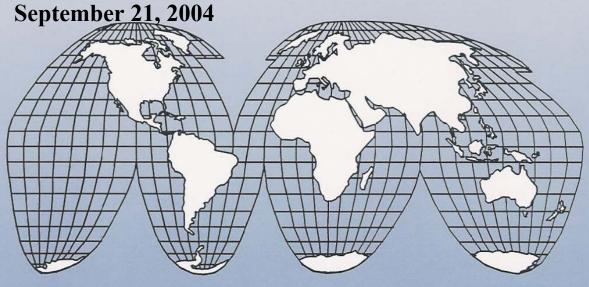
USAID

OFFICE OF INSPECTOR GENERAL

Audit of the Kabul to Kandahar Highway Reconstruction Activities Financed by USAID/Afghanistan's Rehabilitation of Economic Facilities and Services Program

Report No. 5-306-04-006-P





Manila, Philippines



September 21, 2004

MEMORANDUM

TO: USAID/Afghanistan Mission Director, Patrick C. Fine

FROM: RIG/Manila, John M. Phee /s/

SUBJECT: Audit of the Kabul to Kandahar Highway Reconstruction Activities

Financed by USAID/Afghanistan's Rehabilitation of Economic Facilities and Services Program (Report No. 5-306-04-006-P)

This memorandum is our final report on the subject audit. We reviewed your comments to the draft report, made some revisions based on them, and included the comments in their entirety as Appendix II.

This report includes two recommendations. Based on your comments, management decisions have been reached on both recommendations. USAID/Afghanistan should coordinate final actions on the two recommendations with USAID's Office of Management Planning and Innovation.

I wish to express my sincere appreciation for the cooperation and courtesies extended to my staff during the audit.

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Summary of Results

The Regional Inspector General/Manila conducted this audit to determine whether USAID/Afghanistan monitored its road reconstruction activities to achieve planned outputs along the Kabul to Kandahar highway under the Rehabilitation of Economic Facilities and Services program in accordance with USAID policies and procedures (page 7). The audit found that USAID/Afghanistan did not fully monitor its road reconstruction activities to achieve planned outputs in accordance with USAID policies and procedures, although it has taken some positive steps to improve monitoring (page 7).

USAID/Afghanistan generally checked the timeliness of the reconstruction activities, but did not fully monitor the quality of the road reconstruction, in part, due to security restrictions that limited travel outside of Kabul (page 9). In addition, USAID/Afghanistan did not verify that the contractor's performance conformed to the terms of the contract (page 9).

As a result, quality problems affected eight percent of the road's first layer of asphalt, and 30 kilometers of road, which had been paved last year, had to be removed and repaved (page 10). This replacement work may require adjustments to the remaining work schedule in order to meet the project's September 30, 2004 completion date (page 10).

So that it can more fully monitor the progress and accomplishments of the reconstruction activities along the Kabul to Kandahar highway, this report recommended that USAID/Afghanistan (1) develop a monitoring plan to ensure quality, timeliness, and contractor performance, and (2) review contractor claims to ensure that USAID does not pay for the defective work that had to be redone (page 11).

USAID/Afghanistan agreed with the two recommendations in this report, and management decisions have been reached on both recommendations (pages 12 and 13). However, USAID/Afghanistan did not believe that the OIG's draft report accurately or fairly reflected the accomplishments it achieved with limited staff (page 17). Where appropriate, we made changes to this report to address USAID/Afghanistan's concerns and comments.

Background

The Rehabilitation of Economic Facilities and Services (REFS) program is the largest and most visible program being implemented by USAID/Afghanistan. Its purpose is to promote economic recovery and political stability by repairing infrastructure. In September 2002, the Louis Berger Group, Inc. (LBGI) was awarded a contract to implement the program, including road reconstruction and other infrastructure activities, with the contract base period ending December 2005. Since the award date, contract modifications have increased estimated costs to \$665 million

Reconstruction of the Kabul to Kandahar (Kabul-Kandahar) segment of Afghanistan's major east-west highway is the largest activity being implemented under the REFS program. The east-west highway runs from Kabul to Herat and is approximately 1,200 kilometers long.

