with the KMCC have already exceeded original estimates and will continue to grow. LBB-Kaiserslautern mismanagement has caused numerous problems with the KMCC. Examples include poor designs, substandard workmanship on key building components, and a significant reduction in the number of workers on-site. Furthermore, there may be fraud within the project, which is supported by the fact that there are ongoing criminal and civil investigations by AFOSI and German police.

The latest official design schedule completed by LBB-Kaiserslautern and provided to the Air Force in September 2006 indicated that the KMCC would be completed by April 2007. However, during our visit to the KMCC in May 2007, LBB-Kaiserslautern and Air Force officials stated that key milestone dates from the most recent design schedule had obviously slipped. In fact, neither LBB-Kaiserslautern nor Air Force officials could provide a new estimated project completion date during our audit of the project. Also, both LBB-Kaiserslautern and the Air Force provided us current cost estimates of about \$200 million, which have already exceeded the original estimate of about \$150 million. We found that these cost estimates did not include substantial costs related to the expected roof

repair and replacement discussed later, as well as hindrance claims associated with the project.⁹ Furthermore, the Air Force contract with LBB-Kaiserslautern is denominated in euros and therefore the U.S. cost equivalent varies with the exchange rate. For example, the original cost estimate of about \$150 million was developed in 2003 when 1 dollar was able to purchase significantly more in euros than 1 dollar can currently purchase. Figure 1 below shows the trend in the strengthening of the euro against the U.S. dollar over the past several years.

Figure 1: Currency Exchange Rates for Euros since 2003



Source: Federal Reserve.

The schedule delays associated with the KMCC have compounded cost problems because of the appreciation of the euro versus the U.S. dollar. Given the substantial costs associated with repairs to the roof, schedule delays, and potential hindrance claims by contractors, assuming currency rates remain higher than they were for the original project budget, the appreciation of euros versus the U.S. dollar compounds the effect of cost overruns on this project.

⁹Hindrance claims refer to claims against the United States for additional costs contractors incurred due to interruption of contractor work.

Since the start of construction in 2003, the KMCC has experienced numerous problems including poor design, substandard workmanship, poor coordination of the different contractors, and a reduction of workers on the site. Some of the more notable problems associated with this project include the following:

- **Roof:** The roof is experiencing water leaks causing considerable damage to the walls and the floors of the complex. According to Air Force officials, since the contractor responsible for roof construction went bankrupt, KMCC funding sources from the United States (AAFES, Air Force Services Agency, and Military Construction funds) will likely be used to pay the estimated millions of dollars in costs required to repair or replace the entire roof along with any internal damage. Figure 2 shows some damage in the KMCC resulting from the leak in its roof.

