

**REPORT OF THE POST-FINANCIAL CLOSE
INDEPENDENT ENVIRONMENTAL CONSULTANT (IEC)
BAKU-TBILISI-CEYHAN (BTC) PIPELINE PROJECT**

SIXTH SITE VISIT, OCTOBER 2005

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EXECUTIVE SUMMARY

This report presents the results of the sixth post-financial close field visit of the Independent Environmental Consultant (IEC) to Georgia and Turkey, between October 23 and 29, 2005 to monitor compliance with BTC Project Environmental and Social (E&S) commitments. The IEC team conducted the visit as two teams; one focused on Project activities in Turkey and the other in Georgia. Azerbaijan was not visited during this IEC mission, because the BTC construction phase is complete in that country and because reinstatement activities will best be reviewed after the coming winter season. Similarly, only Lots A and B in Turkey were visited as construction of the BTC pipeline is complete in Lot C.

During the visit, the IEC had the opportunity to meet with the two BTC in-country organizations (Georgia and Turkey), BOTAS and the EPC Contractor in Georgia, and review documentation and interview personnel in charge of implementing E&S commitments and monitoring construction activities. The IEC visited several construction sites including activities along the Right-of-Way (ROW) and several Above Ground Installations (AGIs). Considering that the overall BTC Project is now well advanced (the final weld for the entire 1,768 km of pipeline in all three countries, the “golden weld,” took place in Georgia at the time of the IEC visit), much of the visit was focused on the review of reinstatement activities along the ROW in both countries and preparations for the coming winter season.

Organization and Staffing: In Georgia, the E&S organizations continue to reflect the fact that most of the current field work is associated with the construction of the South Caucasus Pipeline (SCP) project. The limited work associated with the BTC project reflects the need to provide erosion and sediment controls to protect the BTC ROW over the coming winter, as final reinstatement cannot take place until the SCP is finished, as well as construction of the Kodiana projects. Although the Contractor SPJV expressed their satisfaction that they have sufficient E&S staff, the reality is that they have continued to demobilize their staff and BTC has assumed more and more responsibility for E&S issues, including the bioremediation program.

In Turkey, demobilization of the E&S organizations continues in Lots A and B as construction and reinstatement activities have largely concluded. IEC notes the continued coherence and good working relationship between the EPC contractor, BOTAS and BTC E&S teams, despite reductions in personnel. IEC however, remains

concerned that the Project maintains sufficient E&S resources to assess the success of reinstatement works through the transition period and to complete the land exit process in a timely and efficient manner.

Management of Change: In Georgia, the only new management of change initiatives for the BTC project have related to Class I changes related to the stability of some stream crossings and details associated with tree planting along the ROW, which still has to be worked out with Operations staff.

In Turkey, a Class III MOC change process has been initiated for the reinstatement of inert waste material piles at PT3, including a review by IEC. Work has begun in the field prior to a response by the Project to IEC. IEC recommends that the Project develop a long-term monitoring and aftercare program considering the location of these sites within ESA 19.

Third Party Concrete and Aggregate Suppliers: Now that construction of the entire BTC pipeline and pump stations is completed, the needs for third-party concrete and aggregate suppliers are essentially finished. As noted during previous missions, Project intervention has been, to date, too little and too late, especially at batch plants with respect to implementing basic pollution prevention measures and worker health and safety measures. At this stage, BTC needs to make sure that these sites are appropriately reinstated and it is understood that BTC is committed to undertake this activity. In Turkey, IEC was informed that all new borrow pits opened by the Project in Lot A and B have been reinstated. IEC observed several good instances of reinstated borrow pits in the field and recommends that an off ROW monitoring program be established to measure reinstatement effectiveness of borrow pits, camps, pipe stockyards and other facilities. Now that reinstatement is nearly complete, IEC also recommends that the Project undertake a final assessment of the quarry and borrow pit registers to ensure that all sites designated for reinstatement according to Project criteria have in fact been fully restored to pre-project conditions.

Potable water: In Georgia, although there are a few deviations from Project standards, testing is conducted on a regular basis and the results do not indicate that there is any health risk from drinking camp water. In Turkey, although protocols have been improved, there still is not a standardized process for assessing potable water quality across the Project. Despite this continued shortcoming, the results provided by the Project show that there are no health risks associated with camp water sources.

Waste Management: This issue continues to be one of the most important environmental challenges in Georgia. Although only limited field work has been conducted, BTC was able to demonstrate that risk analyses are being undertaken that will lead to the development of specific procedures to recondition the Iagljuda municipal disposal facility for the disposal of non-hazardous waste. Plans are still being made for the construction of an EU-compliant non-hazardous waste landfill in Georgia, although this facility will not be completed in time to accept waste generated by the BTC Project. The possibility to export hazardous waste to an EU compliant

facility is still being evaluated in parallel with the development of a hazardous waste landfill, although the option to export the waste is preferred. The largest single component of hazardous waste is spent oil. The Project has undergone a Management of Change (MOC) for the injection of filtered waste oil into the Western Route pipeline and disposal of the approximately 200,000 liters of waste oil. The Georgian MoE has been informed of BTC's intention to recycle the oil by re-injection into the Western Route.

Solid waste management practices across all Contractor operations in Turkey continue to be conducted according to established Project standards. IEC recommends that the Project adhere to these waste management practices during demolition and decommissioning of facilities.

Wastewater Treatment: In both Turkey and Georgia, the performance of wastewater treatment plants (WWTPs) is close to what is achievable given the type of portable plants being used. In Georgia, additional effort has been placed to improve the management of the WWTPs, including coliforms levels. The most recent sampling round from September 2005 shows no non-compliant discharges. The one location where problems have been persistent at PSG-2 office has been discontinued. Where observed directly at the Akhaltsikhe Camp, the WWTP was contained in housing to reduce the effects from winter weather and extensively modified to facilitate maintenance of the system and appears to be well managed. In Turkey, improvements have been made in Lot A to comply with project standards through the implementation of WWTP modifications in June 2005, and continued availability of topsoil treatment as a backup system, should the main WWTP begin to exhibit project exceedances. Lot B remains in compliance. IEC also recommends that the WWTP standards across the Project be maintained for Operation facilities.

Pollution Prevention: As noted in the last IEC trip report for June 2005, the infrastructure for pollution prevention is well developed across the Project and at this point the success of the pollution control systems depends on maintenance, which appears to be generally well done. The situation in the two countries visited can be summarized as follows:

Georgia: Although the pollution prevention systems have been for the most part acceptable as observed during previous IEC missions, improvements were found at the Akhaltsikhe Mechanical Yard in terms of reduction of generator emissions and improvements to the oil-water separators.

Turkey: IEC did not have the opportunity during this mission to review pollution prevention systems in the field, but according to information provided by BTC, the effectiveness of pollution prevention systems has remained unchanged from previous IEC missions. With respect to facility decommissioning, IEC recommends that proper due diligence procedures be established to ensure that proper sampling protocols are initiated prior to clean-

up and that any outstanding environmental liabilities to the Project are fully identified, particularly at camp and pipe yard sites.

Hydrotesting: At the time of the June 2005 mission, a Level II non-compliance was raised in Georgia based primarily on the observation of several management deficiencies observed at KP 138. Consequently, substantial effort was dedicated to improving field procedures and the available test records and associated documentation indicate that the hydrotesting was done in a manner compliant with the Hydrotest Management Plan until there was an uncontrolled release of hydrotest water on September 8, 2005 at KP 183. BTC assigned a Level III Corrective Action Request (CAR) for this event, which was essentially the final phase of hydrotesting in Georgia. As a result, a gap analysis was conducted to identify the root cause of the uncontrolled release, which may have been a simple accident, and improved procedures have been defined that were observed to be implemented at hydrotesting activities of the SCP.

In Turkey hydrotesting has now concluded. Based on a review of monitoring records and other information provided by Project personnel, no outstanding concerns or issues were noted. .

Safety: Now that the entire BTC pipe is in the ground, safety issues relating to open trench, pipeline construction and equipment handling are no longer relevant, except where equipment still needs to be used as part of the final reinstatement of the ROW. In Georgia, a few safety issues observed in the field related primarily to SCP construction and were relayed verbally to the construction management personnel. As construction works have now largely concluded in Turkey, the largest remaining safety issue continues to relate to traffic safety.

Reinstatement: Much of the focus of the IEC's sixth mission was directed towards the monitoring of reinstatement along the BTC pipeline ROW and the winterization efforts. In general, reinstatement was found to be of high quality with only a few exceptions. In Georgia, efforts are being made to prevent the types of difficulties encountered with respect to erosion and sediment control due to insufficient winterization efforts during the past winter. Spread 1 from the beginning of the pipeline in Georgia to KP 183 appears to be better prepared for winter than Spread 2 from KP 183 to the Turkish border. The responsibility for the preparation and implementation of the Biorestitution Plan has been assumed by BTC. The details of this Plan are currently being negotiated with the Georgian Ministry of Environment and BTC expects to submit a revised version of this Plan to the Ministry before the end of the year.

In Turkey, reinstatement and biorestitution works have concluded. In both Lots, IEC was impressed with the amount of work completed since the June 2005 mission, but noted several instances where attention to final details is lacking such as restoration of drainage patterns, proper placement of rip-rap, longevity of jute matting and functionality of slope breakers etc. These items should be noted in the final Project

punch list so that remedial measures can be implemented and a standardized quality protocol for provisional acceptance be developed across all three Lots in Turkey.

IEC notes that no progress has been made in the field towards reinstatement of the NGPL since the June 2005 mission. Given that construction activities have now concluded, IEC recommends a MOC procedure be established for NGPL reinstatement to comply with Project commitments established in the EIA and SLIP.

With regard to access roads, IEC was informed that all new roads opened by the Project in Lots A and B have been restored, except instances where the community requested that the road remain open. Eighteen of 22 roads opened in Lot B and 41/56 roads opened in Lot B have been reinstated. The situation in regard to reinstatement of existing access roads which have been expanded and upgraded by the Project remains unclear. The Project should clarify a position with regard to the commitment that all damage to existing roads or upgraded existing roads shall be reinstated.

Ecological Management: In Georgia, one of the main observations of the June mission was that the conclusions presented in the annual monitoring reports need to be more reflective of the methodologies followed to obtain data and the observations made in the field. Based on discussions with BTC personnel, it is understood that the clarification necessary to improve the presentation, applicability, and usefulness of the biodiversity monitoring results will be presented in future faunal and floral annual monitoring reports.

In Turkey, IEC was informed that reinstatement and biorestitution of the Ecologically Sensitive Areas (ESAs) in Lots A and B has concluded. In the field, IEC noted several instances where final cleanup is required. IEC also recommends that the Project establish specific monitoring procedures to assess the effectiveness of reinstatement and biorestitution works in ESAs across Turkey.

Archaeology: The cultural heritage programs directly associated with the BTC Project have now entered the phases of interpretation, preservation and curation of the findings. Although these phases rest with the host governments, the BTC Project has a substantial investment into cultural heritage management and a commitment to manage this investment according to international standards. In Georgia, the preparation of a major exhibit at the National Museum in Tbilisi is a major accomplishment in educating the public as to the findings made during construction. Another major accomplishment in Georgia has been the restoration of the Saint George Monastery in Tadzrizi, a 10th century religious site that can now be a better resource to the local community. The overall process for interpretation, curation and reporting should be defined in terms of a Plan that can be taken over by Operations personnel. It is strongly recommended that the same individuals responsible for the gathering of data in the field be the ones who also participate in the interpretation and reporting of the data gathered.

An anomaly to the completion of the field work in Georgia for the BTC Project is with respect to access roads and other non-ROW footprints that were established at the beginning of construction activities. Sites were apparently damaged by this activity and Late Finds Protocol was not followed. If the damage is important and/or took place knowingly, this represents a serious breach of Project commitments to protect archaeological sites.

1 INTRODUCTION

D'Appolonia S.p.A. (D'Appolonia), located in Genoa, Italy, has been appointed as the post-financial close Independent Environmental Consultant (IEC)¹ to the Lender Groups for the Baku-Tbilisi-Ceyhan (BTC) Pipeline Project (BTC Project)² and the Azeri, Chirag and deepwater Gunashli (ACG) Phase 1 Project (Phase 1 Project)³. The BTC Project is currently nearing completion and is owned by BTC, a company formed by a consortium of the Main Export Pipeline Participants (MEPs)⁴. Construction of the BTC Project is underway in Azerbaijan, Georgia and Turkey. The ACG Contract Area is being developed by Participating Production Sharing Agreement (PSA) Contracting Parties.⁵

The overall role of D'Appolonia within the BTC and ACG Projects is to assess and report to the Lender Group on the compliance with the environmental and social provisions contained within the respective project Environmental and Social Action Plans (ESAPs), the associated Contractor Control Plans (CCPs), and BTC/ACG Management Plans and with HSE management systems. This report summarizes the

¹ IEC Team members: Roberto Carpaneto (Team Leader), Paolo Lombardo (Team Coordinator), Miles Scott-Brown (Team Member), William J. Johnson (Team Member).

² The Lender Group for the BTC Project (BTC Finance Parties) comprises the International Finance Corporation ("IFC"), the European Bank for Reconstruction and Development ("EBRD"), Compagnie Française d'Assurance pour le Commerce Extérieur ("COFACE"), Her Majesty's Secretary of State acting by the Export Credits Guarantee Department ("ECGD"), Euler Hermes Kreditversicherungs-AG ("Hermes"), Japan Bank for International Cooperation ("JBIC"), Nippon Export and Investment Insurance ("NEXI"), Overseas Private Investment Corporation ("OPIC"), Servizi Assicurativi del Commercio Estero ("SACE"), the Export-Import Bank of the United States ("US EXIM") and any other export credit agencies and commercial lenders and any other providers of debt financing or political risk insurance for the BTC Project, in their capacity as the providers of debt financing or political risk insurance for the BTC Project, including, for the avoidance of doubt, the Sponsor Senior Lenders.

³ The Lender Group for the Phase 1 Project (Phase 1 Finance Parties) means IFC and EBRD.

⁴ Also termed the "BTC Sponsors" includes Amerada Hess Corporation, BP International Limited, BP Corporation North America, Inc. ConocoPhillips, ENI International, B.V., INPEX Corporation, ITOCHU Corporation, SOCAR, Statoil ASA, TOTAL, S.A., Türkiye Petrolleri A.O. and Union Oil Company of California.

⁵ The parties to the PSA at the date of the CTA, also termed the "PSA Parties" includes Amoco Caspian Sea Petroleum Limited, Amerada Hess (ACG) Limited, BP Exploration (Caspian Sea) Limited ("BP Exploration"), Devon Energy Caspian Corporation, Exxon Azerbaijan Limited, INPEX South West Caspian Sea, Limited, ITOCHU Oil Exploration ("Azerbaijan") Inc., Statoil Aspheron a.s., Türkiye Petrolleri A.O. ("TPAO") and Unocal Khazar, Ltd.

results of D'Appolonia's sixth field visit held between October 23 - 29, 2005 for the BTC Project.

The primary objective of the visit has been to verify the implementation of BTC Project commitments established in the Environmental & Social Action Plan (ESAP), final at the time of financial closure (February 2004), and supporting documents developed to assure implementation of the ESAP including Contractor Implementation Plans and Procedures (CIPPs) and associated Method Statements and Procedures. D'Appolonia's review has included the environmental and social (E&S) and health and safety (H&S) management activities of BTC, the Turkish State Petroleum Pipeline Corporation (BOTAŞ) in the case of Turkey, and the individual Engineering, Procurement and Construction (EPC) Contractors. Emphasis has been placed on evaluating compliance primarily on the reactions of the BTC/BOTAŞ and the individual Contractors to non-compliant situations based on the following:

- Random checking of individual non-compliances identified by BTC/BOTAŞ or individual Contractors and reviewing the mechanisms followed by the responsible organizations to identify, address, correct and follow up non-compliant situations, as well as the documentation demonstrating the implementation of appropriate procedures.
- In-depth review of symptomatic non-compliances, which may indicate a deficiency in the process of compliance management and identifying mechanisms and the procedures the BTC Project, proposes to follow to make sure that similar situations will not occur again.
- Follow-up to non-compliant conditions identified during the previous missions, as practical. It should be noted that not all of the locations where non-compliant situations were originally encountered could be visited during this mission, so it is not always practical to close the issues previously identified, even if the Project has performed the required actions.

