Republic of Panama

Environmental Impact Study, Category II: "Project for the construction of a pier in the Telfers Sector, District of Cristobal, district and province of Colon"

Presented to:
National Environmental Authority (ANAM)

Submitted by: LNG GROUP PANAMA S.A.
Legal Representative: JOSE DAPELO BENITES
Passport: C488000; Telephone: +507 394-7660 / +507 394-7661 Fax +507 394-5600.
E-Mail: Jfabrega@lnggrouppanama.com

Prepared by:

Registration N°:-013-2013-IRC DIEORA
Phone: (507) 395-4335
Fax: (507) 395-4336
Cell phone: (507) 6540-2344
E-mail: sermulsa@cableonda.net

January
2014

Content Index

Tables

Figures

2.0 EXECUTIVE SUMMARY

2.1 General Data Of The Company

The project sponsor is LNG GROUP PANAMA S.A., whose legal representative is JOSE DAPELO BENITES, with passport No. C488000. The company is written in the Public Registry of Panama in 674296, 1643967 Document tab.

A) Contact Person: Mr. Julio Fabrega

B) Telephone: +507 394-7660 / +507 394-7661, Fax +507 394-5600.

C) Email Address: jfabrega@lnggrouppanama.com

E) SERMUL: Management Consultant, S.A., Registration:-013-2013-IRC DIEORA

2.2 Description of the project; To develop, approximate budget.

The project consists of the construction and operation of a marine terminal of liquefied natural gas (LNG), which will be enabled to receive, download, store, regasify LNG and natural gas ansportar tr to ground, (Annex 2).

Basically, the regasification process consists of:

Transport: The Liquefied Natural Gas (LNG) is transported in a liquid state at -160ºC in special ships (tankers). The LNG carriers are extremely safe, thanks to its extensive security measures and its robust design (double). There has never been an incident in a boat tanker that has resulted in a loss of LNG.

Lng unloading LNG carriers: transfer the LNG to the regasification plant by unloading arms. The arms are the surest way to download fuels. The arms incorporate some safety valves that are practically non-existent potential LNG spills in case of emergency.

Transfer toward the tanks: The bombs of the LNG tankers driving the LNG from the boat to the storage tank through the unloading arms and a cryogenic (line that supports very low temperatures).

Storage: The LNG is stored at - 160 °C in a total containment tank. This tank is actually formed by two tanks, one within the other. The inner tank is cryogenic steel (which supports very low temperatures) and has a thickness of several cm. It is surrounded by insulating material and the outer tank, prestressed concrete of 1 meter thick. In the unlikely event that the inner metal tank suffered a leaking tank exterior concrete would retain the LNG and the vapors are stored. On the other hand, the tank's concrete exterior protects it from any cryogenic combustion event of neighboring plants that store fuel storage terminals of liquid fuels).

In summary, the terminal will have the capacity to berth vessels, where it will be stored and will be carried out the process of regasification plants. These vessels will be connected to the terminal and, considering the supply of a ship per month, you will have the ability to boost to ground the liquefied natural gas (LNG), delivering on the ground to a cryogenic storage tank of 175,000 m3, which caters to a regasification plant for producing natural gas that is delivered to a branch or pipeline for distribution to final consumption centers.

Natural gas is regarded as one of the fossil fuels cleaner and more environmentally friendly. Its comparative advantage in environmental matters in relation to the coal or oil lies in the fact that the sulfur dioxide emissions are negligible and that the levels of nitrous oxide and carbon dioxide are much smaller. This property comparative LNG makes a contribution to sustainable development in the region.

The project, in addition to providing an infrastructure that will facilitate the provision of safe and reliable natural gas, economic benefits associated with the investment of capital for new projects, employment generation, creation of infrastructure, and generation of other income associated with the activity.

