PNG LNG Quarterly Environmental and Social Report

Second Quarter 2010

PNG LNG

Energy for the World. Opportunity for Papua New Guinea.

PNG LNG

About This Report

Papua New Guinea Liquefied Natural Gas Quarterly Environmental and Social Report – Second Quarter 2010, provides updated reporting on the Project's construction, safety, security, health, environment and social management activities.

This Report is intended to demonstrate the progress made each quarter and is a commitment by the Project to ensure the citizens of Papua New Guinea, interested non-government organizations and other stakeholders are kept well informed.

This Report is published on the Project website, www.pnglng.com. Printed copies are also available.

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Rising to the Challenge

"Helping to bring Papua New Guinea's natural gas to the global market while balancing economic growth, environmental protection and social development demands the integration of ingenuity, integrity, innovation and reliability with an unwavering commitment to delivering on our promises."

Peter Graham, Managing Director, Esso Highlands

This second Papua New Guinea Liquefied Natural Gas (PNG LNG) Project (the Project) Environmental and Social Quarterly Report demonstrates how Esso Highlands Limited, as operator of the Project, is delivering on commitments in the areas of safety, security, health, environment and social management.

Esso Highlands Limited (Company), a subsidiary of Exxon Mobil Corporation, is constructing and will operate the Project on behalf of the co-venturers – Oil Search Limited, Kroton No. 2 Limited, Santos, JX Nippon Oil and Gas Exploration Corporation, Mineral Resources Development Company and Eda Oil.

The Project is still in the early stages of the four-year construction period. Key activities during this quarter (April–June 2010) included further establishing Project teams and necessary infrastructure within Papua New Guinea. The Project continued pre-construction biodiversity and cultural heritage surveys, engaged with stakeholders throughout the Project Impact Area and promoted business and training opportunities within Papua New Guinea.

Quarterly Project status briefings were established to ensure a continuous and transparent flow of information to elected Papua New Guinean officials, including both members of the National Government and the opposition parties. The Project is working with the Government to ensure agencies such as the Department of Labour and Industrial Relations and Immigration and Citizenship Service (part of the Department of Foreign Affairs) have the infrastructure and resources to manage the requirements for successful Project execution.

Construction activities during the quarter focused on improving and upgrading infrastructure, including road and bridge works, telecommunications, and constructing camps to house the construction workforce. Detailed engineering, execution planning and procurement activities for other aspects of the Project also progressed.

Table 1 – Contracts and main construction activities

Contract	Contractor	Major Activities During the Second Quarter 2010
Upstream Infrastructure (C1)	Clough Curtain Brothers Joint Venture	Infrastructure activities at a number of work fronts including: • Wharf and laydown at Kopi. • Bridge and road works on Northern and Southern Logistics Routes. • Camp construction and site clearing activities.
	Telecommunications (EPC1) – TransTel Engineering	Installation of telecommunications infrastructure for both the construction and operational phases.
LNG Plant Early Works (C2)	Curtain Brothers Papua New Guinea Limited	LNG plant site Pioneer Camp construction, and associated power and utilities. Upgrade of the Lea Lea Road. LNG plant site bypass road and fence installation.
Offshore Pipeline (EPC2)	Saipem	Detailed engineering and execution planning at the contractor's office in Singapore.
LNG Plant and Marine Facilities (EPC3)	Chiyoda and JGC Corporation	Detailed engineering, procurement and execution planning at the contractor's main execution office in Yokohama.
Hides Gas Production Facilities and Hides Wellpads (EPC4)	CBI Clough Joint Venture	Detailed engineering, procurement and planning at the contractor's main project offices in Singapore and Brisbane.

Contract	Contractor	Major Activities During the Second Quarter 2010
Onshore Pipelines and Infrastructure (EPC5A)	SpieCapag	Detailed engineering and execution planning. Fabrication of all uncoated onshore line pipe. Construction of temporary bush camp near Kopi started.
Komo Airfield (EPC5B)	McConnell Dowell and Consolidated Contractor Group Offshore	Detailed engineering and execution planning. Pioneer Camp construction and site clearance activities.
Oil Search Limited Associated Gas Development	Aker Solutions	Detailed engineering design work, equipment procurement and execution planning for upgrades of the Kutubu Central Processing Facility and the Gobe Production Facility.
Drilling (new wells and workovers)	Nabors Drilling International Limited	Detailed drilling and completions engineering design. Execution of contract for the supply of drilling rigs and commencement of additional contracting and procurement activities.
Port Moresby Construction Training Facility	Eos	Ongoing construction and fit out of training facility.

Environmental Performance

The Project's approach to environmental protection begins with a thorough understanding of the physical surroundings and operating environment with the goal of minimizing the Project footprint.

To continue the efforts in this area, this quarter the Project Environmental Field team was expanded to enable site verifications across all active construction worksites.

At the end of this quarter, approximately two thirds of the overall survey program and one third of the onshore pipeline survey were complete. Around one third of the pre-construction survey reports (addressing archaeology and cultural heritage, ecology, weeds and water quality) were submitted to the Department of Environment and Conservation, Papua New Guinean Government and acceptance was secured.

Significant effort is being invested in organizing, completing and reporting on surveys. To date, a team of approximately 50 environmental and cultural heritage specialists have completed pre-construction surveys on an area of approximately 4000 hectares.

4000

hectares surveyed in pre-construction biodiversity and cultural heritage surveys

Pre-construction survey results proved valuable in the decision-making process regarding the location for a quarry to supply aggregate needed for the Kopi shore base. A total of 17 potential locations were surveyed for ecological or cultural sensitivities before the final location was selected.

Biodiversity of Papua New Guinea – Native Turmeric, Long-beaked Echidna and Common Green Birdwing Butterfly

The Project also recognizes the importance of evaluating how activities may affect local freshwater availability and demand in communities within the Project Impact Area. Environmental assessments were completed prior to water extraction at six sites this quarter. All assessments confirmed that water use would be less than ten percent of flow, thereby not affecting downstream users or habitat. Meanwhile, erosion and sediment control continued to be monitored, with devices installed throughout the Project Impact Area. This quarter, the Project re-established the disused Gobe to Mubi River road, which has over 30 river crossings. Erosion and sediment control devices were installed at all culverts, and due to heavy rainfall in the area, these will be checked and maintained on an ongoing basis.

Beaver Falls

Limiting the spread of invasive species is another environmental focus for the Project. Prior to starting a site clearance, weed, plant pathogen and pest surveys are completed to prevent the inadvertent spread of weeds and pests to environmentally undisturbed areas. This quarter, surveys identified a number of mitigation measures needed to protect sites along the major transportation routes. Measures were put in place and will be regularly checked to ensure their continuing success.

Spill prevention training session

The Project Biodiversity Strategy is progressing with a steering committee formed to direct formal consultation with stakeholders. Preliminary engagement commenced with conservation organizations and research institutions in Papua New Guinea and other countries, so that the offset component of the Strategy can be developed further. Other activities included establishing 'no go zones' and a remote sensing system for monitoring potential indirect impacts such as fire, deforestation and agricultural conversion of natural habitat.

This quarter, communicating expectations, measuring progress and striving for continuous improvement in environmental performance led to the Project launching a leadership challenge on spill prevention. The challenge included a program of training and awareness raising activities for maintenance crews, equipment operators, spotters and supervisors. A key component of the program was establishing an understanding of the importance of reporting all spills, regardless of how small they may be. It has contributed to a reduction in the number of spills per month and liters released per spill for both May and June 2010.

This quarter, 150 site environmental verifications were completed across all construction worksites. The results included one Level II non-conformance related to spill prevention and seven Level I non-conformances for spill prevention, waste, ecology, weeds, plant pathogens and pests and raw materials management. There were also 93 field observations and 35 positive field observations. Corrective actions have been designated for each non-conformance and field observation with the majority of actions implemented. The process for tracking and closing-out non-conformance and field observation corrective actions has improved with the addition of a 30-day close-out timeframe. Higher risk non-conformances will usually generate a faster corrective action response.

150
environmental site verifications

A consistent and ongoing effort is being made to ensure appropriate waste management continues, with the first Project operated waste incinerators installed at the Oiyarip and Moro B camps. Storage of solid and restricted waste and use of Project approved third party incinerators for non-restricted waste continues at other camps. Recycling opportunities are limited but are being investigated. Predominant waste materials generated in the second quarter were general construction debris, paper and cardboard, plastics and insulation, scrap metal and wood. Restricted waste consisted of oils, paint, medical waste and empty containers. During the quarter, five wastewater treatment plants were installed. Water discharge monitoring commenced and demonstrated that stabilization was achieved following an initial set-up period. This was required to build up bacteria within the treatment units.

World Environment Day activities at Komo

Social Development

The Project's efforts to contribute to economic growth focused on a variety of support and incentive programs to help strengthen the local economy through skills development, job creation, purchase of local goods and services, and creating opportunities for investment. Collectively, this approach is termed national content development.

A children's library established at Koki market in Port Moresby

In April 2010, the Project opened the new Enterprise Center in temporary premises at the well-known Papua New Guinea Institute of Bankers and Business Management in Port Moresby; to help Papua New Guinean Landowner Companies strengthen their business management skills. To date, there have been more than 1,750 visits from Papua New Guinean entrepreneurs who have sought information about the Project and more than 700 businesses have registered with the PNG LNG Supplier Database. This database, available at www.pnglng.com, provides access to domestic company profiles, business assessment summaries, domestic business-to-business opportunities and Enterprise Center events. A Shareholders Information Program has also been developed, aimed at improving understanding about the rights and obligations of directors to their shareholders.

During the second quarter, the Project invested more than 460 million Kina (US$170 million) in Papua New Guinean service contracts for the supply of goods and services.

460 million Kina invested with local companies

Recruiting and training Papua New Guinean citizens is another key component of the Project's National Content Plan. It is expected the Project will require a peak of approximately 12,000 workers, about one third of which will be Papua New Guinean citizens.

By the end of the second quarter, more than 2,300 citizens were employed, representing approximately 80 percent of the Project's total construction workforce. Workers were sourced from across the Project region including Gobe, Kopi, Kantobo, Hides, Komo, Moro and the LNG plant site areas, as well as other areas of Papua New Guinea such as Port Moresby, Mendi and Lae.

2,300 PNG nationals employed representing 80% of the total construction workforce

By helping develop the technical and professional skills, the Project can maximize the number of local employment opportunities and increase the percentage of national employees. While construction continues on two new permanent construction training facilities at Juni and adjacent to the existing Port Moresby Technical College (POM Tech), a temporary training facility has been established. The first class of 48 trainees, recruited from four community areas near the LNG plant site, commenced an eight-week training program in late April 2010. The training curriculum is aligned with the requirements for civil construction laborer qualifications and all 48 trainees, including eight women, graduated in late June 2010. Since then, two more groups of 48 citizens have commenced training, including 11 women in total.

1st trainees graduate

17% women

The Project continues to engage in two-way dialogue with groups and individuals in the Project Impact Area. On the Northern Logistics Route, stakeholder engagement focused on the Road Maintenance And Bridge Building Program for the Highlands Highway, and over 4,300 stakeholders registered attendance at 18 community meetings. Meanwhile, following two years of Project-community interaction in the Hides and Komo region, formal engagement with stakeholders began in June 2010 with more than 1,500 community members participating in 11 meetings.

Textbooks being loaded onto a helicopter at Tari Airport for delivery to remote schools

The Land and Community Affairs team continued working with landowners in relation to land access, legacy issues and compensation to ensure free, prior, and informed consent. Approximately 1,250 field trips and 600 meetings held this quarter helped landowners understand the need for the Project to secure land access for construction. Landowners were provided with information on construction schedules, nature of the work, potential impacts, requirement for local labor hire, rates of pay and duration of employment.

Resettlement milestones achieved during the quarter included relocation of more than half of the households at the Komo Airfield, and there were substantial resettlement activities taking place at five other sites.

Small group stakeholder meetings

The Project's Community Grievance Procedure, aimed at receiving, assessing, tracking and addressing any concerns raised by the community about the Project was communicated to residents in the Project areas, with materials provided to the community in English and Tok Pisin. Grievances continued to be managed in the field and those related to resettlement compensation were addressed through active negotiation to achieve mutually agreed outcomes. The Project has commenced the roll-out of an electronic system, which will help centralize grievance recording, analysis and closure across the wide geographical extent of the Project and be more readily accessible to Project personnel involved in grievance management.

The Project remains committed to conducting business in a manner that protects and promotes the safety and health of employees and the communities where it operates. At Project sites, extensive work was undertaken during the quarter to reinforce safety expectations, building a workforce culture of incident prevention, monitoring contractors as they implemented safety plans, mobilizing additional safety staff to support safety planning and oversee execution, and engaging safety staff alongside contractors to develop safety planning deliverables for upcoming work scopes. Due to prevalence rates, foot hygiene and tuberculosis remain focus areas for the Project's health team. Outside the facilities fence line, the Project is implementing road safety signage and a Traffic Education Program for communities where traffic levels are high, such as around the Hides Gas Conditioning Plant.

This quarter, a cholera outbreak emerged in Port Moresby and surrounding areas. The Project established a Cholera Response Working Group to identify measures to prevent further spread of the disease. Initiatives such as publishing prevention-related materials for employees and contractors, establishing a screening process upon camp entry, ensuring adequate hand washing facilities were available and establishing cholera triage areas, helped ensure there were no reported cases of cholera at any Project worksites. Through a partnership with the Salvation Army, the Project also helped establish a cholera care clinic in Port Moresby for the wider community.

14,000 anti-malarial bed nets distributed in the Project Impact Area in partnership with Rotarians Against Malaria

The Project also made a commitment during the quarter to sponsor the Papua New Guinea Institute of Medical Research's Pneumonia Colloquium to be held in Goroka, August 23–26, 2010, convened in partnership with the World Health Organization and the Papua New Guinean National Department of Health. In Papua New Guinea, pneumonia is the number one killer of children under the age of 12 months, and from years one to five, it is second only to malaria. The colloquium will recognize achievements gained in Papua New Guinea during the past 40 years of research and define a path forward to reduce pneumonia's impact on the country.

In addition to preserving human health, the Project is committed to helping preserve Papua New Guinea's cultural heritage. The Chance Finds Protocol under the Project Cultural Heritage Management Plan provides guidance on managing unknown or unrecorded archaeological sites during the construction phase. The Chance Finds Protocol was activated five times during the second quarter. The most interesting find was a stone bowl, dated at 7000 years old, found at Juni. Called a 'devil stone', the find is believed to have spiritual significance to the people of this region and to have been passed down throughout generations. As the protocol specified, work was stopped, the site was cordoned off and an archaeologist called in to inspect the find and determine its significance. No further artifacts were found in the area enabling work to recommence once the devil stone was removed. It will be passed to the Papua New Guinea National Museum and Art Gallery.

The 'devil stone' found at Juni

1.0 INTRODUCTION

This Report is the second Quarterly Environmental and Social Report for 2010 and provides an update on construction activities and safety, security, health, environment and social management of the PNG LNG Project. This Report also represents a commitment to transparency by the Project. The publication of this information makes it possible for the citizens of Papua New Guinea, interested non-government organizations (NGOs) and other stakeholders to remain well informed about the Project as it progresses.

This Quarterly Report is available on the Project website – www.pnglng.com. Where applicable, printed reports are translated and distributed to stakeholders to make information available to the citizens of Papua New Guinea where access to the internet may be limited.

Plate 1.1 – Port Moresby

The Project is an integrated development that includes gas production and processing facilities in the Southern Highlands and Western Provinces of Papua New Guinea, including liquefaction and storage facilities (located northwest of Port Moresby on the Gulf of Papua) with capacity of 6.6 million tons per year. There is over 700 kilometers (450 miles) of pipelines connecting the facilities. The investment for the initial phase of the Project, excluding shipping costs, is estimated at US$15 billion. Over the life of the Project, it is expected that over nine trillion cubic feet of gas will be produced and sold. The Project will provide a long-term supply of Liquefied Natural Gas (LNG) to four major LNG customers in the Asia region including: Chinese Petroleum Corporation, Taiwan; Osaka Gas Company Limited; The Tokyo Electric Power Company Inc.; and Unipec Asia Company Limited, a subsidiary of China Petroleum and Chemical Corporation (Sinopec).

The Project will progress in a series of development phases with the first LNG deliveries scheduled to begin in 2014. The location and elements of the Project are illustrated in Figure 1.1 and *Appendix 1* details how the contracts for Phase I of the Project have been divided.

Figure 1.1 – Project elements

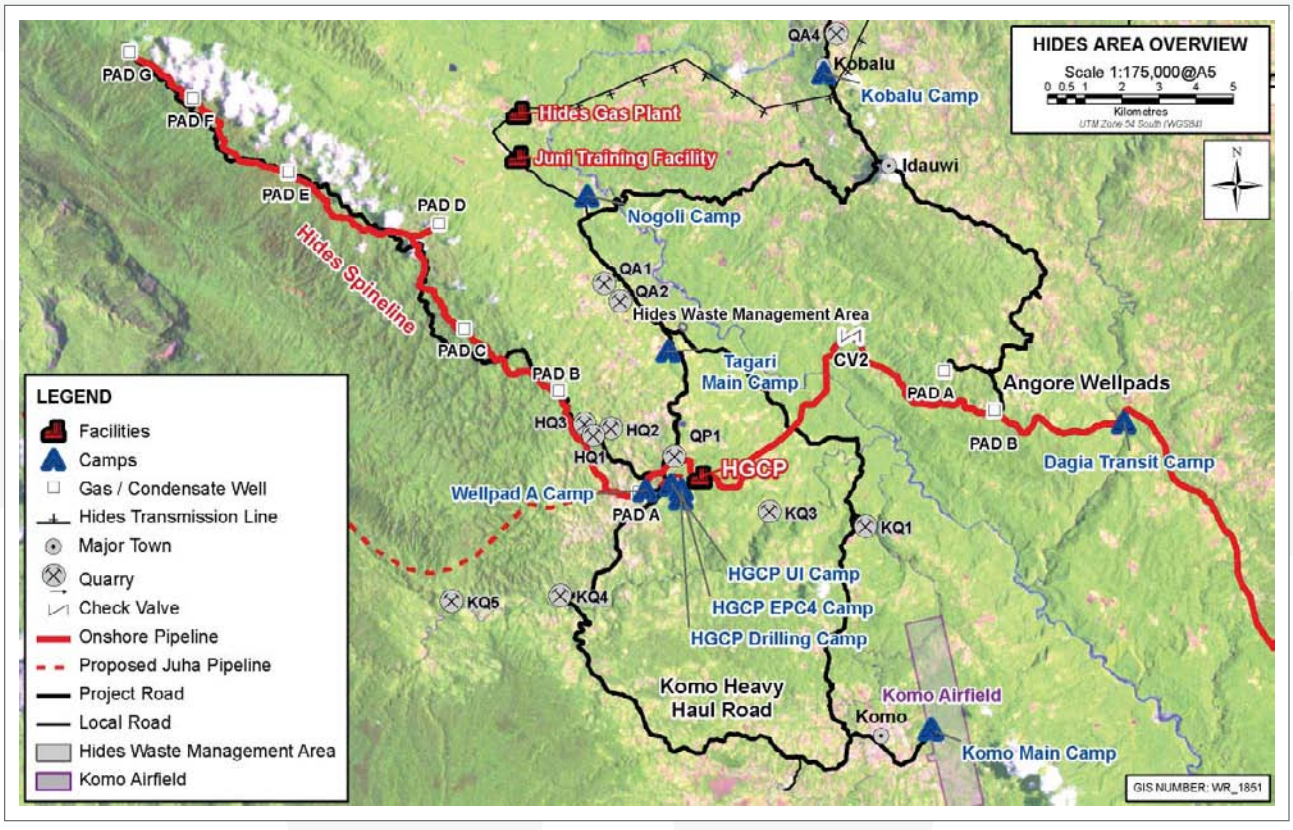
2.0 CONSTRUCTION OVERVIEW

Project construction activities during the second quarter focused on improving and upgrading infrastructure including road and bridgeworks, telecommunications and the installation of the LNG plant site Pioneer Camp and other construction camps.

