



## **Addendum to Assessment Report**

March 18, 2005

Since this assessment report was completed, there have been developments regarding the issues raised therein. To see the progress that has been made on the issues raised in this complaint, please consult the [Recommendation Implementation Status Tracker](#) on CAO's website, [www.cao-ombudsman.org](http://www.cao-ombudsman.org). The tracker lists the key issues raised in each complaint, the CAO's recommendations for moving forward on those issues, and the progress with respect to implementation of these recommendations. New developments and actions by the IFC and/or sponsors are updated on the tracker as soon as CAO can confirm them.



## **Assessment Report**

**Complaint regarding the Baku-Tbilisi-Ceyhan (BTC) Pipeline Project  
Rustavi, Georgia**

**July 2004**

**Office of the Compliance Advisor/Ombudsman  
of the International Finance Corporation and  
Multilateral Investment Guarantee Agency**

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## List of Acronyms

APLR	Association for the Protection of Land Owners Rights
ASME	American Society of Mechanical Engineers
BP	British Petroleum
BTC	Baku-Tbilisi-Ceyhan Main Export Pipeline
BTC Co.	Baku-Tbilisi-Ceyhan Pipeline Company
CAO	Office of the Compliance Advisor/Ombudsman
CIP	Community Investment Program
CLO	Community Liaison Officers
CRM	Community Relations Manager
ESIA	Environmental and Social Impact Assessment
ESAP	Environmental and Social Action Plan
GIOC	Georgia International Oil Company
GLAC	Guide to Land Acquisition and Compensation
GPS	Global Positioning Systems
GIS	Geographical Information Systems
HGA	Host Government Agreement
IFC	International Finance Corporation
MIGA	Multilateral Investment Guarantee Agency
NGO	Nongovernmental Organization
PCDP	Public Consultation and Disclosure Plan
RAP	Resettlement Action Plan
SCP	South Caucasus Pipeline
SLIP	Supplementary Lenders' Information Packet
SPJV	Spie-Capag and Petrofac Joint Venture
SRAP	Social and Resettlement Action Plan

## EXECUTIVE SUMMARY

In March 2004 a complaint was filed with the CAO by residents<sup>1</sup> of the 18<sup>th</sup> and 19<sup>th</sup> subdistricts of the city of Rustavi, Georgia, concerning the Baku-Tbilisi-Ceyhan Main Export Pipeline project. The complaint alleges a lack of disclosure relating to the pipeline routing near the Complainants' apartment buildings, as well as issues of pipeline safety.

CAO contracted two independent pipeline safety engineers to assess the safety issues raised in the complaint; their assessment is based on travelling to Georgia to inspect the site, meeting with the Complainants, reviewing documentation prepared for the project (both public and non-public), and discussing the Complainant's concerns with technical representatives of BTC Co.

Regarding pipeline safety issues, the independent pipeline safety engineers conclude that:

- the pipeline design and proposed method of operation and management comply with the international standards required in the Host Government Agreement; and
- such standards are equal to (or in some cases exceed) international best practice, including the distance of the pipeline from the Complainants' apartments.

In summary, the independent pipeline safety engineers are able to provide technical assurances to the Rustavi residents on almost all of the major safety issues raised by the Complainants. There remain, however, outstanding questions about why the safety concerns arose in the first instance. The origin of the safety concerns and the implications this has for BTC Co.'s policies and practices with respect to disclosure, consultation, and grievances is discussed in this assessment report.

On disclosure, the CAO found that, although IFC's requirements were met in general terms, there was a lack of evidence that consultations were held with affected communities, including the Rustavi Complainants. We infer that an initial information deficit has fueled a spiral of rumors, mistrust, and resentment prejudicial to BTC Co.'s and IFC's commitment to the BTC project having a positive socioeconomic impact. Furthermore, the lack of specificity in the level of disclosure—particularly regarding safety standards, pipeline routing, and the pipeline security zone—has contributed further to a breakdown in communication between the sponsor and the Complainants.

CAO recommends that BTC Co.:

- (i) continue to implement a carefully targeted information campaign about pipeline safety for the Rustavi residents;
- (ii) ensure tighter monitoring of contractors' community liaison activities;
- (iii) carry out an independent review of corrective measures put in place in relation to disclosure issues raised in the complaint;
- (iv) improve the transparency and effectiveness of its grievance mechanisms;
- (v) establish an independent dispute resolution mechanism; and
- (vi) target the Community Investment Program—a program created to invest in improvements to community welfare along the pipeline route—toward the socioeconomic improvement of people in the 18<sup>th</sup> and 19<sup>th</sup> subdistricts of Rustavi.

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<sup>1</sup> A total of 120 individuals signed the complaint.

## 1. INTRODUCTION

This assessment report is in response to a complaint lodged by Mr. Merabi Vacheishvili and Mrs. Eleonora Digmelashvili, on behalf of residents of the 18<sup>th</sup> and 19<sup>th</sup> subdistricts of Rustavi, Georgia. The complaint was received and acknowledged by the CAO on 15 March 2004. Following an appraisal visit, CAO accepted the complaint on 14 April 2004. The complaint concerns lack of disclosure of the Baku-Tbilisi-Ceyhan (BTC) Main Export Pipeline that allegedly passes within 120 meters of the Complainants' apartment blocks, as well as related issues of pipeline safety.

The following issues were raised in the complaint:

- (i) The pipeline is too close to residential apartments, raising concerns of safety to the apartment residents because of the close proximity.
- (ii) There is a history of pipeline failure in the vicinity of people and a history of people being harmed by these failures.
- (iii) The residents desire to have an explanation of the safety standards required for pipelines of this nature.
- (iv) Construction of the BTC pipeline in parallel with the planned SCP gas pipeline will increase the safety risk of those living close to the pipelines.
- (v) The Mtkvari River floodplain between the riverbank and the 18<sup>th</sup> and 19<sup>th</sup> subdistricts is unstable; there is a high water table, poor soil, and a history of erosion that make the area unsuitable for construction of petroleum and gas pipelines.
- (vi) The standard of construction of the residential buildings in the 18<sup>th</sup> and 19<sup>th</sup> subdistricts is not high; vibration caused by construction and operation of the pipeline(s) has the potential to destabilize buildings, causing damage.
- (vii) The BTC/SCP project has nominated a 500-meter "security" zone along each side of the pipeline. The apartment buildings in the 18<sup>th</sup> and 19<sup>th</sup> subdistricts are in this zone, the declaration of which raises concerns of pipeline safety to residents within the zone.
- (viii) The Baku-Supsa Pipeline<sup>2</sup>, constructed some years ago, which will share its easement with the BTC and SCP pipelines, has a history of oil leaks. This indicates to the residents that there is a likelihood that new pipelines will also leak, potentially creating harm to the residents.

In addition, the following issues were raised in discussion with Complainants, which are addressed in this Report:

- (i) Residents expressed concern that, during construction activities, BTC decided to locate an isolation valve in the vicinity of the residents in the 18<sup>th</sup> and 19<sup>th</sup> subdistricts, potentially exposing them to injury by emissions from the valve or possibly danger resulting from malicious damage to the valve installation.
- (ii) During construction of the pipeline in the vicinity of the 18<sup>th</sup> and 19<sup>th</sup> subdistricts, residents observed a pungent smell, which was considered to be associated with a livestock burial pit constructed in earlier times to hold livestock that perished or were killed as a consequence of an anthrax outbreak

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<sup>2</sup> An oil pipeline, running from Baku (Azerbaijan) to Supsa (Georgia), on the Black Sea, built during the Soviet era.

- (iii) Residents expressed concern about reports in publicly disclosed documents that the operations phase will use GPS (Global Positioning Systems) and GIS (Geographical Information Systems), which may emit radiation, potentially causing injury to residents.
- (iv) The residents understood that the pipeline route was originally selected to pass close to the township of Gardabani and that they were unaware that the route had been changed to pass north of Rustavi and close to their residences. In fact, the residents did not realize that the pipeline was in this location until commencement of construction.

The assessment report addresses the issues raised in the complaint, presents the findings of the CAO in relation to these issues, and concludes with recommendations on how these issues may be addressed. The assessment was carried out in accordance with the Operational Guidelines of the CAO. The assessment report is the conclusion of the assessment phase of the complaint process. In accordance with the operational guidelines, the assessment report is prepared for the Complainants and shared with the other parties to the complaint (here BTC Company [BTC Co.], BP, and IFC). If the Complainants choose to make the report public, the CAO will then publish the report on its Web site.

The Complaint is attached as Annex 1.

## **2. BTC PROJECT DESCRIPTION**

The Baku-Tbilisi-Ceyhan (BTC) Main Export Pipeline project involves the development, financing, construction, and operation of a dedicated crude oil pipeline system, to transport oil from the existing Sangachal oil terminal near Baku, Azerbaijan, through Georgia, to a new export terminal to be constructed at Ceyhan, Turkey, on the Mediterranean Sea. The 1,760-kilometer pipeline will be buried throughout its length as it passes through Azerbaijan (442 kilometers), Georgia (248 kilometers), and Turkey (1,070 kilometers).

The pipeline will transport crude oil from the Caspian Sea oilfields of Azeri, Chirag, and Gunashli, (collectively known as the ACG field). The planned capacity of the pipeline will accommodate current levels of production, as well as additional production from ACG, for a total capacity of 1 million barrels per day. It is projected that the pipeline will begin operation in the second quarter of 2005.

The project sponsor is BTC Co., a consortium of 11 partners, which was established in August 2002. British Petroleum (BP), the largest shareholder in the project (30.1%), will operate the pipeline. Other partners (in descending order) are SOCAR [State Oil Company of Azerbaijan] (25%), Unocal (8.9%), Statoil (8.7%), TPAO [Turkish Petroleum Corporation] (6.5%), Eni (5%), TotalFinaElf (5%), ITOCHU (3.4%), INPEX (2.5%), ConocoPhillips (2.5%), and Amerada Hess (2.3%). In its capacity as pipeline operator, BP is leading the project design and construction phases.<sup>3</sup>

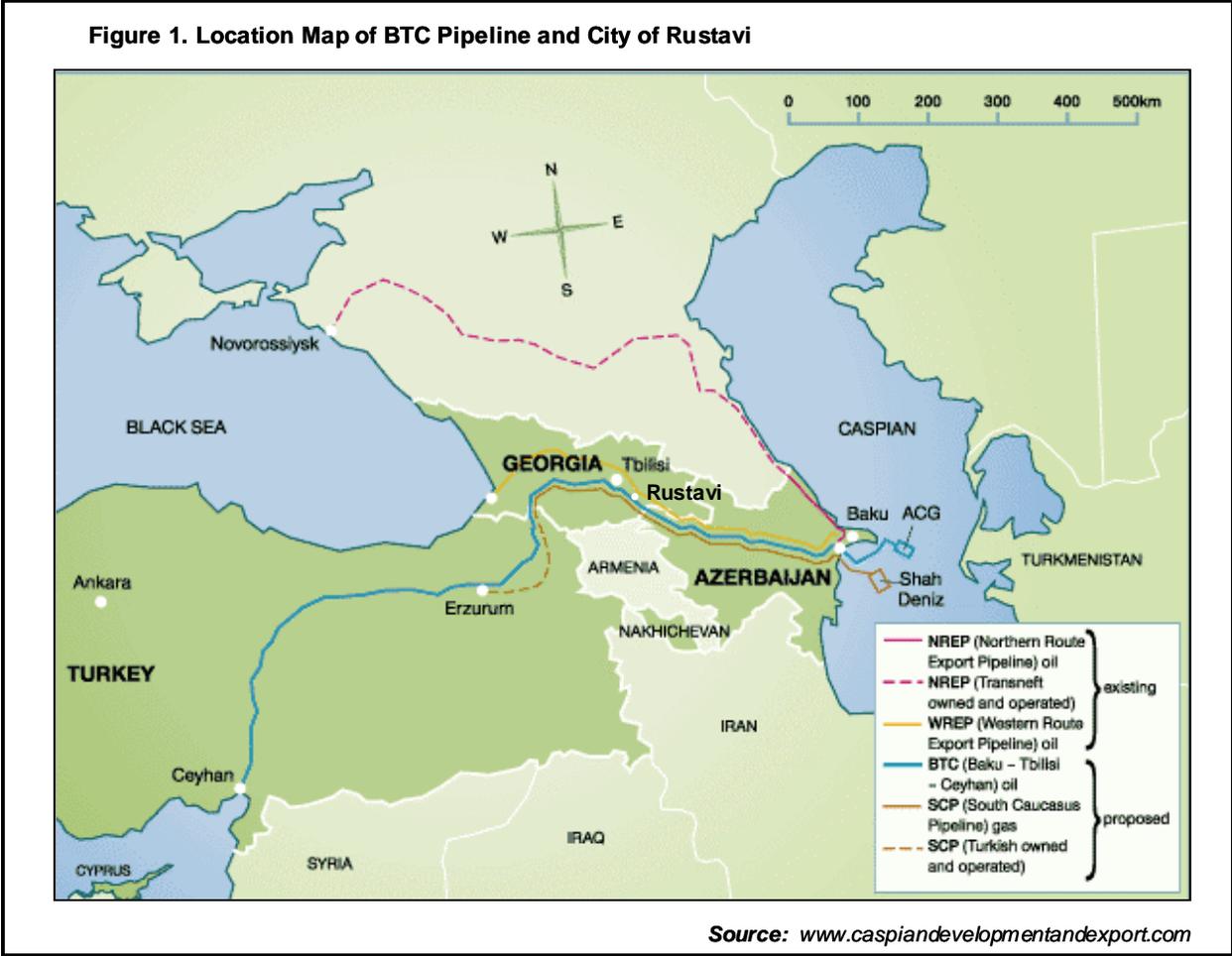
The Georgia section of the pipeline will start in Gardabani at the Azerbaijani-Georgian border and pass through seven regions of the country plus the City of Rustavi (see Figure 1), ending at Naokhrebi in the Akhaltiskhe District on the Turkish border. By a presidential edict of October

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<sup>3</sup> Throughout the report, reference is made to BTC Co., including the recommendations section. In practice, BP will have lead responsibility in implementing any recommendations that it accepts, in its capacity as pipeline operator.

2000, the Georgian International Oil Corporation (GIOC) represents Georgia. GIOC plays the role of a government representative through which BTC Co. requests and secures issuance of rights, licenses, permits, certificates, authorization, approvals, and permissions to conduct project activities. Spie-Capag and Petrofac Joint Venture (SPJV), who were awarded the sub-contract in July 2002, are carrying out the construction work in Georgia.

The total project cost is approximately US\$3.6 billion. The International Finance Corporation’s (IFC’s) gross investment in the project is US\$250 million, \$125 million of which is for IFC’s own account (referred to as an A loan), with an additional \$125 million in syndicated loans, (or so-called B Loan program).



### 3. COMPLAINT HANDLING PROCESS

CAO staff and consultants made three visits to Georgia in April, May and June 2004. (See Annex 6 for complete visit details.) These visits were made to appraise whether the complaint should be accepted and, once it was accepted, to consider the issues raised in the complaint in detail.

