

# ENVIRONMENTAL AND SOCIAL MONITORING REPORT

Camisea Natural Gas and Natural Gas Liquids Pipeline Project, Peru

**Inter-American Development Bank**  
1300 New York Avenue, N.W.  
Washington, D.C. 20577 USA

**Corporacion Andina de Fomento**  
Carmelitas 5086, Altamira 69011-69012  
Caracas, Venezuela

---

## DECEMBER 2002

### 1.0 INTRODUCTION

The Inter-American Development Bank (IDB) and the Corporación Andina de Fomento (CAF) (collectively the Lead Arrangers or “MLAs”) have been performing independent environmental and social monitoring (IESM) of the Camisea natural gas and natural gas liquids pipeline project (“Downstream Project”) in Peru since September 2002. The MLAs are considering providing partial financing to Transportadora de Gas del Peru (TGP), the company sponsoring the downstream component of the Camisea Project. Because construction is already underway, further environmental and social monitoring of the project during this project review period is necessary.

The Camisea Project consists of three sub-projects:

1. The gas field in Block 88 and the proposed Fractionation Plant and Export Terminal near Pisco (“Upstream Project”),
2. The natural gas and liquids transportation pipeline (“Downstream Project”), and
3. The natural gas distribution network in Lima and Callao (“Distribution Project”).

The Downstream Project consists of a 33-year concession agreement with TGP to build, own, operate and transfer two major pipeline systems: a 697 kilometer (km) natural gas pipeline and a 575 km natural gas liquids (NGL) pipeline. The two pipelines will be laid in parallel trenches on a common right-of-way (ROW) extending from a gas processing plant at Las Malvinas, located in the Ucayali Basin 431 km east of Lima, to a proposed NGL processing and shipping facility near the port of Pisco, 200 km south of Lima). The natural gas pipeline will run north to the Lima City gate at Lurin from a point east of Pisco (Figure 1).

This is the fourth monthly report summarizing the construction monitoring activities, performed as part of the overall Environmental and Social Due Diligence review in considering financing for the Downstream Project. The monitoring activities conducted during December 2002 are covered in this report.

### 1.1 Monitoring Objectives

URS Corporation (URS), an international environmental and engineering consulting firm under contract with IDB/CAF, initiated the IESM of the project in September 2002. The MLAs’ review primarily focuses on the Downstream Project, however both the Upstream and Distribution projects are being monitored by URS field personnel because of the overlapping and cumulative environmental and social sensitivity of the tropical rainforest location and impacts. The main objectives of the IESM are to provide the MLAs with reliable and unbiased information regarding the project’s compliance with environmental and social management plans and procedures, as well as construction best management practices (BMPs).

The IESM team consists of full-time environmental and social monitors in the field who perform the following principal activities:



# ENVIRONMENTAL AND SOCIAL MONITORING REPORT

Camisea Natural Gas and Natural Gas Liquids Pipeline Project, Peru

- Conduct daily field observations and document environmental and social procedures and processes that are being implemented by TGP and its contractors;
- Review other construction monitoring activities that are being carried out by TGP and its contractors (Gulf Interstate, Domus, and Knight Piesold);
- Prepare daily reports to IDB/CAF regarding ongoing activities in the field; and,
- Provide immediate recommendations, as necessary and appropriate, to TGP, Pluspetrol, and their field representatives regarding ways to improve management practices.

The IESM does not include redundant sampling, testing, and other measures that are performed by Knight Piesold and Domus for TGP's environmental and social monitoring programs. For sampling and testing results, one can refer to Knight Piesold's monitoring reports. Likewise, INMAC performs monitoring on behalf of Pluspetrol for the Upstream Project.

These monthly summary reports are also being prepared to document the effectiveness of the project's environmental management plans and procedures (Plan de Manejo Ambiental [PMA]) and the recommendations for improvement wherever applicable. The monthly monitoring reports are available to public through the Camisea Web page, [www.camisea.com.pe](http://www.camisea.com.pe).

## 1.2 Report Organization

This monthly monitoring report is a summary of the environmental and social daily and weekly reports and is organized into four major sections:

- Introduction
- Project status and construction activities completed during the current reporting period
- Environmental, health and safety monitoring completed along with observations and recommendations
- Social monitoring completed along with observations and recommendations.