During this early stage of construction, detailed engineering, execution planning and procurement activities progressed well at the main office locations of the Engineering, Procurement and Construction (EPC) contractors.

2.1 Highlands Area (Drilling, HGCP, Komo Airfield, Heavy Haul Road, Supply Routes)

Figure 2.1 – Highlands area Project activities (all phases)



2.1.1 Upstream Infrastructure

The Upstream Infrastructure contractor progressed work on a number of fronts as outlined below:

- Northern Logistics Route:
  - The superstructure of the ME-16 Lai River bridge was installed.
  - Repairs and re-grading of sections of the road to support mobilization of equipment and materials to the Hides site.
  - Oiyarip Camp at Mendi became operational.

- Hides/Hides Gas Conditioning Plant (HGCP):
  - The Wellpad A Camp fence line was completed.
  - Stage one of the Camp opened and pre-assembly of stage two units began.
  - Site clearance for the Juni Construction Training Facility (CTF) was completed.
- Southern Logistics Route:
  - Construction of Wharf 2 at Kopi was near completion in June 2010, while the piling works for Wharf 1 were well advanced.
  - Earthworks for plant and equipment laydown areas numbers two, three and four at Kopi were completed.
  - Construction of Gobe Camp, with 250 beds and laydown area, progressed.
  - Upgrades were completed on the Gobe – Kikori Road.
  - Kutubu Central Processing Facility bypass road works commenced.
  - Clearing of helipads occurred on the Kantobo to Mubi road in preparation for pre-construction surveys.

Plate 2.1 – ME-16 bridge, near Mendi

2.1.2 HGCP and Hides Wellpads

The Hides Gas Production Facilities and Hides Wellpad contractor progressed detailed engineering, procurement and planning at their main project offices in Singapore and Brisbane, notably:

- Completion of the contractor's internal quality audit.
- Initial review of the HGCP 3D model.
- Initial meetings held with suppliers of gas compression and power generation packages.

2.1.3 Telecommunications

A satellite communication system for Wellpad A Camp was installed and commissioned, and an interim radio system providing coverage from Kopi to Hides along the pipeline corridor was completed. Foundations for the telecommunications tower at the LNG plant site were also completed.

Plate 2.2 – Kopi Wharf 2 nearing completion

2.1.4 Komo Airfield

Mobilization of equipment and personnel continued during the quarter, and the Pioneer Camp became operational in May 2010. Main activities included:

- Completion of the topographic survey of the centerline of the Heavy Haul Road.
- Area clearing for the Main Camp and airfield.

Plate 2.3 – Komo site – early May 2010

The area used for the earthworks trial was leveled and compacted for use as a laydown area and a helipad. Alignment of the Heavy Haul Road was reviewed to minimize the number of potential resettlements required.

2.1.5 Drilling

The contract for drilling rigs was signed and additional contracting and procurement activities commenced. Detailed drilling and completions engineering design continued, while recruiting activities for two Papua New Guinean drilling engineering trainees began.

2.2 Onshore Pipeline

Milestones achieved during the second quarter included:

- Fabrication of all uncoated onshore line pipe.
- Completion of the preliminary design review.
- Start of activities in Papua New Guinea with the commencement of the topographic centerline survey, and the construction of the bush camp[1] at the Kopi Scraper Station site.

2.3 Offshore Pipeline

Activities for the second quarter involved detailed engineering, procurement and planning, notably:

- Completion of the preliminary design review.
- The first pipe delivery to a facilities for external protection coating.
- 145 of 414 kilometers (90 of 257 miles) bare line pipe was manufactured.

[1] Bush camps are those with limited duration, of up to four weeks in any location and generally have a maximum capacity of equal to or less than 25 people.

2.4 LNG Plant and Associated Activities

2.4.1 LNG Plant Early Works

All Pioneer Camp accommodation buildings were installed and work continued with the installation of power and utilities. Construction works on the bypass road and the security fence around the LNG plant site progressed. Main activities on the upgrade of the Lea Lea Road included culvert construction, removal of spoil material and embankment installation.

2.4.2 LNG Plant and Marine Facilities

The LNG Plant and Marine Facilities contractor progressed detailed engineering, procurement and planning at their main project office in Japan, notably:

- Completion of the technical evaluation for the jetty construction contract.
- Completion of plant site layout reviews.
- Issued a Letter of Intent for the supply of gas turbine generators.
- Completed geotechnical survey field work.

2.5 Associated Gas Development

Detailed engineering, equipment procurement, and execution planning continued for the Kutubu Central Processing Facility, Gobe Production Facility, crude export system, and Kumul platform upgrades. This included awarding contracts for the alternative fuel gas unit, thermal oxidizer units, and offloading buoy. The Invitation to Tender for the marine construction work was finalized and sent to qualified tenderers. Front-end engineering and updated cost estimates were progressed for the tanker loading line and Kumul topsides, respectively.

Construction continued at the Oil Search Limited Ridge Camp at Kutubu. The civil works are ongoing for the new facilities, and the framing for the new accommodation units is being progressed.

2.6 Port Moresby Technical College

Construction of the Port Moresby Construction Training Facility progressed at the site of the existing Port Moresby Technical College (POM Tech). The focus was on construction and interior fit-out of accommodation, stormwater drainage, road crossings and permanent fence installation.

Plate 2.4 – LNG facility bypass road

Plate 2.5 – LNG plant site Pioneer Camp

Plate 2.6 – New Construction Training Facility being built at POM Tech

A new dining facility was completed on the POM Tech campus site and handed over to POM Tech for operation. The replacement dining facility made available a land area for construction of the new Port Moresby Construction Training Facility.

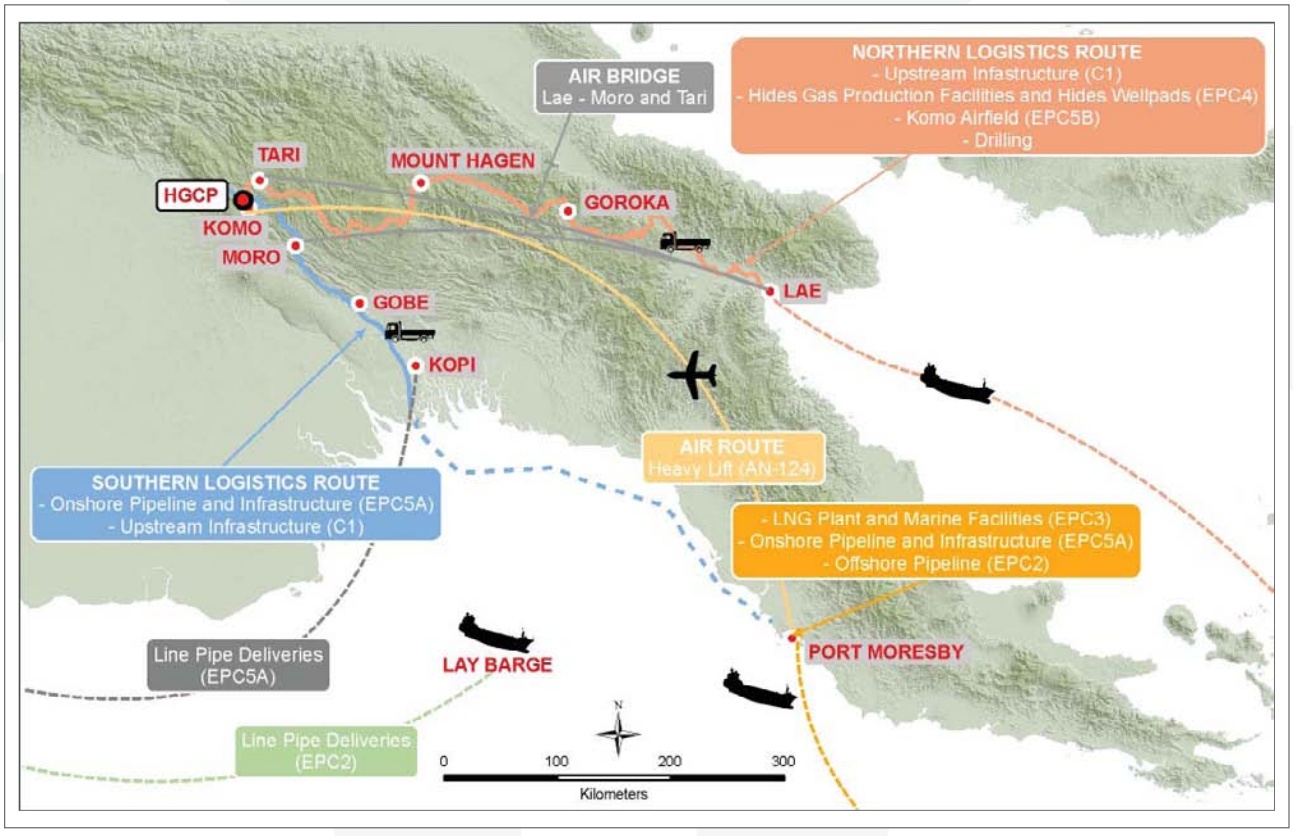
At the Port Moresby Driver Training Center, full fit out was completed.

2.7 Development Support – Logistics and Aviation

Upgrades at the Kobalu heliport, located between the HGCP and Tari Airport, continued. The heliport will include passenger handling facilities and maintenance operations. Commercial negotiations were finalized for the development of a logistics base in Lae. Figure 2.2 shows supply routes for the Project.

Development continued on the ferry service that will operate betwee Port Moresby and Motukea Island, with engineering progressing for docking facilities on Motukea Island. Work also continued on the ferry refurbishment.

Figure 2.2 – Project logistics routes



2.8 Pre-Construction Surveys

During this quarter, environmental pre-construction surveys were undertaken. Findings of the surveys are discussed in *Section 10.1 Ecological Management*. The pre-construction surveys are undertaken pursuant to the Environment Permit and address cultural heritage, ecology, weeds and, where relevant, water quality. As discussed further in *Case Study One: Pre-Construction Surveys*, a pre-construction survey is required for all Project worksites, and all pre-construction survey reports must be submitted to the Department of Environment and Conservation, Papua New Guinean Government (DEC).

Plate 2.7 – Native flora identified during Project-related surveys

Table 2.1 provides a summary of the environmental pre-construction survey reports submitted during this quarter.

Table 2.1 – Progress summary of environmental pre-construction surveys

Location	Activities During the Second Quarter 2010
HGCP	Ecology survey sensitivities identified in the Environment Permit (Annex 1) (Pandanus swamp and Bird of Paradise). Approved in May 2010.
Highlands	Ecology and cultural heritage surveys at: Hides 1, Moran Peak and Iagifu. Approved in May 2010.
Gulf Province	Ecology and cultural heritage surveys at: Gobe Tower, Kaiam and Mount Hee. Approved in May 2010.
LNG plant site	Ecology surveys focusing on sensitivities identified in the Environment Permit (Annex 1) mangrove, sea grass, coral reefs, sandalwood and weeds. Still awaiting approval at the end of this quarter.
Northern Logistics Route	Environmental clearance obtained in April 2010 for the ME-14 Lai River bridge. Large trees survey for TA-06 and TA-07 bridge locations near Tari approved in May 2010. Cultural Heritage Survey for TA-08 bridge submitted and still awaiting approval at the end of this quarter.
Gobe to Mubi River road	Environmental clearance obtained in May 2010.
Central Processing Facility bypass road	Environmental clearance obtained in June 2010.

CASE STUDY ONE: PRE-CONSTRUCTION SURVEYS

In line with the Project's commitment to the local environment, pre-construction surveys were undertaken to establish areas of ecological or cultural importance.

Prior to any ground disturbance commencing, Cultural Heritage teams comprising Papua New Guinean and international archaeologists, spend time at each site discussing the location with the local landowners and their clans and surveying the area for, and recording any, additional sites not identified by the local people.

It is also important to survey each proposed worksite for potential disturbance to wildlife and the environment. The surveys aim to determine these factors and how best to manage any sensitivity a proposed site may have.

More than 100 pre-construction surveys were undertaken across an area of more than 3,900 hectares, ensuring the necessary environmental and cultural obligations were met. Each survey identifies:

- Ecological constraints including large habitat trees, bat roosting sites, Pandanus swamp areas, and other areas inhabited by animals that need to be avoided.
- High-risk areas for new weed and pest invasion and existing areas of infestations.
- Forest susceptible to fungal disease.
- Sites with archaeological, cultural or traditional meaning.

Example of cave bat found during survey at Kopi Quarries

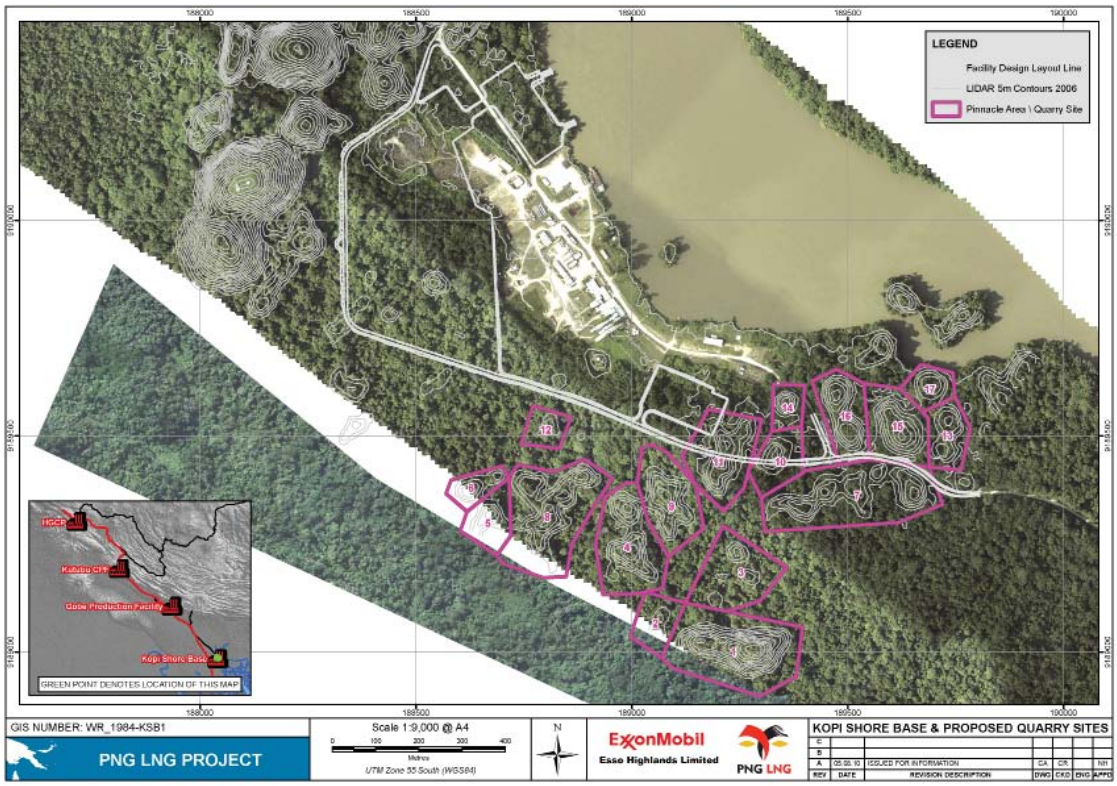
Lowland Tree Kangaroo Dendrolagus spadix observed at Kopi Quarries

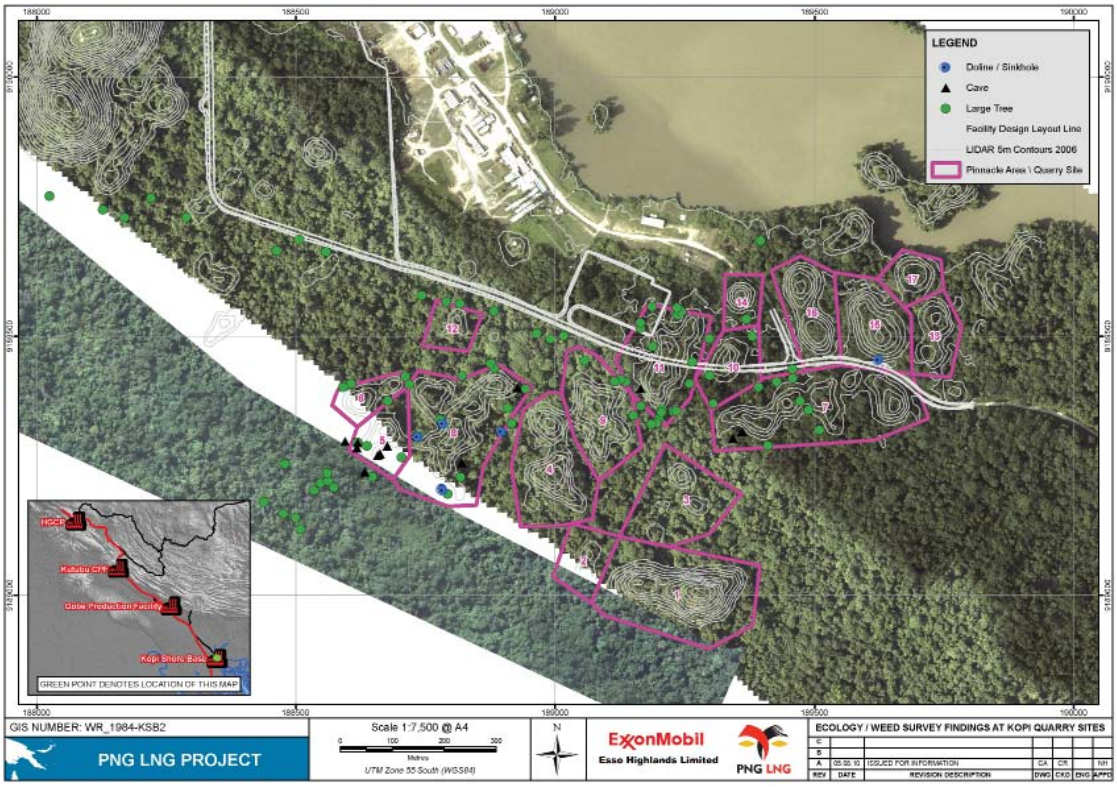
The essential nature of the pre-construction surveys was proven when results were factored into the location decision-making process for a quarry to supply aggregate needed by the Kopi shore base. Seventeen potential locations were surveyed for ecological or cultural sensitivities before the location was selected. Discovering the area was home to lowland kangaroos and several bat caves, many of the potential sites needed to be avoided.

