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Georgia Power and Gas Infrastructure Project (PGIP)

QUARTERLY REPORT FY2010

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November 15, 2010

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Re: Contract No. AID-EDH-I-00-08-00027-00–AID-114-TO-10-00003. USAID/Caucasus - Georgia Power and Gas Infrastructure Project; Quarterly Report for First Quarter FY 2010

Dear [REDACTED]:

In accordance with the requirements of EDH-I-00-08-00027-00, and on behalf of the Tetra Tech team, please find our Final Quarterly Progress Report for the First Quarter Fiscal Year 2010. The report covers the period of June 16, 2010 through August 31, 2010.

We look forward to your review and welcome your comments and suggestions.

Very truly yours,

[REDACTED]
Chief of Party

GEORGIA POWER AND GAS INFRASTRUCTURE PROJECT QUARTERLY REPORT FY2010

November 15, 2010

DISCLAIMER

The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

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1.0 Executive Summary

This is the 1st Quarterly Report submitted under Task Order **AID-EDH-00-08-00027 – AID-114-TO-10-00003**; Georgia Power and Gas Infrastructure Project. The reporting period is for 16 June, 2010 through August 31, 2010.

Table 1-1 Active Q1 Work Orders										
Work Order Type	Sector									
Administrative Work Orders	Power Infrastructure	Gas Infrastructure	Tender Documents	Construction Oversight	Capacity Building	Public Relations and Branding	Quality Assurance and Quality Control	Environmental Assessment	Design Activities	Procurement Plan
Long Term Orders										

2.0 Program Staffing

2.1 Expat Staffing

Table 2-1 International Staffing and Deployment			
Employee Name	Position	Georgia Arrival	Georgia Departure
[REDACTED]			

2.2 Expat Staffing Challenges

Tetra Tech has no expat staffing challenges.

2.3 Local National Staffing

Employee Name	Position	Start Date

2.4 Local National Staff Challenges

Tetra Tech has no local national staffing challenges.

3.0 Contract/Task Order Activities

3.1 Gas Infrastructure Development and Rehabilitation

3.1.1. Performed Studies and Reviews

During the Q1 the PGIP team has studied and reviewed following documentation provided by GOGC for the Senaki – Poti – FIZ Project:

- HSS documents, including the HSS Plan
- Various procedures proposed by GOGC to be used in the management of the project, including Receiving Handling and Storage of Materials, Specifications for Quality Assurance, Specifications for Concrete Materials and Construction, Specifications for Concrete Weight Coating of Line Pipe and Specifications for QA/QC Inspection and the Scope of Work for the preparation of the Invitation for Bid (IFB) for the Senaki – Poti – FIZ Project and issued a No Objection letter on June 8.
- The Scope of Work for each of the subcomponents of the Gas Infrastructure Project (Senaki – Poti – FIZ Pipeline, Saguramo Khushiri Replacement, Saguramo Khushiri Rehabilitation) in preparation for mobilizing to Georgia. The team prepared a list of questions and suggestions for discussion with GOGC in meetings in June.

- The Take Off materials and supplier bids. A review was made for the bids for the three material lots for the Senaki – Poti Pipeline. The PGIP team recommended that the Request for Bids should not be reissued, and the suppliers should be chosen based on the bids received, because of schedule impacts, the competitive nature of the bid, and the number of firms who provided RFB's. Additional information was requested, including budget for each item, proposed delivery schedule, and the detailed material list for each Lot on Senaki – Poti, which was provided.
- The Bidding Documents and the overall Procurement Process related to the Senaki-Poti Pipeline Project (the Detail Drawings, the Crossing Drawings, the Standard Drawing, the Profile Drawings, the Plan Drawings and the Schematic Drawings, specifications, standards, government and agency reports and rulings, permits, and other similar documents). The project team conducted a review of those documents, including consultation, meetings and discussions with GOGC personnel, review of the design and construction plan by engineers, and site visits to the project right-of-way and to the materials storage yard. Result of these activities was a statement of No Objection issued on July 31, 2010.
- Reviewed the List of Materials for the Saguramo – Khashuri Project
- Reviewed the Cost Estimates prepared by GOGC for the Senaki – Poti – FIZ Project. The review included a linear comparison between the GOGC Cost Estimates and Contractor Bid Proposals, a High / Low comparison, and a comparison with experience with recent pipeline projects of comparable pipe diameter and length. After reviewing the cost estimate was determined to be reasonable. Result of review was a letter of No Objection issued for all four Lots (project sections) on August 11, 2010.