Most of the findings identified in this report have been based on field observations, and interactions with the individuals actually responsible for the field implementation of the ESAP.

The IEC team conducted the visit as two teams. Two members of the team toured Turkey while another two visited Georgia. As agreed with the Lender Group representatives, Azerbaijan was not visited during this mission as the effort remaining for the BTC project will be the reinstatement of the ROW and associated non-ROW temporary footprints, such as access roads, borrow pits, temporary work camps, etc., which will best be observed after completion of the Southern Caucasus Pipeline (SCP) parallel to BTC in Azerbaijan and Georgia and currently under construction along the same ROW.

Subsequent sections of this report provide the following:

- Section 2 presents the review of the Project in Georgia
- Section 3 presents the review of the Project in Turkey
- Appendix A presents the trip itinerary
- Appendix B presents lists of non-compliances with the ESAP, with relevant observations and recommendations for Georgia and Turkey, respectively.

2 GEORGIA

The BTC Project in Georgia encompasses 249 km of pipeline extending from Azerbaijan-Georgia border in the Gardabani District and finishing in the Akhaltsikhe District at the Turkish border. The corridor followed by the pipeline is close to the existing Western Route Export Pipeline (WREP) for a short distance from the Georgia – Azerbaijan border, until the BTC pipeline deviates towards Turkey at KP 19. The BTC pipeline also shares the same corridor with the SCP pipeline, which is a subsequent separate related project that has begun construction and will transport gas from the Shah Deniz field to the Georgian/Turkish border. The BTC Project includes several permanent Above Ground Installations (AGIs), including two pump stations, PSG1 located at KP 3.8 and PSG2 located at KP 88 with associated temporary construction work camps (Jandara at PSG1, which is still occupied; and Tetrtskaro at PSG2 – camp and office, with the office location now demobilized), as well as necessary block and check valves.

In addition to the permanent facilities, the pipeline is associated with several temporary facilities, which include:

- Temporary construction camps (Marneuli at KP 53, although still operational the camp is being slowly demobilized; Tsalka at KP 123, which is occupied; Akhaltsikhe at KP 228, also occupied). These camps also serve the SCP project.
- Temporary pipe yards for pipe (Gatchiani; Marneuli; Tetrtskaro; Tsalka 2; Andeziti and Akhaltsikhe); these pipe yards are no longer in operation for the BTC project and are also being phased out for the SCP project. It is expected that closure/reinstatement plans will be implemented for these sites.

During this sixth mission the visit was conducted along the ROW from the Turkish border eastward to approximately KP 90. Akhaltsikhe camp and mechanical yard were also visited.

2.1 CONSTRUCTION STATUS

The BTC Project uses a single EPC Contractor, Spie-Capag Petrofac Joint Venture (SPJV), for both pipeline and AGI construction. Current (October 24, 2005) construction progress is as follows:

- *Facilities* – Pump Stations PSG1 and PSG2 are both complete. Oil filling of the BTC pipeline at the time of the visit had reached PSG2.
- *Pipeline* – The “golden weld,” the final weld for the entire pipeline in the BTC project, was completed during the mission at KP 196 in Georgia. Hydrotesting of the BTC pipeline in Georgia is complete and BTC Co. anticipated the filling of

the entire pipeline in Georgia within a week of the IEC mission. At the time of the visit, Phase 1 initial reinstatement over the 12 meter portion of the 44 meter wide ROW was completed for approximately 75% of the pipeline ROW; Phase 2 reinstatement with permanent stabilization works was completed for about 36%; Phase 3 biorestitution (seeding) had not started to a significant degree (2.8 km out of a planned total of 70.9 km); and Phase 4 vegetation coverage had reached approximately 12% of the pipeline ROW. Final reinstatement for both BTC and SCP over the entire ROW width is reportedly completed between KP 0 - KP 72 (eastern Georgia section), between KP 126 – KP 130 and KP 161 to KP 166.

2.2 ENVIRONMENTAL AND SOCIAL MANAGEMENT ORGANIZATION AND RESOURCES

2.2.1 Resources and Organization - Observations

BTC

Although the day-by-day management activities are conducted by SPJV E&S organization, BTC continues to assume significant responsibilities for assuring environmental compliance for ongoing activities. As a result, BTC has increased its staff, including a toxicologist mobilized to prepare the occupational health risk assessment needed prior to start the full implementation of the conditioning plan for Iagudja municipal waste disposal site; an additional Environmental Field Coordinator for the Borjomi/Bakuriani area has been mobilized; a senior archaeologist was hired to support the development of the exhibition of BTC archaeological findings for the First Oil Celebrations; the wastewater treatment specialist who worked to establish operating wastewater treatment systems at the camps has been hired back to help Operations and Kodiana Security Base Facility with wastewater treatment issues. Some staff members continue to be transitioned into Operations.

SPJV

SPJV remains understaffed for the remaining field efforts, particularly to monitor the reinstatement phases remaining to be conducted at the end of SCP construction and to assure closure of all social issues and adequate and timely land exit protocol implementation. Although SPJV environmental management indicated that they felt they had enough staff for the remaining tasks at hand, and reported that the number of pending complaints on land issues for Spread 2 was reduced by 50 percent between March and October 2005, several key positions had been demobilized since the June mission. In particular, the current E&S understaffing at SPJV has continued to force BTC to assume the leadership for many of the environmental tasks remaining for the construction phase.

2.2.2 Resources and Organization - Recommendations

1. Although some staff members have been transitioned into Operations, IEC renews the recommendation that as many as practical BTC and SPJV Construction E&S staff be retained for BTC Operations to ensure a continuity of performance.
2. BTC and SPJV will need to work closely together to assure that management and closure of social issues is not adversely affected by demobilization and sufficient social staff is available to assure adequate and timely implementation of land exit protocols.

2.2.3 Management of Change - Observations

With the BTC pipeline installation nearly complete, the minor Class I changes related to pipeline construction are associated primarily with the SCP project. The only new management of change initiatives for the BTC project have related to Class I changes related to the stability of some stream crossings and details associated with tree planting along the ROW, which still has to be worked out with Operations staff.

2.3 CONSTRUCTION CAMPS, INFRASTRUCTURE AND SERVICES

The review of construction camps, infrastructure and services focuses on construction operations that potentially have an impact to surrounding infrastructure, natural resources, and community and household assets, including land, roads, borrow pits and irrigation systems. In addition, the review of this topic includes camp water supplies and general aspects of camp management.

2.3.1 Construction Camps, Infrastructure and Services - Observations

BTC

Since IEC's third mission in October 2004, BTC Core Management Team (CMT) has dedicated considerable resources to the survey of third-party sources of supplies, in particular aggregate and cement/concrete. On the basis of this survey, BTC identified suppliers of concrete and borrow pits used as a source of construction aggregate considered to merit Project intervention. Two batch plants, both operated by local subcontractors, were identified where by far the majority of their production was dedicated to Project use, one operated for PSG2 construction and the other operated for PSG1 construction. The two facilities provided concrete under a purchase order issued by SPJV. At this point in time with construction essentially complete, the batch plants are reportedly no longer being operated. It is apparent that the Project was never able to fully implement environmental and social measures at the two facilities consistent with ESAP requirements. A Level II non-compliance was assigned to this situation in the fifth IEC mission report because the Project had not been able to demonstrate that the facilities had been properly managed,

controlled and operated in compliance with many ESAP requirements. The plants were closed before the non-compliance could be resolved.

However, IEC was informed that BTC has committed to fully reinstate the third-party batch plant site at PSG2, since it is not longer in use and equipment was demobilized. BTC has also committed to reinstate the third-party batch plant site at PSG1, located on military property, if the local subcontractor decides to demobilize from the site in the short term. The Level II non-compliance is pending (*Level II Non-Compliance, CCP Procurement and Supply, Commitment ID N34-P35, Commitment M11 – HSE Plan Section 7.4*) and will be rescinded once the site at PSG2 and, possibly based on local subcontractor decision to demobilize, the site at PSG1 have been cleaned up and reinstated, as committed.

SPJV

The IEC visited the Camp and Mechanical Yard at Akhaltsikhe during this mission. Waste collection, segregation and storage continue to be well managed and adequate pollution prevention systems have been in place for some time and continue to be well maintained by SPJV. In addition, significant improvements, implemented by SPJV, were observed at the Akhaltsikhe Mechanical Yard in terms of a better working environment, improved layout organization and housekeeping, reduction of generator emissions, winterization of the Waste Water Treatment Plant (WWTP) and of the Potable Treatment Plant, winterization and reinforcement of pollution prevention equipment for the diesel tank, generators and refueling area; and improvements to the oil-water separators. In addition to the field review of Akhaltsikhe camp and mechanical yard, documents were reviewed to determine the appropriateness of other camp activities and associated infrastructure:

- *Water supplies:* Available test data indicate that potable water generally meeting WHO standards continues to be supplied to the camps. Free residual chlorine is commonly measured below the recommended standard, but bacteriological test records provided for all of the camps indicate that water quality has met WHO standards over the past few months, indicative that adequate disinfection is being achieved.
- *Project footprint:* Borrow pit closure will depend primarily on completion of the SCP. The situation with respect to borrow pits is essentially the same as observed in June 2005. Specific plans have not been prepared for their closure, but borrow pit conditions have been reviewed, listed and prioritized. Final decisions are still pending for their closure. IEC observed some large borrow pits, located at KP 162, KP 153 and Darakov, previously exploited for BTC and currently used for SCP, which deserve careful consideration for reinstatement and/or landscaping at the end of the construction phase. The borrow pit which has been used to dispose of rock spoil from the ROW at KP 90 was visited and found to be adequately reinstated, although SPJV reported that the site has still some limited capacity to dispose of additional excess rock.

- *Excess Rock at PSG2*: Negotiations with the MoE have been finalized and the Ivanovka borrow pit at KP 93 has been selected for the stockpiling of large blocks of rock from PSG2. Rock removal and transportation to the selected borrow pit were ongoing at the time of the visit. The remaining mixture of soil and small rocks at PSG2 will be recontoured and reclaimed in place. The relocation of the large rock pieces is intended to make them available for possible recovery as a rock resource at a later date.

2.3.2 Construction Camps, Infrastructure and Services - Recommendations

1. Batch plant sites at both Project and third-party locations should be reinstated as practical.
2. Where borrow pits have been identified as increasing project footprint and having medium to high E&S impact, as defined in the BTC Georgia Borrow Pit Status document, appropriate plans for reinstatement and/or landscaping should be developed and in place at the end of the SCP construction phase. BTC should give priority to the footprint minimization criteria during the decision-making process.

2.4 WASTE MANAGEMENT

2.4.1 Non-Hazardous and Hazardous Waste – Observations

The processes of waste segregation, handling, recycling and temporary storage continue to be well managed in Georgia and IEC acknowledges the high standards observed during the visit to Project sites. As noted in several previous reports, it is the final disposal of non-hazardous domestic waste (i.e. non-reusable/recyclable) and hazardous waste that has proven to be problematic for BTC and SPJV. As noted in the fifth IEC trip report from June 2005, it is believed that the Project is now on the correct path to develop appropriate mitigations.

The Landfill Conditioning Plan (LCP) developed for the Iagljudja municipal disposal facility is starting to be implemented. There has been limited physical progress in the field (upgrade of site access roads), but BTC reported that the necessary health risk assessment should be complete by December 2005, allowing the implementation of a series of fourteen Capital Improvements Tasks defined for improving the landfill as part of the LCP. A local Construction Contractor has been selected to perform these works, but the results of the health and safety risk assessment are still needed before executing the contract, so that the appropriate H&S plans and method statements can be developed. The most significant H&S risks identified are those requiring the excavation of waste deposit areas and/or the relocation of existing waste piles.

In parallel with implementing the Iagljudja LCP, BTC confirmed that they will construct a new EU-compliant municipal landfill in Georgia, which will be available

for both Project (during Operation) and non-Project use. Due to the delays in mobilizing an expert panel designated by the Municipality of Tbilisi for facility siting, BTC has hired a consultant do an independent siting study on behalf of the Project so this important Project component can advance.

With respect to hazardous waste, it is recognized that SPJV continues to appropriately store this material and that there is no imminent risk of a public hazard from this activity. It is understood that the Project has not abandoned the possibility of constructing a hazardous waste landfill. An EIA document was prepared for the Sagarejo site, but the possibility of exporting the waste to an EU-compliant external facility, probably in Western Europe, is the preferred option due to the limited amounts of hazardous waste generated that cannot be disposed in-country. The largest single component of hazardous waste is spent oil. The Project has undergone a Management of Change (MOC) for the injection of filtered waste oil into the Western Route pipeline and disposal of the approximately 200,000 liters of waste oil located at the CWAA. The Georgian MoE has been informed of BTC's intention to recycle the oil by re-injection into the Western Route. Practical means to filter the waste oil to the required 400-micron particle size are being sought by the Project to be able to comply with the conditions specified in the approved MOC.

2.4.2 Non-Hazardous and Hazardous Waste - Recommendations

1. BTC should ensure that the Iagljudja LCP is expeditiously implemented, as soon as the health risk assessment is complete.
2. BTC should select and implement the final disposal option for the hazardous waste as soon as practical to eliminate any potential, although limited, environmental and health risks associated with their current temporary storage.
3. Once construction is complete, BTC should consider preparing a "Lessons Learned" paper on the subject of waste management in countries with inadequate local infrastructure for the benefit of future similar projects (repeat recommendation).

2.4.3 Wastewater Management - Observations

The issue of the operation of WWTPs is discussed in terms of the MOC process in Section 2.2.3. In general, the Project appears to have developed and operated the WWTPs at all of the camps within the limits that can be reasonably expected for a Project of this nature and with the types of treatment units that are being used. The WWTP at Akhaltsikhe has also been recently improved by containing the structures within a building for winterization and improving access to the treatment tanks for maintenance purposes.

As previously noted in the June 2005 mission, the most problematic parameter for achieving compliance is coliforms. Where discharge is to an irrigation system, a

standard of 1000 MPN/100 ml has been adopted consistent with WHO criteria. Accepting 1000 as a reasonable standard, the Project by June 2005 had reached general compliance with the new standards, except at PSG2 office and Tsalka Camp. The situation at Tsalka Camp was not actually considered to be non-compliant because the discharge is in what is classified as a “fish protection” environment, where the requirements for coliform testing are “functionality checks.”

Since the June 2005 IEC mission, SPJV reports that they have developed improved maintenance procedures for the UV lamps used to kill coliforms and better manage the addition of chlorine disinfectant. In addition, the location with the highest coliform count, PSG2 office, has been dismantled as part of the demobilization from that location. The last test results from September indicate that the WWTP discharges are now fully compliant, with the coliform count from the Tsalka WWTP less than 1000 MPN/100 ml. The Level I non-compliance assigned in the June 2005 trip report is considered rescinded.

2.4.4 Wastewater Management – Recommendations

1. BTC should consider adopting a single standard for effluent discharge, consistent with what has been adopted for discharge to irrigation waters and to minimize potential impact to the maximum degree practical (repeat recommendation). It is now apparent that this recommendation is achievable.