In April 2003, the U.S. government assumed responsibility for 389 kilometers of the Kabul-Kandahar highway starting 43 kilometers outside of Kabul and ending 50 kilometers before Kandahar (see map below). After assuming responsibility for this segment, the U.S. government tasked USAID with reconstructing the 389-kilometer highway. In response, LBGI developed and USAID approved a two-phased strategy to accomplish this.

The Phase One goal included completing a nine-meter wide road (including two one-meter wide shoulders) that had at least one layer of asphalt 10 centimeters thick on the driving surface for 389 kilometers by December 2003. Phase Two envisioned completing the road by widening it to 12 meters (including two 2.5-meter wide shoulders), and adding three additional layers of asphalt for a total of four layers 31 centimeters thick by September 2004.

Herat (50 Kms) Kabul Km 0 to Km 43 Rehabilitation Only (389 Kms) Kandahar (389 Kms) Km 43 to Km 432 Road Project

East-West Highway

A map of Afghanistan illustrating the east-west highway. USAID's segment of the Kabul-Kandahar highway project starts 43 kilometers west of Kabul and runs to within 50 kilometers of Kandahar.

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¹ The first 43 kilometers were already paved, and the last 50 kilometers were to be completed with Japanese resources.

However, LBGI's implementation plan dated January 30, 2004, revised the road design to only three layers of asphalt totaling 25 centimeters. LBGI made this change because load-bearing tests indicated that six centimeters of asphalt could be eliminated without compromising road durability. The Kabul-Kandahar highway is estimated to cost \$269 million. In addition, USAID has planned other road reconstruction activities with estimated costs of \$257 million that include the segment of the east-west highway from Kandahar to Herat.

Audit Objective

The Regional Inspector General/Manila included this audit in its fiscal year 2004 audit plan to answer the following question:

 Did USAID/Afghanistan monitor its road reconstruction activities to achieve planned outputs along the Kabul-Kandahar highway under the Rehabilitation of Economic Facilities and Services Program in accordance with USAID policies and procedures?

Appendix I contains a discussion of the audit's scope and methodology.

Audit Finding

USAID/Afghanistan did not fully monitor its road reconstruction activities to achieve planned outputs in accordance with USAID policies and procedures, although it has taken some positive steps to improve monitoring. For example, in January 2004 the Mission revised an agreement with the U.S. Army Corps of Engineers (USACE) to increase staff from two to ten positions to assist on the REFS program—even though only three of the ten positions could be filled. In addition, in May 2004, the Mission awarded a contract to a nongovernment organization to provide services for inspections and other engineering advisory services. Nevertheless, the Mission's monitoring could have been more complete.

In addition to trying to increase USACE staff and awarding a contract to a nongovernment organization, the Mission monitored the Kabul-Kandahar highway reconstruction activities by:

- Establishing an Office of Infrastructure, Engineering, and Energy to manage and monitor reconstruction activities under the REFS program.
- Reviewing contractor weekly progress reports.
- Tracking the REFS program's budget and expenditures.
- Examining invoices submitted by the contractor.
- Regularly meeting with contractor staff.

However, USAID/Afghanistan did not always monitor the timeliness of the Kabul-Kandahar highway reconstruction activities, nor did it closely monitor the quality of the roadwork.



A photograph of a RIG/Manila auditor and U.S. Army personnel observing a subcontractor applying asphalt. This photograph was taken in June 2004 about 120 kilometers west of Kabul, Afghanistan.

Monitoring of Road Reconstruction Could be Improved

Summary: The Mission did not closely monitor the road reconstruction of the Kabul to Kandahar highway. Further, the Mission did not fully monitor the contractor's performance and did not verify that an approved quality control and assurance program was in place as required by the contract. As a result, quality problems affected eight percent of the first layer of asphalt previously paved in Phase One, and 30 kilometers of asphalt was of poor quality, and was being removed and replaced with new asphalt at the time of our audit. This occurred because the Mission did not develop and implement a plan to monitor contractor performance and the contractor did not fully carry out an effective quality control and assurance program.