At the end of the second quarter, approximately one third of the pre-construction survey reports have been submitted to the DEC.

CASE STUDY ONE:
PRE-CONSTRUCTION SURVEYS

Proposed Kopi Quarry sites





3.0 SAFETY, SECURITY, HEALTH, ENVIRONMENT AND SOCIAL MANAGEMENT

The Project is committed to conducting business in a manner that protects and promotes the safety and health of its employees, those involved with the Project, and the communities where it operates. The Project remains committed to helping meet the world's energy needs while addressing the challenge of sustainability—balancing economic growth, social development, and environmental protection—so future generations are not compromised by actions taken today.

3.1 Approach

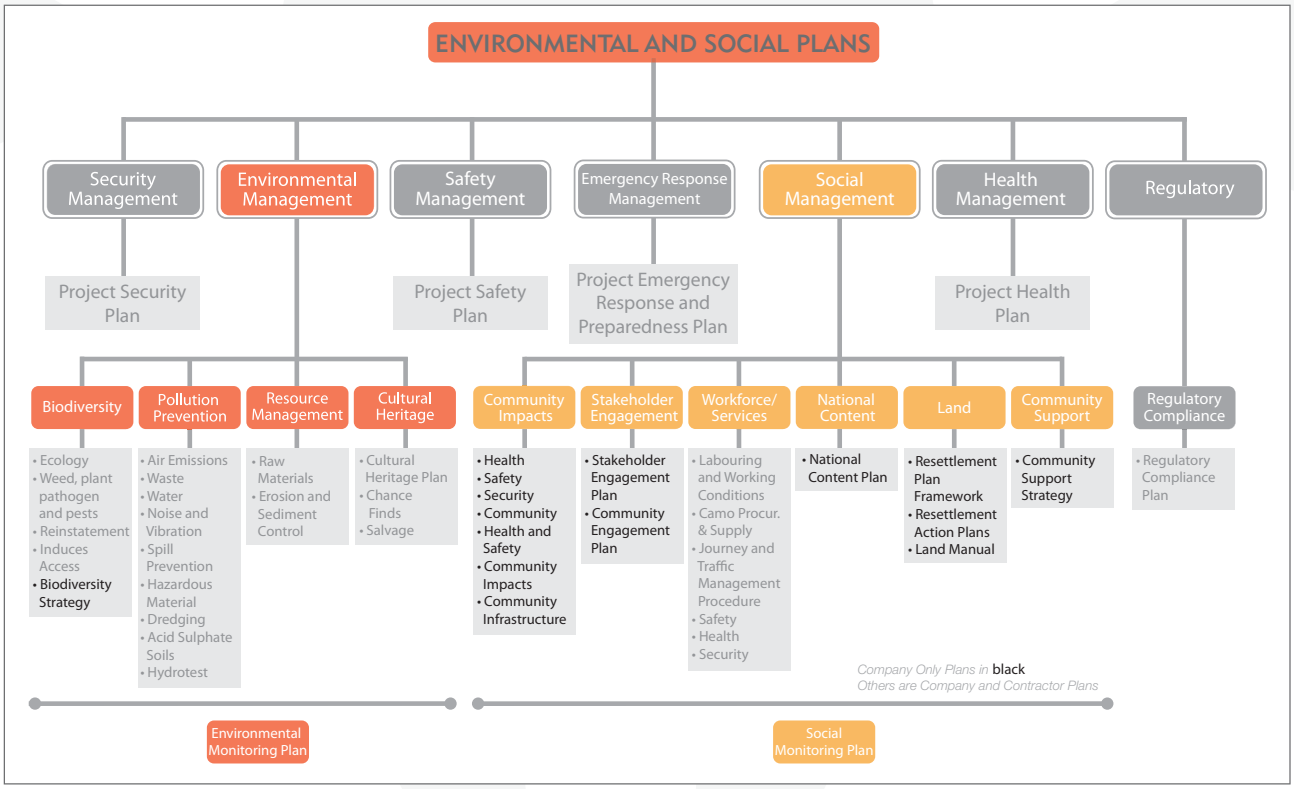
ExxonMobil's Standards of Business Conduct form the framework by which it operates around the world. The relevant guiding principles and foundation policies in these Standards are the:

- Environment Policy, Labor practices guidance.
- Health Policy, Statement of Principles on Security.
- Human Rights, Best Practices in External Affairs and transparency commitments.

Specifically, the safety, security, health, environmental and social aspects of the Project are managed through a series of Project management pans.

Environmental and social requirements are addressed in the Project's Environmental and Social Management Plan (ESMP). Safety, health, regulatory compliance, and security aspects pertaining to the Project are discussed in the Project Safety Management Plan, the Health Management Plan, the Regulatory Compliance Plan, and the Security Management Plan, respectively.

Figure 3.1 – Environmental and Social Management Plans



The ESMP provides an overview of the potential environmental and social impacts associated with construction activities and outlines mitigation actions and monitoring requirements. The Environmental Monitoring Plan is an important component of the ESMP, and the Project has been working in consultation with the DEC during its development. Formal acceptance of the Environmental Monitoring Plan is expected in the third quarter 2010, at which time it will be posted on the Project website (www.pnglng.com), together with the ESMP.

Overall, it is the Project's intention to avoid, when and where practical, those situations or incidents that could cause adverse biophysical, socioeconomic, or health impacts. For situations or impacts that cannot be avoided, the Project has committed to undertaking appropriate mitigation measures.

Recognizing the complex social and environmental setting in which the Project is operating, an Information Management System is being developed. This system will help the Project efficiently collect, sort, manage and report data required to mitigate and manage the Project's social and environmental impacts. In addition, it will facilitate transparent communication of conformance information with regard to the various social and environmental management plans to Project stakeholders.

The Project is also implementing a variety of support and incentive programs for capacity building, collectively referred to as National Content development. The Project's National Content Plan (NCP) outlines the overall approach and objectives the Project is pursuing to achieve social and economic benefits for local communities and the nation of Papua New Guinea.

There are three components to the NCP:

- Workforce Development (*Section 7.1 Development*).
- Supplier Development (*Section 4.1 Supplier Development*).
- Strategic Community Investment (*Section 5.6 Partnerships*).

Contractors and subcontractors are required to implement measures defined in the relevant management plans, as applicable, to each contract scope of works. Contractors and subcontractors develop and implement their own management plans, supported by procedures, instructions and other documents as necessary, to provide site-specific implementation.

Plate 3.1 – Security contractor briefing

The Project also works closely with contractors and the Papua New Guinean community to support the management of security at accommodation and work sites. Community Partnerships underpin the Project's security strategy and the Land and Community Affairs team works closely with the Security team to achieve this goal. Similarly, partnerships are forged with contractors who work within the Project's security philosophy and strategy while remaining responsible for security at their accommodation and work sites. Project security challenges are systematically addressed in accordance with the Security Plan, which incorporates the significant global experience of the operator, ExxonMobil, and tailors security best practices to mitigate security risk. The implementation of the Project Security Plan is monitored through regular and robust inspection and review processes.

A Security and Community Affairs workshop, held in late May 2010, reinforced the integration of Security and Community Affairs and provided valuable insight to all parties who remain committed to a consistent and effective approach to addressing the unique security challenges in Papua New Guinea.

The Project Security team is almost fully staffed with all expatriate and many of the national positions filled. The team will meet, along with contractor security personnel for a workshop in July 2010 to reinforce security expectations.

The Project is supported by the Royal Papua New Guinea Constabulary who has mobilized additional Police resources into the Southern Highlands Province. These additional resources include Community Police, Investigators and a Headquarters group that will enhance the effectiveness and sustainability of the deployments. The Project requires that Police undergo training in the Voluntary Principles on Security and Human Rights by trainers who are approved by the international Red Cross. All Police deployed in support of the Project have undergone this training.

Instances of Royal Papua New Guinea Constabulary alleged improper conduct will be fully reported, to the Royal Papua New Guinea Constabulary executive officers, in accordance with the executed Memorandum of Understanding and the United Nations Voluntary Principles on Security and Human Rights to which ExxonMobil is a signatory. Investigations will be led by the Royal Papua New Guinea Constabulary Internal Investigation Unit with Papua New Guinea Government Ombudsman oversight.

Plate 3.2 – Safety and security workshop conducted in Moro mid-April 2010

3.2 Contractor Management

Most Project contractors are in the design and pre-mobilization phase and are therefore preparing plans and procedures for the execution of the work. The Project reviews and approves contractor documents to ensure they meet the Project's requirements.

During this quarter environmental management planning was a particular focus. The Project reviewed and commented on the draft Environmental Management Plan related to the LNG Plant Early Works contract.

The Offshore Pipeline contractor also began early stage development of their Environmental Management Plan. Although construction is not scheduled to commence until late 2011, significant progress has already been made to ensure the contractor meets Project requirements. This contractor has closely engaged with Project personnel during the scoping and development of the Plan, in particular, to understand the environmental avoidance and mitigation measures that were proposed as part of the Project Environmental Impact Statement.

Avoidance and mitigation measures applicable to the scope of work for the marine facilities have been addressed in the draft Environmental Management Plan. A detailed Environmental Risk Identification and Assessment Workshop has been scheduled for late 2010. Both Project and contractor representatives will attend this workshop. The Environmental Risk Identification and Assessment process will systematically identify activities that could affect the environment by considering each key phase of the contracted work:

- Omati landfall preparation and shore pull.
- Shallow water pre- and post-trenching/dredging.
- Shallow water pipe lay.
- Offshore pipe lay.
- Caution Bay landfall trenching and backfilling.
- Caution Bay landfall preparation and shore pull.
- Pre-commissioning.

Each phase will be further broken down by activity level, for example, mooring, dredging and tie-in and the environmental aspects and impacts of each activity will be identified. Alternative or additional mitigation and management measures will then be identified and included in the final Environmental Management Plan alongside other measures identified during detailed execution planning.

3.3 Revenue Management

The Project will foster economic growth for Papua New Guinea. With good governance and accountability, the value generated from natural resources in Papua New Guinea will provide a better standard of living and increased opportunities for its citizens. Revenue transparency is a key component of good governance which strengthens accountability, deters corruption, and promotes greater economic stability.

ExxonMobil is an active participant in transparency and anti-corruption programs and supports initiatives such as the Extractive Industries Transparency Initiative, the Group of Eight Transparency Initiative and the United Nations Convention against Corruption.

In line with this, the Project is committed to honest and ethical behavior, and opposes corruption by supporting transparency. In Papua New Guinea, the Project is an active member of Transparency International and acknowledges the Government's bilateral Memorandum of Understanding with Australia to explore options for a sovereign wealth fund to benefit the people of Papua New Guinea.

The Project also sponsored the annual Mike Manning Youth Democracy Camp. The eight-day camp brought together 60 youths, aged 16 to 19 years, from around Papua New Guinea to discuss corruption, transparency, governance, human rights and leadership.

3.4 Management of Change

The Project's Management of Change system is designed to ensure changes are appropriately reviewed and endorsed prior to implementation.

Considerations include safety, security, health, environment and social management aspects, operability and maintenance, regulatory, cost, schedule and other identified requirements. Depending on a classification level, certain changes may require Lender Group notification in the Quarterly Environmental and Social Report (Class II – changes of moderate significance), or for changes of more significance, Lender Group review is required prior to implementation (Class I).

Plate 3.3 – A common skink identified during Project-related surveys

For this quarter, no Class I or Class II changes were approved.

3.5 Environmental and Social Milestone Schedule Update

Financing agreements for the Project include undertakings and deliverables required during the Project's development, construction and operation phases. The following summarizes the status of these against the Environmental and Social Milestones schedule:

- The Project worked with the DEC to incorporate their comments into the draft Environmental Monitoring Plan. Formal acceptance of the Environmental Monitoring Plan is expected in the third quarter 2010 at which time it will be incorporated into the ESMP and will be provided to the Lender Group and posted on the Project website.
- The Project Standards document is expected to be finalized and provided to the Lender Group in the third quarter 2010.
- The Social Monitoring Plan is being developed to include details on the monitoring required to determine effectiveness and conformance with the social management plans. It is expected a draft of this Plan will be ready for further consultation with the Independent Environmental and Social Consultant (IESC) during the third quarter 2010.

Plate 3.4 – Gecko identified during Project-related surveys

- The Project has revised the Noise and Vibration Management Plan to require monitoring of blasting overpressure and vibration as well as noise at semi-permanent facilities. The revised Plan will be provided to the Lender Group as part the revised ESMP.
- The Journey and Traffic Management Procedure is nearing completion.
- During the reporting period, the near shore marine survey and a corresponding survey report were completed. The survey report will be provided to the Lender Group in the third quarter 2010.
- The Biodiversity Strategy including monitoring and offset components is being further developed following feedback from the IESC, in preparation for further external consultation during the second half of 2010.
- A quarantine program is being developed for the Project, based upon an assessment of Papua New Guinean quarantine related laws and regulations, practices and capacity, as well as a comparison with related practices in Australia. This forms the basis of a quarantine risk assessment and the development of a Quarantine Management Plan, which is scheduled for completion by the end of the third quarter 2010.
- The Community Support Strategy and supporting plans are undergoing final internal review, after which they will be made available.
- The Cultural Heritage Management Plan was revised to address documentation and reporting of cultural heritage results. Once the Papua New Guinea National Museum and Art Gallery and the DEC accept this Plan, it will be provided to the Lender Group.

4.0 PROCUREMENT AND SUPPLY

A reliable supply of goods and services is critical to the Project's success. Considerable investment is being made into developing national supply sources and supply route logistics.

4.1 Supplier Development

Supplier development is a component of the Project's NCP. It focuses on creating economic opportunities for Papua New Guinean businesses and investing in developing the capabilities of local contractors, suppliers and vendors to help them meet global industry standards. The Project promotes local capacity by helping suppliers meet pre-qualification requirements, training entrepreneurs, and creating business opportunities for small and medium enterprises.

Papua New Guinea's *Oil and Gas Act 1998* further promotes the development of the local business economy by placing requirements on the Project with respect to supplier development. As such, the Project is required to use and purchase Papua New Guinean goods and services whenever they are comparable to foreign-sourced supplies. It also encourages maximum use of Papua New Guinean contractors and subcontractors where those services are comparable to the standard provided by overseas suppliers.

In many cases, these requirements are addressed by using Landowner Companies (Lancos) – registered with the intent of doing business, owned by people of the same clan or clan of origin, who use or have title to land in a specific area. A number of pre-qualified Lancos are suppliers to the Project, including organizations such as Gobe Field Engineering Limited, Hides Gas Development Corporation, Laba Holdings Limited and Kutubu Catering Limited.

The majority of activity in Papua New Guinea, and hence investment, was focused on early works infrastructure construction in Upstream areas, at the LNG plant site and the construction of training facilities at the POM Tech site, as well as logistics, ground transport and aviation.

During the second quarter, the Project continued to support the development of Papua New Guinean businesses, investing more than 460 million Kina (US$170 million) for goods and services related to Upstream Infrastructure construction activity and LNG plant site early works.

4.2 Enterprise Center

In April 2010, the Project opened the new Enterprise Center in temporary premises at the well known Papua New Guinea Institute of Bankers and Business Management in Port Moresby. The Center is expected to move into a permanent facility by the end of 2010.

The Enterprise Center is an independent organization set up to support Papua New Guinean businesses, including Lancos, to optimize business opportunities and promote sustainability through:

- Facilitating communication between Project stakeholders including contractors, subcontractors and domestic businesses.
- Building capacity of Papua New Guinean businesses to meet the Project's business standards.

Plate 4.1 – Temporary Enterprise Center facilities

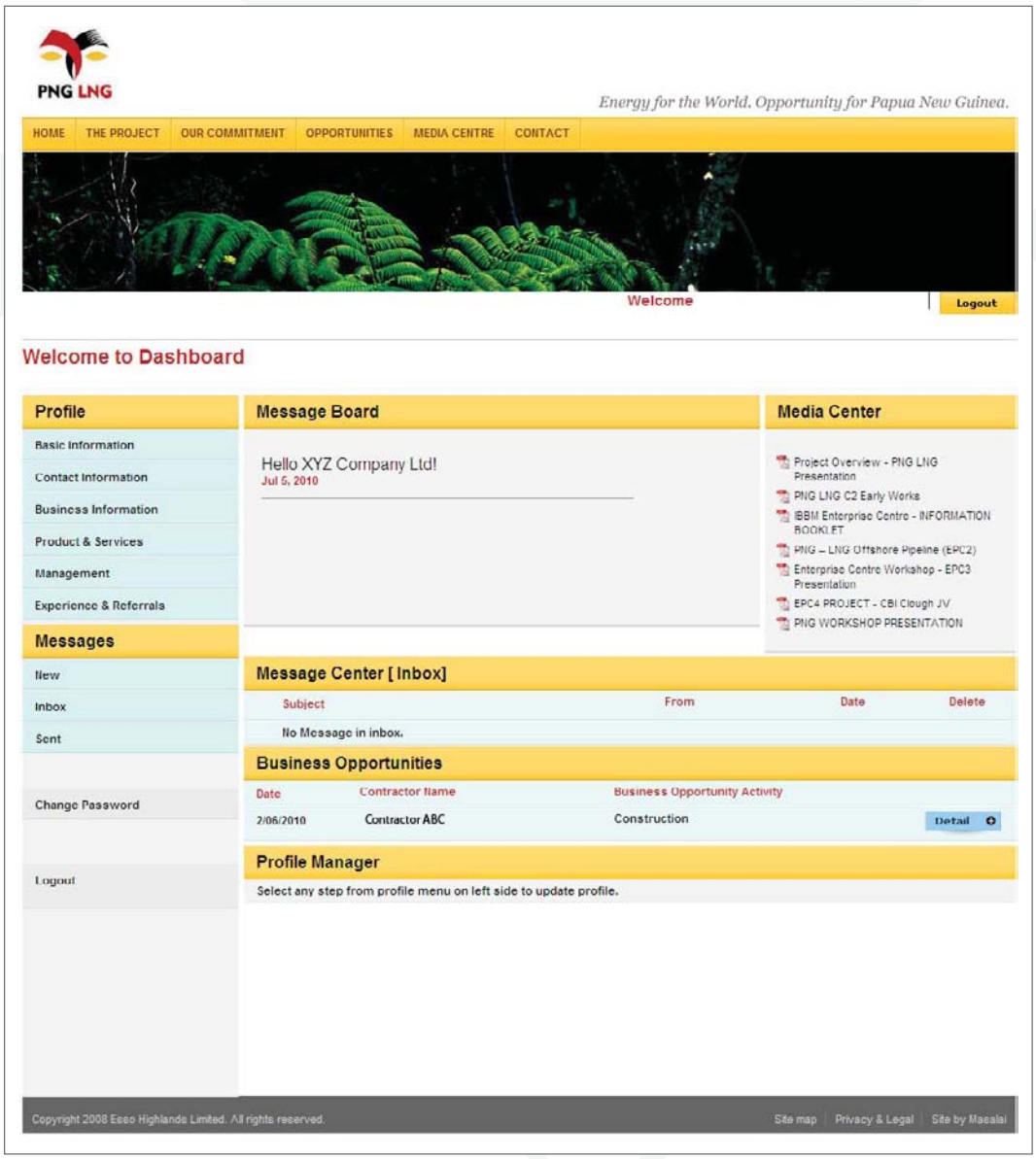
Plate 4.2 – Supporting domestic business

4.2.1 Supplier Database

The PNG LNG Supplier Database, found at www.pnglng.com, is an important means of communicating with contractors and subcontractors, providing access to domestic company profiles, business assessment summaries, domestic business-to-business opportunities and Enterprise Center events. At the end of the second quarter, there were more than 700 domestic companies registered in the Database.