2.5 POLLUTION PREVENTION

2.5.1 Pollution Prevention - Observations

The Project has adopted a pollution prevention plan aimed at systematically identifying potential impacts from construction activities and implementing avoidance and mitigation measures to minimize the likelihood, extent or duration of their occurrence, and any associated adverse effects. The mitigation measures include: spill prevention and management; management of existing contaminated areas, if any found during construction; groundwater protection; surface water protection; ecological receptor protection; air quality protection and dust mitigation; noise control; soil erosion control and topsoil protection.

Hydrotesting

At the time of the visit in June 2005, the most significant activity with the potential for environmental pollution was hydrotesting. This effort is now complete and all of the BTC hydrotest water has been discharged. At the time of the June 2005 visit, difficulties were identified with respect to the field procedures and follow-up testing conducted for hydrotesting, for which a Level II non-compliance was assigned. Revised procedures were implemented and the available information indicates that subsequent testing was conducted appropriately, consistent with the Hydrotest Management Plan. The Level II non-compliance is considered rescinded.

Just as the hydrotesting for the BTC pipe was nearing completion, an incident took place on September 8, 2005 where an unknown volume of hydrotest water was discharged into the Kumiska River within the Borjomi Kharagauli Support Zone (at KP 184) by-passing the appropriate mitigation measures that were installed and working to filter the hydrotest water that was being discharged. BTC issued a Level III Corrective Action Request (CAR) to SPJV, to a large degree because of the assumption that the discharge was a deliberate bypass of the designed discharge system. The incident was reported and thoroughly investigated by BTC and SPJV. It could not be determined if the improper discharge was deliberate or accidental, but the incident highlighted three root causes: lack of communication; disconnection of a hydrotest hose; and insufficient contingency measures. Based on preliminary information received from SPJV, impacts on water quality were temporary, limited and reversible.

It is significant for the IEC that there was a gap analysis to identify root causes and corrective actions for the procedures were defined to prevent future similar incidents. Because this incident took place at the last stage of BTC hydrotesting, these procedural changes do not affect the BTC hydrotesting, but have been carried over to SCP hydrotesting. It should be noted that at this location the water discharged did not contain any biocides or oxygen scavengers to minimize potential environmental risk in the Borjomi region and had only high iron and silt content.

SPJV

As discussed in Section 2.3, pollution prevention systems at the camps and workplaces visited appear to be appropriately installed and maintained. Improvements to the oil-water separators were observed at the Akhaltsikhe Mechanical Yard. As noted in the June 2005 trip report SPJV used ethylene glycol as an antifreeze additive for the hydrotesting of valves at PSG2, but no method of disposal had been identified. A solution for the disposal of the approximately 300 liters of ethylene glycol and water mix has yet to be determined, but it was pointed out that it should be practical to recycle this antifreeze solution.

2.5.2 Pollution Prevention - Recommendations

1. It is recommended that the problems encountered and the solutions identified for hydrotesting, especially in sensitive areas, be compiled as a “lessons learned” document for use as future reference.

2.6 ROW MANAGEMENT

2.6.1 ROW Management - Observations

The pipeline route was visited from the Turkish border at KP 249 to about KP 90 with few interruptions. As a general observation, where Phase 2 reinstatement/slope stabilization has been implemented, conditions appear to be good. Top soil is

adequately maintained in areas where reinstatement is still to commence or where Phase 1 reinstatement only has been implemented. Efforts are being made to prevent the types of difficulties encountered with respect to erosion and sediment control due to insufficient winterization efforts during the past winter. Where visited, Spread 1 ROW winterization from KP 90 to KP 183 appears to be more advanced in terms of implementation of adequate temporary erosion and sediment control measures than in Spread 2 from KP 183 to the Turkish border.

In Spread 2 significant sections of the ROW, especially at the higher elevations, are still open because of SCP construction and long stretches of strung pipe are still visible above ground.

In Spread 1, from KP 0 to KP 72 and from KP 126 – KP 130, where both pipelines are in the ground, final reinstatement of the entire 44 meters corridor has been achieved.

The following sections briefly described the situations encountered during the ROW visit.

KP 183 – KP 249 – Spread 2. Conditions of the BTC corridor are essentially the same as encountered in June, particularly in the western part (KP 249 - KP 206). Significant effort has been placed in stabilizing some critical locations (KP 230, KP 208 and the Kodiana pass gullies), but winterization efforts for all of Spread 2 still need to be consistently implemented. Previous winterization for BTC line appears to be sufficiently maintained in the Bakuriani – Kodiana pass area. Significant erosion of the BTC pipeline route was observed in the soft soils at KP 208 and special efforts will be required to stabilize this area during the upcoming winter. SPJV has only four small crews working to winterize critical areas. Although SPJV plans to surpass the level of effort for winterization undertaken for the 2004 – 2005 winter season, there is much work remaining, especially in the western part of the spread where winterization efforts have just started. It was observed that only one of the maintenance crews incorporates mechanized equipment and most of the erosion and sediment control structures were being installed manually.

The Oshora River crossing at KP 186 was observed to have adequate temporary stabilization in preparation for the upcoming winter and the erosion problems encountered by BTC in late September and early October for which a Level II CAR was issued to SPJV appear to have been generally remediated. This crossing still requires final reinstatement, as recognized by the BTC/SPJV management.

An observation made during the June 2005 mission bears repeating, which is that numerous access roads, used and/or constructed because of the difficult access along the route in much of Spread 2, have produced a visible footprint, especially in high elevation areas. The Project should be prepared to dedicate resources for the reinstatement of these access roads, taking into account previous conditions as the standard for their final reinstatement.

KP 120 – KP 183 – Western Portion, Spread 1. The winterization measures adopted in this section for the most part were effective over the 2004 - 2005 winter. These winterization measures have been maintained with work crews using mechanized equipment and substantial effort has been placed in the Borjomi slope area from KP 176 up to KP 183. A general observation from the portions of Spread 1 at higher elevations is that where temporary erosion and sediment control measures have been implemented for winterization, the quality appears to be better than Spread 2. The need to reinstall OFMME cable has damaged some installed erosion and sediment control structures in this area that will be rehabilitated. In addition, the subcontractor for the reinstallation the OFMME cable caused unnecessary damage to the ROW permanent reinstatement between KP 178+300 (stream crossing) and KP 179+400 (hydrotest 31 and 32 start/end sections) and BTC issued a Level II CAR to SPJV for the impacts caused to the final reinstatement of these areas.

Good reinstatement was observed in the areas between approximately KP 160 and KP 180 in areas where both the BTC and SCP pipelines are in the ground. A similar situation was observed in the general area of KP 128, where reinstatement of the ROW is essentially final (the entire 44 meters – SCP and BTC).

The team made a brief visit to the Tabatskuri borrow pit located at KP 162 and the borrow pit at KP 153. The Tabatskuri borrow pit is located within the Tabatskuri Managed Reserve, which dictates why its reinstatement is a priority. The borrow pit at KP 153 now represents a large footprint that will need reinstatement at the end of SCP construction. Both of these borrow pits have been identified by the Project as having a high priority for Project attention.

KP 90 – KP 120 – Central Portion, Spread 1. This section includes portions where the disposal of excess rock was a significant reinstatement issue. For the most part, solutions have been identified for rock disposal and the frequent piles of rock are no longer present. The rock disposal site at KP 90 was visited. This former abandoned quarry is nearly full and the end result will be an improvement to the landscape. Vegetation is beginning to reclaim the ground surface at this location. A brief stop was also made at the rock pile at PSG2 where large blocks of rock are being actively moved to the Ivanovka borrow pit at KP 93. The effort to comply with Government requirements in an environmentally sound manner is to be recognized. The borrow pit at KP107 was also visited briefly. This pre-existing borrow pit has been expanded such that the highwall is very high. Reinstatement of this borrow pit will be difficult and will require slope stabilization, for instance through reduction of the height of the highwall. It has been reported by BTC that the property owners may want to keep portions or all of these borrow pits open for future use.

KP 0 – KP 72 – Eastern Portion, Spread 1. This section was not visited during the trip, but it is understood that the reinstatement is almost final.

Biorestitution Plan: The responsibility for the preparation and implementation of this Plan has been assumed by BTC. The details of this Plan are currently being

negotiated with the MoE and BTC expects to submit a revised version of this Plan to the MoE before the end of the year.

Access Roads and Borrow Pits. Construction within the ROW has needed to be supported by the development of access roads and borrow pits. At this point in time, now that the SCP is nearing completion, BTC needs to develop a strategic plan for the access roads and borrow pits closure. The plan should systematically define:

- Which access roads are to be kept permanently and adequately open for community benefit;
- Which access roads are needed for Operations;
- Which access roads and borrow pits are to be reinstated and/or landscaped, based on environmental and ecological sensitivity of the region where they are located;
- Level of effort required.

2.6.2 ROW Management - Recommendations

1. SPJV needs to invest the proper resources (workers and equipment) for the timely implementation of the winterization (erosion and sediment control) measures, especially in the Spread 2 area.
2. A permit to work procedure is being adopted for work where it will be necessary to go over the top of the hydrottested BTC pipeline. BTC needs to carefully monitor this permit to work system along the ROW, including during all the reinstatement activities of both BTC and SCP, especially since BTC is effectively an active line.
3. BTC should develop a strategic plan for access roads and borrow pits reinstatement, landscaping and closure.

2.7 BORJOMI AREA

2.7.1 Observations – The Kodiana Project

The Borjomi Work Region extends from about KP 176 to KP 196. This area is one of the most significant parts of Georgia in terms of environmental, economic, cultural and aesthetic considerations. The area is part of the catchment basin for Borjomi Mineral Water, which is one of the most significant private developments in Georgia. Communities in this area are hopeful that tourism will be redeveloped and are concerned that the Project will adversely impact the landscape and their prospects for tourism.

The Project has committed to strictly following best practices with multiple lines of protection and redundancy in design and operations to achieve as close to “zero risk”

of an oil spill or leak as practical. During this visit, the IEC was presented the status of the Kodiana Project as briefly discussed in the following paragraph.

The Kodiana area is where the Government of Georgia has requested that BTC implement special protective measures, including: temporary secondary containments, permanent secondary containments, a draindown tank, and construction of a base for the Government patrolling security corps. Issues to be assessed and managed in the E&S impact assessment will include landscape alteration and aesthetics, potential impacts from altering the local hydrology at the containment locations, construction impacts taking also into account the presence of an archaeological site at one location, potential social consequences from the stationing of about 160 soldiers at the security base, management issues during operation (e.g. waste management, pollution prevention requirements), induced access control (especially the Tori site location for a secondary containment), potential ecological impacts, and identification of relevant mitigation measures.

The IEC visited the area of the proposed draindown tank near KP 183 and several nearby temporary containment structures that are intended to last until permanent structures can be constructed next spring. The IEC continues to look forward to reviewing the E&S impact assessment used to support the decision processes associated with the construction of the Kodiana projects.

2.8 TSEMI WATER INTAKE

2.8.1 Background

At the request of the Lender Group, the IEC visited the Tsemi water intake located near KP 178 along the ROW. Local residents had complained that pipeline construction had impacted their municipal water supply due to increasing turbidity.

2.8.2 Observations

When visited on October 26, 2005 the stream water entering the existing intake structure constructed by BTC for use by the villagers was turbid. Based on the upgradient location of the pipeline construction, it is likely that Project construction was a source of turbidity of the water. The current intake structure was designed such that sediment could settle out of suspension before entering the water pipe, but this feature of the structure is not used and stream water is flowing directly into the water pipe. It is uncertain if an adequate use and maintenance of the intake could effectively reduce water turbidity in the pipe.

BTC was found to be well aware of the problem and recognized that current construction is likely the factor impacting water quality. Therefore, following negotiations with the Tsemi community, BTC is in the process of constructing another intake which would be upgradient of the pipeline ROW. For the time being, the pipe from the new intake would be a temporary structure, but BTC has

committed to construct a permanent intake-structure in the spring of 2006. Although there is the possibility that some turbid water could still enter from runoff flowing from the main road upgradient of the new intake and not related to pipeline construction, the new selected location is expected to provide clear water to Tsemi village. However, baseline water characteristics at the selected intake, as well as a detailed topographical and hydrographic survey, are not available to quantitatively demonstrate that there is not significant issue for water quality.

2.8.3 Recommendations

1. The Project needs to make sure that baseline of the new intake is well defined. Parameters needed to document that the new intake location is appropriate are: baseline water quality, hydrographic position with respect to the pipeline ROW and other sources that could affect water turbidity; and confirmation of this position from land surveying.

2.9 ECOLOGICAL MANAGEMENT

2.9.1 Ecological Management - Background

BTC Ecological Management Plan Commitment F16/D6 defines the Project's responsibility to "...*Promote and undertake a wildlife monitoring programme in forest areas and wetlands to promote the conservation of endangered species...*". In compliance with Commitment F16/D6, the Project is implementing a Biodiversity Monitoring Programme for Georgia consisting of floral and faunal monitoring components.

As part of this program, the Project will conduct five years of annual monitoring, the first of which was conducted in 2004, with faunal and floral annual monitoring reports finalized and submitted to BTC in November 2004. The Biodiversity Monitoring Programme was developed jointly by BTC, the Government of Georgia, and a Georgian environmental consultancy firm (Dzelkva Ltd.). The implementation of the Programme (annual monitoring and report production) is carried out by Dzelkva Ltd. The Biodiversity Monitoring Programme has been approved by the Government in May 2004, following discussions with the Project and involving the governmental Environmental Advisors.

Briefly, the floral component of the Biodiversity Monitoring Programme focuses on three habitats (wetlands, forests, and high mountain meadows), as well as on individual rare species. For the faunal component, multi-taxa monitoring is conducted with emphasis on IUCN and Georgia Red-listed species that occur in the vicinity of the ROW (as determined by the ESIA and as confirmed by the pre-clearance surveys).

The subject of biodiversity monitoring was reviewed extensively by an IEC team ecologist during the fifth mission in June 2005. During and after the fifth IEC trip,

this subject was debated between BTC and IEC at length and, despite disagreement on several technical aspects related to the annual monitoring, a consensus was reached that BTC would provide a separate document that could provide further information to help fill the gaps in the annual monitoring reports and would be used as a reference for all future annual reports produced under the Biodiversity Monitoring Programme.

Pre-clearance surveys are, to certain extent, related to defining a scope for biodiversity monitoring. During the previous IEC mission, the results of the pre-clearance faunal surveys did not always appear to be translated into actual mitigation measures that were considered during pipeline construction, for which a Level II non-compliance was assigned. This non-compliance is considered to be pending until the results of additional monitoring of the spadefoot toad breeding pond at KP 40 can be reported; and corrective actions identified with regard to Caucasian mud-diver's breeding ponds at KP 187 is implemented.

2.9.2 Ecological Management - Observations

The IEC was not able to conduct a detailed review regarding the progress of the biodiversity monitoring program given the relatively short duration of this mission. The IEC was informed that with respect to the Spadefoot toad breeding pond at KP 40, BTC disagrees that pipeline construction had a direct impact on this pond, but it plans to continue the monitoring of the pond as part of the annual biodiversity monitoring program to gather more comprehensive data. With respect to Caucasian mud-diver breeding ponds at KP 187, construction was found to have impacted breeding ponds located within the ROW and BTC has committed to create an additional artificial pond off of the ROW prior to spring 2006. A suitable location for a pond has already been identified by a zoologist and plans are being made to contact the landowner of this site and proceed with creating the pond at this location.

IEC was informed that, as agreed during the June 2005 mission, the "separate document" providing additional clarifications to the annual biodiversity monitoring reports will be produced. BTC is considering to present this document in the form of an Appendix to these annual reports.

