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OFFICE OF INSPECTOR GENERAL

**AUDIT OF USAID/ARMENIA'S
ENERGY AND WATER SECTOR
REFORM PROGRAM**

AUDIT REPORT NO. 8-111-07-002-P
June 26, 2007

FRANKFURT, GERMANY



USAID
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Office of Inspector General

June 26, 2007

MEMORANDUM

TO: USAID/Armenia Mission Director, Robin Phillips

FROM: Regional Inspector General, Frankfurt, Gerard M. Custer /s/

SUBJECT: Audit of USAID/Armenia's Energy and Water Sector Reform Program
(Report Number 8-111-07-002-P)

This memorandum transmits our final report on the subject audit. In finalizing the report, we considered your comments on the draft report, making changes where appropriate, and have included your comments in their entirety in Appendix II.

The report contains two recommendations. In your written comments you concurred with these recommendations and also provided evidence of specific actions taken to address our concerns. Therefore, we consider that final action has been taken on each recommendation.

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

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SUMMARY OF RESULTS

USAID/Armenia's Energy and Water Sector Reform Program (the Program) seeks to provide: energy security that does not rely on unsafe nuclear power; critical energy and water infrastructure to support economic growth and jobs; and reliable and affordable access to essential utilities for all Armenians. This audit was designed to determine if the Program was achieving its planned outputs. (See page 2.)

During the period August 2005 to January 2007, USAID/Armenia's Energy and Water Reform Program achieved most, but not all, of its planned outputs. Of the 145 total planned outputs during this period, which were selected for testing, 101 (or 70 percent) were determined to have been fully or substantially completed. Most of these were associated with five of the Program's major projects, which were making acceptable progress towards achieving both their planned outputs and their overall objectives. The Program's overall performance, however, was negatively impacted as a result of a major residential heat project that did not achieve the majority of its planned outputs and was eventually terminated. Because the Mission had already terminated this project, we are making no recommendation for corrective action. (See pages 3-5.)

Two other matters that came to our attention during the course of the audit did require corrective action by USAID/Armenia. Specifically, the Mission was not always closely tracking the actual delivery of outputs produced by implementing partners as specified in contract documents and work plans to ensure that expected results were being achieved. (See pages 6-7.) In addition, the Mission needed to better document program activities in the official files. The Mission's program files, for example, did not always document trip reports and substantive project changes. As a result, the program files did not include a complete history of the program and were, therefore, of limited use as a management tool in facilitating program oversight and ensuring program continuity when personnel changes occurred. (See pages 8-9.)

To address these matters, the report contains two recommendations for the Mission to:

- Amend an existing Mission Order to ensure that (a) program staff periodically compare actual performance to planned accomplishments under the program's contracts, grants, and cooperative agreements; (b) the results of these assessments are subject to management review; and (c) program staff utilize performance data generated and collected under each implementer's Monitoring and Evaluation Plan in facilitating these assessments. (See page 7.)
- Take appropriate steps to ensure that program staff fully implement and adhere to the documentation maintenance guidance specified in its existing Mission Order prescribing program monitoring procedures. (See page 9.)

In response to our draft report, USAID/Armenia concurred with the recommendations and took action to address our concerns. Specifically, the Mission strengthened its procedures for collecting and reviewing performance data, and ensuring program documentation is properly maintained in the official files. Based on this action, we consider the recommendations closed upon issuance of this report. (See page 10.)

Management comments are included in their entirety in Appendix II.

BACKGROUND

Proper management of Armenia’s physical resources—particularly energy and water—is critical to the country’s economic growth and sustainable development. USAID/Armenia’s Energy and Water Sector Reform Program seeks to achieve three major goals in Armenia: (1) promote energy security to reduce the country’s reliance on unsafe nuclear power; (2) provide critical power and water infrastructure for economic growth and jobs; and (3) ensure reliable and affordable access to essential utilities for all Armenians. Towards these goals, the Program includes activities intended to promote the institutional development of the governing bodies of the energy and water utilities and the development of reliable and accessible public utilities.

As of FY 2006, the Mission’s program portfolio consisted of six major projects with a total life-of-project funding level of approximately \$26 million, as shown in the chart below.