## **4. DISCUSSION OF COMPLAINT ISSUES**

The issues raised in the complaint fall into two interrelated categories. First, the complaint raises specific concerns regarding the safety of the pipeline and associated infrastructure. Second, the complaint raised broad concerns regarding the adequacy of disclosure around the pipeline routing prior to construction and the adequacy of related consultations. These concerns are strongly interlinked, as reflected in the discussion that follows, but are dealt with separately. The safety-related concerns are addressed first, (Section 4.1), supplemented by additional information in Annex 2, followed by a discussion of the disclosure issues. (Section 4.2)

### **4.1 Technical Assessment of Safety Concerns**

The major issue raised in the complaint relates to the safety of the section of the BTC oil pipeline being constructed between the Rustavi residential area and the Mtkvari (Kura) River. CAO engaged independent pipeline safety engineers to assess the technical basis of the safety concerns expressed within the complaint and to provide independent expert advice. The Terms of Reference for their work is attached as Annex 4. The work involved a review of project documentation, site inspection, Complainant interviews, and interviews with BTC Co.

Although the complaint can only be assessed in relation to IFC's investment in the BTC oil pipeline, BTC has acknowledged that the "risk assessment carried out for the BTC pipeline has taken into account the additional risk posed by the adjacent project" (ESIA Response to Comments, par. 6.9.7). In this context, a CAO review of the safety of the BTC pipeline has to include the cumulative risk associated with the adjacent South Caucasus Pipeline (SCP), although IFC is neither an investor nor a lender in the SCP project.

The pipeline safety team's mandate was to scope out the nature of the technical issues at stake, including risk assessment, as the pipeline was initially planned and as it currently exists, in terms of recognized codes, standards, and practices. The team was to perform desk reviews of relevant IFC and sponsor design and engineering documents, as well as conduct on-site interviews and field visits to Georgia. Details of specific pipeline safety concerns in the complaint and the corresponding findings of the pipeline safety engineers are summarized below, and included in full in Annex 2. These findings are consistent with the preliminary findings that the CAO independent consultants presented to the Complainants in Tbilisi on 11 June 2004.

#### **4.1.2 Issue I – Pipeline Too Close to Residences**

*The pipeline is too close to residential apartments, raising concerns of safety to the apartment residents.*

##### **Assessment Conclusion**

The actual distances between the BTC pipeline and the nearest apartment building is 260 meters, and between the SCP pipeline and the nearest building 285 meters. This is substantially larger than would be required either by the international design codes specified in the Host Government Agreements or by the Quantified Risk Analysis requirements in use in the small number of international jurisdictions that mandate separation distances on the basis of risk-based methodologies.

#### **4.1.3 Issue II – History of Pipeline Failure**

*There is a history of pipeline failure in the vicinity and a history of people being harmed by these failures. This causes great concern to the residents living in close proximity to the BTC pipeline.*

##### Assessment Conclusion

The steel used in the construction of both the BTC and SCP pipelines is thick, so a very large explosion is required to puncture either pipe; corrosion risk has been addressed by (i) the application of a thick three-layer coating system bonded to the steel pipe (with an operating life of > 60 years); (ii) a cathodic protection system to prevent corrosion from small coating defects; and (iii) regular inspection by an instrument called an “intelligent pig,” which passes through the pipeline and measures wall thickness. The BTC and SCP pipelines are designed and will be operated and maintained to the highest current international standards. These standards will mitigate any risk of pipeline failure from the most common sources of damage, external interference, and corrosion.

#### **4.1.4 Issue III – Explain What Safety Standards Apply to Pipelines**

*The residents desire to have an explanation of the safety standards required for pipelines of this nature and whether the standards used for the BTC are in fact the highest internationally accepted standard.*

##### Assessment Conclusion

The following standards included in the Host Government Agreement are the most commonly used international standards:

- BTC Pipeline—ASME B31.4
- SCP Pipeline—ASME B31.8

These standards originate in the United States but are the de facto international pipeline standards. CAO’s pipeline safety engineering assessment concluded that the BTC and SCP pipelines have met and exceeded the requirements of the nominated standards.

#### **4.1.5 Issue IV – Construction of BTC and SCP in Parallel Will Increase Risk**

*Construction of the BTC pipeline in parallel with the planned SCP gas pipeline will increase the risk to those living in close proximity to the pipelines.*

##### Assessment Conclusion

The additive effect of the two pipelines would impose a separation distance requirement of approximately 50 meters from the nearer pipeline. The actual distance between the nearer pipeline (BTC) and the nearest corner of any apartment block in the 18<sup>th</sup> or 19<sup>th</sup> subdistricts is approximately 260 meters.

#### **4.1.6 Issue V – Unstable Ground on Mtkvari River Floodplain**

*The Mtkvari River floodplain between the riverbank and the 18<sup>th</sup> and 19<sup>th</sup> subdistricts is unstable, has a high water table, a history of riverbank erosion, and poor soil. It is clearly unsuitable for construction of petroleum and gas pipelines.*

##### Assessment Conclusion

The independent pipeline safety engineers consider that the appropriate investigations have been undertaken, and the erosion risk to the pipeline is low. These investigations included a hydro geological assessment of the river and riverbanks, identification of the flood plain area, boreholes in the river crossing vicinity, and a minor relocation of the pipeline to move it farther from the river.

It is possible that in the future the riverbank may erode. If this happens there is sufficient distance between the pipeline and the river for the erosion to be identified and remedial action initiated to control the problem.

#### **4.1.7 Issue VI – Vibration During Pipeline Operation Will Impact Building Integrity**

*The standard of construction of the residential buildings in the 18<sup>th</sup> and 19<sup>th</sup> subdistricts is not high, and vibration caused by operation of the pipeline(s) (and during construction) has the potential to destabilize the buildings, causing damage.*

##### Assessment Conclusion

Neither the BTC nor the SCP pipelines have the potential to generate any vibration during operation. Construction activities using tracked machinery will generate some vibration as they move along the site, but the ground within 25 to 50 meters of the site dissipates this, so construction vibration will not damage or destabilize buildings, irrespective of their condition.

#### **4.1.8 Issue VII – The 500-meter Security Zone Suggests That It Is Unsafe to Have Apartment Buildings Within This Zone**

*The BTC/SCP project has nominated a 500-meter “security” zone alongside each side of the pipeline. The apartment buildings in the 18<sup>th</sup> and 19<sup>th</sup> subdistricts are in this zone (being from 250 to 325 meters from the pipeline). The declaration of this “security” zone raises concerns of pipeline safety to residents living within that zone.*

##### Assessment Conclusion

The security zone was recommended following a quantitative risk assessment of the SCP gas pipeline and incorporated into the requirements for the BTC pipeline. The 500-meter zone is currently the best practice for managing land use and development in the vicinity of gas pipelines.

The zone was created to require the government to notify the pipeline operator of any development in the vicinity of the pipeline that could introduce a change to its risk profile. Developments controlled in the security zone include high-density residential developments, and sensitive developments, such as hospitals, retirement homes, schools, and child care centers. The “security” zone will ensure that any new development will be required to achieve the same safety standards as that in existing residential areas, without the pipeline operator

being required to replace a significant section of the pipeline, or to reduce pipeline capacity. This ensures that Planners and Developers do not knowingly or unknowingly permit the population to be allowed to live in locations where the existing pipeline design would place the residents at increased risk. However, the “security” zone is not mandatory for managing land use and development in the vicinity of the BTC pipeline, because its design standards (ASME B31.4) do not have any requirements relating to the construction of oil pipelines in close proximity to buildings.

#### **4.1.9 Issue VIII – Baku-Supsa Pipeline Has Leakage History – Validates Concerns**

*The Baku-Supsa pipeline, constructed some years ago, will share its easement with the BTC and SCP pipelines and has a history of oil leaks. This indicates to the residents that there is a likelihood that new pipelines will also leak, potentially creating harm to the residents.*

##### Assessment Conclusion

(The WREP and BTC only share an easement between KP1 and KP20, around 10km before BTC passes Rustavi 18<sup>th</sup> and 19<sup>th</sup> microdistricts. WREP then lies on the opposite side of the Mtkvari River to BTC.) The Baku-Supsa pipeline (aka WREP) was constructed during the Soviet era. It was built and maintained to inadequate standards; and as a result, developed corrosion damage and leaked (before WREP took control of it and replaced substantial lengths of the original pipeline). The experience of the Baku-Supsa pipeline is not a valid basis for concerns about the safety of the BTC or SCP pipelines. However, the operating histories of well-constructed and maintained pipelines (oil and gas) show that proper external coating and corrosion control systems will protect the pipeline from metal loss as a result of corrosion and from consequent leakage.

The BTC/SCP pipelines both have a high quality external coating and a proper cathodic protection corrosion control system to prevent external corrosion. In addition, there is a commitment from BTC to undertake a regular program of metal loss inspection using “intelligent” pigging tools to identify any site of active corrosion. Intelligent pigging ensures that corrosion sites and locations of metal loss from external damage are identified sufficiently early for work to be undertaken to rectify the damage before pipe leakage or failure can occur.

#### **4.1.10 Verbal Issue I – Proximity of Isolation Valves to Residences**

*Residents expressed concern that, during construction activities, BTC decided to locate an isolation valve in the vicinity of the 18<sup>th</sup> and 19<sup>th</sup> subdistrict residences, potentially exposing residents to injury by emissions from the valve or possibly danger resulting from malicious damage to the valve installation.*

##### Assessment Conclusion

An investigation of the engineering design of the pipeline determined that there are no isolation valves on either pipeline in the immediate vicinity of the 18<sup>th</sup> and 19<sup>th</sup> subdistricts. The nearest valves are 2 to 3 kilometers east of the residential area for BTC and SCP.

Residents might be exposed to noise emitted from a gas release from the SCP isolation valve nearest the 18<sup>th</sup> and 19<sup>th</sup> subdistricts, should there be the need for pipeline depressurization, which is rare. There will be no measurable noise or other impact on residences from isolation and depressurization of the BTC oil pipeline.

#### **4.1.11 Verbal Issue II – Contaminated Site Uncovered During Construction**

*During construction of the pipeline in the vicinity of the 18<sup>th</sup> and 19<sup>th</sup> subdistricts, residents observed a pungent smell, which was considered to be associated with a livestock burial pit constructed in earlier times to hold livestock that had perished or were destroyed as a consequence of an anthrax outbreak.*

##### Assessment Conclusion

BTC advised that there are two potential anthrax burial sites identified in the vicinity of Rustavi and the Mtkvari River (east side), but both are outside the right-of-way and adjacent to the horizontal directional drilling (HDD) rig site. These sites have been fenced off, and warning signs have been erected.

The technical advisors sought to obtain further information but were unsuccessful. The CAO and independent pipeline safety engineers have not reached any conclusion on this issue, both on the grounds that it was not within the scope of the engineering assessment and that insufficient evidence was available to resolve the matter.

#### **4.1.12 Verbal Issue III – Concern of Radiation Emitted by Project GPS & GIS Applications**

*Residents expressed a concern about reports in publicly disclosed documents that the operations phase will use GPS (Global Positioning Systems) and GIS (Geographical Information Systems), which may emit radiation, potentially causing injury to residents.*

##### Assessment Conclusion

GPS is a worldwide navigation and survey system based on a system of geostationary satellites positioned above the Earth; these satellites broadcast their positions by low-powered radio transmissions. GPS receiving units receive data from 3 or more satellites and compute the position of the receiver. Because they are receivers, GPS units do not emit radiation. Signals received from the satellite systems are typically lower powered than those generated by mobile telephones, which are almost universally used in Georgia.

GIS is a computer-based spatial mapping system that displays information on the pipeline, land and property and any associated information capable of being recorded in a database or image. GIS systems do not emit radiation.

#### **4.1.13 Verbal Issue IV – The Pipeline Route Was Changed Without Advising Residents**

*The residents understood that the pipeline route was originally selected to pass close to the township of Gardabani. The residents were unaware that the route had been changed to pass north of Rustavi and close to their residences. In fact, the residents did not realize that the pipeline was in this location until commencement of construction. The residents implied that the pipeline route should be relocated. They had not anticipated safety concerns until they learned about the pipeline re-routing.*

##### Assessment Conclusion

The independent pipeline safety engineers reviewed the documentation associated with the ESIA and discussed the route selection with BTC staff. Route 1 was found to be prone to landslide, so it was rejected at an early stage. Route 2, crossing the Mtkvari River south of

Rustavi near Gardabani township, would have passed through a military area, so it was rejected by the Government of Georgia. The route chosen, Route 3, close to the final alignment of the pipeline, was subject to detailed investigation before submission to the Government of Georgia for approval, according to the Host Government Agreement. Upon approval by the government of Georgia, Route 3 was displayed in the ESIA and at the public meeting held in Rustavi in July 2002.

## **4.2 Disclosure-Related Concerns**

The independent pipeline safety engineers have provided technical assurances to the Rustavi residents on almost all of the major safety issues raised by the Complainants. There remain, however, outstanding questions about why the safety concerns arose in the first instance. The origin of the safety concerns and the implications this has for BTC Co.'s policies and practices with respect to disclosure, consultation, and grievances is also important in the context of the complaint.

According to the Complainants, no information about the pipeline routing was shared with them until prior to construction commencing, in January 2004, and no replies were received to letters sent to BTC Co. requesting project information.

At issue is the disclosure process of BTC Co. relating to pipeline routing and safety issues in general and, in particular, to specific requests for information on detailed safety standards. A related factor is the extent to which BTC Co. took into account the residual public perception of the BTC pipeline risks, irrespective of the technical assessments of risk that BTC Co. had undertaken.

### **4.2.1 IFC's Disclosure Requirements and BTC Co.'s Organizational Response**

The IFC's Environmental Assessment Policy (OP 4.01, January 1999)<sup>4</sup> requires that project-affected groups be consulted during the Environmental and Social Impact Assessment (ESIA) process about a project's potential environmental and social impacts. For the BTC pipeline, affected communities were identified in the ESIA as, among others, those communities located within 2 kilometers of the pipeline right-of-way. For complex projects in which environmental impacts and risks are high, OP 4.01 requires that public consultation take place at least twice. Furthermore, the IFC's Manual, "Doing Better Business Through Effective Public Consultation and Disclosure: A Good Practice Manual," provides action-oriented guidelines that stress the need for the project sponsor (in this case BTC Co.) to ensure that public consultation is accessible to all potentially affected parties.

The BTC pipeline project does not involve any physical resettlement, but BTC Co. has developed a Resettlement Action Plan (RAP) to address the economic resettlement associated with land acquisition for the project. The consultation requirements for the project's RAP are covered by the IFC's Involuntary Resettlement Policy (OD 4.30) and outlined in the IFC's "Handbook for Preparing a Resettlement Action Plan." In particular, the project sponsor is required to initiate and facilitate a series of consultations throughout the planning and implementation of the RAP on, among other matters, development opportunities, dispute resolution and grievance redress procedures, and mechanisms for monitoring and implementing corrective actions.

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<sup>4</sup> The BTC Co.'s documents refer to the "World Bank's" instead of IFC Policies.

In applying these IFC requirements and in relation to the current complaint, the BTC Co. stated<sup>5</sup> that the pipeline operators would be ultimately accountable for relations with the pipeline-affected communities and that the primary responsibility for daily liaison with communities would be borne by the construction contractor (SPJV). The BTC Co. also required SPJV to develop its own plan and detailed proposals for community liaison, a Community Relations Plan (CRP). BTC Co. indicated that, in the event that the project faces serious issues in its relationships with communities that could not be resolved with existing grievance mechanisms, solutions would be sought in cooperation with GIOC.

