

**Monitoring of OPIC's Response to the
Office of Accountability Compliance Review dated January 2007
Regarding the Baku-Tbilisi-Ceyhan Oil Pipeline Project**

October 2010

**Office of Accountability
Overseas Private Investment Corporation**

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ABBREVIATIONS AND ACRONYMS

BTC Co.	Baku-Tbilisi-Ceyhan Company
BTC Project	Baku-Tbilisi-Ceyhan Oil Pipeline Project
CIPS	close interval protection survey
CP	cathodic protection
DCVG	direct current voltage gradient
EBRD	European Bank for Reconstruction and Development
ESAP	Environmental and Social Action Plan
ESIA	Environmental and Social Impact Assessment
ESPS	Environmental and Social Policy Statement
FJC	field joint coating
IEC	Independent Environmental Consultant
IFC	International Finance Corporation
JBIC	Japan Bank for International Cooperation
LG	Lenders Group, including IFC, EBRD, JBIC, US Export-Import Bank, and other export credit agencies
MoE	Georgia Ministry of Environment and Natural Resources
NGO	non-governmental organization
OA	Office of Accountability, OPIC
OIP	Office of Investment Policy, OPIC
OPIC	Overseas Private Investment Corporation
OSI	Open Society Institute-Assistance Foundation Azerbaijan
PMDI	Pipeline Monitoring and Dialogue Initiative
Project	Baku-Tbilisi-Ceyhan Oil Pipeline Project
Request	Request for Compliance Review
Requesters	Residents of the Republic of Georgia and a Georgian NGO who requested Compliance Review

EXECUTIVE SUMMARY

The Office of Accountability prepared a Compliance Review Report on the Baku-Tbilisi-Ceyhan Oil Pipeline Project, dated January 2007, in response to a March 2006 request from residents of the Republic of Georgia and a Georgian NGO. The request asked OA to review the Overseas Private Investment Corporation's compliance with environmental policies and procedures with regard to the Project. The requesters' environmental concerns focused primarily on cracks in field joint coatings at the points where pipe sections are joined. The Compliance Review Report found that although OPIC complied with the seven steps in its due diligence process, it a) failed to access all construction monitoring data that could be material to due diligence, and b) did not enforce its own requirements regarding reporting of third-party monitoring data and validation of monitoring methodology.

OA procedures require that OA monitor OPIC's progress in implementing compliance recommendations and make its findings publicly available. This report presents the status of the actions OPIC has taken to address the findings and recommendations of the January 2007 Compliance Review Report. This monitoring report is based primarily on information OPIC has provided to OA from May 2010 through October 22, 2010.

The OA team finds that OPIC has addressed the majority of the issues identified during the 2007 Compliance Review. OPIC has reminded BTC Company of its environmental monitoring requirements, including the recommended use of specific monitoring techniques, reporting of monitoring results and validation of monitoring methodology. The field joint coating concerns that were the basis of the request for compliance review are being adequately addressed. Where recommendations remain to be implemented, OA will follow progress in future monitoring.

Recommendations of the January 2007 Compliance Review Report and the corresponding conclusions of this monitoring report are as follows.

Compliance Review Recommendation 1

Where project construction commences during the due diligence process, OPIC should make a regular practice of requesting and reviewing all available construction monitoring data, not only data labeled "environmental."

Monitoring Conclusion on Recommendation 1

OA finds that OPIC has initiated actions that should lead to satisfactory implementation of this recommendation. OA will follow progress in this area in future monitoring.

Compliance Review Recommendation 2

OPIC should renew its focus on environmental monitoring of the Project in the medium to long term.

Monitoring Conclusion on Recommendation 2

OA finds that OPIC has implemented this recommendation. However, OA observes that the contracts of the Independent Environmental Consultant and the Independent Engineer are such that neither of these third parties, that act on the lenders' behalf, is reviewing water quality data collected in the region of Georgia that is of most concern to the Government, the Requesters, and the preparers of the Environmental and Social Impact Assessment for the pipeline. OA recommends that OPIC

ask the Lenders to send a new set of unambiguous instructions to the IEC and the Independent Engineer.

Compliance Review Recommendation 3

OPIC should give specific attention to implementation of the additional monitoring for field joint coating cracks or leakage, as recommended by Independent Engineer and required by the Operations Environmental and Social Action Plan.