**USAID/Armenia Energy and Water Projects
(As of December 31, 2006)**

Project	Primary Goal	Lifetime Cost (\$ millions)	Start Date	End Date
Armenian Energy Assistance Project	Extend and consolidate energy sector reforms and restructuring	9.46	2/04	9/08
Armenian Water Development Project	Reform and improve the performance of Armenia’s water sector	6.96	9/04	9/07
Heat Assisted Education in Armenia Project	Provide reliable heating systems and lavatories in schools	1.91	9/05	9/07
Energy Efficiency and Heat Pilot Projects	Increase economic and environmental efficiency while diversifying energy sources	3.67	9/03	4/07
Armenian Energy Partnership Project	Facilitate exchanges between U.S. and Armenian energy, water, and telecom groups	0.70	6/06	6/08
Improved Heat Sector Management & Delivery of Heat Supply Project	Demonstrate efficient heat supply solutions with reduced environmental costs	3.14	7/05	12/06
Total		<u>25.84</u>		

AUDIT OBJECTIVE

As part of its fiscal year 2007 audit plan, the Regional Inspector General/Frankfurt conducted this audit to answer the following question:

- **Did USAID/Armenia’s Energy and Water Sector Reform Program achieve its planned outputs for promoting reliable and affordable access to essential utilities?**

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

AUDIT FINDINGS

During the period August 2005 through January 2007, the Energy and Water Sector Reform Program achieved many, but not all, of its planned outputs. Specifically, five of the Program's six major projects, achieved at least 75 percent of their planned outputs and were judged to be on track to achieve their planned overall objectives. The sixth project, however, achieved only 44 percent of its planned outputs and was terminated by the mission. Details regarding these projects are described below.

Armenian Energy Assistance Project This project provides assistance to the Government of Armenia (GOA) to extend and consolidate its energy sector reforms and restructuring. The project seeks (1) improved transparency to reduce opportunities for corruption (2) improved quality of service delivered to customers, and (3) better management and use of Armenia's scarce energy resources, with an emphasis on greater efficiency and environmental sustainability.

The project completed or substantially completed 18 of the 21 planned activities (outputs) specified in the implementer's FY 2006 work plan, including extensive support for Armenian counterpart organizations and the completion of a major study to identify safer alternatives for an ageing nuclear facility. The project also financed 26 energy efficiency demonstration projects. However, the progress of three project activities—activities related to public outreach and education efforts—could not be assessed, as the work steps in the implementer's annual work plan were not sufficiently detailed to permit evaluation. USAID/Armenia staff agreed to correct this problem in the future by requiring more detailed work steps in the work plan for these activities.



Photograph of a gas boiler installed in a maternity hospital in Yerevan, Armenia, as part of the Armenian Energy Assistance Project, March 2007.

Armenian Water Development Project This project was designed to extend national reforms and improve the performance of Armenia's water sector management and regulatory institutions. The project provides assistance related to water resource management, protection and use, and the regulation of water-using public services.

The project successfully completed 15 of the 20 activities in its approved work plan covering the period from November 2005 through October 2006. These successfully completed activities included the development of a draft law on drinking water, the rehabilitation of numerous water monitoring stations, and assistance with the development of a water tariff policy and guidelines for municipal water services. Among the remaining five activities, three were delayed pending a final decision by the GOA on staff resources, water funding and monitoring responsibilities. Two other activities required more time than anticipated and were shifted to the 2007 work plan.



Photograph of a water monitoring station rehabilitated by the USAID-funded Water Development Project, March 2007.



Photograph of an Armenian school's new heating system provided under the Heat Assisted Education Project, March 2007.

Heat Assisted Education in Armenia Funding under this project was used to provide reliable heating systems and lavatories for primary and secondary schools targeted throughout Armenia. The project successfully completed renovation activities at 31 of the 34 schools included in the implementing partners' work plans covering the period from September 2005 through December 2006. Renovation projects for 3 of the 34 schools encountered delays related to funding and site selection, but are expected to be completed during 2007.