For additional information, please contact:

**Dr. Robert Montgomery**  
**Head, Environmental and Social Unit**  
**Inter-American Development Bank – Private Sector Department**  
**1300 New York Avenue, NW**  
**Washington, D.C. 20577**  
**Telephone: 1-202-623-2384**  
**E-mail: robertm@iadb.org**

# ENVIRONMENTAL AND SOCIAL MONITORING REPORT

Camisea Natural Gas and Natural Gas Liquids Pipeline Project, Peru

## 2.0 PROJECT STATUS AND CONSTRUCTION ACTIVITIES

The following is a summary of the project status and construction activities during December 2002. This information has been obtained from field observations and Pluspetrol and TGP monthly reports.

### 2.1 Upstream Project

#### 2.1.1 3-D Seismic

The seismic exploration of Block 88 was completed in October 2002.

#### 2.1.2 Flow Lines

Due to the heavy rains, construction activities along the flowline between Las Malvinas and the production well cluster at San Martin-1 were limited. Crossings for the gas extraction lines (16-inch and 20-inch pipes) across the Purocari River, the aerial crossing at KP 20+400 for the gas injection line (10-inch pipe), and the crossings at KP 24+441 and KP 25+435 for the diesel line (4-inch pipe) were constructed.

Because of the heavy rains, soil erosion continued to be a problem. More erosion control measures were installed including side and longitudinal channels, stabilization measures at deep gullies, terracing, and silt fences. Native mats were installed along high points and at the support beam locations for the gas and diesel lines and the revegetation continued during the month of December. Reseeding of grass and native tree species were done.

Monitoring of the water, air and noise quality parameters continued at the KP 10+000 and KP 20+00 camps during the month of December. Limited archeological monitoring of the flowline as conducted in December.

#### 2.1.3 Gas Plant and Air Strip at Las Malvinas

Gas plant construction at Las Malvinas was 80 percent complete and the airfield was 99 percent complete by the end of December. The overall completion of the Las Malvinas facilities was about 90 percent.

A total of 242 tons (metric) solid waste and 2,035 gallons of hazardous liquids were generated at Las Malvinas. Some organic waste, cardboard and non-hazardous industrial residues were buried on site.

Implementation of soil erosion control measures continued around the gas plant and airport drainage collection system. Side slopes were graded and protected with erosion control mats; and disposal areas were cleaned, seeded, and closed. Soil erosion and re-forestation measures were implemented at the airport area.

Monitoring of the water, air and noise quality parameters continue at the camp during the month of December. Archeological monitoring of the area of influence at Gas Plant and the airstrip also continued during December.

#### 2.1.4 San Martin – 1 Well Pad

Perforation of the San Martin well 1001 was completed and perforation of the San Martin well 1004 continued with the installation of the 9-<sup>5</sup>/<sub>8</sub>-inch and 11-<sup>3</sup>/<sub>4</sub>-inch casing. Supplies to the well pad via helicopters continued during the month of December.

One hundred sixty seven tons of solid waste was generated, 8 tons of organic waste were incinerated on site and 1603 gallons of hazardous liquids (mainly used oil) were also generated.

Monitoring of the air, noise and water quality parameters at the camp continued during the month.

# ENVIRONMENTAL AND SOCIAL MONITORING REPORT

Camisea Natural Gas and Natural Gas Liquids Pipeline Project, Peru

## 2.2 Downstream Project

### 2.2.1 Right-of-Way

During the month of December, the pipeline ROW survey, clearing, trenching, stringing and bending, welding and coating, lower-in and backfill, and regrading were limited along the downstream ROW and were concentrated in the Sierra sector.

In the Selva I and II sectors, construction was limited because of the heavy rainfall. Construction was suspended in mid December and activities will resume in late March after rainy season. In the Sierra and Coastal sectors, construction was suspended from mid December through early January for the holidays.

Transportation of the gas pipes from Pisco to the different work fronts and preparation of the Urubamba River crossing continued during December. In the Huaytara area construction was suspended due to protests by local communities, a minor re-routing of the ROW was implemented in this area.