3.1.2. Letters of No Objection

1. In the Q 1 the PGIP team has issued letters of No Objection regarding the following documents provided by GOGC for the Senaki – Poti – FIZ Project:
 - Scope of Work for the Senaki – Poti – FIZ Project (All Four Lots)
 - Environmental Impact Statement (with respect to Engineering and Technical Issues)
 - QC Requirements, specifically for the Senaki – Poti – FIZ Project, but expected to be acceptable for all pipeline works
 - QA Requirements specifically for the Senaki – Poti – FIZ Project, but expected to be acceptable for all pipeline works
 - Health and Safety Plan specifically for the Senaki – Poti – FIZ Project, but expected to be acceptable for all pipeline works
 - Activity Schedules (Material Lists for all four lots of the Senaki – Poti – FIZ Project, consisting of the complete bill of quantities to construct each Lot)
 - Tender Documents for Procurement for all four lots of the Senaki – Poti – FIZ Project.

- Documents and Control Procedure specifically for the Senaki – Poti – FIZ Project, but expected to be acceptable for all pipeline works
2. On July 16 a letter of No Objection regarding the following documents for the Senaki – Poti – FIZ Project was submitted to USAID:
- HSS documents, including the HSS Plan specifically for the Senaki – Poti – FIZ Project, but expected to be acceptable for all pipeline works
 - Quality Assurance Plan specifically for the Senaki – Poti – FIZ Project, but expected to be acceptable for all pipeline works
 - Quality Control Plan specifically for the Senaki – Poti – FIZ Project, but expected to be acceptable for all pipeline works
 - Scope of Work for the Senaki – Poti – FIZ Project
3. On August 11 a letter of No Objection regarding the following documents provided by GOGC for the Senaki – Poti – FIZ Project was submitted to USAID:
- Construction Crossing Drawings, Sectional Profiles, Sectional Plans, Design Details, Construction Details, Schematic Drawings and riv. Rioni Design Drawings specifically for the Senaki – Poti – FIZ Project.
 - ROW documents, including acquisitions agreement for the various tract owners on the Senaki – Poti – FIZ Project.
 - Construction Permits required for the Senaki – Poti – FIZ Project.
 - Materials Acquisition Plan for all materials required to be purchased by GOGC for the Senaki – Poti – FIZ Project.
 - Bid Process consisting of the tender documents for the materials and for the construction of the Senaki – Poti – FIZ Project. Namely: the Detail Drawings, the Crossing Drawings, the Standard Drawings, the Profile Drawings, the Plan Drawings and Schematic Drawings, specifications, standards, government and agency reports and rulings, permits, and other similar documents.
 - The project team conducted a review of abovementioned documents, including consultations, meetings and discussions with GOGC personnel, review of the design and construction plan by the project engineers, and site visits to the project right-of-way and to the materials storage yard.
4. On August 11 a letter of No Objection regarding the following documents provided by GOGC for the Senaki Poti – FIZ Project was submitted to USAID
- Project Materials and Bid Proposals
 - The GOGC Cost Estimates for the Senaki – Poti – FIZ Project and, the Saguramo – Khushiri Pipeline Replacement Project. The review included a linear comparison between the GOGC Cost Estimates and Contractor Bid Proposals, a High / Low comparison, and a comparison with experience with recent pipeline projects of comparable pipe diameter and length.

3.1.3. Recommendations

In first Quarter the PGIP team has submitted to USAID the following recommendations:

- The recommendations regarding the bidder's proposals for the three material lots for the Senaki – Poti Pipeline. The PGIP team recommended that the Request for Bids should not be reissued, and the suppliers should be chosen based on the bids received, because of schedule impacts if the job was rebid, the competitive nature of the bid, and the number of firms who were provided RFB's.
- The Recommendations related to testing (Chemical, Mechanical and Corrosion) of the pipe in GOGC's Lilo Pipe Yard. A letter was sent to GOGC with recommended number of samples to be tested, the batch (lots) where the pipes would be selected from, the types of tests to be performed and the Russian Standards to be applied to these tests. A letter with recommendations was sent to GOGC.