Monitoring Conclusion on Recommendation 3

OA has confirmed that integrity monitoring is being conducted in accordance with BTC Company's plan and, with the exception of annual acoustic pigging in selected areas, fully implements OPIC's 2007 request to BTC Company. In fact, the frequency of intelligent pigging exceeds the minimum recommended by the Independent Engineer and requested by OPIC. OA recommends that OPIC a) review the forthcoming close-out report on acoustic pigging and b) request the Independent Engineer to review and comment on it as well, prior to responding to BTC Company's decision to exclude this technique from its Operational Inspection and Integrity Plan.

Compliance Review Recommendation 4

OPIC should give particular attention to ensuring that the required summaries of environmental monitoring data are included in monitoring reports and that the self-monitoring methodology is validated.

Monitoring Conclusion on Recommendation 4

OA finds that OPIC's requirement for inclusion of monitoring data in BTC Company's annual reports is now being met, and that part of the recommended action has therefore been completed satisfactorily. On the question of validation, OA recognizes that OPIC has made a substantial effort to have it implemented, but there is as yet no independent audit of the project that includes a proper validation of the self-monitoring methodology. OA will follow progress in this area in future monitoring.

Compliance Review Recommendation 5

OPIC needs to clarify when the three-year independent third-party audit period commences.

Monitoring Conclusion on Recommendation 5

OA concludes that OPIC has fully implemented this recommendation.

INTRODUCTION

The Office of Accountability (OA) is the accountability mechanism for the Overseas Private Investment Corporation (OPIC), and reports directly to OPIC's President and CEO.

In March 2006, the Office of Accountability received a request for compliance review (the Request) from residents of the Republic of Georgia¹ and Green Alternative, a Georgian NGO (the Requesters).² The pipeline transports oil across Azerbaijan and Georgia, and terminates in Turkey; the Request referred to the segments of the pipeline in Azerbaijan and Georgia. The Request asked OA to conduct a review of compliance by OPIC with its own environmental policies and procedures with regard to the Baku-Tbilisi-Ceyhan Oil Pipeline Project (BTC Project or Project). OA screened the Request against its eligibility criteria and accepted it in May 2006.³ OA conducted its compliance review during the remainder of 2006 and issued its final report in January 2007.⁴

OA procedures require that it monitor OPIC's progress in implementing the recommendations of compliance reviews and make its findings publicly available. OA scheduled the first monitoring for fall 2008, but armed conflict in Georgia made it necessary to reschedule. Accordingly, OA began the monitoring process in April 2010.

The Request concerned BTC Project's alleged failure to provide a protective pipeline coating at the points where 12 m pipe sections are joined. Cracks in field joint coatings (FJC), identified by BTC Company (BTC Co.) in November 2003, were the subject of the Requesters' concerns. The Request raised the issue of OPIC's alleged failure to conduct a) adequate environmental due diligence before signing of OPIC's Contract of Insurance on February 3, 2004, and b) adequate monitoring of BTC Co.'s compliance with environmental requirements after OPIC's participation in the Project commenced.

With respect to due diligence, the Compliance Review Report found that OPIC correctly followed its standard seven-step process and collaborated fully with other lenders. If OPIC and the other lenders had obtained BTC Co.'s monthly reports on pipeline construction, which began prior to the agency's decision to insure the project, they would have known of the field joint coating problem three months prior to financial close, rather than two weeks after it.

With respect to environmental monitoring, the report identified several elements of BTC's self-monitoring program that fell short of OPIC requirements and should have been subject to follow-up. The review concluded with the five recommended actions that are summarized below.

Regarding environmental due diligence, OA recommended that:

¹ The request was made by Ms. Manana Kochladze, on behalf of Manana Beridze, Kety Gujaraidze, Nino Gujaraidze, Lela Inasaridze, Tamuna Kurtanidze, Vano Shalataashvili, Guliko Shoshitaishvili, and Green Alternative.

² The Requesters named Pacific Environment, a U.S. NGO, as their US-based representative.

³ OPIC's website (www.opic.gov) includes a link to Office of Accountability's webpage, which contains OA's request acceptance criteria and a public registry showing the current status of registered requests.

⁴ Office of Accountability, Overseas Private Investment Corporation, "Office of Accountability Compliance Review of OPIC's Environmental Due Diligence and Monitoring of the Baku-Tbilisi-Ceyhan Oil Pipeline Project," Final Report, January 2007. See

http://www.opic.gov/sites/tes/default/files/docs/compliance_review_opic_environmental_due_diligence0107.pdf

1. Where project construction commences during the due diligence process, OPIC should make a regular practice of requesting and reviewing all available construction monitoring data, not only data labeled “environmental.”