The Pacobamba re-route was approved and construction activities initiated in this front with the construction of the first tunnel.

The 14-inch natural gas liquids pipe and 32-inch gas pipe to Las Malvinas and Chocoriari camps were delivered.

The following is a summary of the pipeline ROW status to the end of December:

#### Natural Gas

Approximately 50 percent of the natural gas pipeline ROW was cleared and graded, 21 percent trenched, 20 percent pipe stringing, 18 percent welded, 9.6 percent lowered-in and backfilled, and 7.2 percent of the fiber optic cable installed.

#### Natural Gas Liquids

Approximately 50 percent of the NGL pipeline ROW was cleared and graded, 39 percent trenched, 39 percent pipe stringing, 36 percent welded, and 38 percent lowered-in and backfilled.

#### River and Road Crossings

Crossing of the Pampas River and other minor river crossings continued. Clearing and grading of the left and right banks of the Urubamba River continued in preparation for the crossing of the Urubamba River at Chocoriari. The horizontal drilling equipment required to drill the Urubamba River crossing has arrived to Perú and being shipped to Las Malvinas camp.

One fatal accident occurred during the December report at the Kepashiato camp. On December 9, a maintenance mechanic was killed when a metallic structure of a sideboom loader fell over him. The cause of the accident was determined to be an unsafe operation, lack of coordination and inappropriate boom lock system.

### 2.2.2 Construction Camps

Eighteen base and satellite camps, including the main camp in Pisco, were active during the month of December along the ROW. Ten were located within the Selva I and II sectors (Malvinas, Chocoriari, Paratori, Mantalo, Mangoriari, Chimparina, Alto Shima, Alto Itariato, Kepashiato, and Segakiato), and Seven were located in the Sierra sector (San Antonio, Toccate, Pacobamba, Acocro, Vinchos, Rumichaca, and Huaytara). Original camp schedules

# ENVIRONMENTAL AND SOCIAL MONITORING REPORT

Camisea Natural Gas and Natural Gas Liquids Pipeline Project, Peru

and capacities were extended due to the construction delays and the need to hire more workers in order to expedite the construction schedule.

## 2.2.3 Other Downstream Project Activities

Construction of the Pumping Station No. 1 (PS1) was suspended until the rainy season is over. Grading of Pumping Stations areas 2 and 4 (PS2 and PS4) continue according to schedule. Construction activities for PS3 continued delayed.

## 3.0 ENVIRONMENTAL, HEALTH AND SAFETY MONITORING

### 3.1 Introduction

URS provided independent monitoring of the effectiveness of environmental, health and safety (EHS) and social mitigation measures during construction. The monitoring was conducted by visiting active construction sites to observe Techint's implementation of measures contained in the Plan de Manejo Ambiental (PMA), TGP's Health and Safety (H&S) Plans and the construction specifications.

Specific works that were observed included project infrastructure facilities, such as potable water intake, treatment and distribution; collection, treatment and disposal of sanitary and storm water; installation of erosion and sediment control measures; drilling mud management; work camp safety and sanitary conditions; and clearing of the ROW and helipads. Monitoring observations also covered implementation of health and safety control.

The following sites were visited during the December reporting period:

#### Upstream

- Camisea and Malvinas Pluspetrol Camps
- Flow Line ROW (KP 0+000 - KP 4+000 and KP 7+400 - KP 10+400)

#### Downstream

- Natural gas and natural gas liquids pipeline construction: pipeline ROW between Kilometer Posts KP 5+750 – KP 6+800 KP 13+000 - KP 16+250, 360+500 - KP 373+500, KP 416+000 - KP 430+000 and KP 437+000 - KP 441+000.
- Storage yards Puerto in San Martín, Pisco, Rumichaca and Huaytara;
- Camps Malvinas, Chocoriari, Rumichaca and Huaytara.
- Rio Pisco Route Variant
- Helicopter survey of the ROW between KP 0+000 – KP 120+000

Pertinent sections of the PMA that were the focus of monitoring include:

- Prevention, correction and/or mitigation plan.
- Waste management plan
- Environmental training plan
- Contingency plan
- TGP's/Pluspetrol's H&S Plans

# ENVIRONMENTAL AND SOCIAL MONITORING REPORT

Camisea Natural Gas and Natural Gas Liquids Pipeline Project, Peru

## 3.2 Environmental, Health and Safety Observations

In general, Techint and its subcontractors continue to implement the required measures specified in the PMA at most locations monitored. Along most of the pipeline route, vegetation clearing on the ROW has generally been consistent with the needs for constructing dual pipelines, overcoming terrain obstacles, and providing primary construction access.