According to the ESIA, the construction contractor has primary responsibility for community liaison and was designated as the first point of contact with affected communities. The BTC Co. project manager was accountable for ensuring that community liaison objectives were met. This was to be achieved through, inter alia, a team of four dedicated Community Liaison Officers (CLOs). The construction teams in each spread<sup>6</sup> were to work on an approximately 15-kilometer length at any one time. One CLO was therefore required on each section to liaise with communities along the pipeline route. In the Public Consultation and Disclosure Plan (PCDP), however, there was a discrepancy regarding the CLO assignment: One CLO was required for each 50-kilometer construction team's spread at any time. Such a discrepancy indicates a significant difference in the spread length and the workload for the CLOs whose number was not increased proportionally. CLO's tasks included (1) organization of community meetings prior to arrival of construction teams; (2) holding fortnightly (or as required) meetings with communities during construction; and (3) providing a focus for negotiation and resolution of specific disputes with communities, using the dispute resolution procedure.

According to the PCDP, BTC Co. has to monitor the contractor's performance through a Community Relations Manager (CRM), with overall responsibility for liaison with affected communities during the construction period. Furthermore, according to the ESIA, the BTC Co. Construction Manager was accountable for providing assurance during the construction phase that community safety objectives and agreed targets were met. BTC Co. indicated (in the ESIA Response to Comments) that community liaison teams would meet every community along the route prior to construction and that, at these meetings, safety briefings would cover both real and perceived safety risks. In this regard, the sponsor has emphasized (in the ESIA Response to Comments) that community relations were essential to the project and that community concerns would be given high priority.

The Community Relations Program was designed to build and maintain constructive relationships between communities and the project, as well as manage any complaints against the BTC Co. and its contractor, SPJV. To this end, a grievance mechanism was established to ensure that all complaints from local communities are dealt with appropriately with corrective actions being implemented and the Complainants being informed of the outcome. The mechanism was meant to apply to all complaints received from any pipeline-affected communities. The CLOs are responsible for registering written complaints and coordinating responses to all complaints.

#### **4.2.2 BTC Co. Implementation Efforts and CAO Findings**

##### **BTC Co.'s Commitments under the Environmental and Social Impact Assessment**

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<sup>5</sup> ESIA, Appendix F, Public Consultation and Development Plan (PCDP).

<sup>6</sup> A spread is an area covered for a given length by construction operations.

BTC Co. and GIOC have indicated that public disclosure of the draft ESIA took place between late May 2002 and the end of July 2002. Public information about the pipeline was provided through community pamphlets on safety, employment, and land issues, (in Georgian, Russian, and English), the Nontechnical Executive Summary of the ESIA, exhibition panels, television programs and newspaper advertisements. Posters advertising the date, location, and transport arrangements to the “Road Show” and public meetings were placed in at least two prominent locations in each community and in the regional Governors’ offices. BTC Co. made the draft ESIA available for public viewing and comment at the Rustavi Regional Administrative Center (Land Management Department), a government office in the City of Rustavi. All documentation was available in both Georgian and Russian.

According to the PCDP, BTC Co. social consultants visited all pipeline-affected communities, including Rustavi, three times. A full text of the ESIA was also provided for participants to consult, and copies of the Nontechnical Executive Summary of the ESIA were provided for people to take with them. A pamphlet addressing concerns and interests of communities along the proposed route was distributed to those communities. Feedback forms were distributed; and a drop-box was provided for collection of completed forms, or they could be mailed to BTC Co. in Tbilisi. Lastly, a public disclosure phone line was also opened.

A public meeting, advertised on 6 television stations and 11 newspapers, was held in the Rustavi Dramatic Theatre on 2 July 2002 and attended by approximately 600 people, according to GIOC and BTC Co. At the meeting, large-scale maps were displayed, and information was provided on potential environmental and social impacts. Questions were fielded on international standards regarding the distance between the pipeline and the community, including route selection and right-of-way width and actual construction and compensation for landowners falling within the 44-meter right-of-way area. As the meeting ended with some questions unanswered, BTC CO. posted in the “Rustavi” newspaper answers to questions on land issues, environment and health, pipeline security, and operational safety. According to GIOC, the Rustavi town hall meeting showing (among other information) the pipeline route was repeatedly broadcast in 2003; posting of community information announcements was made in November and December 2003.

#### Commitments under the Resettlement Action Plan

Consultations were undertaken during the development and implementation of the RAP and carried out by a combination of BTC Co.’s land team, independent consultants and by the Association for the Protection of Landowners Rights (APLR). A document was developed for public disclosure, the Guide to Land Acquisition and Compensation (GLAC), which focused on community concerns. Along with the GLAC, the full RAP was disclosed to the public from late October 2002 and on 8 January 2003, respectively. The GLAC was made available at the Regional Land Department in Rustavi; APLR held a series of meetings with communities between July and December 2002, including two in Rustavi on 7 September 2002. The full RAP was disclosed at regional land departments beginning on 8 January 2003; advertisements announcing the availability of the RAP in both Georgian and Russian were placed in seven national newspapers and five regional (weekly) papers. APLR had 10,000 BTC community pamphlets reprinted and distributed along the pipeline route, held meetings with NGOs in Tbilisi, and carried out a visit to Rustavi landowners at an early stage.

#### CAO Findings: Implementation of ESIA and RAP by BTC Co.

The CAO was presented with contradictory information concerning the timing and nature of disclosure and consultations. The Complainants argued that they were either unaware of or unable to attend public meetings held in Rustavi on the BTC pipeline and that they did not receive information on pipeline routing and pipeline safety issues from BTC Co. and/or contractors or through the media. Both GIOC and BTC Co. have expressed doubts that residents of the 18<sup>th</sup> and 19<sup>th</sup> subdistricts in Rustavi would have been left uninformed until the beginning of pipeline construction. GIOC and BTC Co. cited two letters dated 8 November 2002 (to GIOC) and 29 January 2003 (to BTC Co.) from some residents of the 18<sup>th</sup> and 19<sup>th</sup> subdistricts, which, according to them, indicated Complainants' prior knowledge that the pipeline route would be located close to (within 120 meters of) the residents' buildings. GIOC also asserts that its personnel had frequent meetings with these residents at that time. The Complainants have responded that they had no prior knowledge of the two letters cited by GIOC and BTC Co. They suggested that these may have been inquiries about safety and compensation from individuals who lived in the 18<sup>th</sup> and 19<sup>th</sup> subdistricts, but they were not shared more widely with residents or the Complainant group.

The Complainants cited in their official complaint letter two pieces of correspondence sent to BTC, for which they have never received a response. The letter described above, dated 29 January 2003, was referred to by the Complainants, as was another letter to BTC Co. (dated 30 April 2003) for which no reply has been confirmed by the CAO. This letter—although signed by some residents of the 19<sup>th</sup> subdistrict—was from another group of residents of the 18<sup>th</sup> and 19<sup>th</sup> subdistricts whose association with the Complainants could not be determined, and its subject is actually a complaint about the sum offered for a land compensation payment.

BTC Co. and GIOC indicated that questions regarding pipeline safety standards were addressed in a letter by BTC Co. to GIOC and copied to residents of the Rustavi 19<sup>th</sup> subdistrict, dated 11 March 2003. The Complainants confirmed having seen and read the letter but observed that it fell short of effectively spelling out international safety standards used for the construction of the BTC pipeline. The letter did, however, detail provisions of the internationally recognized pipeline design code ASME B31.8, which “permits construction of individual dwellings 15 meters either side of the pipelines.”

The Complainants' perception of BTC Co.'s reluctance to examine specific international safety standards used by the BTC project was confirmed by Green Alternative, as well as other Georgian NGOs. BTC Co.'s insistence that the BTC pipeline was essentially safe, without fully disclosing and explaining what international pipeline safety standards are required, either in the ESIA or other subsequent communications, fueled increasing suspicions on the part of the Complainants.

In the opinion of the CAO, the lack of evidence for verifiable early proactive engagement with the Rustavi 18<sup>th</sup> and 19<sup>th</sup> subdistricts, combined with a socially and economically depressed locality, has led to a breakdown in trust between the Complainants and BTC Co. Corrective actions deployed by BTC Co. to address Complainants' concerns in the few weeks following the filing of the complaint with the CAO, including renewed contacts by CLOs, have elicited little positive reaction from Complainants, who regard the actions as “too little, too late.”

#### Performance of the Community Liaison Officers (CLOs)

In April 2003, BTC Co. had five CLOs in place: three for the pipeline and two for the two pump stations in Georgia. In February or March 2004, BTC Co. began recruitment of three additional CLOs, who were to be in post by the end of April 2004 and, at approximately the same time,

one CLO left the project. In May 2004, BTC Co. assigned a Community Investment Officer (CIO) as CLO, specifically to deal with the Complainants' concerns.

According to the first independent Social and Resettlement Action Plan Panel review (SRAP),<sup>7</sup> completed in August 2003, at the time of the review, the primary community liaison role was still being undertaken by BTC Co.'s land teams. There was an early intention to move BTC land team members over to the BTC CLO team but, as the land acquisition process took longer than originally anticipated, this was not possible. As a result of this and other factors, BTC Co. recruited additional CLOs, as noted above. The SRAP Review Panel indicated that, from experience gained in the other two countries crossed by the pipelines, a clear demarcation in the roles of the contractor and BTC Co. CLOs was critical, noting that, should responsibilities be unclear, it was very easy for issues to fall between the gaps with no one assuming responsibility for taking corrective action.

In October 2003, BTC Co. decided that its CLOs would extend their activities beyond solely assuring that SPJV liaison activities included proactive community liaison. BTC Co. also is expected to recruit a second expatriate social field supervisor to work closely with the CLOs. In addition, BTC Co. is to assign a dedicated resource within the management team to support this process and to provide a greater degree of coordination across the various elements of community relations, including field security and land officers. A series of public information brochures, the first of which was dedicated to operational pipeline safety, was issued in early June 2004. A wider communication and consultation process involving key local and national stakeholders, including at least one public meeting in each area, was also to be implemented.

According to the second SRAP report (February 2004), BTC Co. has agreed to have a more proactive use of CLOs for preparing villages prior to the arrival of a construction section, including briefing and engaging shareholders who are influential in local affairs and using CLOs as the focal point for a "team approach" to solving any crises (such as blockades) in project work areas. BTC Co. believed that the increase in the size of the CLO team and in management resources would go a long way toward enabling CLOs both to proactively develop relationships with communities and to provide necessary "firefighting" support to the construction team.

BTC Co. has acknowledged that local tenants in Rustavi apartment blocks still have concerns about pipeline safety, "despite numerous BTC Co. and SPJV CLO visits and meetings with local government officials to discuss all issues associated with safety and construction."<sup>8</sup> As suggested by IFC, BTC Co. has developed targeted materials on safety issues, including a Rustavi-specific pamphlet insert as well as a set of "Frequently Asked Questions" for the CLOs to use to respond to the queries of the Rustavi tenants. BTC Co. believed that the most effective way of communicating the complexities of risk assessment and pipeline engineering for operational safety would be through numerous briefings with a small number of people rather than larger community meetings. This was to be supported by further efforts to inform and enroll local government officials, such as the Mayor and Governor, in the communication effort, together with GIOC. BTC Co. stated that it has also written formal responses to a number of letters sent by a group of Rustavi residents and copied to various government and international entities.

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<sup>7</sup> The Social and Resettlement Action Plan (SRAP) is a report required from the sponsor on a semi-annual interval, as a requirement of both the Resettlement Action Plan (RAP) and the Environmental and Social Impact Assessment (ESIA).

<sup>8</sup> BTC's Response to IFC's Key Concerns, March 2004.

The contractor (SPJV) indicated that (with GIOC) it had conducted a large community meeting in Rustavi on 16 January 2003 where SPJV introduced itself as the pipeline construction company and information on the BTC project was provided. According to SPJV, a television program on the start of the pipeline construction was aired in Rustavi. SPJV also deployed three CLOs during 2003 (currently it has eight) in connection with the pipeline construction, but could not confirm who had attended the meetings held in Rustavi. CAO notes that the organization of these meetings with the Complainants in Rustavi could not be substantiated; SPJV has argued that such meetings would have been poorly attended anyway, because, according to them, people were only interested in financial compensation and land ownership. Regardless of whether the meetings were or were not organized in Rustavi, SPJV was aware, however, of the critical socioeconomic situation in Rustavi: for example, BTC Co. received 4,000 job applications from Rustavi residents.

SPJV confirmed that a construction team was on site at the Mtkvari (Kura) River Crossing and had provided a briefing on safety issues, employment, and grievance mechanisms two weeks before the start of the construction. A BTC Co. pre-construction briefing was also provided on 22 January 2004 by a CLO, according to GIOC. However, GIOC indicated that the CLOs doubted that SPJV actually carried out the pre-construction notification in Rustavi. On 21 January 2004, at the Rustavi Municipality building of the 19<sup>th</sup> subdistrict, some 40 to 50 residents attended a meeting with the Deputy Head of the Rustavi Municipality, the Deputy Mayor, a GIOC representative and two CLOs. The meeting was devoted to safety and compensation issues stemming from pipeline construction near the 19<sup>th</sup> subdistrict.

#### Performance of the Grievance Mechanism

The grievance mechanism was established to ensure that all complaints from local communities are dealt with appropriately with corrective actions implemented. The mechanism was meant to apply to all complaints received from any pipeline-affected communities. The CLOs are responsible for registering written complaints and coordinating responses to all complaints. Complaints can be submitted in a variety of ways, including complaint boxes situated in some villages. BTC Co. indicated to IFC in March 2004, that once a grievance was received by BTC Co. or SPJV, the process of resolution was dependent on the subject and the complexity of the grievance. In general, the first step of the process involves a visit to the Complainants by the SPJV CLOs to assess the validity of the grievance. If the SPJV CLOs find it invalid, BTC Co., through a regular process of review of SPJV grievance logs, assess the grievance as well. The effort to find a resolution involves coordination by the social team of a number of actors, including field supervisors, site managers, construction managers and, on occasion, independent technical advisors. BTC Co. has commented that, with the increased capacity of BTC Co. CLO team, they would begin to audit on a regular basis the SPJV grievance system in order to confirm whether the Complainant is satisfied that the complaint has had a response.

IFC stressed to BTC Co., in correspondence dated 5 March 2004, that the grievance processes set up by BTC Co., SPJV and even by GIOC were not working in practice, as landowners and villagers remained unsure about where to file complaints. IFC also noted that complaints were not being answered in a timely manner, mostly due to lack of clarity regarding the different CLO roles of BTC Co., SPJV, and GIOC. IFC urged BTC Co. Georgia, therefore, to develop better systems of community liaison from field to management to ensure that issues are followed up in an effective and timely manner.

For its part, BTC Co. believed that the grievance processes and systems set up by BTC Co. and the SPJV were working effectively. Two internal, pre-financial disclosure audits done by the Lenders' Group's environmental consultants, Mott McDonald, found no issues of nonperformance or any level of noncompliance with SPJV's grievance system. This system has

been in place since the start of the project; grievances are reported to BTC Co. monthly and are tracked through monthly reports and meetings. According to Mott McDonald, the SPJV responds to over 90 percent of the complaints within seven days, and they are resolved in less than 30 days. Nevertheless, IFC was concerned about what essentially seemed to be a breakdown in communication systems on the ground as evidenced by numerous difficult interactions with community leaders and landowners.