A project's Cognizant Technical Officer (CTO) is ultimately responsible for monitoring performance. According to USAID's Automated Directives System (ADS), CTOs are tasked with monitoring the quality and timeliness of outputs produced by implementing partners such as a contractor. For example, the ADS states that a CTO should ensure that a contractor is performing in accordance with contract terms. In addition, the CTO designation letter, a letter issued by the

mission contracting officer to the CTO, includes other CTO responsibilities such as documenting material deficiencies in a contractor's performance, and inspecting services or supplies to verify that standards are met.

The Mission tracked timeliness during Phase One of the Kabul-Kandahar highway reconstruction by employing a CTO, two USACE engineers and a Foreign Service National (FSN) employee; however, the Mission did not fully monitor quality. While the Mission made limited site visits under tight security control and used the contractor's helicopter to make visual observations, the Mission did not ensure the quality of the roadwork being done by the contractor and its subcontractors.

In addition, after completing Phase One in December 2003, the Mission did not closely monitor either the quality or the timeliness of the work done on the highway, partly because the three USACE personnel and one FSN engineer were mostly reassigned to other REFS projects. Furthermore, the Mission did not verify that an approved quality control and assurance program was in place as required by the contract. Also, prior to June 2004, neither the CTO nor his representatives had inspected contractor quality control laboratories nor verified that reconstruction work had met standards. As a result, 30 kilometers of asphalt previously paved in Phase One was of poor quality, and was being removed and replaced with new asphalt at the time of our audit.

This occurred because (1) the Mission did not develop and implement a plan to monitor contractor performance, and (2) the contractor did not fully carry out an effective quality control and assurance program. We believe a monitoring plan is an important element of monitoring performance because it identifies roles, responsibilities, and procedures for Mission personnel to ensure quality, timeliness, and compliance with contract terms. This is especially important in a program as large and complex as this one. While there were a number of monitoring entities, such as the CTO, USACE personnel, the FSN engineer, etc., their roles were poorly defined and/or they had other duties in addition to monitoring the road project. For example, during much of Phase One, the Deputy Mission Director was the CTO for the entire REFS program and another large program—in addition to carrying out his regular duties. Consequently, Mission officials said the Mission did the best it could with the limited personnel it had to complete the first layer of asphalt by December 31, 2003. Mission officials also noted that the Mission continues to face problems in filling positions to monitor the highway and other infrastructure projects. The Mission has tried to increase staffing by improving working and living conditions and offering financial incentives. However, issues such as the security situation continue to affect its recruitment efforts.

In addition to the Mission not fully monitoring contractor performance, LBGI did not fully carry out an effective quality control and assurance program as required by its contract. According to its contract, LBGI, as the prime contractor, should develop and submit to USAID for approval a comprehensive quality control and assurance program. Although LBGI developed a 5-page document outlining its quality control and assurance program, it was not comprehensive, nor was it submitted to or approved by USAID.



A photograph of a subcontractor removing defective asphalt. This photograph was taken in June 2004 about 125 kilometers west of Kabul, Afghanistan.

According to that document, quality control is a subcontractor responsibility, and quality assurance is LBGI's responsibility. However, in June 2004, we accompanied USAID representatives to observe reconstruction activities and to inspect subcontractors' testing laboratories, and found that LBGI had not fully assured quality. For example, during this visit, LBGI staff told the USAID representatives that even though some sections of the highway were heavily cracked, LBGI did not have the subcontractor remove asphalt around the cracked areas. Instead, the subcontractor simply sealed the cracks and paved the next layer of asphalt. In addition, Mission personnel noted deficiencies in LBGI's quality control and assurance program such as untrained personnel and laboratory testing not being done in compliance with industry standards.

As a result of not having an effective quality control and assurance program, quality problems affected eight percent of the first layer of asphalt paved during Phase One, and 30 kilometers of asphalt had to be removed and repaved. In addition, replacing defective work has caused delays that may require adjustments to the remaining work schedule in order to meet the project's September 30, 2004 completion date.