Erosion and sediment control and other measures to protect land and related water resources have been implemented where required at most locations along the ROW. Nonconformities in PMA implementation that were noted during previous months' of monitoring were being corrected during this reporting period. This was helped in part by a reduction of most mainline construction operations in preparation for the holiday break. This has allowed erosion control crews to catch up with new BMP installation and to make progress with maintaining or repairing existing installations.

The accident involving a fuel truck on the Los Libertadores Highway and the resultant spill of diesel fuel that occurred in late November was responded to quickly and serious impacts were averted to the extent possible. Water samples were collected and the situation continues to be monitored. Remedial work consisting of isolating, exhuming and disposal of contaminated soils is ongoing.

No significant long-term, irreparable construction-related impacts were observed during the reporting period. Impacts resulting from deficient implementation of mitigation measures could be ameliorated with proper application or corrective action. Inconsistencies and deficiencies in conforming to the PMA were noted and reported to TGP and PlusPetrol as appropriate.

Highlights of proper PMA implementation observed during December are described in the following subsections:

### 3.2.1 Upstream Project

Erosion control and revegetation continues (slope containment, drainage systems, lining and reforestation) along the flow lines.

On the upstream flow lines between KP 3+000 to KP 3+100, excellent erosion control work was performed. On KP 0+000 to KP 4+000, satisfactory revegetation and reforestation effort was performed; plants have survived and there is a good coverage of Paja Pichi. The margins of the watercourses at KP 0+150, KP 0+630, KP 1+034, KP 1+300, KP 1+450, KP 1+600, etc. were also revegetated.

Near KP 002+750, a large amount of water had flooded the ROW, making it impassable. Graña & Montero personnel tried to pump the water to the river using water pumps, but heavy rains negated their efforts. At the EH&S meeting, the opening of a canal to drain these waters was approved, however it was not needed after a higher capacity pump was used.

### 3.2.2 Downstream Project

#### Selva

In the Selva sector, only slope stabilization and erosion control work is being performed due to heavy rains.

On the ROW between KP 6+450 and KP 6+700, eroded fill embankments were repaired and gabions were installed at the base of the embankments to improve stability. Additional stabilization work on adjacent slopes, runoff channels, and construction of additional slope breakers is needed.

## ENVIRONMENTAL AND SOCIAL MONITORING REPORT

Camisea Natural Gas and Natural Gas Liquids Pipeline Project, Peru

Slope stabilization and repair/reconstruction of sediment barriers was performed on the ROW in vicinity of KP 6+500 and the ROW section between KP 13+000 and KP 16+250. This work included improvement of the runoff collection channels and revegetation work on fill embankments at KP 16+250, KP 17+000 and 17+200. The final restoration and revegetation of Chiregoroato creek was completed.

Erosion control activities were ongoing on the ROW near KP 40+500.

### Sierra

Portions of the existing Huaytará - Ayaví access road have been upgraded and maintained by Techint. Further upgrading and maintenance work is planned for the Ayaví to Chaulisma section.

Near the Huaytará section, the presence of vicuñas near the ROW suggests that these animals have adapted to the initial impact in the area. TGP has improved and enlarged the fence that limits the vicuña areas from 3 communities and has contracted 4 forest guards to take care of the area.

### Costa - Pisco Variant

Two archeological teams are evaluating the proposed route variation, taking into consideration the archeological findings in the area.

### Work Camps and Other Project Sites

At the pipe unloading area at Pisco harbor, ENAPU longshoremen were trained on safety measures. The port operator has improved safety issues. Additional control measures implemented for pipeline transport trucks.

At Rumichaca and Huaytará camps, most of the deficiencies identified by IESM monitors during September and October have been corrected.

Work is underway to improve the wastewater treatment plants at Rumichaca and Huaytará camps.

