
PERU LNG

**Independent Environmental and Social Monitoring – IESM
November 29 to 30/2010 Monitoring Mission**

PERU LNG Plant and Marine Facilities Final Report

November/December, 2010



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Executive Summary

This Report presents the results of the Independent Environmental and Social Monitoring (IESM) Mission conducted at the LNG Plant and the Marine Facilities in Melchorita, on November 29th and 30th, 2010. The results and observations presented in this report reflect information reviewed in documents made available by PERU LNG as well as information from interviews, meetings and observations made during a site reconnaissance to the LNG Plant and associated Marine Facilities.

The PERU LNG (the Project) consists of a liquefied natural gas plant, associated marine loading terminal and a 408 km pipeline. The LNG plant and Marine Terminal are located at Pampa Melchorita on the Pacific coast of Peru, approximately 170 km south of Lima.

The Project is currently considered fully operational. The official Facility Acceptance took place on October 14, 2010. The Marine Facilities have been operational since June 2010, when the first ship was loaded with LNG. Testing of some pieces of equipment and systems will continue through the first quarter of 2011.

With regard to the implementation of environmental and social programs, the Project is currently transitioning from the completion of programs conducted during the construction of the Project to the implementation of programs developed for the operations phase. In alignment with the Project's current transitional phase, this report presents information regarding environmental and social programs associated with construction as well as operations phase.

Results of the IESM conducted in November/December 2010 indicate that the environmental and social programs have been implemented in accordance with the Project schedule and requirements. In addition, results of the monitoring programs indicate that the Project is in compliance with Project's Standards.

Minor environmental observations and opportunities for improvement were noted and are presented in this report. In general, the Project is found to be in compliance with in-country requirements and standards established for the Project.

1.0 Introduction

This Report refers to the IESM Mission conducted at the LNG Plant and the Marine Facilities at Melchorita, on November 29th and 30th, 2010. Description of ongoing activities refers to conditions observed at that time of the site visit. Description of ongoing Environmental and Social Programs as well as on supervision activities by government entities is based on information contained in PERU LNG's Q3 2010 Environmental and Social Report, with cut-off date on September 30th, 2010.

Facilities inspected during the Mission included selected process and support areas of the LNG Plant and the Marine Facilities, as detailed in **Section 4.0** herein. The Mission focused on areas where operation activities were ongoing, based on recent information reported by PERU LNG, and on the analysis of actions taken upon recommendations issued by the previous IESM Mission.

Lender representatives' participation in the Mission included:

Elizabeth Brito	Environmental Specialist Leader – IDB
Rosa Orellana	Environmental Specialist - IFC
Maria da Cunha	Social Specialist – IDB
Leyla Day	Social Specialist – IFC

JGP's monitoring team included:

Ana Maria Iversson	Social Specialist Leader
Alejandro Dorado	Ecologist – Environmental and Biodiversity Specialist
Humberto Vera	Local Environmental and Health and Safety Specialist
Cleone Botelho	Environmental and Social Specialist

Plant and Marine Facilities field inspection was conducted by part of the team on December 30th, 2010.

During the November/December 2010 Mission, the IESM Team had access to several other complementary environmental and social documents and met with representatives of the Plant and Marine operators. The complete list of documents reviewed during preparation of this report is included in **Annex 01**.

It should be noted that although the plant and marine facilities were fully operational during the November 2010 Mission, this report includes information relating to 2010 3rd Quarter, when some construction activities were still ongoing. Therefore, some sections describing construction activities were included in this report even though operation programs were already implemented at the time the mission was conducted.

2.0

List of Monitoring Activities

Monitoring activities during the IESM Mission included:

Monday – November 29, 2010 – Meetings in Lima

Morning

All participants:

- Kick-off meeting

Environmental Health and Safety Group (Rosa Orellana, Humberto Vera and Alejandro Dorado):

- Desk Review
- Coastline Monitoring
- Noise Monitoring
- Effluents Monitoring
- Responses to September IESM Observations

Afternoon

- Noise Monitoring
- Effluents Monitoring
- Responses to September IESM recommendations

Social Group (Ana Maria Iversson, Cleone Botelho, Elizabeth Brito, Leyla Day and Maria da Cunha):

Morning

- Security Management Strategy. Meeting with PERU LNG Security Director and COLP Security Manager
- Update on social programs implementation
- Responses to September Mission IESM recommendations

Afternoon

- Update on the Fishermen Compensation Plan

All participants:

- Participatory Social and Environmental Monitoring Program (PMSAP). Meeting with ProNaturaleza and PERU LNG

Tuesday – November 30, 2010:

Morning

- Travel to the Plant
- Presentation of H&S Statistics
- Marine Facilities Review

Afternoon

- Visit to beach where there is longshore sedimentation
- Visit to the Plant (CPI Separator, Wastewater Treatment Plant, Waste Management Area, Construction of Bypasses, Ongoing Monitoring Activities)
- Return to Lima

3.0

Summary of Construction and Commissioning Progress

Information in the PERU LNG's Q3 2010 Report indicates that construction of the LNG Plant attained 100% completion. The report also states that CB&I will serve as the Facility's maintenance contractor. Only punch list items remain. Main commissioning activities during Q3 2010 included:

- CB&I continued the demobilization of temporary construction facilities and equipment.
- Contractor Translei mobilized to the site for the construction of the PanAm underpass. The Tunnel Extension Work is on schedule.
- Activities for the interconnection of the PERU LNG and TGP SCADA systems continued with the definition of tag lists and performance of the detail engineering design.
- First Preventive Maintenance Procedures were performed at the marine system.

At the time of the November Mission, there were slightly fewer than 800 workers at the LNG Plant. The workforce included 287 from CB&I that will eventually maintain about 50 workers at the site. PERU LNG informed that since October 14th the Plant is officially in operation and the emergency shutdown system has been tested.

The load capacity tests of the ships and the reliability tests of the Plant were accepted on July 22th and September 14th, respectively.

Testing of the Plant's ethylene consumption, performance and efficiency was conducted in October 2010 and the results were considered acceptable. Testing of the Plant emergency shutdown system is pending changes that need to be made to the system's loading lines for the system to be tested at maximum loading capacity. Currently, ships are loaded at low loading capacity.

GTG 2 (*Generador de Turbina a Gas N° 2*, Gas Turbine Generator No. 2) failed initial testing. Plant's personnel stated that a new rotor would be installed and GTG 2 as well as the other GTG units will be tested again in February 2011. The emission testing of the turbines and furnaces will be completed when GTG 2 is replaced.

By November 30th, 2010, The Plant had completed 12 days of the Lender's reliability test. The Lender's reliability test consists of 90 consecutive days of Plant operation in which the Plant must reach an average processing capacity of 482 tons/hour. PERU LNG reported that during the results of the first 12 days had met the test requirements.

During Q3 2010, Translei began construction of the underpass that crosses the Pan-American Highway. This company also conducts, in conjunction with TGP, activities for connecting the PLNG's SCADA system to TGP's SCADA system.

Marine construction activities were completed in Q1 2010. By the time of the September Mission, Marine Facilities' commissioning and testing were completed and were described in the September's mission report. The Quarry and Access Road Closure Plan were approved by OSINERGMIN on March 24th, 2010.

4.0

Summary of Operation Progress

As previously reported, the Plant officially began the operational phase on October 14th, 2010, when the ITF (*Informe Técnico Favorable*, Favorable Technical Report) was received from OSINERGMIN. Compañía Operadora de LNG del Perú (PERU LNG Operating Company – COLP) operates the Plant and marine facilities.

The load capacity tests of the marine facilities and the reliability tests of the Plant were accepted on July 22nd and September 14th, respectively.

During the November 2010 site visit, PERU LNG reported that the LNG Plant operated without interruption during Q3. The LNG production was reported at 1,524,000 m³ and the exported volume of LNG was reported at 1,413,000 m³.

During Q3 2010 quarter, the first scheduled maintenance of the marine system was performed and the decommissioning of the 10-inch natural gas pipeline began. This gas pipeline supplied gas to the generators during construction.

5.0

ESHS Performance

Scope of the IESM Team's Review

Inspection of the LNG Plant during the November/December 2010 IESM Mission was conducted on November 30th and the following areas were inspected:

- CPI Separator.
- Effluent outfall.
- Trestle.
- Treated Wastewater Reuse Plant.
- Reverse Osmosis Unit.
- Temporary chemical storage area.
- Beach sedimentation and erosion areas.

5.1 Environmental Compliance

The assessment of compliance with environmental requirements for the Melchorita LNG Plant is based on a review of the Q3 2010 environmental and social report, other documents listed in **Annex 01** (List of Documents Reviewed) and the observations made during the visit to the facilities during the November/December Mission.

Field inspections conducted during the November/December 2010 Mission did not identify major non-compliances in relation to environmental issues.

With regard to the effluent discharge monitoring program, during the 3Q 2010, PERU LNG only sampled the combined effluent in October. The justification was that since the CPI Separator was out of service in August and September, the results of the RO effluent would be equal to the combined effluent since there was no input from the CPI Separator. However, the IESM Team recommends that the combined effluent be sampled every month because this location is considered the point of compliance for the Project.

In general, compliance with approved plans and procedures could be verified, as evidenced by the overall good housekeeping conditions observed at the facilities. Some minor and punctual observations and opportunities for improvement were observed during the visit and immediately reported to PERU LNG during a closing meeting. Minor observations and opportunities for improvement included:

- Plastic buckets are used to obtain marine water samples, which are then transferred to sample bottles and sent to a laboratory for analysis. According to standard procedures, the manner in which the Plant collects water samples would be considered inadequate for TPH (Total Petroleum Hydrocarbons) and MEH (Material Extractable in Hexane, A&G) analyses since it allows for volatilization of these compounds during sample collection.
- The collection of combined samples of effluents from the Reverse Osmosis Plant and the CPI separator is carried out along a small blind (dead-end) branch of the effluent discharge pipe that contains a sealed volume of approximately 5 gallons. There is no approved procedure for collecting these samples, which should include purging of the effluent (usually 2 or 3 times of the stored volume) until a representative effluent sample is obtained.
- The cleaning of the CPI separator to remove the water-oil emulsion from the separator is producing accumulation that leads to stains in the soil along the separator.
- The pond of effluents from the CB&I Wastewater Treatment Plant was observed to be receiving water overflowing from the potable water tank. This situation, in addition to being a waste of water resources, dilutes the effluent. This practice of adding water to effluent is considered dilution, which is not recommended. In addition, one of the walls along the pond showed signs of deterioration and requires immediate repair.
- As for the location of sampling points for monitoring seawater quality and effluent discharge, it is important to assure that samples are collected downstream and upstream of the dominant marine current, in accordance with standard practice. Due to the changing patterns of localized water currents caused by the two breakwaters, it is virtually impossible to determine, at a glance, the preferential direction of longshore currents in the area of the effluent discharge and how they affect the dispersion of the effluent and if effluent plumes are formed. Therefore, the IESM Team suggested that PERU LNG determines the preferential direction of localized currents and, based on this information, locates the water quality sampling points. It is also important to note that outfall discharges are intermittent, thus, it would be useful if the monitoring reports indicated whether the seawater quality sample was collected during or after outfall discharge. This information would aid in the interpretation of the laboratory results.

Annex 3, Photographic Records, presents photos of the areas where minor environmental observations and opportunities for improvement were observed during the November/December IESM Mission.

