
PERU LNG

**Independent Environmental and Social Monitoring – IESM
September 18, 2009 Monitoring Mission**

LNG Plant and Marine Facilities Final Report

October, 2009



**Consultoria e
Participações Ltda.**

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1.0 Introduction

This report refers to the IESM Monitoring Mission conducted at the LNG Plant and Marine Facilities on September 18th, 2009. Description of ongoing activity refers to the situation observed at that date. Description of progress on Environmental and Social Programs as well as about assurance activities by government entities, is based on information contained in PERU LNG's Q2 2009 Environmental and Social Report.

The scope of the Mission included the LNG Plant and the Marine Facilities at Melchorita, as detailed in section 4.0 herein. It is important to note that not all construction fronts were inspected. As in previous Missions, focus was placed on areas where most intense construction activity was ongoing, based on recent construction progress reported and on the analysis and recommendations of the previous IESM Monitoring Mission.

IFI representative participation in the Mission included:

Leyla Day – Environmental and Social Specialist - IFC
Ximena Herbas – Environmental Specialist - IDB
Maria da Cunha – Social Specialist - IDB

JGP's monitoring team included:

Juan Piazza	Main Environmental and Social Specialist
Alejandro Dorado	Ecologist – Biodiversity Specialist
Humberto Vera	Local Environmental and Health and Safety Specialist
Guillermo Salas	Local Social Specialist

During the Mission, the Monitoring Team requested several complementary environmental and social documents and met with representatives of the plant and marine facility main contractors (CB&I and CDB). The complete list of documents analyzed during preparation of this report is included in **Annex 01**.

2.0 List of Monitoring Activities

Monitoring activities during the Mission included:

Friday – September 18, 2009:

All participants:

- Presentation of construction status – Marine Facilities and LNG Plant – PERU LNG.
- Health and Safety presentation (Plant and Pipeline).
- Health and Safety Management Systems for Operation – Presentation.
- Review of recommendations and activities developed since last IESM Team Monitoring visit.

Environmental and H&S Group (Ximena Herbas, Juan Piazza, Humberto Vera and Alejandro Dorado):

- Desk review of monitoring results for underground water, coastline and discharge.
- Inspection of construction and civil works – LNG Plant / Permanent Community.
- Inspection of Marine Facilities.
- Meeting with PERU LNG to discuss specific issues about ESIPs.
- Review of Marine Monitoring Program.

Social Group (Maria da Cunha, Leyla Day and Guillermo Salas):

- Presentation by CB&I's labor relations manager.
- Meeting with SwissContact and *Recursos* S.A.C.
- Status reviews of social projects, grievances redress management, local hiring, registry of interested parties, influx management plan updating.
- PERU LNG presentation on progress on the Fishermen's Compensation Management Plan (with participation of Juan Piazza and Ximena Herbas).

All participants:

- Closing meeting with PERU LNG.

3.0

Construction Summary

3.1 LNG Plant

PERU LNG reported that progress in the LNG Plant contract had reached 78%. All major equipment was already on site at the time of the September Mission. The construction summary presented highlighted that the construction of tanks continued according to schedule. Perlite installation in LNG tank N^o 1 was well advanced, and, in tank N^o 2, compressed air testing was finalized and Perlite installation had commenced also.

Steel structure works were still being assembled throughout the Plant, the air compressor shelters were already finalized and the cover and lining works of the trestle control room were commencing. Secondary steel structure assembly works continued along the main train area.

It was reported that the main cryogenic heat exchanger insulation works (MCHE) will attain 90% progress by the end of September 2009. Insulation works of the propane refrigeration horizontal units and of the gaseous acids removal unit (AGRU) were still ongoing during the September Mission. Piping installations were underway and together with electrical installations constitute the activity that has increased most in importance during Q2 2009. Asphalt paving of the internal road system will begin soon. Plans are to truck asphalt in from commercial plants rather than to install an asphalt plant on site.

The reverse osmosis plant (RO) was reported to be temporarily out of service. Algae was clogging the pumps and this was being solved by reducing the resident time at the storage pond. Temporary pumps had also been installed and the system was expected to be back in service in October.

At the time of the September Mission, there were 5,614 CB&I employees (which are expected to be reduced by the end of November), 831 CDB workers, and 123 PERU LNG employees on site.

CDB was decommissioning its cement plant, while CB&I continued to operate its own cement plant and is planning to continue until January. One Gas Turbine Generator (GTGs) was undergoing pre-commissioning testing.

It was reported that CB&I is about 4 weeks behind schedule, though only 3 weeks in terms of the critical path. PERU LNG considers this to be a recoverable delay and reported that it still plans to end LNG Plant construction by May 28, 2010.

3.2 Marine Facilities

In relation to the Marine Facilities, total progress of 95% was reported. CDB will finish construction ahead of schedule.

Dredging activities were finalized at the time of the Mission, although some additional materials removal is expected to take place before commercial operation.

Rock loading operations for the trestle using trucks was well underway and making rapid progress. By the end of September 2009, 2,245,000 tons of rock will have been placed (out of a total of 2,277,000 tons). Placement of precast concrete blocks (BCRs) continued, with 9,068 units placed on the seaward face of the breakwater.

3.3 Quarry and Access Roads

Exploration of the quarry had been discontinued in accordance with schedule.

4.0 Construction Related Performance

Scope of the IESM Team's Review

Inspection of construction fronts during the September Mission focused on the Marine Facilities that were thoroughly inspected, including the provisional trestle extension, the main breakwater and the roll-off facility. CB&I's support area by the trestle was also inspected.

Within the LNG Plant as such, the focus of inspection was on the permanent community being built by GyM, a CB&I subcontractor. This community had not been inspected yet in previous Missions and is already at an intermediary stage of progress.

4.1 Environmental Compliance

Housekeeping and pollution prevention at the Marine Facilities and the CB&I support area near the trestle were found to be very adequate, and only very minor observations were made during the inspection, mainly regarding storage of full and empty gas cylinders together and inadequate labeling of a waste bin. These problems were regarded as margin of error issues.

However, at the permanent community, more significant shortcomings were identified. Very intense work was ongoing during the inspection, and a sizable workforce was involved. No major problems were observed at the permanent facilities being built. However, several storage areas and warehouses, as well as auxiliary work areas are distributed throughout the site, and both housekeeping and pollution prevention were found to be non-compliant with several aspects of the applicable ESIP's.

Several small warehouses are being used to store fuels, paints and other chemical products and in many cases no fire extinguishers were found in place. Secondary containment was not always adequate, and frequent problems of inadequate piling of liquid product packages within the secondary containment were observed.

Waste management practices also require improvement. Some bins without labels were identified, and several bins labeled for “empty chemical product packages” were actually being used to deposit packages that are half-full with liquids. The recommendation to re-classify these bins as hazardous product bins has been set forth in Section 10.0 of this report.

CB&I will require corrective actions from GyM as appropriate. However, the situations observed at these auxiliary areas within construction fronts indicate that CB&I needs to improve its inspection routines and checklists as they apply to such areas. Similarly, PERU LNG should also reinforce its compliance assurance focus in this case.

4.2 Health and Safety Compliance

Health and safety practices were found to be compliant with Project requirements at the Marine Facilities and at the CB&I support area by the trestle. In the case of the permanent community, the need for eye-washers was observed. Also, lack of fire extinguishers in chemical products storage areas, already mentioned in Section 4.1 above, should be considered a health and safety issue equally.

In general, at the permanent community, signage affecting required PPE use warrants some improvement.

4.3 Social and Community Relations

Construction related social and community relations issues refer to social impacts and/or disturbances that are directly attributable to construction activity and are not being managed under one of the Project’s E&S programs. Main issues in this category have referred thus far to housing of out-of-region workers outside of the construction camps and within the direct area of influence. This issue was raised in the report on the April 3 - 4 Mission, issued in June 2009, as a result of an observation from OSINERGMIN, because housing of out-of-region workers in Chincha or Cañete was restricted in the EIA. Since then, however, PERU LNG has obtained specific permission to house workers in the direct area of influence (mainly bus drivers).

Additionally, some PERU LNG personnel is currently housed in residential condominiums at Cerro Azul and Asia, outside of the Project’s direct area of influence.

According to the Q2 2009 Report, the number of non-local workers housed outside the campsites at Cañete, Chincha and Cerro Azul or Asia was as follows:



Month	Non local labor housed at Campsites	Non local labor housed at Cañete	Non local labor housed at Chincha	Non local labor housed at Cerro Azul or Asia
April	3,122	37	13	47
May	3,156	33	14	47
June	3,161	38	14	47

5.0 Internal E&S Assurance

5.1 PERU LNG E&S Supervision and Audits

During Q2 2009, PERU LNG performed internal EHS Audits of Plant and Marine Facilities construction work. These took place during the months of May and June 2009. Weekly joint PERU LNG / Contractor environmental inspections were held with the exception of those weeks when OSINERGMIN was onsite auditing.

Two of the May audits focused on verification of the Quarry Management ESIP and the Dredging ESIP. In June, audits focused on the Waste Management ESIP. No follow-up actions were required.

Observations and improvement opportunities affecting E&S assurance detected by the IESM Team during the Mission are minor and easily implementable. They refer mainly to the need to review specific aspects at the permanent community, where it was found that observations raised by the IESM Team had not been previously noted by PERU LNG's environmental inspectors (see Section 4.1).