Figure 2: KMCC Damage from Leaks in Roof

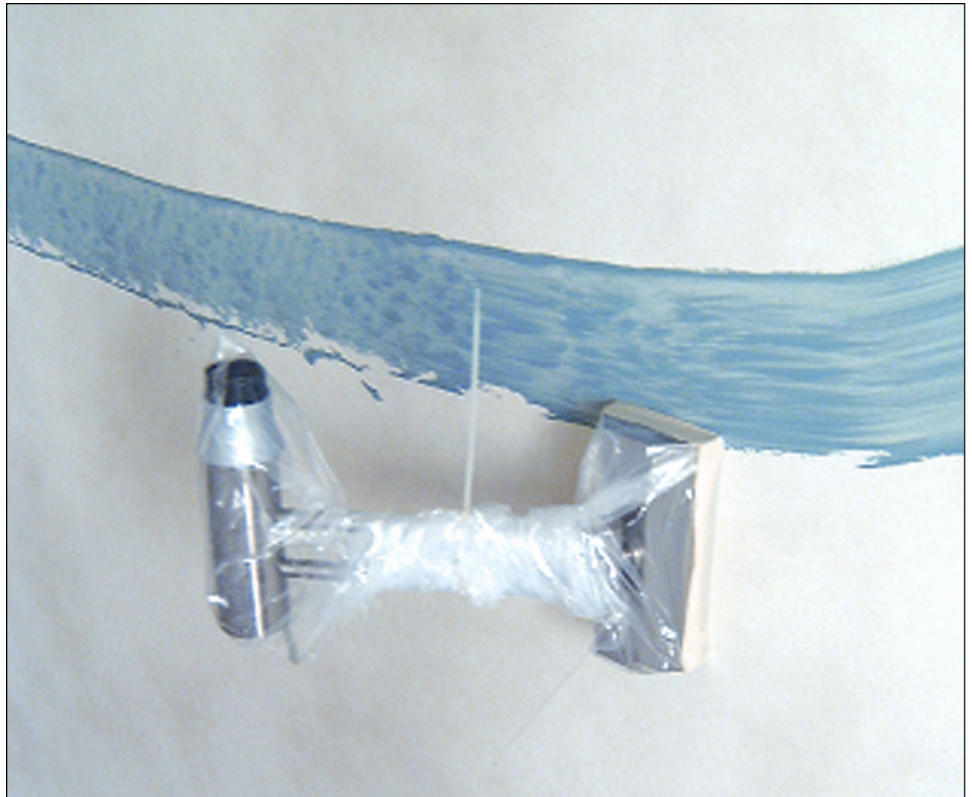


Source: USAFE.

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- **Exhaust ducts:** The kitchen exhaust ducts installed in the KMCC do not comply with fire code standards established by the National Fire Protection Association.¹⁰ According to Air Force officials, it will take several months to make the exhaust ducts compliant with the fire codes at a cost of hundreds of thousands of dollars.
 - **Bathroom faucets:** Design plans called for some of the bathroom faucets in the KMCC to be automatic where water would turn on when a motion sensor indicated the presence of a person. However faucets and walls were installed prior to the electrical contractor installing wires needed to power the automated faucets.
 - **Vandalism:** In April 2006, vandalism occurred in over 200 rooms inside the KMCC. The cost to repair damage caused by the vandalism is estimated to be over \$1 million. To make matters worse, as shown in figure 3, due to poor project coordination, a German contractor installed light fixtures on top of the vandalized walls. These lights will need to be removed to enable wall repairs to be made and then reinstalled.

¹⁰National Fire Protection Association 96: Standards for Ventilation Control and Fire Protection of Commercial Cooking Operations.

Figure 3: Light Fixture Installed on Top of Vandalized Wall



Source: USAFE.

- **Reduction of construction workers:** In the past several months, the KMCC has faced a drastic reduction of the number of workers on-site. LBB-Kaiserslautern officials attributed this decrease to slow payment for services and reduced payment amounts from the Air Force due to increased scrutiny of invoices by the Air Force. The Air Force has delayed the payments to certain contractors because the total amount of charges billed to the Air Force has already risen to the contract cost ceiling for the specific contractor. Therefore, the Air Force has been unable to pay those contractors for work performed without a contract change order to increase the contract ceiling. As a result, many of the contractors either reduced the number of workers or have quit working altogether on the project. Prior to September 2006, the number of workers on the site was normally several hundred. Currently, the number of workers on the site is routinely less than 50.

In addition to the construction problems faced by the KMCC, there have been a number of personnel who have been removed or have resigned from the project. In the past year, project management officials from LBB-Kaiserslautern have been replaced. Also, JSK, the firm hired by LBB-Kaiserslautern to manage the KMCC, was fired. Finally, a senior Air Force civilian in charge of the project resigned from the position and left the Air Force in 2006. On top of those personnel changes, both the AFOSI and the German Police have ongoing investigations into the project. The investigations span a variety of issues, both criminal and civil, including the investigations of Air Force project management officials as well as German government officials. In the past year, both Air Force and LBB-Kaiserslautern offices have been searched and documentation seized by both AFOSI and German police in relation to these investigations.

KMCC Problems Caused by Overseas Construction Risks, LBB-Kaiserslautern Management Deficiencies, and Lack of Air Force Controls

Current problems facing the KMCC have been caused by the additional risks associated with overseas construction, project management deficiencies by LBB-Kaiserslautern, and the Air Force's lack of effective controls to mitigate project risks. Guidelines set forth in ABG-75 add risk to the contract management process for U.S. forces construction in Germany. In addition, during the design and construction of the KMCC, the German government construction agent, LBB-Kaiserslautern, did not effectively carry out its project design and construction management duties. Finally, the Air Force failed to recognize risks associated with the KMCC and develop control procedures to minimize project risks. Because the most significant control that the United States can exercise over construction projects in Germany is financial control, the Air Force should have increased the project oversight controls to identify any invalid, unsupported, or inaccurate costs before money was spent. Instead, the Air Force did not have basic oversight and in some cases has circumvented controls in order to expedite payments.