2.9.3 Recommendations

1. For both the floral and faunal monitoring, more specific objectives should be defined for each of the monitoring components (i.e., for each taxon and each vegetation community). Objectives should be consistent with limited baseline data and the design of the monitoring program, which does not lend itself to inferential statistics. A distinction should be made between the overarching 'goal' of the monitoring program and the specific objectives needed to track monitoring progress over time. The overall goal and the specific objectives should be listed in each annual report (repeat recommendation).

2. The following information should be incorporated into the separate document that would be used as a reference for all future annual biodiversity monitoring reports: justifications for all indices, site selection, sampling protocols, and statistical tests; citations for methods; all available baseline data in a concise format so that an independent reviewer will be able to verify the results; and separate figures that clearly show the monitoring design at the different sites.

Justifications (for indices, sampling protocols, statistical tests) should be specific to the population in question. Clear explanations of why a particular method was chosen (supported with citations, when necessary) are recommended. In the annual reports, deviations from these methods should be discussed (and justified) as necessary (*repeat recommendation*).

3. BTC should implement the corrective actions discussed in the fifth IEC report to mitigate the impacts in the Caucasian mud-diver breeding ponds at KP 187: to create one artificial pond; to map the habitat of the new mud-diver breeding pools with respect to connectivity to existing waterways (streams) to assess its stability and to evaluate if this habitat can be considered ‘compensatory’; and, if the pools do not sustain future breeding, to consider other mitigation measures (*repeat recommendation*).
4. BTC should implement the actions discussed in the fifth IEC report regarding the spadefoot toad habitat at KP 40 and KP 11 (*repeat recommendation*).

2.10 OFFSET MITIGATION AND ENVIRONMENTAL INVESTMENT PROGRAMMES

During the mission, the IEC was updated on the status of the Offset Mitigation Measures and the Environmental Investment Programme (EIP) in Georgia. The following paragraphs, developed based on draft quarterly progress reports from EIP Implementing Partners, present the information provided by the Project for the components of the EIP that are being implemented. It must be noted that the Project information below are reported only and not commented by IEC, since direct observations on the effectiveness, progress, achievements, quality and issues relevant to each individual components are not made by IEC during the field visits.

- **Caucasian Black Grouse (CBG) Research, Monitoring and Conservation Management:** As part of a population biology study, monitoring of 14 tagged birds is continuing. The GIS data input and analysis for the Current Distribution and Habitat Requirements Study is complete. Data processing for the Species Range Fragmentation Pattern and Connectivity Level Study is complete. A draft version of the Monitoring Plan has been developed and some workshops held. The book ‘Economically Valuable Birds of Georgia: Guide-Book for Natural Resources Managers’ is ready to be published and distributed. A Project Performance Review was conducted by a monitoring expert, who will continue to review the prepared reports and materials.

- **Ecosystems and Species Conservation in Georgia: Brown Bear:** Based on field data collected, there were at least 16 adult bears in Borjomi-Kharagauli national park, and at least 10 bears in the Bakuriani area last autumn. Field work in Bakuriani, Tetrtskaro and Gori forests was undertaken as part of the assessment of the scale of forest exploitation and degradation. Work continues on development of a habitat map based on GIS data, field data and a desk based review of existing data. Public awareness programs have been started.
- **Management of Small Grants for NGO Capacity Building along the BTC ROW:** In the beginning of September 2005 the Sub-Grant Agreements for the selected NGOs to implement the First Round of EAGs were prepared and signed. Some workshops were held, and the development of a plan on project visibility, including area-wide public and promotional campaigns, has been initiated. Monthly program and grant monitoring visits to Intermediary Support Organizations have been conducted.
- **Enhancement of Environmental Education around Borjomi Kharagauli National Park:** 28 Nature Clubs submitted proposals and three projects were selected for grants: Borjomi School Project; Ani's Nature Club; Varkhani Secondary School Project. Funding is to be provided to Nature Clubs for 9 projects demonstrating environmentally friendly agricultural practices, ranging from tree nurseries to bee keeping. A contract was signed with a local NGO to run a two-week environmental summer camp for children. Training was given to 89 teachers of 33 secondary schools covering related subjects.
- **Environmentally Sound Livestock Farming (ELF):** Diseases with clinical characteristics of foot and mouth diseases and necrobacillosis in the community of Tsakhani were identified. The situation requires improved collaboration with the State veterinary department and discussions are reported to take place. Training materials for veterinary and livestock feeding activities procured and distributed in 14 villages of Adigeni, Borjomi and Akhaltsikhe districts. Two models for improving value of natural pasture and hay lands composition were developed and approved for further implementation. 17 individual schemes to construct manure storage facilities have been developed. In addition to the original 56 demo farmers, a further 28 demo farmers have been selected and co-operation agreements signed. Demo-farmers have been provided with the medicines and training to treat helminthes disease and over 950 livestock have been treated. A draft List of veterinary medicines and equipments for service cooperatives and state veterinary service has been developed. Preliminary activities to establish service cooperatives have been initiated.

In addition to the projects being implemented, BTC provided information on three projects considered to be in either the planning or definition stage:

- **The Forest Eco-compensation Programme** aims to recreate similar forest habitat to that affected by the pipeline construction. This program has not moved forward. The basic issue that has not been resolved between MoE and BTC is the amount of compensatory reforestation for unit damage. The MoE indicated that the meeting with IEC constitutes their notification to the Lender Group of their desire to have the Lenders participate as mediators. BTC indicated their concurrence with this concept. BTC also reported that the issue has been brought to the attention of its top management.
- **Management Planning for Ktsia Tabatskuri Managed Reserve.** BTC reports that significant progress has been recently achieved with the launching of a Feasibility Study of Management Planning for this program undertaken by an ecological consultant in September 2005. The purpose of this study has been to identify the issues/challenges normally associated with developing a management plan. BTC submitted this study to MoE for their consideration.
- **Sustainable Forest Pilot Project.** Initial discussions have been held with an International Agency to partner with their forestry initiative in order to get this EIP project started. BTC reported that the project is still at an early stage of development.

2.11 CULTURAL HERITAGE MANAGEMENT

Cultural heritage management is predominantly the responsibility of BTC. The governing procedures are defined in the ESAP, Appendix D as *Archaeological Late Finds Protocol*. The definition of significance and actual excavation of sites is the responsibility of the Centre for Archaeological Studies (CAS), the Georgian government's cultural properties review and compliance agency, as specified in the *Georgian Law on Cultural Protection*. SPJV is responsible for reporting chance finds in the ROW and stopping work until the BTC Cultural Heritage Field Team (CHFT) can evaluate the situation in association with CAS and provide appropriate guidance. For chance finds outside the ROW, SPJV is responsible for implementing the Late Finds Protocol (LFP).

2.11.1 Cultural Heritage Management - Observations

At this stage of the BTC Project, nearly all of the archaeological field effort is associated with the SPC Project and this effort is near completion with only one location being excavated on the Turkish border. Nevertheless, "*some compensatory excavations may be warranted at KPs 53, 77+600, 80+750, 85+300, 120, 165, 193, 211, 212 and 249*", as indicated in the BTC September Qualitative Report. These locations are where site damage occurred during the pipeline construction process. The compensatory excavations are associated with discoveries made during SCP construction, where damages could be associated with the BTC Project, the SCP Project or both. In accordance with the Project Late Finds Protocol, negotiations are

underway with CAS to determine the amount of compensatory excavation and appropriate treatment strategies, based on the degree of damage that will be assessed in the field when CAS and BTC archaeologists examine the sites together. The actual degree of damage will not be known until compensatory excavations have started. From the point of view of the IEC, this potential damage is not a failure of the system, but is a fairly normal part of a cultural heritage program. This situation is anticipated as part of the Late Finds Protocol for Georgia, which gives procedures for “Compensatory Post Construction Data Recovery.” The IEC observed that the compensatory programs are proceeding as planned.

Another IEC concern is that construction outside of the ROW (borrow pits; access roads) has not been treated with the same degree of study and treatment as the main pipeline ROW. The BTC September Qualitative Report for Georgia states the following – *“CAS is threatening legal action because the project has failed to address site damage on temporary use areas in accordance with heritage regulatory frameworks. This is a contractual obligation of SPJV; however it has not been met to date.”* The IEC did not visit areas where this type of damage has taken place, but understands from BTC that a Middle Bronze Age kurgan located on the main access between Tetrtskaro and Tsalka near Access 102 was bisected during road improvements and that compensatory excavations have not been undertaken. A similar situation is reported to exist on the access between Tsalka and Tabatskuri. It was reported that the BTC archaeologists did not have contractual responsibility to work at non-ROW locations. This situation is a significant non-compliance as the “Late Finds Protocol” is intended to cover the ROW *or other project construction areas*. BTC Commitment F34 states: *Account shall also be taken of cultural heritage in the location of new facilities or improving existing ones, e.g. access tracks.* An assessment of the damage significant at the locations under responsibility of SPJV is not possible until there is compensatory excavation. If the damage is important and/or took place knowingly, this would represent a serious breach of Project commitments to protect archaeological sites and highlight that it is not good practice to distribute the responsibility for cultural heritage management. The issue will be investigated by the IEC during the next visit (*Level II Non-compliance, Archaeological Late Finds Protocol – Georgia and Commitment F34*).

A major accomplishment achieved by the BTC/SCP Projects in October 2005 is the conservation of one the Phase III sites, the 9th century Tadzrizi Monastery, for the Ministry of Culture, Department for Protection of Monuments in Georgia (Monuments Department). This work was monitored and administered by the CHFT and represents a good will community/public relations effort by BTC/SCP, rather than mitigation for adverse project impacts. This effort is now complete and the IEC visited the completed restoration, which is now being used by the local community for worship and weddings.

Another significant accomplishment by the BTC/SCP Projects is the display of archaeological artifacts encountered during construction at the National Museum in

Tbilisi as part of the First Oil celebrations held on October 12, 2005 with the display continuing forward. This is an extensive, high-quality display that represents an important first step in the dissemination of the archaeological findings associated with the more significant discoveries of the two projects.

Technical reports of the BTC archaeological excavations reviewed by IEC consist largely of a photo journal of artifact recovery and features excavated. These reports need to be the technical foundation for organized analysis and interpretation, which has not yet taken place. High-quality comprehensive technical reports still need to be prepared.

2.11.2 Cultural Heritage Management - Recommendations

1. Identify if there has been any impact to cultural heritage sites in areas of soil disturbance outside of the ROW (access roads; borrow pits) and provide mitigation as appropriate and allow for possible compensatory excavations (repeat recommendation). It is not apparent that BTC has exerted pressure on SPJV for them to fulfill their obligations for cultural heritage. If significant damage has been unreported, which appears to be the case if CAS is threatening to sue SPJV, this represents a serious breach of Project commitments to protect archaeological sites.
2. As noted both previous mission reports, BTC will need to take care, together with CAS, that the analysis and reporting are consistent with international standards. These activities will carry over into Operations. This is a repeat recommendation and consistent with the main recommendations provided by Oxford Archaeology.
3. The BTC and SCP projects should collaborate to prepare a post-construction program that will cover the topics of interpretation, curation and reporting of the overall findings. It should be recognized that there will be different audiences for both local and international levels and that documenting the findings within regional context for an international audience is not a trivial effort and could easily require about two years to complete. A possible mechanism for disseminating information would be to prepare comprehensive monographs for a select number of the most significant sites, as performed by BTC in Turkey. The First Oil display at the National Museum is a good first step in presenting some of the discoveries to the public. Consideration should also be given to expanding and varying the content of the displays at the National Museum. To serve the scientific community, consider setting up a website in cooperation with CAS.
4. The efforts being made by BTC to enhance the capacity of CAS are appropriate and the measures being taken need to be continued. Recognizing that the BTC/SCP projects are the most comprehensive archaeological programs ever conducted in Georgia, CAS should be fully equipped to analyze and interpret

the excavated findings to the level of international best practice. Their work products to date do not reach the level of best practice and this organization needs technical support from the Project, new equipment, support for obtaining radiocarbon dates, construction of a suitable curation facility, etc.

5. The Project should work to make sure that the people involved with the field work are the same as those that are involved with the interpretation and reporting (repeat recommendation).

2.12 COMMUNITY LIAISON

The Community Liaison Teams of BTC and the SPJV are responsible for communicating BTC Project information to the general public and, specifically, the community in areas along the pipeline route, as well as receive and transmit community information to the BTC Project. The overall objective for the community liaison is to build a positive, non-dependent relationship between the BTC Project and the local communities. The BTC social programs are managed by a Social Programs Manager supported by two field social coordinators, one for each Spread, who in turn are supported by five CLOs. SPJV has demobilized part of their social staff since the June IEC mission. Five CLOs, three for Spread 1 with one assistant and two for Spread 2 with two assistants for Spread 2, now report to the Community Relations Manager.

2.12.1 Community Liaison - Observations

Community relations for the most part no longer relate to the BTC project as the pipe is now entirely in the ground. The same is true for the SCP as the number of complaints is diminishing in proportion to the completion of that project. Most construction related grievances continue to be related to claims of vibration damage from the passage of trucks, road damage, disruption to irrigation channels, the maintenance of access roads and the use of borrow pits. One issue related to the increased turbidity at the village of Tsemi is discussed in Section 2.8.

2.13 HEALTH AND SAFETY

Limited safety issues associated with the BTC pipeline still remain given that the pipeline is now constructed. At this point it should be recognized that the BTC organization made extensive effort to properly manage the safety performance of the different parties involved during the Project development through the establishment of a comprehensive Health and Safety (H&S) Management system. Field observations during this mission related to some safety infractions were relevant to SCP construction (not included in the IEC scope of work) and were relayed directly to SCP management in the field. A noteworthy accomplishment in the health field noted during this mission has been the establishment of an HIV/STD program implemented through an NGO.

2.14 MEETING WITH GOVERNMENTAL OFFICIALS

Following a request by the Georgian Ministry of Environmental Protection and National Resources (MoE) to BTC, a meeting was held between the IEC and representatives from the MoE and the Georgian International Oil Corporation (GIOC). This was the second meeting held between the IEC and the MOE/GIOC.

The main goals of the meeting from the point of view of the MoE were as follows:

- Present topics of concern they have in their relations with BTC; and
- Request that the scope of work for the IEC include regular meetings with them.

Although several points are outside IEC's scope of work, as pointed out during the meeting, the following topics were presented by the MoE to the IEC:

- Conditions for the approval of the oil spill response plan;
- Optical Fiber Vibration Sensors testing;
- Construction activities, and in particular the Sakire landslide mitigation measures;
- Reinstatement, including ROW winterization, and assessment of the Biorestitution Specification Plan and Biorestitution Method Statements submitted by the Project;
- Rock disposal;
- The Forestry Eco-compensation Program, as discussed in Section 2.10 above;
- Environment Management Plans for the pipeline Operations Phase;
- The Environmental Investment Program (EIP), specifically the following three components: Ktsia-Tabatskuri Managed Reserve Management Planning, Borjomi-Kharagauli National Park Support Zone; and Sustainable Forest Management Pilot Project; and
- Groundwater Monitoring in Tsalka and Ktsia-Tabatskuri section.

3 TURKEY

The BTC Project in Turkey encompasses 1,076 km of pipeline extending from the Georgia - Turkey border in the Posof District (Turkgozu border gate) to the Ceyhan marine terminal on the Mediterranean Sea. From the Georgian border, the pipeline ROW crosses the provinces of Ardahan, Kars, Erzurum, Erzincan, Gumushane, Sivas, Kayseri, Kahramanmaras, Osmaniye and Adana, terminating at Ceyhan. The BTC Project runs approximately parallel to the recently completed (2001) East Anatolian Natural Gas Pipeline (NGPL) for about 30% of its length (approximately 330 km), between the cities of Erzurum and Sivas (Lot B). The planned BOTAŞ Gas Pipeline is parallel to the BTC pipeline at the Georgian border, but diverges until it terminates in Horasan.