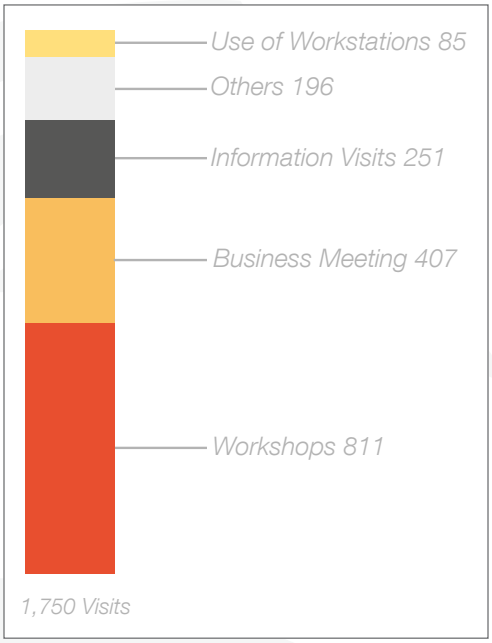
Figure 4.1 represents a webpage sample from the PNG LNG Supplier Database.

Figure 4.1 – PNG LNG Supplier Database website



4.2.2 Enterprise Center Communication

Figure 4.2 – Visits to the Enterprise Center



Since opening at the start of the quarter, the Enterprise Center has welcomed more than 1,750 visits from Papua New Guinean entrepreneurs who have sought information about the Project.

The Enterprise Center also held a series of workshops in April 2010, where Project contractors were able to present their organization, scope of work and procurement principles and processes to Papua New Guinean suppliers.

During this week-long series, 780 Papua New Guinean entrepreneurs who participated in the workshops generated more than 130 questions for contractors. All questions and answers were formally documented.

The Enterprise Center has also organized business meetings for more than 400 Papua New Guinean businessmen and welcomed a further 250 visitors who obtained specific information about the Project.

4.2.3 Capacity Building Activities

The Enterprise Center provides a Business Improvement Program tailored to specific needs identified through a formal business assessment of individual companies.

The assessment process addresses:

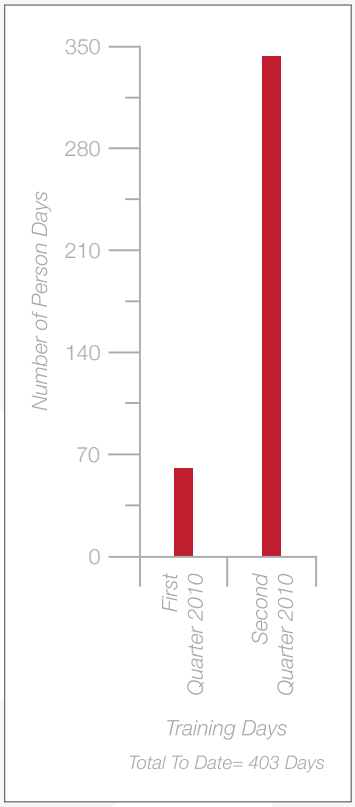
1. Organization and governance.
2. Operation management.
3. Financial management.
4. Personnel management.
5. Inventory control.
6. Safety, health and environment management.
7. Quality and control management.
8. Citizenship and reputation.

The assessment is not a due diligence audit nor a pre-qualification, but rather a review of the individual company and its operations.

Plate 4.3 – Presenter at the contractor workshop

During the second quarter, the Enterprise Center initiated 24 business assessments and provided more than 340 person days of training to domestic businesses with a specific focus on the Project Impacted Area Lancos.

Figure 4.3 – Capacity building in training



In formal feedback sessions, Papua New Guinean Lanco participants have expressed satisfaction with the course content and materials, and special appreciation that the course was given in their local language Motu, which is one of the three official languages in Papua New Guinea. The participants were optimistic that the knowledge and skills provided in the course would allow them to contribute more meaningfully in conducting Lanco business.

The Enterprise Center has also developed a Shareholders Information Program aimed at improving understanding about the rights and obligations directors have to their company shareholders.

5.0 COMMUNITIES

The Project has established a set of plans and processes to address the impact of construction activities on local communities within Papua New Guinea. These plans and processes direct how operations are to be conducted in a manner that respects the land, environment, rights, and cultures of local communities. The Project seeks to understand community perspectives on issues of mutual interest and to deal constructively with differing views through open consultation.

5.1 Structure and Relations

A specific set of management plans have been developed which include the:

- Communities Impact Management Plan: Addresses impacts that may affect the structure of, and relations within, communities.
- Community Engagement Plan: Covers community relations, grievances and disruption.
- Camp Management Plan: Deals with avoiding or reducing impacts on the community and maintaining constructive relationships between local communities and workers' camps.

The Project's progress on community structure and relations activities in the second quarter is outlined in the following sections.

5.1.1 Community Grievance Procedure

The Project has developed a Community Grievance Procedure aimed at receiving, assessing and addressing grievances. The Procedure is being communicated to residents in Project areas through the Stakeholder Engagement Program and other information campaigns.

Information is being conveyed verbally and reinforced with posters and flyers. Forms to register grievances have been developed with ease-of-use in mind and are available as printed cards, in English and Tok Pisin, with translations into Motu and Huli underway.

The grievance management process extends beyond collecting and recording grievances to include analysis and implementation of corrective actions, where applicable. The cornerstone of this process is employing and training field based personnel responsible for direct assistance in all phases of the grievance management process.

Since the Project's inception, grievance management has been a key function at all levels within the Project. Depending upon the nature of the grievance, to respond accordingly, the Project utilizes the expertise and experience of the following:

- Land and Community Affairs.
- Government Interface.
- Public and Government Affairs.
- Project Execution.
- Other enabling organizations.

Implementation of the grievance management process during this quarter progressed more slowly than intended. However, the Project has accelerated efforts to implement the Grievance Management Program in accordance with approved plans.

Grievances recorded during this quarter were managed in the field and those related to resettlement compensation were addressed through active negotiation and mutually agreed outcomes. In addition, the Project retained the services of the Papua New Guinea Environmental Law Center to help people with grievances understand their rights.

Importantly, the Project has commenced the roll-out of an electronic system, which will help centralize grievance recording, analysis and closure across the wide geographical extent of the Project. This system will be more readily accessible to Project personnel involved in grievance management.

The Project anticipates that consolidating records maintained by the various groups involved in grievance management into a single database will result in an artificial 'spike' in the number of grievances recorded in the next two quarters of 2010. This spike will not be indicative of Project performance, but a result of the improved data consolidation process.

In the third quarter 2010, the Project aims to achieve the following milestones in relation to implementing the grievance management process:

- Training more than 100 individuals assigned to the various geographic work areas—from Land and Community Affairs, community liaison, and designated Project and contractor representatives—to be fully aware and able to assist in grievance management.
- Distributing posters and Community Grievance Procedure cards to communities throughout the Project area as part of regular Land and Community Affairs and stakeholder engagement activities.
- Systematic recording and management of grievances through a centralized process.

5.1.2 Project Induced In-Migration Study

The Project Induced In-Migration Study is nearing completion. This study consolidates:

- Baseline information collected on naturally occurring in-migration.
- Project area activities encompassing the construction schedule showing the location, size and purpose of camps. It includes those that will support the construction phase (therefore temporary construction camps) and those that will support production (for example, the Hides Gas Conditioning Plant and LNG plant site) that may encourage Project Induced In-Migration.
- Project Induced In-Migration lessons learned from other extractive industry projects in Papua New Guinea.

The Project Induced In-Migration Study outcomes will enable the Project to establish in-migration strategies and implement influx management and mitigation measures.

5.1.3 Fisheries Surveys

Plate 5.1 – Fish at a local market

The Project is engaging with the University of Papua New Guinea to undertake fish catch landing surveys for up to 14 months at each of the four villages surrounding the LNG plant site; Porebada, Papa, Lea Lea and Boera. The purpose of the surveys is to establish baseline catch data such as number, size, weight and species caught, to understand the importance of fisheries for household consumption and for market. This will be of value in evaluating any potential future claims concerning commercial or artisanal fishing and determining an appropriate type and level of compensation, if warranted.

Fish catch landing surveys will involve a Project survey team made up of experienced local fisheries specialists, University of Papua New Guinea students, which the Project Fisheries Advisor will lead. Workshops have been held with University of Papua New Guinea students for training and preparation for the fisheries surveys. University of Papua New Guinea Biological Sciences Division staff

have also attended weekly village meetings with the Project's Land and Community Affairs staff to discuss and gain support from communities for undertaking surveys. These meetings have achieved positive outcomes. As a result, fish catch landing surveys are expected to commence in the third quarter 2010.

The Project conducted fish species identification workshops in April 2010 at the University of Papua New Guinea for final year marine biology students. The aim was to impart the knowledge and skills required to classify over one hundred species of food fish caught in Papua New Guinean waters to the family level within the hierarchy of biological classifications.

Plate 5.2 – Students inspect the features of this small queen fish to identify it to its family level

Plate 5.3 – Two students point out some features on this small reef snapper

Plate 5.4 – Fish identification workshop attendees

5.1.4 Social Considerations for Logistics Activities

The Southern Logistics Route enables the Project to transport materials and equipment to existing facilities at Kopi Wharf in the Gulf Province. The Southern Logistics Route includes the temporary use of waterways, existing and planned roads and infrastructure to support access to the Project's pipeline corridor. Communities living near intended barge routes are located outside the primary Project Impact Area. The Project is developing a mechanism to address temporary impacts of logistic activities on those communities during construction.

In addition to the river based logistics activities, a Komo Airfield study is being completed. This study is a review of the social implications of the airfield construction and operations.

5.2 Infrastructure, Services and Resources

The Project's Community Infrastructure Management Plan addresses aspects such as changing road conditions, road access, river access, disruption to electrical supplies, water supply and distribution, and telecommunications. The Community Impact Plan covers topics including improved road conditions, marine and river vessel movements, fire, emergency services and response, water quality and quantity, raw materials, and produce availability and price distortions.

During the second quarter, the Project identified water sources within the HGCP site footprint that are being used by the local community but will not be accessible as a result of Project activities. A baseline survey of these water sources was undertaken. At the end of the quarter, recommended mitigation measures were being developed.

A survey also identified that the construction of the HGCP fence may increase the walking distance for some individuals to roads or other facilities. The Project is investigating options to improve access to roads in these instances.

One of the Project's Performance Indicators is the average number of days taken to effect repairs to damaged community infrastructure from the grievance date. To date, no grievances have been received regarding infrastructure issues. The Project is committed to minimizing impacts to community infrastructure, and where they do occur, completing any repairs in a timely manner.

5.3 Verification, Monitoring, Assessment and Audit

The first IESC visit was conducted during the second quarter, approximately three months after financial close.

The Project's efforts have focused primarily on finalizing and approving the prime contractor's various social management plans. At the same time, work is ongoing in the development of the tools, templates, processes and organizational capacity required to implement the verification, monitoring, assessment and audit processes on a systematic basis during the Project's construction.

The Project's vision for establishing this process includes a cooperative approach involving contractors, field based and Project social management personnel with support and interface from the Port Moresby based Socio-economic, Land and Community Affairs organization. The process will be supported by additional assessments provided by ExxonMobil Functional Groups.

A key component of this process would be the follow up and close-out process of mutually agreed upon findings and areas for improvement noted during periodic IESC visits.

Plate 5.5 – Monitoring visit early May 2010

Plate 5.6 – With a team of four people, the group visited Hides (Nogoli Camp), Komo, Kopi, Moro, and Mendi

5.4 Community Health

The Project is committed to conducting business in a manner that protects and promotes the safety and health of its employees, those involved with its operations, and the communities where it operates. The Project's Community Health Management Program concentrates on 12 Environmental Health Areas identified in the International Finance Corporation Performance Standards to provide a standard framework for considering community and household level impacts.

5.4.1 Demographic Surveillance System

A sponsorship agreement is being developed between the Project and the Papua New Guinea Institute of Medical Research.

The Institute of Medical Research will conduct population-based surveillance. During this quarter, their work included a review of potential base sites for the Demographic Surveillance System Program in the area of the LNG plant site.

5.4.2 Health Services Infrastructure and Capacity

In the second quarter, a facility and services site assessment was conducted in the Kikori and Kopi areas to evaluate the impact of Project-related physical examination requirements on local health services. Collaborative discussions were held with the Oil Search Limited public Health team to explore potential facility upgrades through the Strategic Community Investment Program.

At the LNG plant site, an area coordination meeting was held with the Salvation Army Health Manager to discuss the future Papa clinic, including the expansion of staffing. A coordination meeting was also conducted with the Hiri District Health Manager, Maternal Child Health Coordinator, Health Promotion Manager and Public Health Manager to gain alignment on objectives.

Plate 5.7 – Diagnostic capacity discussions between Institute of Medical Research staff and Kikori Hospital staff

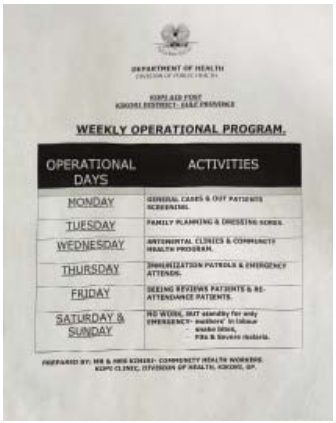
Site visits were conducted at the Papa and Porebada clinics to determine potential avenues whereby the Project could support local health services.

Based on the needs identified by local health workers and the Hiri District Maternal Child Health Coordinator, small medical equipment (scales, stethoscopes, thermometers) and supplies were obtained and delivered to both Papa and Porebada aid posts to assist with patient care and reporting.

A Health Work Group established in the first quarter 2010 conducted initial discussions during this quarter regarding options for the Project to enhance the existing Hiri District Health Program health patrols. The Health Work Group is made up of Hiri District Health representatives, Hiri District Councilors and Project representatives.

In the Hides area, ongoing resettlement health surveys were conducted for populations to be resettled. Malaria diagnosis and treatment, along with immunization support, were provided at the same time.

Plate 5.8 – Kopi clinic schedule



WEEKLY OPERATIONAL PROGRAM.

OPERATIONAL DAYS	ACTIVITIES
MONDAY	
TUESDAY	
WEDNESDAY	
THURSDAY	
FRIDAY	
SATURDAY & SUNDAY	

Plate 5.9 – Porebada Health Center

Plate 5.10– Papa aid post

Initial discussions were also held with the Papua New Guinea School of Medicine Health Sciences regarding support for physician placement to rural locations in the Project area, funded through the Strategic Community Investment Program.

5.4.3 General Community Health Education

General Community Health Education is a broad topic covering a number of Environmental Health Areas—first aid, Human Immunodeficiency Virus (HIV)/Acquired Immune Deficiency Syndrome (AIDS) prevention, community based vector control and sanitation/hygiene.

An exploratory meeting with the Papua New Guinea Red Cross discussed costs and capacity for providing first aid and sanitation/hygiene education programs in communities within the Project area, beginning with the LNG plant site area and the Komo Airfield/Hides area.

5.4.4 National Program Management Delivery Systems

Through the Project Strategic Community Investment Program, plans are in place to support a national infectious diseases diagnostic and research laboratory and outreach program in conjunction with the University of Papua New Guinea School of Medicine and the Institute of Medical Research. Building locations have been evaluated, costs estimated, and procedures and detailed budgets for review and approval were completed during this quarter.

The Institute of Medical Research and Papua New Guinea School of Medical Health Sciences have agreed to collaborate and cooperate on a diagnostic laboratory. The Institute of Medical Research will be the managing operator with the facility being located at the School of Medical Health Sciences main campus.

Plate 5.11 – Porebada Health Center

Plate 5.12 – Papa aid post

5.4.5 Sexually Transmitted Infections and HIV/AIDS

The Project held detailed meetings with the International Review Group regarding the Project HIV Program. The International Review Group is an independent group tasked with reviewing Papua New Guinean progress towards meeting its international commitments to HIV prevention and treatment.

The Project policy on Sexually Transmitted Infections and HIV/AIDS was submitted to the NGO, the Business Coalition Against HIV/AIDS.

The Project accepted detailed technical approach/protocols from the Institute of Medical Research for the evaluation of Sexually Transmitted Infection rapid diagnostic testing kits across key Project areas with an emphasis on the Highlands Highway.

Scopes of work were completed for NGOs regarding general Project worker education and transportation of workers. Coordination meetings were held with Project teams to define 'closed camp' policies and enforcement procedures.

Under the Strategic Community Investment Program, the Project also collaborated with the Australian Agency for International Development (AusAID) to deliver primary school textbooks and capacity building booklets (including HIV/AIDS prevention, problem solving and violence prevention booklets). Books and booklets were delivered to the Hiri District and remote areas of the Southern Highlands.