3.1.4. Participation in Procurement Process

The PGIP team members have participated as an observers in the procurement processes and performed the following activities:

- Participated as an observers during the Materials Bid Openings and provided comments in relation to the proposed awards for materials and construction for the Senaki – Poti – FIZ project. The proposal indicated the proposed awardees and values for Materials for Lot II (Fittings) and Lot III (Valves) and for Construction Lot I, Lot II, Lot III and Lot IV. Materials Lot I (Pipe) will be provided through GOGC, which Lot was not included in the opinion letter. Since the proposals constituted the low bids for each lot and the proposed awardees met the project requirements, the team had no objections to these awards.
- Participated as an observers in the Construction Contractor Pre-Bid Meeting held at Senaki – Poti – FIZ Pipeline area. The purpose of this meeting was to let the contractors see the route and the project area and to ask questions for GOGC to address before the bid. GOGC representatives explained the route alignment, situations, the contractors would expect to encounter like flooding areas, ROW, access roads, crossings (aerials, open cut, railroad and road crossings), and structures to be demolished. The meeting was well organized and contractors acquired information needed for further participation.
- Participated as an observers in the opening of the Construction Contractors Bids. Ten contractors attended the pre-bid meeting, but only seven contractors submitted bids. The bid opening was well conducted and no change recommendations were issued.
- Participated in the selection of the pipes (samples) to be test. A letter was sent to GOGC with the recommended number of samples to be tested, the batch (lots) where the pipes would be selected from, the types of tests to be performed; and the Russian Standards to be applied to these tests. A letter was sent to GOGC with recommendations.

3.1.5. Following Site Visits Have Been Performed:

- On June 15-16 a site visit was made to the Senaki – Poti – Fiz project area and route to verify conditions, route selection, road and railroad crossings, waterbody crossings and the Rioni River Aerial Crossing. Generally there were no major problems related to the route chosen for the pipeline. Following comments were made:
 - a. The project design indicated that in some areas the line will be between two water channels (one in each side). This may be challenge in terms of the limited space provided for the construction contractor and also means that there is a strong possibility that water will be found less than 1.00 meter.
 - b. In some areas, electrical lines are going to be too close to the center line.
- On June 16 a site visit was made to the GOGC Lilo Pipe Yard to verify the conditions of the pipes proposed to be used for the Senaki – Poti – FIZ Project as part of the swap process. After the pipe examination, It was concluded that they are in a good condition and since schedule is very tight, it is advisable to use them for current stage. As regards to the project pipes, when they will arrive GOGC can do a swapping.
- Several site visits were made to the Aragvi crossing on the Saguramo – Khashuri Project to view the Cable Bridge Crossing, which will require pipe replacement.
- Several site visits were made to Lilo Pipe Yard for inventory of pipe to be used for the Senaki – Poti Project,
- On July 27 a site visit to the Lilo Pipe Yard was made in order to decide which approach to use for selection for the testing of their chemical and mechanical conditions. It was decided to use Russian standards since Georgia doesn't have its own and the Russian's are still applicable. Also it was recommended that along with the Mechanical and Chemical analysis, a corrosion test to be done to the pipes to see if the % of corrosion on the pipes meets the standards.
- In August several site visits were made to the cities along the Saguramo – Khashuri Route with the aim further to familiarize with the project route specifics. Visits have revealed following issues for consideration:
 - a. To start discussions with GOGC Environmental Manager to consider the EA for the project taking into consideration USAID new requirements.
 - b. GOGC / GTC to perform the testing on the abandoned lines, to check the effect that this could produce in the proposed schedule.

4.0 Power Infrastructure (Electricity Transmission Upgrade, Reconstruction and Operation)

During the Q1 the PGIP team has performed following activities related to electricity transmission upgrade, reconstruction and operation:

In June 2010 the TT team participated in with the project's Rapid Appraisal team for an assessment of the Senaki 1 & 2 transmission line and a review of the Menji and Tskaltubo substations. It was determined that information regarding the line routing, existing structure drawings, geotechnical information and substation wiring and control diagrams was not available. In August the team working on power infrastructure direction had returned to Georgia to search for data and inspect the transmission routing and existing substations. Despite the best efforts, including number of on-site field investigations, existing information for the Senaki 1 & 2 transmission line as well as information of the substation terminus at the Menji and Tskaltubo substations has been found to be non-existent.

It was determined that an over-the-route survey was needed for the transmission line and that geotechnical investigation along the transmission route and within the substations is required. The PGIP team has provided specifications for both ground and aerial surveys of the transmission route and the substation properties. The team also provided a geotechnical specification for soil borings. The bids were received from qualified contractors and their results were provided to USAID for further approval for contracting.