The BTC Project in Turkey is broken down into three Lots from the Georgian border to Ceyhan: Lot A (278.0 km), Lot B (465.4 km) and Lot C (332.8 km). Each Lot effectively operates as a separate construction project undertaken by an EPC Contractor as indicated below:

Lot A: KP 0 – 278

Contractor: TEPE – Nacap JV (TPN) – contract terminated in January 2005 by BOTAŞ, which is now directly in charge of construction.

Spreads: 3, plus one mini-spread

Block valves: 15

Major crossings: 3 rivers, 6 roads, 3 railways

Camps: 3, main at Kars at KP 115, 2 spread camps at Hanak (closed) and Köprüköy (closed).

Lot B: KP 278 – 744

Contractor: Gunsyl-Haustadt & Timmerman-Max Streicher-Alarko JV (STA)

Spreads: 3

Block valves: 24

Major crossings: 9 rivers, 13 roads, 3 railways

Camps: 1 main (Kova at KP 527 in Spread 1), 4 spread camps (Iliça – decommissioned - and Çardikaya in Spread 1; Koyunkaya and Sivritepe in Spread 2 - are being decommissioned)

Lot C: KP 744 – 1076

Contractor: Punj Lloyd - Limak JV (PLL)

Spreads: 2 + 34" spread

Block valves: 13

Major crossings: 10 rivers, 6 roads, 1 railway

Camps: 1 main (Azizli at KP 1037), 3 spread camps (Andirin, Yesilkent, Orensehir, all three are being decommissioned).

Pump Stations

Contractor: TEPE – contracted terminated by BOTAŞ in April 2005, which is now directly in charge of construction.

Pump station PT1 at KP 21.3

PT2 at KP 278

PT3 at KP 442 and

PT4 at KP 744

Pigging station IPT1 at KP 944

IPT2 (under construction supervision by Lot A)

The BTC pipeline terminates at the Ceyhan Marine Terminal (CMT), which includes 2.6 km long jetty and offshore loading facility, seven one-million barrel storage tanks, a central control building, housing compounds and administration, and a fiscal metering system (Contractor TEKFEN).

The October 2005 visit concentrated only on reviewing progress of reinstatement of the pipeline ROW in Lots A and B. Documentation pertaining to environmental, social and health and safety management was collected and is reviewed in this report, but no specific field visits to verify the data were made as in previous visits.

No visits were made to either Lot C or to the Ceyhan Terminal (CMT) in October 2005. Only PT-3 of the Project Pump Stations was visited to assess progress of reinstatement of three inert waste disposal sites.

A detailed itinerary of the October 2005 visit is provided in Appendix A.

3.1 CONSTRUCTION STATUS

Construction has almost concluded at Lots A, B and C and the fixed facilities in anticipation of delivery of first oil, now estimated in January 2006. BTC provided the following information on construction progress as of October 2005.

- Lot A – 99.61%
- Lot B – 98.96%
- Lot C – 100%
- Stations – 98.05%
- Terminal onshore – 100%

- Terminal offshore – 100%
- SCADA systems – 86.03%
- Telecom systems – 98.36%

Reinstatement Progress

The Project provided a summary of reinstatement progress as of October 2005.

	km	Phase 1	Phase 2	Phase 3
Lot A	278	100.0%	100.0%	100.0%
Lot B	465.4	100.0%	100.0%	92.1%
Lot C	332.8	100.0%	100.0%	100.0%

Notes. Punch listing and maintenance activities ongoing

Phase 1: recountouring; Phase 2: top soil spreading; Phase 3: biorestitution

3.2 ENVIRONMENTAL AND SOCIAL MANAGEMENT ORGANIZATION AND RESOURCES

3.2.1 Observations

In Turkey, a turnkey contract was signed between BTC and BOTAŞ who subsequently awarded EPC contractors the construction work in each of the three Lots, the Pump Stations, and at the Ceyhan Marine Terminal. BTC maintains an assurance role over both BOTAŞ and the EPC contractors.

Since the time of last visit in June 2005, the number of Environment and Social and Health and Safety personnel continues to decrease as construction activities are concluding.

BTC

There have been changes in the BTC License to Operate (LTO) organization since the June 2005 visit. There are no LTO advisors remaining in Lot C. There is now one LTO advisor in Lot B and two LTO advisors remain in Lot A.

The Lot A and Lot B reinstatement specialists continue their assurance role in both Lots.

Since March 2004, the BTC assurance organization, through their programs of auditing, inspection and monitoring, continues to focus on formal compliance of documents and activities completed by BOTAŞ, supplemented by field monitoring of the commitments by the LTO Advisors.

BOTAŞ

There have been minor changes to the BOTAŞ environmental organization as of October 2005. An Environmental Manager and a Community Relations Manager oversee activities of the BOTAŞ site teams from Ankara. Three Environmental Supervisors (Lot A, Lot B and Lot C/CMT) report to the BOTAŞ Environmental Manager and to each BOTAŞ Site Manager. At the Pump Stations, four environmental monitors report to the BOTAŞ Site Manager and Environmental Manager.

Community Relation Supervisors are in place in each Lot and for the Pump Stations, with functional reporting to the Community Relations Manager in Ankara.

A Turkish consultant firm, CINAR, continues to provide third party monitoring and technical support in environmental management, reinstatement and ecological issues.

Pump Stations

Since April 2005, BOTAŞ has assumed the EPC role at the Pump Stations and there has been a complete integration of TEPE and BOTAŞ personnel. Former TEPE personnel are now contracted to BOTAŞ through a third party service provider, BILEN.

As of October 2005, there are a total of four environmental personnel at the Pump Stations. A Lead Environmental Monitor oversees one Environmental Monitor/Engineer at each of PT1, PT2 and PT4/IPT1. The Lead Environmental Monitor also is responsible for PT3. From the organization chart provided, it is understood that the environmental monitor of Lot A is also responsible for IPT2 environmental monitoring.

The Community Liaison Manager has left the Project. According to the organization chart provided by the Project, each of the environmental monitors now also is responsible for a CLO function, reporting directly to the BOTAŞ site manager and the BOTAŞ CR manager in Ankara.

BOTAŞ – Lot A

In June 2005, IEC was informed that there were a total of 11 environmental staff in Lot A, including a new Environmental Supervisor, four environmental monitors, one Reinstatement Engineer, one Archaeological Monitor, two Ecologists, a Waste Management technician and a Pollution Prevention technician.

In October 2005, the Environmental organization in Lot A has been reduced to five persons, consisting of one environmental supervisor, one environmental monitor, one ecologist, one archaeological monitor and one Waste Management/Pollution Prevention technician.

CINAR remains in an advisory and consultative role on environmental related matters.

The three reinstatement contractors previously working in Lot A have been demobilized.

There are now three CR personnel in Lot A, one less than in June 2005.

STA – Lot B

In June 2005, IEC reported that there has been a successful coordinated working relationship between STA and BOTAŞ Environment, CR and H&S personnel. This integration was noted again in October 2005, despite reductions in personnel, particularly within STA.

As of October 2005, STA has five environmental personnel, including one environmental manager, one environmental engineer and one WWTP technician in Lot B (reduced from six staff in June 2005). The environmental manager also oversees a reinstatement crew consisting of one environmental inspector, two ecologists, one soil expert and four reinstatement foremen.

BOTAŞ now has one Environmental Supervisor, one environmental monitor, one environmental expert, one Archaeologist, and one reinstatement expert (reduction of one position). CINAR provides two additional environmental staff.

The organization of CR function is as follows. STA has one Community Liaison Manager and one CLO, while BOTAŞ has one CR supervisor and one CR officer. This is a reduction of two CR staff since June 2005. Both CR teams continue to work together as a coordinated unit.

3.2.2 Recommendations

1. BOTAŞ and BTC should continue to make sure that sufficient resources are allocated in both Lots to meet the needs for reinstatement monitoring and aftercare, and preparing for land exit.
2. BTC and BOTAŞ should make sure that adequate CR personnel will be available to deal with issues of social closure and land exit across all three Lots and Pump Stations in Turkey. This particularly applies to the Pump Stations where it appears that one individual now is responsible for both environmental and social functions at each station.

3. Although a transition management strategy is being developed by BTC and was again discussed during the October 2005 visit, IEC repeats the recommendation that the practical implementation of the transition plans and familiarization of BTC and BOTAŞ International Ltd (BIL) operations personnel along the ROW should be initiated as soon as possible to ensure ongoing completion of ESAP commitments from construction through to operations. This is particularly relevant to aftercare and monitoring of biorestitution efforts through Provisional Acceptance to Work Completion and also to allow for a standardized approach to land exit.
4. As the Contractor teams are now in the process of demobilization across all three Lots, and soon at the Pump stations and CMT, the Project should make efforts to ensure that the data, information, and field experience of E&S and H&S construction staff are fully transferred to operations. This data management exercise should form part of the transition plan to BIL.
5. The Project should consider a lessons learned exercise regarding environmental and social management in Turkey. This should also be done as part of the transition to Operations.

3.2.3 Non-Conformance Records (NCR) Register

The latest NCR Register was provided by the Project during the October 2005 visit.

The following is a summary of the total number of NCRs issued by BOTAŞ and BTC.

As of October 2005, 25 NCRs still remain open in Lot B raised by BTC and 0 NCRs raised by BOTAŞ. The Project should work together to resolve these discrepancies in the number of open NCRs in Lot B and ensure that they are closed as soon as possible.

NCR Register – October 2005

Facility	Total NCR		Open NCR	
	BOTAŞ	BTC	BOTAŞ	BTC
Lot A	74	6	0	0
Lot B	92	126	0	25
Lot C	45	14	0	0
PT1	15	5	0	0
PT2	28	NR	0	NR
PT3	17	NR	1	NR
PT4	25	16	0	0
IPT1	4	NR	0	NR
IPT2	NR	NR	NR	NR
CMT	14	2	0	0

NR – No records taken – data supplied by BOTAŞ as of October 2005

3.3 CONSTRUCTION CAMPS, INFRASTRUCTURE AND SERVICES

The review of construction camps, infrastructure and services focuses on construction operations that potentially have an impact to surrounding infrastructure, natural resources, and community and household assets, including land, roads, and irrigation systems. In addition, the review of this topic includes camp potable water supplies and general aspects of camp management.

3.3.1 Construction Camps – Observations

There were no inspections conducted of operating construction camp facilities in October 2005. IEC team visited the site of the Köprükøy camp in Lot A where decommissioning activities had been initiated.

3.3.2 Potable Water Testing at Camps

In February 2005, IEC raised a repeat Level II non-compliance with BOTAŞ Environmental and Social Management Plan over a failure of poor QA/QC control and limited procedures developed by the Project for potable water testing.

In response to the above, IEC was later informed that the Project had taken some actions regarding potable water testing at camps including the following:

- Laboratory audits have been undertaken by ÇINAR staff at Erzurum and Adana Hıfzıssıha Water Quality Laboratory; Sivas Provincial Control Laboratory; Çukurova University Environmental Engineering Department Water Quality Laboratory; Sivas Public Health laboratory.
- An analysis was conducted to improve consistency of suite of chemical parameters among the different facilities and organizations. Since the beginning of June, there appears to be an improvement, although sampling procedure and quality control are still unclear and require a verification from BTC.
- Reverse osmosis treatment was introduced at Kars Camp to improve potable water quality and minimize any potential human health risks.

In June 2005, IEC rescinded the non-compliance, recommending that BTC undertake an independent evaluation of quality control and quality assurance procedures for potable water sampling and testing, including laboratory assessments.

In October 2005, IEC received additional water quality data from Lot A and Lot B, but no follow up from BTC on the above recommendation.

3.3.3 Construction Camps and Infrastructure – Recommendations

1. The Project should ensure that due diligence evaluations are carried out at all decommissioned camps and facilities (including all pipe stock yards and construction yards used by the Project) to confirm that there are no outstanding environmental liabilities associated with improper waste disposal procedures or spills, and that, once reinstatement has concluded, the land is turned back to the respective owner in pre-existing and environmentally safe conditions. Adequate due diligence protocols should be developed by BTC, including collection of quantitative data to demonstrate the absence of any potential contamination, prior to any significant earth movement at the site. In case that pollution is found, it is responsibility of the Project that adequate clean-up is defined and implemented.
2. In June 2005, IEC noted the efforts of the Project to improve the quality and consistency of potable water testing across all Lots and fixed facilities in Turkey. It was recommended by IEC and acknowledged by BTC to undertake an

independent evaluation of quality control and quality assurance procedures for potable water sampling and testing, including laboratory assessments. IEC did not find any specific progress on this issue and therefore, further clarification by the Project is needed.

3. Even if the visit of the terminal (CMT) was not part of this mission, in June 2005 IEC requested clarification regarding the status of the temporary harbor. As no response has yet to be provided, the Project should clarify its position on the future of the temporary harbor at the CMT. The minimization of Project footprint should be a guiding consideration for its removal. Any other decision will require a full environmental and safety assessment considering potential changes to marine traffic patterns, potential water and sediment contamination issues, underwater noise and vibration disturbances, and other relevant issues.

3.3.4 Aggregate and Excess Material Management - Observations

IEC acknowledges the progress made by the Project to adequately document and manage aggregate use, while ensuring that environmental and social assessments are completed prior to extraction. Aggregate registers (including quarries and borrow pits) are now in place in all three Lots, Pump Stations and the CMT. BTC has also completed a survey of aggregate sources in Azerbaijan, Georgia and Turkey. In October 2005, the focus of IEC shifted to assessing the effectiveness of reinstatement and biorestitution efforts.

Lot A

IEC was informed that all seven new borrow pits opened in Lot A have been reinstated. Several instances of borrow pit reinstatement were observed during the ROW visit and all appeared to be well done.

An updated Quarry register was provided as an appendix to the Site-Specific Reinstatement Plan during the Lot A visit in October 2005. According to data, nine quarry sites were identified as red (Project impact high: site should be subject to Project attention). Of these nine quarries, 7 have been reinstated and 2 were previously existing.

IEC also notes that gravel operations are ongoing at the Posof Municipality gravel pit at the Posof River crossing. Based on available information, it is not certain as to whether the Project (PT1) continues to use this gravel supply source.

Lot B

In October 2005, IEC received an updated quarry register for Lot B and was informed that five of six “quarries” have been reinstated. As noted in the June 2005 report, IEC examined the Quarry Register and found that it is divided into two parts: existing quarries and aggregate supplies. The aggregate supplies register identifies

what quantities of aggregate have been extracted in Lot B, but does not specifically indicate the source as being a quarry or a borrow pit.

Pump Stations

No analysis was made of aggregate use at the Pump Stations in October 2005. Instead efforts focused on evaluating reinstatement of three inert waste materials piles at PT3.

In October 2004, IEC recommended that the Project develop a reinstatement plan for inert material disposal sites at PT3, recognizing the sensitivity of ESA 19 and ensuring compliance with specific commitments made in both the Ecological Management and Reinstatement Plans for Turkey. In February 2005, IEC assigned a repeat Level II non-compliance because, despite some progress in regard to planning, expeditious corrective action and site specific attention had not been implemented in the field. In June 2005, IEC received the restoration method statements prepared by CINAR for the inert material disposal sites (dump site areas) at PT1, PT2 and PT3 and noted they were incomplete with respect to schedules and resources.