It is important to note that there are two spring simulation studies carried out by the Center for Simulation, Maritime Research and Development (Sidmar) of the Panama Canal Authority, and approved by them with the compatibility study granted (Annexs 4 and 5). For these studies, the main recommendations that emerged were (apart from the vast majority that dealt with maritime safety recommendations):

- The minimum depth under the keel should be 2 meters
- Environmental limits should be established as winds, tides and visibility. This is to ensure a safe margin to enable it to operate under most operating conditions
- The currents in the area must not pass of 1.2 knots
- The location of the spring should be away from populated areas and marine traffic

The above, was taken into consideration when the study was: Analysis of the hydrodynamic characteristics (currents, tides, waves). Site of the Spring Island Telfer, Colon Province, carried out by the specialist who worked in this EsIA (Annex 6). Within the main conclusions of this study, taking into account the recommendations of the two aforementioned simulation studies we have:

- The speeds in the construction site of the spring range from 0.03 to 0.12 m/s and are directed toward the SW 232° in situ measurements.

- The results of the model show that this is a body of water of weak speeds to the western end and anchor in the area of Puerto Cristobal like the French Channel. While, in general, the area of construction of the pier presents with moderate slightly speeds, between 0.09-0.12 m/s, with direction toward the SW.

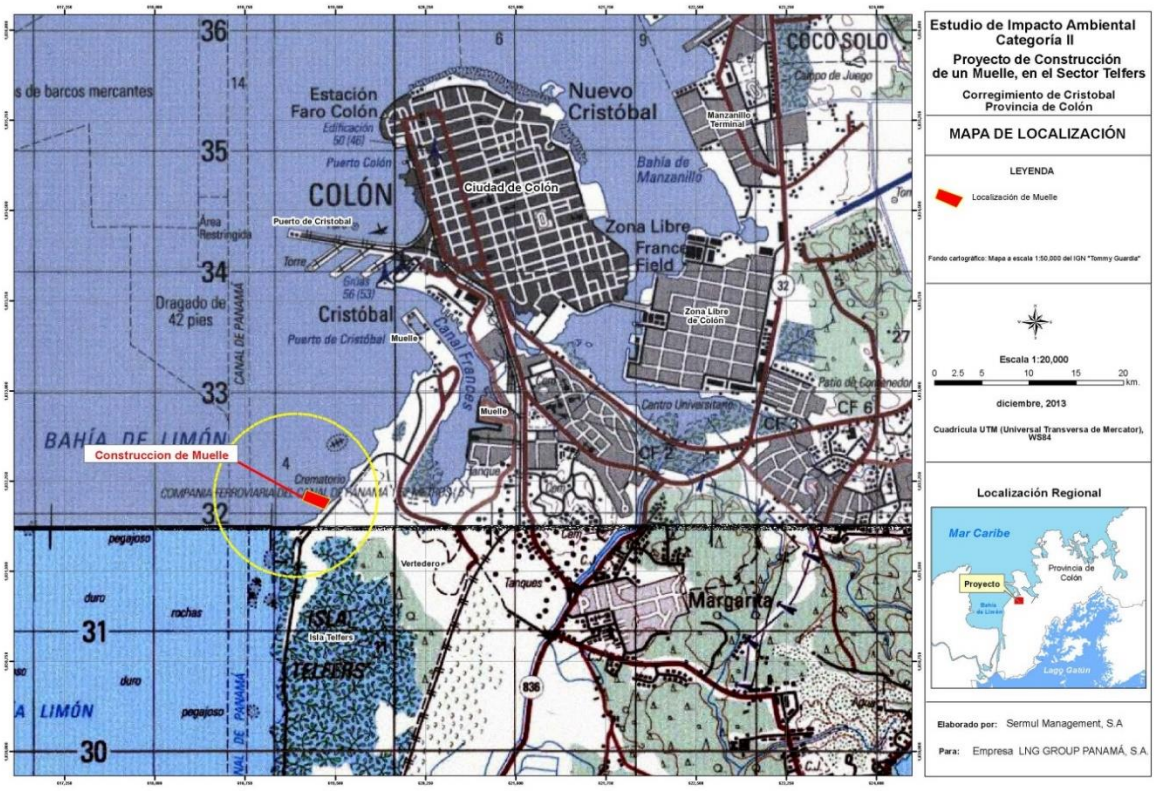
- The maximum and minimum values of significant wave height are presented in the months of February and October respectively.