Regarding environmental monitoring, OA recommended that:

2. OPIC renew its focus on environmental monitoring of the Project in the medium to long term;
3. OPIC give specific attention to implementation of the additional monitoring for field joint coating cracks or leakage, as recommended by the Independent Engineer;
4. OPIC give particular attention to ensuring that the required summary of environmental monitoring data and periodic validations of monitoring methodology are included in monitoring reports;
5. OPIC clarify when the three-year independent third-party audit period commences.

OPIC Management formally recognized OA’s findings and recommended responsive actions in August-September 2007.⁵ OA has monitored OPIC’s implementation of the recommended actions, and this report presents the results of that monitoring.

MONITORING APPROACH

The primary focus of OA’s monitoring of the recommendations is on actions taken by OPIC, and OPIC staff and files are thus the main sources of information. OA sent a questionnaire to key staff in May 2010 and followed up with interviews in June and July. OA reviewed project files. OA also examined OPIC’s new Environmental and Social Policy Statement (ESPS), which became effective on August 26, 2010, to ascertain whether the ESPS covers the recommended actions that involve OPIC’s standard procedures.

In July 2010, OA interviewed experts responsible for the Project in two consulting firms that provide independent advice to the Lenders Group⁶ – WorleyParsons Energy Services, which is the Lenders’ Independent Engineer for the pipeline, and D’Appolonia S.p.A, the Independent Environmental Consultant (IEC). Both provide reports that OPIC and the Lenders Group use in monitoring the Project.

The OA team’s monitoring field visit to Azerbaijan and Georgia took place during the period August 23-28, 2010. OA visited the offices of BTC Co. in Baku, Azerbaijan, and met with BTC Co. staff in Tbilisi and at locations along the pipeline in Georgia, to review the implementation and

⁵ Written responses of OPIC Management to the BTC Compliance Review Report dated February-September 2007 are posted on OA’s webpage, at http://www.opic.gov/sites/default/files/docs/btc_agency_response_update.pdf.

⁶ During the pre-financial close period (2002 to February 3, 2004), the financing agencies organized a Lenders Group (LG), including the International Finance Corporation (IFC) the Japan Bank for International Cooperation (JBIC) and other bilateral credit agencies. OPIC, as a provider of insurance but not financing, was not a formal member of the LG but participated in LG meetings, discussions and written communications on environmental issues. During both construction and operations phases, on behalf of its members, the LG engaged an Independent Engineer and Independent Environmental Consultant.

results of the programs for monitoring pipeline integrity and monitoring surface and groundwater in sensitive areas in Georgia. The review included examination of data and interpretive reports and discussions with BTC Co. staff regarding conclusions and follow-up actions. OA also discussed communications between the company and community groups and NGOs in both countries. With BTC staff, OA made a field visit to the secondary containment facilities, the emergency drawdown facility, and various locations along the pipeline in the Borjomi region of Georgia for a first-hand inspection of the pipeline in one of the sensitive areas.

OA met with the Georgia Ministry of Environment and Natural Resources (MoE) to discuss monitoring and reporting by BTC Co. and MoE's monitoring activities.

OA met in Tbilisi with Green Alternatives, the NGO representing the Requesters. Green Alternatives accompanied OA on field visits to Baheti and Imera, two villages in the Tsalka region, for direct contact with residents affected by the pipeline's construction. OA and Green Alternatives also met with the elected executive of the Tsalka Self-Governance Unit.

In Baku, OA met with the Open Society Institute-Assistance Foundation Azerbaijan (OSI). The main topic of this discussion was OSI's activities to support and implement monitoring of the pipeline's construction by civil society in Azerbaijan.

PROGRESS IN IMPLEMENTING RECOMMENDED ACTIONS

OA Compliance Review Recommendation 1

Where project construction commences during the due diligence process, OPIC should make a regular practice of requesting and reviewing all available construction monitoring data, not only data labeled "environmental."

OPIC's response and action 1

OPIC cites two implementing actions taken during due diligence since 2007.

- OPIC's Office of Investment Policy (OIP) now routinely inserts environmental and social monitoring into the contract scope of work when OPIC engages independent consultants for due diligence. According to OPIC staff, the forthcoming due diligence procedures under OPIC's new Environmental and Social Policy Statement will include this requirement. The procedures will be supplemented with training for investment officers on the need to consult with OIP on the scope of work when and if they plan to hire independent consultants to support due diligence. OIP has engaged a consultant to prepare the procedures and conduct the training,
- OPIC has reviewed 15 environmentally sensitive projects since March 2007, five of which ultimately received OPIC support. Of the five, only one project had initiated construction activities (site clearance for well pad installation) before or during due diligence, but had not yet initiated construction monitoring and reporting. However, OPIC included an inspection of the site clearance operations in its due diligence visit.