During field inspection, PERU LNG personnel discussed measures already implemented as well as proposed measures to reduce and control the number seabirds in the trestle area. Measures already implemented include the use of birds of prey, i.e., falcons that are native to Peru. PERU LNG has hired a company that provides two falcons to hunt on the seabirds. Measures to reduce and control the number of seabirds are necessary due to damages to the marine facilities that result from the seabird droppings. The pilot experiment with the two falcons was ongoing and initial results would be evaluated to determine if these measures could become routine or if additional measures would be needed. PERU LNG personnel also discussed the proposed use of special flags along the marine facilities that would discourage seabirds from using the area and depositing droppings.

The use of falcons will continue during the Q1 2011 and may be augmented with other measures, such as the installation of flags and cables to discourage seabirds from nesting in the marine facilities.

5.2 Health and Safety Compliance

PERU LNG's Q3 2010 report states that no Medical Attention took place at the Plant or at Marine Facility. In addition, no Lost Time Incidents occurred during this quarter. During the November Mission, PERU LNG made a presentation to provide additional health and safety statistics information to the IESM Team.

The safety indicators used for the Project, which measure the frequency of recordable Lost Time Incidents, are far below the target set for the Project and are below the Oil and Gas industry average. This is evidence that safety measures are working well, in terms of facility design, compliance with procedures and personal capacity-building.

Observations made during the site visit identified some minor and punctual areas where there are opportunities for improvement. These include:

- Electrical equipment located at the entrance of the Marine Terminal pier has safety straps, Lockout/Tagout procedures that were implemented by CB&I during the construction phase. Since the facilities are now operated by COLP, the electrical equipment should be isolated by posts that prevent passing vehicles from damaging it, and, if necessary, be locked and labeled in accordance with approved procedures for the operational phase.
- In the area of the Wastewater Treatment Plant of the permanent camp, the compressed air pipe has a sign informing to contact CB&I before any activities are performed in the area. This sign should be updated to reflect the current operating conditions and to indicate that COLP is now responsible for these systems.

- On the access road to the Marine Terminal, a control checkpoint has been built and a sign posted with a warning that car parking is prohibited because of falling rocks. To the left and right of the checkpoint, fallen rocks of various sizes could be observed. Because the rocks observed were large enough to cause serious damage to the checkpoint post itself, it is recommended that the checkpoint post be relocated to a safer location or its conditions improved with adequate barriers or screens in order to protect the guards and staff who work at the site during passenger inspection.
- In the area of the Wastewater Treatment Plant of the permanent camp, construction a wire was used in place of safety locks to secure the hose connection. A stock of safety locks should be kept in the area of the Wastewater Treatment Plant to avoid the use of wire. This situation creates an unsafe condition because of possible puncture or tears in the hose. In the same area, some other hoses were observed without hose clamps. The hoses were held together with a belt clamp, which according to COLP security personnel were acceptable for low pressure systems. The IESM Team could not verify evidence of approved procedures that indicate when and which type of safety locks and clamps should be used for compressed air hoses.
- In the Wastewater Treatment Plant of the permanent camp, a retractable lifeline secured to the rungs of the ladder limits the space available for the worker to safely use the ladder. The structure for the lifeline should be secured so as not to limit the space for the workers to climb the ladder.
- In the temporary chemical storage and handling area of the terminal, plastic containers with chemical products were found without identification labels. In addition, a plastic bucket and a hand pump were used for transferring chemical products from the containers. This location had no fire extinguishers, eyewashes, safety showers, or spill kits, which are required for chemical storage and handling areas. These pieces of safety equipment were found at the Wastewater Treatment Plant, located nearby. However, chemical storage and handling areas must have safety equipment readily available in case of an emergency.
- In the potable water tank, near the CB&I construction camp, the pond where domestic effluents are mixed with water discharged from the Reverse Osmosis Plant is out of service and standing water was observed. This is a potential breeding ground for insects and disease vectors.
- In the pond that receives treated effluents from the CB&I Wastewater Treatment Plant, one of the walls shows signs of deterioration. This situation may be due to water leaks or, as reported during the mission, this results from trucks that pull water tanks and park near the top of the pond walls. Although small, this damage to the wall of the pond could contribute to an accident when trucks approach the tanks to collect water.

This situation requires corrective action and it was reported to the plant managers during the inspection.

Annex 3, Photographic Records, presents photos of the areas where minor health and safety observations and opportunities for improvement were observed during the November/December IESM Mission.

5.3 Social and Community Affairs

Based on information reviewed and obtained during meetings with PERU LNG staff, the Project is in compliance with the requirements of social and community affairs programs. Details of the social and community affairs activities conducted during the 3Q 2010 are presented in the Social Programs detailed in Section 8 of this report.

5.4 Security Management

A meeting with PERU LNG Security Director and COLP Security Manager was held in Lima to discuss the Security Management Strategy proposed for the operational phase. Nevertheless, strategies adopted during construction phase to protect the Company assets and personnel security with respect to local communities safety were also discussed in details.

According to PERU LNG security staff, the company policy has been to structure the project's safety procedures to comply with the Peruvian laws and national, regional or local regulations. The company security personnel worked closely with the communities' relation teams to develop the project's security strategies. In the unlikely scenario of tension between the local community and PERU LNG, the company would have support from Peruvian police forces, but would always seek peaceful negotiations and resolution.

The revised version of the Security Management Strategy for the operational phase was discussed and the final document will be sent for revision and approval of IESM and Lenders.

6.0

Internal E&S Assurance

6.1 PERU LNG E&S Supervision and Audits

PERU LNG and CB&I continued to conduct joint weekly environmental inspections of the LNG Plant, except when OSINERGMIN's personnel are at the site conducting week-long audits.

An internal audit of the Project's Waste Management Program was conducted in Q3 2010. No major observations were recorded. Overall, compliance of the Waste Management Program was considered adequate. Notwithstanding, waste collection from different areas within the Project site is on a continuous improvement basis and subject to frequent internal auditing.

6.2 Operation Related Monitoring and Performance Assessment

In compliance with commitments made in the EIA, PERU LNG continued environmental monitoring during Q3 2010 and reported the results of these activities to DGAAE in monthly reports. The results from July, August, and September are presented below.

The IESM Team analyzed the results from the monitoring activities performed at the PERU LNG Plant and Marine Facilities in comparison to the standards and indicators established for the Project in the Plant Environmental Monitoring Management Program (Published: March 10th 2010, Rev 01/ENV-000-PRG-1310).

As per information reviewed, during the Q3 2010 PERU LNG monitoring programs were conducted in accordance with approved procedures and samples were collected for air quality, ballast water, noise, seawater and effluents (treated wastewater reuse, brine from the reverse osmosis unit, CPI separator and combined outfall). The results of the various monitoring programs are described below.

Marine Environment Monitoring

- Seawater Quality Monitoring

The seawater quality monitoring programs consists of 15 sampling stations, as indicated in the EIA, and three stations required by permits for the Reverse Osmosis (RO) brine and CPI discharge. Seawater quality monitoring events are carried out every two months, as established in the Plant Environmental Monitoring Management Program. After the first year of operations, the sampling frequency will be revised based on the analyses of the monitoring results.

During Q3, the seawater quality monitoring campaign was carried out in July and in August 2010 and the results were presented in the August 2010 report. Seawater quality monitoring was not conducted in September 2010 because strong waves posed a threat to the field staff's safety. Therefore, the October report included the subsequent monitoring results. The frequency of the seawater monitoring event during Q3 complied with the program requirements.

The geographic coordinates of the stations monitored during July and August were not included in the monitoring report. However, the numbers of the stations matches the numbers established in the program, from which one can assume that the sampling was carried out in compliance with the monitoring program requirements.

All parameters listed in the Plant Environmental Monitoring Management Program were monitored during the July-August 2010 monitoring campaign. It is not possible to correlate the results from the effluent outfall monitoring with the results from the seawater monitoring because the parameters are not exactly the same in the two monitoring programs. Therefore, the concentrations of some parameters that exceeded the standards established for seawater monitoring may be unrelated to activities associated with the Project, but the Project cannot be completely dismissed until the results between the two monitoring programs can be compared.

The remaining parameters investigated in this campaign had results that were in compliance with the standards established for the Project.

The August 2010 monthly report, which describes seawater monitoring results, does not include monitoring information from the T3-14 and T4-14 monitoring stations. However, these results are included in the Q3 2010 ESHS Quarterly report.

In addition, no monitoring results from the stations listed in Table 2 of the Plant Environmental Monitoring Management Program (Section 4.2.1) were included in the August Monitoring Report. The IESM Team could not verify if samples were collected at these locations.

It should also be noted that Station T4-14 (listed in Table 4, Section 4.2.2 of the Plant Environmental Monitoring Management Program and in Table 5.3.3 of the Q3 2010 ESHS Quarterly Report) is not included in the list of seawater monitoring stations (Section 4.2.1, Table 1) of the Plant Environmental Monitoring Management Program.

To facilitate the presentation of data gathered in the July to August 2010 monitoring campaigns, **Tables 6.2.a** and **6.2.b** below show only those parameters whose concentrations exceed the Project's Standards.

Table 6.2.a

Relationship of the non-compliant parameters detected in the First Campaign to the applicable Project Standard

Parameters (mg/L)	(S)-Surface/(mg/L)				(M)-Medium/(mg/L)					Project Standard
	T4-10	T4-12	T3-10	T3-14	T2-16	T4-12	T4-16	T3-10	T3-12	
DO (mg/L)										≥4
TSS (mg/L)			79	100				78	95	70
N-Nitrates (mg/L)					0.459		3.39			0.3
Hg (mg/L)		0.0006				0.0005				0.0001
As (mg/L)										0.036
Cr (mg/L)	0.0581									0.05
Zn (mg/L)								0.165	0.0871	0.081

Note: Results extracted from Monthly Monitoring Reports - Monthly Report filed to DGAAE – Plant

Table 6.2.b

Relationship of the non-compliant parameters detected in the First Campaign to the applicable Project Standard

Parameters (mg/L)	(B)-Bottom/(mg/L)							Project Standard
	T2-16	T2-12	T4-12	T4-16	T3-16	T3-10	T3-12	
DO (mg/L)	2.15	3.46	2.09	2.31	2.33	3.12	3.98	≥4
TSS (mg/L)						76	214	70
N-Nitrates (mg/L)					0.335			0.3
Hg (mg/L)								0.0001
As (mg/L)	0.135							0.036
Cr (mg/L)								0.05
Zn (mg/L)								0.081

Note: Results extracted from Monthly Monitoring Reports - Monthly Report filed to DGAAE – Plant

Note 2: Although the D.O. concentration is below the standard this is typical of bottom waters, at the sediment-water interface.

- Marine Sediment Monitoring

Marine sediment monitoring includes 11 Sampling Stations with sampling carried out every six months during the first year of operation. Marine sediment monitoring is conducted in accordance with the Plant Environmental Monitoring Management Program. Following the first year of Project operation, the frequency of the marine sediment monitoring program will be revised based on the results obtained during the first year and may be conducted once a year thereafter.

According to the Q3 2010 Environmental, Social, Health and Safety Quarterly Report, the first campaign of the operation phase will be carried out during Q4 2010 (November).

- Ballast Water Monitoring

Ballast water monitoring should be carried out randomly in one of the ship's compartments before loading. The monitoring frequency should be assessed periodically based on the results obtained during monitoring. **Table 6.2.c** below is from Table 6 in Section 4.2.3 of the Plant Environmental Monitoring Management Program, and it shows the parameters to be monitored and the format to be used during ballast water monitoring.