5.2 Construction Related Monitoring and Performance Assessment

During April, May and June 2009, monitoring of the main environmental parameters established in the EIA was performed. Results obtained were duly presented to OSINERGMIN in the respective Monthly Monitoring Reports and are summarized below.

Air Quality / Atmospheric Emissions

During the September Mission, no problems relative to dust and vehicle emissions were identified. The results presented in the monthly reports sent to OSINERMING showed that no permissible emission limits were exceeded.

Water Quality - Cañete River

Cañete River water intake has continued to be utilized with variable frequency, depending on the Project's demand. Samples were collected and analyzed along the three-month period. Small alterations in some parameters were observed. In all months, nitrates levels were exceeded, considering that the maximum permissible content is of 0.1 NMP, and the results obtained for the months of April, May and June were of 0.102, 0.202 and 0.231, respectively. This represents no material alteration with respect to previous monitoring results.

In April and June, there were alterations in the level of Total Coliforms, resulting in 16,000 NMP for both periods, compared to a maximum permissible NMP of 5,000. It is also important to note that during the month of May, monitoring results showed sulfates (SO₄) above maximum permissible NMP, having reached 0.0004, against a maximum permissible NMP of 0.0002.

However, it is important to note that these monitoring results are not due to the interference of the Project, that is only extracting water and is not discharging any effluents into the river.

Water Quality – Camp Facilities

Water quality for human consumption has been constantly monitored. Based on the reports sent to OSINERMIN during the quarter, CB&I campsites and offices, including the ORUS campsite (security personnel), as well as CDB facilities were monitored, and according to the analyzed water potability parameters, some of the results obtained were above maximum permissible levels, as commented below:

April

- **CB&I:** Total Hardness limit exceeded, presenting a result of 387 mg/l in Module B4, and of 376 mg/l in the workshops. The maximum permissible level established by WHO is 300 mg/l. (This is not a health indicator and hardness in this case results from high mineral content in well water). Other exceeding values were also found for Total Dissolved Solids (TDS) with a result of 680 mg/l in Module B4 and of 636 mg/l in the workshops. It is important to note that these values are only surpassed when compared with the EPA standard established at a maximum permissible value of 500 mg/l, whereas the maximum permissible level established by WHO is of 1,000 mg/l.
- **CDB:** All parameters analyzed during April presented results lower than the maximum permissible levels.

May

- CB&I: During the month of May, parameters exceeding NMP standards were Total Hardness, with 384 mg/l in Module B6 and 385 mg/l in ORUS campsite. At those same facilities, Total Dissolved Solids (TDS) results surpassed standard values, having reached 611 at Module B6 and 604 at ORUS campsite.
- CDB: All parameters analyzed during May presented results lower than the maximum permissible levels.

June

- CB&I: Similar to what was presented during the month of May, parameters exceeding NMP values were Total Hardness, with 386 mg/l in Module B6 and 377mg/l at the office facilities. At those same locations, Total Dissolved Solids (TDS) levels were surpassed, having reached 634 in Module B6 and 600 at the office facilities.
- CDB: At CDB campsite, it was verified that the turbidity level of water for consumption at the potable water treatment station had surpassed NMP levels, having reached 1.07 NTU. This level only surpasses EPA's standard of 1 NTU, whereas it is still lower than the maximum permissible level established by WHO of 5 NTU.

Treated Effluents

At both campsites, domestic effluent treatment plants have been monitored monthly. Among the monitored parameters, Phosphorus, Ammonia Nitrogen, and Total and Fecal Coliforms presented levels above the Project's reference standards. It should be noted, however, that exceedances with respect to those standards are not legal non-compliances, since effluents that exceed maximum permissible levels are not being discharged to a water body but are being reused or used for dust control.

April

- CB&I: Phosphorus values exceeded in the wetland effluent and in the tertiary treatment, having reached 3.56 mg/l and 3.16 mg/l, respectively, versus a reference NMP level of 2.0 mg/l.
- CDB: Domestic wastewater at CDB's campsite presented a small increase in Phosphorus level, having reached 2.099 mg/l.

May

- CB&I: In May, at the artificial wetland effluent and wetland effluent treatment stations, Ammonia Nitrogen exceeded the NMP level of 10 mg/l, reaching 45.1 and 66.2 mg/l, respectively. At the artificial wetland effluent station, Total and Fecal Coliforms exceeded NMP levels, resulting in 23,000 NMP/100 ml for both parameters.
- CDB: Results obtained after physical-chemical and biological analyses for all CDB treatment stations were below maximum permissible levels.

June

- CB&I: Phosphorus levels were exceeded in the wetland effluent and the irrigation effluent, having reached 2.03 mg/ and 2.40 mg/l, respectively.
- CDB: Results obtained were below maximum permissible levels.

Discharge Monitoring Program

PERU LNG informed that during Q2 2009, only discharge of reverse osmosis brine occurred. Due to seawater intake pump maintenance activities, the use of seawater in the RO Unit occurred only during 10 days in April. Discharge monitoring was not required in May and June. Discharges were found to be compliant with Project standards.

PERU LNG informed that the results were communicated to DGAAE and OSINERGMIN in the monthly reports.

Marine Water Quality – Receiving Body

Effluents discharges at sea were monitored during the months of April and May. All results were compliant with applicable legislation.

Noise Monitoring

During Q2 2009, environmental noise monitoring continued with daytime and nighttime measurements.

Two out of five noise monitoring points (NM1 and NM3) are within the fenced perimeter of the LNG Plant, where industrial standards are applicable. The other points (NM2, NM4 and NM5) are external to the Plant's perimeter.

Based on the results presented in the monthly monitoring results sent to OSINERGMIN, three out of five monitored points presented high noise levels during the three-month monitoring period. Points NM1 and NM3 are compliant with national and World Bank standards for industrial areas.

The levels obtained for point NM2 varied between 72.6 dB(A) and 72.2 dB(A), which is above maximum permissible values in the Plant premises. However, such results are due to inbound and outbound vehicle traffic next to the noise measurement point, as well as to its proximity to the Pan-American Highway.

At point NM4, noise levels obtained were 54.2 dB(A) in April, and 51.7 dB(A), in May and June. It is important to note is that these measurements were always obtained during nighttime, around 10:00 PM. The result above the maximum permissible value is attributed to vehicle traffic at the Pan-American Highway.

In relation to point NM5, noise levels varying between 53.7 dB(A) in April, 54.7 dB(A) in May, and 55.5 dB(A) in June, were obtained during nighttime, around 10:00 PM. The high noise levels are attributed to noise generated by sea waves, considering the monitoring point's proximity to the ocean.

Dredging Monitoring

The dredging process at the port's evolution basin has been constantly monitored in relation to turbidity. Six monitoring points were established next to the dredging locations, and eight monitoring points were established at the dredged materials disposal sites.

During Q2, turbidity levels at dredging and disposal areas were compliant with the project standard.

Quarry Monitoring

During Q2, air quality and noise were monitored at the Quarry (activity has now ceased).

Air Quality

During the month of April, PM₁₀ levels exceeded World Bank standards established at 70 µg/m³, having reached the following values at points A-2 and A-4: 103.4 µg/m³ and 419.8 µg/m³, respectively. The high rate obtained at point A-4 was attributed to its proximity to the vibrating screen (about 100 m).



Noise Monitoring at the Quarry

During the month of April, all noise levels measured were below the maximum permissible levels. However, during the months of May and June, levels reached 76 dB(A), and 72.8 dB(A), at point QM-01.

The levels obtained above the maximum permissible rate were attributed to the measuring point's proximity to the Pan-American Highway.

**6.0
External E&S Assurance**

6.1 OSINERGMIN Inspections and Observations

During the reporting period, OSINERGMIN performed seven audits in the Plant, Quarry and Marine Facilities. Three environmental audits were performed in the Plant and in the Marine Facilities, whereas three environmental audits were performed in the Quarry and one social audit was performed in the Plant and in the direct area of influence of the Project. No requirements for new actions were reported.

Table 6.1 below, summarizes OSINERGMIN's observations presented during Q2 2009.

**Table 6.1
Summary of OSINERGMIN Inspections during Q2 2009**

Month	Description of Field Observations
April	<p>1 - ENVIRONMENTAL INSPECTION TO THE PLANT AND MARINE FACILITIES</p> <p><u>Inspected Area:</u> Four-day inspection to different construction fronts at the Plant and Marine Facilities <u>Observations:</u> No field observations requiring follow-up were raised.</p> <p>2 – ENVIRONMENTAL INSPECTION TO THE QUARRY</p> <p><u>Inspected Area:</u> Three day inspection to the Quarry. <u>Observations:</u> No field observations requiring follow-up were raised.</p> <p>3 - ENVIRONMENTAL INSPECTION TO THE QUARRY</p> <p><u>Inspected Area:</u> Three day inspection to the Quarry. <u>Observations:</u> No field observations requiring follow-up were raised.</p>
May	<p>4 – ENVIRONMENTAL INSPECTION TO THE PLANT AND MARINE FACILITIES</p> <p><u>Inspected Area:</u> Four-day inspection to different construction fronts at the Plant and Marine Facilities. <u>Observations:</u> No field observations requiring follow-up were raised.</p>



Month	Description of Field Observations
June	<p>5 - ENVIRONMENTAL INSPECTION TO THE PLANT AND MARINE FACILITIES</p> <p><u>Inspected Area:</u> Three-day inspection to different construction fronts at the Plant and Marine Facilities. <u>Observations:</u> No field observations requiring follow-up were raised.</p>
	<p>6 - ENVIRONMENTAL INSPECTION TO THE QUARRY</p> <p><u>Inspected Area:</u> Two-day inspection to the Quarry. <u>Observations:</u> No field observations requiring follow-up were raised.</p>
	<p>7 - SOCIAL INSPECTION TO THE PLANT, QUARRY AND MARINE FACILITIES</p> <p><u>Inspected Area:</u> Three-day inspection at the Plant and Projects in the area of direct influence. <u>Observations:</u> No field observations requiring follow-up were raised.</p>

As can be noted from the information presented in **Table 6.1**, OSINERGMIN did not raise any field observations that required follow-up.