OA monitoring conclusion on Recommendation 1

OA finds that OPIC management has initiated actions that should lead to satisfactory implementation of this recommendation. OA will follow progress in this area in future monitoring.

OA Compliance Review Recommendation 2

OPIC should renew its focus on environmental monitoring of the Project in the medium to long term.

OPIC's response and action 2

OPIC conducted a three-week environmental, health and safety site visit to all three Project countries in June 2007, which coincided with the 2007 site visit of the Independent Environmental Consultant. The resulting environmental monitoring report is on file at OPIC and covers, among others, oil spill response capability, leak detection, additional inspection and monitoring in sensitive high-groundwater areas, and water quality monitoring. The report states that surface and groundwater monitoring has not been possible at the frequency foreseen in the Operations ESAP because of the impossibility of collecting samples under snow cover, but that the monitoring results to date indicate no contamination from project operations. OPIC followed the site visit with a letter reminding BTC Co. of its obligations to comply with the applicable environmental and social policies and guidelines of the lenders, with the ESAP, and with national law.

Three types of monitoring are relevant to prevention of adverse impacts caused by pipeline leaks. One, which is not a subject of this report, is by means of a system called ATMOS that is designed to provide a real-time warning when a leak occurs. The second is pipeline inspection and integrity monitoring, which involves a number of internal and external tests that are performed periodically to detect incipient problems such as flaws in the pipeline coating (including FJC) and changes in the thickness of the pipeline wall caused by corrosion. This type of monitoring is discussed in more detail below, under Recommendation 3.

The third type of monitoring is ambient water quality monitoring, which BTC Co. conducts on two levels. One level is routine monitoring that is ongoing at pumping stations and other pipeline facilities. The routine monitoring covers ambient air and water quality, effluents from wastewater treatment systems and other discharges, and emissions from machinery including turbines and generators. The other level is a special monitoring program that BTC Co. has put in place in the sensitive and high-groundwater areas in Georgia at the request of the Government of Georgia. Samples are taken semi-annually at 55 groundwater wells and 57 surface water locations in the vicinity of Borjomi, Ktsia-Tabatskuri, and Tsalka (See Figure 1, Map of BTC Pipeline Right-of-Way in Georgia, p. 13). The intent of the routine monitoring is to track BTC Co.'s compliance with the provisions of the operations phase Environmental and Social Action Plan (ESAP) for effluents and air emissions and with ambient air and water quality standards. The special monitoring, which is partially covered in the ESAP, is designed specifically to provide early warning of the hydrocarbon contamination that would result from a leak in the pipeline.⁷

⁷ The ESAP describes the approach to water quality monitoring for the purpose of detecting hydrocarbons and mentions that, in Georgia, there are 19 sampling wells and 22 surface water sampling stations in the Tsalka area, and 11 wells and 9 surface sampling stations in Borjomi. The current program in Georgia has evidently been expanded since the ESAP was issued; it includes a third sensitive area, Ktsia-Tabatskuri and covers 112 sampling points.

OPIC states that it comprehensively reviews environmental monitoring reports, which are available in OIP's electronic files, and consist of the annual environmental and social reports prepared by BTC Co., the site visit reports of the Independent Environmental Consultant, and the site visit reports of the Independent Engineer.

OA discussed environmental monitoring with BTC Co.'s environmental manager in Baku and with environmental staff during the field visits in Georgia, with particular attention to the surface and groundwater monitoring program in the designated sensitive areas of Borjomi, Tsalka, and Ktsia-Tabatskuri. OA also reviewed the laboratory reports for the seventh and eighth rounds of sampling, conducted in 2009. Key points of these discussions follow.

- Each round of sampling requires approximately six weeks of work by two people. Of the 112 sampling stations, 55 are for groundwater and the rest are for surface waters. Two 200-ml samples are collected at each sampling station, preserved and sent to a laboratory in the Netherlands for analysis.
- Ministry of Environment staff accompany the BTC Co. field team for part of each round of sampling as observers. In 2008, MoE and BTC Co. agreed that, beginning in 2009, the number of parameters measured could be reduced to four, focusing on those that are effective indicators of the presence of hydrocarbons.
- Eleven sampling wells have been the subject of monthly sampling and much correspondence between MoE and BTC Co., because anomalies in initial samples made it impossible to establish acceptable baselines. MoE has now accepted the baselines for six of the wells, and BTC Co. has agreed to redrill or replace the other five, which cannot be sampled because they are dry. MoE considers the issue closed.
- MoE normally receives the monitoring data in the Annual Environmental and Social Reports. BTC Co. will provide the data directly to MoE on request.
- To date, no evidence of hydrocarbon contamination from the pipeline has been detected in any samples.