LBGI officials told us that in some instances the first layer of asphalt had been paved in bad weather, which affected the quality of the asphalt that was put down.

According to LBGI, asphalt should not be paved over frozen ground or put down during bad weather. However, we were told there could be other reasons why asphalt may become defective. For example, during our site visit, nine trucks loaded with hot asphalt were waiting to unload. The USAID inspection team told us that because of the long wait, the temperature of the asphalt may not be hot enough for proper compaction. The USAID inspection team stressed the importance of having adequate quality control.

USAID/Afghanistan needs to more fully monitor contractor performance. In addition, it needs to ensure that it does not pay for the asphalt that had to be replaced. Therefore, we are making the following recommendations:

Recommendation No. 1: We recommend that USAID/Afghanistan develop a comprehensive monitoring plan to ensure quality, timeliness, and compliance with contract terms, including requiring the contractor to submit a comprehensive quality control and assurance program for USAID approval.

Recommendation No. 2: We recommend that USAID/Afghanistan perform an analysis of contractor claims to ensure that USAID does not pay for the defective roadwork.

Factors that May Affect USAID's Goal of Completing the Highway by September 30, 2004

USAID's goal is to finish the Kabul-Kandahar highway by September 30, 2004. However, defective work in Phase One for eight percent of the highway has caused delays in reconstruction activities. According to contractor officials, to make up for these delays, LBGI may institute night shifts for paving crews, and reallocate the workload from less productive subcontractors to subcontractors that are more productive. Phase Two entails adding new layers of asphalt; widening shoulders; completing six bridges; and adding permanent dividers, borders, and signs. According to LBGI, the outputs shown in Table 1 on the next page had been achieved as of June 22, 2004.

Table 1: Planned and Completed Outputs for the Kabul-Kandahar Highway

Reconstruction Outputs as of June 22, 2004	Planned	Completed
Paving a first layer of asphalt (Phase One)	389 kms	359 kms^2
Paving a second layer of asphalt (Phase Two)	389 kms	310 kms
Paving a third layer of asphalt (Phase Two)	389 kms	117 kms
Completing six bridges (Phase Two)	6	0

At the time of this audit, none of the six bridges were open for traffic, though LBGI reported that five were essentially finished while one was still under construction. Nonetheless, contractor officials believed the Kabul-Kandahar highway would be substantially complete by September 30, 2004.

Both Mission and LBGI officials remain concerned about the threat of terrorist attacks that could affect their ability to complete the highway on time. Such attacks have at times halted reconstruction, destroyed equipment, and resulted in worker deaths.

Evaluation of Management Comments

USAID/Afghanistan provided written comments to our draft report that are included in their entirety as Appendix II. In its comments, USAID/Afghanistan agreed with the report's two recommendations. However, USAID/Afghanistan stated it did not believe that our draft report accurately or fairly reflected the accomplishments it achieved with limited staff. Additionally, the Mission proposed changes to the contents of the draft report. Where we agreed with USAID/Afghanistan's comments, we made appropriate changes to the final report.

For Recommendation No. 1, USAID/Afghanistan stated it is working to develop a series of comprehensive monitoring plans not just for the road reconstruction activity, but also for all the programs managed by the infrastructure office. USAID/Afghanistan also stated that it expects to the have the plans in place by the end of the calendar year. The Mission further stated that it had already requested the contractor to submit a comprehensive quality control and assurance program, and it expects to approve the final plan by the end of the calendar year. Based on the Mission's comments and actions, we consider that a management decision has been reached on this recommendation.

² This number reflects the 30 kilometers of asphalt that had to be removed and has not yet been repaved.

For recommendation No. 2, USAID/Afghanistan stated that it already performs considerable analysis of contractor claims, but it is expanding that analysis to pay particular attention to billing for roadwork to assure that USAID does not pay for repair of defective segments of the road. For the final report, we revised this recommendation; however, the revision did not significantly change the recommendation or affect the Mission's response. Therefore, based on the Mission's comments and actions, we consider that a management decision has been reached on this recommendation.