Plate 5.13 – Lea Lea Primary School textbooks and capacity building booklets distribution ceremony

Plate 5.14 – Peter Graham, Company Managing Director and Stephanie Copus-Campbell, AusAID PNG, at a textbook distribution ceremony in Lea Lea village

5.4.6 Respiratory Infections

A meeting was held between the Project and the Institute of Medical Research in Goroka. The Project agreed to sponsor the Institute of Medical Research Pneumonia Colloquium in August 2010, which will involve significant numbers of health workers from the Hides area. The Project is reviewing sponsorship of the Fogarty Scholarship Program at the Institute of Medical Research and University of Papua New Guinea.

The Institute of Medical Research prepared a detailed technical scope regarding potential Project sponsorship of an immunogenicity trial to facilitate national level selection of appropriate vaccines for pneumococcal infections.

5.4.7 Vector Related Diseases (malaria, lymphatic filariasis, dengue fever)

Through the Strategic Community Investment Program, the Project collaborated with Rotarians Against Malaria to provide logistics support for their Long Lasting Insecticide Treated Bed Net Education and Distribution Program. This includes household surveys on bed net use, interviews to determine possible evidence of lymphatic filariasis, follow up with the National Department of Health for lymphatic filariasis treatment responses where symptoms are found, and malaria prevention education programs offered through the NGO Population Services International. During the quarter, the Project began the development of the Logistics Support Plan with the Rotarians Against Malaria Project Manager and immediate distribution occurred for the Project area villages. Distribution is also planned for the Kikori/Kopi remote village areas.

Plate 5.15 – Logistics assistance for Rotarians Against Malaria's bed net distribution, malaria prevention education and lymphatic filariasis case identification and treatment program

The Project met with Population Services International to determine the capacity for expanding their bed net educational programs to cover other health areas such as sanitation/hygiene, Sexually Transmitted Infection – HIV/AIDS prevention, hand washing and respiratory disease prevention.

5.4.8 Contractor Conformance

Reviews and comments were provided for contractor community health management plans. A joint meeting was held with the Northern Logistics Route Transportation team in Lae to review contractor Community Health management requirements.

5.4.9 Community Medical Emergency Response Plan

The Project has a defined procedure addressing community requests for health assistance. This procedure was activated in June 2010 with the case of a woman in labor. A local doctor made a request to one of the construction contractors for medical assistance at the village of Kantobo. The case was determined to be urgent and the Project responded by providing a doctor to travel to the village to evaluate the patient's condition and provide assistance. Because of the seriousness of the case, the doctor requested the patient be transported by helicopter to the Moro clinic. At the clinic, the woman was then evacuated by helicopter to Mendi hospital for further intensive care. It is believed that the prompt action saved the patient's life.

5.5 Community Safety

A number of initiatives underway reflect the Project's commitment to community safety, particularly in the area of traffic management. For example, around the HGCP, where Project traffic will be in close proximity to an existing school, mitigation measures are being implemented, which include providing people to direct traffic, installing signage, posters and utilizing directional traffic cones/poles.

Plate 5.16 – Traffic poles and roadworks signs in place

Plate 5.17 – Vehicles stopping to allow community members to pass by to attend a funeral

At the Komo Airfield site, both the Pioneer Camp and the laydown area have been fenced to control unauthorized access and provide a safety barrier between Project activities and community members. At the end of the quarter, fencing was also being extended around the outer boundary of the general airfield area so there is a clear demarcation in advance of bulk earthworks activities commencing.

Land and Community Affairs Officers have been stationed at the worksites to educate the community about safety issues and assist with traffic management.

At the Ridge Camp bypass road worksite, where blasting will be required, the Project will implement community safety procedures as well as liaise with the community through the Land and Community Affairs team to ensure communities are engaged and informed of the blasting schedule.

The Project's Stakeholder Engagement team is also actively involved in promoting safety by reminding stakeholders of the importance of driving within speed limits near worksites and following the instructions of traffic controllers. During community meetings, the team encourages parents to teach children safety rules and emphasizes community safety near worksites.

5.6 Partnerships

Community partnerships are an important aspect of the Project's corporate citizenship. The Project engages with communities through programs and initiatives that are part of its agreements, as well as through voluntary initiatives focused on health, education, environmental conservation and support for the economic opportunities of women. Through many of these initiatives, the Project strategically focuses investments to reduce known barriers to development and promote economic growth.

Plate 5.18 – Performing a traditional Papua New Guinean dance

The Community Support Strategy provides direction for initiatives that promote the development of conditions to enhance the livelihoods of Papua New Guinean communities. This Strategy identifies the need for a suite of community support and development initiatives in addition to activities already described in the existing social management plans[2]. To develop these initiatives in compliance with International Finance Corporation Performance Standard Seven (Indigenous Peoples), a significant amount of analytical work has been undertaken including:

- Livelihood assessments analyzing community assets and vulnerabilities.
- Institutional reviews capturing existing structures, activities, capacity and lessons of both government and NGOs relevant to the Project benefit area.
- Industry reviews exploring business and livelihood opportunities for Project area communities.
- Risks of in-migration.
- In addition to desktop reviews of existing literature and analysis, the following stakeholders were consulted.

Table 5.1 – Stakeholders consulted

Activity	Stakeholders Consulted
Livelihood Assessments	• Communities at Juha, Hides, Angore, Komo, Moran, Kutubu, Gobe and Kikori, and around the LNG plant site.
Industry Review	• Private sector and representative bodies including eight major companies in the poultry, spice and flower sectors. • Ten Government institutions including agricultural research bodies and small business corporations. • Six NGOs including the Community Development Initiative. • Individuals and specialists with experience in business development in Papua New Guinea.
Institutional Review	• Provincial and local level government in the Southern Highlands, Gulf and Central Provinces. • Over 25 NGOs, including development agencies and banks, faith-based, local NGOs, international NGOs and industry.

This analytical work forms the basis of a Community Support Strategy Action Plan, being drafted. The primary component of this Action Plan is the Community Development Support Program, which describes the activities the Project will undertake to invest in community development. Stakeholder workshops with Government,

[2] The Benefit Sharing Agreement Process (Government owned); Company Resettlement Policy Framework and Resettlement Action Plans; NCP; Company Stakeholder Engagement Plan; Company Community Health, Safety and Security Management Plan; and the Company and contractor social management plans (construction).

industry, development agencies and banks, along with NGOs, will be held next quarter to inform them of the Program.

To assist with planning and early implementation, a team of 12 Papua New Guinean citizens has been identified, with six fully mobilized. Field officers have started community consultation and mapping in Hides, Angore, Komo, Kikori and the LNG plant site areas. The next steps will be to assist communities to establish representative ward development committees, or other representative community structures, as appropriate, as a vehicle to help communities drive their own development and ensure Project-funded activities address their needs.

Table 5.2 – Update of Community Support Strategy activities against commitments in the Community Support Strategy Implementation Program (October 2009)

Commitment	Timeframe	Progress During the Second Quarter 2010
Sustainable Livelihood Assessment	October 2009 – June 2010	Drafts completed. Being internally reviewed during this quarter.
Stakeholder Consultation and Visioning (to determine the operating principles of the Community Support Strategy)	November – December 2010	Ongoing stakeholder consultation through development of the Community Support Strategy Action Plan. Stakeholder workshops planned for September 2010.
Industry/Sector Analysis (on the key sectors that contribute to livelihoods along the pipeline)	November 2009 – June 2010	Drafts completed. Being reviewed during this quarter.
Establishing Community Development Forums	November 2009 – June 2010	In preparation to strengthen ward development committees or other community structures as appropriate, community consultation and mapping started in Hides, Angore, Komo, Kikori and the LNG plant site.
Stakeholder Engagement of Vulnerable Communities	Ongoing	Identification of, and engagement with, vulnerable groups was undertaken during the Sustainable Livelihood Assessment. Identification will ensure specific actions to include vulnerable groups when establishing the development committees and other community support activities.
Community Cluster Local Development Plans	January – October 2010	On track to achieve a significant amount of planning by October 2010. Progress variable based on individual community capacity. Some communities expected to move at different rates than others.
Consolidation of Information and Stakeholder Workshops	October 2010	The Sustainable Livelihood Assessments, institutional and industry reviews will form the basis of a Community Support Action Plan, which will be presented to primary stakeholders for feedback. This will include presentation at the workshops planned for August/September 2010.
Programs and Budget Planning	November 2010	Draft plan expected August 2010.
Final Community Development Report for Public Disclosure	December 2010	Expected August 2010.
Implementation of Development Support Programs	May 2010 onwards	In practice, implementation of the Community Support Program had already started prior to May 2010 and benefits are accruing via engagement with communities and capacity building.

The Strategic Community Investment Program focuses on voluntary investments in education, health, sustainable livelihoods and environment that build the capacity of local communities and improve the socioeconomic environment. The Strategic Community Investment Program targets its efforts to communities primarily in the Project Impact Area. The selected program areas reflect priorities identified in the Papua New Guinean Government's Medium-Term Development Strategy, as well as the findings and recommendations of the Project's Social Impact Assessment and two Health Impact Assessments.

It is anticipated the Project will work with the NGOs, where possible, to deliver projects to communities potentially affected by the Project. Where NGOs lack capacity to deliver projects, commercial service providers will be used. Communities will be involved in project identification and implementation to help encourage ownership, and participation, as well as ensure the sustainability of projects.

At the close of the second quarter, a number of initiatives became ready for implementation across the Project's Community Partnerships focus, as discussed in the following sections.

Education

Plate 5.19 – Children enjoying books at Koki market

In June 2010, the Project sponsored the establishment of a children's library at Koki market in Port Moresby. This library is part of a larger national program aimed at increasing literacy rates in Papua New Guinea by engaging underprivileged children in reading. Specifically, the children who benefit from this initiative are unable to attain formal education in schools given the prohibitive cost of school fees.

The Project also provided logistical support to the AusAID Textbook Distribution Program, providing vehicle and helicopter delivery services to schools in a number of remote areas. Textbooks were delivered to 24 remote primary schools in the Southern Highlands Province. The Project plans to cooperate further with AusAID on future projects.

Health/Community Support

One of the aims of the United Nations Millennium Development Goals is to reduce the mortality rate of children under the age of five. In Papua New Guinea, pneumonia is the number one killer of children under the age of 12 months, and from years one to five, it is second only to malaria. In recognition of this, the Project is sponsoring the Institute of Medical Research's Pneumonia Colloquium in Goroka, August 23–26, 2010, convened in partnership with the World Health Organization and the Papua New Guinea National Department of Health. The Colloquium will recognize achievements gained in Papua New Guinea during the past 40 years of research and define a path forward to reduce pneumonia's impact on the country.

In response to a cholera outbreak in Papua New Guinea during the second quarter, the Project also supported the establishment of a Salvation Army cholera care clinic.

Meanwhile, the Project is continuing a partnership with Rotarians Against Malaria. The partnership provides logistical support for the distribution of long lasting insecticide treated bed nets to communities to combat the incidence of malaria and malaria-related deaths. During this quarter, the Project assisted with distributing 12,000 anti-malarial bed nets by helicopter to remote villages in the Gulf Province and a further 2,000 nets to villages near the Project site.

To support communities, the Project developed plans to provide maintenance to the Port Moresby facilities of Cheshire Homes and City Mission to help them better serve disabled and homeless children, respectively.

In addition, the Project assessed and designed three meeting platforms to be constructed at Lea Lea, Papa and Porebada to serve various community groups at each of these villages.

A preliminary assessment was also conducted of the Lea Lea footbridge and arrangements made for a structural engineer to undertake a detailed safety and serviceability assessment of this structure.

Women's Economic Empowerment

Healthy and educated communities in which all citizens have the opportunity to play a valuable and productive role help create a stable and prosperous environment. For this reason, the Project supports programs that help women fulfill their economic potential and drive economic and social change in their communities.

In May 2010, the Project nominated four Papua New Guinean women working in non-profit organizations and community development to attend a 12-day program in Washington, D.C. The program focused on developing advocacy strategies that advance women's economic opportunity. The training program was conducted by the global non-profit organization Center for Development and Population Activities (CEDPA) and supported by The Project Foundation's Women's Economic Opportunity Initiative, which have partnered together since 2005 to train women leaders to advance their economies.

6.0 COMPENSATION AND RESETTLEMENT

The Project aims to minimize resettlement where possible. However where resettlement is deemed necessary, the Project respects property rights and pursues the free, prior and informed consent of impacted communities.

6.1 Compensation

The Project's land access process is based upon Government requirements (*Land Act and Oil and Gas Act 1998 Section 118*) and refers to specific compensation levels for the use of land, and damage and deprivation compensation related to gardens, cultivated trees, man-made improvements, naturally occurring bush, vegetation, birds, animals or fish, or effects on the quality of water supplies.

The Project's Land and Community Affairs team is responsible for negotiating In-Principle Compensation Agreements with affected landowners/users. During the second quarter, the Project undertook an independent compensation rates study and reviewed compensation paid in the resettlement process. As a result, it has been determined that the total garden compensation package paid is equivalent to prevailing market rates.

A total of 78 sites have been identified where In-Principle Compensation Agreements are required to meet the Project's land requirements. To date, 59 (76 percent) of these Agreements have been signed, allowing land access for construction to proceed. Of these, a total of 12 In-Principle Compensation Agreements were signed during this quarter. The Land and Community Affairs team will focus on completing the 19 outstanding Agreements during the third quarter 2010.

Plate 6.1 – Example of household crops and vegetable gardens

Plate 6.2 – Presenting homegrown produce at community markets

Compensation payments were made for work such as land clearing for bridge maintenance activities, temporary helipads, survey lines, drill site clearances and road works. Compensation has also been paid in relation to burial site relocation activities at Komo Airfield and the HGCP site where earthworks are necessary.

Several compensation payments have been withheld due to disputes between clan members as to who should receive payments. In these cases, payments due to clans in dispute are held in abeyance in an escrow account and will only be released when the land dispute is resolved through mediation or when disputing parties agree to a sharing arrangement. During the second quarter, payments, all related to one clan, were on hold for the Northern Logistics Route MR-01 bridge improvements. Discussions are ongoing to resolve this matter.

6.2 Resettlement

In the Project's first Quarterly Report, an estimate was provided of areas where resettlement would be necessary. As detailed design progresses, further efforts are being made to avoid or minimize resettlement, when possible, and the estimated number of affected persons will be revised.

The Project aims to design and implement resettlement in a manner that gives physically and economically displaced persons the opportunity to restore their livelihoods and standard of living. Ensuring free, prior and informed consent by people affected by resettlement is fundamental. Resettlement may be the result of:

- Physical displacement involving the loss of shelter and assets resulting from the acquisition of land associated with the Project.
- Economic displacement involving the loss of income streams or means of livelihood resulting from land acquisition or obstructed access to economic resources (land, water, forest) because of the construction or operation of the Project.

Generally, resettlement areas are identified and referred to by the Project's activity title. Some of these activity titles are clusters of activities, and others also reflect geographic areas. The Project resettlement activities are Komo Airfield, facilities (including HGCP, Kopi facilities, Juni Construction Training Facility), pipelines, wellpads, various roads, quarries, landfills (Hides and Gobe), Northern Logistics Route bridges, camps, and the Heavy Haul Road. There were substantial resettlement activities taking place at six sites during the second quarter of 2010, namely Komo Airfield, Komo Access Road, HGCP, Heavy Haul Road, Hides quarries and landfills.

Plate 6.3 – Example of home and gardens affected by resettlement

Plate 6.4 – Ensuring women's participation in resettlement activities is critical

6.2.1 Resettlement Planning: Milestones and Progress

Numerous resettlement milestones were achieved during the second quarter, with solid progress made on other resettlement planning processes and activities. The Lender Group has approved the final Resettlement Action Plan for the Komo Airfield activity, and the relocation of households has been more than half completed. Preliminary research, consultation processes and resettlement planning for a further five locations were also completed. This involved initial awareness activities, census and social/economic surveys, land use surveys and the production of survey data summaries. In three of the six cases, survey data was disclosed to participating households, and for five Project activities, Resettlement Action Plans were completed or are under preparation.

Plate 6.5 – Landowners and Company personnel gather for consultations

Table 6.1 presents an overview of the status of the key resettlement activities and tasks for each of the areas being actively worked at the end of this quarter.

Table 6.1 – Status of key resettlement activities

Project Activity Involving Resettlement	Key Activities During Second Quarter 2010	Status During the Second Quarter 2010		
		April	May	June
Komo Airfield	Compensation payments and first rations distributed	Current	Current	Current
	House removal	Current	Current	Current
	Land access (resettlement)	Not started	Not started	Current
	Rations monitoring	Current	Current	Current
	Livelihoods Program	Current	Current	Current
	Monitoring and evaluation	Not started	Not started	Current
HGCP	Negotiation and agreements	Current	Current	Current
	Identify resettlement sites	Current	Current	Current
	Resettlement Action Plan compilation	Current	Current	Completed
	Resettlement Action Plan approved by Lenders	Not started	Current	Current
	Compensation payments and first rations distributed	Current	Current	Current
	Rations monitoring	Current	Current	Current
	Livelihoods Program	Not started	Not started	Current
Two kilometer (1.24 miles) access road to Komo Airfield	Negotiation and agreements	Current	Completed	Completed
	Identify resettlement sites	Current	Completed	Completed
	Resettlement Action Plan compilation	Not started	Not started	Current
	House removal	Current	Completed	Completed
	Land access (Resettlement)	Current	Completed	Completed
	Rations monitoring	Current	Current	Current
	Livelihoods Program	Current	Current	Current
	Monitoring and evaluation	Current	Current	Current
Hides quarries	Disclose census and socioeconomic survey summaries	Not started	Not started	Current
	Negotiation and agreements	Not started	Not started	Current
	Identify resettlement sites	Not started	Not started	Current
	Resettlement Action Plan compilation	Not started	Not started	Current
Heavy Haul Road	Introductory meetings	Not started	Current	Completed
	Census and surveys	Not started	Current	Completed
Landfill	Introductory meetings	Not started	Current	Completed
	Census and surveys	Not started	Current	Completed

6.2.2 Trends, Highlights, Challenges, Achievements and Lessons Learned

The Project continues to seek ways to modify the design of certain activities to reduce or avoid resettlement. Of the activities undertaken during the second quarter, the following was achieved:

Komo Airfield: Relocation of households progressed within the Komo Airfield site. Key achievements for this component were the conclusion of the final outstanding In-Principle Compensation Agreements, as well as compensation payments made to affected households and absentees, and the dismantling and relocation of houses and relocation of churches.