Based on conducted analyses and studies, the PGIP team came to the conclusion that an over-the-route survey will not be complete before Q1 of 2011. This is a best-case estimate and would require that an aerial survey be completed. If USAID prefers a ground survey that time for completion would be lengthened by approximately 3 to 5 months (this is partially due to winter weather conditions). While the geotechnical investigation can be accomplished concurrently with the aerial/ground survey, the actual work schedule will be lengthened by bad winter weather. Bids for this work have been presented to USAID. Each day of delay on the bid awards lengthens the overall project schedule. If contract award would take place in Q1, the bulk of the project design could start early Q1 2011. Such a start would result in an online date late Q1 2013.

4.1 Site visits

- From June 12 through June 22 several site visits were made to Menji and Tskaltubo substations for acquainting with existing situation and reviewing the existing structures and equipment for Senaki #1 and #2 Transmission line. Transmission line sites were visited and studied as well. The team has obtained detail drawings of the right of way, tower design and footing details.
- On August 4, a site visit was made to the he Menji Substation for reviewing the basic scope of the project with GSE engineers. Inquiry in relation to substation physical „construction“ drawings for the 220 kV switchyard was not successful due to the fact that they were destroyed during the civil war. Situation is the same in relation to electrical drawings for the 220 kV switchyard. Team has studied Senaki 1 and Senaki 2 Bays, autotransformer AT-1 bay, switchyard Grounding, switchyard Raceway, station auxiliary Power, control and protection panels and SCADA System.

- On August 4-5, a site visit was made to the Menji substation for collecting a field data in the substation yard, in the substation control house and additional data was collected for better understanding how the protection and control system work and how GSE is operating the substation. As well the team collected data on the transmission line entrance in the Menji substation and double circuit line condition. All existing towers were found to be extremely rusted and most towers had many damaged and/or missing members. The stub angle attachment of the towers to the foundations were found to be defective with rusted members, anchor bolts and rebar as well as spalled concrete foundations. Other existing foundations were found to be spalled, with anchor bolts cut off at the top of concrete or missing. The recommendation was made to replace all towers and foundations with new foundations and galvanized steel towers.
- On August 5, a site visit was made to the Tskaltubo Substation for going over the basic scope of the project. The team tried to obtain substation physical "construction" drawings for the 220 kV switchyard and electrical drawings for the 220 kV switchyard. No „construction" drawings were found and only a limited number of electrical drawings were available. The team has studied Tskaltubo Substation 220 kV Switchyard, Switchyard Grounding, Switchyard Raceway, Station Auxiliary Power, Control and Protection Panels, Circuit Breaker power and control cabling and SCADA System
- On August 6, a site visit was made to Gardabani Substation for studying the 220 kV switchyards control and protective relaying system

5.0 Gas Infrastructure (Gas Transit Infrastructure Construction, Replacement, and Rehabilitation)

Since May 24, 2010, a review of the scoping documents was undertaken, including the technical and engineering aspects of the Environmental Impact Assessment. The Scope of Work was reviewed, including a review of the design basis, capacity, natural gas delivery points and operating conditions. The review included the hydraulics, capacity, and standards applied to the project (ASME, API, BSI, Russian Standards and Georgian regulations).

The engineering documents were reviewed, including: alignments sheets, typical drawings, site specific drawings, environmental exclusion areas, specifications, pulsation characteristics, cathodic protection, delivery meters, gas delivery stations and other engineering and design plans.

5.1.1 Tender Documents

The team participated as an observer on both the Materials and the Contractors Bid Openings. The Senaki – Poti – FIZ Project Materials Bid Proposals were reviewed and recommendations were made to USAID regarding the procurement. The GOGC Cost Estimates for the Senaki – Poti – FIZ Project were reviewed and a letter of No Objection was provided on August 11.

The Contractors Bid Proposals for the Senaki – Poti – FIZ Project were reviewed.

5.1.2 Construction Oversight

Number of site visits was made to the Senaki – Poti – FIZ Pipeline route to verify the conditions, route selection, road and railroad crossings, waterbody crossings and the Rioni River Aerial Crossing to make a preliminary assessment of constructability. The conclusion of that site visit is that GOGC has selected a good route for the project, considering minimizing length, environmental impacts, impacts to residences and villages and constructibility.

A trip was made to the Senaki – Poti – FIZ area as an observer for the Pre – Bid Meeting for construction Contractor Bid.

Construction oversight has not commenced and will begin when construction mobilization for the Senaki – Poti – FIZ Project begins mobilization.

5.1.3 Capacity Building

The SOW for the PGIP lacks any substantial input related to building capacities at GSE and GOGC in terms of policies, strategies, O&M protocols and etc.

Project team has and will provide on-the-job and informal mentoring to both GSE and GOGC personnel, however long term sustainability of PGIP will also depend on a more aggressive capacity building in energy sector.