In December 2003, BTC Co. implemented a land grievance system that is being managed by APLR. People who submitted grievances through dedicated post boxes made comments to the SRAP panel that they did not know if their grievance had been received or not. APLR is now sending a letter to each Complainant to acknowledge the receipt of complaints.

According to the August 2003 SRAP Review, complaints received by SPJV were not being reported in the Internal Monitoring Report. All complaints (land-related and other) need to be collated for management and reporting purposes. The expert panel reviewer did not see the contractor's complaints log. The SRAP Panel urged BTC Co. to verify that the contractor was diligent in recording all complaints and in promptly undertaking corrective actions. The Panel also indicated that, at the time of the expert panel review, APLR was being briefed to manage the grievance collection and recording process. APLR has established a coordinator in each district (five in number) to collect complaints and act as a facilitator to assist with their resolution. The panel therefore recommended that BTC Co. (1) organize a workshop to clarify the grievance processing mechanism among all involved players and (2) undertake random verification of grievance outcomes through contact with Complainants as part of the internal RAP monitoring. Both activities were implemented, as confirmed by the February 2004 SRAP Panel Review.

#### CAO Findings: Performance of Community Liaison Officers and Grievance Mechanism

The CAO notes that many of the corrective measures put in place by BTC Co. since the filing of the complaint with CAO, which in part were a response to IFC's stated concerns, are rooted in clear systemic problems in on-the-ground implementation and auditing, as noted by IFC in a letter to BP on the land acquisition process. . CAO concurs with IFC's analysis that the feeling of nervousness on the part of the Complainants from 18<sup>th</sup> and 19<sup>th</sup> subdistricts of about the pipeline probably is a shortcoming of relying on the CLOs, who were stretched too thin and who were not provided with appropriate technical/engineering briefings. Delays in the land acquisition process meant that CLOs were in fact in place quite late in the process. CAO is of the opinion that there was scope for improvement in the performance of BTC Co.'s land acquisition team in Georgia, as it is aware of a delay between CLOs' contact with communities—starting with the land acquisition process—and the communities receiving technical briefings in response to community concerns.

CAO also notes that recommendations made by the SRAP Panel to seek greater clarity among all stakeholders on the grievance mechanism and the demarcation of roles between SPJV and BTC Co. CLOs—had they been fully implemented—would have ensured more effective communication with pipeline-affected populations in Rustavi. In this regard, CAO believes that IFC's interaction with BTC Co. could have been more forceful at an earlier stage in ensuring that these deficiencies were remedied and that due diligence was effectively exerted by BTC Co. on SPJV's actual capacity and management of community liaison.

#### Summary of CAO Findings: Disclosure-Related Concerns

In conclusion, although there were opportunities for the Complainants to become familiar with the pipeline project as it was presented through the public disclosure campaign, there is no compelling evidence that they knew of the proximity of the pipeline to their dwellings. Although IFC's disclosure requirements were met by BTC Co. in general terms, the lack of evidence of actual consultations specifically with the residents of the Rustavi 18<sup>th</sup> and 19<sup>th</sup> subdistricts, is reason enough for CAO to believe that an initial information deficit has fueled a spiral of rumors, mistrust, and resentment prejudicial to BTC Co.'s and IFC's commitment to positive socioeconomic impacts of the BTC project. Furthermore, the lack of specificity in the level of disclosure, particularly regarding safety standards, pipeline routing, and protection zones, has contributed further to a breakdown in communication between sponsor and Complainants.

## **5. CAO RECOMMENDATIONS**

**5.1 CAO urges BTC Co. (and BP as operator) to continue developing and implementing a carefully targeted information campaign about pipeline safety for the sub-districts 18 and 19 of Rustavi, concurrent with the release of the CAO report.** More broadly, BTC Co. should continue its efforts to ensure that all project stakeholders have access to project information in forms that are both readable and comprehensive, including information on aspects of the project that had elicited pervasive and recurring misunderstandings such as pipeline safety and the 500-meter "consultation zone."

**5.2 The independent pipeline safety consultants were unable to verify a verbal complaint that the BTC pipeline construction uncovered a contaminated site close to the Complainants' residences; CAO requests BTC Co. to pursue and resolve this matter directly with the Complainants.** If there is evidence of a possible contaminated site, special procedures developed by BTC Co. for contaminated sites should be implemented when construction of the SCP is undertaken in approximately 18 months.

**5.3 BTC Co. should continue to monitor and supervise the construction contractor's (SPJV's) community liaison activities through its Community Relations Manager, particularly with regard to SPJV CLOs' organization of community meetings prior to arrival of construction teams, holding regular meetings with communities during construction, and serving as a focus for settling disputes with communities.**

**5.4 CAO urges BTC Co., through existing channels such as the SRAP panel, to proceed promptly with an independent review of the implementation and effectiveness of corrective measures that they have already committed to carrying out in relation to this complaint.** It is anticipated that the review should cover measures to support enhanced accountability such as: (i) providing clarity in defining the respective roles of BTC and SPJV CLOs; (ii) assigning resources within BTC Co.'s management team to clarify and improve coordination between SPJV, the BTC land team, and BTC's social and environmental department; (iii) recruiting a second expatriate social field supervisor to work closely with the CLOs; (iv) ensuring more proactive use of CLOs prior to commencing work on a construction section; and (v) organizing a wider communication and consultation process with key local and national stakeholders, including holding at least one public meeting in each area.

**5.5 The CAO understands that a key issue raised by the Complainants is that, without appropriate and proactive community liaison, access to grievance mechanisms was not an option for them. Nevertheless, BTC Co. should improve the transparency and effectiveness of its grievance mechanisms. The system has represented a bureaucratic approach, which may ensure that written grievances are recorded but does not necessarily ensure**

**that genuine communication is taking place with project-affected people.** The revised mechanism should ensure that BTC Co. develops an informed understanding of the substance and underlying reasons for expressed grievances. This should improve the perception among project-affected people that the BTC Co. grievance mechanism offers a meaningful, workable channel for addressing their complaints.

**5.6** In addition, **BTC Co. should set up an independent appeals process, at least for Georgia.** This appeals process should be invoked if the reinforced grievance mechanism fails to produce a mutually satisfactory settlement. It should involve joint problem solving or preventive processes, including the use of a neutral third party in, for example, facilitation, conciliation, and mediation. One proposal, common in many countries, is for each party to voluntarily agree to a binding outcome based on a panel review. Three arbiters/mediators might be appointed to the panel. One member is selected by each of the two parties. The other two members then select the third jointly.

**5.7** Apartment dwellers of Rustavi's 18<sup>th</sup> and 19<sup>th</sup> subdistricts—unlike rural villagers within two kilometers of the pipeline—have received neither employment opportunities nor Community Investment Program (CIP) assistance from the project. In addition, the residents expressed concerns about a perceived reduction in the resale value of their apartments because of the proximity of the pipeline. **CAO therefore urges BTC Co. to ensure that a second phase of the CIP program—for which US\$3 million is earmarked—be targeted to enhance development opportunities for urban communities living close to the pipeline route, including Rustavi's 18<sup>th</sup> and 19<sup>th</sup> subdistrict Complainants.** BTC Co. has indicated that it would channel this second tranche of the CIP into educational sector programs, including adult education, and prioritize schools in Rustavi. CAO strongly urges BTC Co. to involve Complainants in a participatory approach in deciding how to use CIP to improve the dire socioeconomic situation of the residents of the 18<sup>th</sup> and 19<sup>th</sup> Rustavi subdistricts, including targeting of the micro-credit program at Rustavi residents.

**5.8** It is clear that there has been a breakdown of trust between the Complainants and BTC Co. As a confidence-building measure, CAO stands ready to facilitate a meeting between the Complainants and BTC Co. to go through the concerns raised in the complaint and assist in re-establishing communication lines between Complainants and the project sponsor; to ensure that future requests for information, including on compensation, are timely and answered appropriately through existing project processes; and to assist in the development of an independent, trusted dispute resolution mechanism for the project.



Project sponsor - BTC Co jointly through a special purpose finance company, BTC Finance B.V. borrow from IFC, up to US\$125 million A loan and US\$125 million B loan. The decision was approved in November, 2003.

The BTC pipeline is being sponsored and developed by affiliates of Ameralda Hess (2.36% interests), BP (30.10%), ConocoPhillips (2.50%), Eni (5.00%), INPEX (2.50%), ITOCHU (3.40%), SOCAR (25.00%), Statoil (8.71%), TOTAL (5.00%), TPAO 26.53%, and Unocal (8.90%).

## 2. Background Information

The Environmental permission for the BTC pipeline Georgian part was granted by Ministry of Protection of Environment and Natural Resources of Georgia at 30 November, 2002. Decision was taken based on the Environmental and Social Impact Assessment (ESIA) submitted by Project sponsor to the Ministry of Environment together with additional materials including the exact maps. Nowhere in the ESIA or supplementing documents including the maps or Resettlement Action Plan that was given for public discussions there is no note that pipeline will go so close to one of the sub-districts even in 1 km. for example maps distributed by BTC Co in Summer 2002 (please see attached Annex II) clearly indicates that 29-30 km of pipeline is located in 10-20km far from the last buildings.

However, as it became clear for us in January 2004, the pipeline will go close to sub-district multistory buildings around 180-250 meters (see attached annex III). Pipeline runs on Mtkvari river bank, about 250 meters from the river bed, in high level erosion zone.

## 3. We have been, or are likely to be affected by social or environmental impacts of the project in the following way(s):

- The Georgian legislation as well as the Host Governmental Agreement does not specify how far the pipeline should be from the living houses. However, we fear that the pipeline is too close to our houses, taking into account existent erosion of the surrounding territories, as well as the increased insecurity and political turmoil within the country.
- There is number of cases, around the world, including cases even in USA when pipelines cross very close to houses and number of ruptures and pipeline explosions take place, that even ended with the death of the people. The introduction of pipeline Safety Act by US in 1999 was forced by the tragedy in United States when two boys playing the football passing away because of explosion of oil pipeline.
- Project sponsor everywhere underlines that pipeline would be safe and comply with internationally accepted standards, however, when we ask the concrete ones we have been refused.
- The situation is more exaggerated due to the fact that the parallel to oil pipeline gas pipeline would run.
- Our houses are located close to the River Mtkvari, around 500 meter. The area itself is very sensitive due to the existence of the underground sulfate aggressive waters (around 2 m in deep), locally swamped spots, density of main and distributing channels, naturally slow drainage process of surface and underground waters.
- Taking into account that our houses in poor conditions, there is the doubt that operation of oil pipeline will create the additional danger to buildings [Due to the pipeline vibration during operation]. Itself British Petroleum clearly indicates that 500 meter from pipeline is the security zone, where construction of schools, hospitals and others should be prohibited.

## 4. The following action has been taken by me/us to try to resolve these issues:



h. On 25 February we talked to BTC Co. Community Liaison Officer, Ms. Ana Petriashvili, requiring from her to come and meet with the people on spot. However, her response was that she is spending too much time with people like us, and she knows that people are trying to solve their social problems at the expense of BTC Co. She tried to assure us that pipeline is safe. After we require from her relevant documentation that would prove that pipeline is safe, her response was that it is written in Agreement with Host country Government that pipeline would comply with highest western standards. Regarding our request to provide safety standards, her response was that Agreement with host country Government is enough guarantee and refused to give other documents. One of our concerns was that Baku-Supsa pipeline also has lots of problems, including several leakages, the response of Ms. Petriashvili was that Baku-Supsa pipeline was not constructed by BP, and in a case of BTC everything will be OK. She also assured us that oil pipeline could be very close to residential buildings like in case of village Ktsanisi, where it goes in 15 meters from buildings. She also mentioned that she was ashamed when had to explain Indian experts invited by BTC Co, why there are so many problems in Georgia regarding BTC, while everything went off smoothly in Turkey and Azerbaijan, saying that resistance to pipeline route from different group of people in Georgia is caused by hard social-economical situation within country. It should be underlined that her attitude and conversation was very discourteous and full with foul language; and we have not reached any compromise. Finally she told us that she is on vacation and will ask her colleague to visit us in coming days. Indeed, her colleague, called us and came to the appointed a meeting, but he said that have no enough competence to give qualified answers on our questions and promised to bring necessary documentation to us, but since that time he did not appeared yet.

5. The name of any contact person(s) at IFC or MIGA are:

Ms. Ana Akhalkatsi

6. I/we have had contact with the following other person(s) in attempting to resolve these issues:

- Letter to President of Georgia Mr. Mikheil Saakashvili, 16.02.2004
- Letter to Ms. Nino Burdjanadze, Speaker of the Parliament of Georgia, 05.02.2004
- Letter to Mr. Zurab Jvania, Prime Minister of Georgia, 19.02.2004
- Letter to Mr. Irakli Okruashvili, General Prosecutor, 14.02.2004
- Letter to Mr. Zurab Adeishvili, Minister of Security of Georgia, 19.02.2004
- Letter to Mr. Vano Merabishvili, Secretary of Security Council of Georgia, 16.02.2004
- Letter to Mr. Giorgi Papuashvili, Minister of Justice of Georgia, 19.02.2004
- Letter to Ms. Tamar Lebanidze, Minister of protection of Environment and Natural Resources of Georgia, 19.02.2004
- Letter to Ms. Tamar Sulukhia, Minister of Infrastructure of Georgia, 19.02.2004
- Letter to Mr. Giorgi Chanturia, President of Georgian International Oil Corporation, 19.02.2004
- Letter to Mr. Ed Johnson, BTC oil pipeline project Manager, 19.02.2004
- Letter to IFC representative in Georgia, Ms. Ana Akhalkatsi, 24.02.2004

7. The following are details of policies, guidelines or procedures of IFC or MIGA that have not been complied with:

Policies and procedures violated by Project Sponsor:

1. Procedures for Public disclosure

- 2. IFC operational Policy 4.01 on Environmental assessment
- 3. World Bank Operational Policy on Involuntary Resettlement, OP 4.30
- 4. Procedures for preparation of Resettlement Action Plan

8. I/we would like to see this complaint resolved in the following way:

We require to:

1. The CAO should review the IFC actual process of due diligence investigation, in order to assess whether the IFC properly investigated foregoing issues and whether it took the steps necessary to ensure that this project complied with IFC policies;
2. The CAO should review the environmental and social impacts information the project sponsors has submitted to IFC, and compare it with the information contained in this complaint in order to establish the adequacy and the veracity of environmental and social impacts;
3. The independent expertise of the BTC pipeline impact on the block of flats, where we are living should be conducted;
4. CAO should provide us with guarantees based on independent panel conclusion that BTC oil pipeline construction and operation would not adversely affected our buildings and if it would not be possible, BTC Co. should find out alternative route of the Pipeline in a way that our buildings would be out of 500 meter of security zone;
5. Only in last case and if all above mentioned is not possible, to reserve us, through the adequate compensation or adequate displacement

9. Any other relevant facts to support this complaint are:

Please find attached:

- Video material, presenting state of our living spaces and showing how close the pipeline will pass to our buildings, interviewees with local residents
- Map of the BTC pipeline old route disclosed by BTC Co
- BTC pipeline current route Map

Date: 11. 03.2004

Signature(s):

Thoroughly know English language and carry the responsibility for accuracy of translation.  
 ჯეროვნად ვიცი ინგლისური ენა, მასევე ვარაუდობ თანმიმდევრულ სარგებლობას.