Table 6.2.c
Ballast water monitoring

Parameter	Unit	Compartment/tank	IMO regulation d-2
Toxicogenic <i>Vibrio cholerae</i>	CFU/100 mL	TBD	< 1
Fecal Enterococcus	CFU/100 mL	TBD	100
<i>Escherichia coli</i>	CFU/100 mL	TBD	250

According to the Q3 2010 Environmental, Social, Health and Safety Quarterly Report, the first ballast water monitoring campaign of the operation phase was carried out during this quarter and it is informed that the monitoring results are in compliance with the applicable environmental standards. However, these results are not presented in Q3 2010. It is recommended that in the future these results be presented in the quarterly monitoring reports.

Air Quality Monitoring

The data refer to monitoring campaigns in July, August and September 2010 (Monthly Plant Reports). All parameters proposed in the air quality monitoring program were analyzed during this quarter.

All locations where air quality is monitored are located within the perimeter of the Plant's facilities and the monitoring results complied with the Project Standards.

The tables of results for each month did not show monitoring results from the 10-inch Fuel Line Station because the frequency of air quality monitoring for this station is annual or as necessary, as proposed in the Plant Environmental Monitoring Management Program.

According to the air dispersion model presented in the EIA, the air pollutant plume reached areas outside of the Project's property fence line, which have not been monitored.

The IESM Team will conduct more detailed review of air quality data generated by the Project to assess the need for air quality monitoring in areas outside of the Project's property fence line, in accordance with the results of the air dispersion model presented in the EIA.

- Stack Emissions Monitoring

Stack emissions monitoring did not take place during Q3 2010. According to the Plant Environmental Monitoring Management Program, this monitoring should be carried out annually during the first three years. Therefore, it can be inferred that this monitoring has not yet been carried out.

However, results from emissions tests for main pieces of equipment that are conducted as part of manufacturer's guaranties should be available for comparison with expected emissions that were used in the air dispersion model presented in the EIA.

The IESM Team kindly requests that emission results be made available in the next Quarterly Report.

- Vehicle Exhaust Emissions Monitoring

The results reviewed were those presented in monthly reports because the Q3 2010 PERU LNG report does not present the vehicle combustion emission data.

The parameters were monitored according to the Project Standard (Supreme Decree 047-2001-MTC). They are:

Opacity K (m^{-1})
CO (% Vol)
HC (ppm)
CO+CO₂ (%)

The results obtained comply with the Project Standard.

- Noise Monitoring

Noise monitoring is carried out every two months and during the Q3 2010 noise monitoring was carried out in July and September. **Table 6.2.d** presents the Q3 2010 Noise Monitoring results that exceeded the Project Standard.

Table 6.2.d
Noise monitoring results exceeding project standard

Date	Station	Time	LeqA (hour)	Standard	Reading (dB)	
					Max	Min
18-Sep-10	NM2	22:04	74.7	45	98.9	38.4
26-Jul-10	NM4	23:49	53.9	45	70.1	24.2
15-Sep-10	NM4	21:57	51.8	45	62.8	31.3
26-Jul-10	NM5	08:28	57.7	45	64.8	51.8
26-Jul-10	NM5	22:16	55.8	45	61	50
20-Sep-10	NM5	22:10	52.9	45	61.7	48
9-Jul-10	NM7	08:38	72.3	70	75.2	69
12-Sep-10	NM7	00:29	73.7	70	76.6	71.5
8-Jul-10	NM9	15:25	70.4	70	74.3	68.2
8-Sep-10	NM9	17:39	70.7	70	74.2	67.2
12-Sep-10	NM10	22:04	46.1	45	69.3	37.9
Values in bold exceed maximum permissible limit						

The monthly monitoring results include 10 monitoring points (NM1 to NM10). **Table 6.2.d** above only shows the results that exceeded the noise Project Standard. The stations that exceeded the standards include NM2, NM4, NM5, NM7, NM9 and NM10.

Stations **NM2** and **NM4** are located near the Pan-American Highway and the high noise levels are associated with vehicle traffic on the highway. **NM5** is located near the beach (6 km from the LNG Plant), and the noise is associated with waves breaking on the beach. **NM7** and **NM9** stations are located near LNG production areas. The difference noted could be related to additional work carried out during the day as part of the commissioning process.

The noise at Station **NM10** is related to recreational activities that were occurring during the measurement reading. The noise standards must be respected in the recreational areas because people who work in shifts are resting. All staff should be informed not to make noise during hours in which it is prohibited.

Solid Waste Monitoring

Solid waste monitoring is carried out daily through observations of the generation, transport and final disposal of waste from construction camps, offices and workshops within the Project site.

The **Table 6.2.e** and **6.2.f**, below, consolidates waste generation for Q3 2010.

Table 6.2.e

Solid and liquid waste generated during the period – Q3 (July to September 2010)

Period	Non-hazardous Solid Waste (m ³)		Hazardous Solid Waste (m ³)		Hazardous Liquid Waste (Gallons)	
	Recyclable (m ³)	Non-recyclable (m ³)	Volume (m ³)	Unit	Recyclable (gallons)	Non-recyclable (gallons)
July	25	455	5	324	0	55
August	140	483	15	305	110	17
September	15	370	20	28	0	0

The quantity of waste generated in August 2010 was somewhat higher than the previous period because of CB&I's demobilization conducted during that month. In September 2010, for instance, there was a significant reduction in the generation of solid waste because of the end of construction and demobilization.

Table 6.2.f

Solid and liquid waste transported during the period – Q3 (July to September 2010)

Period	Solid waste (ton)			Liquid waste (ton)		
	Recyclable Non-hazardous (ton)	Non-hazardous non-recyclable (ton)	Hazardous (ton)	Non-recyclable (ton)	Used oil (ton)	Oil waste (ton)
July	2.57	93,520	8,115	25,175	0	0
August	12.10	82.96	0.010	59,730	0	0
September	2,620	68,980	38,110	66,710	4,610	0.050

As for final waste disposal, EPS-RS ECOCENTURY continued transporting non-hazardous non-recyclable solid waste to the RELIMA landfill, non-hazardous recyclable waste to REMAR, and various hazardous solid and liquid wastes to the BEFESA industrial landfill. All the waste disposal areas are authorized by the competent authorities, and certificates are available for verification from PERU LNG.

In addition to the record-keeping of volumes of waste generated at the Project site, it is suggested that indices be developed for domestic waste in kg/day/person and for industrial waste in kg/m³ of LNG produced. In addition, there could be a trend table for KPI of waste and a graphic included in the PERU LNG quarterly report.

Liquid Waste Monitoring

- Domestic Wastewater Monitoring

In July, August and September 2010, domestic effluent sampling was carried out in the RES-25 water reservoir, which stores treated domestic effluent before its re-use. As established in the project EIA, sampling frequency is monthly.

There was no discharge of domestic effluent into the ocean during Q3 2010. The effluent was reused for watering the internal access roads within the Project site, as a dust control procedure. The analytical results of the domestic wastewater monitoring were compared with environmental standards established for the project and showed that all the parameters are in compliance with the standards. Only two parameter results from the September sampling event showed exceedances; these included: pH (9.60) and Oil and Grease (2.0 mg/L), whose concentrations exceeded the Project Standards for these parameters (pH = 6.5 – 8.5; Oil and Grease = 1.0 mg/L). This could be due to cross contamination during the collection or analyses of the samples.

During the mission, RES-25 water reservoir was observed to be receiving potable water, which affects the effluent results because of dilution. Potable water should not be discharged into RES-25 water reservoir.

- Industrial Effluent Monitoring

During the month of September 2010, the CPI separator and the reverse osmosis system were operational. Therefore, effluent monitoring was conducted at each effluent stream as well as on the combined effluent stream.

Samples from all three effluent types were collected for laboratory analyses. The brine sample was collected at the reverse osmosis plant monthly, as established in the EIA.

The CPI separator sample was collected from the separator outlet box while the combined effluent sample was taken from a discharge pipe sampling valve at the entrance to the pier. Effluent sampling takes place when the CPI separator is operating.

Brine analysis results from July, August and September 2010 show that all parameters comply with the applicable project limits.

PERU LNG monitoring results for effluent discharges comply with the approved project standards.

It is recommended that in future reports, the tables containing monitoring results be presented as Excel spreadsheets, for each monitoring station, and be included as annexes, so that graphs of the trends could be included in the text, when necessary.

7.0

External E&S Assurance

7.1 OSINERGMIN Inspections and Observations

During Q3 2010, OSINERGMIN carried out audits for a total of 7 days, 4 days for environmental issues at the Plant and Marine Facility and 3 days for social issues in the Direct Area of Influence of the Plant and the Quarry. In both audits, OSINERGMIN had no comments.

Table 7.1

Summary of OSINERGMIN Inspections during Q3 2010

MONTH	DESCRIPTION OF FIELD OBSERVATIONS
July	<p>1 - ENVIRONMENTAL INSPECTION TO THE PLANT AND MARINE FACILITIES</p> <p><u>Area Inspected:</u> Four-day inspection to the plant and marine facilities, including commissioning fronts.</p> <p><u>Observations:</u> No field observations requiring follow-up were raised.</p>
	<p>2 - SOCIAL INSPECTION TO THE PLANT, QUARRY AND MARINE FACILITIES</p> <p><u>Area Inspected:</u> Three-day inspection to the Plant and Quarry direct area of influence.</p> <p><u>Observations:</u> No field observations requiring follow-up were raised.</p>

Source: PERU LNG's Q3 2010 ESHS Quarterly Report.

As for the previous reported OSINERGMIN observations discussed in the IESM's September 2010 report that were still pending, PERU LNG informed that the company provided answers to OSINERGMIN and the agency had no further comments.

7.2 IESM Missions

The results of the November/December 2010 Mission indicate that sixteen (16) previously reported recommendations remained pending (Recommendation Tracking Table in **Annex 02**). Eleven (11) recommendations were issued during the September 2010 IESM Mission and the other seven were still pending from previous Mission reports. Two (02) of those recommendations were closed, either because of appropriate corrective action by PERU LNG or because they are no longer pertinent in view of the Project's current phase.

The sixteen (16) recommendations still pending closure are summarized below. It should be noted that most of the recommendations are being implemented, but they were not considered closed in the present report due to the lack of results to be evaluated by the IESM Team at this time. Therefore, the number of recommendations still open reflects the transitional phase of the project rather than a lack of adequate environmental and social management.

1. Date recommendation was issued: 05.09

There is a good opportunity for PERU LNG to develop synergies between the two additional social projects (*AgroProgreso* and Local Suppliers) and the Fishermen's Compensation Management Plan.

Corrective Action Reported	IESM Team Status Assessment
Under evaluation, not yet defined.	Recommendation under evaluation, pending conclusion.

2. Date recommendation was issued: 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.

Corrective Action Reported	IESM Team Status Assessment
PERU LNG has reported that the Community Investment Program for the operations phase is being developed and will be submitted to Lenders/ICA prior to project completion.	Discussion in progress. To be discussed in the next Mission

3. Date recommendation was issued: 03.10

It is recommendable to implement a wave monitoring program at the service pier by the RLOF. This is a health and safety concern, as pointed out in the report.

Corrective Action Reported	IESM Team Status Assessment
The Company has reported that the service pier is not being used.	There is no indication as to whether this is a temporary or permanent situation. The IESM Team was under the impression that the service pier has a useful function during marine facility operations. Will wait for clarification and/or for indication of planned actions before closing this recommendation.

4. Date recommendation was issued: 07.10

The IESM Team recommends enhancing communication of marine monitoring results to local communities. During the Mission, the IESM Team repeatedly received the complaint that due to the construction process and the lights of the plant, many sea lions came to the shore and destroy fishermen nets. Fishermen also remark about the diminishing quantities of fish that they attribute to changes provoked by the construction process. Improved disclosure of the results of marine monitoring to the local population may be useful.