6.2 IESM Missions

In the previous IESM Mission carried out on July 10th and 11st, 2009, four new recommendations were issued and action upon them had not yet been reported on at the date of issuance of this report.

Four of the 14 recommendations dating back to April IESM Mission were responded to only after the July Mission IESM Report was issued. Response by PERU LNG was deemed adequate with regards to the recommendation affecting technical assistance requirements to the economic projects being implemented by fishermen with compensation under the Fishermen’s Compensation Plan. Notwithstanding, the IESM Team will continue to follow up on the effectiveness of this assistance.

Response on feedback on E&S program results to local communities was also found to be adequate. However, in the case of the other two recommendations in this group, affecting exchange of information between PMSAP monitors and the Marine Monitoring Program, and the development of synergies between the two Additionality Social Projects (AgroProgreso and local suppliers), PERU LNG has reported that it is still reviewing these issues and hence, these recommendations have remained open in the Recommendation Tracking Table in **Annex 03**.

Three further recommendations dating back to previous Missions refer to the need of adequate retrenchment planning and for a transition plan between the construction and operation phases. Adequate action upon these recommendations is considered to be still pending at the time of issuance of this report.

Finally, on the basis of the September Mission, five new recommendations have been formulated and have been included in the Recommendation Tracking Table.

7.0

Environmental and Social Program Implementation and Performance

7.1 Marine Monitoring

Progress Reported by PERU LNG

The Q2 2009 Report presents a summary of Marine Monitoring activities developed by PERU LNG, as well as brief summaries of meetings held. PERU LNG also informed that by the end of 2009, the results of the third year of monitoring will be presented.

Marine Monitoring was undertaken from April 22nd to 28th. This was the 10th monitoring event in the Marine Monitoring Program and it represented the last survey of the three-year monitoring period. Members from 24 institutions participated in the field work. Preliminary results show no cause for concern relating to the marine environment.

Hydrographic measurements and water quality levels show that water conditions in April were similar to those found during years 1 and 2 of the monitoring program. Sediment granulometry, metals (with the exception of arsenic and zinc) and total petroleum hydrocarbon were consistent with previous records.

Macrobenthos remained consistent with previous survey results. Species of economic importance were found in similar abundances to those reported previously. For fishing, total biomass has fluctuated widely over the monitoring period to date. There has not been any evidence of differences in fish abundance or biomass between the work area and the four control areas.

PERU LNG informed that the results of the Year 2 monitoring program were presented at a workshop that was held in Chincha with 100 participants from 29 institutions including government, NGOs and fishermen organizations.

PERU LNG reported that Marine Monitoring will from now on take place twice a year (autumn and spring), as previously informed. The next Marine Monitoring campaign shall take place in November 2009, follow the EIA transects to ensure compliance.

Secondary statistical data on regional and local fish resources, based on several governmental sources, is still ongoing. This information shall be used by the Marine Monitoring Program.

It was further reported that the Program is being unified with the Seabirds and Marine Mammals Monitoring Program and that its management is being transferred to the Smithsonian Institute.

Scope of the IESM Team's Review

A meeting with PERU LNG's Team responsible for the Marine Monitoring Program was held during the September Mission. No specific field inspections took place. Nevertheless, the IESM Team observed birds and dolphins occupying the habitat in the region of the Marine Facilities, as well as a great concentration of marine birds.

Compliance Assessment

The Marine Monitoring Program, as informed previously, has focused on marine ecosystem, fishermen, and the possible interference of the Project on both of them. Up to the present moment, monitoring activities have not registered any variation, and the Marine Facility's construction is almost complete. The operation phase will now commence, and monitoring activities have been transferred to the responsibility of the Smithsonian Institute. The decrease in sampling activities (monitoring frequency) planned by PERU LNG, is consistent with what is established in the Environmental Impact Study (EIA).

Results Assessment

Results of the third year of monitoring will be published by the end of 2009.

Suggestions and Recommendations

Consolidated results should be presented as soon as possible.

Program Evaluation

To date the program is presenting satisfactory results and accomplishing all stages as planned.

7.2 Ecological Monitoring Program

7.2.1 Seabirds and Marine Mammals Monitoring

Progress Reported by PERU LNG

PERU LNG informed that the design of this monitoring program is currently being finalized and shall be integrated to the new phase of the main Marine Monitoring Program, which is due to commence in October / November 2009.

As commented in previous IESM Reports, seabird and marine mammal monitoring results constitute a baseline representative of conditions during the construction phase. Therefore, the assessment of the Marine Facility's operation impacts on seabirds and marine mammals will only be compared to baseline data which was obtained after construction began.

It was also informed that the Smithsonian Institute will be responsible for this integrated monitoring program during the operation phase.

Scope of the IESM Team's Review

A meeting with PERU LNG's Team responsible for the Marine Monitoring Program was held during the September Mission and no field inspections were performed.

Compliance Assessment

The Seabirds and Marine Mammals Monitoring Program is an Additionality Program, and therefore, it is not subject to compliance assessment. PERU LNG has performed this monitoring activity because it detected the importance of these organisms in the marine ecosystem, and therefore, considers them as good indicators for environmental performance.

The program has thus far been carried out with adequate scientific criteria and shall obtain useful information for the national and international scientific community, as well as for governmental institutions.

Results Assessment

Results will be assessed after the presentation of the consolidated report by the end of 2009.

Suggestions and Recommendations

As was already mentioned in previous recommendations, Marine Facilities have been transformed into a new habitat for seabirds. These facilities offer shelter and nestling locations and provide an important source of food. Considering these aspects, the Project has had a positive impact on these natural resources.

Similarly, groups of dolphins have also adopted the Marine Facilities as their habitat. It will be important to detect and define procedures so that Marine Facilities operations do not result in negative impacts for these resources.

Program Evaluation

It was not possible to evaluate the program considering that no further information was presented during the visit.

7.2.2 Tillandsia Translocation Plan

PERU LNG informed that recent surveys of the Tillandsias relocated as part of the early site preparation contract have shown no change from the previously reported condition in Q1 2009, with few surviving individuals among those transplanted.

It was informed that additional monitoring of native plants will not be included in the Q3 2009 Report. PERU LNG intends to reduce the frequency of monitoring and possibly discontinue the monitoring in the near future.

7.3 Coastline Monitoring

Progress Reported by PERU LNG

PERU LNG informed that a 7 km topographical survey (4 km north and 3 km south of the trestle) was undertaken in late April 2009. This surveyed 56 transects perpendicular to the coastline, generating profiles in dry (50 m) and submerged zones (100 m). Only an interim report is available on the results of this survey.

Additionally, a complementary survey was conducted by Golder Associates in July. This was a walk along and air photograph verification of the water line.

It was reported that due to relatively rapid change along the coastline near the trestle, PERU LNG has scheduled additional topographic monitoring on a monthly basis between September and December 2009 (at least). These will include at least 4 transects north and 2 south of the trestle. The October survey will contemplate monitoring of all 56 transects.

An assessment with analysis of the information gathered from December 2008 through April 2009 will be presented shortly. A comprehensive report on coastline monitoring will be presented by January 2010.

PERU LNG also reported that some beach erosion was identified between 800 and 1,000 m north of trestle. However, visual monitoring indicates it is filling in and this area will be covered by the monthly monitoring described above.

Scope of the IESM Team's Review

The IESM Team held meetings with PERU LNG's team responsible for the Program and conducted an inspection in the area surrounding the trestle.

Compliance Assessment

The program is being correctly implemented. Additional monitoring scheduled in order to obtain a more thorough understanding of coastline changes is in excess of project requirements.

Results Assessment

The IESM Team was surprised by the speed of change along the coastline in the trestle area. The beach is rapidly widening and it will be crucial to assess if this rate continues or begins to stabilize, indicating a new equilibrium.

Suggestions and Recommendations

The IESM Team recommends the continuation of monitoring activities as planned by PERU LNG. Depending on evolution of coastline change, hydrodynamic modeling may be necessary in order to predict new equilibrium conditions.

In the case of erosion to the north of the trestle, continued monitoring should take place until the process is fully reverted (or otherwise).

Program Evaluation

This program is being properly implemented and coastline changes in progress confirm that it is of crucial importance to PERU LNG.

7.4 Luminosity Monitoring

As indicated in the previous IESM Report (August 2009), this is an additionality program and based on results obtained, PERU LNG decided to discontinue it as of March 2009 (last luminosity monitoring campaign).