The image shows the official seal of the National Center for Transparency and Anti-Corruption Center of Georgia (NAC). The seal is circular with the acronym 'NAC' in the center and the full name of the organization in both English and Georgian. To the right of the seal is a handwritten signature in black ink.

## Annex 2

### Independent Pipeline Safety Engineering Assessment Report

#### 1. INTRODUCTION

The independent pipeline safety engineers, Mr. Ken Bilston and Mr. Philip Venton, are experienced pipeline engineers, with expertise in design, construction, and operation of major pipeline systems and with particular expertise in the development of technical standards for design, construction, and operation of pipelines.

Neither team member has had previous association with either the BTC or the SCP, and each has approached the complaint assessment on the basis that each complaint is to be assessed on its technical merit.

Neither team member has specific expertise in environmental, political, or social issues associated with the pipeline development and, except for comment made on the basis of experience with pipeline design and construction projects and their risk assessment, have avoided comment on environmental, political, and social issues associated with the complaints.

#### 2. CHRONOLOGY

Pre-June 6	Document gathering and review, including project information from the Environmental and Societal Impact Assessment (ESIA) together with associated review and response documents to the ESIA, documentation obtained from the project Web site, and documents provided by IFC to CAO.
June 6 – 7	Travel to Tbilisi
June 8	Preliminary site inspection and initial meeting with Complainants.
June 9	Visit site to measure the relationship between the pipeline and the apartment buildings.
June 10	Meeting with BTC
June 11	Formal meeting with Complainants, including presentation of preliminary assessment.
June 11-13	Return from Tbilisi
June 15-18	Assessment report preparation.

#### 3. SUMMARY OF KEY FINDINGS

The independent pipeline safety engineers conclude that none of the complaints made formally to CAO, or informally during the June CAO assessment visit identify design or operational conditions that create a risk to the residents of the 18<sup>th</sup> and 19<sup>th</sup> subdistricts of Rustavi that exceed levels set by international standards.

The independent pipeline safety engineers reached this assessment after inspecting the site, meeting with the Complainants, reviewing documentation prepared by the Project (both public and non public documentation), and discussing the concerns with technical representatives of BTC.

In particular, the independent pipeline safety engineers conclude:

- The pipelines (BTC and SCP) are installed at a distance from the residences approximately 5 times greater than the distance that would be required to comply with the most stringent international risk practice, considering the contribution of each pipeline to the total risk exposure.
- The pipeline design and proposed method of operation and management comply with the international standards required in the Host Government Agreement; such standards are at least equal to international best practice.
- The pipeline design for ground conditions in the vicinity of the residences is appropriate to the conditions.
- Neither the BTC nor the SCP pipeline will generate vibrations during operation.
- The 500-meter “security” zone established by the Project for the SCP is a methodology used to control development in the vicinity of the pipeline to ensure that its risk profile is not changed by land-use changes, particularly in relation to “sensitive” development. The “security” (or in some countries *consultation* or *notification*) zone concept represents the best international practice for land development management in the vicinity of transmission pipelines, and its use for the SCP is commended.

The independent pipeline safety engineers were unable to reach a conclusion on a verbal complaint that the BTC pipeline construction uncovered a contaminated site close to the residences. CAO has requested that IFC’s project team pursue and resolve this complaint with BTC Co. If there is evidence of a possible contaminated site, special procedures developed by the project for contaminated sites should be implemented when construction of the SCP is undertaken in approximately 18 months.

The independent pipeline safety engineers consider that each of the complaints arose because the residents were not adequately informed about pipeline issues related to their perception of their safety. The independent pipeline safety engineers consider that an appropriate community information program undertaken by properly trained personnel would have avoided the complaints. It was apparent that serious mistrust has arisen between the Complainants and the project. The independent pipeline safety engineers recommended that the pipeline operators be encouraged to:

- Implement an upgraded information program focused on safety and describing the operational safety provisions for the pipelines, including patrols, operating methodology, and emergency contact provisions; and
- Implement provision of information explaining the controls that are applied to the pipeline right-of-way, including the purpose of the 500-meter security zone.

#### **4. ENGINEERING ASSESSMENT**

The Engineering Assessment is formatted to address in turn each of the eight matters raised formally in the complaint and each of the three matters raised in discussion with the residents. It is supported by a technical summary of the pipeline design, attached as Annex 3.

##### **4.1 Issue I – Pipeline Too Close to Residences**

*Complaint: The pipeline is too close to residential apartments raising concerns of safety to the apartment occupiers because of the close proximity.*

##### Engineering Assessment

The distance between the two pipelines and the apartment blocks of the Complainant residents was measured on-site. At the closest corner, the BTC pipeline is approximately 260 meters from the nearest building, and the SCP is approximately 285 meters.

At the residents' request, the independent pipeline safety engineers visited the site and measured the relative location of the four residential buildings and the pipeline. This was done using a hand-held global positioning system (GPS) instrument with a nominal accuracy of 5 meters in open ground. The measurement was checked at one location using a string line provided by the residents that was 42 meters long. The measurements are shown in Appendix A.

The requirements of the SCP dominate the separation distance, because the design code B31.8 has a count-buildings zone 200 meters each side of the centerline of the gas pipeline. The SCP must be more than 200 meters from the multi-story apartments for the location class selected (Class 3) to be valid. The 285-meter actual distance comfortably meets this requirement. No equivalent spacing requirement exists in B31.4 for the BTC pipeline.

In accordance with the Host Government Agreement, Quantified Risk Assessments (QRAs) were carried out for both the BTC and the SCP. QRAs are required in a small number of jurisdictions; notably Holland, the United Kingdom, and some states of Australia. The QRA methodology calculates a notional contour distance from the centerline of a pipeline at which a defined risk criterion is met.

The commonest criterion adopted in the Individual Fatality Risk (IFR) and a value is usually adopted of an IFR of 1 in a million per year. For both the BTC and the SCP in Location Class 3, the IFR did not reach the 1-in-a-million criterion directly over the pipeline, but for the combined risk, the 1-in-a-million IFR contour was located at approximately 50 meters from the nearer pipeline.

#### Assessment Conclusion:

The 260 to 285 meter distance between the BTC and SCP pipeline right-of-way is substantially larger than would be required either by the international design codes specified in the Host Government Agreements or by the Quantified Risk Analysis requirements in use in the small number of international jurisdictions that mandate separation distances on the basis of risk-based methodologies.

## **4.2 Issue II – History of Pipeline Failure**

*Complaint: There is a history of pipeline failure in the vicinity of people and a history of people being harmed by these failures. This causes great concern to the residents living in close proximity to the pipeline.*

#### Engineering Assessment

History shows that pipelines are a very safe method of transportation, and in fact most of the world's liquid fuels and all the natural gas fuels are transported through pipelines. Pipeline failures have occurred in some countries, and publicity has been given to failures in both the United States and Russia in recent times.

There have been a limited number of pipeline failures in Europe. The most relevant safety history of gas pipelines resides in an incident database managed by the European Gas Pipeline Incident Data Group (EGIG). This group started collecting data in 1982, and the database represents experience from all of the major gas pipeline operators in Europe.

At the end of 1998 (the reporting period referenced), there were 2.09 million kilometer years of pipeline data, and exactly 1,000 incidents reported in the database. The data show that, since 1970, there has been a continuous reduction in incident frequency consistent with improvement in pipeline design, steel and coating quality, and improvement in incident and condition detection systems. The 2001 report states that there were no incidents reported to their database between 1970 and 1998 of pipeline incidents that resulted in injury to the public, inhabitants, or residents close to pipelines.

Although this experience is not necessarily relevant to pipelines operated in the United States or in Georgia it is relevant to pipelines operated by organizations experienced in the standards and procedures used in Europe. BTC Co.'s experience draws extensively on European experience.

The American and Russian experiences are not as good as the European experience. Some pipelines in those countries are quite old and were protected from corrosion by coatings that may have been the best available at that time, but whose working life was around 20 years. It is generally these older pipelines that have failed through corrosion.

The BTC and SCP pipelines have addressed the corrosion risk by—

- Applying a thick three-layer coating system that is strongly bonded to the steel pipe. This coating is suitable for an operating life in excess of 60 years and represents one of the best coating systems currently available worldwide.
- The BTC and SCP pipelines have a cathodic protection system to prevent corrosion at small coating defects that may occur through the life of the pipeline. This is international practice.
- BTC and SCP pipelines will be inspected regularly by an instrument passed through the pipeline (“intelligent pig”) to measure the wall thickness and identify any locations where there is metal loss.

In the United States, the government now requires all pipelines to be inspected by this method because experience shows that this will detect metal loss and allow repair of pipe before it is weakened to the point of failure.

Intentional damage (terrorism) is a possible source of pipeline failure. The independent pipeline safety engineers is not competent to assess the political situation within Georgia or the likelihood of intentional damage to the pipelines in the vicinity of the 18<sup>th</sup> and 19<sup>th</sup> subdistricts.

However:

- The pipeline steel is thick (19 and 21 mm), and a very large explosion would be required to puncture either pipe. The gas pipeline requires a through wall axial defect greater than 400 mm in length and operation at maximum pressure before rupture can be initiated. The energy required to create a defect of this size in this pipe thickness is very large and is unlikely to be capable of being delivered by, for example, a car bomb such as those used in Iraq.
- The economic impact of damage to a pipeline is relatively small, because in most cases the pipeline can be repaired and brought back into operation within 48 hours of an incident's occurring. Terrorists seeking to have an impact on a company or the state economy can achieve much more by attacking facilities that require much longer repair times, such as pump stations. The vicinity of the 18<sup>th</sup> and 19<sup>th</sup> subdistricts is open ground, so that any terrorist activity would be readily visible. It appears unlikely that this vicinity would be a priority location for terrorist acts.

In the vicinity of the 18<sup>th</sup> and 19<sup>th</sup> subdistricts, BTC and SCP will be patrolled daily by an inspector on horseback (six days per week), and by vehicle on the seventh. These patrols will search for evidence of unauthorized or suspicious activity. In some locations additional specific methods of detecting unauthorized disturbance of the soil will be used.

Furthermore, the pipeline operators will engage the community in reporting any suspicious activity or incidents for investigation by the company. The EGIG database reports that approximately 40 percent of incidents are reported by the public. About 22 percent of incidents are detected by company patrols, and about 17 percent of incidents are reported by contractors working on or adjacent to a pipeline. These factors combine to provide an effective process to mitigate the likelihood of external interference to the pipeline.

### Assessment Conclusion

The pipelines are designed and will be operated and maintained to the highest current international standards. These standards will mitigate any risk of pipeline failure from the most common sources of damage (external interference and corrosion).

Terrorism threats may exist in Georgia from time to time throughout the life of the pipeline, and specific procedures will have to be implemented by the company and the government to mitigate these threats at times when the political situation results in these threats being present. The pipelines have considerable capacity to withstand all but the largest terrorism acts.

#### **4.3 Issue III – Explain What Safety Standards Apply to Pipelines**

*Complaint: The residents desire to have an explanation of the safety standards required for pipelines of this nature, and whether the standards used for the BTC are in fact the highest internationally accepted standards.*

### Engineering Assessment

The Host Government Agreements for the BTC and SCP pipelines list the international standards to which the pipelines must be designed, constructed, and operated/maintained.

The following primary technical standards contain the safety requirements:

- BTC Pipeline—ASME B31.4
- SCP Pipeline—ASME B31.8

Although they originate from the United States, these two standards are the de facto international standards.

The Introduction to B31.4 contains the following explanation of the standard:

*The design requirements of this Code are adequate for public safety under conditions usually encountered in piping systems within the scope of this Code, including lines within villages, towns, cities, and industrial areas.*

The Georgian HGA includes additional safety standard requirements, notably the Dutch Standard for transmission pipelines NEN 3560. This standard mandates the QRA methodology and IFR criterion adopted for the project.

### Assessment Conclusion

The standards included in the Host Government Agreement are the most commonly used international standards. Additional safety requirements are included in Georgia.

In relation to the matters that are the subject of the complaints, the engineering assessment concluded that the BTC and SCP pipelines have met and exceeded the requirements of the nominated standards.

#### **4.4 Issue IV – Construction of BTC and SCP in Parallel will Increase Risk**

*Complaint: construction of the BTC pipeline in parallel with the planned SCP gas pipeline will increase the risk to those living in close proximity to the pipelines.*

### Engineering Assessment

The additive risk of the two pipelines was dealt with in the Engineering Assessment under Section 3.1.

### Assessment Conclusion

The additive effect of the two pipelines would impose a separation distance requirement of

approximately 50 meters from the nearer pipeline. The actual distance between the nearer pipeline (BTC) and the nearest corner of any apartment block in the 18<sup>th</sup> and 19<sup>th</sup> subdistricts is approximately 260 meters.

#### **4.5 Issue V - Unstable Ground on Mtkvari River Floodplain**

*Complaint: the Mtkvari River floodplain between the riverbank and the 18<sup>th</sup> and 19<sup>th</sup> subdistrict is unstable with a high water table, has aggressive soil, has a history of riverbank erosion, and is clearly unsuitable for construction of petroleum and gas pipelines.*

##### Engineering Assessment

There is evidence that the BTC design team has taken the nature of the soil in the region into account in the design of the pipeline.

This has included—

- Hydro geological assessment of the river and river banks and their stability
- Identification of the flood plain area
- Geotechnical investigations (boreholes) in the vicinity of the river crossing
- Minor relocation of the pipeline to move it farther from the riverbank to increase the separation in the event of erosion.

The pipeline alignment sheets show design detail that is consistent with good practice in these areas.

CAO provided the independent pipeline safety engineers with a translated copy of a letter written by Professor Zviadadze (who apparently participated in the hydro geological study undertaken for the pipeline) to the chairman of the Rustavi Procedural, Legal Issues and Administrative Rights Protection Commission on 25 September 2003. This letter was provided by the residents in support of their concern about the soil conditions in the Mtkvari river floodplain.

Although the letter identifies a number of conditions that have a potential impact on pipeline integrity over the life of the pipeline, the letter does not raise issues that are unusual for a cross-country pipeline, and certainly not sufficient to restrict the location of the pipeline.

Possible impacts at the site of the stream crossing are mitigated by the construction of the river crossing using a horizontal directional drill, while the potential corrosion impacts along the alluvial soil of the river bank are mitigated by the external coating applied to the pipe and the cathodic protection system. Using a metal loss detection “intelligent” pig to inspect the pipeline will enable the pipeline operator to detect any areas of localized corrosion and to initiate repairs before the corrosion reaches a point where the pipeline leaks

##### Assessment Conclusion

The design team has considered the nature and condition of the soil, having undertaken hydro geological and flooding assessment and made bore holes close to HDD river crossing construction, to obtain design geotechnical information.

The independent pipeline safety engineers consider that the appropriate investigations have been undertaken and that the risk to the pipeline is low. It is possible that in the future the riverbank may erode, and if this happens there is sufficient distance between the pipeline and the river for the erosion to be identified and management initiated to control the problem.