Energy Efficiency and Heat Pilot Projects The objectives of this project are to (1) increase economic and environmental efficiency in the energy sector by demonstrating the cost-effectiveness of integrated solutions and (2) identify more diversified energy sources both by reducing electricity and identifying economically viable renewable energy resources. The project successfully completed 12 of 15 planned activities funded under two separate contracts. Among the completed activities, the implementer successfully completed 21 pilot projects—considerably more than the 7 to 10 projects anticipated in the contract documentation. In addition, as part of the public outreach activity, the project produced two documentaries and four public service announcements for broadcast on local Armenian television. The three planned activities that were not completed were expected to be completed during 2007.

Armenian Energy Partnership This project is intended to create ongoing information exchange partnerships between U.S. and Armenian energy, water, and telecommunication organizations. These exchanges are expected to enhance the effectiveness and efficiency of Armenia's energy sector organizations.

Under this project, the implementer planned to hold five training seminars between June and December 2006; however, only three seminars were held during this time frame, with the remaining seminars delayed until 2007. The delays occurred when a Russian company bought a considerable interest in Armenia's energy infrastructure, requiring changes to the training schedule to ensure that the project supported only Armenian beneficiaries.

For the three seminars held in 2006, follow-up reports from the attendees—considered to be a key deliverable, according to the contract—had not been submitted to the implementer or to the Mission. Further investigation found that no mechanism for developing or obtaining these reports had been included in the work plan. Mission and implementer officials stated that the work plan would be modified to ensure that attendees developed and submitted these post-training reports.

Improved Heat Sector Management and Delivery of Heat Supply Project This project sought to promote energy security in Armenia by demonstrating a full range of heat supply alternatives that would reduce heating costs through effective management while also reducing environmental damage.

During the period from August 2005 through July 2006, the project completed only 22 of the 50 activities specified in its work plan. Completed activities included an assessment of energy legislation, an operational manual for cooperative management of residential heating systems, and a short and long term communications strategy in support of the project's goals. Key activities that were not completed included media training sessions, an assessment on policies and the framework for promotion of local heat supply companies, and a list of heat energy project concepts to be compiled in collaboration with the World Bank, UNDP, and other stake holders.

The project's lack of progress resulted from several factors. For example, the contract contained a relatively broad statement of work which, while allowing for flexibility during implementation, also gave rise to differences of opinion regarding strategy and direction for many of the project's activities. Although the Mission made numerous attempts to bridge these differences with the implementing partner, these efforts had limited success. Agreement on the implementation strategy was made more difficult by the departure of and changes among key Mission and contractor staff, both before and during contract implementation. Thus, while some project activities moved forward, others remained stalled. In light of these continuing difficulties, the Mission initially focused on completing those few activities that had been successfully initiated and were in progress and eventually terminated the contract with the implementing partner. In light of the fact that the Mission has already taken corrective action, we are not issuing a formal recommendation with regards to the uncompleted work under this project.

Program Outputs Need to Be More Closely Monitored

Summary: USAID's Automated Directive System (ADS) 202.3.6 states that missions should monitor the quality and timeliness of outputs produced by implementing partners as described in the contract Statements of Work. Additionally, bureau guidance requires missions to periodically compare planned and actual results under each contract. USAID/Armenia's program staff, however, were not always performing periodic comparisons of expected and achieved results so as to ensure that all planned deliverables would be achieved. This was attributed, at least in part, to the fact that USAID/Armenia's internal implementing guidance did not specifically require close tracking of contract outputs. Unless the Mission closely monitors the status of outputs, projects will have an increased risk of not achieving their objectives.

According to ADS 202.3.6, monitoring the quality and timeliness of outputs produced by implementing partners is a major task of Cognizant Technical Officers (CTOs). The ADS notes that these outputs should be specifically described in contract Statements of Work. Europe and Eurasia Bureau Operating Procedure (BOP) 311 provides additional guidance, requiring missions to describe how they will monitor and document the performance of USAID-funded activities. Specifically, this guidance states that performance information must compare actual performance against planned results and accomplishments for each contract, grant, and cooperative agreement. USAID/Armenia contracts require implementers to submit detailed work plans stating the activities and related outputs to be completed during the contract period.