According to the Independent Environmental Consultant, the IEC's mandate is primarily to evaluate BTC Co.'s compliance with the ESAP. As a consequence, it reviews the monitoring data collected at and around the various facilities, such as pumping stations. The program of more intensive water quality monitoring in the sensitive region between Borjomi and Tsalka was requested by the Government of Georgia as a supplement to the monitoring defined in the ESAP. The IEC considers this program not to be a part of the ESAP and therefore has neither reviewed its adequacy as a means of protecting groundwater quality nor evaluated the data it has generated. Similarly, the IEC was not involved in the changes in the program agreed between BTC Co. and the Government of Georgia, such as fewer parameters, that were reflected in the program in 2009.

When OA asked the Independent Engineer whether it had reviewed water quality data or assessed the adequacy of the program to protect groundwater in the sensitive areas, the response was also that this was not within its mandate. The focus of the Independent Engineer's reviews and inspections on behalf of the lenders is to investigate the integrity of the BTC system, its operation

and its maintenance, from the standpoint of sustaining its ability to deliver 1 million barrels of oil a day. Environmental issues only come onto the Independent Engineer's agenda when they relate to that core function – e.g., when flooding at a pumping station in Turkey halted oil delivery. According to the Independent Engineer, review of water quality monitoring procedures or results falls outside this mandate.⁸

OA discussed the water quality monitoring program with the Georgia Ministry of Environment. The Ministry is satisfied with the sampling program and with receiving the results as part of BTC Co.'s annual reporting. It does not want to receive the raw data, preferring an interpretive report. It considers the issue of problematic baseline data at eleven wells closed, and it considers the reduction in the number of chemical parameters to be appropriate. MoE has not received any complaints regarding water quality related to the operation of the pipeline.

In both countries, local NGOs participated in a Pipeline Monitoring and Dialogue Initiative (PMDI) in 2005-2007. This initiative was sponsored by the Project, and included training in monitoring techniques and an opportunity for participating NGOs to recommend improvements. The focus of civil society engagement with the Project subsequently shifted to community development, in a program in which NGOs submit competitive proposals for Project grants to support community development activities.

OA monitoring conclusion on Recommendation 2

OA finds that OPIC has implemented this recommendation. However, OA observes that the contracts of the Independent Environmental Consultant and the Independent Engineer are such that neither of these third parties, that act on the lenders' behalf, is reviewing water quality data collected in the region of Georgia that is of most concern to the Government, the Requesters, and the preparers of the Environmental and Social Impact Assessment for the pipeline. OA recommends that OPIC ask the Lenders Group to send a new set of unambiguous instructions to the IEC and the Independent Engineer, so that the lenders will have the benefit of third-party reviews of all monitoring data.

OA Compliance Review Recommendation 3

OPIC should give specific attention to implementation of the additional monitoring for field joint coating cracks or leakage, as recommended by the Independent Engineer.

OPIC's response and action 3

During the June 2007 environmental, health and safety site visit, BTC Co. provided OPIC with an overview of its plans for pipeline inspection and integrity monitoring. The overview listed five primary integrity monitoring methods: cathodic protection (CP) monitoring surveys at regular intervals; Close Interval Protection Surveys (CIPS) every three years after a baseline survey; Direct Current Voltage Gradient (DCVG) surveys every three years; intelligent pigging surveys consisting of a baseline after full commissioning and follow-up surveys at five-year intervals; and leak-detection pigging (i.e., acoustic pigging) in environmentally sensitive areas in Georgia as a "point in time assurance check". On July 29, 2007, OPIC forwarded the overview to the Independent Engineer with a request for comments – a logical action since the original recommendation for

⁸ For the same reasons, the Independent Engineer did not review Oil Spill Response Plans.

intensive monitoring in the high-groundwater areas was contained in the Final Report on the BTC Design Assessment issued by the Independent Engineer in 2002.

The Independent Engineer responded with general approval of the plans and two recommendations: that CP posts be monitored at 6- to 12-month intervals and that the first follow-up intelligent pigging survey be conducted three years after the baseline, with subsequent surveys to be carried out at five-year intervals if the first one does not detect significant corrosion-associated metal loss. In a subsequent comment, the Independent Engineer recommended that acoustic pigging in selected areas be conducted annually rather than at a single point in time. OPIC agreed with the Independent Engineer's recommendations and requested in writing that BTC Co. amend the inspection and monitoring plan accordingly. BTC Co. replied that it accepted the recommendations regarding CP monitoring and intelligent pigging and was evaluating the benefits of acoustic pigging before responding to that recommendation.