7.5 Groundwater Monitoring

Progress Reported by PERU LNG

PERU LNG informed that the first survey of Year 3 of the Groundwater Monitoring in Topará was conducted in May 29. The monitoring program includes quarterly monitoring of water levels, field parameters, physical, chemical and biological analysis.

Also during May, a workshop was held in Topará for presentation of the results of the second year of monitoring and of the schedule for the third year. Community and government stakeholders participated.

Additional monitoring took place between August 19 and 20, 2009. Results of this monitoring campaign are expected for October and the corresponding report for November 2009.

The next and last monitoring activity is scheduled for February 2010, as Quarry extraction activities have finished, and to date, no impact due to the Project has been detected in groundwater levels and groundwater quality parameters at Topara.

Scope of the IESM Team's Review

IESM Team's review was restricted to verification of documentation presented by PERU LNG. No field visits were undertaken.

Compliance Assessment

Monitoring performed during the period is compatible with requirements established in the corresponding program.

Results Assessment

The results of the Groundwater Monitoring in May showed that since the program started in 2007, no variation in seasonal water levels or hydro-chemical characteristics of groundwater have occurred.

Suggestions and Recommendations

There are no recommendations or suggestions.

Program Evaluation

This program is nearing completion. It has been useful to provide documented evidence that no impacts attributable to the Quarry have affected groundwater at Topará.

7.6 Cultural Heritage Management Plan

PERU LNG informed that archeologists permanently monitor construction activities in the Plant, Quarry and Quarry Haul Road ensuring that all the provisions of the Cultural Heritage Management Plan are adequately implemented.



During Q2 2009, the closure and restoration of the Pre-Hispanic Road (Sector 1C) on the Quarry Haul Road was completed and the archeological contractor submitted the final report for this rescue to INC-Lima. Approval from INC is pending.

No chance finds were encountered during the quarter.

7.7 Local Hiring and Purchasing Plan

Progress Reported by Peru LNG

According to the Q2 2009 Report, during the reporting period, local workforce comprised almost 41% of the total Peruvian workforce on the LNG Plant and Marine Facilities, as summarized below.

Local hiring	April	May	June	Monthly Average	% Monthly Average
Chincha	864	964	966	931	46
Cañete	1,000	1,113	1,151	1088	54
Total	1,864	2,077	2,117	2019	100

There is a material difference in the proportion of local workers between Chincha (46%) and Cañete (54%). Consistent with this, the quantity of visits to the Chincha office requesting jobs is higher (both in absolute numbers and in percentages) than those in Cañete (see Stakeholder Engagement Plan, information of visits on July and August).

According to PERU LNG, during Q2 local procurement amounted to US\$ 292,424 in April, US\$ 314,437 in May, and US\$ 281,564 in June, adding up to US\$ 888,424 for the quarter. Procurement from Chincha and Cañete was primarily by contractors.

Contractor	Purchasing in Chincha (US\$)	Purchasing in Cañete (US\$)	Total (US\$)
Plant EPC Contractor	203,208	428,198	631,406
Marine EPC Contractor	103,632	153,386	257,018
Total (US\$)	306,840	581,584	888,424
%	35	65	100



The following table classifies local procurement by types of goods and services:

Item	%
Services in general	34
Lodging	28
Food	15
Construction materials and supplies	13
Others	6
Fuel	4

Scope of the IESM Team's Review

During the April Mission, the IESM Team had meetings regarding local hiring and purchasing with PERU LNG's Community Relations staff.

Compliance Assessment

There is a minor difference in the proportion of local workers between Chinchá and Cañete and an effort to reduce this difference should be taken.

Results Assessment

The program is benefiting a significant number of local workers and local businesses. The percentage of local workers in the total Peruvian workforce of the Project has increased in Q2 in contrast with Q1.

Suggestions and Recommendations

The need for a detailed transition plan between the construction and operation phases of the Project, including retrenchment planning, will be essential in order to smoothen the social impacts of demobilization and decrease of local workforce and goods/services demand.

The IESM Team recommends that further efforts should be made in order to divulge within all areas of the company the policy regarding Local Purchasing and to create incentives in order to maximize them. PERU LNG could strengthen local procurement policies internally so that staff are rewarded for purchasing locally. The IESM Team suggested that PERU LNG approach to local purchasing in this area can gain from the experience of CB&I. The maximization of local purchase is being enhanced by the *Local Supplier Development Project*, whose efforts could be complemented stressing its importance within all areas of the company.

Program Evaluation

The Local Hiring and Purchasing Plan is being successful in maximizing the benefits of the construction process for the local population of both Cañete and Chincha.

7.8 Stakeholder Engagement Plan

Progress Reported by Peru LNG

According to the Q2 2009 Report, during the quarter focus continued to be directed to the dissemination of information and positioning of the PERU LNG Project in the provinces of Chincha and Cañete, in coordination with key local stakeholders. The following activities were reported on:

- 26 informative meetings were carried out with eleven schools and educational institutions.
- 1,415 students participated and, during these meetings 2,197 comics with informative material about the Project were delivered.
- Informative meetings about Project activities were carried out with directors and teachers from 17 local schools. 84 leaflets, 80 newsletters and 26 posters with information about the Project were distributed in these meetings.

PERU LNG also reported that during Q2, 596 comics, 434 leaflets and newsletters about Plant and Quarry, and 25 seabirds and marine mammals' identification guides were distributed to the general public visiting the offices.

During Q2 2009, PERU LNG offices received 890 visitors for the Plant, Quarry and Marine Facilities, with 417 consultations in Cañete, and 473 in Chincha (57 of the visits to the later were inquiries regarding Pipeline activities).

These visits were related to inquiries for job opportunities, fishermen compensation and general consultations about the Project (requests for information on the Project, updates on construction and benefits to the community).

Only two grievances were received:

- One grievance regarding a local subcontractor worker who claimed that his social benefits were not received at the time he resigned. The bearer of the grievance received the benefits and an agreement was signed to close the grievance.



- One grievance regarding damage to a fisherman’s nets caused by dredging activities on April 28, 2009. Investigations performed by PERU LNG showed that the dredge was not responsible for the claimed damages and the company is preparing the official response to the fisherman’s grievance.

Also in this period, the grievance that remained open from the previous quarter was closed as per the approved procedures. The bearer of the grievance, a fisherman that claimed damages to his fishing nets by the dredge, was provided with a new fishing net, and an agreement was signed to close the grievance.

During the Mission, the IESM Team was provided the following information for July and August:

The Chincha and Cañete offices received a total of 740 visits. The visits inquiring for work opportunities show increasing importance since Q2 2009. This should be taken into account when developing the retrenchment plan. While both offices show a similar pattern, in Chincha the demand for work positions is clearly higher than in Cañete.

	Chincha	Canete	Total	%
Local hiring	289	145	434	59
Fishermen compensation plan	73	143	216	29
General information	44	32	76	10
Social aid	10	2	12	2
Local purchasing	2	0	2	0
Total	418	322	740	100

There were no new grievances in July and August. The pending grievance was solved and closed.

Regarding the Influx Management Plan, PERU LNG reported that during Q2 2009 there has been no encroachment of informal settlements within the LNG Plant buffer zone. Community Relations personnel continue with the weekly monitoring of the buffer zone and nearby areas to monitor growth of informal settlements in the area, to verify no encroachment is taking place and to ensure that the perimeter fence of the buffer zone is kept in good condition.

Scope of the IESM Team’s Review

During the Mission, the IESM Team held a meeting with PERU LNG’s Community Relations team.

Compliance Assessment

During Q1 2009, gaps between CB&I and CDB grievance procedures and those established for the Project were assessed and adjustments were implemented as necessary. The situation observed during the September Mission was found compliant.

Results Assessment

The program is divulging information on the Project and on the transition process from the construction phase to the operation phase. Interactions with stakeholders are being properly managed and registered.

Records show that employment opportunities have become the main issue of concern for the local population with regards to the Project.

Suggestions and Recommendations

The need for a transition plan from the construction to operation phase in order to minimize grievances due to worker dismissals is once again emphasized.

Program Evaluation

The Stakeholder Engagement Plan is properly managing and documenting the Project's interaction with the local population.

7.9 Fishermen's Compensation Management Plan

Progress Reported by Peru LNG

PERU LNG reported that during Q2 2009 eight (08) agreements were signed with artisanal fishermen associations and negotiations were ongoing with the remaining 2. These remaining associations prefer to receive cash compensation as opposed to compensation in social/economic projects. They also expect to receive a large compensation amount and this is hindering the process. Since May 22, 2008, 16 formal negotiation meetings have taken place with these 2 associations. Meetings are usually held with the participation of independent observers.

242 agreements were signed with independent fishermen, out of 284 identified as eligible in the Compensation Plan (85% of progress).

PERU LNG is developing business ideas and feasibility studies with fishermen for the implementation of sustainable productive projects as part of the compensation to restore lost income due to the future implementation of the security zone around the marine trestle.

During Q2 2009, the implementation process of the fishermen's compensations projects is summarized as follows:

- 370 business ideas jointly identified with 563 fishermen that have already signed a Compensation Agreement.
- 109 business profiles involving 109 fishermen are being elaborated, where 70% correspond to associated fishermen and 30% to independent ones.
- 140 business profiles have been completed and approved, involving 172 fishermen.
- 54 businesses are in process of implementation. The majority are related to secondary economic activities that fishermen were already carrying out, or to main economic activities being carried out by the fishermen's direct relatives. These business are distributed as follows:

✓ Transportation	74%
✓ Commerce	10%
✓ Agriculture and livestock	9%
✓ Services	7%

- At least one follow-up visit to each business project has been carried out.
- 172 workshops have been carried out in order to achieve these results.