However, USAID/Armenia's program staff for the Energy and Water Sector Reform Program were not always effectively tracking program activities so as to ensure that all planned outputs specified in the implementing partners' annual work plans would be achieved. For example, although the Energy Partnership contract (SOW) emphasized that training participants would be responsible for certain deliverables—in this case, written reports demonstrating how the training benefited the recipient organizations—no such reports had yet been obtained, and the mechanism for ensuring the collection of these reports had not been included in the contractor's annual work plan.

Furthermore, work plans did not always adequately describe the work to be completed. In reviewing the planned activities outlined in the contractor's annual work plan for one of the projects (Energy Assistance Project), we identified three listed activities—related to public outreach efforts—which provided insufficient detail to evaluate the activities' progress. The work plan simply described the activities as three broad program goals without providing specific information about the tasks to be completed to achieve these goals. As a result, neither the auditors nor the Mission were able to evaluate whether these public outreach efforts had progressed as intended during FY 2006.

Finally, one major project did not have a Monitoring and Evaluation (M&E) Plan to facilitate tracking of outputs. According to the Mission's Contracting Officer, the use of a specific clause requiring the development of an M&E plan represented a "best practice" that should be included in all major contracts. However, due to an oversight during the contract review phase, the specific language requiring an M&E plan was not included in the Energy Efficiency and Heat Pilots contract.

This lack of specific attention to the achievement of outputs was attributed to USAID/Armenia's guidance on its internal monitoring procedures—specifically, the lack of emphasis this guidance placed on the monitoring of outputs. These internal procedures are documented in USAID/Armenia Mission Order (MO) 1003, which did not specifically require the periodic comparison of expected project outputs with actual achieved results. Instead, MO 1003's guidance for the review of contract outputs was very general, noting only that staff will “consider performance at all levels, and report major issues” for consideration by Mission management. Consequently, the guidance did not address the specific requirement to compare actual performance against planned results and accomplishments under each contract.

The lack of clear guidance mandating the above comparison stemmed from the Mission's focus on the progress being made towards the achievement of Strategic Objective (SO) and Intermediate Results (IR) indicators. According to Mission officials, this emphasis reflected the importance USAID had placed on the use of these indicators in reporting results. However, these indicators, while useful for program management, can differ substantially from the variety of outputs expected from various contractors and grantees, and therefore cannot effectively monitor the achievement of these outputs.

The lack of emphasis on monitoring outputs and comparing planned results to actual results was further undercut by the cancellation of annual Activity Monitoring Reports (AMRs) for FY 2006. According to MO 1003, AMRs should be completed annually for review by Mission management, and CTOs should discuss “progress towards targets” for the previous fiscal year. However, the Mission did not require CTOs to complete AMRs for FY 2006 due to other Mission priorities, particularly the completion of a new operational plan. Furthermore, AMRs completed for FY 2005 contained only a listing of accomplishments and did not contain a comparison of actual performance against planned results as required by BOP 311.

Because the Mission's guidance does not focus on closely tracking contract-related outputs, this increases the risk that some required outputs may not be achieved and may be overlooked, especially if the project appears to be meeting SO and IR goals. It also limits the CTOs' ability to take early action in response to potential implementation problems.

To ensure that the Mission maintains an appropriate focus on the achievement of outputs under its grants, contracts and agreements, we are making the following recommendation:

Recommendation No. 1: We recommend that USAID/Armenia revise the language in its Mission Order 1003 to ensure that (a) program staff compare actual performance to planned accomplishments under the program's contracts, grants, and cooperative agreements; (b) the results of these assessments are subject to management review; and (c) staff use the performance data generated and collected per the implementer's Monitoring and Evaluation Plan to facilitate these assessments.

Program Files Were Not Always Properly Maintained

Summary: According to MO 1003, CTOs should maintain documentation in the program files relating to substantive communications with implementing partners. Any significant decisions reached during meetings or phone conversations should also be documented in these files. This guidance, however, was not being fully and consistently implemented by all Energy and Water Sector Reform Program staff. In several instances, for example, the Mission's official program files did not adequately document substantive changes and developments, key decisions and the status of activities under the program. These problems occurred as a result of a lack of management attention and oversight to ensure implementation of the MO 1003 requirements. As a result, the program files did not provide a complete history of the program and were, therefore, of limited use as a management tool in facilitating program oversight and ensuring program continuity when personnel changes occur.