Corrective Action Reported	IESM Team Status Assessment
In its Q2-2010 Report PERU LNG stated that it is committed to improving communications with local communities. Furthermore, the Company notes that it has committed to disclose marine monitoring results in the Stakeholder Engagement Plan.	According to information presented during the Mission, improved communication has started and will be reported in the next Mission. Seminars with the results of marine monitoring were scheduled.

5. Date recommendation was issued: 07.10

PERU LNG should apply best efforts to maintain open communications and reach agreements with the remaining fishermen to be compensated .

Corrective Action Reported	IESM Team Status Assessment
PERU LNG has reported significant progress on this issue. Agreements with the Nuevo Tambo de Mora and APAICH associations were recently reached. Negotiations with CETEC are ongoing.	Though progress in this respect has been commendable, this recommendation is still under implementation. Will be closed as soon as compensation negotiations are concluded, or when, based on appropriate justification, PERU LNG decides to cease pursuing a negotiated agreement and allows the outcome to be decided in court.

6. Date recommendation was issued: 07.10

It is important to ensure the continuity of the assistance to the fishermen who are already running their businesses. The IESM team also recommends implementing a program for monitoring these businesses to provide the necessary assistance in a timely manner to maximize their success and sustainability.

Corrective Action Reported	IESM Team Status Assessment
<p>PERU LNG reported its action on this issue is ongoing and its level of effort has not been reduced. It was furthermore informed that a training program will begin to be implemented as part of the technical assistance component for the fishermen included in the compensation plan.</p> <p>The process to select the contractor is in process and it is expected that activities will start in Q1 2011 (or earlier if possible).</p>	<p>The IESM team recognizes the efforts PERU LNG is making to address this recommendation, which was issued out of concern that technical assistance to fishermen may be discontinued or not be forthcoming with the same level of effort in the case of more recently approved projects for individuals or associations that took longer to reach a compensation agreement. The IESM Team reports that this has not been the case thus far, but maintains this recommendation open until the proposed new technical assistance process begins.</p>

7. Date recommendation was issued: 07.10

It would be useful to integrate results of marine monitoring with those being obtained in the Coastline Survey and ongoing monitoring.

Corrective Action Reported	IESM Team Status Assessment
<p>PERU LNG reported in its Q2 2010 Report it will integrate the Coastline Survey information within the marine monitoring protocols design. During the September Mission, it was furthermore reported that the monitoring protocols are being designed by BMAP specialists and will contemplate coastline survey data, commercial value of fisheries, abundance patterns, among other factors.</p> <p>PERU LNG expects that the protocol will be ready by the end of 2010.</p>	<p>Recommendation currently under implementation. Based on projected schedule, the IESM Team expects it will be able to verify the marine monitoring protocols during the Q1 2011 Mission.</p>

8. Date recommendation was issued: 09.10

PERU LNG should adjust some monitoring programs for the operations phase as requested herein, contemplating:

- a. A noise monitoring point should verify compliance with noise standards where workers are lodged.

- d. The focus of the ballast water monitoring needs to be altered to include at least *Limnopema fortunei*, phytoplacton of the *Pyrrophyta* (photosynthetic dinoflagellates) and *Chrysophyta* (diatoms) groups; zooplankton (as microbiological indicators), *Vibrio holera* (O1 and O1-39), faecal coliforms, coliphages and *Salmonella* spp.

Corrective Action Reported	IESM Team Status Assessment
<p>a. Initial environmental noise monitoring for the protection of the community shows noise levels well below applicable standards .</p> <p>d. Phytoplankton monitoring will be incorporated to the ballast water monitoring activities in the fourth quarter of 2010. PERU LNG is evaluating the parameters and indicators that will be monitored, based on IMO standards.</p>	<p>One noise monitoring result at the permanent community is not sufficient to guarantee that the applicable noise standard is met throughout operations. Therefore, an additional monitoring point near residential receptors is necessary and a matter of good practice.</p> <p>On item “d”, will wait for PERU LNG to report on results of its evaluation</p>

9. Date recommendation was issued: 09.10

Continued monitoring of accretion and erosion processes at the coastline should proceed contemplating the specialized consultant’s (ESSA) recommendations. Any changes with potential impact on fishing activities should be disclosed as provided under the Fishermen Compensation Plan.

Corrective Action Reported	IESM Team Status Assessment
All the recommendations from the specialized consultant will be implemented in Q4 2010.	Will verify proper implementation during the next IESM Mission

10. Date recommendation was issued: 09.10

Job Safety Analysis (JSA) should be conducted on the use of treated effluents for vehicle washing operations, particularly with focus on the types of PPEs necessary

Corrective Action Reported	IESM Team Status Assessment
Treated effluent is not utilized for vehicle washing operations.	This is not consistent with what was observed and reported in the September 2010 Mission. PERU LNG should confirm exactly what uses of treated effluents are allowed and how this information is disclosed to all pertinent personnel.

11. Date recommendation was issued: 09.10

It is necessary to strengthen H&S training of workers engaged in the plant and marine facility commissioning process, as some unsafe work procedures were observed (at the trestle, a worker over the pipe rack without safety rope; at the service dock, work on an electric panel without the necessary Permit to Work).

Corrective Action Reported	IESM Team Status Assessment
Additional training for contractors has been initiated with the Permit to Work process. This includes a specific JSA for each permit. In addition, critical permits are audited by the safety staff to identify and immediately correct any non-conformance to prevent a repeat of the observations.	The IESM Team will review training records before proceeding to close this recommendation.

12. Date recommendation was issued: 09.10

The IESM Team suggests that necessary efforts are made in order that fishermen who are included in the compensation plan process can cross the beach exclusion area in an expedited procedure, reducing waiting time for crossing approval.

Corrective Action Reported	IESM Team Status Assessment
Best efforts will be conducted to reduce the waiting time for fishermen included in the compensation plan to cross the exclusion zone.	PERU LNG reported during the Mission that improvements in the procedure are under evaluation. The next report should provide information on the changes implemented to improve the process.

13. Date recommendation was issued: 09.10

The IESM Team also recommends implementing a program for monitoring these Fishermen Compensation Program businesses in order to provide the necessary assistance to maximize their success in terms of livelihood / income restoration.

Corrective Action Reported	IESM Team Status Assessment
A revised monitoring program is being developed and will be launched early next year. Overall results shall be presented within our final completion report for the Fishermen Compensation Plan.	The IESM Team will follow up on implementation of reported actions in coming Missions.

14. Date recommendation was issued: 09.10

There is a good opportunity to develop synergies between the two additional social projects (AgroProgreso and Local Suppliers) and the Fishermen's Compensation Management Plan.

Corrective Action Reported	IESM Team Status Assessment
In evaluation, not yet defined	Recommendation pending results of evaluation and proposals.

15. Date recommendation was issued: 09.10

PERU LNG should submit the proposed structure and content of its Quarterly ESHS Compliance Reports for the operations phase. This should include evidence of proper implementation of plans and procedures in the ESHS Management System for operations as recently approved by Lenders, and should be submitted before the next Quarterly Report is prepared.

Corrective Action Reported	IESM Team Status Assessment
<p>The structure, content and data included in this Quarterly E&S Compliance Report have been adjusted to adequately cover the operation phase.</p> <p>It provides evidences of the implementation of different elements of the ESHS-MS. If the IESM Consultant or Lenders consider that additional information is required, it can be included in subsequent quarterly reports on a continuous improvement basis. (i.e. similar approach to the first three quarterly reports issued after Financial Close.)</p>	<p>The IESM Team have some suggestions to the structure of PERU LNG's Quarterly Report and plans to discuss suggested modification in a special meeting to be scheduled during the next Mission..</p>

16. Date recommendation was issued: 09.10

It is necessary to consolidate health and safety statistics and follow on H&S KPIs with respect to worked hours during the operations phase and not only from inception to date.

Corrective Action Reported	IESM Team Status Assessment
<p>It is expected that the H&S KPIs for 2010 calendar year will follow the format utilized since the start of the project. There is no fixed date to accurately determine start up of operations and to separate it from commissioning.</p> <p>The 2011 reports will utilize a format in keeping with the ESHS Management System elements.</p>	<p>The IESM Team reinstate its recommendation that PERU LNG consolidate H&S statistics yearly and/or semi-annually during operations to provide the basis for meaningful analyses of trends over time. January 1st 2011 is an adequate cut-off date to begin this. Inception to date statistics can continue to be issued if desired.</p>

Sixteen (16) new recommendations are being issued as a result of the December 2010 IESM Mission and they are consolidated in **Section 10.0** of this report.

8.0

Environmental and Social Program Implementation and Performance

Environmental and social monitoring programs for the Q3 2010 already include activities related to the Operation phase.

These are the programs for the PLNG Plant and Marine Facility according to the Environmental and Social Monitoring Procedures Manual for Operation Phase:

- 8.1 Marine Monitoring Program
- 8.2 Coastline Monitoring Program
- 8.3 Cultural Heritage Management Plan
- 8.4 Local Hiring and Purchasing Plan
- 8.5 Stakeholder Engagement Plan
- 8.6 Fishermen's Compensation Management Plan
- 8.7 Influx Management Plan

8.1 Marine Monitoring Program

Progress Reported by PERU LNG

This program is conducted on a semi-annual basis and according to the Q3-2010 report no new campaign were conducted during this period.

During the November/December 2010 Mission, PERU LNG informed that the Year 4 was considered transitional between construction and operation phases, and the present year was considered the first year of Plant operations. As of December 2010, 11 monitoring events/campaigns have been completed (October 2006 to November 2010). From Year 1 to Year 3, ERT - KP served as the environmental consultant and was responsible for the marine monitoring programs. In December 2009, ERM replaced ERT – KP and currently serves as the environmental consultants responsible for the marine monitoring programs.

Activities include:

- Monitoring of water quality (depth, temperature, salinity, pH, dissolved oxygen, turbidity and chlorophyll);
- Currents (speed and direction);
- Marine sediment quality;
- Macro benthos;
- Plankton;
- Boat-based fishing and shore-based fishing.

The participatory monitoring program has the participation of 11 artisan fisherman associations; government authorities (Ministry of Production – PRODUCE, Supervising Agency for the Investment in Energy and Mines – OSINERGMIN, Peruvian Marine Institute – IMARPE, Regional Production Department– DIREPRO, Ministry of Energy and Mines - MEM).

Scope of the IESM Team's Review

During the November/December 2010 Mission, the IESM Team held a meeting with PERU LNG's team responsible for the Marine Monitoring Program, the Smithsonian Institution's (SI) coordinator and ERM coordinator. No field inspections were conducted.

ERM presented a database on macrobenthos with results for the major species and their trends over time. The results do not show new species or variations on the number of the resident species. The Polichaeta (verms) was the predominant group in terms of species number, followed by arthropods and mollusks.

Temporal variation results were presented for *Emerita analoga* (muy-muy); *Donax marincovich* (palabrita) and *Magelona phyllisae*, *Nephtys impressa* and *Spiophanes bombix* (verms).

The methodology for the evaluation of phytoplankton was developed based on quantitative analyses. The samples for assessment of the composition and abundance of zooplankton populations were collected using Hensen nets for vertical distribution.

The results indicate the identification of the following:

Phytoplankton	Taxa (No.)
Microalgae	218
Diatoms	122
Dinoflagellates	81
Phytoflagellates	8
Coccolithophores	4
Silicoflagellates	3

Eighteen (18) zooplankton taxa were identified, including: cnidarians, ctenophores, gastropods, bivalves, polychaetes, cladocerans, copepods, amphipods, cirripedia, decapods, euphausiids, isopods, brachiopods, chaetognaths, phoronids, echinoderms, appendicularians and bryozoans. Larvae and eggs of *Engraulis ringens* “anchoveta” (incidental ichthyoplankton) were also identified.