USAID/Afghanistan stated that the draft report did not accurately or fairly reflect the accomplishments it achieved with limited staff. For example, the Mission believed that a reader could conclude from the report's first paragraph that it did nothing to monitor the Kabul-Kandahar highway reconstruction activities. The Mission contends that it did monitor the activities although the monitoring may not have been adequate or complied fully with USAID policies. Prior to receiving the Mission's comments, we had already decided to revise the draft report to state that the Mission had not fully monitored the highway reconstruction activities. We felt that this revised wording better reflected the status of the Mission's monitoring. In addition, for the final report, we added more examples of the monitoring that the Mission did do. We believe these changes provide a clearer, more balanced discussion of the Mission's monitoring of the Kabul-Kandahar highway reconstruction activities.

USAID/Afghanistan also felt that the draft report did not adequately reflect the circumstances in which the highway reconstruction activities were undertaken or the overarching U.S. government objectives which drove the Mission's reconstruction actions. For example, the Mission cited constraints imposed on it by such things as the security situation, space limitations and the difficulties in getting staff to serve in Afghanistan. The Mission also cited U.S. government objectives, such as the U.S.'s promise to complete Phase One of the Kabul-Kandahar highway reconstruction by December 2003, as affecting how it directed its limited resources. Our draft audit report did discuss staffing limitations and did mention security restrictions. The draft report might not have discussed these constraints in the depth that the Mission would have liked, but the OIG has addressed these constraints in detail in other reports such as the two risk assessments the OIG has performed on USAID/Afghanistan activities. Further, notwithstanding U.S. government objectives, the Mission could have more fully monitored the Kabul-Kandahar highway reconstruction activities.

In its comments, USAID/Afghanistan pointed out what it believed was an inaccuracy in our draft report and it commented on specific sections of the draft report. Where we agreed with the Mission, we changed the final report accordingly.

In summary, while USAID/Afghanistan acknowledged that its monitoring was not all that one would hope for in normal circumstances, it stressed that the

situation in Afghanistan was and remains far from normal. The Mission further stated that it has achieved better results than anyone could reasonably have expected given the constraints with which it operated and in large part continues to operate today. USAID/Afghanistan's complete comments are in Appendix II.

Scope and Methodology

Scope

RIG/Manila conducted this audit in accordance with generally accepted government auditing standards. The audit was performed at USAID/Afghanistan in Kabul and at the offices of the Louis Berger Group, Inc., the primary contractor. Fieldwork was conducted from June 7-24, 2004. We conducted site visits to various points between Kabul and Kandahar to observe reconstruction activities. The audit covered the period from August 2003 through June 2004, during which time USAID had disbursed at least \$197 million for the Kabul-Kandahar highway.

This audit included an assessment of management controls used by the Mission to monitor reconstruction activities. Specifically, we assessed controls related to whether the Mission (1) conducted site visits to evaluate progress and monitor quality; (2) documented significant actions, meetings, or conversations with the contractor; and (3) monitored the funds disbursed. The audit also reviewed the Mission's evaluation of its reconstruction activities in its fiscal year 2003 Federal Managers' Financial Integrity Act submission.

Methodology

To answer the audit objective, we held discussions with officials from the Mission, the primary contractor, and the U.S. Army Corps of Engineers. We also reviewed:

- Applicable laws, regulations, and USAID policy and guidance related to the objective.
- Documentation such as, but not limited to, contracts, trip reports, contractor project reports, and financial reports.
- Financial audit reports on costs billed to USAID.

We did not set a materiality threshold for this audit as the nature of the audit did not lend itself to the establishment of such a threshold. However, we designed our audit to address potential concerns such as inadequate oversight over reconstruction activities, and lack of awareness of existing problems along the Kabul-Kandahar highway.