At Chocoriari Camp the following activities were performed:

- The protection of the compost cells from rain.
- The removal of mud from the diesel tank secondary containment system and the disposal of empty drums in a secondary containment area.
- The transportation of used oil drums to Pucallpa for final disposal.
- The replacement of fire extinguishers in the JP-1 storage area, two areas for the storage of oxygen, acetylene and natural gas liquids.
- The burial of the electric cables for potable water pumps.
- The correct functioning of the wastewater treatment plant.
- Improvements to the food preparation and storage areas that included the replacement of the air conditioner in the vegetable and fruit storage area, the installation of an extra tent for the storage of food products, the installation of an air conditioner in the dry product storage area, and the storage of cleaning and disinfecting products in the new tent.

# ENVIRONMENTAL AND SOCIAL MONITORING REPORT

Camisea Natural Gas and Natural Gas Liquids Pipeline Project, Peru

- Replacement of the geotextile membrane lining for the secondary containment system where the JP-1 fuel drums are stored.
- Installation of UV radiation protector covers to protect the diesel fuel storage bladders.

## 3.3 Deficiencies

Compliance with the PMA continues to be acceptable overall. As noted in previous monthly reports, deficiencies in the implementation of the PMA continue to be observed. Specific locations along with concerns and recommendations were discussed in the field with TGP/PlusPetrol, as appropriate.

The slowdown of construction activities in preparation for the holiday recess has allowed Techint to address previously noted deficiencies.

The following discussion focuses on general issues rather than specific occurrences or deficiencies. The primary concerns with the Downstream Project during the month of December 2002 could be grouped into four general categories. These categories and underlying causes are generally the same as reported in previous monitoring reports. They are as follows:

1. Effective waste management practices at camps
2. Timely implementation of spill prevention and secondary containment measures
3. Timely installation of storm drainage, soil/slope stabilization, and general erosion and sediment control (Best Management Practices), maintenance of existing installations, and correction of new erosion problems.
4. Consistent and effective safety implementation.

### 3.3.1 Waste Management

In most instances, acceptable waste management practices are being followed along the ROW and in the camps. However, consistent and comprehensive implementation of proper waste management practices has lagged or has been incorrectly applied (mostly in the work camps). A notable effort was made during this reporting period, particularly at Rumichaca, Huaytará and Chocoriari camps. However, there continues to be a significant need for improvements at these and other locations, most notably Vinchos and Acocro, where the sanitary wastewater treatment systems continue to be overburdened due to a greater number of residents than was anticipated for the original design capacity.

Probable causes include:

1. Techint's priority on pipelaying production to recover from schedule delays, as opposed to a coordinated effort to focus due attention to all aspects of construction.
2. Inadequate due diligence, leadership and training to crews responsible for the proper identification and implementation of waste management.
3. Insufficient allocation of workers assigned to waste management.
4. Insufficient surveillance and enforcement by TGP regarding waste management issues.

Recommendations to improve performance on this issue include:

1. Techint should provide better onsite supervision and where needed, Techint should increase the number of workers dedicated to waste management in accordance with the PMA.

## ENVIRONMENTAL AND SOCIAL MONITORING REPORT

Camisea Natural Gas and Natural Gas Liquids Pipeline Project, Peru

2. Provide recurrent refresher training to all workers regarding proper waste management practices.
3. TGP should take a stronger contractual position to compel Techint to maintain acceptable waste management practices in full compliance with the PMA.

### 3.3.2 Spill Prevention and Secondary Containment

Most deficiencies in the deployment of spill contingency and prevention measures continue to be observed in the work camps. This may now be declared to be a chronic oversight, where consistent compliance with the PMA is not being achieved. The most common locations include warehouse areas for bulk fuel/lubricant storage and storage of other potential contaminants used for construction. No reportable incidents occurred as a result of these deficiencies. The work completed at Chocoriari, Rumichaca and Huaytará are viewed as important steps toward better implementation of spill protection and containment measures.

Probable causes include:

1. Techint's priority on pipelaying production to recover from schedule delays, as opposed to a coordinated effort to focus due attention to all aspects of construction.
2. Insufficient due diligence by operations and logistics personnel
3. Inadequate leadership and training to crews responsible for the proper implementation of spill prevention.
4. Insufficient dedicated staff to implement measures.