Overseas Construction Risks

The KMCC presented increased risk from the beginning because U.S. forces are not in direct control of construction projects in Germany. Under the terms of ABG-75, most U.S. military construction projects are required to be executed by German government construction agencies, in this case LBB-Kaiserslautern, in accordance with German laws. This includes all contractual authority for design, bid tender and award, project execution, construction supervision, and inspection for all military projects within Germany. As such, the German government construction agency contracts directly with the design and construction companies responsible for a given project. As a result, the United States is required to work through

this indirect contracting method, and does not have any direct legal relationship with the contractors for construction projects that are to be built on their behalf.

According to Air Force officials, because ABG-75 gives the German government such broad powers in the construction of military projects, the United States has limited influence on how construction projects are built. For example, Air Force officials stated that they were initially resistant to use a trade lots¹¹ acquisition strategy for the construction of the KMCC because of the complexity involved with coordinating and managing the contractors associated with this strategy. Air Force officials stated that they relented to German government demands for trade lots after it was pointed out that the method of contracting was clearly within the German government's prerogative under ABG-75. ABG-75 stipulates that the U.S. government pay German government construction agencies (e.g., LBB-Kaiserslautern) between 5 and 7 percent of the project cost for administering the contract regardless of the total project costs with no incentives for early completion. As a result, no incentive exists to minimize costs or encourage early completion.

Despite additional risks associated with ABG-75, U.S. forces do have some leverage in managing construction projects in Germany. Specifically, under ABG-75, the United States is granted the authority to approve designs and provide prior consent to any modifications to the construction contract (also known as "change orders") that affect the scope, quality, or cost of the project. Any excess costs must be approved in advance by U.S. forces, and the forces are not liable for costs proved to be the fault of German officials or contractors. Thus, U.S. forces do have the "power of the purse" which can be used to pay only for costs within the scope of the contract. According to Air Force officials, the Air Force has the ability to cut off funding for its projects. However, since the projects are needed for base operations, such a step would only be used as a last resort.

Finally, general risks associated with overseas construction projects add to an already risky situation. Increased complexities of overseas projects include differences in languages, culture, construction laws, safety regulations, and exposure to changes in currency exchange rates. Changes

¹¹The use of trade lot contracts refers to the practice of contracting directly with individual companies for specific sections of work on a larger project instead of contracting with one general contractor who then subcontracts out the specific tasks.

in currency exchange rates can pose a significant risk when project costs must be paid in the host country's currency, especially when projects take substantially longer to complete than originally planned. Despite risks associated with overseas construction, the Air Force did not institute sufficient controls to manage the project.

LBB-Kaiserslautern Did Not Effectively Perform Required Duties for the KMCC

During the design and construction of the KMCC, LBB-Kaiserslautern did not effectively carry out its project design and construction management duties. LBB-Kaiserslautern's deficiencies in these areas have contributed to additional costs, schedule delays, and increased financial risk to the U.S. government for the KMCC project.