In September 2005, IEC reviewed additional documentation in support of the planned Class III MOC for the restoration of three subsoil material disposal sites at PT3. The Project response to this review is summarized as follows:

- Subsurface drainage calculations and the designed maximum slope angle to ensure slope stability as follows:
 - Subsurface drainage has been designed according to the hydrological and hydrogeological characteristics of the material as described in Section 6 of the WMS using standard calculations. The spacing density of the sub-horizontal drainage is a function of parameters such as effective rainfall and the hydraulic conductivity of the medium and deemed sufficient to maintain adequate drainage of the medium to prevent a build up of pore water pressures which are commonly associated with unstable slopes.
 - The designed maximum slope angle for a clay loam soil should be maximum of 50%. The steepest angle envisaged as part of the landscaping work, is 42 % (see Section 5 of the WMS).

A final compaction analysis will be undertaken for the reformed slopes.

- Public consultation: BTC informed IEC that a meeting was held by CR supervisors and PT3 site manager with Başköy villagers in May 2005. The site manager gave information about the site restoration plans to villagers. No concerns were raised by the Muhtar. In addition to compensation, villagers requested construction material from the project for their new government

house. The Site Manager accepted this request and construction material was provided to Başköy village;

- The following HS documentation was in place prior to WMS implementation:
 - A method statement was prepared. Work Method Statement For Re-instatement Activities on Slopes Greater and Less Than 15° (Document No: TKM-MST-CNS-PT3-001)
 - The work is controlled by PT3 HS teams as part of the PT3 works
- The aftercare and monitoring plan for the sub-soil areas will be incorporated into the overall monitoring plan for all on-BTC ROW and off-BTC ROW areas. Aftercare and monitoring of the subsoil areas will also include the following: settlement; slope wash from improperly placed berms; slumping and soil movements from slopes; loss of stored topsoil, subsoil or cuttings; sediment run-off into water bodies; re-vegetation success; and biorestitution.

During the October 2005 field visit, IEC noted that work had begun at all three inert waste pile locations at PT3. IEC observed the following:

- Work is underway at all three sites;
- The contractor is Tek-İmas, under BOTAŞ supervision;
- The sites are being reinstated to natural vegetative conditions and landscape contours:
 - DS-4 – work is almost completely finished (subsoil reinstatement) and installation of final drainage control and replacement of topsoil is pending.
 - DS-5 – was started first and work was halted due to snow at PT3. Material is being removed from below and is being placed on top.
 - DS-1 – working from north to south.

IEC is pleased that work is underway to reinstate these three sites at PT3.

3.3.5 Aggregate and Excess Material Management - Recommendations

1. IEC notes the procedures for reinstating new borrow pits in both Lot A and B are consistent with Project documentation and EIA/SLIP commitments. The Project should conduct a post-closure review of all borrow pit sites in Lots A, B and C to verify that final reinstatement status is consistent with established aggregate management procedures across the Project.

2. Clarification is still required on the “quarry” register for Lot B and to verify the status of quarries and borrow pits indicated in the register.
3. IEC notes that gravel operations are ongoing at the Posof Municipal Gravel Pit located at the Posof River crossing. BTC should confirm that gravel operations are not affecting pipeline integrity nor riverbank restoration efforts. Also, confirmation is required that the Project is no longer sourcing gravel from this site.
4. With respect to the reinstatement works on going at the three sites at PT3, BTC should ensure that:
 - A comprehensive monitoring and after-care program is completed, beginning in Spring 2006, to measure the effectiveness of reinstatement and impact on ESA 19. Monitoring should also apply to the integrity of drainage control measures;
 - There are no outstanding issues with either local communities or landowners over the final end land use of these three sites; and
 - The Projects response to IEC’s review of the MOC documentation in September 2005 are implemented and monitored.

3.4 WASTE MANAGEMENT

3.4.1 Non-Hazardous and Hazardous Waste – Observations

Consistent solid waste management practices at all Contractor operations continue to be observed across the Project in Turkey. Waste is routinely collected in Central Waste Accumulation Areas (CWAAs) and segregated into recyclable and non-recyclable components. Non-recyclable domestic and hazardous wastes are shipped to Izaydas treatment facilities.

Waste registers are standardized and adequately maintained, and manifest procedures for waste tracking are in place.

IEC was provided waste registers for Lots A and B and evaluation of this documentation indicates that waste management procedures continue to meet Project standards.

3.4.2 CMT Narlik Inert Material Disposal Site – Observations

In June 2005, IEC raised a Level II non-compliance because of the uncontrolled dumping of Project waste at the Narlik Inert Material Disposal site (*Level II non-compliance CCP Waste Management Turkey, APC1E69, APC3E41*). In October 2005, the Project presented IEC with a TEKFEN Report TKF-REP-ENM-TRG-134

Rev. 3 that is an update of an environmental and social assessment of the Narlik site completed in May 2004 (Rev 0). IEC reviewed the document and had the following observations:

- Although the document is an update, the material presented in it is not clear. There is reference to a second revision, presumably in response to the June 2005 IEC report, but no date is provided as to when this second revision was carried out.
- The report has no conclusion so it is difficult to completely assess the response to observations made in the June 2005 IEC report.
- The document states that only inert waste was sent from the CMT to the Narlik dump site and that other waste present is due to other sources. However, there is no data provided such as waste manifests or summaries of waste volumes to back up this conclusion.
- The document also does not adequately address the comment made by IEC in June 2005 that BTC should also conduct a site assessment aiming at evaluating mitigation options and potential environmental liability. There is no mention in the report about potential environmental liability to the Project.

Therefore, the Level II Non-compliance is not rescinded, until evidences are provided by the Project that only inert waste was disposed of at this location, as discussed below, and, as needed, adequate actions are taken by the Project in order to minimize the potential impact on the site.

3.4.3 Non-Hazardous and Hazardous Waste - Recommendations

1. IEC considers that the updated documents provided by the Project does not adequately address concerns about potential liability at the Narlik site and requests further supporting evidence, in the form of a specific site assessment, and waste manifests or logs from the waste register, that only inert waste was disposed of at this location. Landscaping and residual impact minimization should be implemented on site by BTC or its contractor BOTAŞ.
2. Some garbage (water bottles, lunch waste) was noted on the ROW in Lot A. Both Lots should make sure that all project waste is removed from the ROW and all other reinstated off-ROW facilities as part of final punch list actions.
3. IEC noted that BOTAŞ is initiating decommissioning activities at Köprüköy camp. The Project should ensure that all demolition wastes resulting from decommissioning activities are handled according to established Project waste management procedures. BOTAŞ should ensure that proper documentation of waste disposal measures is in place.

3.4.4 Wastewater Management - Observations

BOTAŞ - Lot A

In June 2005, IEC assigned a repeat Level II Non-Compliance for performance of WWTPs in Lot A (*CCP Pollution Prevention, Commitment ID: CH7E13, APC4E39*). At that time, modifications to the Kars WWTP system were being performed to correct the non-compliance situation, and a topsoil irrigation system had been installed to provide wastewater treatment capability while modifications were being completed. During the October 2005 visit, review of the WWTP performance showed some improvement in complying with BOD limits; however consistency in complying with Project standards remains to be achieved. A Level I Non-Compliance (*CCP Pollution Prevention, Commitment ID: CH7E13, APC4E39*) is assigned until the Project provides evidence that this consistency has been achieved.

STA - Lot B

Lot B staff provided IEC with wastewater data for Kova Camp. The data and the WWTP register shows that the treatment plant is in compliance with Project standards, including oil and grease. During the June 2005 visit, IEC assigned a Level I non-compliance because of the persistent problems to monitor compliance for a complete list of regulated. As oil and grease is now measured, this Level I non-compliance is rescinded.

Stations

IEC was informed of the following topsoil irrigation system performance. Owing to difficulties in obtaining enough volume of sample water using the soil water sampling equipment, a 1 liter water sample was extracted which was used to analyze the water for Coliforms. The following results were obtained:

- PT1 Coliform (total and faecal) analysis (0m = >4800, 0.5m depth = 0 and 1.5m depth = 0)
- PT2: Sample results meet project standards
- PT3: Coliform (total and faecal) analysis (0m = <2800; 1.0mdepth = 0)
- PT4: Coliform (total and faecal) analysis (0m = >4800, 1.0m depth = 0)

3.4.5 Wastewater Management – Recommendations

1. IEC notes that problems of BOD exceedances continue at Kars Camp in Lot A; BTC should indicate what steps will be taken to ensure compliance with Project WWTP discharge standards.

2. IEC notes the action of the Project to improve the reporting on a full set of wastewater parameters, including oil and grease. Similar standards should also be applied to Operations.

3.5 POLLUTION PREVENTION

3.5.1 Observations

The Project has adopted a pollution prevention plan aimed at systematically identifying potential impacts from construction activities and implementing avoidance and mitigation measures to minimize the likelihood, extent or duration of their occurrence, and any associated adverse effects. The mitigation measures include: spill prevention and management; management of existing contaminated sites; groundwater protection; surface water protection; ecological receptor protection; air quality protection and dust mitigation; noise control; soil erosion control and topsoil protection.

Various provisions apply directly to the protection of surface water and groundwater, including permanent fuel and chemical storage, hazardous materials storage, vehicle maintenance facilities, wastewater discharges, run-off controls, and disposal of trench water and groundwater.

IEC did not undertake a review of pollution prevention activities during the October 2005 visit.

3.5.2 Recommendations

1. During the visit to Lot A, IEC was informed that part of the equipment stockyard at Kars Camps had been cleaned up. IEC recommends that proper due diligence procedures be put in place to ensure proper sampling protocols are initiated prior to clean-up and that any outstanding environmental liabilities to the Project can be identified.

3.6 ROW MANAGEMENT, EROSION CONTROL, REINSTATEMENT AND BIORESTORATION

3.6.1 Erosion Control, Reinstatement and Biorerestoration - Observations

Reinstatement Planning and Progress

Reinstatement planning and implementation is an ongoing major concern of IEC. Therefore, the October 2005 visit focused on reviewing the completion of reinstatement and biorerestoration efforts in Lots A and B, prior to the arrival of winter 2005-2006.

IEC has noted that in accordance with the Contractor Control Plan Reinstatement – Turkey, each EPC contractor is responsible to provide specific reinstatement plans for each Lot and fixed facility. Appendix C2 Reinstatement Plan – BTC Project EIA is very clear about the roles and responsibilities of BOTAŞ and the contractors regarding reinstatement. Page 3 of Appendix C2 states the following:

“...BOTAŞ will be responsible for:

- *Contractor management and compliance with the requirements of this Plan;*
- *Consultation with government departments and authorities, non-governmental organizations, landowners and other interested and affected parties during preparation, disclosure and approval of the EIA;*
- *Ongoing dissemination of information about the project to interested and affected parties during construction and operation, including landowners, government authorities, and non-governmental organizations;*
- *Communication to Contractors of requirements and commitments made during consultation;*
- *On-site communication and confirmation of specific reinstatement requirements;*
- *Inspection, monitoring and audit of Contractors performance with respect to reinstatement including the final approval and acceptance of Contractor reinstatement works;*
- *Ongoing monitoring and maintenance of reinstatement works following final acceptance of Contractor reinstatement works;*
- *All training needs of BOTAŞ Staff in relation to this RP.*

The Contractor will be responsible for:

- *Implementation of all reinstatement works in accordance with the requirements of this Plan, Contractors project specific plans and procedures, commitments stated in the EIA and to the satisfaction of on-site BOTAŞ Environmental Inspectors;*
- *The provision of an experienced project manager supported by project personnel who can demonstrate full knowledge of reinstatement and the contents of this RP;*
- *Further development of this RP as it pertains to the Contractors scope of work;*

- *Development and implementation of site-specific method statements;*
- *Development and implementation of site-specific method statements for the reinstatement of all Special Areas ;*
- *Performance of all appropriate pre-construction surveys to facilitate the development of site-specific reinstatement method statements for all Special Areas (see Section 21);*
- *Consultation with local experts, specialist organizations and government authorities in order to ensure the reinstatement works are appropriate to the local, site-specific conditions;*
- *Consultation (in association with BOTAŞ) with each landowner regarding specific reinstatement requirements and fulfillment of these requirements to the satisfaction of the landowner;*
- *Ensuring compliance of Contractor appointed sub-contractors;*
- *All training needs of Contractor Staff in relation to this Reinstatement Plan....”*

In February 2005, a repeat Level II non-compliance was assigned in both Lots A and B for the failure to produce a formal specific reinstatement plan incorporating personnel, machinery needs and realistic completion dates. Based on review of reinstatement plans and field observation in both Lots during June 2005, this Level II non-compliance was closed.

In October 2005, IEC was informed that reinstatement and biorestitution were completed in Lots A and C, and almost completed in Lot B. Field observation showed this to be the case and the following specific findings are made for Lots A and B.

Lot A

In previous missions, IEC has expressed concerns regarding the progress made towards reinstatement in Lot A. In June 2005, IEC was encouraged that a reinstatement plan had been prepared and that initial efforts towards reinstatement and biorestitution were positive. At that time, Lot A Environmental personnel reported that about 63 km (23%) of Phase 1 reinstatement and 47 km (17%) of Phase 2 reinstatement was completed.

In October 2005, IEC was informed that Phase 1, Phase 2 and Phase 3 reinstatement is 100% complete. In addition to the entire pipeline ROW, reinstatement of additional lands has also been initiated as follows:

- Camps – Hanak camp has been turned over to PT1, pipe stockyard cleanup has been initiated at Kars camp and reinstatement is proceeding at Köprükøy camp;
- All 14 stockyards have been reinstated;
- All 7 borrow pits, inventoried by the Project as new, have been reinstated;
- The Separation Plant at Ardahan has been reinstated; and
- 18 of 22 newly opened access roads have been reinstated, and four remain open at the request of the local community (see Access roads for more details).

An Excess Material and Rock Disposal Strategy has been developed for Lot A and excess material has been re-used as follows:

- Side cuts
- Gully remediation
- Drainage repairs
- Rip-rap
- Rock terraces
- Retaining walls
- Borrow pit reinstatement
- Used by villagers and for upgrading of access roads.

IEC was not provided with any data or information regarding the amount of rock and excess material managed via the Excess Materials Strategy, compared to the amount of rock excavated during construction.

Data on biorestitution progress was presented to IEC, including the following information:

- A total of 436,200 m² of jute matting has been installed;
- About 12,000 kg of seed has been used. Five different seed mixes were used according to habitat type in Lot A (alpine meadows, slopes, wet meadows, river banks and shallow soil/rock areas);

- A total of 10,850 trees and 2,550 shrubs have been planted. The Ardahan Environment Foundation is responsible for tree planting and after care; and
- An additional 500 trees (*Pinus silvestris*) have been planted in offset locations.

IEC visited a number of locations in non-agricultural lands of Lot A, and was encouraged by the progress in the field since June 2005. The following observations were noted:

- A punch list has been developed by BTC and BOTAS;
- Good contouring was noted at the side cuts at KP 2+100 and revegetation had been initiated;
- The difficult slope at KP 3.5 has been well reinstated and jute matting was installed. Some improvements to rip-rap installation at the outlet of drainage structures is required;
- At KP 17, removal of the previous talus slope was noted and good attention has been paid to the installation of jute matting and slope breakers;
- At KP 20, the step slope and side cut were adequately restored with respect to natural contours, but drainage control requires improvement;
- At KP 58.5-59, a steep slope with a large amount of previous excess rock was adequately reinstated. Good disposal practices for excess rock were noted and natural revegetation is occurring;
- Some garbage was noted on the ROW in ESA 8 where IEC had previously noted poor attention to waste management on previous missions;
- Reinstatement of the Ardahan Separation Plant was adequately done, but attention to drainage control and waste management is needed; and
- Good use of jute matting and restoration of contours were noted at KP 247.

IEC observed that Lot A personnel have made a significant effort to complete reinstatement and biorestitution works within the 2005 growing season. While the quality of the reinstatement efforts, for the most part, appeared to be adequately done, IEC observed a few cases where routine maintenance, repairs and attention to details are still needed along the ROW. In particular, this relates to the need to ensure integrity of drainage and erosion control measures, such as jute matting, rip-rap and drainage outlets, through the warranty period to operations. Special attention should also be made to final ROW cleanup and waste management, prior to land exit.