Effort during Q2 has been focused on business' profiles elaboration. During Q2 the compensation implementation process reached 45%. The number of businesses implemented has increased from 2 to 57.

During the IESM Mission, PERU LNG and the implementation partner advanced the following information regarding July and August 2009.

- Only one fishermen association (APARCHPC) has not yet reached an agreement with PERU LNG regarding compensation. The main issue is that the association demands that a percentage of the compensation to be received in cash, rather than through sustainable projects. The acceptance of this condition could jeopardize the already signed agreements with other associations. Representatives of the Ministry of Energy and Mines have participated in negotiations as mediators.
- One more independent fisherman has signed a compensation agreement. The remaining independent fishermen seem to be waiting for the outcome of the negotiations with APARCHPC in order to make a decision. While they know that new associations will not be accepted in the compensation program, it seems that they still are expecting this possibility. This is associated with the creation of new associations (formed after the deadline of the baseline studies for compensation).



Some independent fishermen constituted this new association under a false premise, hoping to receive a higher compensation.

- One more business idea was identified.
- 129 business profiles are being elaborated.
- 242 business profiles have been approved.
- 150 businesses are being implemented.
- 129 businesses have already started operations.

Cumulative results until August are presented in the table below.

Businesses	Approved Profiles		Under implementation		In operation	
	Number	%	Number	%	Number	%
Transport	117	48	107	71	94	73
Commerce	47	20	18	12	15	12
Livestock	25	10	4	3	4	3
Agriculture	15	6	5	4	3	2
Services	22	9	11	7	10	8
Manufacture	3	1	2	1	1	1
Fishing	13	6	3	2	2	1
Totals	242	100	150	100	129	100

It was reported that no more transport projects will be approved.

Scope of the IESM Team's Review

The IESM Team held a meeting with PERU LNG's staff responsible for the Fishermen's Compensation Plan and representatives of the implementation partner.

Compliance Assessment

Negotiations with fishermen associations are extending for a longer period than planned. This timeframe is due to the unexpected difficulty in reaching agreements with some associations and cannot be considered a non-compliance.

Results Assessment

The negotiation process has thus far been successful. Only one association is still negotiating.

Businesses and projects are being implemented, but it is too soon to assess results in this regard.

The project did not foresee the large number of individual projects presented. This has had an impact on the duration of the project cycle, where preparation and implementation of projects is taking longer than initially planned.

Suggestions and Recommendations

While the IESM Team is conscious of the difficulties that the development of new businesses entails, it is important to try to expedite project preparation and implementation. Examples of successful implementation of new businesses might be an incentive for the fishermen that have not yet signed agreements.

Program Evaluation

The program's negotiation phase has been facing complex negotiations with two associations. For Q3 2009, it is critical to close an agreement with the remaining association.

The implementation of the businesses and projects is making steady progress. However, a more expedite process is desirable.

8.0 Additionality Programs

8.1 Contractors' Investment in Community Development

As briefly described below, both CB&I and CDB are carrying out a wide variety of social interventions in the communities of Cañete and Chincha. These interventions are described in PERU LNG's Q2 2009 Report. During the Mission, the IESM Team attended presentations by CB&I and CDB Community Relations teams in which all social investment initiatives were reviewed in detail. All projects continue to be implemented.

Social Development

Health Campaigns (CB&I and CDB)

During Q2 2009 36 health campaigns consisting of brief medical checks were carried out benefiting 3,876 people, mainly from rural areas. In addition, 15 vaccination campaigns were carried out, benefiting a total of 1,611 people. CB&I and CDB contribute through support in logistics, transport and funding of informative material to health centers in Chincha and Cañete.

Health/Hygiene Training in Community Kitchens (CB&I)

During Q2 2009, one nutritional and environmental workshop was developed for 28 women that are active members of these organizations. These activities are carried out in coordination with local governments.

Economic Development

Strengthening Local Textiles Workshops (CB&I)

During Q2, two Textile Workshops (one in Chincha and one in Cañete) providing local people with information regarding administrative issues and working for improvement of garment quality. During the reporting quarter, the Plant EPC Contractor commissioned the production of 733 shirts, 900 pants, 558 vests and 70 t-shirts. Also, PERU LNG continues supporting these two textile workshops through its Supply Chain Management Project.

Cultural Development

Dance school (CDB)

This program promotes local music and dance among children from Chincha and Cañete. Around 100 children participate in the program. In Q2 2009, the dance school held 96 class-hours.

Football school (CDB)

The football school was initiated to develop skills of children from Chincha and Cañete. The number of children participating increased to 110 during the second quarter, with an average of 120 class-hours. As part of this program, the school also provides nutritional and medical assistance to the children.

Supporting Volleyball, Fronton and Chess (CB&I)

In coordination with local governments and the Peruvian Institute of Sport, CB&I supports volleyball, *fronton* and chess teaching and training for children and teenagers from both Chincha and Cañete. During Q2, training was conducted by two qualified and recognized sportswomen. It is expected that as a result of this process, 240 active participants will significantly increase their skills.

Environmental Protection

Healthy School Program (CB&I)

The goal of this program is to support and improve safety, health and protection of the environment in schools. It has also included workshops for prevention of the AH1N1 flu. It is implemented in coordination with health centers, municipalities and the National Police. Healthy school brigades have been formed in 11 schools in Chincha and Cañete municipalities.

Based on information given by CB&I and CDB in their detailed presentations, the IESM Team highlights the following:

- Both contractors have developed a rich experience in engaging with local populations through their several projects. It is crucial that PERU LNG's Social Investment team gain from this knowledge. During the Mission, the IESM Team was informed that PERU LNG's Social Investment Team will be in charge of accompanying both CB&I and CDB Community Relations team in order to accomplish this.
- The IESM Team have found the following CB&I initiatives particularly valuable, in support of community's initiatives:
 - Supporting the elaboration of Concerted Development Plans, Institutional Development Plans and Territorial Development Plans of Cañete and Chincha Municipalities.
 - Supporting *Comedores Populares* initiatives, in collaboration with State Agencies and grassroots women's organizations.
 - CB&I's experience in the development of a Local Purchasing Policy (which includes advance payments, middle term purchasing planning, support to business formalization, and the payment an extra 20% over non-local competitors during the first year and 10% in the second year).
 - CB&I will continue all programs until March 2010.
- The IESM Team have found the following CDB initiatives particularly valuable:
 - Integrated education and training strategy that includes not only children but also their families through football and dance academies.
 - CDB support to State Agencies involved in Domestic Violence prevention programs which involve community promoters, the National Police, legal officers as well as high school students.

- Support of Women's Associations in their alphabetization efforts. These rely on the Municipality's Participative Budget, although it only covers the teachers' salaries.

8.2 PERU LNG Social Projects

PERU LNG is undertaking investment in community development through targeted programs in agricultural promotion and supply chain management.

AgroProgreso

The objective of this program is to improve the profitability and competitiveness of the agricultural plots of 300 families selected in the districts of San Vicente (Cañete), Grocio Prado and Sunampe (Chincha). Two target groups have been identified:

- Grape farmers (72% of beneficiaries) - A grapevine production supply chain is being implemented with the following components: training program; technical assistance; access to financial credit to purchase agricultural supplies; and support in commercialization.
- Other crop farmers (avocado, apple, asparagus, tangerine and *pallar* bean). Due to small product quantities, it was not possible to implement a production supply chain similar to the one implemented for the grape farmers.

The Q2 2009 Report reports the following project progress:

- Agronomic baseline data gathering process from 348 beneficiaries has been initiated.
- Soil samples from 150 agricultural plots have been taken.
- The Training Program and the Technical Assistance services have been satisfactorily implemented.
- Technical Assistance has been focused on the preparation of agricultural plots (resting period, grapevine cutting process).
- 130 small farmers have received training in grapevine, avocado and *pallar* bean management.
- 138 grape farmers have been technically evaluated in order to obtain access to financial credit for purchase of agricultural supplies.
- 112 have been selected to participate in the financial credit program. The delivery of fertilizers and pesticides is planned for late August.
- The rehabilitation of small productive infrastructures (vineyards) affected by the 2007 earthquake has been concluded, and 23 farmers have benefited from this component of the program.

During the Mission, the IESM Team was informed about further progress in the following aspects of the project during July and August:

- 328 soil samples have been taken.
- 36 pits for soil characterization have been executed.
- Informative meetings with a total of 34 beneficiaries in Cañete and 71 in Chincha have been carried out.
- 8 beneficiaries from Cañete and 35 from Chincha have signed credit agreements.

Local Supplier Development Project

The Q2 2009 Report informs that the implementing partner, SwissContact - *Recursos SAC*, has carried out the following activities:

Completion of the survey of Small and Medium Enterprises (SMEs) in the region that can supply goods and services. 215 SMEs have been identified and 103 assessed.

Main results of the SME survey are:

- 74% of the SMEs are in Chincha, in the manufacturing, construction and services sectors;
- 26% of the SMEs are in Cañete, in the agro industry, construction and services sectors;
- The average annual sales range from in US\$ 35,000 to US\$ 1,400,000;
- SMEs have an average workforce of 18 people.