The monitoring procedures outlined in MO 1003 include detailed guidance related to the proper maintenance of the program files. According to MO 1003, documentation relating to substantive communications with implementing partners must be maintained in the official award files. Further, any significant decisions reached during meetings or phone conversations should also be documented in these files. If such decisions or communications are conveyed through an e-mail exchange, these can be documented by simply printing out the e-mails and including them in the official files. MO 1003 also states that site visits should occur at least quarterly, and that these site visits must be documented through trip reports. Such reports, according to the guidance, serve to confirm appropriate monitoring and oversight of USAID-funded activities, while also providing a clear audit trail for program monitoring activities.

This guidance, however, has not been fully and consistently implemented and adhered to with regard to the Energy and Water Sector Reform Program. Rather than maintaining all of the required records centrally in the official program files, each CTO maintained project files differently with correspondence and documentation stored as hard copies in cabinets, on personal drives, as saved email, or on shared drives. Further, trip reports were not always being prepared and documented as required; this issue was reported during the Mission's most recent FMFIA review as well as during the previous Mission Management Assessment performed in 2005.

In addition, documentation related to significant program operations and changes was not always readily available in the project files. For example, there was an absence of records documenting: (1) reductions in funding for energy assistance demonstration projects, (2) the addition of the Lake Yerevan Study to the Water Development Project's work plan, and (3) key developments related to personnel and work plan modifications during the Improved Heat Sector Management Project. These discrepancies occurred as a result of a lack of management attention and oversight towards ensuring compliance with the documentation requirements specified in MO 1003.

Since the Mission's official program files do not always adequately document substantive changes and developments, key decisions, and the status of activities under the program, the files do not provide a complete history of the program. As a result, this limits the files' usefulness as a management tool and archive, which can facilitate management needs and ensure continuity when personnel changes occur.

To ensure that the Mission's official program files are maintained in accordance with the guidance, we are making the following recommendation:

Recommendation No. 2: We recommend that USAID/Armenia take appropriate steps to ensure program staff fully implement and adhere to the documentation requirements contained in Mission Order 1003.

EVALUATION OF MANAGEMENT COMMENTS

In its comments on our draft report, USAID/Armenia concurred with our findings and recommendations. In addition, the Mission provided evidence of specific actions taken to address our concerns.

To address our recommendation relating to the collection and evaluation of performance data, USAID/Armenia revised Mission Order 1003 to include an addendum requiring program staff to perform periodic comparisons of expected and achieved results under each award. The new guidance includes a requirement for a thorough evaluation of the implementer's Monitoring and Evaluation plans, and clearly states that the collected data will be presented to Mission management during the annual portfolio review process.

To address our recommendation concerning the documentation of program activities, USAID/Armenia initiated spot check reviews to be performed annually on all of its official project files to ensure that program documentation is properly maintained in accordance with the requirements outlined in Mission Order 1003, with the results of these reviews discussed at Mission Control Review Committee meetings. The Mission also developed an annual schedule indicating the timing of these individual reviews.

We believe that these actions appropriately address our concerns. Consequently, we consider that final action has been taken on our two recommendations. The Mission's comments are included in their entirety as Appendix II.

SCOPE AND METHODOLOGY

Scope

The Regional Inspector General in Frankfurt audited USAID/Armenia's Energy and Water Sector Reform Program activities in accordance with generally accepted government auditing standards. The purpose of the audit was to determine whether USAID/Armenia's Energy and Water Sector Reform Program activities had achieved planned outputs for promoting reliable and affordable access to essential utilities.

For each major project, we selected the most recently completed annual work plan and evaluated all planned activities contained in these work plans (a total of 145 activities). Because the projects were initiated at different times, the performance period covered by these various work plans ranged from August 2005 to January 2007.

In planning and performing the audit, we assessed management controls related to the development, implementation, use and management review of performance measures and indicators. Specifically, we reviewed:

- The Mission's current Performance Management Plan (PMP);
- ADS and Bureau and Mission Order requirements related to performance measures; and
- The Mission's FY 2006 FMFIA process and results.