The results of the marine monitoring events are considered useful in the identification of potential toxic algal bloom (red tide) events.

With regard to the seawater quality, temperature, salinity, dissolved oxygen, pH and turbidity were measured *in situ* by field equipment. Seawater samples were collected and sent to a certified laboratory for analyses of total suspended solids, chlorophyll-a, total nitrogen, total phosphorus, sulfates, biochemical oxygen demand (DBO5) and fecal coliforms. In addition, seawater samples are also analyzed for: mercury (Hg), arsenic (As), barium (Ba), calcium (Ca), cadmium (Cd), chromium (Cr), copper (Cu), potassium (K), magnesium (Mg), sodium (Na), nickel (Ni), lead (Pb), selenium (Se), strontium (Sr), and zinc (Zn).

Two new sampling locations were added to the north and south of existing sampling locations.

The results show that for the temperature there is a stratification of the water column in the summer and autumn and mixing of the water during the winter and spring months. The pH values show no significant changes. The turbidity had high values in January 2007 and April 2009. These results are probably associated with current and wave conditions recorded at the control points. In May 2010, the recorded turbidity is associated with the presence of the dinoflagellate *Gymnodinium sanguineum*.

The results that show an increase in nutrients and organic compounds (TSS, phosphates, sulfates, organic nitrogen and total nitrogen) are most likely related to the influx of continental waters. For example, during the first campaign of year 4 (December 2009), with strong influence of ENSO, the Quebrada Topará was active and the Pisco River had a large volume of water. Another factor that may affect the results of nutrients and organic compounds is the presence of phytoplankton, such as *Oscillatoria* sp, in continental waters .

In September 2006, DBO results exceeded the national standard of 10 mg/L in samples collected near the coastline. Some concentrations of total coliform recorded during the first year also exceeded the Peruvian standard of 30 NMP/100 mL.

The marine sediments were analyzed in a certified laboratory for granulometric, total organic carbon, heavy metals (Zn, Cu, Pb, Ar, Cd, Cr, Hg e Ni) and PAHs.

The results show that the average heavy metal concentrations in sediments comply with the international standard (Screening Quick Reference Table for Inorganic Sediments).

There was no significant variation in Total Organic Carbon concentrations. TPH and PAH concentrations were reported below the method detection limit.

Automatic recording methods (Acoustic Doppler Current Profiler - ADCP) were used to measure marine currents at two locations, for a monitoring period of 48 hours. The data show that before the construction of the marine facilities, the surface currents maintained a predominantly southern direction. The deep currents showed variations. After construction

of the port facilities, the data show a strong variation in the direction of surface and medium-depth currents. The deep currents now have a predominantly southern direction. These localized changes in current direction are likely related to the accumulation of sediments in the trestle area.

Finally, for surf fishing (from the shoreline), three groups of beaches were assessed for 24 hours (north, central, and south) in three shifts of 8 hours each. Fishermen were interviewed and identified and fish stocks were measured. The results show 12 identified fish species, with main species including *chita*, *lenguado*, and *tembladera*.

Boat fishing takes place on a small boat and with different types of equipment that allow catch at different depths. The dominant species were *pejerrey*, *achoveta*, *samasa* and *bobo*.

ERM presented a new methodology for continuing the surveys that does not include interviews with fishermen because of the subjectivity observed in their responses. The IESM Team recommends that the fishermen continue to be interviewed as part of the program. Nonetheless there can be improvements in the format to be applied and in the analyses done in order to detect incorrect information due to subjectivity in the responses.

Compliance Assessment

This participatory marine monitoring program is being executed accordingly to the proposed scope of work and frequency. PERU LNG executes this program because it recognizes the importance of these marine organisms to the equilibrium of the marine ecosystem and considers them to be good environmental indicators, to be shared with all stakeholders that make a living in connection with the marine environment in the Melchorita area.

Results Assessment

The program is executed according to good scientific criteria and generates important scientific and useful information. The proposed participation of stakeholders has been deemed adequate.

Suggestions and Recommendations

The IESM Team recommends that the fishermen continue to be interviewed as part of the program. Nonetheless there can be improvements in the format to be applied and in the analyses done in order to detect incorrect information due to subjectivity in the responses.

Program Assessment

To date, the results of the marine monitoring program do not indicate that the implementation of the Project has had significant adverse impacts on the seawater quality.

8.2 Coastline Monitoring

Progress Reported by PERU LNG

PERU LNG informed that no monitoring activities were conducted during Q3 2010. However, a survey of seven topographical transects close to the trestle was conducted in October 2010. In addition, in November 2010, the semi-annual monitoring of 56 transects covering 7 km of the coastline was conducted.

During the visit, PERU LNG informed that a workshop for discussing ESSA's coastline monitoring results was scheduled for December 2010, with the integrated participation of all the teams involved with marine issues (ERM, ESSA, SI and PERU LNG). ESSA is the expert consultancy contracted to assess the sedimentation and erosion processes that are ongoing along the shoreline near the marine facilities.

Scope of the IESM Team's Review

The IESM team visited the sedimentation area on the beach near the marine facilities and walked northward along the seashore to observe locations where deposition and erosions processes have taken place in recent months.

Results Assessment

The coastal morphology report prepared by ESSA consolidated data collected since 2007. The results were presented to the National Port Authority and included recommendation made by ESSA. Recommendations included:

1. To continue the coastline monitoring program to establish trends and patterns;
2. To increase the extension of surveying area;
3. To increase the beach sediments sampling and granulometry at 24 transects
4. To extend beach profiles up to depths of 6 meters.

These new recommendations are expected to lead to a better understanding of the ongoing coastline processes and associated physical changes to the beach profile.

Suggestions and Recommendations

None at this time.

Program Evaluation

This program is being properly implemented by PERU LNG. The results are being integrated with Marine Monitoring and Ecological Programs.

8.3 Cultural Heritage Program

Progress Reported by PERU LNG

Q3 2010 refers to the closure of all activities related to archaeological and cultural heritage evaluation and rescue during the construction phase of Pipeline, Plant and Quarry that had already been completed in 2009. No chance findings have been reported by PERU LNG since then. In total, during the construction phase the project obtained 231 certificates of Inexistence of Archaeological Remains (CIRAs for Spanish Certificado de Ausencia de Restos Arqueologicos) granted by the Instituto Nacional de Cultura.

Scope of the IESM Team's Review

IESM's review was based in information provided by the Q3 2010 report, and review of the approved Cultural Heritage Program for operation (SOC-000-PGR-1000, March 10th 2010. Rev01).

Compliance Assessment

Implementation of this program is completed and was executed in compliance with the Program.

Results Assessment

There are no new results to be assessed.

Recommendations and Evaluation

Cultural and archaeological evaluation and rescue activities were monitored during the construction phase and the management plan applied to that phase was fully implemented and satisfactory to comply with Peruvian laws and requirements as well as international standards for cultural protection. All works were completed in coordination's with the construction timetable as well. The only pending issue is the submittal of the final documentation with the approval by INC of the Final Report on the Plant and Quarry Archeological Monitoring Plan, submitted by PERU LNG in June 2010.

8.4 Local Hiring and Purchasing Plan

Progress Reported by PERU LNG

According to the PERU LNG Q3 2010 Report, during this quarter almost 55% of the total Project workforce was Peruvian. Because the Project has concluded major construction activities, the demand for local workforce has decreased. During the Q3 2010, local workforce at the LNG Plant consisted of 535 people from Chincha and 615 people from Cañete.

The trends in local hiring numbers are consistent with the progress of the Project, which had great demand for local workforce during construction and now transitions to the operations phase when the number of workers required for the operations of the LNG Plant is greatly reduced.

Scope of the IESM Team's Review

During the November 2010 Mission, the IESM Team did not receive additional information regarding local hiring. As per information reviewed, there were no labor grievances or unrest as a result of the demobilization of workforce that followed the completion of the construction phase.

Compliance Assessment

Based on information reviewed, the Local Hiring Program is in compliance with the Project's commitments and Peruvian regulations.

Results Assessment

The results of the Local Hiring Program are consistent with the progress of the Project. During the construction phase, the Project had a big demand for local workforce. Now that the Project is in operation, the number of workers has been greatly reduced.

Suggestions and Recommendations

Now that the project has transitioned from construction and to operations and maintenance, PERU LNG should promote information about other benefits and incentives the Project brings to the local communities and economy, besides local hiring. With regards to local preferential purchasing, new opportunities may arise as procurement reflects needs associated with operations and maintenance, which are long term.

Program Evaluation

The program has been successfully implemented and has achieved the program's targets.

8.5 Stakeholder Engagement Plan

Progress reported by PERU LNG

According to the Q3 2010 Report and additional information provided during the Mission, in this quarter, PERU LNG continued close coordination with key local stakeholders in Chíncha and Cañete as well as information exchange with the general public. The following activities were carried out during the Q3 2010 period:

- 120 handout bulletins, 108 4-page brochures and 351 illustrative brochures were distributed to stakeholders. All these materials provide information about the PERU LNG Project.
- PERU LNG field offices received 532 visitors, corresponding to 282 consultations in Cañete and 250 in Chíncha. Visits to the field offices most often were: inquiries about job opportunities, fishermen compensations and general consultations about the Project, including requests for information and updates on construction and benefits for the community.

Visits to Field offices	Cañete	Chíncha	Total	%
Job Inquiries	96	152	248	47
Fishermen compensations	108	79	187	35
General consultation	78	19	97	18
Total	282	250	532	100

During the Mission, updated information on the field offices attendance indicated that the consultations in both offices continued in the fourth quarter, mainly related to job inquiries.

In addition to visits to field offices, other stakeholder engagement activities included 89 interactions with stakeholders. Most of these interactions were related to PERU LNG's social monitoring activities, which account for 84% of all interactions. The subjects of the interactions are summarized in the table below:

Key Subjects	Number of Interactions	%
Social Monitoring	75	84
Operations and Maintenance Activities	6	7
Others	4	4
Grievances management	2	2
Additionality	1	1
Incident Prevention and Management	1	1
Total	89	100

During Q3 2010, 37 letters were received from various stakeholders. The table below presents a list of key topics of these stakeholder letters.

Key Item	Number of Letters	%
Fishermen compensation	22	59
Additionality	11	30
Other	3	8
Social Monitoring	1	3
Total	37	100

The exclusion zone on the beach around the Marine Facilities was implemented in May 2010. Additional monitoring activities are conducted on the beach to prevent incidents through traffic control that allows circulation of fishermen bearing proper identification. Only fishermen who were registered and included in the compensation plan are allowed access to the Project's exclusion zone along the beach in the general area of the Marine Facilities. The IESM Team visited the exclusion zone and at the time about two people were observed to the north of the area. On average, about 3 fishermen cross the exclusion zone every week. There are no grievances from fishermen with regard to access to the exclusion zone.

During meetings, PERU LNG explained that there was an incident in which a fisherman's boat drift into the exclusion zone resulting in the boat being damaged by a tugboat. PERU LNG received the complaint of the fishermen and settled an agreement for support in order to repair the damage and avoid further losses to the fisherman, even though the incident occurred inside the exclusion zone. The case is under investigation by the Port Authority and the fisherman may seek additional compensation from the contractor involved in the accident, if the Port Authorities rules on favor of the fisherman. Based on the information obtained, it seems that PERU LNG promptly and proactively acted in order to avoid further impacts to the fisherman income due to the time required by the Port Authorities to conduct an investigation of the incident and to provide a final ruling on the case.

Scope of the IESM Team's Review

During the November 2010 Mission, the IESM Team held a meeting with PERU LNG's Community Relations team and visited the exclusion zone at the beach.