- The waves in the area proposed for the construction does not exceed 0.5 m high significant and comes from the WNW in its transformation. So that the dimension of coronation of the spring is enough to this condition.
- There are no significant changes in the behavior of the current direction and speed by construction of the pier.
- As you can see in Figure 2.2-1: PROJECT LOCATION, the same is away from populated areas and marine traffic

The project is located with the following coordinates in UTM:

Point 1: 0619319E/1045043N;
Point 2: 0620864E/1045043;
Point 3:0620864E/1046553;
Point 4: 0619319E/1046553N.

Figure 2.2-1 : Location of the Project



In the planning stage, perform a variety of activities, among which we can mention: Collection of existing information, the conduct of preliminary field studies and final designs, studies of current capacity and feasibility of drinking water systems, sanitary service, electrical service and communications, preparation of the Environmental Impact Study and its approval, obtaining all permits with the corresponding authorities.

It is not considered stage of **abandonment** in this project, however, once the construction phase will leave the place totally clear of debris and completely clean.

In the project will be the construction of a pier.

The labor for the project is dimensioned considering all of the components that make up. The **construction phase** will have an average of 120 people per month and a maximum of 170 people per month.

In the **implementation phase** will require the following staff (skilled and unskilled):

- Civil Engineer with specialty in health care,
- Civil Engineer
- Inspectors,
- Administrative Staff (Manager, secretary, etc.),
- Foreman.

In the stage of operation has an average of 40 persons per month and a maximum of 60 people per month.

The area where you will build the Pier, corresponds to an area where there are already established companies with operations similar to the project.

The estimated investment of the work is of B/. 25, 000,000.00 (Twenty-five million with 0/100)

2.3 Summary of the characteristics of the areas of influence of the project.

The stratigraphy of the area of the development of the project, in the top [1] , is characterized by non-consolidated sediments, filled with sand and corals. Underlying in addition, formations of lacustrine sediments [2] (sediments Holocenos), made up mainly of silty sand, silt and organic clays.

The soil has a use similar to the project operations such as Atlantic Pacific, S.A. (APSA) in the storage of fuel from the Atlantic Coast and the PETROPORT with the storage of

1 Geological Map, Republic of Panama, Ministry of Trade and Industry, Mineral Resources, 1991

2 Geologic Map of the Panama Canal and Vicinity, Republic of Panama, 1980

Liquefied Petroleum Gas which are neighbors of the area selected in the Telfers Island. We also develop activities of the authority of the Panama Canal and Panama Ports Company.

The agrologica capacity in the area of the project, corresponds to soils of class V, VI and VII (according to the classification of the Soil Conservation Service of USA). The project area has traditionally been used for activities related to the adjacent port facilities and distribution of liquefied gas.

The climate that is presented in the study area, is determined by the influence of the oceanic masses, mainly in this case, the Caribbean Sea. The high humidity is an example of this, determining the properties of temperature of the air masses circulating between the oceans. According to the Köppen classification system, of the three (3) Climatic zones that exist in the Canal Watershed in the project area is considered to be tropical wet climate (AWI), which is characterized by a higher average annual rainfall of 2.500 mm, a summer of three (3) months and an average annual temperature between 24° C and 26° C.

The meteorological features of the area of influence of the project, described for the elements: temperature, precipitation, and wind. This information is useful for establishing basic conditions for the design, construction and operation of the project must have.