5.1.4 Public Relations and Branding

For increasing a public awareness and transparency, the PGIP team has carried out the following branding-related activities:

- At the initial stage, branding specification was developed - the specific requirements for logo, brand book and webpage as well as webpage software.
- The requirements were submitted to the three leading companies on the local market. Cost-estimate of the company "Pixel" was considered to be the best among the cost-estimates presented. The company developed project logo, which was approved by USAID. The logo is presented on all the project documentation since August.

As for the website design, two versions are expected to be completed in the second quarter of 2010 and will be submitted for USAID approval.

5.1.5 Quality Assurance and Quality Control

The project team reviewed the Quality Assurance Plan and the Quality Control Plan Documents and provided a letter of No Objection on July 16, 2010.

Further activities related to compliance with quality standards, will be carried out after material delivery and construction activities will be commenced.

5.1.6 Environmental Assessment

Construction of a new 30.6km, 700mm gas pipeline from Senaki to Poti FIZ ;

The first stage of the EA process for the project is development of the screening and scoping study, although in the case of the Senaki Poti extension, the scoping study was not developed since the work has already been done. Prior to obtaining USAID funding GOGC has already prepared EIA and obtained Environmental Impact Permit under the Georgian Legislation. In spite of the already drafted EIA and Permit obtained by GOGC. USAID BEO did not approve the document and on July 28 sent substantial comments regarding the EIA doc. The major concern expressed, was related to the scope of the document and issues related to, resettlement and alternative analysis. All these comments were showing, that document was not drafted in accordance with the Reg 216.

Due to the mentioned fact, Tetrattech has assisted GOGC to redraft the document. After additional studies of construction sites, final route and alternatives had been identified. There were critical directions to be discussed in the document, one of them was the issue with alternatives and also waste area near the pipeline construction territory. GOGC confirmed in correspondence redrafted in accordance of the USAID format and submitted to BEO for approval.

As a result, on August 30 USAID BEO approved the document

Replacement of 12 km of undersized pipeline sections with new 700mm piping and rehabilitation of 48.3 km of leaking 700 mm pipe between Saguramo and Satchkhere;

So far the Tetra Tech team was not able to undertake any activities in this regard. The reason for this was discussions initiated by GOGC, which was proposing other alternatives to be used for project completion.

Final decision in this regard is anticipated to be made in Quarter 2.

5.1.7 Design Activities

Beginning on May 24, 2010, the team began the review of engineering documents, design and specifications. As part of this review, a site visit was made to the Senaki – Poti – FIZ project route. After this review, a letter of No Objection for the Senaki – Poti design and construction works was provided on July 30, 2010.

Number of Site visits were made made to the Aragvi Cable crossing site on the Saguramo – Khushiri Project.

5.1.8 Procurement Plan

The project team reviewed the materials procurement plan and advised that it would be unlikely that the Senaki – Poti Pipeline would be completed on schedule if the pipe for the project were to be procured by new purchase order. GOGC then proposed to use 720 mm OD pipe they had in place at the Lilo pipe yard, in the amount of approximately 27 km. By using this pipe and procuring the balance required by the project, the project schedule is achievable, provided the balance of the 720 mm OD pipe can be delivered during the later stage of construction.

Several site visits were made to GOGC's Lilo pipe yard to check the condition on the pipe proposed to be used for the Senaki – Poti Pipeline. On July 28, the project team recommended quality testing of the pipes at the Lilo Pipe Yard, prior to approving its use for the Senaki – Poti Project.

After reviewed all the Procurement Process, the Bidding Documents, Materials Acquisition Plan and the project take off, a letter of No Objection was sent to USAID on July 30, 2010.

The project team participated as an observer during the opening of the Materials Bid Opening and gave USAID recommendations regarding the materials bidders proposals.

6.0 Performance Monitoring Plan

In first quarter of 2010 the PGIP has developed the Project Performance Monitoring Plan (PMP). The aim of the document is to manage and assess project performance, through the use of a set of indicators. The PMP provides information on each performance indicator: definition, unit of measurement, data source, method and approach of data collection and calculation, schedule/frequency, reporting, analysis, use, and person responsible. The Performance Indicator Reference Sheets (PIRS) were completed for approximately 90% of indicators and the rest of the sheets are expected to be completed within upcoming 4-6 months. These sheets are including description of data, how they will be acquired, issues related to data quality, plan analyses and critical assumptions.

The draft document was submitted to USAID for comments and the final approval is expected to take place in Q2 of 2010.

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