Flawed Project Design and Implementation

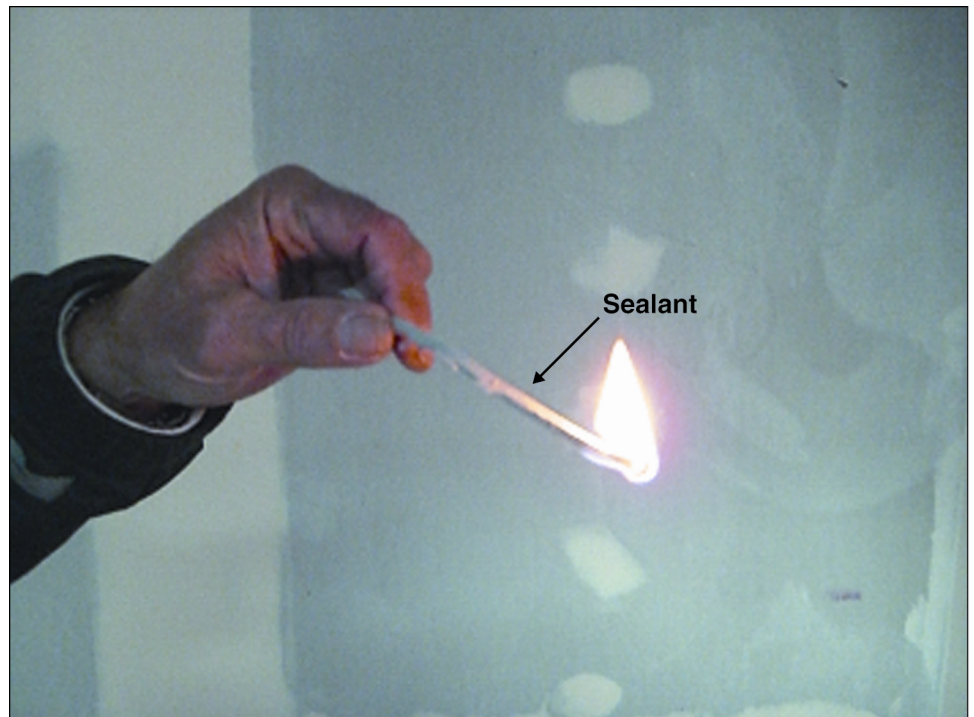
The design of the KMCC was inadequate and resulted in numerous instances of rework costing millions of dollars to fix. LBB-Kaiserslautern hired an architect-engineer firm, JSK, to draft plans for the KMCC, and subsequently contracted with JSK to be the construction manager. According to Air Force and AAFES officials, numerous design flaws were identified by the Air Force in the initial design review of the KMCC and were communicated to both LBB-Kaiserslautern and JSK. However, according to these U.S. officials, neither LBB-Kaiserslautern nor JSK incorporated many of their comments into the final design, which later resulted in additional work and costs. Air Force officials stated that, as of June 2007, they have identified millions of dollars of additional work required because of identifiable design flaws, which the Air Force plans to pay for in order to keep construction work moving forward.

The following are some examples of design and construction flaws for the KMCC project:

- **Exhaust ducts:** During review of the initial KMCC design, Air Force identified and commented to LBB-Kaiserslautern and JSK that the exhaust ducts used in the restaurant kitchens did not meet U.S. fire safety standards. However, LBB-Kaiserslautern and JSK failed to ensure the change was addressed by contractors responsible for duct construction. As a result, the exhaust ducts installed at the KMCC were not compliant with U.S. fire safety standards. In addition, when we toured the KMCC, an Air Force official showed us the material used to seal the exhaust ducts. According to the official, this material was flammable and, as such, posed a safety risk when hot gasses are vented through the exhaust ducts. Because of the poor design of the exhaust ducts, the Air Force has recently approved a change order for hundreds of thousands of dollars to

fix the problem. Figure 4 below is a picture of the flammable sealant used in the kitchen exhaust ducts.

Figure 4: Flammable Sealant Inappropriately Used in Kitchen Exhaust Ducts



Source: USAFE.

- **Retail space ceiling:** The design of the ceiling in the AAFES retail area was not adequate to support light fixtures. The design detailed an open-grid suspended ceiling (not fitted with tiles) with light fixtures fitted into some of the openings. However, during installation, workers discovered that the ceiling grid was not strong enough to support the light fixtures. Ceiling tiles stabilize the grid to keep it from shifting, so omitting the tiles weakened the grid to the point where the light fixtures could not be supported. As a result of this design error, a contract change was necessary in order to provide additional steel supports for the ceiling grid.
- **Escalator/escalator pit:** Poor design and construction coordination caused problems with installation of the building's escalator. The escalator pit was initially built as part of the contract to construct the building's concrete floor. A subsequent contract was issued for installation of the escalator itself. However, the contract specifications for the escalator installation did not sufficiently detail the size and location of the escalator

pit, and the escalator provided by the contractor did not fit in the previously-built pit. As a result, rework was necessary to build a new pit in the proper location.

Ineffective Project Management

LBB-Kaiserslautern did not effectively manage the KMCC project. Instead of using a general contractor who would be contractually responsible to build the project, LBB-Kaiserslautern attempted to execute the project by managing more than 30 separate trade lot contracts by itself. Each trade lot contractor was only responsible for its section of work, and no one party, other than LBB-Kaiserslautern, was responsible for the overall completion of the project. In addition, the LBB-Kaiserslautern's decision to use trade lot contracts also meant that LBB-Kaiserslautern would be required to properly coordinate the effort of all the contractors, adequately staff the project, and appropriately monitor construction schedule and costs, so that work could progress. As described below, LBB-Kaiserslautern did not carry out its requirements in the following areas:

- **Poor project coordination:** LBB-Kaiserslautern did not effectively coordinate the work of the more than 30 construction contractors on-site. This resulted in inefficiencies in construction as well as damage to finished work. For example, one contractor responsible for installing a tile floor was forced to delay work while the contractor responsible for installing the ceiling finished work over the area where the floor was to be installed. In another case, the contractor responsible for laying the paving stones outside the building was allowed to finish its work before major exterior construction was completed. This resulted in damage to the paving stones when heavy cranes were subsequently used on top of the stones to install exterior bracing to the building.
- **Inadequate staffing:** In our interviews, LBB-Kaiserslautern officials told us that their office was understaffed. LBB-Kaiserslautern officials stated that this lack of staffing hindered LBB-Kaiserslautern's ability to provide assurance that the project design was adequate and improve contractor coordination discussed previously. In part, as a result of the above listed design and coordination problems, numerous contract change orders were necessary. Again, the lack of staffing hindered LBB-Kaiserslautern's ability

to process necessary change orders as required by ABG-75.¹² According to Air Force officials, there are hundreds of change orders that LBB-Kaiserslautern has approved, yet has not submitted documentation to the United States for approval. Many of these change orders also had corresponding invoices submitted and certified by LBB-Kaiserslautern that the Air Force subsequently paid. LBB-Kaiserslautern was only able to provide us a listing of the change orders involved. This was far less than the detailed specifications required for review by the Air Force prior to the approval of the change and payment.

Air Force officials also stated that this failure to process change orders was a major problem because this processing serves as the basis for increasing the obligation authority for the contract. In addition, LBB-Kaiserslautern officials stated they had approved the work for most of these change orders and thus the contractors performed the work and were expecting payment. According to Air Force officials, in some cases when the Air Force refused to make payment on the unapproved changes, contractors halted work and sent notices to the LBB-Kaiserslautern that they would be liable for any costs associated with delays in payment. In many cases, the Air Force chose to reduce controls and make payments on these items despite not having appropriate change order documents in an attempt to keep the work on the project progressing.

The lack of staff also hindered LBB-Kaiserslautern's ability to sufficiently monitor the quality of the contractors work. For example, as stated previously, the KMCC roof is leaking substantially because LBB-Kaiserslautern did not properly monitor the contractor's work. Because of this, the Air Force is facing potentially millions of dollars in additional costs to replace the poorly built roof.

- **Unreliable construction schedule and cost estimates:** LBB-Kaiserslautern is responsible for providing the Air Force with up-to-date detailed construction schedules and cost estimates. According to Air Force officials, the latest official construction schedule provided by LBB-Kaiserslautern was in September 2006 and showed a completion date of

¹²During normal construction work done under the ABG-75 agreement, contractors perform work as specified in the original contract. When changes to the original contract are necessary, U.S. forces are to be given advance notice of any change and must give their approval before work can begin. This notice and approval process would be accomplished by LBB-Kaiserslautern through development of a contract change order document which specifies the details of the change, cost, and other related information. Once documents are approved by the U.S. forces, work can be initiated.

March 2007 for the visiting quarters and April 2007 for the mall portion of the KMCC. During our visit in May 2007, LBB-Kaiserslautern officials stated that they do not have a current construction schedule or completion date established for the project. Despite the lack of an estimated completion date, LBB-Kaiserslautern officials had developed an estimate of the total KMCC cost at completion. This estimate currently projects that costs will be higher than original estimates of approximately \$150 million. According to LBB-Kaiserslautern officials, this cost estimate does not include certain expected costs, which we consider significant. For example, as stated earlier, the roof on the facility is continually leaking and likely will need to be replaced. Air Force and AAFES officials estimate that the cost to replace the roof will be in the millions of dollars. In addition to roof estimates, there are additional costs associated with hindrance claims that were not included in the cost estimate. In fact, in May of 2007, LBB-Kaiserslautern officials stated they received a single claim for several million dollars, which has not been substantiated, from just one of the more than 30 contractors. Finally, LBB-Kaiserslautern cost estimates do not include adjustments for future cost increases on existing contracts. Although past experience on this project has shown that many of the contract amounts have increased due to change orders or quantity increases, LBB-Kaiserslautern did not include any estimates for these expected future increases.