The average annual temperature registered is of 26.88° C (80.4° F), with an absolute minimum temperature that goes up to 18.88° C (66° F) between the months of November and December, and an absolute maximum temperature of 52.5° C (95°F), registered in the months of May and October. However, the minimum and maximum averages for the year are located at 24.55° C (76.2° F) and 29.33°C (84.8° F), respectively, which shows a thermal gradient averaged approximately ± 2.4 °C.

In general, the rainy season is beginning in the month of April and ends in the month of november to december; but is mainly concentrated between the months of October and November.

The currents are linked closely to the movements of the earth and the exposure of the oceans to the solar rays. In turn, the sea-atmosphere interaction determines the properties of heat and humidity of the air masses that circulate through the oceans, affecting heavily the meteorology which is manifested on the earth.

The characteristics of the air quality are modified by the presence of sources of pollutants, of which in the project's area of influence, are distinguished only the corresponding to mobile sources of existing landfill and vehicles that circulate in the area and on the access roads.

During the visit in the project area were perceived characteristic smells of the garbage dump located in the area.

The vegetation present in the project area is low, because the site has been acondicionandose for the development of the different stages of other projects.

The current use of adjoining sites of the project corresponds to an area where there are already established companies with operations similar to our project as are Atlantic Pacific, S.A. (APSA) in the storage of fuel from the Atlantic Coast and the PETROPORT with the storage of Liquefied Petroleum Gas which are neighbors of the area selected in the Telfers Island.

Currently, in the city of Colon and the surrounding area, including the community of Sabanitas, the management system of the wastewater consists basically in the sanitary sewer of the I.D.A.A.N. In the city of Colón and its surroundings, including the communities of Sabanitas, Cativa, Puerto Pilon, Villa Alondra and Cristobal, the management system of the wastewater consists basically in the sanitary sewer system and primary treatment in septic tanks and percolation Imhoff and seagrass beds. The predominant productive activity of the community is oriented toward commercial, industrial, transport, storage.

2.4 More relevant information about the critical environmental problems generated by the project

The project is located in the marine area of the Caribbean Sea, the area where the aim is to develop the same, is a designated area for industrial use, where there are other similar industrial activities.

In the construction phase of the project will be established buildings, warehouses, deposits and other, located in a given area or any other sector, roofing or not, the purpose of which is oriented to the administrative and logistical support of the work, are these buildings such as offices, parking lots, warehouses, dining rooms, bathrooms for the staff, garages for the maintenance of vehicles, areas of collection, etc.

For these facilities is estimated using spaces for pre-assembly of piles and for temporary offices and facilities in the project area, which could affect the landscape. Affected the air quality in the construction stage by contamination with dust, produced by the movement of soil and traffic of heavy equipment, and for possible bad smells at the same time you are danto the movement of the seabed for the installation of the piles; however, at the stage of operation does not adversely impact the quality of surface water or groundwater or aggressive emissions to the environment.

2.5 Short of scripcion of positive and negative impacts generated by the project

The potential **positive impacts** are: employment generation, improvement of the quality of life of the population, development and intensification of economic activities, increase in the value of the land uses compatible with the territorial planning.

The following are the possible **negative impacts** that can be generated in the middle by the actions of the project.