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Management Comments



United States Agency for International Development

Kabul, Afghanistan

September 5, 2004

MEMORANDUM

TO: George Jiron, RIG/A, Manila

THRU: Amanda Levenson, Controller /s/

FROM: Patrick C. Fine, Mission Director /s/

SUBJECT: Management Comments to RIG/Manila's Final Draft on the Third Performance

Audit of the Road Project Financed by USAID/Afghanistan's Rehabilitation of

Economic Facilities and Services (REFS) Program

RIG/M Memorandum 04-00X

We appreciate the opportunity to respond to the subject final draft report. The Mission concurs with the recommendations in the report. In fact the Mission had been working to develop a comprehensive monitoring plan and analyzing contractor claims to ensure the USAID does not pay for defective road work before the auditor's visit. However the Mission believes the auditor's principle finding "that USAID/Afghanistan did not monitor its road reconstruction activities...", and the general tone of the report does not accurately or fairly reflect the Mission's substantial accomplishments achieved with extremely limited staff.

Reading the first paragraph of the report, one might easily conclude that USAID/Afghanistan did nothing to monitor road reconstruction activities. That is not the case. Monitoring may not have been adequate, or complied fully with AID polices and procedures, but monitoring did take place. The Mission also feels the report does not adequately reflect the circumstances in which the road reconstruction activities were undertaken, or the overarching US Government objectives which drove the Mission's actions in implementation of the road reconstruction.

The background section of the report accurately reports that the original contract signed in September 2002 planned for completion of the Kabul – Kandahar segment of the east-west highway by September 2004. However it does not reflect that at that time no one expected to complete an initial layer of asphalt by December 2003. In January of 2003, Afghan President

Karzai visited President Bush in the US. During that visit President Karzai stressed the importance of rapid, visible, reconstruction action for the stability of Afghanistan, and made clear that the east-west highway was his highest reconstruction priority. President Bush promised that working with other countries the U.S. would complete a first phase of the K – K highway by December that year. By April it became apparent that the U.S. would have to reconstruct the large majority of the road. It was understood at the outset that reconstruction of 389 kilometers of road by December was an extremely ambitious undertaking even in the best of conditions. And the conditions in Afghanistan, as summarized below, were not the best.

Weather, security, and isolation all presented serious constraints to completion of the effort. The first phase actually had to be completed by the beginning of December because after that it would be impossible to lay asphalt. Twenty two people were injured, and fifteen killed in hostile actions on the road between November 2002 and June 2004. The logistics of moving heavy road construction equipment and paving material to rural Afghanistan were daunting. In addition due to severe space constraints in the Embassy and difficulties in getting staff to serve in Afghanistan, the USAID Mission had only 4 USDH staff in Kabul during the phase one period.

Given the political imperative associated with achieving the overall objective, completing phase one by December, it was understood by all working on implementation that every kilometer of asphalt laid may not be perfect. In fact, it was understood that it was likely asphalt would have to be laid in poor weather conditions, which could adverselyl affect quality. The first priority of the President, the NSC and the Ambassador was to complete the first phase on time. Given the limited staff available, and the difficulty of getting out of Kabul to inspect the road, that priority was the principal emphasis of monitoring during phase one.

Preparation of the base and application of the first layer of asphalt on the full length of the 389 km US Section of the highway in nine months was an extraordinary engineering and construction accomplishment that contributed greatly to US foreign policy and national security objectives. This has been recognized by independent engineering organization's in the U.S. in awarding the following Kabul-Kandahar Highway Project-related recognitions:

- 2004 Engineering Excellence Award Certificate 2nd Place awarded by the American Council of Engineering Companies (registers all the Engineering firms in the US); and,
- 2004 Outstanding Civil Engineering Award and Improving Quality of Life Award of the American Society of Civil Engineers;

The Mission believes that the second paragraph on page 5 is inaccurate. An Afghan engineer employed by USAID identified the 30 kilometers of poor quality asphalt referenced. The CTO and many others in the Mission were aware of the section being repaved prior to the auditors work and visit. The work is an example of the success of USAID's monitoring efforts and LBG's quality assurance program rather than an indication of a deficiency.