Recommendations to improve performance on this issue include:

1. Provide better onsite supervision to identify potential problems and to direct proper implementation of spill prevention and containment practices for camps and other bulk storage areas.
2. Increase the number of crews responsible for implementing proper methods for spill prevention and material storage.
3. Diligent onsite enforcement by TGP.

### 3.3.3 Best Management Practices

While Best Management Practices have been installed in most locations where needed along the ROW (e.g., greater than 80 percent), this application rate is marginally acceptable and efforts should be made to bring the compliance goal to the >95% range. The lag in timely and effective erosion and sediment control implementation is a recurring deficiency that is inconsistent with the PMA and Techint's environmental specifications.

Most of the deficiencies observed during December were on existing erosion control measures in the Selva and reflect the effects of high rainfall that is typical of the rainy season. Wet conditions impede the ability of erosion control crews to access problem sites and to implement timely stabilization work. As such, there should have been a greater effort to secure erosion-prone sites prior to onset of the rainy season. Specific areas of concern that should be corrected as soon as possible after the rainy season continue to be conveyed to TGP.

Most likely causes for the erosion control problems observed include:

1. Failure to complete initial installations prior to the onset of the rainy season.
2. High precipitation and runoff conditions that weaken existing BMP's and create new erosion problem sites.
3. Extremely difficult logistics that delay delivery of materials and labor to remote locations.

# ENVIRONMENTAL AND SOCIAL MONITORING REPORT

Camisea Natural Gas and Natural Gas Liquids Pipeline Project, Peru

Recommendations to improve performance on this issue include:

1. TGP should provide better surveillance and diligent onsite enforcement.
2. TGP should continue to prioritize areas for receiving stabilization work and BMP installation by Techint. For remote sites, this work should be initiated in a timely manner after the rainy season.
3. Provide better onsite supervision and where necessary, increase the number of workers dedicated to erosion control crews and provide better training regarding erosion control practices.

### 3.3.4 Safety

The fatal accident that occurred at Kepashiato Camp brings the number of project-related fatalities to 12. This should be considered to be unacceptable and it reflects a trend that commands immediate attention. TGP and Techint have an immediate need to critically review their safety programs and take appropriate measures provide for more diligent safety training, oversight, and enforcement.

Most likely causes for the erosion control problems observed include:

1. Use of local/inexperienced labor that are not fully aware of the inherent dangers of pipeline construction.
2. Inadequate training and supervision at all levels.
3. Inadequate refresher training and reinforcement of safety objectives.
4. Inadequate oversight and enforcement by TGP, both in the field and at upper management levels.

Recommendations to improve performance on this issue include:

1. TGP's upper management must emphasize and reinforce TGP's commitment to safety throughout the project organization...from the top down. A "zero tolerance" position should be assumed.
2. TGP or the Owners' Engineer (Gulf Interstate) should retain a professional pipeline safety specialist to conduct an internal audit of safety programs and construction implementation. Recommendations for improvement should be incorporated immediately.
3. Techint should likewise conduct an internal safety audit and adopt measures to improve safety performance, particularly at the foreman/supervisor levels.
4. Foremen should be held responsible for the safety of their crews.
5. Recurrent training along with effective oversight and enforcement is essential.

## 4.0 SOCIAL MONITORING

### 4.1 Introduction

URS also monitored the effectiveness of Pluspetrol's and TGP's Community Relations Plan (CRP). The purpose of this plan is to identify, understand, and manage key social aspects of the project that impact the communities within the project's area of influence. Pluspetrol and TGP have implemented a Community Relations Office to implement the different programs included in the CRP. The Community Relations Office is composed of a Community Relations Manager, a Community

## ENVIRONMENTAL AND SOCIAL MONITORING REPORT

Camisea Natural Gas and Natural Gas Liquids Pipeline Project, Peru

Relations Supervisor, and a team of Community Relations Coordinators who are responsible for the fieldwork.