Table 2.5-1 : Possible Negative Impacts

Potential Impact	Description
Resuspension of sediments and the reduction of transparency.	The pile driving actions that are the structural basis of the esplanade or spring. Iran grounded to 15 m, other to 10 m. These whether kneeling by hydraulic pressure or by excavation have the capacity to generate resuspension of solids. Heavier sediments quickly settle, but the fine sediments, clays and silts remain in suspension and these are transported by the currents and swells covering large areas and generating turbidity, and increasing the concentration of suspended solids, surpassing the natural condition. The impact that physical decline will occur is the transparency of the water column, which will have a limited duration, especially since that will be basically fractions of sand, silt and clay by the depth, severity and density settle out quickly, in the same place.
Alteration to the Hydrodynamics	This impact occurs when you alter or reduces the tidal prism. The morphological configuration of a system such as the Lemon Bay is the result of the interactions between factors such as the prism of tides, currents, and the prevailing direction of waves.
Affectation to the sedimentary dynamics	If you generate a significant impact to the hydrodynamics, the alteration in the sedimentary dynamics is likely.
Changes in the quality of the sea water.	The constructive activities of the Castled and pile driving can affect the quality of the sea water to provide a greater amount of solids in suspension. These changes can affect both benthic and pelagic organisms in the project area.
Damage to the bodies of the fund	The construction of the new pier leads to the establishment of a castled in the coastal area and installation of piles as part of the constructive activity. The Castled directly affects the bottom organisms because it eliminates the species that may be associated to it and who have limited mobility.
Changes in the benthic habitat.	The sea is affected by the construction of the castled in the coastal zone, although these effects are much lower when installed piles. However, in one or another activity will occur in damages to habitat to a greater or lesser degree.
Affectation to pelagic organisms.	All marine activity carries some kind of affectation to pelagic organisms, so that you can assess the level of alteration to these agencies. Especially during the construction of the pier, pelagic organisms tend to be more affected than during the operation phase.
Creation of new marine habitats	The construction of the castled, regardless of which affects the seabed, it also creates a new habitat that is usually conquered by invertebrate species associated with rocky coast.

Potential Impact	Description
Risk of accidents	Would consist in the possibility of a worker suffering a certain damage resulting from their work activity. Are considered diseases, diseases or injuries with reason or on the occasion of the work.

Source: Prepared by the consultant. 2014

2.6 Description of mitigation measures, monitoring, surveillance and control provided for in respect of each type of environmental impact identified.

The following are recommended mitigation measures:

Measures to control the quality of the sea water

During the construction phase of the Castled and pile driving could occur oil spills, dumping of waste, increased sedimentation or of particles in suspension. Some measures are proposed during the construction phase:

- Train staff on issues related to spills and accidents with substances such as fuel or lubricants.
- Keep the computer you are using, land and sea, in good condition in order to prevent leakage of fuel or lubricants.
- Remove any spilled fuel or oil immediately and arrange suitable sites.
- Do not pour sewage, solid waste or the sea.
- Implement measures of monitoring, surveillance and control such as visual inspections and periodic monitoring of the quality of sea water.

The activities of the spring during the operation stage, can generate impacts on the quality of the sea water, among them we find possible leaks that may have the boats that use, accidental spills during shipping or supply, discharge of waste and organic waste to the sea or discharges

of wastewater from vessels or boats. To reduce the occurrence of effects on the quality of the sea water, we propose the following measures:

- Train staff on issues related to the management of spills and accidents with substances such as fuel or lubricants
- Remove any spilled fuel or oil, immediately and arrange suitable sites
- Do not discharge wastewater or solid waste to the sea.
- Perform periodic monitoring of water quality, in the area of the spring

Measures to control sedimentation of the Seabed

The activities during the construction phase, Castled and pile driving can cause an increase in the generation of sediment, which have to be treated properly so that, ultimately, do not affect the seabed.

- Follow the set out proposed in the suggested measures to control the increased sedimentation during the construction phase of the project in the terrestrial zone.

During the operation phase, it is expected that there will be significant changes in the sedimentation of the seabed. The effect of the barges on the sedimentation of the seabed will be timely and temporary.

Measures to reduce their effects on the benthic species

During the construction phase, it is expected an increase in the sedimentation, product of the activity itself, which may affect species of benthos. In order to avoid this effect it is recommended:

- The use of piles for the construction of the structure (as set out in the project description). The stilts have the characteristic that are less invasive in marine environments, so its use for these structures is recommended.

During the operation stage of spring it is not expected that the benthic organisms are affected. However, it is advisable to follow a number of measures aimed at preventing the involvement of the same. It is advisable to take the following measures for the conservation of these agencies:

- Do not discharge wastewater or solid waste to the sea.
- To control the access of boats to shallow areas where the propellers may affect organisms living in the sediment at the bottom.