Even prior to completion of phase one of the activity, the US Government decided to greatly accelerate the reconstruction efforts in Afghanistan to include over 400 schools, nearly 380 clinics, additional primary highways, secondary roads, power, irrigation and potable water projects. While engineering and management staff available to work on infrastructure activities was increased, the increase was unable to keep pace with the huge surge in demand for reconstruction across a broad front. The continuing security threat only made the situation more problematic.

With successful completion of the promised first phase of the road the priorities of the US Government in Afghanistan shifted to the acceleration of other activities. As one would expect the Mission's limited resources were largely directed to the priorities laid out by the NSC and the President's Special Envoy to Afghanistan. When facing serious resource constraints the prudent manager devotes resources according to the organization's priorities. However, Mission staff continued to monitor the road activity, while bringing on additional resources in the form of US PSC engineers, additional local engineers and expanded US Army Corps of Engineer (USACE) staff. That buildup process has continued since the auditor's visit in June and the Infrastructure team now consists of 11 professional staff working within the AID offices, and additional engineers working outside the AID office plus an A&E oversight firm recently contracted to assist in oversight of infrastructure programs.

In sum, while the Mission acknowledges that monitoring of the road reconstruction activity was not all that one would hope for in normal circumstances, the situation in Afghanistan was and remains far from normal. The Mission has achieved better results than anyone could reasonably have expected given the constraints within which it operated, and in large part continues to operate today. The Mission and its reconstruction efforts have strongly supported one of the nation's highest priority foreign policy and national security goals.

As mentioned at the outset, the Mission concurs with the two recommendations of the draft report. Recently arrived staff are already working to:

1. Develop a comprehensive monitoring plan to ensure quality, timeliness, and compliance with contract terms, including requiring the contractor to submit a comprehensive quality control and assurance program for USAID approval.

The Mission is working with USACE and IRD (the A&E support contractor) to develop a series of comprehensive monitoring plans not just for LBGI and the road activity, but for all programs managed by the infrastructure office. We expect to have the plan in place by the end of the calendar year. The Mission has already requested LBGI to submit a comprehensive quality control and assurance program, and we have seen an initial draft. We expect the final plan to be submitted and approved by the end of the calendar year.

Based on these actions we request resolution of this recommendation.

2. Perform a continuing analysis of contractor claims to ensure that USAID does not pay for the defective road work.

The Mission already performs considerable analysis of LBGI claims. We are expanding that analysis to pay particular attention to billing for road work to assure that AID does not pay for repair of defective segments of the road.

Based on this action we request resolution of this recommendation.

The Mission also has the following comments on specific sections of the report.

- 1. Last paragraph of page two: The 49 kilometers described as being repaired were in fact totally reconstructed from the sub grade up. This is an important distinction.
- 2. Last paragraph of page six: All cracks on the road were initially sealed with asphalt in order to prevent the intrusion of water. All areas of pavement exhibiting failure were removed, the improved sub grade was corrected and later overlain with the first course of ATB. On those sections of pavement where cracks were solely of a transverse nature the repairs were made permanent by covering the sealed cracks with Geo Tech fabrics and the second course of ATB. These represent appropriate engineering solutions considering the available resources (man, machine and material) in Afghanistan at that time and under the time constraints imposed.

LBGI reports that its Materials Engineer has been to each of the Sub Contractors laboratories on a number of occasions assisting in the calibration of their equipment, viewing their test procedures and taking samples back to its own labs to run independent tests anytime the Sub Contractors tests were questionable.

4. Page seven, paragraph two: The report states that during the visit, nine asphalt trucks were standing by waiting to unload. It states further that the auditors were told this was bad practice because the material could cool, preventing proper compaction. LBGI reports that air temperatures during the months of June and July exceed 33° Celsius (92° F). At this temperature asphalt can remain in the trucks for upwards of 3 – 4 hours without adverse effects on compaction. Nevertheless, all temperatures were measured on lay down and conformed to specifications. This is a normal part of the QA/QC procedure for the project.

Clearances: CMoseley, CTO (draft)

BPrimm, Deputy Mission Director (draft)