Compliance Assessment

The Stakeholder Engagement Management Plan was found to be in compliance with the Project's social commitments.

Results Assessment

Records show that job enquiries continue to be the main issue of concern for the local population with regards to the Project. This was expected because the Project transitioned into the operational phase and the demand for local workforce has been greatly reduced.

Records indicate a low number of grievances and it appears that PERU LNG evaluates and seeks resolution in a timely and appropriate manner.

Suggestions and Recommendations

None at this time.

Program Evaluation

The Stakeholder Engagement Plan has been properly implemented and Project interactions with the local population have been properly documented.

8.6 Fishermen's Compensation Management Plan

Progress Reported by PERU LNG

Compensation Agreements:

PERU LNG reports that during the Q3 2010, the company continued negotiations with the 21 remaining independent fishermen that have not yet signed compensation agreements. The company also reports 100% of agreements signed with fishermen associations (representing 553 fishermen) and 92% with independents (264 fishermen out of 285).

The legal action that CETEC brought against PERU LNG in May 2010 has been suspended by Cañete's Judiciary Court until the plaintiff fulfills legal procedural formalities. CETEC seeks compensation for alleged loss of income over a twenty-year period that would result from PERU LNG operations. The association itself is not included in the Fishermen Compensation Plan. However, a few of its members were registered as independent fishermen. These are the same independent fishermen with pending agreements.

Fishermen Compensation Plan Implementation:

PERU LNG reports that the company is developing business ideas and feasibility studies for the implementation of sustainable productive businesses for the fishermen. These projects will be implemented as part of the compensation plan to restore potentially loss in income due to the implementation of the exclusion zone surrounding the marine trestle.

The main activities for the Q3 2010 period are:

- 810 fishermen are involved in 692 business profiles approved by the Trust Management Committee.
- Most of the businesses are related to secondary economic activities that the fishermen were already carrying out prior to compensation or to main economic activities developed by the fishermen's close relatives. These include:

Type of activity	%
Transportation	35
Fishing	18
Commerce	20
Livestock	12
Services	10
Agriculture	4
Manufacturing	1

- 666 businesses under implementation (involving 810 fishermen);
- 635 businesses with the implementation process finished (involving 664 fishermen); and
- 128 businesses in operation (involving 134 fishermen) out of 142 businesses visited (involving 181 fishermen).

During Q3 2010, the implementation of businesses focused on providing technical support to Tambo de Mora fishermen association and independent fishermen who had recently signed agreements with PERU LNG. One hundred percent of the fishermen that belong to associations have had their business profiles approved by the Trust Fund Management Committee, and 96% of the business profiles are under implementation. Similarly, 100% of the independent fishermen who have signed agreements have had their business profiles approved by the Trust Fund and 99% of these profiles are under implementation.

According to the Q3 2010 report, follow-up visits were paid to 142 businesses and results indicate that only 128 of the 142 businesses were in operation. Businesses involving agriculture, commerce and livestock faced the greatest challenges.

PERU LNG reports the company is currently revising the three years monitoring program, which will be launched in early 2011. Results of the monitoring program will be in the final completion report for the Fishermen Compensation Plan.

During Q3 2010, technical assistance on the subject of small business administration, accounting, taxes, and legal requirements was provided to of 259 fishermen in 311 businesses. In addition, PERU LNG has secured the services of a local training institution to provide specialized training to all fishermen who have reached agreements with the Company. This program shall be launched by early in 2011.

A summary of the Fishermen Compensation Plan status and activities performed during the Q3 2010 is presented in the table below.

Activities	Status	Target Goal	Status
1. Planning/Preparation			
1.1 Meeting for presentation of Fishermen Compensation Plan	completed	17 meetings held	100%
1.2 Project sample	completed	1 project sample performed (Chincha and Cañete)	100%
1.3 Implementation of technical assistance and institutional strengthening	completed	Hired a specialized institution to provide training	100%
1.4 Definition of the agreements to be used for the legal closure of the compensation agreements	completed	2 completed and approved agreement models	100%
1.5 Definition of contract terms for the creation of the trust fund where the compensation funds of the fishermen associations will be deposited	completed	1 signed contract	100%
2. Implementation			
2.1 Agreements reached with associations	completed	10 signed agreements	100%
2.2 Agreements reached with independents	completed	285 agreements	92%
2.3 Opening of accounts for associations	completed	11 accounts opened	100%
2.4 Identification of business ideas and business profiles preparation	completed	Business profiles concluded for associations and independents that signed compensation agreements.	100%
2.5 Implementation of business profiles	In progress	469 productive businesses implemented for associated fishermen.	96%
		223 productive businesses implemented for independent fishermen.	99%
3. Execution			
3.1 Follow up on implementation of businesses	In progress	Sustainable businesses generate income for fishermen	142 business visited and 128 verified to be in operation
3.2 Technical assistance to business in operation	In progress	Assistance, identification of problems and corrective actions	311 businesses received technical assistance for 259 fishermen

Activities	Status	Target Goal	Status
4. Grievances			
4.1 Incorporation of independent fishermen requests to the Compensation Process (as affected).	In progress	All requests have been answered	98%
4.2 Requests and grievances presented by fishermen associations referred to the Compensation Process were solved within a 30-day timeframe	In progress	All requests have been answered	100%

Scope of the IESM Team's Review

During the November 2010 IESM Mission, the IESM Team held meetings with PERU LNG representatives and also attended a presentation. The IESM Team did not meet with local fishermen during the November 2010 Mission. The scope of work was limited to documentation review and meetings with PERU LNG representatives.

Compliance Assessment

Based on information reviewed and obtained from meetings with PERU LNG, the Company has signed agreements with 100% of the associations included in the Compensation Plan and with 92% of the independent fishermen. These numbers attest to a high negotiation success rate. The Company acknowledges that additional technical assistance is needed to support the large number of small businesses started with the compensations and has hired a local institution to provide training and is revising the monitoring program to better follow up and assess the small businesses. Overall, the program is in compliance with the applicable social commitments of the Project.

Results Assessment

The negotiations with the remaining 21 independent fishermen are complicated because the majority of them refuse to negotiate out of the associations' framework. These attempts to negotiate collectively are understandable in light of the fact that these fishermen know that the last associations to reach agreements with PERU LNG obtained the highest compensations per individual fisherman. This is an incentive for them to continue to insist in negotiating as an association as opposed to individually. The Company is following good practices while negotiating with the remaining independent fishermen and is committed to continue to do so.

In general, small businesses have been implemented and those pertaining to fishermen participating in the two last associations that reached agreements with PERU LNG are subject to an expedited implementation process. The Company is committed to continue with follow up visits to prevent an increase in failing business rate.

Suggestions and Recommendations

PERU LNG reports that the monitoring program to follow up with small businesses is under revision and will be launched in early 2011. The Company also states that it has secured the services of a local institution to provide training to the business owners. The training program will be launched in early 2011. The IESM Team recommends that these two programs be initiated as soon as possible to minimize failure rate of existing businesses and provide adequate support to the most recent adherents to the programs.

Program Evaluation

It is clear that little progress has been made with regard to negotiations with the remaining independent fishermen who now insist in negotiating as associations to get better compensations. All evidence provided indicates that PERU LNG is making the necessary efforts to continue to pursue fair compensations. The Company seems to continue to follow the procedures and commitments established for the Project.

The implementation of the businesses and projects is progressing fairly well, but the Company recognizes that additional measures are needed to provide technical assistance and monitoring to maximize the number of successful small businesses resulting from the Program.

8.7 Influx Management Plan

Regarding the Influx Management Plan, PERU LNG reported that during Q3 2010 there was no invasion of informal settlements within the LNG Plant buffer zone. However, it was reported that fishermen were using an informal access opened in the perimeter fence of the southern buffer zone to reach the fishermen's path implemented by PERU LNG. Community Affairs staff continued with the weekly monitoring of the buffer zone and nearby areas to monitor informal settlement growth in the area. The objective of the monitoring is to confirm that encroachment is not taking place and to ensure that the perimeter fence of the buffer zone is kept in good condition. PERU LNG maintains close and frequent coordination with the Ministry of Agriculture to provide timely information on the status of the buffer zone and activities carried out by COVIPERU S.A. within this area. . It was reported that new wooden houses have been built in the "El Trebol del Pacifico".

During the November 2010 Mission, PERU LNG informed that the situation remains as reported in previous IESM reports.

9.0

Additionality Programs

PERU LNG will continue to invest in social investment programs 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 areas of 300 families selected in the districts of San Vicente (Cañete), Grocio Prado and Sunampe (Chincha). Two target groups have been identified:

- Grape farmers (69% 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 marketing and commercialization.
- Other crops farmers (avocado, apple, asparagus, tangerine and pallar bean) - Due to the small quantities of products, it was not possible to implement a production supply chain similar to the one implemented for the grape farmers.

The PERU LNG Q3 2010 Report includes the following information updating the project's progress up to September 2010 (referring to the 2010-2011 agricultural campaign):

- As part of Technical Assistance Plan, 332 farmers received technical assistance in their agricultural areas. An average of two technical visits was conducted per farmer between July and September 2010. Assistance is tailored according to the growing stage of each crop (grape, Lima bean, avocado, apple, tangerine and asparagus)
- Workshops and training sessions were carried out with 110 farmers as part of the Agronomic Training Plan implementation. Training topics covered productive chains, harvesting and post harvesting handling, plague control, budgeting, and taxes.
- Fifteen guided visits were conducted to model farms as part of the training program.
- Implementation of 0.75 hectares with a sprinkler system in Cañete grape areas in order to demonstrate more efficient water use, measure productivity increase, and cost-effectiveness; and assess of this technology in the zone. The farmers partially covered the cost of the system. According to the results, this technology will be installed in additional agricultural areas.
- Implementation of a 0.6 hectare experimental grape area for demonstration to farmers of a cost efficient model of grape production.
- To date, 33 farmers have signed credit line contracts for purchasing fertilizers and pesticides for a total amount of US\$ 43,070. Seventeen of them have used the credit line for a total of US\$3,132.
- Contracts with Agricola Viñasol and AgroRetail have been signed for the purchase of Italian grape and apple.

During the November/December 2010 Mission, the IESM Team did not conduct field visits to see the implementation of this Program. The project will end in May 2011 with the completion of the agricultural campaign. Currently, the program has 332 beneficiaries and is making steady progress.

Supply Chain Management Project (ForPyme)

The ***Supply Chain Management*** (ForPyme) program is being implemented in coordination with the International Finance Corporation (IFC) to enhance the socio-economic impact of the Project and foster community relations by creating business links between PERU LNG, other large businesses and local small and medium businesses. The Program was launched in November 2008 for completion within 2 years.

The Q3 2010 Report informs that the implementing partner, SwissContact-Recursos SAC, has carried out the following activities:

- 302 Small and Medium Enterprises (SMEs) were registered and 120 of them were characterized or profiled (the initial target was 100 SME)
- 122 SMEs have received an Improvement Business Plan
- 102 are addressing the issues identified in the Improvement Business Plan, with the support of the technical assistance team
- 74 out of 101 SMEs registered as suppliers have achieved a total of US\$ 3,740,246 in sales revenue with the technical support of the project. Sales were mainly related to garments, agro-industry, wood processing, construction and services, and 16% of these sales and connected to PERU LNG
- Follow up on commercial linkages initiated in Entrepreneurial Business Meeting held in Chincha, where more than 100 SMEs participated. Final businesses are worth up to US\$2,178,458.