Business support services required for these SMEs were implemented with 15 SMEs, which developed Business Improvement Plans with the support of the program's technical assistance team.

Regarding potential product demand, 32 large corporations from Chincha, Cañete and other areas have been contacted. To date 12 SMEs have been linked with potential buyers. By the end of June, commercial and business linkages developed with the support of the program totalized US\$ 94,000. These were mainly related to garments and agro-industry related products.

The Institutional Strengthening component of the program is at an initial stage. A cooperation agreement with Chincha's Chamber of Commerce has been drafted and agreed, and will be executed in the next quarter.

During the September Mission, the IESM Team received the following complementary information, based on the survey of SMEs:

- 7 more SMEs have been registered.
- 7 more SMEs have been evaluated.
- 106 have received a Business Improvement Plan.
- 15 SMEs are implementing Business Improvement Plans: 9 SMEs are participating in the Total Quality Program and 6 are receiving specialized technical advice.

In July and August two more corporations were identified as potential sources of demand for local SMEs: WOODGROUP, which is in charge of Pluspetrol's plant in Pisco, and CERRO LINDO mine (MILPO), in Chincha highlands.

The following SME sales have been achieved through the program during July and August:

- COLP and PERU LNG - US\$ 63,138.00
- Other companies (mainly Agricola Viñasol) - US\$ 100,383.00

An agreement with Chincha's Chamber of Commerce has been signed.

Suggestions Regarding Social Investment:

Both contractors (CDB and CB&I) have developed a rich experience in engaging with local populations through several projects. It is crucial that PERU LNG's Social Investment team gain from this knowledge. During the Mission, the IESM Team has been informed that PERU LNG's Social Investment team will accompany CB&I and CDB Community Relations team in order to evaluate their programs.

Associated to the development of the Fishermen's Compensation Plan there is an emerging expectation of similar programs from the rest of Chincha's and Cañete's population. PERU LNG must evaluate the possibility of implementing a business evaluation and training service as part of its future social investment initiatives.

9.0 Project KPI Analysis

9.1 Environmental Indicators

During Q2 2009, all environmental indicators were within the Project's targeted performance.

9.2 Social Indicators

All performance targets established in the Project's Social KPI's were met during Q2 2009. The only comment worth registering in this context is that local hiring continues slightly unbalanced in favor of Cañete. An effort to balance the situation should be undertaken since the unbalance has persisted over a considerable period of time and due to this could be considered a non-compliance with the KPI.

9.3 Health and Safety Indicators

PERU LNG reported there were no lost time incidents during Q2 2008 and the Lost Time Incident Rate (LTIR) from inception to end of Q2 2009 was 0.03, well below the corresponding KPI of 0.25.

However, there were two minor accidents requiring medical attention (hand/finger), and one incident affecting a marine survey vessel that was dragged onshore by currents due to mechanical problems (no injuries occurred).

There was also a food poisoning incident that affected about 300 workers. Some workers were treated at the Plant's hospital and others were transferred to hospitals in Chincha and Cañete. Follow-up actions taken by PERU LNG were:

- A full investigation to determine the cause of the incident;
- Deep cleaning of all food preparation and serving areas;
- Monthly health inspections and audits to catering services;
- Increase of health staff;
- Reinforcement of H&S training.

PERU LNG also reported 4 recordable incidents in August. Two of them were transportation accidents involving children (Pipeline). At the time of the September Mission, one of the incidents had been closed.

10.0 Consolidated Suggestions and Recommendations

Recommendations set forth herein are classified into six main categories as follows:

- Recommendations affecting PERU LNG's E&S assurance procedures relative to construction.
- Recommendations requiring PERU LNG to request corrective action from EPC Contractors.
- Recommendations relative to ongoing E&S Programs.
- Suggestions relative to Additionality Projects.

- Requests for inclusion of complementary information in PERU LNG's Environmental, Social and Health and Safety Quarterly Reports.
- Recommendations for future action in view of perceived environmental and social upcoming risks (i.e. recommendations for preventive action with regards to future works, rather than for corrective action on past or ongoing performance).

New recommendations resulting from the April Mission are presented below, organized according to the six categories specified above. A **Recommendation Tracking Table** is presented in **ANNEX 03**.

Type 1 - Recommendations Affecting PERU LNG's E&S Assurance Procedures Relative to Construction

- PERU LNG should increase inspection frequencies or otherwise improve inspection procedures at subcontractor auxiliary work and storage areas at construction fronts. Most housekeeping and pollution prevention problems identified during the September Mission were concentrated in this type of auxiliary facilities.

Type 2 - Recommendations Requiring PERU LNG to Request Corrective Action from Contractors

- Several housekeeping and pollution prevention improvements should be required of GyM (a CB&I subcontractor) at the Plant's permanent community. These include:
 - Installation of fire extinguishers as required at chemical and hazardous products storage areas.
 - Improved waste bin labeling at construction front and waste segregation practices (bins labeled as *used chemical product packages* should be reclassified as *hazardous product* bins, since in most cases, packages with leftover liquid contents are being placed within bins.
 - Eye-washers should be deployed as pertinent.
 - Inadequate piling of chemical and other hazardous products within secondary containment should be corrected.
 - Health and safety signaling requires improvement, particularly with regards to required PPE's at each construction front.

Type 3 - Recommendations Relative to Ongoing E&S Programs.

- Efforts should be made to expedite the business project preparation and implementation process of the Fishermen's Compensation Management Plan.

Type 6 - Recommendations for Future Action in View of Perceived Environmental and Social Upcoming Risks

- Communities' safety and communication issues should be included in the EHS plans for the operation phase of the LNG Plant that are being developed.

October, 2009

ANNEX 01 - LIST OF DOCUMENTS REVIEWED

Annex 01 – List of Documents Reviewed Peru LNG – PLANT AND MARINE FACILITIES

Meeting list
Construction Progress
Grievances Procedures
Management supply plan
Registro de Compromiso para Planta
CBI Grievances Procedures
CDB Grievances Procedures
Informe de plan de gestión de flujo
Quarter Report N° 2 to DIGESA about effluents
Biannual Report to DIGESA about domestic effluents
Copy letters sent to DIGESA-Reports
Plant Social Investment Programs Presentation
Fishermen Compensation Plan Presentation
Plant Social Management Presentation
Water Quality Results (before and after treatment)
Livelihood Program Technical Proposal
Biodiversity Monitoring Program Presentation
H&S and E&S Org Charts
Fishermen Compensation Examples
COLP communications diagram
CBI Community Relations Presentation
CDB Community Relations Presentation
Marine Monitoring Program Workshop Presentation
Monthly EHS Progress Report - Jul 2009
Monthly EHS Progress Report - Aug 2009
Monthly EHS Progress Report - Sep 2009
Monthly Report - OSINERGMIN - Mar 2009
Monthly Report - OSINERGMIN - Apr 2009
Monthly Report - OSINERGMIN - Mai 2009
Monthly Report - OSINERGMIN - Jun 2009



ANNEX 02 - INSPECTION PROTOCOLS

 IP.01	INDEPENDENT ENVIRONMENTAL & SOCIAL MONITORING		
	INSPECTION PROTOCOL – LNG PLANT	Rev. 01	18/09/2009

Inspection Check List		Inspected Facilities							
A. Housekeeping and Pollution Prevention		Permanent community							
A.1	Control of fugitive dust	√							
A.2	Control and/or containment of activity-related emissions (blasting, painting, others)	√							
A.3	Control of vehicle and equipment emissions	▲							
A.4	Control of vehicle and equipment noise emissions	▲							
A.5	Location restrictions for installations or activities with high contamination risk	Na							
A.6	Construction equipment spill prevention	√							
A.7	Control of concrete mixer washing	▲							
A.8	Control of construction front liquid effluents	√							
A.9	Handling and storage of chemicals, fuel, oil, paints and other liquids at construction fronts	√							
A.10	Hydrotest water handling (sourcing, reuse, additives, pre-discharge treatment, other)	Na							
A.11	Construction front sanitary installations	√							
A.12	Construction front canteen and worker resting areas	√							
A.13	Classification and provisional storage of solid waste in construction fronts	X							
A.14	Control of solid waste off-site transportation and disposal	▲							
A.15	Destination of recyclable wastes	▲							
A.16	Proper corrective action in case of spills	o							
A.17	Control of water use, including permits	Na							
A.18	Transportation and handling of radioactive or other hazardous products, including permits	Na							
A.19	Access and circulation restriction (barriers) around and within construction fronts	√							

Inspection Check List		Inspected Facilities							
B. Archaeological Chance Finds		Permanent community							
B.1	Delimitation and protection of archaeological remains	√							

Na *Not Applicable*
 o *Not Active*
 ▲ *Not-Verified*
 √ *Compliant*
 X *Non-Compliant*

 IP.01	INDEPENDENT ENVIRONMENTAL & SOCIAL MONITORING			
	INSPECTION PROTOCOL – LNG PLANT		Rev. 01	18/09/2009

Inspection Check List		Inspected Facilities							
C. Erosion and Run-off Control		Permanent community							
C.1	Erosion control at borrow pits and surplus material deposits	Na							
C.2	Stabilization of soil and aggregate piles within construction fronts	Na							
C.3	Control of inclination of platforms, cut and fill sections and drainage components	Na							
C.4	Stabilization / recovery of erosion	√							
C.5	Geological inspections	o							