Additionally, we considered relevant prior audit findings from similar audits completed at USAID/Egypt and USAID/Azerbaijan. We also reviewed the Mission's performance indicators for program activities as well as the performance data collected and reported under these indicators as part of the FY 2005 Annual Report.

We conducted the audit at the USAID/Armenia Mission in Yerevan, Armenia and at various implementing partner site locations in Armenia from January 15 to February 8, 2007 and from March 5 through March 21, 2007.

Methodology

To form a conclusion about whether USAID/Armenia's Energy and Water Sector Reform Program activities were achieving their planned outputs, we first compared the planned work outlined in the implementers' contracts, grants, and cooperative agreements to their respective work plans to ensure consistency. We then reviewed the work accomplished as reported in the implementers' reports and compared actual accomplishments against the specific outputs as defined in contracts and approved work plans, such as the completion of energy demonstration projects and the renovation of school heating systems. To assess the Mission's compliance with requirements to document program performance, we reviewed correspondence, assessment reports, and other data maintained by the Mission. We also tested a judgmental sample of outputs under each project and verified reported progress related to these outputs during

site visits and interviews with each implementing partner. Based on the collective results, we determined the progress of each project toward the achievement of planned outputs and overall objectives.

In addition, we reviewed applicable policies, procedures and management controls related to the management for results, including ADS 202, ADS 203, Bureau Operating Procedure 311, and Mission Order 1003. We then evaluated the Mission's compliance with relevant program management controls and policies.

In assessing each project's progress toward its overall objectives, we established a materiality threshold of 75 percent. That is, if a project's work plan adequately reflected the overall contract goals, and the contractor had achieved at least 75 percent of its planned outputs during the audit period, the project was judged to be making acceptable progress towards its overall objectives.

MANAGEMENT COMMENTS



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TO: Regional Inspector General, Frankfurt, Gerard M. Custer
FROM: USAID/Armenia Mission Director, Robin Phillips /s/
CC: M/CFO/APC, USAID/Washington, Karon Wilson
DATE: May 24, 2007

SUBJECT: USAID/Armenia's Energy and Water Sector Reform Program –
Mission Comments on Draft Audit Report No. 8-111-07-002-P

Thank you for the opportunity to review the subject draft report. We agree with the findings and recommendations, and welcome the opportunity to improve our systems. Corrective measures have already been established to address the recommendations, and we have included documentation with this memo in support of the actions taken. Our comments on the two audit recommendations follow:

Recommendation No. 1: We recommend that USAID/Armenia revise the language in its Mission Order 1003 to ensure that (a) program staff compare actual performance to planned accomplishments under the program's contracts, grants, and cooperative agreements; (b) the results of these assessments are subject to management review; and (c) staff use the performance data generated and collected per the implementer's Monitoring and Evaluation Plan to facilitate these assessments.

We revised Mission Order 1003 (see Attachment A) to include an addendum requiring program staff to perform periodic comparisons of expected and achieved results under each award using performance data collected by the implementers, and report the results of these assessments to the Mission management. Consequently, we request that this recommendation be closed upon issuance of the final audit report.

Recommendation No. 2: We recommend that USAID/Armenia take appropriate steps to ensure program staff fully implement and adhere to the documentation requirements contained in Mission Order 1003.

Technical office directors will conduct periodic verification of official project files to ensure documentation is maintained in accordance with the requirements outlined in Mission Order 1003. We have prepared a schedule (see Attachment B) for these spot checks. In addition, the Mission will incorporate spot check reviews as part of the annual FMFIA process and the results of these reviews will be discussed at the Mission Control Review Committee meetings. Consequently, we request that this recommendation be closed upon the issuance of the final report.

We would also like to mention that the Mission is currently recruiting for the Monitoring and Evaluation Officer who will work to further strengthen mission performance monitoring processes.

Finally, we would like to thank the RIG auditors for their collaborative and supportive approach during the execution of this audit. We believe that the draft report is fair and balanced and will provide a positive contribution to our development effort here in Armenia.