The monitoring was conducted by visiting active construction camps, communities, and settlements. The following sites were visited during December 2002:

- Nuevo Mundo, Las Malvinas (upstream and downstream), Chocoriari, Kepashiato, Vinchos, Acocro and Pisco camps
- Communities of San Vicnete de Cañete, Pampamarca, Jesus de Neke, Huancano, Ayacucho, Shimaa, Hasanajay, Camisea, Rimmilayoc, Shivankoreni, and Sepahua.

Specific monitoring of the following programs was conducted:

- Community Relations and Training Program
- Communications and Consultation Program
- Local Development Program
- Temporary local hiring programs

In general, the programs specified in TGP's and Pluspetrol's CRP are underway. The following is a summary of the observations and recommendations for the reporting period.

### 4.1.1 Observations

#### Community Relations and Training Program

The TGP Community Relations Training Program is designed to prevent, minimize, and manage negative social impacts within the area of influence. Under this program, Pluspetrol and TGP conducted the following activities:

- Pluspetrol visited the communities of Nueva Luz, Nueva Vida, Sensa and Maria with the technical group of Servicios Educativos Ruarels (SER) of the NGO's to evaluate the feasibility to generate potable water sources for these communities.
- Pluspetrol conducted an investment workshop at the Sepahua community. The workshop intended to help and identify investment opportunities and better distribute the community compensation money.
- On December 13, 14 and 15, the third Community Monitoring Committee workshop was conducted at the Camisea community. The workshop was presented by Pro Naturaleza to evaluate the Community Monitoring Plan.
- The mobile Museum exhibit was closed. The community cultural promoters were awarded for organizing and conducted the exposition at the different communities of the lower Urubamba River.
- Pluspetrol provided supplies and tools to one of indigenous families from the settlement of Alto Paquira while visiting the Nueva Horizonte community due to health related problems. Five isolated families live in the settlement.
- During the month of December, Pluspetrol provided support to several families from the area of influence of the project that required to be evacuated to Lima for emergency health treatment.
- During the month of December, TGP distributed Christmas cakes, chocolate, powdered milk and sugar to the children of the communities along the ROW.

## ENVIRONMENTAL AND SOCIAL MONITORING REPORT

Camisea Natural Gas and Natural Gas Liquids Pipeline Project, Peru

- TGP co-ordinated and provided support to the Ministry of Health personnel in vaccination prevention campaign against the malaria outbreak at the Kepashiato area.
- On December 6, TGP conducted a training workshop in Lima for their Community Liaison Officers (CLO) from the coastal sector. The purpose of the workshop was to train the CLO's on issues such as environmental, health and occupational safety, and community relations so they could conduct induction to the new hires in the coastal sector.
- On December 12, a meeting between TGP and the community of Shima was conducted. During the meeting the community acknowledged TGP for installing the water pipe system for the community. IDB representatives also attended the meeting.

### Communication and Consultation Program

- Pluspetrol coordinated and communicated with representatives from the Segakiato and Cashiriari communities regarding the flow line route between San Martin 1 and San Martin 3 wells. Pluspetrol informed these communities the safety measures and impact control that will be taken during the opening of the flow line.
- On December 18, Pluspetrol attended the FECONAVY annual Conference held in Sepahua. Pluspetrol made a presentation of the overall Camisea Project and the social community relations program to the project area of influence.
- Pluspetrol hired the services of a communication consultant to improve the communication program and the skills of their Community Relations Officers.
- TGP provided a clarification explanation to the authorities and members of the Anchac Huasi community and NGO officers of the Huanchaymantay community regarding an alleged contamination of the Vinchos River caused by discharges from the Vinchos Camp. TGP explained the wastewater treatment process and final disposal into the Vinchos River.

### Local Product Acquisition Program

Pluspetrol purchased 10,800 nuevo soles worth of Pajapichi grass from the Segakiato community for the reseeding of the flowline ROW. Pluspetrol also purchased tree trunks from the Communities of Camisea and Shivankoreni for 2,750 nuevos soles. TGP under this program does not purchase local products.