Measures to reduce the changes in the morphology of the benthos

It is expected, during the construction phase, the modification of the relief fund product mainly of the Castled and pile driving. While the castled has a alteration of the benthos not mitigable, the placement of piles is one of the less intrusive activities used in the construction of ports, given that the alterations to the fund are very punctual.

- The use of stilts (presented in the description of the project) is in itself an excellent measure to reduce changes in the morphology of the benthos.

In the stage of operation are not expected an alteration of the relief fund except that caused by natural sedimentation processes. Every time that there may be a risk of an increase in the sedimentation and therefore a change in the morphology of the benthos by unnatural causes, suggests the following:

- The measures presented to control the increase in sedimentation.
- To control the access of boats or boats to the shallower areas.

Measures to reduce the impact on the pelagic organisms

The pelagic organisms are affected by the construction of structures in the sea, so it is expected this same effect during the construction of the pier. This is a negative impact to make the agencies move to quieter areas. The impact of this action is negative, by making the pelagic organisms will move to other areas, more quiet, during the period of construction of the structures. Although these actions are of a temporary nature, it is recommended that:

- Implement the measures for the control of the deterioration of the quality of the marine waters (construction phase).
- Remove any spilled fuel or oil immediately and arrange suitable sites.
- Limit the number of vessels used during the process of construction of the pier.

During the operation phase, it is expected that the pelagic organisms return to the area and that it can be used as a refuge for some of them.

- Is the possibililty preventive maintenance tasks for the machinery that works in the driving of the piles.
- You must exercise extreme caution in the tasks of concreting over the water.
- You will not be able to wash tools or equipment next to the bay, having a specific area for this purpose.
- To implement the norms and conventions (MARPOL 73-78) to reduce marine pollution by oil spills
- Train staff on issues related to spills and accidents with substances such as fuel or lubricants;
- Dispose of absorbent oil and floating barriers to avoid short-term the dispersion of hydrocarbons in the water.
- Comply with what is established in the 35-2000 DGNTI-COPANIT Standard on Water, Liquid Effluent Discharge directly to bodies and bodies of surface water and

groundwater, continental and maritime.

- Implement the plan for monitoring the quality of the marine water and sediment.
- Implement measures of monitoring, surveillance and control such as inspections
- Visual and periodic monitoring of the water quality of both at the stage of construction and operation.

Management measures

The contractor must have a specific procedure for:

- Supply of fuel and oil change for the machines that will work in the construction of the piles and the docking platform.
- Procedure for checking the machinery, which includes in addition to the preventive maintenance the initial check of the hydraulic lines.

Implement a money laundering working tools for concreting, along with the site of older equipment washing

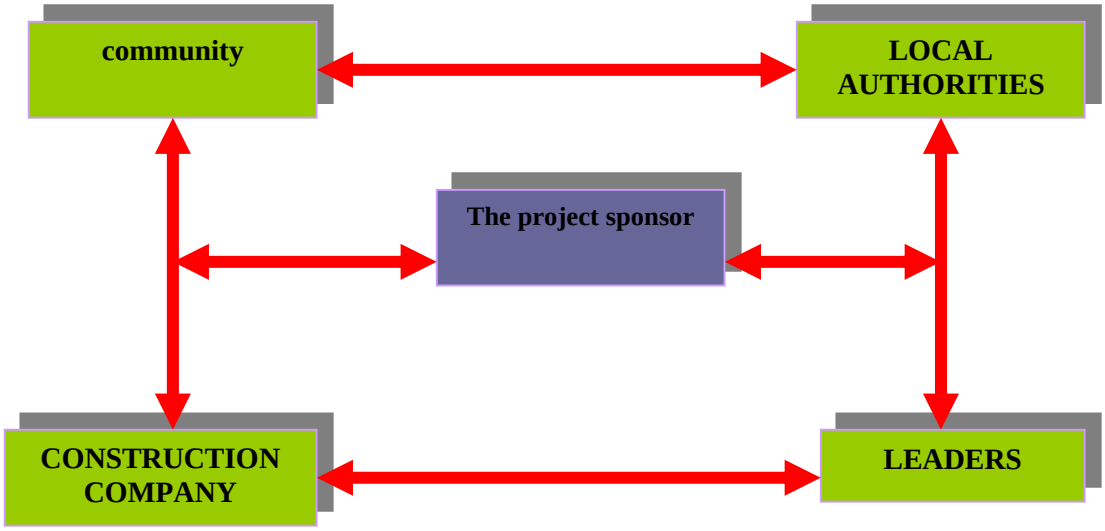
2.7. Description of the citizen participation plan.