During the OA field visit in August 2010, BTC Co. provided updated information on pipeline integrity monitoring activities conducted since completion of construction.

- By the end of 2007, baseline CIPS, DCVG and CP test point surveys had been completed as part of hand-over from the construction project group to operations. A combined CIPS and DCVG survey was conducted in 2009-2010.
- Full CP test point surveys were conducted at least once a year.
- Baseline intelligent pigging was completed in 2007. A second set of intelligent pig runs was carried out in 2009.
- Pilot tests of an acoustic pig were done in the section from PSG2 to PST1 in November and December 2007 (see Georgia map, p. 13).
- Four field joints in Azerbaijan and ten in Georgia were excavated and inspected in 2007-2008, targeting locations where FJC was applied in cold weather or by hand, and high groundwater areas.

The overall conclusions from the 2007 and 2009 intelligent pigging surveys are that none of the possible corrosion features found in Georgia would constitute a risk to pipeline integrity over the ensuing five years. One location in Georgia where all eight of the external corrosion features found in the 2009 survey were clustered was nevertheless excavated and repaired. The likely cause – stray currents from a railway and an overhead power transmission line – is under investigation according to BTC Co. staff. The 2007 and 2009 intelligent pigging surveys indicated that two features in Azerbaijan were of greater concern because a continuation of the trend observed there could result in reduced pipeline wall thickness beyond acceptable limits within fewer than five years. Of the two potentially problematic features, staff explained that the one that appeared to be external corrosion was also excavated, but was considerably smaller than indicated by the intelligent pigs and did not require repair.

The overall conclusion of the 2009-2010 CIPS and DCVG Survey is that cathodic protection is adequate for most of the pipeline length. Survey results in terms of indications of coating defects were somewhat compromised by the presence of an additional transformer-rectifier station unknown to the consultant and hence not synchronized for the testing procedure, and the consultant recommended repeating the complete survey. The consultant also recommended a thorough survey of possible sources of interference with the cathodic protection system, such as other pipelines, power lines, and railways.

The excavations and inspections of 14 field joints did not reveal any FJC defects. The report concluded with the recommendation that BTC Co. should rely on its other integrity management activities and should not continue a program of excavation related to FJC defects.

On the basis of the pilot acoustic pig runs in 2007 and an additional test of a modified acoustic pig in another pipeline in 2009, BTC staff have concluded that the technology is not sufficiently developed for its purpose. According to staff, the pig detected leaks that did not exist, experienced interference from the sounds of its own movement through the pipeline, and did not provide distance measurements accurate enough to permit locating any leaks that might be detected. BTC Co. will prepare a “close-out” report to document its experience and the reasons for its decision not to include acoustic pigging in its suite of pipeline integrity and inspection activities.

According to BTC Co. staff, the ongoing integrity program for BTC consists of the following activities:

- Continued reliance on daily horse patrols, vehicle patrols, vantage point surveys and the ATMOS system for leak detection;
- Geohazard monitoring;
- Internal corrosion control (product quality control and regular running of cleaning pigs);
- Annual monitoring of all cathodic protection test posts, with selected locations monitored more frequently, and location, assessment and correction of CP interference sources;
- A repeat CIPS/DCVG survey with differential GPS in 2010, with surveys at three-year intervals thereafter;
- Intelligent pigging surveys every two years, which is BP policy for critical pipelines such as BTC;
- Development of GIS capability to permit overlaying information from intelligent pigging, CIPS, DCVG and interference source studies, e.g., to compare significant DCVG indications of coating defects with data from intelligent pigging;
- Excavations to improve the knowledge base on defects revealed by the various monitoring techniques.

OA monitoring conclusion on Recommendation 3

OA has confirmed that integrity monitoring is being conducted in accordance with BTC Company’s plan and, with the exception of annual acoustic pigging in selected areas, fully implements OPIC’s 2007 request to BTC Company. In fact, the frequency of intelligent pigging exceeds the minimum recommended by the Independent Engineer and requested by OPIC. OA recommends that OPIC a) review the forthcoming close-out report on acoustic pigging and b) request the Independent Engineer to review and comment on it as well, prior to responding to BTC Company’s decision to exclude this technique from its Operational Inspection and Integrity Plan.

OA Compliance Review Recommendation 4

OPIC should give particular attention to ensuring that the required summaries of environmental monitoring data are included in monitoring reports and that the self-monitoring methodology is validated.