A non-cash component of the agreement reached with absentee landowners, in addition to a cash component, was provision of four sawmills, provided as part of a community development package. The payment of the cash component of the housing package offered to resettlers was completed in the second quarter, with payments made into interest bearing deposit bank accounts. The Resettlement team arranged for representatives of a bank to visit the site to assist resettlers open accounts and to deposit portions of the agreed compensation packages.

Plate 6.6 a-b – Church relocation ceremony and feast

Hides Gas Conditioning Plant: Individual household negotiations were undertaken with HGCP affected households throughout this quarter and all except six (out of 59) signed housing and agricultural compensation agreements. Numerous households insisted on 'splits' as some family members were entitled to separate packages (notably older sons who had recently or were about to get married, as well as men with multiple wives).

Although there were some initial delays with the logistical and security requirements to get money to sites, all households that had signed the agreement received a transit allowance as well as the initial cash component of their housing packages. Some households were unwilling to accept payments as stipulated in agreements, frequently using the opportunity to claim additional compensation. These situations required ongoing liaison between the households and the Resettlement and Land and Community Affairs teams to achieve a resolution.

Plate 6.7 – Consultations underway

For other agreements, payments were made into interest bearing deposit accounts opened by numerous resettlers during the bank representatives' visit to the site. At the end of this quarter, identification of relocation sites using a geographical positioning system had been completed for 97 percent of the households. The relocation of houses commenced, with 23 houses dismantled.

Heavy Haul Road: Following the census and survey of the first section of the Heavy Haul Road immediately south of the HGCP site, a major review of the alignment and design of the road was underway by the Project planning and resettlement teams to reduce physical resettlement. Preliminary results indicate that resettlement will be reduced by 60 percent. The resettlement process, including survey disclosure, consultation and negotiation, and the conclusion of agreements and resettlement implementation, will continue once the road alignment is finalized.

Komo Access Road: Compensation payments (into interest bearing deposit accounts), rations delivery and garden re-establishment was ongoing throughout this quarter, while the physical relocation of households was completed. Some households had moved onto the site after the original surveys, so a revised Resettlement Action Plan was compiled to incorporate them.

Quarries: A new quarry site was identified in place of the Hides Quarry 2 site, which had been determined to be an unsuitable site. Surveys were completed on the alternative quarry site with survey information disclosed to affected households during the commencement of a consultation and negotiation process. Confirmation of boundaries for the quarry access road was in progress to define the extent of resettlement required along the road and allow completion of the Resettlement Action Plan.

Plate 6.8 – Example of local house

Plate 6.9 – Agreements finalized with relevant landowners

Bridges: Surveys were completed for six Northern Logistics Route bridges and the information submitted to the Land and Community Affairs team, who will assist the Government in negotiations and delivery of payments. At the end of this quarter, there were a further eight bridges to be surveyed.

Pipeline camps and components: As part of the ongoing efforts to minimize Project related resettlement, the Project team has explored possible ways in which resettlement could be further reduced through design modifications.

Landfill: Potential landfill sites were re-evaluated to determine if there are suitable alternative sites to the previously proposed site that could reduce the number of households affected by the construction of Project landfill facilities. As such, no resettlement activities occurred in these areas during this quarter.

Plate 6.10 – Consultations are two-way, often small group discussions

Plate 6.11 – Survey and interviews underway

7.0 WORKFORCE

The Project is committed to developing and supporting its workforce through health and safety management, worker welfare and training. By incorporating workforce and community health considerations into the planning process, the Project is also constructively contributing to Papua New Guinea's broader economic and social development.

7.1 Development

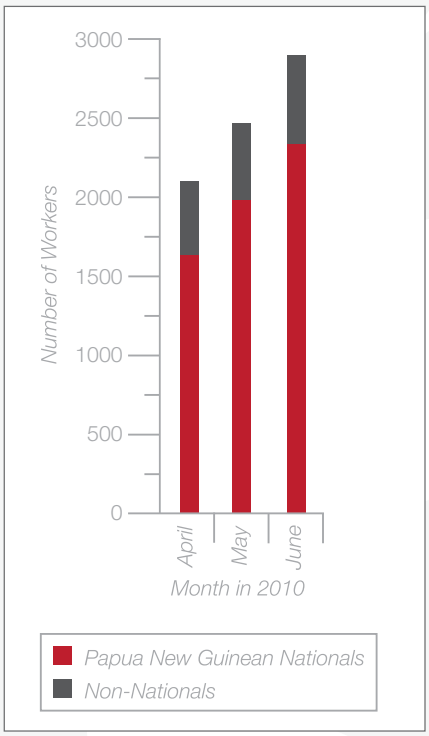
The Project's approach to workforce development, as outlined in the NCP, is to increase the number of Papua New Guinean employment opportunities and to build national employees over the life span of the development. The NCP estimates the Project will require a peak of approximately 12,000 workers, about one third of which will be Papua New Guinean citizens.

Project contractors and subcontractors have been employing increasing numbers of Papua New Guinean citizens, primarily sourced through Lancos (outlined in *Section 4.1 Supplier Development*), for construction activities.

By the end of the second quarter, over 2,300 Papua New Guinean citizens were employed on Project construction activities, representing approximately 80 percent of the Project's total construction workforce.

Workers were sourced from across the Project region including Gobe, Kopi, Kantobo, Hides, Komo, Moro and the LNG plant site areas, as well as other areas of Papua New Guinea such as Port Moresby, Mendi and Lae. They have been involved in activities such as the Northern Logistics Route bridge works, site clearance for the Juni Construction Training Facility, construction of wharves at Kopi, the construction of training facilities at the POM Tech site, and aviation and ground transportation. Figure 7.1 depicts the growth and extent of the workforce.

Figure 7.1 – Construction workforce



7.2 Workforce Training

7.2.1 Project Training

To address a shortage in qualified construction workers in Papua New Guinea, the Project is providing facilities to train Papua New Guinean citizens for construction roles. Two Construction Training Facilities are being built, one at Juni near the HGCP site and one at Port Moresby on the POM Tech site.

While both the Port Moresby and Juni Construction Training Facilities are being constructed, a temporary training venue has been established in Port Moresby to meet early training needs for the LNG plant site. The temporary training venue has capacity to train approximately 100 trainees at a time. Part of this venue has been established by the Project as a Driver Training Center complete with driving simulators set up for various vehicle types. The scope of the driver training covers driving skills in four wheel drive, mini and 20 seater buses, and rigid tray trucks up to ten tons.

Plate 7.1 – New Construction Training Facility being built at POM Tech

Plate 7.2 – The first trainees with their graduation certificates

Plate 7.3 – Simulator used in Driver Training Center

After extensive community consultation and trainee recruiting across the four community areas near the LNG plant site, the first class of 48 trainees including eight women (refer to Plate 7.2) commenced an eight-week training program at the temporary training venue in late April 2010.

The training curriculum was aligned with the requirements for civil construction laborer qualifications. These 48 trainees graduated in late June 2010, with 15 transferring into a six-week driver training program. Two further training groups of 48 trainees (11 of the total 96 trainees are women) also commenced their eight-week civil training program during this quarter.

Plate 7.4 – First Operations and Maintenance trainees including 20 women from across Papua New Guinea

Plate 7.5 – Female recruits in Operations and Maintenance training

The Australian Quality Training Framework accredited training courses are being delivered by a team of 14 Papua New Guinean trainers, who were trained in Queensland over a period of six months. In addition, the Project Training Services team is supported by six Papua New Guinean citizens, which includes two women. These six personnel are employed by the Project as part of the Graduate Training Development Program (total number employed to date is 22, which includes four women) covering engineering, Project controls, administration and finance disciplines. These young professionals are being employed throughout the Project team in a variety of roles.

Training of civil construction laborers and drivers will continue in the temporary training venue/Driver Training Center until the fourth quarter 2010, after which time the construction trades qualification courses will transfer to the newly completed Port Moresby Construction Training Facility, at POM Tech. Training of drivers will continue at the Driver Training Center post fourth quarter 2010.

7.3 Health Management

A focus area for the Project in the second quarter 2010 has been a continuing commitment to both contractor mobilization and post-mobilization support.

The pre-mobilization support through the contractor Health Plan assessment was expanded during this quarter with the engagement of an additional health advisor to assist contractors with the development and review of their health plans and related documents.

Activities in this quarter focused on site inspections, along with the commencement of a number of new activities including contractor Health Plan auditing and Food Safety Plan auditing. In addition, the Health team has developed and implemented a number of Project-wide supporting health procedures required by the Health Project design standards. These included implementing the work of the Foot Care Hygiene Taskforce (see *Section 7.3.7 Foot Care Hygiene Program*).

Emerging situations requiring attention during this quarter included a cholera outbreak in Port Moresby. This is described in *Case Study Two: Cholera Response – Port Moresby*.

7.3.1 Pre-Mobilization Health Support

Consistent with Project mobilization patterns, Health Plan assessments increased during the second quarter, necessitating the appointment of an additional health advisor to assist with contractor engagement and support. In addition to the formal plan approval assessments, pre-mobilization meetings and support activities were undertaken with contractors.

During the quarter, contractor Health Plan approval prior to site mobilization fell below target levels. In response, the Health team is overseeing these facilities in the field while working directly with the individual contractors to ensure the outstanding health related plans are completed.

Mobilization of contractor health managers is an important milestone in the pre-mobilization of contractors to site. An improvement in this measure was observed during this quarter.

7.3.2 Post-Mobilization Health Support

As part of the post-mobilization health support program, the Health team captures a range of leading indicators[3] including:

- Results of Project camp health assessments (food, water, accommodation, general sanitation).
- Malarial Chemoprophylaxis Compliance Program (MCCP).
- Malaria Control Program (MCP) field assessments.
- Contractor Health Program Audits.

7.3.3 Camp Health Inspections

The charts presented summarize results from site inspections by the Health team's in-country health advisors[4] using standardized inspection score sheets for a consistent approach. This program aims to minimize the potential for diseases and illnesses by identifying areas for improvement, observing and implementing a best practice approach in areas such as food safety, water quality, general sanitation and vector control. For the second quarter, a total of nine Category 1 and 2[5] sites were inspected, along with two hotels/lodges utilized by the Project.

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3 Leading indicators provide advanced warning of conditions such as poor water quality, which may lead to adverse health outcomes such as water borne illness.

4 The Project employs health advisors to monitor project health requirements.

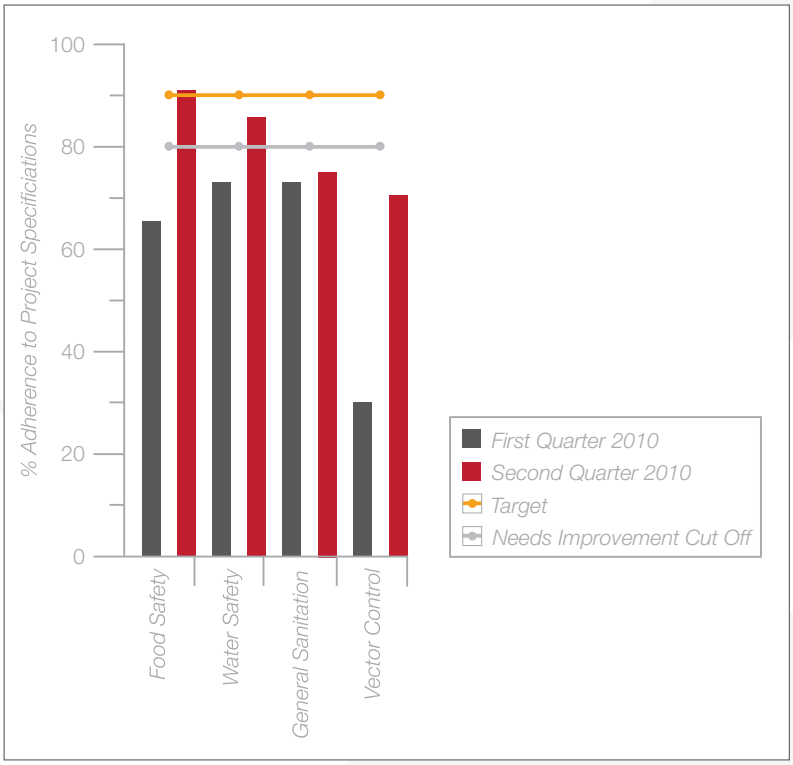
5 Category 1 – Sites established and managed by the Project or contractor, Category 2 – third party facility completely utilized by the Project or contractor.

Improvements in Category 1 and 2 results (see Figure 7.2) are reflective of:

- Increased focus on Category 1 and 2 sites in the pre- and post-mobilization phases.
- Improvements to key subcontractor food safety plans.
- Increased evidence of water sampling and reporting at Category 1 and 2 camps.
- Continued increase in the mobilization of the primary vector control subcontractor.

The Project achieved the overall target completion rate for post-mobilization activities of greater than 90 percent during the quarter (see Figure 7.3).

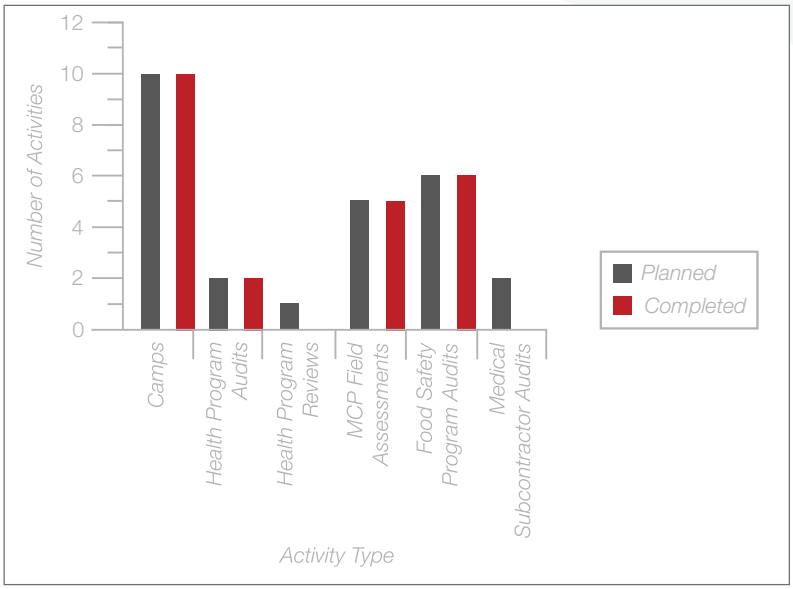
Figure 7.2 – First and second quarter 2010 monthly Category 1 and 2 site cumulative adherence to Project specifications by public health category



7.3.4 Lagging Indicators

The Health team captures and reports a range of lagging indicators[6] including the number of, and actions resulting from, health incidents[7]. Health incidents are captured in the Project Incident Register and are reported to the Project by contractors in accordance with the Project coordination procedures. As shown in Figure 7.4, foot/skin issues are significant, with foot fungus remaining the dominant condition type. Preventative measures and early detection and treatment are an important component of the management of foot/skin infections and this is addressed in more detail in *Section 7.3.7 Foot Care Hygiene Program*. The Health team also reported an increasing number of first aid cases, which is a result of increased surveillance and mobilization of personnel.

Figure 7.3 – Key planned versus completed post-mobilization health activities for the second quarter 2010.



An essential element of the Project Health Plan is tuberculosis screening. Active tuberculosis case management processes are in place to deal swiftly with diagnosed cases. Pre-placement screening and return to work screening are also essential elements of the Tuberculosis Management Strategy.

6 Lagging indicators are direct measures of adverse health outcomes (e.g. reportable diseases).
7 Contractors also report non-stewardable (non-work related) health incidents.

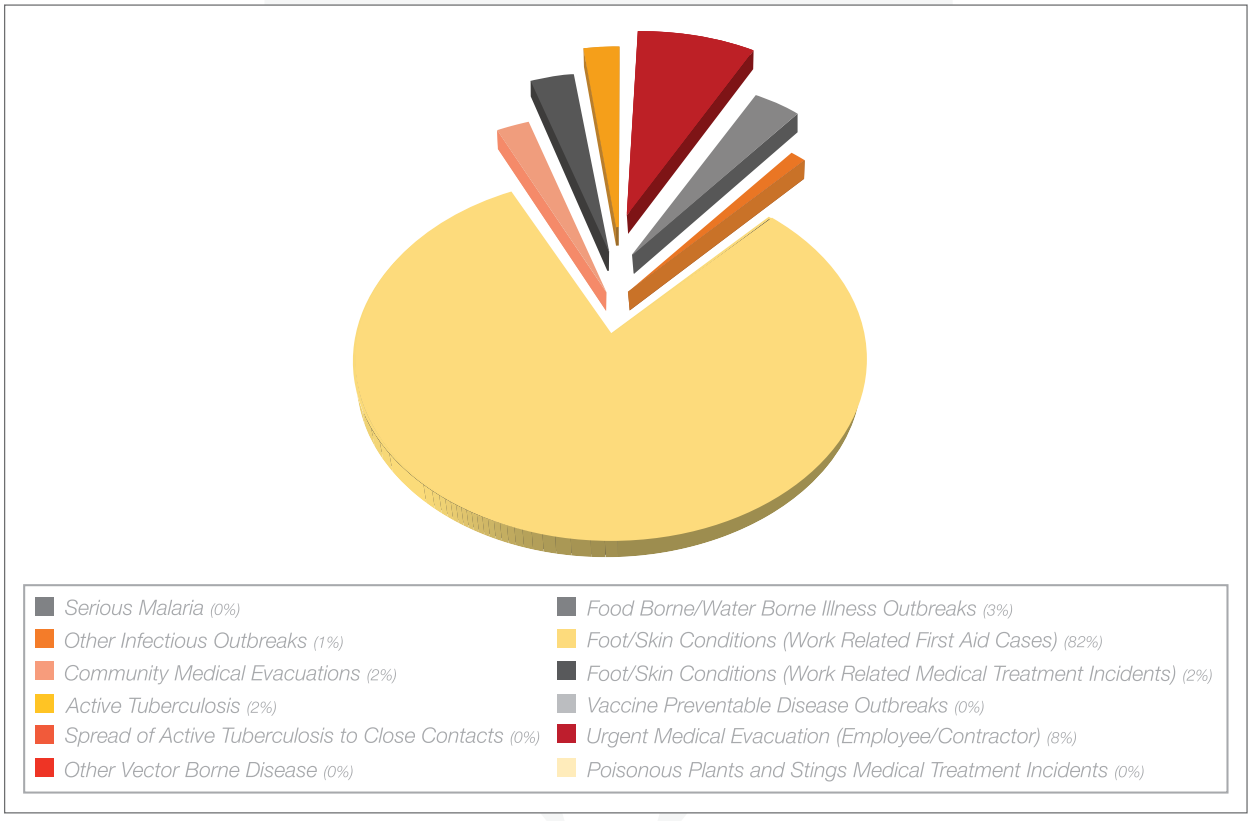
Readiness for medical evacuations (work and non-work related) also remains important. A strong emphasis is placed on contractor medical emergency response plans and pre-placement medical screening.