D. Construction Front Signaling		Permanent community							
D.1	Signaling – Access restriction	√							
D.2	Signaling – Vehicle and equipment circulation and maneuvers	√							
D.3	Signaling – Health & Safety warnings	X							

E. Worker's Health and Safety		Permanent community							
E.1	Use of Protection Equipment	√							
E.2	Worker's transportation	√							
E.3	Vehicle and equipment conditions	▲							
E.4	Compliance w/ Safe Work Procedures (SWP) – Earth Movement	Na							

Na *Not Applicable*
 o *Not Active*
 ▲ *Not-Verified*
 √ *Compliant*
 X *Non-Compliant*

 IP.01	INDEPENDENT ENVIRONMENTAL & SOCIAL MONITORING		
	INSPECTION PROTOCOL – LNG PLANT	Rev. 01	18/09/2009

Inspection Check List		Inspected Facilities							
E. Worker's Health and Safety		Permanent community							
E.5	Compliance w/ SWP – Work in high places	√							
E.6	Compliance w/ SWP – Welding	√							
E.7	Compliance w/ SWP – Sandblasting	Na							
E.8	Compliance w/ SWP – Electric risk	√							
E.9	Compliance w/ SWP – Confined space	Na							
E.10	Compliance w/ SWP – Pressure testing	Na							
E.11	Compliance w/ SWP – Safe driving	▲							
E.12	Compliance w/ SWP – Other	√							
E.13	Emergency equipment (including extinguishers and first aid)	√							

Na *Not Applicable*
 o *Not Active*
 ▲ *Not-Verified*
 √ *Compliant*
 X *Non-Compliant*

 IP.01	INDEPENDENT ENVIRONMENTAL & SOCIAL MONITORING	
	INSPECTION PROTOCOL – MARINE FACILITIES	

Inspection Check List		Inspected Facilities							
A. Housekeeping and Pollution Prevention		Trestle							
A.1	Control and/or containment of activity-related emissions (sandblasting, painting, others)	o							
A.2	Control of equipment air emissions	▲							
A.3	Control of equipment noise emissions	▲							
A.4	Construction equipment spill prevention	√							
A.5	Construction front sanitary installations, canteens and worker resting areas (on land)	√							
A.6	On board sanitary conditions (canteen, restrooms, etc.)	Na							
A.7	Handling of construction front liquid effluents (sanitary and other)	√							
A.8	Handling and storage of chemicals, fuels, oil, paints, and other liquids at construction fronts	√							
A.9	Handling and storage of chemicals, fuels, oil, paints, and other liquids on board	Na							
A.10	Classification and provisional storage of solid waste in construction fronts	▲							
A.11	Classification and provisional storage of solid waste on board	▲							
A.12	Control of solid waste off-site transportation and disposal, including recyclables	▲							
A.13	Control of ship waste disposal	▲							
A.14	Transportation and handling of radioactive or other hazardous products, including permits	▲							
A.15	Control of ship fuel supply operations	o							
A.16	Proper corrective action in case of spills at land	o							
A.17	Marine spill containment and withdrawal capabilities	▲							
A.18	Proper corrective action in case of spills at sea	o							
A.19	Seawater contamination surveillance / monitoring	√							
A.20	Beach contamination surveillance / monitoring	▲							
A.21	Beach access and circulation restriction around and within land construction fronts	▲							
A.22	Access restriction around marine construction fronts (exclusion zone enforcement)	√							

Na *Not Applicable*
 o *Not Active*
 ▲ *Not-Verified*
 √ *Compliant*
 X *Non-Compliant*

 IP.01	INDEPENDENT ENVIRONMENTAL & SOCIAL MONITORING			
	INSPECTION PROTOCOL – MARINE FACILITIES		Rev. 01	18/09/2009

Inspection Check List		Inspected Facilities							
B. Minimización de impactos marinos		Trestle							
B.1	Control of beach erosion and debris deposition	√							
B.2	Dredging plan compliance assurance	Na							
B.3	Control of dredged material disposal at dump site	Na							
B.4	Control of breakwater footprint limits	Na							
B.5	Other sea bed disturbance reduction measures	▲							

C. Construction Front Signaling		Inspected Facilities							
C. Señalización del frente de la construcción		Trestle							
C.1	Signaling – Access restriction	√							
C.2	Signaling – Vehicle and equipment circulation and maneuvers	√							
C.3	Signaling – Health & Safety warnings	√							
C.4	Marine signaling – navigation	Na							
C.5	Marine signaling – footprint limits	Na							

D. Worker's Health and Safety		Inspected Facilities							
D. Worker's Health and Safety		Trestle							
D.1	Use of Protection Equipment	√							
D.2	Worker's transportation	Na							
D.3	Vehicle and equipment conditions	▲							
D.4	Compliance w/ Safe Work Procedures (SWP) – Navigation / work at sea	Na							
D.5	Compliance w/ SWP – Work in high places	o							
D.6	Compliance w/ SWP – Welding	o							
D.7	Compliance w/ SWP – Sandblasting / Garnet Blasting	o							
D.8	Compliance w/ SWP – Pressure testing	o							

Na *Not Applicable*
 o *Not Active*
 ▲ *Not-Verified*
 √ *Compliant*
 X *Non-Compliant*

 IP.01	INDEPENDENT ENVIRONMENTAL & SOCIAL MONITORING		
	INSPECTION PROTOCOL – MARINE FACILITIES	Rev. 01	18/09/2009

Inspection Check List		Inspected Facilities							
D. Worker's Health and Safety		Trestle							
D.9	Compliance w/ SWP – Fuel supply	<i>o</i>							
D.10	Compliance w/ SWP – Other	<i>Na</i>							
D.11	Emergency equipment (including extinguishers and first aid)	<i>√</i>							

Na *Not Applicable*
o *Not Active*
▲ *Not-Verified*
√ *Compliant*
X *Non-Compliant*

 IP.05	INDEPENDENT ENVIRONMENTAL & SOCIAL MONITORING	
	INSPECTION PROTOCOL – OPERATION OF CAMP FACILITIES & PROVISIONAL INDUSTRIAL INSTALLATIONS	

Inspection Check List		Inspected Facilities					
A. Housekeeping and Pollution Prevention		Support Area CBI	Support CDB/ GyM				
A.1	Control of fugitive dust	√	√				
A.2	Dust containment during aggregate loading / unloading and similar operations	▲	▲				
A.3	Control of point source emissions	▲	▲				
A.4	Cleaning and maintenance of filters and other emission control devices	▲	▲				
A.5	Control of point source noise emissions as pertinent	√	√				
A.6	Handling and storage of chemicals, fuels, oil, paints and other hazardous products	√	Na				
A.7	Oil/water separation installations and maintenance	√	X				
A.8	Sanitary installations and maintenance	√	√				
A.9	Control of solid and liquid waste off-site transportation and disposal	√	√				
A.10	Classification and provisional storage of solid and liquid wastes (including recyclables)	√	X				
A.11	Control of solid waste off-site transportation and disposal, including recyclables	▲	▲				
A.13	Water quality monitoring (effluent discharge receptor)	▲	Na				
A.14	Physical delimitation of camps and industrial facilities (barriers)	√	√				
A.15	Control of access roads	Na	Na				

Inspection Check List		Inspected Facilities					
B. Usage of explosives		Support Area CBI	Support CDB/ GyM				
B.1	Handling and transportation of explosives	Na	Na				
B.2	Legal compliance affecting handling and use of explosives (permits, authorizations, others)	Na	Na				
B.3	Explosions control	Na	Na				
B.4	Compliance with explosions schedule	Na	Na				

Na Not Applicable
 o Not Active
 ▲ Not-Verified
 √ Compliant
 X Non-Compliant

 IP.05	INDEPENDENT ENVIRONMENTAL & SOCIAL MONITORING			
	INSPECTION PROTOCOL – OPERATION OF CAMP FACILITIES & PROVISIONAL INDUSTRIAL INSTALLATIONS		Rev. 01	18/09/2009

Inspection Check List		Inspected Facilities					
C. Archaeological Chance Finds		Support Area CBI	Support CDB/ GyM				
C.1	Delimitation and protection of archaeological remains	<i>Na</i>	<i>Na</i>				

Inspection Check List		Inspected Facilities					
D. Vegetation cutting and clearing control and other site preparation activities		Support Area CBI	Support CDB/ GyM				
D.1	Quarry and overload on deposit area impact minimizing measures	<i>Na</i>	<i>Na</i>				
D.2	Impact minimizing measures on access roads	<i>Na</i>	<i>Na</i>				
D.3	Top soil and vegetation previous removal and storage	<i>Na</i>	<i>Na</i>				

Inspection Check List		Inspected Facilities					
E. Erosion and Run-off Control		Support Area CBI	Support CDB/ GyM				
E.1	Erosion control at borrow pits and surplus material deposits	<i>Na</i>	<i>Na</i>				
E.2	Stabilization of soil and aggregate piles within construction fronts	<i>Na</i>	<i>Na</i>				
E.3	Control of inclination of platforms, cut and fill sections and drainage components	√	√				
E.4	Stabilization / recovery of erosion	√	√				
E.5	Geological inspections	<i>Na</i>	<i>Na</i>				