OPIC's response and action 4

Inclusion of summaries of environmental monitoring data in monitoring reports. In recent environmental clearances issued for proposed projects, OPIC has explicitly required that annual reports include summaries of monitoring results. With respect to the BTC Project, OPIC states that it has reviewed the BTC Annual Environmental and Social Reports for 2007, 2008 and 2009 and confirms that the summaries of monitoring data are appended to these reports, and the data presented in the summaries are interpreted in the reports. OA has reviewed the three reports and differs with OPIC's conclusions in one respect: the 2009 annual report contains only the monitoring data from 11 test wells that were being sampled on a monthly basis because of data anomalies and well failures in the 2007 rounds of sampling that made it impossible to establish a reliable baseline. In response to a written query from OA prior to the August 2010 visit, BTC Co. acknowledged that the water quality data appendix in the 2009 report was incomplete; data from 101 sampling stations were missing. The company explained that this was an inadvertent omission and provided OA with copies of the laboratory reports from both rounds of sampling for 2009. BTC Co. is preparing a revised 2009 report that will include summaries of the complete water quality results for 2009 and will be made available to the lenders and the public.

Validation of BTC Co.'s self-monitoring methodology. The purpose of the validation, which occurs once during the life of the project, is to assure OPIC and the client that the client's methodology is scientifically sound and sufficiently comprehensive. OPIC relies on client self-monitoring to detect environmental impacts and to assess the efficacy of mitigation measures.

OPIC reminded BTC Co. of its obligation to validate its self-monitoring methodology in May 2007. BTC Co. acknowledged that, under the terms of the ESAP, validation is one of the tasks that the IEC should undertake during one of its independent audits but pointed out that the company could not instruct the IEC because it reports to the lenders. OPIC accordingly directed its request for validation by the IEC to another lender, the European Bank for Reconstruction and Development (EBRD), in its function as manager of the IEC contract, in May 2007. The IEC acknowledged receipt of instructions from EBRD. However, even after these communications, the IEC did not cover the topic of validation in its 2007 field visit report. Yet another prompting from OPIC in July 2007 elicited an e-mail from the IEC stating, "We have reviewed the monitoring data and, to the best of our knowledge, they are fine in terms of consistency with ESAP commitments with the exceptions discussed in our draft report. Our previous report also presented comments on the monitoring activities performed, and their eventual closure. Therefore the issue has been addressed throughout the project development."

Neither OPIC nor OA considers the IEC's response to be a validation of self-monitoring methodology, as it does not provide any comment on the design of the monitoring program, such as the number and locations of sampling stations, frequency of sampling, or parameters selected. OPIC staff expressed frustration at what seems to be an effort by the IEC to avoid a direct response to OPIC's request. In a telephone discussion with OA, the IEC acknowledged that it had not validated the methodology. According to IEC staff, had the IEC received direction from the lenders to do that, it could and would have done so, but it did not interpret the instructions it received as authorizing more than the review described in the preceding paragraph.

OPIC now routinely specifies in its clearances that the independent audit of a client's compliance with environmental and social conditions must include validation of the self-monitoring methodology.

OA monitoring conclusion on Recommendation 4

OA finds that OPIC's requirement for inclusion of monitoring data in BTC Company's annual reports is now being met, and that part of the recommended action has therefore been completed satisfactorily. On the question of validation, OA recognizes that OPIC has made a substantial effort to have it implemented, but there is as yet no independent audit of the project that includes a proper validation of the self-monitoring methodology. OA will follow progress in this area in future monitoring.

OA Compliance Review Recommendation 5

OPIC needs to clarify when the three-year independent third-party audit period commences.

OPIC's response and action 5

OPIC's new Environmental and Social Policy Statement, adopted on August 26, 2010, clarifies the commencement of the three-year third-party audit period, as follows:

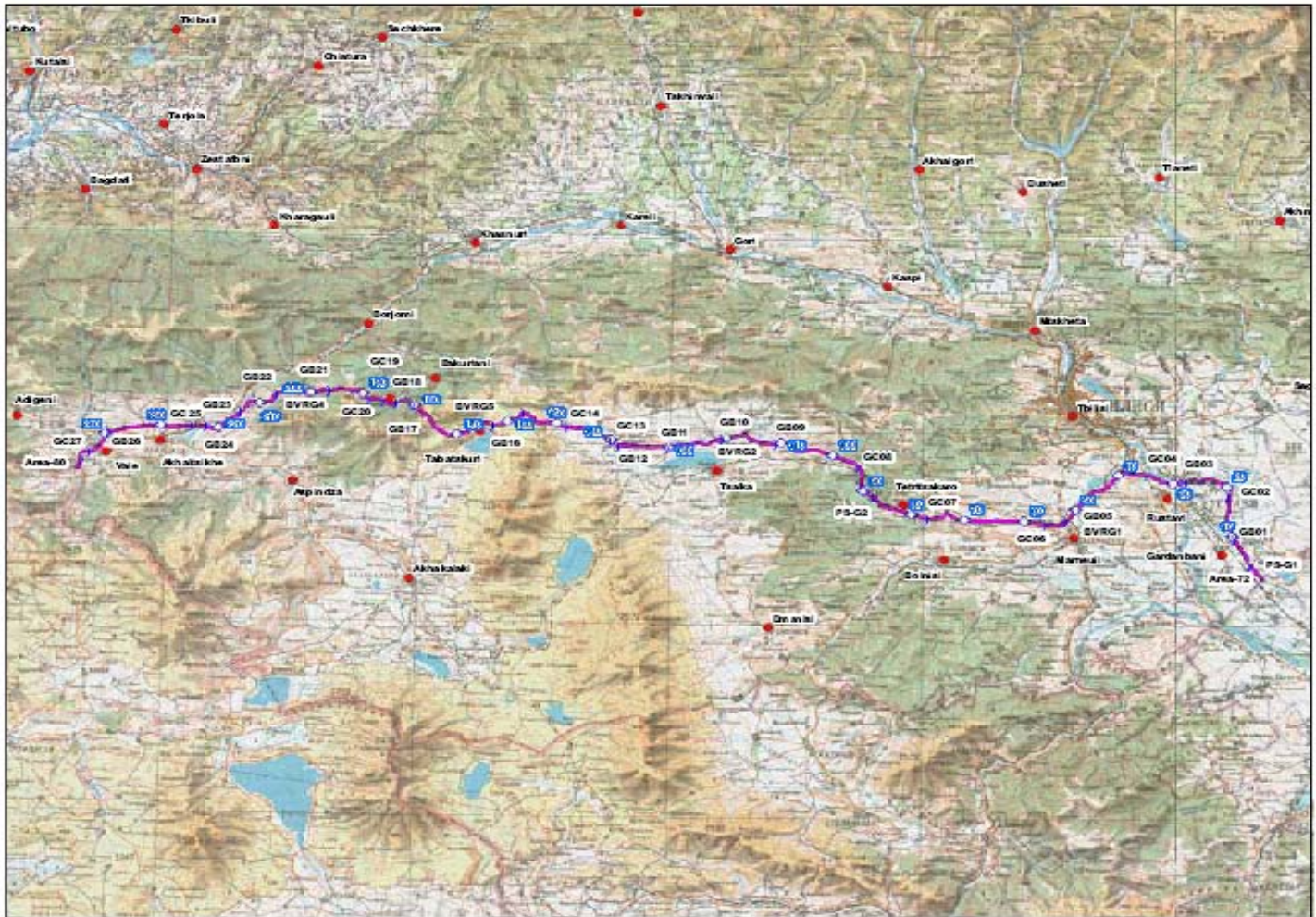
7.8 OPIC requires Applicants to conduct and certify that third-party audits for all Category A projects have been completed. OPIC may require third-party audits of some Category B projects. The purpose of the audit is to (1) evaluate a project's compliance with all environmental and social requirements (and underlying representations) that are reflected in OPIC Agreements; and (2) validate the methodology used in Annual Environmental and Social Reports required under OPIC Agreements.

7.9 At least one third-party audit is required for all Category A projects. The audit should be performed after the project has completed construction and is within the first three years of its operating phase. For certain projects third-part audits may be required during the construction phase. Applicants are required to obtain OPIC approval of the audit scope of work and the selection of third-party auditors. The Applicant is responsible for all costs associated with conducting the audit(s).

OPIC's recent environmental clearances reiterate the requirement for an independent audit within three years of the commencement of operations.

OA monitoring conclusion on Recommendation 5

OA concludes that OPIC has fully implemented this recommendation.



NOTES

COORDINATE SYSTEM PARAMETERS
 PROJECTION: GAUSS KRUGER
 ELLIPSOID: KRASOVSKY
 GEODETIC DATUM: PULKOV 1942
 VERTICAL COORDINATE SYSTEM: (BALTIK SEA) DATUM

LEGEND

- BTC KP
- (CITIES
-) AGI BTC
- BTC PIPELINE

REV	DATE	DESCRIPTION	BY	CHK	APP

AGT Pipeline Project

TITLE:
 BTC
 GEORGIA

SCALE: 1: 650 000

DRAWING No.
 AGT002-2000-G2-GRM-03546-SHT001