Specific Project requirements for the maintenance and aftercare are outlined in Appendix C2 – Reinstatement Plan, BTC Project EIA Turkey.

IEC observed that reinstatement of camps, borrow pits and other facilities in Lot A is well underway. At Köprüköy camp, decommissioning has been initiated by BOTAŞ. IEC understands that no sampling was undertaken to assess contaminant levels in key locations, such as refueling areas, prior to beginning work.

IEC noted that reinstatement of borrow pits and pipe stock yards has been completed, and that reinstatement of topsoil and landscape contours were adequately done.

Monitoring will be required to assess the effectiveness of vegetative cover restoration in the next growing season and identification of erosion-prone zones.

Lot B

In February 2005, IEC assigned a repeated Level II non-compliance in Lot B for the failure to produce a formal specific reinstatement plan incorporating personnel, machinery needs and realistic completion dates. Additional concerns were raised about the delays in reinstatement in high elevation areas, and the failure to implement temporary erosion control measures over the winter months.

In June 2005, IEC noted a positive finding that reinstatement and biorestation efforts were underway in Lot B with significant progress recorded for Phase 1 and Phase 2. The Level II non-compliance regarding the lack of a reinstatement plan was rescinded. Specific concerns were noted pertaining to reinstatement on steep slopes, the fertility of stored topsoil and lack of continued progress with regard to reinstatement of the NGPL.

In October 2005, IEC was informed that overall reinstatement progress was 97.6% and that the remaining 2.4% would be completed within two weeks. Phase 1 and Phase 2 reinstatement were 100% completed and biorestation works 92.1% complete.

IEC was also informed that an excess material and rock strategy was developed to re-use this material as follows:

- Side cuts
- Rip-rap
- Seedling enveloping
- Community requests for rock materials, and
- Road improvements.

No data was provided to IEC indicating the total amount of excess material managed through the developed strategy and the relative allocation of volumes as indicated above.

IEC was provided with a summary of biorestitution works. A total of 151.8 km of the ROW in Lot B has been seeded.

A total of 450,000 m² (16,000 m total length) of jute mat has been used for slope stabilization. Reforestation works include the planting of 37,260 trees (*Pinus silvestris*) and 11,700 shrubs (*Elaeagnus angustifolia* and *Berberis vulgaris*). Seeding was also conducted along the ROW.

During the field visit, IEC was impressed with the progress of reinstatement efforts since June 2005 and that good attention has been paid to detail (contouring, jute mats, slope breakers and restoration of drainage conditions). The following observations were noted:

- At KP 737, the slope has been re-graded following the June 2005 visit and good contouring and placement of jute mat was noted;
- At KP 729, good placement of jute mat was noted using wooden stakes;
- In the Karst area (e.g. KP 612), Phase II reinstatement is complete. Biorestitution is ongoing in the Karst area and IEC was informed that final seeding, installation of jute matting and drainage restoration would be complete in a further 10 days; and
- A significant effort has been made to stabilize steep slopes at KP 456 and 458 using wooden terraces. At KP 456, IEC was informed that the installation of terraces involved 18 personnel over 40 days.

In June 2005, IEC assigned a Level II non-compliance for a failure of the Project to adequately assess topsoil fertility in high elevation areas between KP 458 and KP 449. In October 2005, progress on this issue remains limited: the Project informed IEC that a topsoil and reinstatement assessment of high elevation areas in Lot B has not been completed yet and that it will be completed during the 2006 growing season (*Level II Non-Compliance - CCP Reinstatement, Commitment ID: CH6E6, CH15E3, CH15E7, CH15E10, APC2E143, 410*).

Reinstatement of the NGPL

IEC has expressed previous concerns over persistent and unresolved delays in the reinstatement of the NGPL. During the June 2005 visit, IEC was informed that a decision on the selection of the preferred contractor to conduct the reinstatement works was pending. As of October 2005, imperceptible progress towards reinstatement commitments of the NGPL has been made. During Project interviews,

IEC was informed that BOTAŞ has expressed safety concerns for reinstatement works associated with working over a live gas line and that final responsibility for NGPL reinstatement (both contractual and financial) now rests with BTC and BOTAŞ Corporation.

IEC is disappointed with the response of the Project to address ongoing concerns raised since June 2004 about the failure to meet EIA commitments towards reinstatement of the NGPL. Since that time, resolution of this issue is completely stalled and ongoing high-level meetings between BOTAŞ and BTC concerning the NGPL issue have failed to produce significant progress that can be recorded in the field. A repeat Level II non-compliance was assigned (*Level II Non-Compliance, CCP Reinstatement Turkey, Commitment ID: CH15E5, APC2E15, APC2E16, APC2E17, APC2E18*) as a result of the previous visits.

The EIA and SLIP make specific reference to Project commitments regarding reinstatement of the NGPL as follows.

Background

“...The BTC pipeline will be constructed parallel to the recently constructed East Anatolian Natural Gas Pipeline (NGP) for a substantial part of its length (approximately 400km). Separation distances between the two laid pipes will be typically around 12-18m. Sometimes they will be less and sometimes the two corridors will diverge entirely. However, for most of the parallel length, the separation will be such that the BTC working width will overlap with the area that has been affected by the construction of the NGP.

In a number of areas the existing NGP has caused major impacts in terms of land degradation (erosion, productivity and visual appearance) and at river crossings. In addition there are features outside the BTC working width caused by the gas pipeline construction that could have a negative effect on the BTC pipeline – these include areas of rill and gully formation, water crossings with bank erosion and others ...”, (Page 12 Appendix C2 Reinstatement Plan).

Joint Responsibilities for Reinstatement of the NGPL

Appendix C2 Reinstatement Plan states *“...that it is a BTC Project requirement that the BTC Pipeline will not inherit reputation and soil erosion problems caused by poor reinstatement of the NGP. In order to achieve this, a two-phase approach to reinstatement in the vicinity of the NGP will be adopted. The first phase will involve the NGP construction contractor undertaking remedial reinstatement measures prior to BTC construction to resolve existing problems related to poor reinstatement of the NGP. The second phase will require the BTC Contractor to undertake any additional mitigation measures necessary to ensure the integrity of the BTC corridor in areas impacted, or potentially impacted, by the presence and/or proximity of the NGP pipeline. This second phase will require the BTC Construction Contractor to*

implement reinstatement measures across the two parallel corridors in areas as defined in this Section (e.g. hill slopes, river crossings etc)....”

Additional information is provided in Appendix I of the SLIP that summarizes the results of a field investigation for quantitative assessment of reinstatement of the NGPL. BOTAŞ undertook a reinstatement audit of the NGPL in September 2002 and a follow-up survey in May-June 2004. The SLIP states that “...since the completion of this audit (September 2002), the NGP contractors have undertaken a clean-up of the site. BOTAŞ are due to return to the corridor to undertake a follow-up audit of the works undertaken by the NGP contractor to determine if the reinstatement has been completed to a satisfactory level....”

IEC Comment: The EIA is clear about the responsibility of BOTAŞ to undertake remedial reinstatement measures prior to BTC construction. The May/June 2004 NGPL survey documents provided by the Project to IEC do not make specific mention of any prior clean-up or reinstatement works.

The Project has provided limited evidence that BOTAŞ has in fact implemented the first phase of NGPL reinstatement prior to BTC construction. In the absence of specific confirmation to this effect, and based on field observation and the fact that construction has now concluded in Lot B, IEC considers this to be a serious breach of Project EIA and SLIP commitments established specifically to reduce Project footprint.

Contamination and Liability Assessment

Page 100 of the SLIP (Turkey) states that “...accordingly contactors will be required to include Phase 1 contamination surveys in their pre-construction programs in order to identify such areas (of contamination) prior to construction....”

IEC Comment: The Project has informed IEC that pre-construction surveys to assess existing contamination were conducted for camps and PSAs but not the pipeline ROW or adjacent NGPL corridor.

Reinstatement Commitments

The following reinstatement commitments are presented in Appendix C2 Reinstatement Plan, pages 12-16.

“... A number of conditions that will require specific reinstatement measures to be undertaken prior to or during reinstatement of the BTC Pipeline due to the presence of the NGP pipeline have been identified as follows:

Condition 1: General Reinstatement - The responsibility of the BTC Contractor will be to reinstate the areas defined as ‘BTC only’ and ‘Overlap’ to Pre-Existing Condition A....”

IEC Comment: According to available information the Project has not identified the areas defined as BTC only and Overlap.

“...Condition 2: Adjacent Agricultural Land - In areas where poor reinstatement and damage caused to roads, water supply, arable land, nurseries, pastures, and village infrastructure practices have lead to reputational issues with disaffected landowners, it shall be the responsibility of the NGP Contractor to reinstate these areas prior to BTC construction commencing. If such problems persist into the BTC construction phase, it will be the responsibility of the BTC Contractor to apply corrective action....”

IEC Comment: The Project has not provided any evidence that BOTAŞ has in fact implemented the first phase of NGPL reinstatement prior to BTC construction. Complaints on the lack of NGPL reinstatement are noted in the Lot B complaint register. The Project has not specifically identified where these reputation issues exist with respect to damages to infrastructure and landowner complaints and assigned responsibility for corrective action.

“...Condition 3: Hill Slope Reinstatement - In areas where both parallel corridors are on a hill slope, both parallel corridors will require appropriate mitigation measures (i.e., slope breakers). Interim measures (Pre-BTC Construction) will be the responsibility of the NGP Contractor. Final reinstatement measures will be the responsibility of the BTC Contractor....”

IEC Comment: The Project has not provided any evidence that BOTAŞ has in fact implemented the first phase of NGPL reinstatement prior to BTC construction. IEC is unsure as to whether the Project has in fact implemented slope breakers across parallel corridors on hill slopes and has not observed this in the field.

“...Condition 4: Erosion - In areas where erosion has lead to, or could potentially impact the integrity of the BTC Pipeline corridor, it will be the responsibility of the NGP Contractor to reinstate such areas prior to BTC construction. If such problems persist into the BTC construction phase, it shall be the responsibility of the BTC Contractor to apply corrective action. ...”

IEC Comment: The Project has not provided any evidence that BOTAŞ has in fact implemented the first phase of NGPL reinstatement prior to BTC construction. Although BTC has prepared a partial reinstatement punch-list or “checklist” (c. 107 km), the Project has not specifically identified where these erosion prone areas exist and assigned responsibility for corrective action.

“...Condition 5: River Crossings - In areas where river erosion has lead to, or could potentially impact the integrity of the BTC Pipeline corridor, it will be the responsibility of the NGP Contractor to reinstate such areas prior to BTC construction. If such problems persist into the BTC construction phase, it shall be the responsibility of the BTC Contractor to apply corrective action....”

IEC Comment: The Project has not provided any significant evidence that BOTAS has in fact implemented the first phase to reinstate river crossings, although the Project has taken some actions in this regard (e.g. Karasu River crossing). However, the Project has not specifically assessed every river crossing and assigned responsibility for corrective action.

A Level II non-compliance is again assigned (*Level II Non-Compliance, CCP Reinstatement Turkey, Commitment ID: CH15E5, APC2E15, APC2E16, APC2E17, APC2E18*). The failure of addressing the NGPL reinstatement within a reasonable amount of time after the completion of the construction time would be a serious breach of Project commitments with respect to the EIA and the EMP. IEC will assess and report the progress in terms of actual implementation of the NGPL reinstatement commitments during the next visit. The current non-compliant situation will be re-evaluated based on field observation of actual reinstatement implemented.

3.6.2 Erosion Control, Reinstatement and Biorestoration – Recommendations

1. IEC acknowledges the significant effort by both Lot A and B personnel to complete reinstatement and biorestoration works prior to the onset of winter 2005-2006, and recommends that the effort should not be lost and monitoring plans should now be put in place to assess the effectiveness of reinstatement and biorestoration through to the June 2006 growing season and later during the Operations phase.
2. IEC noted several areas of the ROW in Lot A and B that still require attention to final details, such as restoration of drainage patterns, proper placement or rip-rap, jute matting and slope breakers etc. These items should be noted in the final Project punch list so that remedial measures can be implemented and a standardized quality protocol for provisional acceptance be developed across all three Lots in Turkey.
3. In the June 2005 mission, IEC recommended that BTC implement a systematic assessment of topsoil fertility, particularly focused on problematic high elevation areas with fragile and thin topsoil in Lot B. Now that Phase 3 reinstatement has been concluded in these locations, IEC continues to recommend that special attention be paid to monitoring and quantitatively reporting revegetation success in high elevation areas.
4. IEC notes that the Project is preparing a biorestoration monitoring plan to assess erosion performance and revegetation requirements as per EIA commitments. IEC recommends that the plan consider the appropriate final punch list items for all three Lots and that a full plan be prepared by spring 2006.
5. IEC was informed that the Ardahan Environment Foundation is responsible for providing trees and shrubs for biorestoration in Lot A. The Project should ensure

that the warranty provisions for tree and shrub survival apply in this case and that the responsibility for monitoring and aftercare provisions is clearly assigned.

6. IEC notes that an excess rock strategy has been developed for both Lot A and Lot B. Volumes of excess rock disposal however were not provided for Lot B. IEC recommends that the Project undergo an analysis of the volume of rock removed during construction against the volume of excess rock re-used during reinstatement to ensure there are no future liabilities or claims regarding excess rock disposal, such as that resulting from reinstatement of the NGPL.
7. IEC recommends that the Project develop reinstatement monitoring plans for all reinstated borrow pits and clarify that reinstatement standards for off ROW areas are the same as reinstatement of the ROW.
8. IEC notes that the Project has begun decommissioning works at fixed facilities such as camps and pipe storage areas without clear protocols and sampling procedures for the assessment of environmental liabilities. Of particular concern are specific areas that may have hydrocarbon-contaminated soils, such as refueling areas and equipment stockyards. IEC recommends that the Project develop clear protocols for decommissioning and liability evaluation of fixed facilities to ensure no residual liability lies with the Project, once these lands are returned to their original owner.
9. IEC notes that there has been no significant progress whatsoever in the implementation of reinstatement of the NGPL. IEC understands the need to ensure safety of reinstatement crews over a live gas line, but finds that these concerns should have been clearly addressed as soon as the BTC commitment to reinstate NGPL was made, and, therefore, should not affect the implementation of NGPL reinstatement commitments made in both the EIA and SLIP. At this point, BTC and BOTAŞ management appear to be deadlocked over the responsibility for implementation of these particular commitments. The EIA is clear in this regard in ascribing the pre- construction remedial responsibilities of the NGP contractor, and that *'Final reinstatement measures will be the responsibility of the BTC Contractor'*. To IEC's knowledge, neither of these works has been fully completed in compliance with Project commitments. Until BTC/BOTAŞ can provide evidence to the contrary, IEC recommends that a Management of Change Procedure should be implemented to deal with modifications to the EIA regarding reinstatement of the NGPL. As part of the MOC, IEC requests the Project to provide a unified plan that fully outlines BOTAŞ and BTC responsibilities to fulfill the commitments made to reinstate the NGPL, at this time (given that construction has finished and that the contractor is demobilizing). This plan should incorporate the results KP by KP of the joint punch list being prepared for Lot B.
10. Appendix C2 of the EIA makes reference to five specific reinstatement conditions of NGPL reinstatement. The Project should ensure that these

conditions are referred to in assigning protocols and procedures for reinstatement of the NGPL in the final joint punch list.

11. The Project should also develop audit protocols and procedures to ensure that NGPL commitments are upheld and implemented.