Na *Not Applicable*
 o *Not Active*
 ▲ *Not-Verified*
 √ *Compliant*
 X *Non-Compliant*

 IP.05	INDEPENDENT ENVIRONMENTAL & SOCIAL MONITORING	
	INSPECTION PROTOCOL – OPERATION OF CAMP FACILITIES & PROVISIONAL INDUSTRIAL INSTALLATIONS	

Inspection Check List		Inspected Facilities					
		Support Area CBI	Support CDB/ GyM				
F. Signaling							
F.1	Signaling – Access restriction	√	√				
F.2	Signaling – Vehicle and equipment circulation and maneuvers	√	√				
F.3	Signaling – Health & Safety warnings	√	√				
F.4	Signaling – Health & safety warnings	√	X				
F.5	Signaling – Quarry delimitation zone	Na	Na				
F.6	Signaling – Environmental markings	Na	Na				

Inspection Check List		Inspected Facilities					
		Support Area CBI	Support CDB/ GyM				
G. Worker's Health & Safety							
G.1	Use of Protection Equipment	√	√				
G.2	Worker's transportation	▲	▲				
G.3	Vehicle and equipment conditions	▲	▲				
G.4	Compliance with applicable Safe Work Procedures	Na	Na				
G.5	Compliance w/ SWP – Earth movement	Na	Na				
G.6	Compliance w/ SWP – Safe driving	▲	▲				
G.7	Compliance w/ SWP – Other	√	√				
G.8	Emergency equipment (including extinguishers and first aid)	√	X				

Na Not Applicable
 o Not Active
 ▲ Not-Verified
 √ Compliant
 X Non-Compliant



ANNEX 03 - RECOMMENDATION TRACKING TABLE

ANNEX 03
Recommendation Tracking Table

Type 1 - Recommendations Affecting PERU LNG's E&S Assurance Procedures Relative to Construction					
Date	Recommendations	Subject	Risks	Corrective Action Reported	Current Status
05.09	It is recommended that there be an exchange of information and experiences between the community members participating in participatory monitoring activities on the pipeline's coastal spread and on the Marine Monitoring Program. Among local community members, the Project is viewed as only one and the division of monitoring activities may seem unclear.	Marine Monitoring Program and Pipeline's Coastal Spread	Loss of information Risk of image	Pending	
07.09	Include the verification of the correct use of static current clamps and static current connections to dissipate or equalize static current at all project fuel storage tanks and fuel supply and transportation facilities, in the inspection routines (checklist) carried out by PERU LNG as part of its construction E&S assurance procedures.	Assurance procedures relative to construction	Risk of fire	Pending	
09.09	PERU LNG should increase inspection frequencies or otherwise improve inspection procedures at subcontractor auxiliary work and storage areas at construction fronts. Most housekeeping and pollution prevention problems identified during the September Mission were concentrated in this type of auxiliary facilities.	Assurance procedures relative to construction	Risk of pollution Non-compliance	Pending	

Type 2 - Recommendations Requiring PERU LNG to Request Corrective Action from Contractors					
Date	Recommendations	Subject	Risks	Corrective Action Reported	Current Status
07.09	Require additional and/or more frequent induction with regards to proper segregation of waste by workers at construction fronts and appropriate use of waste segregation bins. This should also include guidelines relative to maintenance and cleaning of spill trays.	Waste segregation	Non-compliance with storage of solid waste in construction fronts	Pending	

Type 2 - Recommendations Requiring PERU LNG to Request Corrective Action from Contractors

09.09	<p>Require to GyM / CB&I:</p> <ul style="list-style-type: none"> • Installation of fire extinguishers as required at chemical and hazardous products storage areas. • Improved waste bin labeling at construction front and waste abbreviation practices (bins labeled as used chemical product packages should be reclassified as hazardous products bins) • Eye-washers should be deployed as pertinent. • Inadequate piling of chemical and other hazardous products within secondary containment should be corrected. • Health and safety signaling requires improvement, particularly with required PPE's at each construction front set. 	Assurance procedures relative to construction	Non-compliance with storage of solid waste in construction fronts	Pending	
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Type 3 – Recommendations Relative to E&S Ongoing Programs

Date	Suggestion	Subject	Risks	Corrective Action Reported	Current Status
09.09	There is a good opportunity to accelerate elaboration process and program implementation for the Fishermen's Compensation Management Plan.	Fishermen's Compensation Plan	Deterioration of relations with local communities. Risk of image	Pending	

Type 4 - Suggestions Relative to Additionality Programs

Date	Suggestion	Subject	Risks	Corrective Action Reported	Current Status
05.09	There is a good opportunity to develop synergies between the two additionality social projects (Agroprogreso and Local Suppliers) and the Fishermen's Compensation Management Plan.	Agroprogreso, Local Suppliers Programs and Fishermen's Compensation Plan	Deterioration of relations with local communities. Risk of image	Pending	
07.09	Start new survey of Seabirds and Marine Mammals Monitoring Program.	Ecological Monitoring Plan	Risk of biotic integrity decrease	Pending	

Type 5 - Requests for Inclusion of Complementary Information in PERU LNG’s Environmental, Social and Health and Safety Quarterly Reports

Date	Recommendations	Subject	Risks	Corrective Action Reported	Current Status
07.09	In future Quarterly E&S Reports, include the established performance targets in the Environmental KPI Summary Table.	Performance indicators	Loss of information	Pending	

Type 6 - Recommendations for Future Action in View of Perceived Environmental and Social Upcoming Risks

Date	Recommendations	Subject	Risks	Corrective Action Reported	Current Status
05.09	The need for rapid conclusion and implementation of a transition plan for the end of the construction process is highlighted. This plan should include both retrenchment issues and influx management strategies.	Influx management Retrenchment	Loss of means of livelihood Worker unrest	Pending	
05.09	It is necessary to evaluate the future of CB&I and CDB social initiatives in the transition from the construction to the operation phase. As they are not sustainable in themselves, it is necessary to start defining what will be PERU LNG’s policy in terms of continuity of these projects in the future.	Community relations Social responsibility	Deterioration of relations with local communities	Pending	
05.09	PERU LNG should develop a Strategic Social Responsibility Plan in the near future. It will be important for PERU LNG to establish and disclose which kind of projects it wishes to support and develop. In this context, it is also recommended that the overall project strategy for the operation phase be integrated to the extent possible.	Social responsibility	Deterioration of relations with local communities	Pending	
09.09	Communities’ safety and communication issues should be included in the EHS plans for the operation phase of the LNG Plant that have already been developed.	Influx management Community relations	Loss of means of livelihood Deterioration of relations with local communities	Pending	



**ANNEX 04 - PHOTOGRAPHIC RECORDS OF MISSION
OBSERVATIONS**

	<p>Location: Plant construction front</p> <p>Observation: Effluent treatment station, filters and wetland</p>
	<p>Location: Plant construction front</p> <p>Observation: Access roads</p>
	<p>Location: Plant construction front</p> <p>Observation: Solid waste arrangement</p>
	<p>Location: Marine facilities in Melchiorita</p> <p>Observation: Glass waste container with plastic items. Lack of waste segregation</p>



Location: Marine facilities in Melchiorita

Observation: Waste containers without identification



Location: Marine facilities in Melchiorita

Observation: Designed cage and identified with appropriate label "Inflammable gas" and NFPA (1, 4, 0) label and named "GLP", being used for non-inflammable gases. Due to the fact that GLP cylinder diameter is larger than other compressed gases cylinders, the chain is not appropriate to hold the gases cylinders



Location: CBI facilities by the pipeline sleeper way towards the trestle

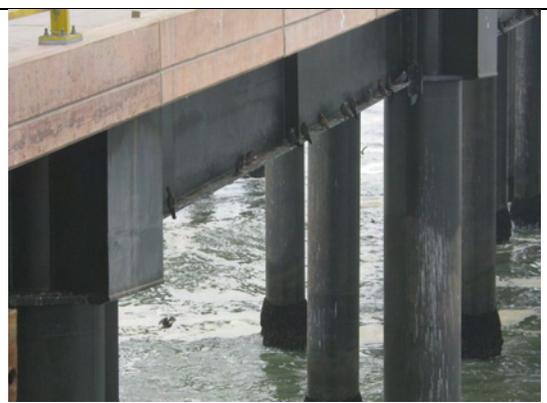
Observation: Hazardous chemical product cylinders placed on wooden boards without any secondary containment



Location: Chemical products and fuels warehouse in permanent camp construction works

Observation: Lack of fire extinguishers and eye washers

	<p>Location: Permanent camp construction works</p> <p>Observation: Workers in a very noisy area, near power generators without PPEs</p>
	<p>Location: Marine facilities in Melchiorita</p> <p>Observation: Trestle for gas shipping, where great quantities of marine birds are observed</p>
	<p>Location: Marine facilities in Melchiorita</p> <p>Observation: Detail of facilities converted in new habitat for marine birds</p>
	<p>Location: Marine facilities in Melchiorita</p> <p>Observation: Changes in marine currents in the port area, showing changes in the shoreline</p>

	<p>Location: Marine facilities in Melchiorita</p>
	<p>Location: Marine facilities in Melchiorita</p>
	<p>Location: Marine facilities in Melchiorita</p>
	<p>Location: Marine facilities in Melchiorita</p>
	<p>Observation: Pelicans feeding in the port area</p>