Air Force Did Not Appropriately Minimize Risks

The Air Force did not incorporate sufficient controls to minimize the significant project risks involved with the KMCC. Control deficiencies included inadequate staffing, poor policies, and a lack of effective control processes in place. By not utilizing controls that were available to them through the ABG-75 agreement, the Air Force has given up any leverage it had on keeping project costs within budget. These control weaknesses contributed to schedule and performance problems without a sufficient reaction from the Air Force. In addition, after problems were identified, the Air Force did not take appropriate corrective actions.

Air Force Lacked Necessary Staffing and Expertise for Adequate Oversight

Air Force officials did not have adequate staff with appropriate expertise needed to oversee the KMCC. In 2002, the Air Force elected not to use the USACE as the servicing agent for the KMCC project. According to the Air Force officials, they were not required to use the USACE on this project because only a small percentage of the KMCC funds were based on appropriated military construction funding. However, in foregoing USACE oversight, the Air Force did not establish adequate staffing or contracting and construction management expertise needed for a project as complex as the KMCC. According to Air Force officials, at the inception of the

project, there were approximately eight full time personnel assigned to the KMCC from the Air Force. In addition, the limited number of Air Force staff did not have adequate expertise in the areas of contracting or construction management. As of May 2007, no contracting officers or certifying officials have been assigned to the KMCC.¹³ These experts are trained and certified to obligate and spend funds on behalf of the U.S. government and would typically be found in any military construction-funded project.¹⁴

As a result of the lack of staffing with adequate contracting and construction management expertise, many invoices came into the Air Force office, overwhelming the ability of the staff to adequately review invoices prior to payment. According to Air Force officials, no invoices were disputed prior to September 2006. However, after September 2006 when significant problems with the KMCC were recognized, some staffing improvements were made. For example, the Air Force increased the number of personnel to approximately 17 full time personnel currently on site, because it became apparent that they did not have sufficient personnel to conduct adequate reviews of invoices. Since the increase in staff, the Air Force has been able to review invoices more thoroughly, and according to Air Force officials, the percentage of recent invoices disputed increased to 75 percent.

Air Force Policies and Control Procedures were Inadequate

The Air Force did not have adequate policies and control procedures in place for the management of the KMCC. At the beginning of the project, project management officers lacked a standard operating procedure to follow. According to Air Force officials, the only written process in place was a simple one-page process flow chart to delineate how the entire process was supposed to work. Since the recognition of numerous problems associated with the KMCC, the Air Force has instituted additional control procedures, such as increased invoice reviews, but has not formalized those procedures into a written operating procedure.

We were unable to determine if there were any specific procedures in place prior to September 2006. However, the project schedule slippage and

¹³For example, a German national employed by the Air Force has been obligating and expensing millions of dollars spent on the KMCC. This official is neither a contracting officer nor a certifying official but rather what the Air Force calls their ABG-75 specialist.

¹⁴According to a USACE official, the USACE makes it a standard practice to have a contracting officer involved in all of their projects.

lack of disputes of invoices by the Air Force indicates that the controls in place were not fully effective. When we asked the Air Force officials about control procedures in place prior to September 2006, several officials, who were working on the project during the time in question, stated they were unable to answer questions based on advice from their legal counsel. The same officials who declined to answer questions stated that the project was under investigation by AFOSI. In addition, a senior Air Force civilian on the project prior to September 2006 had resigned and was therefore unable to answer questions. Without written procedures or explanations from Air Force staff, we could not determine what controls, if any, existed prior to September 2006.

In September 2006, Air Force officials recognized that significant problems faced the project. One problem specifically recognized was that numerous payments were made on invoices for work that had been billed on the 400 contract changes, which lacked documentation and had not been previously approved by the Air Force. Upon this recognition, the Air Force attempted to institute controls going forward. For example, the Air Force instituted a closer review of invoices to identify items that were billed but were not approved by the United States through change orders. However, under pressure to keep the project moving forward to completion, the Air Force subsequently relinquished much of this control by expediting the payment of invoices upon receipt from LBB-Kaiserslautern including charges for unapproved work. Examples of the relaxing of these controls include:

- paying invoices submitted after September 2006 on work billed to the Air Force related to the 400 contract changes which had not been submitted by LBB-Kaiserslautern, and
- approving invoices even though the line item quantities greatly exceed contracted amounts.