#### **4.6 Issue VI – Vibration During Pipeline Operation Will Impact Building Integrity**

*Complaint: the standard of construction of the residential buildings in the 18<sup>th</sup> and 19<sup>th</sup> subdistricts is not high, and vibration caused by operation of the pipeline(s) (and during construction) has the potential to destabilize the buildings, causing damage.*

##### Engineering Assessment

Neither the BTC nor the SCP pipeline has the potential to generate any vibration during operation.

Construction activities are undertaken using tracked machinery that will generate some vibration as they move along the site—but this is local to the construction site and is dissipated by the ground within 25 to 50 meters of the site.

If blasting was required for trench excavation, it may have the potential to impact the buildings; however the soil in the vicinity of the 18<sup>th</sup> and 19<sup>th</sup> subdistricts is alluvium that is readily excavated, and there will be no blasting in this area.

##### Assessment Conclusion

There is no danger that construction related vibration would cause structural damage, irrespective of the condition of the buildings.

#### **4.7 Issue VII – The 500-Meter Security Zone Suggests That It Is Unsafe to Have Apartment Buildings Within This Zone**

*Complaint: the BTC/SCP project has nominated a 500-meter “security” zone along each side of the pipeline. The apartment buildings in the 18<sup>th</sup> and 19<sup>th</sup> subdistricts are in this zone (being 250 to 325 meters from the pipeline). The declaration of this “security” zone raises concerns of the pipeline safety to residents living within that zone.*

##### Engineering Assessment

This zone was recommended following a quantitative risk assessment of the SCP gas pipeline, was adopted as part of the management of that pipeline, and has been incorporated into the requirements of the BTC.

The “security” zone is created to require the government to notify the pipeline operator of any development in the vicinity of the pipeline that could introduce a change to its risk profile. Upon receiving the notification the pipeline operator is required to assess the potential for the development to impact on the risk profile of the pipeline, and advise the Government planning department as to whether the development should be permitted.

The following developments are controlled in this zone:

- “Sensitive” developments: sensitive developments are developments such as hospitals, retirement homes, schools, child care centers, etc., where, because of the condition of people in these developments, their ability to escape an incident resulting from a gas pipeline failure is restricted.
- High-density residential development.

There is no restriction imposed on individual land users or on development of isolated residences in the vicinity of the pipeline.

Reasons for the security zone:

1. The design standard for the gas pipeline (ASME B 31.8) has a mandatory requirement for design of the pipeline in locations of high-density population and in the

vicinity of “sensitive” development. This mandatory requirement is that the pipe wall thickness be determined using a design factor ( $F_d$ ) of 0.50 (Class C – Annex 4, Section 1.3).

2. If, during the operating life of the pipeline, “sensitive” development occurs close to the pipeline, the design standard (ASME B31.8) requires that the operating pressure in that location be reduced to a level where the thickness is equivalent to Class 3 requirements at the reduced operating pressure or that the pipe thickness is increased in the location.

3. Any reduction in pressure will reduce the capacity of the pipeline, which is clearly not acceptable.

4. The government is responsible for permitting all development and, under the Host Government Agreement with the pipeline developers, has an obligation to maintain conditions so that there is no interference with pipeline operations.

It is becoming common practice for such zones to be declared around gas pipelines in other countries to provide controls for development in the vicinity of the pipeline that could affect the pipeline risk profile and require action (probably very costly) by the pipeline operator. In the United Kingdom, the zone is called a “consultation” zone, and in Australia it is called a “notification” zone.

In all cases, the zones are an instrument for control of development in the vicinity of gas pipelines to control risk where there is development in the vicinity of the pipeline.

Although the Project has published details of restrictions that apply to land use in the vicinity of the pipeline (over it and at increasing distances from the pipeline), it is almost certain that the reasons for the “security” zone have not been made available to the residents of the 18<sup>th</sup> and 19<sup>th</sup> subdistricts in a clear manner, particularly in the GLAC. Because the issue is relatively complex, it is not surprising that residents have misunderstood the intent of the 500-meter zone, particularly given its title of “security” zone.

#### Assessment Conclusion

The Project (SCP) has acted responsibly in defining this 500-meter zone to provide a method for the government to control development within close proximity of the pipelines that could have an impact on the pipeline security and the pipeline capacity.

This is current “best practice” for managing land use and development in the vicinity of gas pipelines. The SCP design in the vicinity of the 18<sup>th</sup> and 19<sup>th</sup> subdistricts provides pipe with a design factor for Class C locations, recognizing the residential population in this location.

The 500-meter zone is not required for managing land use and development in the vicinity of the BTC pipeline because its design standard (ASME B31.4) does not have any requirements relating to the construction of oil pipelines in close proximity to buildings.

The Project should be encouraged to provide information to the residents on the restrictions that apply to land use in the vicinity of the pipelines to clarify the purpose of the various controls applied.

#### **4.8 Issue VII – Baku-Supsa Pipeline Has Leakage History – Validates Concerns**

*Complaint: the Baku-Supsa pipeline<sup>9</sup> constructed some years ago, which will share its easement with the BTC and SCP pipelines, has a history of oil leaks. This indicates to the residents that there is a likelihood that new pipelines will also leak, potentially creating harm to the residents.*

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<sup>9</sup> An oil pipeline, running from Baku (Azerbaijan) to Supsa (Georgia), on the Black Sea, built during the Soviet era.

## Engineering Assessment

The Baku-Supsa Pipeline was constructed by the former Soviet Union. The independent pipeline safety engineers were not able to assess the detail of the design or operating history of the pipeline, other than to confirm that the residents' information is correct in relation to a past history of leaks.

BTC Co. took control of the pipeline as part of the South Caspian development project. BTC Co. undertook an investigation to determine the integrity of the pipeline and its suitability for continued operation.

This investigation determined that the pipeline was in very poor condition. It was necessary to replace the whole of the pipeline through Azerbaijan and a substantial length of the pipeline through Georgia to bring the pipeline to a standard where it is suitable for continued operation, with a low risk of future leakage.

BTC Co. engineers advised the independent pipeline safety engineers that the pipeline is being operated and maintained to similar standards as required for the BTC pipeline.

## Assessment Conclusion

The Baku-Supsa history shows that pipelines that are constructed and maintained to inadequate standards are likely to suffer corrosion damage with time and will leak.

However, the operating histories of well-constructed and maintained pipelines (oil and gas) show that proper external coating and corrosion control systems will protect the pipeline from metal loss from corrosion and from consequent leakage.

The BTC/SCP pipelines have both a high quality external coating and a proper cathodic protection corrosion control system to protect the pipeline from external corrosion. In addition, there is a commitment from BTC to undertake a regular program of metal loss inspection using "intelligent" pig tools to identify any site of active corrosion. Intelligent pigging ensures that corrosion sites and locations of metal loss from external damage are identified sufficiently early for work to be undertaken to rectify the damage before pipe leakage or failure can occur.

The Baku-Supsa pipeline experience does highlight the need for the operating company to maintain a commitment to an integrity management process throughout the life of the pipeline.

There is a potential for the pipeline operator to neglect this program as the pipeline approaches the end of its useful life (as the oil reservoirs are depleted), and vigilance is required by government agencies to ensure that the pipeline operator maintains this program throughout the entire operating life of the project. This is particularly important if the pipeline ownership changes in this period.

The experience of the Baku-Supsa pipeline is not a valid basis for concerns about the safety of the BTC or SCP pipelines.

### **4.9 Verbal Issue I – Proximity of Isolation Valves to Residences**

*Complaint: residents expressed concern that during construction activities BTC decided to locate an isolation valve in the vicinity of the residences in the 18<sup>th</sup> and 19<sup>th</sup> subdistricts, potentially exposing residents to injury by emissions from the valve or possibly danger resulting from malicious damage to the valve installation.*

## Engineering Assessment

An investigation of the engineering design of the pipeline, including document number 24630-010-U7R-0000-01000 Project Register Facility and Above Ground Installation Locations and alignment sheets for both the BTC and SCP, determined that there are no isolation valves on either pipeline in the immediate vicinity of the 18<sup>th</sup> and 19<sup>th</sup> subdistricts. The following table is extracted from the above-mentioned document showing the location in the Georgian section of the pipeline of the isolation valves on each pipeline.

KP Route 11 3D Chainage		AGI/FACILITY	
BTC	SCP	BTC	SCP
27.573	-	BALL valve	-
34.810	-	CHECK valve	-
51.427	51.469	BALL valve	BALL valve

The 18<sup>th</sup> and 19<sup>th</sup> subdistricts lie between KP29.56 (bend BG-054) and KP 31.3 (bend BG-056) on the BTC.

Alignment sheets provided by BTC confirmed that the pipeline design contains the nominated valves at the locations nominated in the table.

It can be seen that the valves are 2 to 3 km to the east of the residential area (upstream) for both BTC and SCP, respectively, and 3.5 km and 20 km to the west of the residential area (downstream) for the BTC and BTC/SCP.

There is no possibility of residents in the 18<sup>th</sup> and 19<sup>th</sup> subdistricts being adversely affected by the presence or operation of valves at any location.

If it should be necessary to de-pressurize a section of the SCP through vents associated with the isolation valve at KP 27.57, the residents will be exposed to noise emitted by the gas release. Although the noise will be disturbing and unsettling, it will not have a safety or a physical impact on the residents. It should be noted that pipeline depressurization is a very rare event in an operating gas pipeline and is occasioned to facilitate major repair of the pipeline or a modification.

Should the oil pipeline require isolation and depressurization, there will be no measurable noise or other impact at any residence.

#### Assessment Conclusion

The only potential impact to the 18<sup>th</sup> and 19<sup>th</sup> subdistrict residents from the nearest SCP valve being opened (in the rare case that de-pressurization of the SCP pipeline is necessary) would be noise emitted by the gas release.

#### **4.10 Verbal Issue II – Contaminated Site Uncovered During Construction**

*Complaint: during construction of the pipeline in the vicinity of the 18<sup>th</sup> and 19<sup>th</sup> subdistricts, residents observed a pungent smell that was considered to be associated with a livestock burial pit constructed in earlier times to hold livestock that perished or were killed as a consequence of an anthrax outbreak.*

Residents are concerned that if a burial site were uncovered and not properly treated, there would be a risk that anthrax will persist in the area, with a potential for an outbreak to occur sometime in the future.

#### Engineering Assessment

Although this public health concern was not within the brief of the Engineering Assessment, the technical advisors requested advice from BTC on this matter. BTC advised as follows:

*Two potential anthrax burial sites were identified in the vicinity of Rustavi and the Mtkvari (Kura) River. Both these sites are outside the right-of-way and adjacent to the horizontal directional*

drilling (HDD) rig site. These have been fenced off and warning signs erected. No other sites have been identified or found during construction and trenching activities.

The technical advisers sought to obtain further information but were unsuccessful.

#### Assessment Conclusion

This report does not reach any conclusion on this complaint, both on the grounds that it is not within the brief of the Engineering Assessment and on the grounds that insufficient evidence was available to progress the matter.

#### **4.11 Verbal Issue III – Concern of Radiation Emitted by Project GPS and GIS Applications**

*Complaint: residents expressed a concern about reports in publicly disclosed documents that the operations phase will use GPS (Global Positioning Systems) and GIS (Geographical Information Systems), which may emit radiation, potentially causing injury to residents.*

#### Engineering Assessment

GPS is a worldwide navigation and survey system based on a system of geostationary satellites positioned above the Earth. Each satellite broadcasts its position by a low powered radio transmitter. GPS receiving units receive data from three or more satellites and compute the position of the receiver—typically with an accuracy of less than 10 meters. The GPS receivers are receivers and do not emit radiation. The signals received from the satellite system are typically lower powered than those generated by mobile telephones, which are almost universally used in Georgia.

GIS is a computer-based spatial mapping system that displays information on the pipeline, land and property, and any associated information capable of being recorded on a database or an image. GIS systems do not emit any radiation.

#### Assessment Conclusion

GPS receivers do not emit radiation, and the satellite-generated signals they receive are typically lower-powered than those generated by mobile telephones. GIS systems are computer software systems, and do not emit any radiation.

#### **4.12 Verbal Issue IV – The Pipeline Route Was Changed Without Advising Residents**

*Complaint: the residents understood that the pipeline route was originally selected to pass close to the township of Gardabani. The residents were unaware that the route had been changed to pass north of Rustavi and close their residences. In fact, the residents did not appreciate that the pipeline was in this location until commencement of construction. The residents implied that the pipeline route should be relocated. They had not anticipated safety concerns until they learned about the pipeline re-routing.*

#### Engineering Assessment

The independent pipeline safety engineers reviewed the documentation associated with the ESIA and also discussed the route selection with the BTC staff.

The route selection considered three alternatives for the BTC and SCP pipelines in the vicinity of Tbilisi and Rustavi. The following alternatives were considered along a corridor nominally 10 km wide:

1. A route following the Baku-Supsa pipeline for its length, passing north of Tbilisi. An investigation of this route determined that it passes through unstable land with a high potential for landslip. This investigation concluded that construction of the new pipelines along this route would introduce an unacceptable risk to the pipelines, as well as unacceptable environmental risk. As a result, this route was discarded.

2. A route crossing the Mtkvari River to the south of Rustavi near the township of Gardabani (as mentioned by the residents). The government advised BTC / SCP that this route would pass through an area set aside for military purposes, and permission to consider this alternative was refused.
3. A route passing between Rustavi and Tbilisi that is very close to the final alignment of the pipeline.