The activities carried out as part of the Institutional Strengthening component included:

- Consultants Training Program is ongoing with the participation of 15 professionals (10 from Chincha and 5 from Cañete)
- Implementation of Chincha Chamber of Commerce Strategic Plan is ongoing: Accountant – Administrative Procedures Handbook as well as Functional Organization Handbook is being prepared in coordination with Chamber members.
- Five workshops on “Why and how the association is a good option”, Farmers “Environmental Management”, “Corporate Identity”, “Marketing for workshops”, “Negotiation Techniques” were successfully conducted in Chincha.

During the November/December 2010 Mission, the IESM Team did not conduct field visits to see this Program. Information provided by PERU LNG confirms that the program is making steady progress and all events organized are receiving major acceptance by local participants.

Due to the great results obtained to date, this Program has been extended for more one year; i.e, until November 2011.

10.0

Project KPI Analysis

10.1 Environmental Indicators

All environmental performance targets established in the Project's Environmental KPI's were met during Q3 2010. PERU LNG

10.2 Social Indicators

Operations social performance targets established in the Project's Social KPI's started to be applied during Q3 2010, starting in September on. Performance evaluation will be applicable in the next report.

10.3 Health and Safety Indicators

The safety indicators for Lost Time Incidents and recordable accidents are compliant and far below the standard.

The Recordable Incidents and Lost Time Incident Rate (LTIR) for Q3 were 0.02 and 0.00. The inception-to-date Recordable Incident Rate for the Plant stood at 0.25. Similarly, the Lost Time Incident Rate stood at 0.04, versus a KPI of 0.25.

Recordable Incident Rate (RIR) were 0.08 (July); 0.07 (August); 0.09 (September). The target is 1.25.

11.0

Consolidated Suggestions and Recommendations

Recommendations set forth herein are classified into six main categories for Operation Phase, as follows:

Recommendation Type	Subject
Type 1	Recommendations affecting PERU LNG's E&S Assurance Procedures
Type 2	Recommendations requiring PERU LNG to request corrective action from contractors or operation staff
Type 3	Recommendations relative to ongoing E&S Programs implementation and effectiveness
Type 4	Suggestions relative to Additionality Projects
Type 5	Requests for inclusion of complementary information in PERU LNG's Environmental, Social and Health and Safety Compliance Reports or monitoring processes and reports as established for specific plans
Type 6	Recommendations for future action in view of perceived environmental and social upcoming risks

New recommendations resulting from the November/December 2010 IESM Mission are presented below, organized according to the six categories specified above. A **Recommendation Tracking Table** is presented in **Annex 02**.

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

- Install security posts to protect electrical equipment located at the entrance of the Marine Terminal pier. Lockout/Tagout procedures should be implemented according to the approved operational procedures.
- Replace the control booth on the access road to the Marine Terminal, or protect it from rock falling from the adjacent slope using barriers or screens.
- Prepare and approve a procedure for operating and maintaining hoses in general, but especially pressure hoses, taking into account the following:
 - Location of the hoses when they are not in use (hose cabinets or hangers).
 - Have a stock of hose clamps to avoid any future shortages or the inappropriate use of wires to connect hoses to equipment.
 - Type of hose clamps approved should be consistent with the pressure level.
 - Devices to prevent snapping of the hoses in case of accidental disconnection or hose breakage.
 - Frequency of inspections and maintenance.

- Relocate or remove the the lifeline support attached to the ladder at the permanent waste water plant
- Chemical storage and handling areas must have emergency equipment such as eyewashes or showers, fire extinguishers and spill kits. Personnel with access to chemical storage and handling areas must have proper training to learn how to use the emergency equipment.
- All containers, whether they have chemical or waste products, must be properly labeled to prevent accidents, in accordance with approved procedures.
- The pond with standing water near the CB&I camp should be drained and taken out of service, or alternatively, it could replace the nearby effluent pond, which has damage to one of its walls.
- It is recommended that some sampling procedures for monitoring water quality be reviewed so that they are in accordance with standard procedures and methods.
- Review the procedures for cleaning the CPI separator and the water accumulation well to avoid oils stains on the ground.

Type 3 - Recommendations Relative to Ongoing E&S Programs Implementation and Effectiveness

- PERU LNG should promote information about other benefits and incentives to the local communities and economy, besides those provided by local hiring. With regards to local preferential purchasing, new opportunities may arise as procurement reflects needs associated with operations and maintenance, which are long term.
- PERU LNG reports that the monitoring program to follow up with small businesses is under revision and will be launched in early 2011. The Company also states that it has secured the services of a local institution to provide training to the business owners. The training program will be launched in early 2011. The IESM Team recommends that these two programs be initiated as soon as possible to minimize failure of existing businesses.
- PERU LNG should consider monitor the same parameters in the effluent discharged through the outfall and in seawater quality samples. The inconsistency in the parameters does not provide PERU LNG with well-founded evidence that the Project is not responsible for exceedances observed in seawater quality results.
- The IESM Team understands that the Project is transitioning from the construction to operational phase and PERU LNG is fine-tuning some programs and procedures, but it is recommended that the integrated environmental management system be fully implemented as soon as possible.

Type 5 - Requests for Inclusion of Complementary Information in PERU LNG's Environmental, Social and Health and Safety Quarterly Compliance Reports or monitoring processes and reports as established for specific plans

- Because future IESM reports will include a Section on Security Management, the IESM Team kindly requests that future PERU LNG reports include information specifically regarding this issue.
- Present the documents with INC's approval of the final report on the Plant and Quarry Archaeological Monitoring Plan.
- Present emissions data and air quality data in the quarterly reports



ANNEXES

ANNEX 01
List of Documents Reviewed



ANNEX 01

List of Documents Reviewed – PERU LNG – Plant

Q3 2010 PERU LNG ESHS Quarterly Report
Presentation on Plant Status – Nov 2010
Presentation on Environmental Management – Plant
Plant Contingency Plan - Rev Version based on Sep Mission comments
Reports filed to Water Authorities
Laboratory Procedures for seawater sampling
Bi-annual H&S Report for OSINERGMIN
Monthly Reports filed to DGAAE - Plant
Presentation on Q3 2010 Monitoring and Biodiversity Conservation
Presentation on Environmental, Health and Safety Performance
Grievance Program - Rev Version based on Sep Mission comments
Influx Management - Rev Version based on Sep Mission comments
Local Hiring - Rev Version based on Sep Mission comments
Local Purchasing - Rev Version based on Sep Mission comments
PERU LNG Security Management Strategy - Revised Version – Dec 2010
PLNG TORs - Livelihood Monitoring and Evaluation
PLNG-SG-224-10-Chorobamba Environmental Claim Closed
Presentation on Community Relations - Plant
Presentation on Social Investment - Coast
Social Aspects Register - Rev Version based on Sep Mission comments
Presentation on Marine Monitoring
IESM – Environmental & Social Monitoring Procedures Manual – Operation Phase (rev Nov 2010)
ESHS Management System Manual

ANNEX 02
Recommendations Tracking Table

**ANNEX 02 - RECOMMENDATION TRACKING TABLE PERU LNG PLANT & MARINE FACILITIES –
NOVEMBER/DECEMBER 2010**

Type 1 - Recommendations affecting PERU LNG's E&S Assurance Procedures					
Date	Recommendation	Subject	Risks	Corrective Action Reported	Current Status
09.10	<p>PERU LNG should adjust some monitoring programs for the operations phase as requested herein, contemplating:</p> <p>a. A noise monitoring point should verify compliance with noise standards where workers are lodged.</p> <p>b. Relocation of the monitoring points of the effluent discharge at sea should be justified.</p>	Worker Health and Safety	Health and Safety issue	<p>a. Initial environmental noise monitoring for the protection of the community shows noise levels well below applicable standards.</p> <p>b. PERU LNG relocated the monitoring stations because of the following reasons; 1. The previous location was set to be close to the outfall used during construction. This outfall has been decommissioned and moved to the permanent location. 2. The permanent discharge point is now located closer to the RLOF. The monitoring stations for operations have been moved closer to the discharge point, ensuring the representativeness of data collected during monitoring activities. 3. Vessels were not able to safely reach the stations between the RLOF and the shoreline (too close to the waves' break / surf zones). The new location does not represent a safety hazard.</p>	<p>One noise monitoring result at the permanent community is not sufficient to guarantee that the applicable noise standard is met throughout operations. Therefore, an additional monitoring point near residential receptors is necessary and a matter of good practice.</p> <p>The justification for relocation of monitoring points of effluent discharges at sea is found to be adequate.</p>

Type 1 - Recommendations affecting PERU LNG's E&S Assurance Procedures					
Date	Recommendation	Subject	Risks	Corrective Action Reported	Current Status
09.10	c. The marine sediment monitoring point in the navigation channel is not representative and should be relocated to the place where the vessels approach the mooring lines, near the loading arms connection.	Marine Monitoring	Lack of adequate documentation on compliance	c. Sediments monitoring station will be moved to Transect T3 on the navigational channel (i.e. Monitoring point will be on the channel and in front of the loading arms. See Appendix C)	Response to item “c” is adequate. This recommendation is closed. On item “d”, will wait for PERU LNG to report on results of its evaluation.
	d. The focus of the ballast water monitoring needs to be altered to include at least <i>Limnopoma fortunei</i> , phytoplacton of the <i>Pyrrophyta</i> (photosynthetic dinoflagellates) and <i>Chrysophyta</i> (diatoms) groups; zooplankton (as microbiological indicators), <i>Vibro cholerae</i> (O1 and O1-39), faecal coliforms, coliphages and <i>Salmonella</i> spp.	Marine Monitoring	Lack of adequate documentation on compliance	d. Phytoplankton monitoring will be incorporated to the ballast water monitoring activities in the fourth quarter of 2010. PERU LNG is evaluating the parameters and indicators that will be monitored, based on IMO standards.	
09.10	Continued monitoring of accretion and erosion processes at the coastline should proceed contemplating the specialized consultant's (ESSA) recommendations. Any changes with potential impact on fishing activities should be disclosed as provided under the Fishermen Compensation Plan.	Coastline Monitoring	Lack of adequate documentation on compliance	All the recommendations from the specialized consultant will be implemented in Q4 2010.	Will verify proper implementation during the next IESM Mission.

Type 1 - Recommendations affecting PERU LNG's E&S Assurance Procedures					
Date	Recommendation	Subject	Risks	Corrective Action Reported	Current Status
	Job Safety Analysis (JSA) should be conducted on the use of treated effluents for vehicle washing operations, particularly with focus on the types of PPEs necessary	Health and Safety	Health and Safety Issue	Treated effluent is not utilized for vehicle washing operations.	This is not consistent with what was observed and reported by the IESM Team during the September 2010 Mission. PERU LNG should confirm exactly what uses of treated effluents are allowed and how this information is disclosed to all pertinent personnel.
09..10	In the July 2010 Monthly Monitoring Report submitted to OSINERGMIN (on operations), which was sent after the September 2010 IESM Mission, no information was found about monitoring exposure of workers to physical, chemical, biological, or radiological agents in compliance with item 2.9 of IFC's General EHS Guidelines. However, as an example, technical information reviewed on the sweetening process (elimination of acid gases as CO ₂ and H ₂ S with MDEA), indicates there is a loss of chemical products in the absorption process in quantities which depend on the operational conditions of the regeneration tower, thus making exposure of workers to chemical risks a possibility.	Health and Safety	Health & Safety Issue	Worker exposure to chemicals due to this process is limited to activities related to restoration of the absorption chemicals. This process is done approximately every five years and is a major outage activity. All such activities have comprehensive work plans including Health and Safety review with specific requirements for worker protection.	This recommendation is closed.