The Air Force stated the decision to relax the controls was made so that construction proceeded as expeditiously as possible on the KMCC.¹⁵ Despite the removal of these controls, the number of workers on-site has still decreased significantly. In addition, Air Force officials stated that they viewed these payments on unapproved work as “partial payments” of

¹⁵The Air Force continues to look for ways to relax controls to expedite payment. For example, the Air Force is studying whether to approve change orders based on contractor's initial offer instead of negotiated amount, as is typically required.

expenses, and that any disputes in payments could be recouped upon project completion. However, we have reported in the past that such “pay and chase” strategies are not effective and increase risks substantially to recover the unapproved amounts. The Air Force was unable to provide any examples where the United States had successfully recouped overpayments in German courts.

KMCC Problems May Adversely Affect Military Members and Future Construction Projects

The substantial schedule and cost overruns of the KMCC may affect military personnel and have major implications for future projects in Germany. The effects of these cost increases are likely to be shouldered by our men and women in the military. AAFES, the largest financial contributor to the KMCC, has stated that cost overruns have reduced the return of investment (e.g., the amount of profit they plan to receive from the project). As a result, AAFES and Air Force Services Agency funding of morale, welfare, and recreational activities for U.S. military members may be reduced. In addition, the escalation in costs may also affect the ability of AAFES and the Air Force Services Agency to finance future capital projects from its nonappropriated funds. Further, because of the delay in the completion of the visiting quarters portion of the KMCC, service members on travel to other locations, including Iraq and Afghanistan, may have to stay off-base. In addition to the inconvenience that this places on service members, the Department of Defense—and thus taxpayers—must fund the additional cost of any required temporary lodging off-base, which the Air Force estimates to be approximately \$10,000 per day or \$300,000 per month.

In addition to the effect on military members and their families, the current Air Force project management weaknesses may have implications for future Air Force construction in Germany. The Air Force planned construction within the Federal Republic of Germany for the next 5 fiscal years totals more than \$400 million. These construction projects include small operations and maintenance projects (such as school renovations and road repairs) and major military construction projects (such as a \$50 million clinic and a \$50 million base exchange and commissary). Absent better Air Force controls, these projects may experience the same types of heightened risks associated with KMCC.

Concluding Comments

Although one of the major problems with KMCC related to ineffective project management by LBB-Kaiserslautern, the Air Force did not effectively institute oversight to mitigate the high-risk nature of the entire project. By the time the Air Force started making an attempt at oversight,

the project was already several months past the original construction deadline of early 2006. With mounting problems including contractors walking off the job, the Air Force faces the dilemma of instituting controls far too late in the process and further extending the completion of the project versus paying whatever it costs to get the job done as quickly as possible. The likely substantial cost overruns and potential years of schedule slippage will negatively affect morale, welfare, and recreation programs for DOD service members, civilians, and their families for years. The Air Force needs to seriously consider substantial changes in oversight management capabilities for the hundreds of millions of dollars of planned construction projects planned in Germany over the next several years.

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 assess the current problems facing Kaiserslautern Military Community Center (KMCC), we interviewed agency officials from the Air Force at Ramstein Air Force Base in Germany. We physically inspected the KMCC facility with an Air Force project manager and documented construction problems. We also reviewed financial records and statements in the form of contracts, change orders, and invoices to the extent that they were available.

To examine the effect the Auftragsbaugrundsätze 1975 (ABG-75) had on the management of the KMCC project, we reviewed the ABG-75 agreement, which outlines construction requirements for U.S. forces stationed in Germany. In addition, we conducted interviews with officials from the Air Force, Landesbetrieb Liegenschafts- und Baubetreuung (LBB) the German government construction agency, and the U.S. Army Corps of Engineers.

In order to determine the management weaknesses of LBB and the Air Force, we interviewed officials from both organizations, conducted interviews with other organizations affected by the KMCC project including the Air Force Office of Special Investigations (AFOSI), Air Force Audit Agency, Air Force Services Agency, and the Army and Air Force Exchange Service. We also reviewed applicable Department of Defense Financial Management Regulations as well as the National Fire Protection Association standards.

To assess the effect that control weaknesses found in the KMCC project could have on future the Air Force projects in Germany, we obtained information from the Air Force on future construction plans in Germany. We also interviewed Air Force officials to determine what changes in processes had been made that would affect future construction projects.

We performed our audit work from May 2007 through June 2007. Audit work was conducted in accordance with generally accepted government auditing standards.

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