Monitoring of community medical events is also important given the proportion of the workforce located in local villages.

Table 7.1 – Health incident summary

Incident Type	Number of Incidents During the Second Quarter 2010	Year to Date
Infectious Disease Cases		
Serious malaria	0	0
Vector borne disease, other	0	0
Active tuberculosis	0	2
Spread of active tuberculosis to close contacts	0	0
Foot or skin conditions	55 first aid cases (resulting from foot hygiene inspections) 1 medical treatment incident (ulcerated foot blister)	91 first aid cases 3 medical treatment incidents
Summary of Project Outbreak Events		
Vaccine preventable disease outbreaks	0	0
Food/water borne disease outbreaks	0	3
Infectious outbreaks, other indicators	1 contagious conjunctivitis at LNG plant site (13 cases – 11 Papua New Guinean citizens and 2 expatriates)	1
Medical Evacuations		
Medical evacuations (work related)	2	2
Medical evacuations (non-work related)	3	7
Community medical evacuations	1	2

Figure 7.4 – Percentage contribution of health incidents year to date



Two key events for this quarter are shown in Table 7.2. Response to the community cholera outbreak in Port Moresby is detailed in *Case Study Two: Cholera Response – Port Moresby*.

Table 7.2 – Key events during the second quarter of 2010

Community Health Events of Project Significance	Details	Project Workers Affected
Viral Conjunctivitis	Community outbreak emerged in Kopi in May 2010. Subsequently has subsided	23 project workers from local communities acquired viral conjunctivitis
Cholera Outbreak (Port Moresby)	Outbreak commenced late April 2010 and is affecting National Capital District and Central Province.	No cases associated with the Project.

7.3.5 Malaria Control Program and Malaria Chemoprophylaxis Compliance Program

The Health team tracks contractor adherence to these programs through monitoring enrolment by contractors in the MCCP, results from MCCP worker testing and MCP field assessments against specified program requirements.

As shown in Figure 7.5, compliance with MCCP enrolment remains excellent, with only one contractor outstanding at the end of the second quarter. It has been identified that a number of small subcontractors are not properly enrolled in the Program (representing approximately ten percent of the Upstream workforce). This situation is being reviewed to determine the reasons for this with a response planned for third quarter 2010.

MCCP testing targets, as depicted in Figure 7.7, were affected by some in-field sampling issues during this quarter. Improvements are also planned for the visitor component of the program to ensure all non-immune visitors are identified and included in the Program. In addition, a review of required testing numbers is underway to ensure the required testing target (ten percent rotators/residents and 25 percent visitors) is achieved.

Figure 7.5 – Monthly MCCP enrolment summary

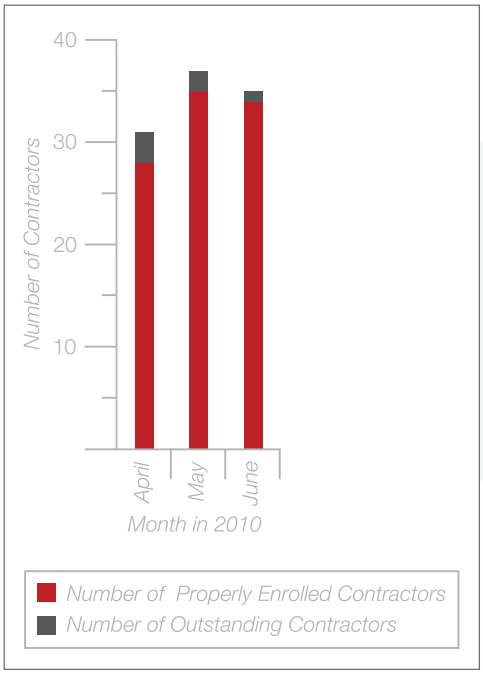
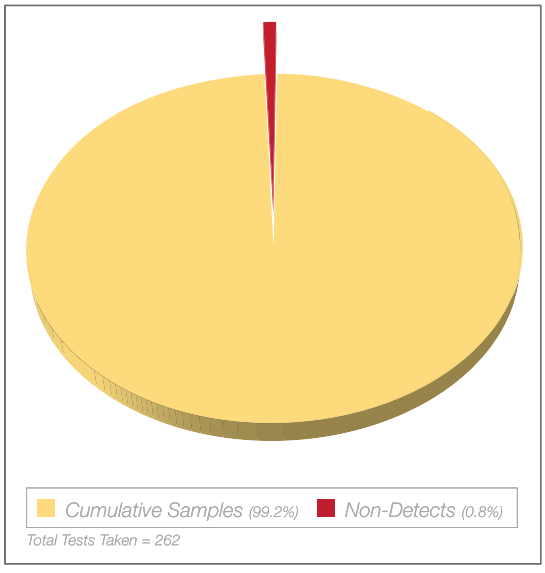


Figure 7.6 – MCCP non-detect results



The MCCP non-detect results (Figure 7.6) remain excellent with less than one percent detection rate across the Project.

The number of MCP field assessments (Figure 7.8) improved in the second quarter with five contractors assessed, however, field audit results show a reduction in adherence to MCP requirements by those contractors inspected in the quarter. These issues are being pursued with the relevant contractors. Key areas identified for improvement included site arrival/departure management, documenting the MCP and establishing a Visitor Testing Program. Included in the MCP field assessments for this quarter were a number of smaller contractors, which also contributed to the overall result, as they are generally less mature in their development of an effective MCP.

Figure 7.7 – MCCP testing target results

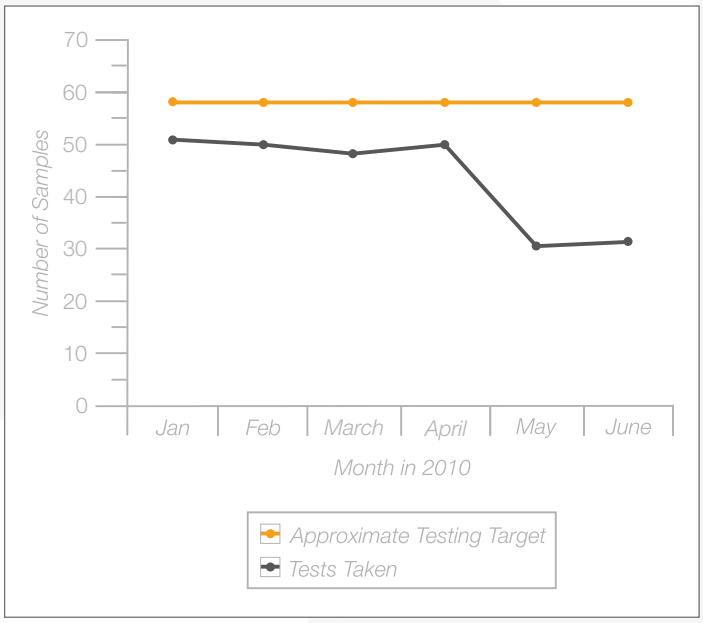
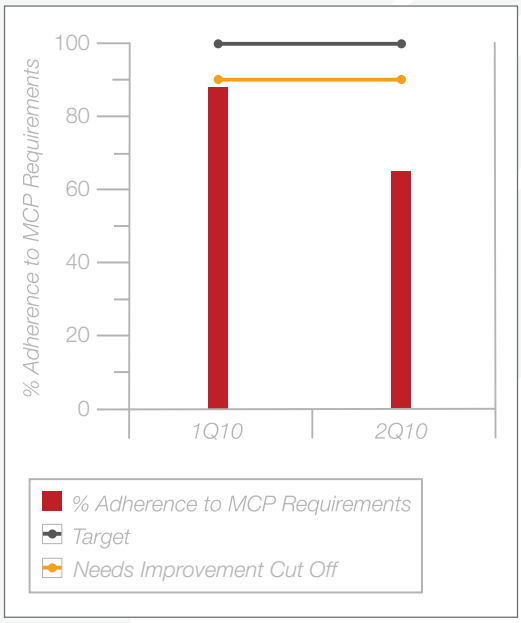


Figure 7.8 – MCP field assessment adherence to Project requirements



Note: An approximate testing target is shown because the testing target varies according to worker type.

7.3.6 Strategic Initiatives

The Health team remained committed to its strategic initiatives during the second quarter, including improvements to contractor stewardship reporting and implementation of Project-wide programs and protocols such as the Tuberculosis Control Program, Return to Work from Rotation Protocol and the Injury and Illness Reporting Protocol. The development of Project-wide programs and protocols promotes consistency and allows a Project-wide focus on significant events.

In addition, the work of the Foot Care Hygiene Taskforce remained a focus for this quarter.

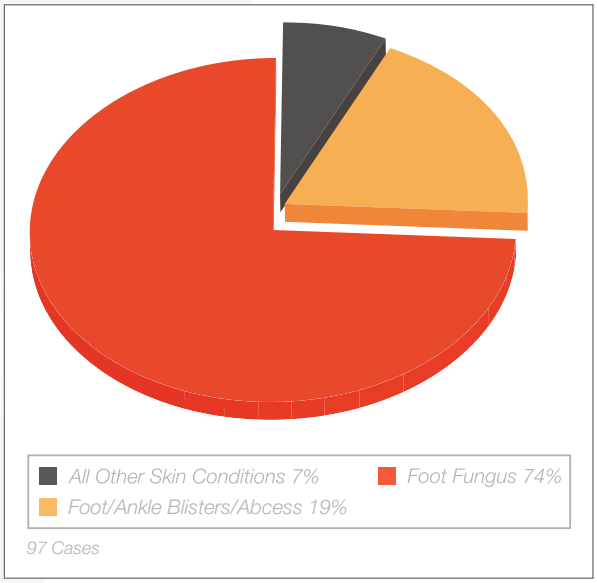
7.3.7 Foot Care Hygiene Program

In response to the clear case for action, the Foot Care Hygiene Taskforce was established in the first quarter to:

1. Reduce the incidence of foot fungal infections.
2. Reduce the incidence of foot related injuries, for example blisters caused by poorly fitted or constricting boots.

Implementation of the Foot Care Hygiene Taskforce recommendations remains a priority for the Health team and is supported by the significant representation of foot conditions as a percentage of all reportable skin conditions.

Figure 7.9 – Foot and skin condition summary



Note: Totals include some cases that have more than one condition. For the purposes of this chart both conditions are counted.

Early identification and management of foot related skin conditions is an important measure to minimize the risk of these ailments becoming more serious. In the second quarter, health advisors and medical staff based at Moro B Camp undertook 126 foot inspections at three Upstream locations, including a foot and general hygiene education session and training for field supervisors. The Taskforce has recommended similar foot inspections Project-wide.

Key elements of the Foot Care Hygiene Program include:

- Providing personal and foot hygiene training for workers.
- Regular foot inspections, including at pre-employment medicals and at the time of return to work from rotation.
- Access to appropriately designed footwear (to meet boot performance standards established by the Foot Care Hygiene Taskforce) particularly to cater for anthropomorphic differences in foot dimensions (e.g. ball and arch circumference, foot width).
- Access to adequate numbers of boots (two pairs minimum) and socks (three pairs minimum) to enable regular changes of footwear in damp conditions.
- Access to appropriate sock laundering for all workers.
- Contractors establishing boot replacement and care guidelines along with a written program to address the implementation of Taskforce recommendations.

Plate 7.6 – Project health advisor and medical doctor undertaking foot hygiene inspections and education at Juni

Plate 7.7 – Project doctor training field supervisors in identifying and managing foot fungus

A significant number of deliverables, such as procedures and programs, were also completed in this quarter including:

- A work boot and sock performance standard.
- A boot recommendation list for Papua New Guinean conditions.
- A work boot fitting procedure.
- Recommended boot drying devices for sleeping quarters.
- A sample boot and sock care replacement program for contractors.
- A medical protocol for treating foot blisters and foot and skin conditions.
- Guidelines for classifying tropical foot cases.

7.3.8 Tuberculosis Control Program

Due to the prevalence of this disease in Papua New Guinea, tuberculosis remains a focus area for the Project. In the second quarter, the Health team completed the following initiatives:

1. Finalizing procurement, location and logistics for placement of the first transportable x-ray unit to be located in Kopi.
2. Commencing procurement of the second transportable x-ray unit to be located in the Hides area.
3. Drafting the Project-wide Tuberculosis Control Protocol for Project Management sign-off.
4. Providing Project-wide refresher training.

The primary Project medical provider continues a screening program and reported a total of 461 persons screened during this quarter.

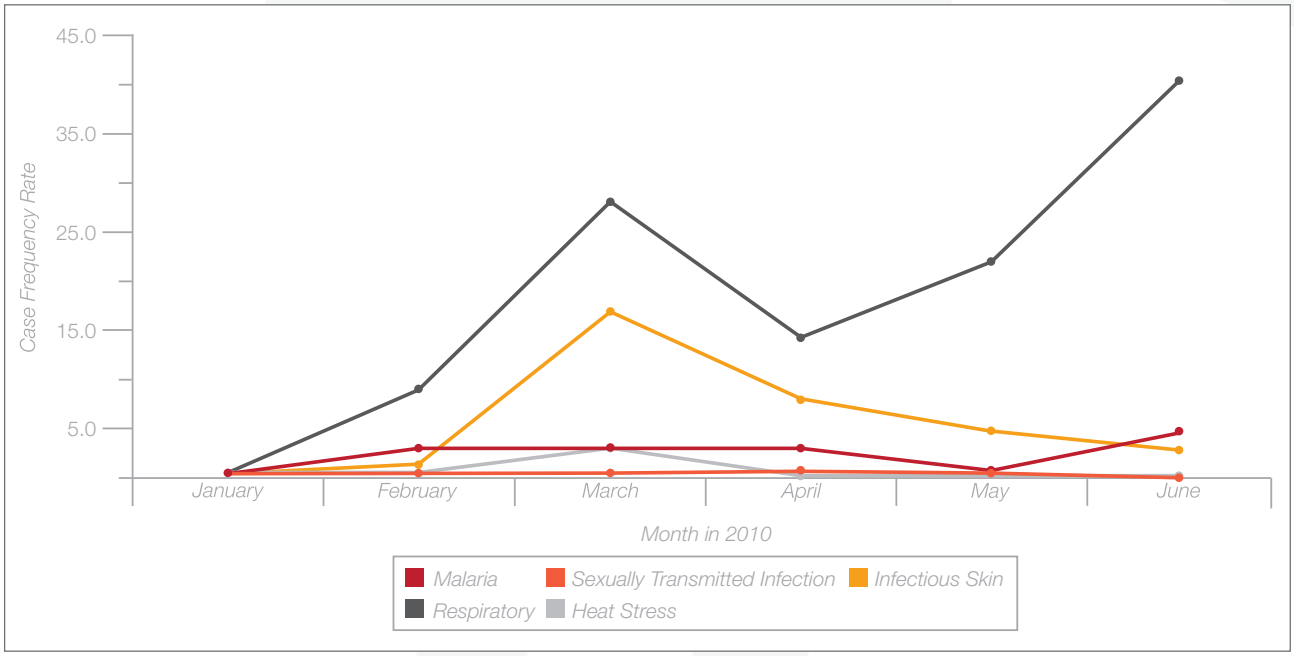
7.3.9 Contractor Stewardship Reporting

The Health team began capturing and analyzing performance data directly from contractors, and the team intends to expand this capture, analysis and reporting throughout the year. When combined with aggregated performance data from across the Project, this will allow for improved trend analysis and comparison of contractor performance and disease patterns. Work related illnesses are recorded separately and reported in the standardized safety performance metrics.

Selected statistical information for this quarter is provided in Figure 7.10 for contractors mobilized and reporting health metrics.

Figure 7.10 shows an increase in respiratory cases. Rising rates of respiratory illness are not necessarily unexpected in the winter season. Toward the end of this quarter, the Health team began investigating this trend with relevant contractors. This type of information is an example of data, which will be monitored over time and analyzed for trends, which can inform Project health planning and review.

Figure 7.10 – Reportable conditions case frequency rate summary for all contractors mobilized in the second quarter year to date



Notes: 1) Case frequency rate adjusts for the number of exposure hours and will allow comparison between contractors that have varying numbers of workers employed and hours worked. Case frequency rate targets have not yet been established for the various diseases. This includes both work related and non-work related cases. *Case frequency rate = [No. of cases x 200,000]/exposure hours.* Malaria cases reported above are those less serious cases in the semi-immune workforce. To date in 2010 there have been no confirmed cases of serious Malaria.
2) Aggregated data from those contractors reporting health data.

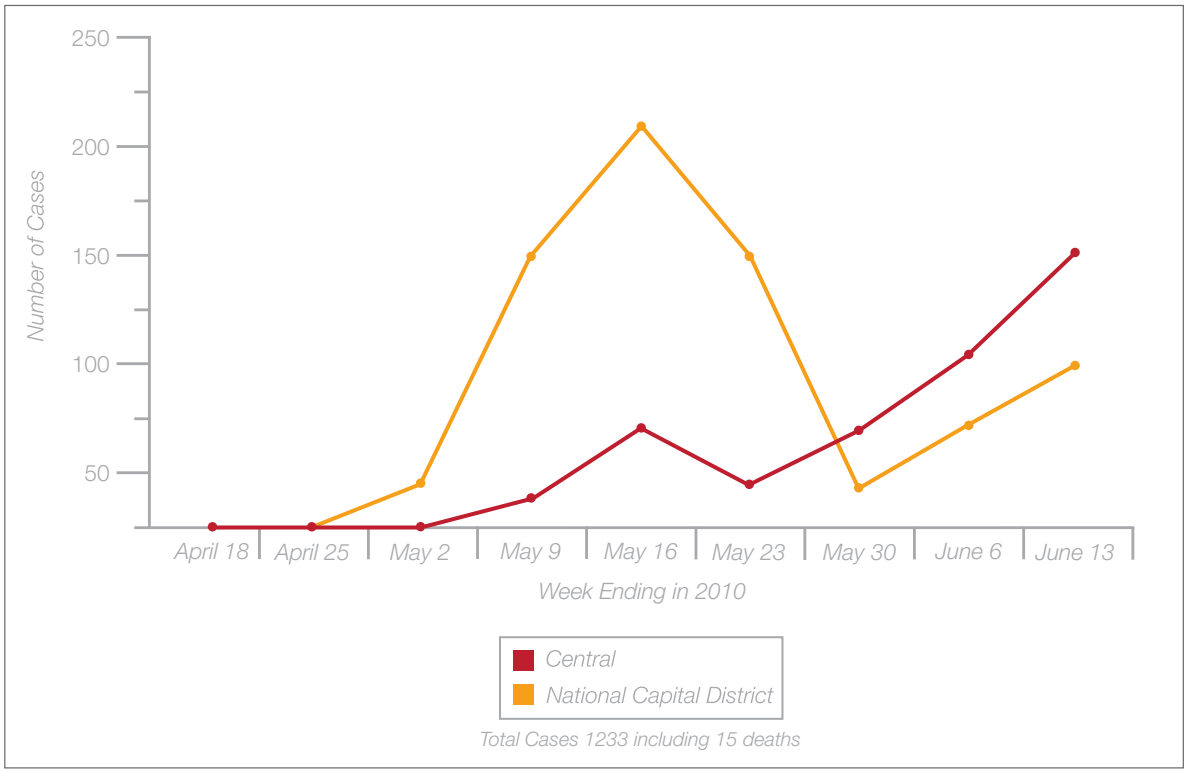
CASE STUDY TWO:
CHOLERA RESPONSE – PORT MORESBY

Successful businesses and projects rely on a healthy workforce. The Project provides support programs and services to help its workforce live healthier lives. By incorporating workforce and community health considerations into Project activities, it plays a constructive role in addressing the broader economic and social development of the communities in which it operates.