Type 2 - Recommendations Requiring PERU LNG to Request Corrective Action from Contractors or Suppliers					
Date	Recommendation	Subject	Risks	Corrective Action Reported	Current Status
09.10	It is necessary to strengthen H&S training of workers engaged in the plant and marine facility commissioning process, as some unsafe work procedures were observed (at the trestle, a worker over the pipe rack without safety rope; at the service dock, work on an electric panel without the necessary Permit to Work).	Health & Safety	Health & Safety Issue	Additional training for contractors has been initiated with the Permit to Work process. This includes a specific JSA for each permit. In addition, critical permits are audited by the safety staff to identify and immediately correct any non-conformance to prevent a repeat of the observations.	The IESM Team will review training records before proceeding to close this recommendation.

Type 3 – Recommendations Relative to E&S Ongoing Programs					
Date	Recommendation	Subject	Risks	Corrective Action Reported	Current Status
03.10	The IESM Team recommends the implementation of a wave monitoring program at the service pier by the RLOF. This is a health and safety concern, as pointed out in the report.	Coastline Monitoring	Health & Safety Issue Engineering hazard	The Company has reported that the service pier is not being used.	There is no indication as to whether this is a temporary or permanent situation. The IESM Team was under the impression that the service pier has a useful function during marine facility operations. Will wait for clarification and/or for indication of planned actions before closing this recommendation.
07.10	It would be useful to integrate results of marine monitoring with those being obtained in the Coastline Survey and ongoing monitoring.	Coastline Monitoring Marine Monitoring	Ecological Impact	PERU LNG reported in its Q2 2010 Report it will integrate the Coastline Survey information within the marine monitoring protocols design. During the September Mission, it was furthermore reported that the monitoring protocols are being designed by BMAP specialists and will contemplate coastline survey data, commercial value of fisheries, abundance patterns, among other factors. PERU LNG expects that the protocol will be ready by the end of 2010.	Recommendation currently under implementation. Based on projected schedule, the IESM Team expects it will be able to verify the marine monitoring protocols during the Q1 2011 Mission.

Type 3 – Recommendations Relative to E&S Ongoing Programs					
Date	Recommendation	Subject	Risks	Corrective Action Reported	Current Status
07.10	The IESM Team recommends enhancing communication of marine monitoring results to local communities. During the Mission, the IESM Team repeatedly received the complaint that due to the construction process and the lights of the plant, many sea lions came to the shore and destroy fishermen nets. Fishermen also remark about the diminishing quantities of fish that they attribute to changes provoked by the construction process. Improved disclosure of the results of marine monitoring to the local population may be useful.	Community relations Marine monitoring	Reputational risks Risk of unfounded claims	In its Q2-2010 Report PERU LNG stated it is committed to improving communications with local communities. Furthermore, the Company notes that it has committed to disclose marine monitoring results in the Stakeholder Engagement Plan.	Implementation of improved communications has started and will be reported in the next Mission.
07.10	PERU LNG should apply best efforts to maintain open communications and reach agreements with the remaining fishermen to be compensated.	Fishermen compensation	Reputational risks Risk of unfounded claims	PERU LNG has reported significant progress on this issue. Agreements with the Nuevo Tambo de Mora and APAICH associations were recently reached. Negotiations with CETEC are ongoing.	Though progress in this respect has been commendable, this recommendation is still under implementation. Will be closed as soon as compensation negotiations are concluded, or when, based on appropriate justification, PERU LNG decides to cease pursuing a negotiated agreement and allows the outcome to be decided in court.

Type 3 – Recommendations Relative to E&S Ongoing Programs					
Date	Recommendation	Subject	Risks	Corrective Action Reported	Current Status
07.10	It is important to ensure the continuity of the assistance to the fishermen who are already running their businesses. The IESM team also recommends implementing a program for monitoring these businesses to provide the necessary assistance in a timely manner to maximize their success and sustainability.	Fishermen compensation	Risk of low business survival rate	PERU LNG reported its action on this issue is ongoing and its level of effort has not been reduced. It was furthermore informed that a training program will begin to be implemented as part of the technical assistance component for the fishermen included in the compensation plan. The process to select the contractor is in process and it is expected that activities will start in Q1 2011 (or earlier if possible).	The IESM team recognizes the efforts PERU LNG is making to address this recommendation, which was issued out of concern that technical assistance to fishermen may be discontinued or not be forthcoming with the same level of effort in the case of more recently approved projects for individuals or associations that took longer to reach a compensation agreement. The IESM Team reports that this has not been the case thus far, but maintains this recommendation open until the proposed new technical assistance process begins.
09.10	It is important to deploy a communication strategy addressing other forms in which PERU LNG is giving opportunities to the local community, beyond local hiring.	Stakeholder engagement Project disclosure	Unnecessary deterioration of relations with communities	PERU LNG is conducting different efforts to communicate opportunities to the local community, beyond local hiring. For example, the Company has launched radio programs in Chincha and Cañete called “Estacion Agraria” and “ForPyme en Accion”, which will provide technical advice on agriculture and management of SMEs to the population.	This action is deemed satisfactory and the recommendation closed.
09.10	The IESM Team suggests that necessary efforts are made in order that fishermen who are included in the compensation plan process can cross the beach exclusion area in an expedited procedure, reducing waiting time for crossing approval.	Fishermen compensation	Reputational risks Risk of unfounded claims	Best efforts will be conducted to reduce the waiting time for fishermen included in the compensation plan to cross the exclusion zone.	PERU LNG reported during the Mission that improvements in the procedure are under evaluation. The next report should provide information on the changes implemented to improve the process.

Type 3 – Recommendations Relative to E&S Ongoing Programs					
Date	Recommendation	Subject	Risks	Corrective Action Reported	Current Status
09.10	The IESM Team also recommends implementing a program for monitoring these businesses in order to provide the necessary assistance to maximize their success in terms of livelihood / income restoration.	Fishermen Compensation Plan	Unnecessary Reduction in social and economic benefits of the Fishermen Compensation Plan	A revised monitoring program is being developed and will be launched early next year. Overall results shall be presented within our final completion report for the Fishermen Compensation Plan.	The IESM Team will follow up on implementation of reported actions in coming Missions.

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	In evaluation, not yet defined	Recommendation pending results of evaluation and proposals.





Type 5 - Requests for Inclusion of Complementary Information in PERU LNG's Environmental, Social and Health and Safety Compliance Reports					
Date	Suggestion	Subject	Risks	Corrective Action Reported	Current Status
09.10	PERU LNG should submit the proposed structure and content of its Quarterly ESHS Compliance Reports for the operations phase. This should include evidence of proper implementation of plans and procedures in the ESHS Management System for operations as recently approved by Lenders, and should be submitted before the next Quarterly Report is prepared.	Operation Phase reporting		The structure, content and data included in this Quarterly E&S Compliance Report have been adjusted to adequately cover the operation phase. It provides evidences of the implementation of different elements of the ESHS-MS. If the IESM Consultant or Lenders consider that additional information is required, it can be included in subsequent quarterly reports on a continuous improvement basis. (i.e. similar approach to the first three quarterly reports issued after Financial Close.)	The IESM Team have some suggestions to the structure of PERU LNG's Quarterly Report and plans to discuss suggested modification in a special meeting to be scheduled during the next Mission.

Type 5 - Requests for Inclusion of Complementary Information in PERU LNG's Environmental, Social and Health and Safety Compliance Reports					
Date	Suggestion	Subject	Risks	Corrective Action Reported	Current Status
09.10	It is necessary to consolidate health and safety statistics and follow on H&S KPIs with respect to worked hours during the operations phase and not only from inception to date.	Health and Safety		It is expected that the H&S KPIs for 2010 calendar year will follow the format utilized since the start of the project. There is no fixed date to accurately determine start up of operations and to separate it from commissioning. The 2011 reports will utilize a format in keeping with the ESHS Management System elements.	The IESM Team reinstate its recommendation that PERU LNG consolidate H&S statistics yearly and/or semi-annually during operations to provide the basis for meaningful analyses of trends over time. January 1 st 2011 is an adequate cut-off date to begin this. Inception to date statistics can continue to be issued if desired.





Type 6 - Recommendations for Future Action in View of Perceived Potential Environmental and Social Risks					
Date	Recommendations	Subject	Risks	Corrective Action Reported	Current Status
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	PERU LNG has reported that the Community Investment Program for the operations phase is being developed and will be submitted to Lenders/ICA by the end of Q4 2010.	Implementation in progress. To be discussed in the next Mission



ANNEX 03
Photographic Records of Mission Observations

	<p>Location: Sampling point of effluents discharged into the ocean (point of compliance)</p> <p>Comment: This point is located near the entrance gate to the Marine Terminal pier. The small-diameter pipe of the sampling point is welded to a neck flange welded to the main pipe. The volumen of water contained in the neck is about 5 gallons. To obtain a representative sample of the effluent that is flowing through the pipe, the section of the pipe used for sample collection should be purged. In this case, it would be advisable to drain about 10 gallons or more.</p>
	<p>Location: Entrance to the Marine Terminal Jetty</p> <p>Comment: Electrical equipment with temporary warning tape does not have permanent barriers to prevent potential damage to passing vehicles. The team had an outdated CBI warning label.</p>
	<p>Location: CPI Separator</p> <p>Comment: Part of the CPI separator and some of the auxiliary facilities, such as the valves, pipes and cement pond. The water-oil emulsion accumulates in the separator because the skimming weir (part of the CPI separator) cannot remove solution from the separator. This leads to leaks as evidenced by stains on the surrounding area.</p>
	<p>Location: Water Treatment Plant for waters from the Permanent Camp</p> <p>Comment: Housekeeping issue - The Treatment Plant and Effluent Tank were operational during the mission, but the effluents were sent for additional treatment at the CBI construction camp treatment plant, for subsequent use. Observe the air hose on the ground. When not in use, the hose should be placed where it do not pose a trip and fall hazard to workers in the area.</p>

	<p>Location: Water Treatment Plant for waters from the Permanent Camp</p> <p>Comment: There are no safety locks on the connectors. Wire was used to prevent accidental disconnection of the hose and joint.</p>
	<p>Location: Water Treatment Plant for waters from the Permanent Camp</p> <p>Comment: Retractable lifeline secured to the rungs of the ladder limiting the space the worker can use to climb in. The structure for the lifeline should be secured so as not to affect the worker's climbing.</p>
	<p>Location: Temporary chemical storage and handling area</p> <p>Comment: Plastic containers full of unidentified substances and without proper labels (NFPA, UN, DOT). Hand pump and a 5-gallon bucket are evidence that chemical handling takes place in this area. This chemical storage and handling area must be equipped with readily available emergency eye wash and shower, fire extinguisher and spill kits.</p>
	<p>Location: Effluent tank of the CB&I Water Treatment Plant</p> <p>Comment: This tank is out of service and still stores effluents. This standing liquid can serve as a breeding ground for insects that carry diseases. The water/effluent should be analyzed before it is disposed in according with its classification.</p>

	<p>Location: Effluent tank of the CB&I Water Treatment Plant</p> <p>Comment: slope-stability - The south slope of the pond shows evidence of instability and subsidence. This pond requires repairs to prevent environmental contamination and potential physical hazard to vehicles that pass by this area.</p>
	<p>Location: Trestle area</p> <p>Comment: Falcon used to scare seabirds in the Trestle area.</p>
	<p>Location: Trestle area</p> <p>Comment: A significant decrease in seabird population was observed during the November/December IESM Mission, as compared to numbers observed during previous missions.</p>
	<p>Location: Beach (south sight)</p> <p>Comment: The sedimentation process that is associated with the presence of marine facilities seems to have stabilized when compared to conditions observed during previous missions.</p>