Depending on the scope of the Executive Decree 123 of 14 August 2009, in its Chapter II: The Citizen Participation Plan, Article 30, we describe as developed by the consultant team in this area.

A. Identification of key actors within the area of influence of the project, work or activity (communities, authorities, organizations, community boards, environmental advisory councils, other).

The actors involved in the project which is the subject of study, can be clearly observed in the scheme below.

Figure 2 .7-1: Actors involved in the project which is the subject of the study



The relationship that must exist between the different actors involved in the implementation of the project is broadly reflected in the figure. This implies a close relationship between the different actors, which allows an absolute communication and trust between them, which ensures continuity of the project. The fundamental actor of the work, is identified with the community to avoid misunderstanding and mistrust.

B. Participation techniques employed to key stakeholders (surveys, interviews, workshops, assemblies, meetings, etc.), the results obtained and its analysis.

Within the participatory techniques employed, we have the implementation of survey, informal interviews. Everything was led by a document attached in Annex N° 8. The results in our view were satisfactory and can be seen clearly in point 8.3 (local perception on the project, work or activity through the Citizen Participation Plan). An objective analysis of the results of the Plan of participation, the acceptance of the work but, with some apprehensions that are no more than a reflection of lack of information and domain on the subject of the work proposal.

C. Techniques of dissemination of information employees. Given the complexity and dominion of the topic to be discussed, was used as the diffusion technique, the open conversation. This allowed a direct relationship with the main actors of the project. This discussion was allowed in the first place, trust between them and, on the other hand, a comprehensive explanation of the scope of work proposal for its development. In the annex is an informative document of Notice of Public Consultation, which was used as a guide to inform the community about the scope and development of the work proposal.

D. Information request and response to the community. One of the concerns presented by the community is the contamination of the environment, fauna, flora and people. If it is true, was expanded in some way the explanation of the scope of the work, it is recommended that the implementation of alternatives that permit the increase, to the extent possible, the degree of knowledge of the community on the proposed project. This will help to avoid any disagreement about the project, once the implementation of the same. This is the best means of responding to the requests for information and response to the same.

E. Contributions of key actors. For the phase that involved the community in the Citizen Participation Plan, one of the greatest contributions, was offered by the consultant team. The contact between the two sides, cleared my doubts with the daily live and evolve in the area you have chosen to run the project. In the analysis of point b (participatory techniques employed to key stakeholders (surveys, interviews, workshops, assemblies, meetings, etc.), the results obtained and its analysis), with clarity, the latent concern of the inhabitants of the area of influence of the project and the mechanisms that the consultant team poses to settle the differences indicated by them.

F. Identification and resolution of possible conflicts generated or strengthened by the project. A fundamental aspect that must be considered by the managers of the work, is to maintain a direct and permanent communication with the community, so that if it were ever to be some inconvenience, this can be remedied by means of dialog and understanding between the parties. It is advisable and prudent, provide all possible opportunities to those

who express affectation or disagreement around the project, as well as delivering answers that satisfy the nonconformity of the affected.