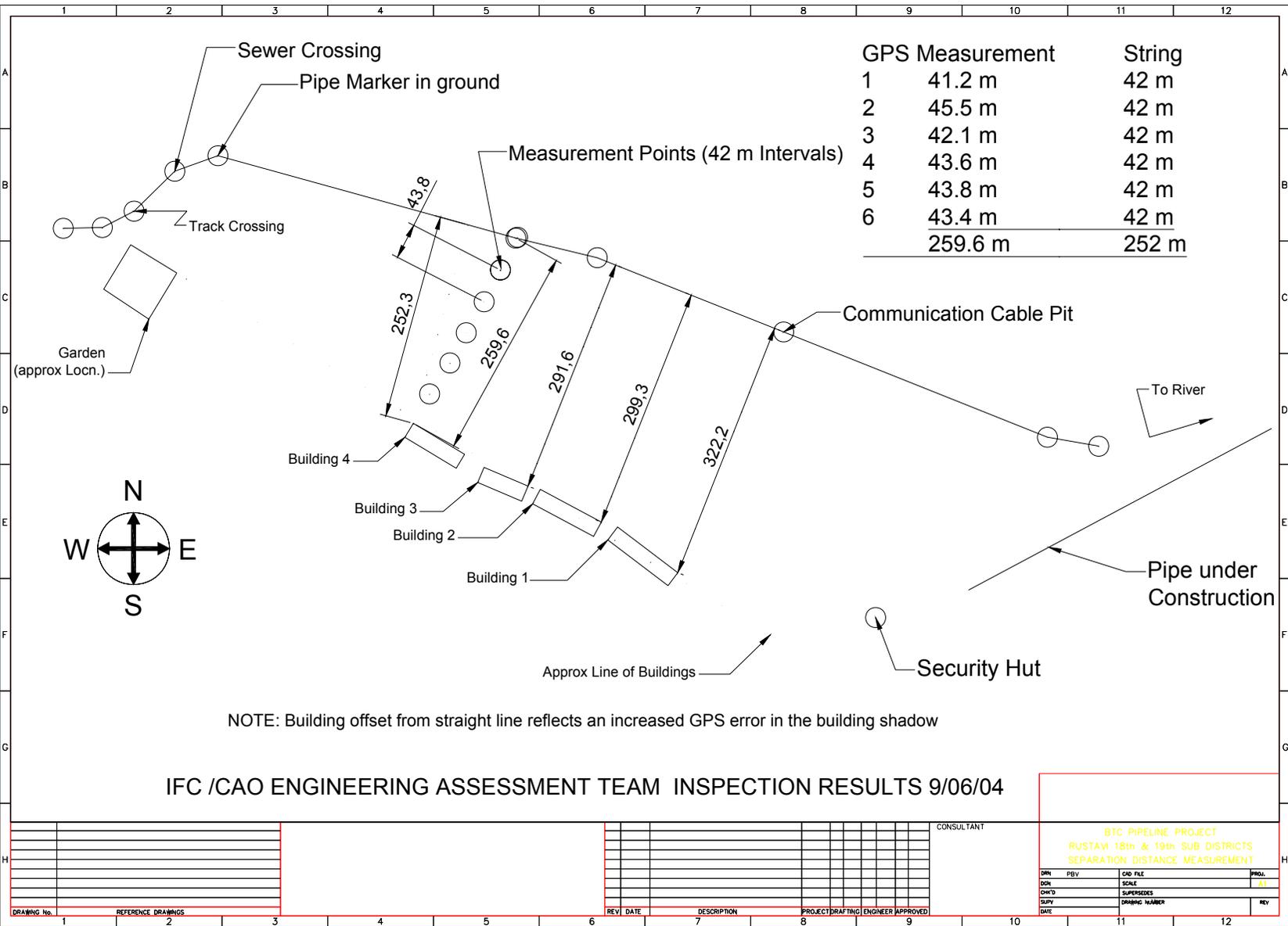
The selected route corridor was then subjected to detailed investigation, and the route refined allowing the 10 km corridor to be narrowed to 500-meters width for detailed analysis prior to submission of the final route to the government of Georgia in accordance with the Host Government Agreement. Upon receipt of government of Georgia approval of the route, the 500-meter wide Preferred Route Corridor was the basis of the public ESIA, and the ESIA presented only route 3. The route identified in the ESIA was the 500-meter Preferred Route Corridor approved by the government of Georgia and stamped by all relevant stakeholders prior to the ESIA. This route was included in the ESIA (May 2002), was displayed on maps in Rustavi, and was on display at the public meeting held in Rustavi in July 2002.

BTC provided the independent pipeline safety engineers with a drawing (AGT002-2000-GI-GRM-03096-SHT001) that shows the overall pipeline routes considered through the area and a drawing (AGT002-2000-GI-GRM-03063-SHT001) that shows the development of the route in the area of the 18<sup>th</sup> and 19<sup>th</sup> subdistricts.

Drawing AGT002-2000-GI-GRM-03063-SHT001 shows the centerline of the original 10 km wide corridor, the centerline of the 500-meter Preferred Route Corridor presented in the ESIA, and the centreline of the 44-meter wide right-of-way along which the BTC pipeline was constructed.

## *Appendix A*

### **Site Measurements**



## Annex 3

### Pipeline Design

#### 1.1 General

The project being developed by BTC Co. in the vicinity of Rustavi and Tbilisi contains two pipelines constructed in parallel:

- A 46” outside diameter crude oil pipeline designed to ASME B31.4 (Pipeline Transportation Systems for Liquid Hydrocarbons and other Liquids).
- A 42” outside diameter gas pipeline designed to ASME B31.8 (Gas Transmission and Distribution Piping Systems).

Each pipeline will transport hydrocarbon fluids from production and treatment systems at Baku (Azerbaijan) to a port at Ceyhan (Turkey), in the case of the oil pipeline (BTC), and to a gas pipeline transmission system in Turkey (SCP).

The pipelines are to be constructed in parallel on a common right-of-way with a normal separation between the pipelines of 28 meters. At sensitive and restricted locations, the separation between the pipelines is reduced.

#### 1.2 BTC Oil Pipeline Design

The BTC oil pipeline in Georgia is 46” (1168 mm) outside diameter. This diameter was selected to reduce friction losses sufficiently to achieve the design capacity using only two pumping stations in Georgia. This decision was made partly because of the topography and partly because the pipeline runs through sensitive environmental locations in the mountainous areas west of Tbilisi.

The design pressure of the pipeline varies with the internal pressure along its length.

In a liquid pipeline, the pressure reduces at a predictable rate with the distance from the pumping station along a sloping line known as the hydraulic gradient line. When this is plotted on a graph with the pipeline elevation, the internal pressure in the pipeline is the difference between the hydraulic gradient line and the pipeline elevation.

Because of this, it is usual for the thickness of oil pipelines to be varied along the pipeline length as required by the internal pressure.

In the region of the complaint, the pipeline design pressure is 117 bar (11.7 MPa).

The pipeline is constructed from steel complying with API Specification 5L Grade X70 – PSL2. This material has a specified minimum yield strength of 70,000 psi (482 MPa).

The required wall thickness (from ASME B31.4) is calculated as follows:

$$t = \frac{PD_o}{2SF_d}$$

Where: t = Wall thickness (mm)

P = Design pressure (11.7 MPa)

S = Specified Minimum Yield Strength of Steel (482MPa)

F<sub>d</sub> = Design Factor (safety factor) (0.72)

The required thickness from the above calculation is 19.7 mm.

The project alignment sheets (410088-95-L-PL-AL Sheets 530 to 532) in the region of the complaint show that the pipe wall thickness is 20.4 mm. This thickness is adequate for an internal pressure of 12.1 MPa, providing a small additional margin of safety.

The BTC pipeline in the area of concern is installed at a minimum depth of cover of 1.0 meter, with local deepening to 1.5 m cover in locations where the pipeline crosses tracks, and deeper where required to pass beneath sewer mains to the west of the buildings owned by the Complainants.

In the region of the 18<sup>th</sup> and 19<sup>th</sup> subdistricts (KP30), the BTC pipeline has an actuated isolation valve at KP27.6 (on the east side of the Mtkvari River, and not visible from the buildings), and there is a non-return valve installed KP34.8 on the western side of the Tbilisi-Rustavi highway. The next downstream-actuated isolation valve is co-located with a similar valve on the SCP at KP51.5.

The BTC pipeline is externally coated with a three-layer coating system consisting of a fusion bonded epoxy corrosion coating layer, a co-polymer adhesive layer, and a 3 mm thick medium density thick mechanical protection coating layer. The welded joints are coated with a spray applied epoxy-urethane coating (SPCC 2888).

The pipeline is internally lined with an epoxy paint.

### **1.3 SCP Gas Pipeline Design**

The SCP gas pipeline has the following characteristics:

- Outside Diameter 42"
- Design Pressure 10 MPa (100 bar)

Gas pipeline design uses the formula shown in Section 1.2 to calculate the wall thickness. The design standard (ASME B31.8) requires the use of more conservative design factors in locations where the building number and type in a zone 200 meters on either side of the pipeline (total width = 0.25 mile), and 1,600 meters (1 mile) long represent increasing population densities. The design factors ( $F_d$ ) are—

- 0.72 (Class 1 - rural areas - occasional buildings; not more than 10),
- 0.60 (Class 2 - 11 - 46 buildings),
- 0.50 (Class 3 - more than 46 buildings; suburban areas), and
- 0.40 (Class 4 - multistorey buildings of 4 or more floors).

The SCP route has been selected so that there are no locations that require pipe with a design factor of 0.4. Along the pipeline length, the SCP pipeline has adopted Location Class 3 wherever there is considered to be a future potential for residential development near the pipeline—a conservative approach.

The calculated thickness corresponding to the three design factors are 15.4 mm, 18.5 mm, and 22.1 mm.

In the vicinity of the 18<sup>th</sup> and 19<sup>th</sup> subdistricts, the buildings are beyond the 200-meter counting zone, and the pipe could strictly be designed with a wall thickness of 15.4 mm. In consideration of the possibility that in the future the area between the pipeline and the apartment blocks of the 18<sup>th</sup> and 19<sup>th</sup> subdistricts may be subjected to further

residential development, BTC Co. has decided to construct the pipeline with the thickest of the three thicknesses used on the project (22 mm) in this area, providing a more conservative design than necessary.

In the region of the 18<sup>th</sup> and 19<sup>th</sup> subdistricts (KP30), the SCP pipeline has an actuated isolation valve at KP27.6 (on the east side of the Mtkvari River, remote from and not visible from the buildings). The next isolation valve downstream is at KP51.5.

#### **1.4 Other Design and Operating Measures**

The SCP external and internal coating and joint coating is the same material as that used on the BTC.

The corrosion coating on both the SCP and the BTC pipelines is supported by an impressed current cathodic protection system to ensure that corrosion does not occur at coating defects that may be created during construction or throughout the operating life of the project.

The pipeline operators have committed to an ongoing integrity maintenance process that includes:

- Regular metal loss inspection by intelligent pigs (with increased frequency at locations of high environmental consequence).
- Daily horseback patrols (six days each week), supplemented by vehicle and aerial inspections.
- Real time model-based leak detection system (BTC pipeline).
- Tight control of activities in the immediate vicinity of either pipeline. Control is progressively relaxed with increasing distance from either pipeline.
- A 500-meter “security” notification zone on either side of the pipeline within which the pipeline operator must be consulted prior to development approval.

These are in addition to the operating and maintenance procedures typically expected for major hydrocarbon pipeline systems.

## Annex 4

### Terms of Reference, Independent Pipeline Safety Engineers

BTC – GEORGIA / RUSTAVI COMPLAINT ASSESSMENT VISIT, JUNE 2004

The Office of the Compliance Advisor/Ombudsman (CAO) for the International Finance Corporation (IFC) and the Multilateral Investment Guarantee Agency (MIGA) is an independent office, reporting directly to the President of the World Bank Group, mandated

- To assist IFC and MIGA, through a flexible, problem-solving approach, to address complaints of people affected by projects with a view to enhancing the social and environmental outcomes of projects in which these institutions play a role (Ombudsman role);
- To provide independent advice to the President and senior IFC/MIGA management on trends, issues and policy concerns (Advisory role);
- To oversee audits of IFC's and MIGA's social and environmental performance, both on systemic issues and in relation to sensitive projects (Compliance role).

#### BACKGROUND

On 15 March 2004 CAO received a complaint from the residents of the 18<sup>th</sup> and 19<sup>th</sup> subdistrict of Rustavi, Georgia, regarding the Baku-Tbilisi-Ceyhan oil pipeline project. The complaint, following technical appraisal mission to Rustavi, was accepted on 14 April 2004.

The complaint relates to the following concerns:

- 1) Lack of effective disclosure and consultation regarding actual pipeline routing and safety issues;
- 2) Safety of the pipeline route going 180 to 250 meters from the buildings and the danger posed to the buildings in view of the soil erosion, current underground conditions, and increased political insecurity;
- 3) Lack of legal specification on safety distance between the pipeline and a housing complex either in the Georgian national law or internationally accepted standards;
- 4) Lack of transparency and responsiveness on the part of the project sponsors regarding requests for evidence of pipeline safety and compliance with internationally accepted standards.

In its assessment, the CAO intends to examine the role of IFC vis-à-vis the sponsors with regard to each of the above-mentioned issues, including noncompliance with IFC environmental and social policies, guidelines, and procedures, where applicable.

#### OBJECTIVES

To assist the CAO in meeting its mandate and provide independent technical expertise, two pipeline safety-engineering consultants are required:

- (a) to scope out the nature of the technical issue at stake regarding safety distance between pipeline and buildings in general—including environmental risk assessment—as it was initially planned and as it currently stands, in terms of recognized industry codes, practices, and standards, or generally accepted standards, which refer to practices and methods engaged in or approved by a significant portion of the pipeline industry that, in the exercise of reasonable judgment in light of the facts known or that reasonably should have been known, would have been expected to be adhered in a manner consistent with applicable laws and codes, reliability, safety, environmental protection, economy, and expedition;
- (b) to perform desk review of relevant IFC and BTC Co.'s documents and conduct on-site interviews;
- (c) to assess BTC Co.'s effectiveness in communicating to affected people the engineering of the pipeline for operations safety and risk assessment;
- (d) to provide CAO with recommendation on the suitability of further technical risk assessment study and/or community relations activities;
- (e) to perform other relevant tasks as required.

### **PROFILE OF CONSULTANTS**

The consultants should have at minimum a Bachelor's degree in engineering in relevant fields and demonstrate (1) substantive experience in pipeline safety and/or pipeline risk assessment (at least 15 years), including cross-border gas and oil pipelines in developing countries; (2) ability to evaluate the adequacy of safety systems and compliance safety legislation with generally accepted engineering practice regarding crude oil pipeline safety and risk assessment; (3) readiness to perform site assessment with CAO Assessment visit at agreed date; (4) ability to perform as a member of multidisciplinary team; and as a plus (5) knowledge of WB/IFC's policies, procedures and guidelines would be very helpful. Consultants should not have worked for BP or any other BTC Co. members, including IFC, in the last three years, either on BTC or other projects.

### **WORK SCHEDULE AND TIMELINE**

Under the guidance and supervision of the CAO's specialist ombudsman, the consultants will take part in the desk review as well as the field assessment visit that is slated to travel to Georgia/Rustavi on 7-11 June 2004 and conduct site interviews with Complainants, BTC Co./ P, GIOC, local and national authorities, nongovernmental organizations, and any other interested parties. Consultants will provide a written contribution to the CAO Assessment Report by 18 June 2004.

## Annex 5

### Visit Participants

#### ***Appraisal Visit, 1 – 7 April 2004***

Jacques Roussellier, Specialist, CAO  
Sara Gann, Research Assistant, CAO

#### ***First Assessment Visit, 18 – 21 May 2004***

Jacques Roussellier, Specialist, CAO  
Sara Gann, Research Assistant, CAO

#### ***Second Assessment Visit, 8 – 11 June 2004***

Meg Taylor, Compliance Advisor/Ombudsman, CAO  
Jacques Roussellier, Specialist, CAO  
Amar Inamdar, Consultant (*joining CAO as Senior Specialist in September, 2004*)  
Ken Bilston, Independent Pipeline Safety Engineering Consultant  
Philip Venton, Independent Pipeline Safety Engineering Consultant

## Annex 6

### Complaint Handling Process Details

#### 1. Appraisal Visit (1 - 7 April 2004)

Appraisal is the process whereby the CAO determines whether a complaint should be accepted, prior to considering the issues raised in any detail. CAO staff visited Georgia from 1-7 April 2004, to appraise the Rustavi–BTC Complaint. The main purpose was to assure CAO of the authenticity and legitimacy of the complaint, i.e. that the complaint met CAO's criteria for acceptance. These require that the complaint be filed by (or on behalf of) people negatively affected (or likely to be affected) by an IFC project, in this case the Baku-Tbilisi-Ceyhan (BTC) pipeline.