3.6.3 Access Roads - Observations

In June 2005, IEC observed that the Project has started to develop procedures for the reinstatement of access roads. In accordance with ESAP commitments, all temporary access roads created by the Project shall be reinstated unless otherwise agreed with the local community, but subject to ecological sensitivity and importance.

The CCP Reinstatement Plan Turkey establishes clear commitments for reinstatement of Project access roads (Commitment ID: 2) including the following:

- *“...Temporary roads will be removed when no longer needed and will be reinstated. All damage to existing roads will also be reinstated.*
- *Any additional routes will be selected to avoid ecologically sensitive areas, and to minimize erosion.*
- *The contractor will liaise with the appropriate regulatory authorities to gain approval to use, and regularly inspect, the road infrastructure.*
- *Culverts will be installed as necessary where access roads cross water courses.*
- *Temporary access roads will be kept free from deposits to prevent silt, oil or other materials from entering drains or watercourses.*
- *The contractor will remove all temporary roads or road enlargements, except where local communities or landowners request that a new road be left in place. BOTAŞ will advise the contractor regarding the views of regulators, environmental considerations and the concerns of stakeholders for those roads that are to be left in place. ...”*

Section 11.4 of Appendix C2 Reinstatement Plan (Existing Roads and Access) states that *“...Contractor shall exercise care when using both public and private roads for traveling to and from the BTC RoW and shall upgrade and maintain roads during the works as necessary for safe operations, and reinstate them to their original upgraded condition or better following completion of construction activities....”*

In October 2005, staff in Lots A and B informed IEC on the status of reinstatement of new roads created by the Project.

Lot A

IEC was informed that 130 access roads were used by the Project in Lot A. Of this total, 22 roads are considered new. Eighteen of these 22 roads have been reinstated. IEC was informed that the local communities had requested that the remaining four new access roads remain open.

IEC was provided the access road register for Lot A as an appendix to the Site-Specific Reinstatement Plan. However, it could not be verified how many of the 130 access roads used by the Project were expanded for construction purposes.

Lot B

IEC was provided with the access road register of Lot B. The register indicates that a total of 660 km of access roads have been used by the Project. This includes 602.5 km of existing road (soil), 26.6 km of existing roads (asphalt) and 30.9 km of newly opened roads. A total of 41 out of 56 new access roads have been reinstated (total of 23.5 km). IEC was informed that the local communities had requested that the remaining 15 new access roads remain open.

However, the situation with existing access roads, and in particular those existing roads that have been upgraded by the Project, is not clear. The Access Road register indicates that 602.5 km of existing dirt access roads were used by the Project. IEC is not clear on the reinstatement status of existing roads that have been upgraded by the Project in Lot B.

IEC visited the access road to the base of KP 458 which was an existing track significantly upgraded by the Project. It was reported that this road remains in the current upgraded conditions at the request of the landowner. IEC notes that the disposal of spoil from upgrade of the access road is affecting a small creek that has been diverted as a result of pipeline construction. IEC was informed that no plans are in place to reinstate, or even partially reinstate, this existing track and the area affected by the spoil.

Appendix C2 Reinstatement Plan states that existing access roads will be reinstated “... to their original upgraded condition or better following completion of construction activities....” Commitment ID:2 of the CCP Reinstatement Plan Turkey states that “...all damage to existing roads will also be reinstated....”

IEC considers that damage in this context described above would apply to upgrade/modification/expansion of existing access roads across all three Lots and that a clarification by the Project to this commitment is required (*Level II Non-Compliance, Reinstatement CCP, ID 2*)

3.6.4 Access Roads - Recommendations

1. The situation with regard to existing access roads, and in particular upgrade/modification/expansion of existing access roads, is not clear, especially in Lot B. The Project should clarify a position with regard to the commitment that all existing roads shall be reinstated *'to their original upgraded condition or better following completion of construction activities'* and *'...all damage to existing roads will also be reinstated...'*.

3.6.5 Hydrotesting – Observations

Hydrotesting is now complete in all three Lots and IEC had no observations during the October 2005 visit.

3.7 ECOLOGICAL MANAGEMENT

3.7.1 Observations

A total of 55 Ecologically Sensitive Areas (ESAs) have been identified in Turkey from the EIA studies. ESAs were identified in two phases, which included a habitat survey in the 500 meter corridor. There are 12 ESAs in Lot A, 24 ESAs in Lot B and 19 ESAs in Lot C. As part of the pre-construction survey, detailed vegetation mapping studies were undertaken in the 28-meter ROW. Based on these additional detailed studies, Special Area Reinstatement Method Statements (SARMS) were developed by BOTAŞ and the EPC Contractors for each ESA, and Areas of Important Plants (AIPs) were identified.

In previous visits, IEC has commented on the relocation of unique and rare plants from the ROW to adjacent sites. In October 2005, the Project informed IEC that the opinion of ecologists is not to translocate these species back again to the ROW, except in very special cases.

In October 2005, IEC observed reinstatement efforts at some ESA's in Lots A and B and notes the following:

- ESA 33 at KP 729 appeared to be “abandoned”. Garbage and flagging tape were strewn across the site and there did not appear to be a dedicated monitoring plan in place;
- ESA 13 was visited and good reestablishment of water drainage and standing water conditions was noted.
- Reinstatement works were well completed in ESA 8 but garbage was noted; and
- Snow did not permit observations of reinstatement efforts at ESA 1.

A more comprehensive assessment of the ESA reinstatement and biorestoration will be conducted during the next visit.

3.7.2 Recommendations

1. IEC notes that as of October 2005, biorestoration of ESAs in Lots A and B has concluded. IEC recommends that the Project develop a Turkey-wide monitoring plan and follow-up strategy and implementation plan for ESAs. An evaluation of the effectiveness of biorestoration in ESAs should be made in the summer of 2006.
2. Consideration should be given as to how ongoing monitoring of translocated plants in ESAs should be done. Sites should be maintained and all unnecessary waste should be removed.
3. The Project should conduct a lessons learned exercise over the usefulness of the ESA concept as a management tool for a defined linear distance of ROW and how it can be improved for future projects.

3.8 COMMUNITY LIAISON

Community liaison and dialogue with affected stakeholders is a major concern of the Project. Processes are well established for communicating Project information to the general public and communities along the pipeline route, as well as to receive and transmit community concerns to the Project. The overall objective for the Community Liaison and Community Relations teams is to build a positive, non-dependent relationship between the Project and local communities. Specific responsibilities for Community Liaison include, but are not limited to:

- Providing Project affected communities with regular information on construction progress and its' implications for these communities;
- Informing the Project of any community related issues that may impact on construction progress;
- Monitoring implementation of mitigation measures and the impact of construction via direct monitoring and feedback;
- Resolving grievances and managing disputes between the Project and affected communities;
- Assisting with the implementation of community safety, health and investment programs, particularly in response to the recent concerns over open trench;

- Conducting community training programs in important issues such as transportation safety and third party access and safety along the pipeline ROW; and
- Recruiting workers from affected communities.

3.8.1 Observations

A team of Community Relations (CR) Supervisors from BOTAŞ and the two EPC contractors (Lot B and Lot C) continue to be responsible for community liaison activities. Planning has now shifted toward concluding land exit procedures.

Lot A

Since June 2005 there is a reduction of CR personnel in Lot A from four to three.

CR personnel reported that there are now only five open complaints more than 30 days (two relating to land, two to roads and one contractor related).

IEC was informed that there are 1,030 private and 1,600 customary parcels that will require land exit agreements. A plan has yet to be developed detailing scheduling and resources. In addition to the Lot A CR staff, BTC is planning to contract the General Directorate of Agriculture to assist in land exit.

Lot B

As reported earlier, BOTAŞ and STA together have four CR personnel in Lot B. The following information was reported to IEC:

- 396 out of 412 community requests have been fulfilled;
- 850 community meetings were held;
- 1,650 students were trained in Traffic Safety awareness;
- 1,441 local people have been employed; and
- Total local procurement was US\$14.4 Million.

A total of 709 complaints have been received since Project initiation and 700 have been closed. Of the nine open complaints, six of open more than 30 days (one land related, two road related, one property related and two relating to rental agreements).

There are a total of 4,000 land parcels in 124 villages that will require land exit agreements. Land exit will begin on 8 November 2005 and conclude by 18 December 2005.

3.8.2 Recommendations

1. The Project should ensure that sufficient CR resources are available to complete land exit. This comment is particularly addressed to Lot A.
2. The Project needs to evaluate any outstanding damages to infrastructure (especially, roads) resulting from Project traffic and develop a consistent policy for compensation and rehabilitation throughout all Lots and fixed facility locations.

3.9 ENVIRONMENTAL INVESTMENT PROGRAMME

There was no update on the EIP provided during the October 2005 visit.

Appendix A
Trip Summary- 6th IEC Mission by D'Appolonia for the BTC Pipeline Project –
October 2005

For this mission, two members of the team toured Turkey while another two visited Georgia. The trip summaries of the two groups are presented separately.

Georgia Team

October 23 – Georgia. Team arrives in Tbilisi by air.

October 24 – Georgia. Meetings held with BTC staff at the BTC offices in the morning; meeting held with SPJV at SPJV offices in the afternoon.

October 25 – Georgia. Travel to the Turkish border and visit locations along the ROW to KP 206. Travel to Akhaltsikhe Camp and conduct a camp tour. The team spends the night at Akhaltsikhe Camp.

October 26 – Georgia. Tour the Akhaltsikhe Mechanical Yard and then travel along the ROW from KP 206 to KP 176 with a stop at the newly-restored Tadzrizi Monastery at KP 200. The team spent the night in Bakuriani.

October 27 – Georgia. Tour the ROW from KP 176 to PSG-2 (KP 88) and then continue to Tbilisi. Present closeout meeting at BTC office in Tbilisi and then meet with representatives from the Georgian Ministry of Environmental Protection and National Resources (MoE) and the Georgian International Oil Corporation (GIOC) at the BTC offices in Tbilisi.

Turkey Team

October 24 – Team arrives in Ankara by air.

October 25 – Drive to Lot B from Ankara. Visit steep slopes at KP 729 and 731. View reinstatement in the Karst area (KP 614). Team overnights at Kova Camp.

October 26- Interviews with Lot B personnel. Drive to high elevation areas in Lot B, view reinstatement works at KP 456 and KP 458. Inspect progress of reinstatement of inert waste piles at PT3. Closeout meeting for Lot B in PT3. Drive to Erzerum and overnight.

October 27 – View reinstatement of ESA 13. Drive to Lot A and view decommissioning of Koprokoy camp. Observe reinstatement at BVS 14, KP 242 and 247. View river crossing at the Hachiamet River, KP 222 Drive along the ROW and visit reinstatement works at KP 198, 173-174 and in the Sarakamis Forest and ESA 8. Interviews with Lot A personnel. Overnight in Kars Camp.

October 28 – Drove to the Georgian Border. View reinstatement of side slopes at KP 2 + 100 and KP 3.5. Attempted to drive to ESA 1 but could not proceed due to snow. Returned via Posof and observed reinstatement at the steep slope at KP 17 and KP 20. Drove down the “Russian Road” and observed reinstatement at KP 55 and 58-59. Observe reinstatement of the Ardahan separation facility. Drive to Kars due to blizzard.

October 29 – Close out meeting at Lot A. Fly from Kars to Ankara.

October 30 – Team departs Turkey.

Appendix B
Table B-1: Non-Compliances with ESAP – Georgia

Section Ref.	Observation	Non-Compliance	Level	Comments / Recommendations
2.3.1	Two batch plants were used such that by far the majority of their production was dedicated to Project (PSG-2 and PSG-1 construction). Project had not been able to demonstrate that the facilities had been properly managed, controlled and operated in compliance with many ESAP requirements. The plants were closed before the non-compliance could be resolved. BTC has committed to fully reinstate the third-party batch plant site at PSG2, since it is not longer in use and equipment was demobilized. BTC has also committed to reinstate the third-party batch plant site at PSG1, located on military property, if the local subcontractor decides to demobilize from the site in the short term.	CCP Procurement and Supply, Commitment ID N34-P35, Commitment M11 – HSE Plan Section 7.4	II (pending from 5 th mission)	Batch plant sites at both Project and third-party locations should be reinstated as practical.
2.9.1	During the previous IEC mission, the results of the pre-clearance faunal surveys did not always appear to be translated into actual mitigation measures that were considered during pipeline construction, for which a Level II non-compliance was assigned. This non-compliance is considered to be pending until the results of additional monitoring of the spadefoot toad breeding pond at KP 40 can be reported; and corrective actions identified with regard to Caucasian mud-diver's breeding ponds at KP 187 is implemented	Ecological Management Plan, Commitment F6	II (pending from 5 th mission)	BTC should implement the corrective actions discussed in the fifth IEC report regarding the Caucasian mud-diver breeding ponds at KP 187 and the spadefoot toad habitat at KP 40 and KP 11

Section Ref.	Observation	Non-Compliance	Level	Comments / Recommendations
2.11.1	SPJV has damaged cultural heritage resources at locations outside the ROW and chance find protocol procedures have not been followed.	Environmental and Social General Commitment Register, Commitment F34	II	If the damage is important and/or took place knowingly, this would represent a serious breach of Project commitments to protect archaeological sites.

Appendix B
Table B-3: Non-Compliances with ESAP – Turkey

Section Ref.	Observation	Non-Compliance	Level	Comments / Recommendations
4.4.2	Uncontrolled dumping of a variety of Project waste at the Narlik inert material disposal site for the Ceyhan Marine Terminal (Observation made in June 2005).	CCP Waste Management Turkey, APC1E69, APC3E41	II	The Project supplied IEC with documentation in response to a Level II finding in June 2005. IEC considers that the updated documents provided by the Project do not adequately address concerns about potential liability at the Narlik site and requests further supporting evidence that only inert waste was disposed of at this location
4.4.4	Sporadic non-compliant conditions reported for the WWTP at the Kars Camp, Lot A	CCP Pollution Prevention, Commitment ID: CH7E13, APC4E39	I	Sporadic non-compliance with Project discharge standards for BOD at Kars Camp. Switch to topsoil pile irrigation system to ensure compliance, if there are further exceedences.
4.6.1	Particularly in some high elevation areas with fragile and thin topsoil, topsoil has been stored for more than 2 years and, from a visual assessment, its fertility appears to be significantly reduced. Fertility conditions have not been assessed by the Project	CCP Reinstatement, Commitment ID: CH6E6, CH15E3, CH15E7, CH15E10, APC2E143, 410	II	Note that BTC will initiate an assessment of reinstatement success in high elevation areas in the summer of 2006.
4.6.1	A Level II non-compliance for in-action on the NGPL was raised since July 2004 due to a persistent and unjustified uncertainty and controversy over reinstatement of the NGPL. Continued delays in defining a practical implementation program for the reinstatement of the NGPL ROW are not in compliance with ESAP commitments	CCP Reinstatement Turkey, Commitment ID: CH15E5, APC2E15, APC2E16, APC2E17, APC2E18	II	IEC noted that no significant progress on reinstatement of the NGPL has been made since the June 2005 mission. The Level II non-compliance is maintained. IEC recommends that a Management of Change Procedure should be implemented to deal with modifications to the EIA regarding reinstatement of the NGPL. As part of the MOC, IEC requests the Project to provide a unified plan that fully outlines BOTAŞ and

Section Ref.	Observation	Non-Compliance	Level	Comments / Recommendations
				BTC responsibilities for reinstatement of the NGPL at this time (given that construction has finished and that the contractor is demobilizing). This plan should incorporate the results KP by KP of the joint punchlist
4.6.3	Reinstatement of existing access roads	CCP Reinstatement Turkey, Commitment ID 2	II	The situation with regard to existing access roads, and in particular expansion of existing access roads, is not clear, especially in Lot B. The Project should clarify a position with regard to the commitment that all existing roads shall be reinstated.