To occur some incident in this regard, we must not lose sight of the three fundamental characteristics for the resolution of conflicts and which we quote below: Focus the dispute to apply a solution, the negotiations must be based on the interest and can be supported with the existence of a third of impartial type.

It is the responsibility of the Company, strict compliance with the agreements established with the Community, prior to the start of the construction of the work or any that may arise during the process or when it is to start operations. This will help to ensure the strengthening of the relations that should prevail between the Community and the promoter of the project.

2.8. Sources of Information Used

- Arauz Diana, 2013 Analysis of the hydrodynamic characteristics (currents, tides, waves), site of the Telfer, Colon Island Pier.
- Bernal, G.; Poveda, G.; Roldán, P. and C. Andrade. (2006). Patterns of variability of sea surface temperatures in the Colombian Caribbean coast. Rev. Acad.Colomb. Cienc., 115(30): 195-208.
- Bernal, G.; Poveda, G.; Roldán, P. and C. Andrade. 2006. Patterns of variability of sea surface temperatures in the Colombian Caribbean coast. Rev. Acad.Colomb. Cienc., 115(30): 195-208.
- Fudis, Sustainable Development. 2006. Local Diagnostic and Statistics
- Management of Hydrometeorology and Studies of ETESA. 2003. Data from weather stations of Panama (Graphs of daily temperature and precipitation).
- The Comptroller General of the Republic, Statistics and Census. 2001. Panama in figures.
- The Comptroller General of the Republic. 2000. National censuses of population, VI. Directorate of Statistics and Censuses.

- Goto, C.,Ogawa,Y,Shuto N., and F . Imamura, 1997. IUGG/IOC Time , Numerical Method or Tsunami Simulation with the Leap-Frog Scheme, Oceanographics Intergovernmental Commission of UNESCO. Manuals and Guides # 35. Paris, 4 Parts.
- CITES, 1996. Appendices I, II and III, to the Convention on International Trade in Endangered Species of Wild Fauna and Flora.
- Holdridge, L. R. 1996. Ecology based on areas of life. IICA, San José, Costa Rica. 216 pages.
- Perelló Sivera, John. 1996. Environmental economics". U. of ALICANTE, Spain.
- Peter Singer. 1995. "Compendium of Ethics". ALIANZA EDITORIAL, Spain.
- Kwiecinski, B. D'Croz L. 1994 . Scientia- Panama, vol. 2. Values that are obtained from the ratio of the amplitudes of four of the main harmonic constants of a port and that determine the regime or type of tide that corresponds (K1 + O1)/(M2+ S2).
- Martinez Alier and Klaus Schlupmann. 1991. "The Ecology and the Economy" . FONDO DE CULTURA Económica, Mexico.
- National Geographic Institute "Tommy". 1988. National Atlas of the Republic of Panama.
- R. Whittaker. 1978. "Communities and Ecosystems". McMILLAN, New York.
- Mendez, E. 1970. The main wild mammals of Panama. The Gorgas Memorial Laboratory, Panama, 282 pp.
- Law 23 of 23 January 1967, which protect certain species that are in serious threat of extinction.
- Naval Oceanographic Office. 1963. Atlas of Nautical Charts of pilots, waters of Central America and the South Atlantic Ocean, United States of North America. 53p.
- LNG project: berth and Operational Simulation Desatraque in spring LNG in Cristobal, version 2
- LNG project: berth and operational simulation desatraque in Cristobal, Version 3 Final
- DGNTI-COPANIT Technical Regulation 35-2000. Discharges of liquid effluents directly to bodies and masses of surface water and groundwater.

- DGNTI-COPANIT Technical Regulation 39-2000. Discharges of liquid effluents directly to wastewater collection systems.
- Naval Oceanographic Office. 1963. Atlas of Nautical Charts of pilots, waters of Central America and the South Atlantic Ocean, United States of North America. 53p.