On 2 April 2004, CAO staff met with Complainants from subdistricts 18 and 19, in Rustavi. Staff spent the day in one of the Complainant representative's homes, checking signatures to make sure that residents had actually signed the complaint, and checking that the Complainants were aware of—and agreed freely with—the issues raised in the complaint.

As several hundred people had signed the complaint, and in order to ascertain that the signatures were genuine, a sample of around 25 to 30 percent of the signatures was checked, by speaking to Complainants, verifying that their names were listed on the complaint and checking their identification cards or passports.

There was some discrepancy between the copy of the faxed complaint that CAO had received and the Complainants' original copy. It appeared that some of the pages listing Complainants from the 19<sup>th</sup> subdistrict, many of whom appeared before CAO staff in person to show their IDs on 2 April had mistakenly not been faxed to the CAO. However, their identity was verified based on notarized documents signed by residents of subdistrict 19 authorizing Mr. Merabi Vacheishvili and Mrs. Eleonora Digmelashvili to lodge the complaint with CAO on their behalf.

The result of meeting a selection of the Complainants, and the appraisal of signatures, was that all the Complainants were found by CAO to be legitimate. Representatives of the Rustavi residents association for subdistricts 18 and 19 who filed the complaint, including Eleonora Digmelashvili and Merabi Vacheishvili, confirmed that they had accepted offers of technical and translation assistance from members of the Georgian nongovernmental organizations (NGOs) Green Alternative and Young Lawyers' Association. Representatives of the NGOs did, however, emphasize that the genesis of the complaint was from the Rustavi residents themselves.

On the basis of the outcome of the meeting with the Rustavi Complainants, CAO accepted the Rustavi Complaint on 14 April 2004 and proceeded on to the next step, complaint assessment.

#### 2. Assessment (18 - 21 May 2004 / 8 – 11 June 2004)

Assessment is the process whereby a preliminary investigation of the complaint allegations is undertaken, and decisions are made on what further action (if any) is required.

The CAO performed a desk review of BTC project documents from mid-March to mid-May 2004, and met with the IFC BTC project team on 10 May 2004. CAO was given contact information

by IFC for key project people from BTC Co., BP and GIOC in Tbilisi, who were contacted prior to the CAO mission visiting Georgia. CAO staff visited Georgia in May and June 2004, in support of the Rustavi Complaint assessment.

BP informed CAO on 10 May 2004 that its key staff would be out of the country during the week of the planned assessment visit in May but that they would be available for meetings in Tbilisi in early June. A second field assessment visit was then scheduled for June to interview the BTC Co. operator (BP) and other related parties (GIOC and local authorities).

CAO staff visited Rustavi on 18 May 2004. Accompanied by the Complainants' main representatives (an informal "steering committee") CAO staff visited the pipeline construction site. Complainant representatives were asked questions in order to ascertain what communication and project-related disclosures had taken place between them and BP, BTC Co., and GIOC, and to establish a timeline of the actions taken. The Complainants also elaborated the main issues relating to pipeline safety.

Accompanied by Complainants' representatives, CAO met on 19 May 2004 with the Green Alternative and the Young Lawyers Association, NGOs who have been providing technical help to the Rustavi Complainants. Green Alternative indicated that it had become involved in this Complaint after alleged police action on 9 January 2004 against a peaceful demonstration at the pipeline construction site adjacent to subdistrict 19 in Rustavi. Green Alternative argued that the responses that Complainants received through the BTC project grievance mechanism were inadequate, and it recommended that the Rustavi residents lodge a complaint with the CAO.

It was important for the legitimacy of the Complainant steering committee members to show the other Complainants that the effort and monetary contributions expended filing the complaint with the CAO had not been fruitless. Consequently, on 20 May, CAO staff held two community meetings in subdistricts 18 and 19. Meetings were well attended and took place in a constructive, yet intense atmosphere. Questions were fielded from Complainants, mostly about guarantees of safety of the pipeline from vibration, oil spills, soil strength, standards for pipes used to transport crude oil, and the radiation threat of GPS sensors to be placed along pipeline route. As many of the Complainants' questions were technical in nature, residents were informed that CAO had hired two independent pipeline safety engineers who would be visiting Georgia in early June 2004, as part of the second assessment visit, and that these experts would be available to answer their technical inquiries.

CAO staff and independent pipeline safety consultants visited Georgia 8–11 June 2004, to complete the assessment process. The team met with local authorities and BTC Co. representatives, and held a further meeting with the Complainants and Green Alternative. On 11th June 2004 the CAO held a debriefing meeting in Tbilisi with Complainants, who were presented with the preliminary assessment by the independent pipeline safety consultants.



## Annex 7 – Complaint Issue Matrix

Issue Raised by Complainant	Technical Assessment	Recommendations on how to proceed
<p>Issue I. The pipeline is too close to residential apartments, raising concerns of safety to the apartment dwellers.</p>	<p>The actual distances between the BTC pipeline and the nearest apartment building is 260 meters, and between the SCP pipeline and the nearest building 285 meters. This is substantially larger than would be required either by the international design codes specified in the Host Government Agreements or by the Quantified Risk Analysis requirements in use in the small number of international jurisdictions that mandate separation distances on the basis of risk-based methodologies.</p>	<p>Independent pipeline safety engineers have determined that there is no safety-related concern. Therefore no action required.</p>
<p>Issue II. There is a history of pipeline failure in the vicinity of people, and a history of people being harmed by these failures.</p>	<p>The BTC and SCP pipelines are designed and will be operated and maintained to the highest current international standards. These standards will mitigate any risk of pipeline failure from the most common sources of damage, external interference and corrosion. Pipeline steel is thick and bonded with three-layer coating system; during operations, will be protected by cathodic system to prevent corrosion, and regularly inspected internally by intelligent pigging.</p>	<p>Independent pipeline safety engineers have determined that there is no safety-related concern. Therefore no action required.</p>
<p>Issue III. The residents desire to have an explanation of the Safety Standards required for pipelines of this nature.</p>	<p>Standards included in Host Government Agreement are most commonly used international standards for pipelines. American Society of Mechanical Engineers (ASME) B31.4 and ASME B31.8, for BTC and SCP, respectively.</p>	<p>Independent pipeline safety engineers have determined that there is no safety-related concern. Therefore no action required.</p>
<p>Issue IV. Construction of the BTC pipeline in parallel with the planned SCP gas pipeline will increase the risk of those living nearby.</p>	<p>The additive effect of the two pipelines would impose a separation distance requirement of approximately 50 meters from the nearer pipeline. The actual distance between the nearer (BTC) and the nearest corner of any apartment block in the 18<sup>th</sup> or 19<sup>th</sup> subdistricts is approximately 260 meters, so the requirement for distance from the pipeline has been met and exceeded.</p>	<p>Independent pipeline safety engineers have determined that there is no safety-related concern. Therefore no action required.</p>
<p>Issue V. The Mtkvari River floodplain between the riverbank and the 18<sup>th</sup> and 19<sup>th</sup> subdistricts is unstable; there is a high water table, poor soil, and a history of erosion. Unsuitable for construction of pipelines.</p>	<p>The independent pipeline safety engineers consider that the appropriate investigations have been undertaken and that the erosion risk to the pipeline is low. Investigations included hydro geological assessment of the river and its banks, identification of the flood plain area, drilling of boreholes in the river crossing vicinity, and a minor relocation of the pipeline so it is located farther from the river.</p>	<p>Independent pipeline safety engineers have determined that there is no safety-related concern. Therefore no action required.</p>

Issue Raised by Complainant	Technical Assessment	Recommendations on how to proceed
<p>Issue VI. The standard of construction of the residential buildings in the 18<sup>th</sup> and 19<sup>th</sup> subdistricts is not high; vibration caused by construction and operation of the pipeline(s) has the potential to destabilize buildings, causing damage.</p>	<p>Neither the BTC nor the SCP pipelines have the potential to generate any vibration during operation. Construction activities will generate some vibration, but this is dissipated by the ground within 25 – 50 meters of the site and will not cause damage to buildings.</p>	<p>Independent pipeline safety engineers have determined that there is no safety-related concern. Therefore no action required.</p>
<p>Issue VII. The BTC/SCP project has nominated a 500-meter “security” zone along each side of the pipeline. The apartment buildings in the 18<sup>th</sup> and 19<sup>th</sup> subdistricts are in this zone, the declaration of which raises concerns of pipeline safety to residents.</p>	<p>The 500-meter security zone is currently best practice for managing land-use and development in the vicinity of gas pipelines, and was incorporated into the requirements for the BTC pipeline. The “security” zone is created to require the government to notify the pipeline operator of any sensitive development in the vicinity of the pipeline that could introduce a change to its risk profile, such as hospitals, retirement homes, and schools. There is no restriction imposed on individual land users or on development of isolated residences in the vicinity of the pipeline.</p>	<p>Independent pipeline safety engineers have determined that there is no safety-related concern. Therefore no action required.</p>
<p>Issue VIII. The Baku-Supsa Pipeline, which will share its easement with the BTC and SCP pipelines, has a history of oil leaks. This indicates to the residents that there is a likelihood that new pipelines will also leak, potentially creating harm for people nearby.</p>	<p>The Baku-Supsa pipeline was constructed during the Soviet era, and built and maintained to inadequate standards, and as a result developed corrosion damage and leaked. The operating histories of well-constructed and maintained pipelines (oil and gas) show that proper external coating and corrosion control systems will protect the pipeline from corrosion and consequent leakage. The BTC / SCP pipelines both have high quality external coating, cathodic protection control systems, and will be internally inspected regularly by means of intelligent pigging.</p>	<p>Independent pipeline safety engineers have determined that there is no safety-related concern. Therefore no action required.</p>
<p>Verbal issue I. Residents expressed concern that during construction activities, BTC decided to locate an isolation valve in the vicinity of the 18<sup>th</sup> and 19<sup>th</sup> subdistricts, potentially exposing them to injury by emissions from the valve, or possibly danger resulting from sabotage to the valve installation.</p>	<p>The nearest valves for both BTC and SCP are 2 to 3 kilometers east of the 18<sup>th</sup> and 18<sup>th</sup> subdistricts, not in the immediate vicinity of the residential area. Residents might be exposed to noise from a gas release from de-pressurization from the SCP isolation valve nearest to the 18<sup>th</sup> and 19<sup>th</sup> subdistricts. There would be no measurable noise or other impact from isolation or de-pressurization of the BTC pipeline.</p>	<p>Independent pipeline safety engineers have determined that there is no safety-related concern. Therefore no action required.</p>

Issue Raised by Complainant	Technical Assessment	Recommendations on how to proceed
<p>Verbal issue II. During construction of the pipeline in the vicinity of the 18<sup>th</sup> and 19<sup>th</sup> subdistricts, residents observed a pungent smell, considered to be associated with a livestock burial pit constructed earlier to hold livestock that died or were destroyed as a consequence of an anthrax outbreak.</p>	<p>BTC advised that there are two potential anthrax burial sites in the vicinity of Rustavi and the Mtkvari River, but both are outside the pipeline Right-of-Way; they have been fenced off and warning signs posted.</p>	<p>The independent pipeline safety consultants were unable to reach a conclusion about this issue, due to insufficient information available. BTC Co. should pursue and resolve this matter directly with the Complainants. If there is evidence of a possible contaminated site, special procedures developed by BTC for contaminated sites should be implemented when construction of the SCP is undertaken in approximately 18 months time.</p>
<p>Verbal issue III. Residents expressed concern about publicly disclosed documents reporting that the operations phase of the pipeline will use GPS and GIS systems, emitting potentially dangerous radiation to residents.</p>	<p>A Global Positioning System (GPS) is a navigation and survey system that utilizes low-powered radio transmissions from geostationary satellites to compute the position of an object. GPS units do not emit radiation. GPS signals received are typically lower powered than those generated by mobile phones, which are universally used in Georgia. A Geographic Information System (GIS) is a computer-based spatial mapping system that displays information that can be linked geographically to land. GIS systems do not emit radiation.</p>	<p>Independent pipeline safety engineers have determined that there is no safety-related concern. Therefore no action required.</p>
<p>Verbal issue IV. The residents understood that the pipeline route was originally selected to pass close to Gardabani township; they claim they were unaware that the route had been changed to pass north of Rustavi, close to their homes. The residents did not realize that the pipeline was routed through its present location until the beginning of construction.</p>	<p>The independent pipeline safety engineers reviewed the documentation associated with the ESIA and discussed the route selection with BTC staff. The route near Gardabani township would have run through a military area so was refused. The route chosen, Route 3, was subject to intense investigation before submission to the Government of Georgia for final approval, according to the Host Government Agreement. Upon approval by the Government, Route 3 was displayed in the ESIA and at the public meeting held in Rustavi in July 2002.</p>	<p>Independent pipeline safety engineers have determined that there is no safety-related concern. Therefore no action required.</p>

Issue Raised by Complainant	Technical Assessment	Recommendations on how to proceed
<p>Disclosure issues. Inadequate disclosure of the pipeline routing prior to the beginning of construction, and failure to adequately consult with residents of the 18<sup>th</sup> and 19<sup>th</sup> subdistricts.</p>	<p>The CAO was presented with contradictory information concerning the timing and nature of disclosure and consultations. BTC Co.'s insistence that the pipeline is safe, without fully disclosing or explaining what international pipeline safety standards are required, either in the ESIA or other communications, fueled increasing suspicions on the part of the Complainants. Lack of evidence for verifiable, timely proactive engagement with the Rustavi 18<sup>th</sup> and 19<sup>th</sup> subdistricts has led to a breakdown of trust between the Complainants and BTC Co.</p> <p>CAO notes that there was a systemic dysfunction in the performance of the project-initiated grievance mechanism and the community liaison officers. CAO believes that IFC's interaction with BTC Co. and BP could have been more forceful in ensuring that information disclosure and community liaison deficiencies were remedied at an early stage, and BP effectively exerted that due diligence on SPJV's actual capacity and management of community liaison.</p>	<p>BTC Co. (and BP as operator) should continue developing a carefully targeted information campaign about pipeline safety for the Rustavi residents, concurrent with the release of the CAO report.</p> <p>BTC Co. should provide better monitoring and supervision of the construction contractor's (SPJV's) community liaison activities through its Community Relations Manager, particularly regarding SPJV's Community Liaison Officers' (CLO) organization of community meetings prior to arrival of construction teams and during construction, and the CLOs' role in settling disputes with communities.</p> <p>CAO urges BTC Co. to proceed promptly with an independent review of the implementation and effectiveness of corrective measures that they committed to carry out in relation to this Complaint.</p> <p>BTC Co. should overhaul its grievance mechanisms, as the current system is a bureaucratic approach that may ensure the recording of written grievances, but does little to ensure that genuine communication is taking place with project-affected people.</p> <p>BTC Co. should set up an alternate dispute resolution mechanism, at least for Georgia.</p> <p>BTC Co. should ensure that a second phase of the Community Investment Program—for which US\$3 million is earmarked—be targeted to urban communities living close to the pipeline route, including Rustavi as a whole.</p> <p>CAO stands ready to facilitate a meeting between the Complainants and BTC Co. / BP to go through the concerns raised in the Complaint and assist in re-establishing communication lines between Complainants and the project sponsor.</p>