### Land Compensation Program

TGP continued its negotiations for the use of land along the ROW. This activity was limited in the Selva and Sierra sectors; however, in the Coast negotiations were intense so construction of the ROW could start at the beginning of 2003. As of the end of December, 1386 contracts were executed which represents approximately 78 percent of the identified landowners. In the Selva Sector, the ROW is approximately 100 percent established. In the Sierra sector, the area under negotiation is the Pacobamba re-route located within the Chiquintirca community. In the Coastal sector negotiations with landowners in Pisco, Cañete, Asia, Mala, Chilca and Lurin are under way.

# ENVIRONMENTAL AND SOCIAL MONITORING REPORT

Camisea Natural Gas and Natural Gas Liquids Pipeline Project, Peru

## Local Development Program

TGP installed water pipe system for the community of Shimaá. The water pipe system was provided as part of TGP's local development program and also as compensation for the impacts due to the proximity of the ROW to the community.

## Temporary Local Hiring Programs

During the month of December, Pluspetrol hired 6 new locals. However, local people whose contract had expired were rotated among other sub-contractors. Four local workers were terminated due to breach of the Code of Conduct, and the measure was communicated to their respective communities. There was no information of any local hiring by TGP during December. However, as of the end of December TGP has hired a total of 931 in the Selva, and 1322 in the Sierra, no local hires in the Coast. These hires were on a temporary basis and for very small periods of time.

## Camp Conditions

The construction camps, in general provide adequate accommodations for the workers. Significant improvements were observed at the Vinchos and Kepashiato camps. Workers security was improved and a general housekeeping was conducted in the camps.

## Other Issues

- On December 24, Pluspetrol provided a special Christmas dinner for the personnel at the Las Malvinas Camp.
- TGP approved the construction of a 1000-meter perimeter wall around the Emilio Valdizan School in the Pampamarca Community. The wall will be made of adobe and will provide safety to the school children due to close proximity of the ROW.

### **4.1.2 Recommendations**

#### Community Relations and Training Program

TGP and Pluspetrol continue the implementation of their community relation and training programs. The workshops to train the Community Liaison Officers (CLO) have been very positive and should continue on a regular basis.

TGP and Pluspetrol should also continue their support and commitment to the communities regarding the investment of their compensation money. This support should be on a regular basis.

#### Communication and Consultation Program

TGP management should follow Pluspetrol's lead and hire a communication consultant to improve the communication skills of their CLO's and re-organize the communication program. Improvements to the use of suitable didactic material, language skills, organization and implementation are needed in the workshops when communicating technical issues to the communities. This continues to be the weakest point of the social program.

#### Land Compensation Program

TGP should continue implementing the land compensation and relocation programs more effectively. During the month of December, no complaints from the communities and private owners were received. Special attention should be paid when negotiations begin in the coastal sector to avoid disruption of the construction schedule.

# ENVIRONMENTAL AND SOCIAL MONITORING REPORT

Camisea Natural Gas and Natural Gas Liquids Pipeline Project, Peru

## Temporary Local Hiring Program

Communities have high expectations for local hiring especially in the Sierra sector. Some communities have expressed their disappointment in the program, even though TGP and Techint have made promises to hire local workers. During December no information regarding local people being hired was available from TGP. Again, TGP should explain the local hiring program procedures as well as the objectives of the program to the communities to avoid future complaints.

## Construction Camps

TGP should implement appropriate safety measures and good housekeeping practices at the Acocros Camp and the ROW along this area. Latrines, garbage cans and warning signs should be installed. The use of local trees for the construction of camp facilities should be avoided and prohibited. A social area cabin at the Acocros Camp was built using trees from a nearby environmentally sensitive area”.

## Other Issues

Speed limit signs and traffic warnings should be posted at the Abancay and 9de Diciembre Avenues in Ayacucho, which are being used for transportation of the gas pipes. Children were observed playing at parks and soccer fields along these two avenues and sometimes running after a soccer ball onto the streets.

Continue the issue of dust at communities and populated areas due to transportation trailers carrying materials to the different fronts. These areas should be watered to minimize impacts to the air quality due to dust. Techint should improve and implement their own specifications to prevent dust along by watering the access road surface in populated areas.

## **5.0 FOLLOW-UP ACTIONS**

The observations and recommendations discussed above have been discussed with TGP's and Pluspetrols' on-site inspection staff and will be tracked for compliance during subsequent monitoring.