In April 2010, a cholera outbreak occurred throughout Port Moresby and the surrounding areas, causing a major health risk to citizens and workers within the Project's worksites.

While initial cases were detected in coastal areas of Port Moresby, the outbreak was also present throughout the National Capital District and Central Province. In the National Capital District, most cases occurred in the North West Moresby district, followed by North East Moresby then Moresby South. The majority of cases in Central Province occurred in the locations of Lea Lea, Papa, Porebada, Waiori and Wanigela.

Cholera cases National Capital District and Central Province April 18 – June 13, 2010



As a result of the outbreak, the Project formed a Cholera Response Working Group to identify measures that could be undertaken to prevent further spread of the disease. The Group consisted of Project Medicine and Occupational Health representatives and site supervisors from affected work facilities.

Through regular meetings, the Cholera Response Working Group identified the key areas to focus on were hygiene, medical assessment, education, and frequent communication to those living in or travelling to the affected areas.

Inspections of Port Moresby Project worksites, including the LNG plant site and POM Tech, were undertaken to identify and implement opportunities for improving cholera prevention. Initiatives included establishing a screening process upon camp entry, ensuring adequate hand washing facilities were provided and installing temporary hand washing stations at mobile worksites.

Workers using newly installed hand wash stations

Temporary hand wash stations at a roadside worksite

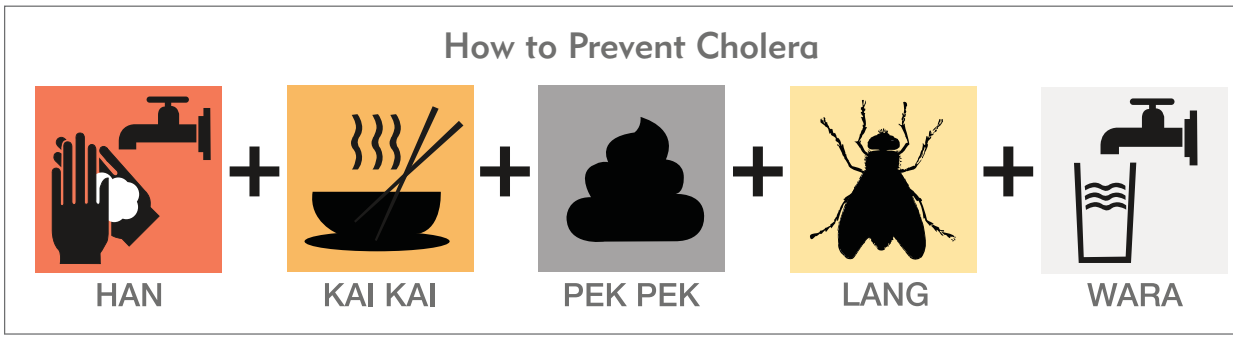
Cholera triage areas were set up at major Project worksites to allow rapid assessment and isolation of potential cholera cases. Through a partnership with the Salvation Army the Project also helped establish a cholera care clinic in Port Moresby for the wider community.

Educational material, some of which was provided by Papua New Guinea's National Superannuation Fund (NASFUND), was distributed throughout the community and regular alerts were sent to all Project and contractor personnel, advising on the status of the outbreak and how to avoid contracting the disease.

These measures assisted in controlling the outbreak and at the end of the second quarter, there were no reported cases of cholera at any Project worksites.

Cholera triage center established at the LNG plant site

Extract of educational material provided by NASFUND



As shown in Figure 7.11, cumulative training suggests adequate training coverage for malaria and heat stress for Upstream Infrastructure.

7.4 Safety Management

The Safety Vision for the Project is *Nobody Gets Hurt*. The Project team is focused on management leadership and worker involvement to implement incident prevention processes. The Project's safety plans continue to be refined during their implementation with early works activities, and lessons learned incorporated into the safety plans for major contractors as they prepare for mobilization.

Key activities performed by the Project team during the second quarter included:

- Reinforcing safety expectations through field visits by Project Senior Management.
- Monitoring of contractors as they implemented safety plans.
- Mobilizing additional safety staff to support safety planning and oversee execution.
- Working with contractors to develop safety planning deliverables for upcoming work scopes.
- Facilitating start-up meetings with contractors to ensure alignment with safety expectations.
- Continued implementation of the Leading With Safety Program for Project and contractor line management teams.
- Continued analysis of Leading Indicator trends to drive worker behavior toward incident prevention.

Figure 7.11 – Cumulative training summary

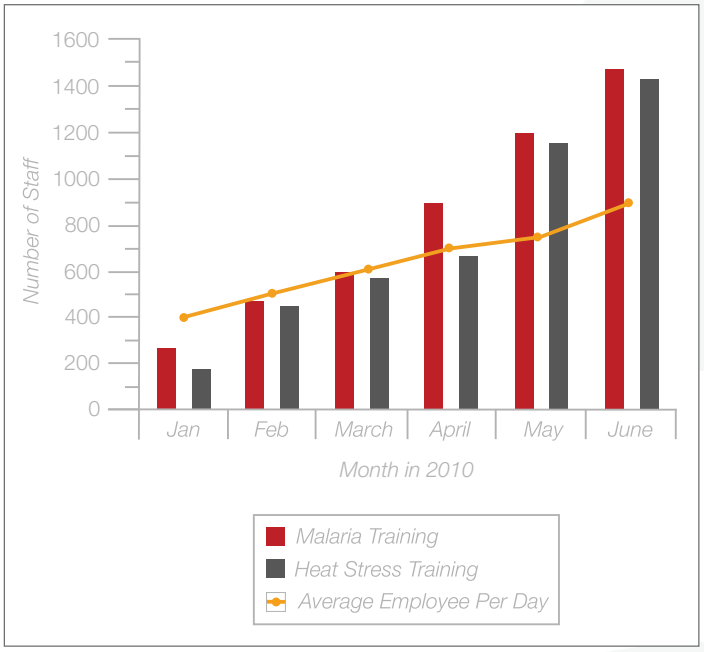


Plate 7.8 – The Project's vision Nobody Gets Hurt

Initiatives to address injury trends included:

- Mobilizing a Safe Work Practices team to major worksites to enable and execute safety fundamentals.
- Developing First Line Supervisor Fundamentals of Safety training focused on safety leadership, hazard management tools and critical risk activities.
- Developing Field Safety in Uncontrolled Environments training focused on hazard identification/mitigation and emergency response planning for small work teams in remote, frontier areas.
- Adapting field tools for greater understanding by Papua New Guinean citizens, for example multi-language use and pictorial media.
- Using stand-downs and safety alerts to increase awareness of hazards and evolving issues.

Key activities planned for the third quarter 2010 include:

- Continuing to implement 'outside the fence' safety programs, and further define safety controls related to community and construction equipment interfaces.
- Contractor workshops focused on incorporating lessons learned from activities undertaken up to the second quarter into major plans for mobilization.
- Contractor workshops focused on aligning expectations and assisting with building safety, health, environment and social capability.
- Producing videos to improve communication of safety expectations and safety education of employees from Papua New Guinea.

Figure 7.12 – Trend analysis (no incidents on Category 2 sites)

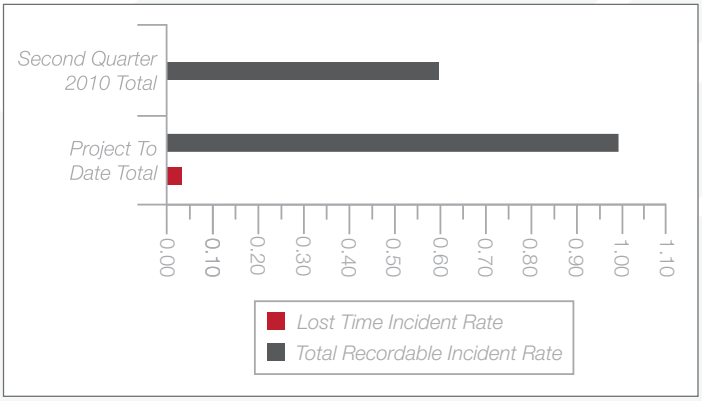


Figure 7.13 – Project work hours

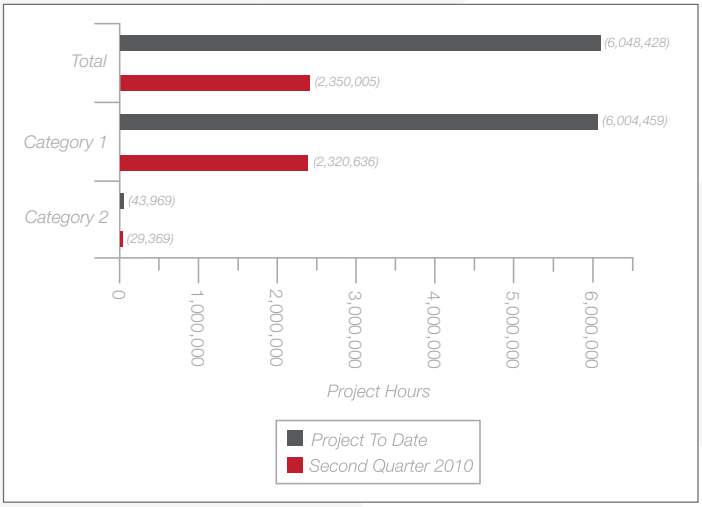


Table 7.3 – Leading indicators

Leading Indicators	Second Quarter 2010	Project to Date
Leading With Safety Workshops	60	149
Job safety analysis[9] (actual)	14,816	28,565
Job safety analysis (per 200,000 work hours)	1,639	1,673
Job safety analysis quality	89%	84%
Observations and interventions[10] (actual)	13,546	16,467
Observations and interventions (200,000 work hours)	1,499	965
Observations and interventions quality	86%	79%
Safe behaviors (per 200,000 work hours)	13,752	9,167
At risk behaviors (per 200,000 work hours)	1,388	981

8 A method for studying a job in order to identify the hazards associated with each step or task and developing solutions that will eliminate or prevent such hazards or accidents.

9 A behavior based process performed by trained observers (managers, supervisors, safety advisors, and/or workers) who periodically observe workers as they perform their daily job activities. The goal of the Observation and Intervention process is to positively reinforce safe behaviors and to change at-risk behavior through constructive feedback.

7.5 Worker Welfare and Conditions

Worker welfare and conditions covers all of the situations that workers are exposed to in the workplace including their living conditions in camps. Ensuring workers are recruited, trained and treated fairly in the workplace is a priority for the Project. Given the nature of the work, ensuring workers are accommodated in an equitable and fair manner and Project camp standards are met is also essential.

An integral part of achieving sound labor relations in the workplace is promoting cross-cultural understanding. Throughout the Project's construction, people will be employed from many different nationalities and cultures and they will work and live side by side. During this quarter, the Project launched a Cross-Cultural Training Program to provide Project and contractor teams with an understanding of the multi-cultural environment in Papua New Guinea as a foundation to promoting respect. Training is tailored to specific workplace needs as follows:

- Senior management:
  - High-level overview of social conditions and the challenges of doing business in Papua New Guinea.
- Middle management and contractors:
  - Detailed introduction to social conditions.
  - Organizational entities in the Project.
  - Trigger issues and management strategies.
- Site supervisors, Land and Community Affairs, all employees, security and logistics:
  - Overview of cultural landscape.
  - Conflict management in a multi-ethnic environment.
  - Rapid response behaviors.
- Communities:
  - Overview of western business culture.
  - Conflict resolution.

Plate 7.9 – Workers at Kutubu Central Processing Facility bypass

Risk Assessments

It is envisaged that in some instances Papua New Guinean citizens will not live in camps provided by the Project, but rather commute from home to work on a daily basis. To ensure that these workers are transported safely with minimum disruption to local communities, a detailed risk assessment was completed and mitigation measures were generated. These cover areas such as community impacts, community health and safety, worker health, logistics, catering arrangements, and personal protective equipment arrangements.

Plate 7.10 – Moro B Camp aerial overview

Other risk assessments were also conducted around room size and the need to wear permethrin treated clothing during the day at the LNG plant site. In each instance, worker health, safety, comfort and living conditions were considered and appropriate mitigations were developed where required.

Camp design

A key focus during this quarter was ensuring camp design and construction meet Project standards. Women's needs have been highlighted as deserving particular attention to ensure accommodation for female personnel provides equality as well as adequate safety and security measures. These needs have been translated into the design and recent construction of the camps.

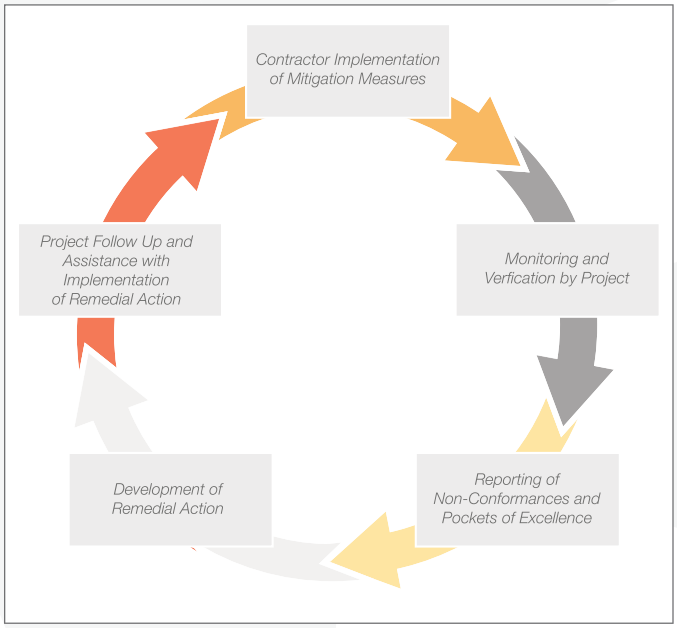
7.5.1 Verification, Monitoring, Assessment and Audit

As construction activities progress, monitoring of camps, labor and working conditions and community relations will increase. The Project has designed a monitoring process that will assess Project activities against the following social management plans:

- Camp Management.
- Labor and Working Conditions.
- Community Impacts.
- Community Infrastructure.
- Community Engagement.
- Community Health and Safety.

The process is illustrated in Figure 7.14:

Figure 7.14 – Monitoring process outline



Monitoring activities guide and assist the Project and contractors in meeting the obligations contained in each social management plan and as such, they will continue for the duration of Project construction. During this quarter, a monitoring exercise was conducted Upstream, identifying that recruitment processes, contracts of employment and payroll are areas in need of attention. An action plan has been developed around these issues and additional monitoring will be undertaken.

7.5.2 Contractor Provided Training

Training activities continued this quarter and covered a broad range of purposes and Project needs.

Induction training: Contractors have developed or are developing comprehensive induction programs covering all topics that are relevant to new employees including Project safety, health and environment, cross-cultural awareness, journey management planning, and other travel details.

Capacity building for Papua New Guinean citizens: Some contractors are developing community information packages, which outline Project details, training, local job opportunities and employment selection information for potential candidates. A 'cultural awareness in reverse' module, which includes information about respect for women, has also been designed by one contractor to help local employees adjust to working with expatriates.

Community and social training: Contractors have worked with the Project's Socioeconomic, Land and Community Affairs team to develop a cross-cultural awareness training package for workers who are not native to Papua New Guinea. This package is aimed at helping develop awareness and knowledge of local and national behaviors, expectations, customs, and beliefs. It contains five training modules, aimed at different training audiences:

- Managing a multi-ethnic workforce (for Managers).
- Working with expatriates (for Papua New Guineans).
- Cultural Awareness Executive Summary (for Executive Management).
- First time in the Southern Highlands (for expatriates going into the field).
- Working in a multi-ethnic workforce in Papua New Guinea (for all field employees).

The modules contain cultural do's and don'ts; local customs, beliefs, and communication considerations; community issues; and the Community Grievance Procedure; and information about Papua New Guinean history, governance, legal and political structures, principal landowner organizations, and leadership structures.

They also contain specific information about the Project's needs and expectations, and conflict resolution strategies, for managing work based conflict, gender and ethnic conflict. An extension of this is a Community Conflict Resolution Program that has been developed to help communities manage their own internal conflicts. This Program is mediation based and is anticipated to be launched later in 2010.

Safety: Safety is of the utmost importance to the Project and its contractors. During this quarter an extensive range of contractor training programs covered aspects such as procedures and guidance related to injury and compensation, rapid emergency response, security, human rights, in field movement, and safety management. In addition, 540 Project and contractor personnel completed programs addressing specific workplace safety issues such as ergonomic general awareness training, ergonomic supervisor training, first aid and general evacuation instructions, food safety, observation and intervention observer training, and incident and management reporting.

Environment and cultural heritage: In the area of environmental training, the Project and its contractors have been particularly active during this quarter. Project Environmental Training was delivered to over 400 individuals to date, spanning supervisors, operators, and general workers.

For the Upstream Infrastructure operations, all personnel must attend an induction when they arrive on-site for the first time. This includes fundamental environmental and cultural heritage management information. This is supplemented by detailed training provided to targeted personnel.

For example, a detailed Cultural Heritage Training Package is being provided to construction supervisors and machinery operators. This Package explains the importance of cultural heritage in Papua New Guinea, outlines the Project's approach to cultural heritage management, provides examples of archaeological artifacts that may be encountered in the Project area and describes what to do in the event of a 'chance find' during construction works.

Contractors provide regular 'toolbox' talks to site construction crews, supervisors and maintenance teams on spill prevention and response, including demonstrations of how to use a spill kit. This is followed up with refresher sessions to reinforce the main points of the training. Other toolbox talks have covered waste management and erosion control.

Highlands Highway personnel who work with or handle hazardous materials, including stores personnel and maintenance teams, were provided with hazardous materials handling training. This training will be completed at other sites over the upcoming quarter.

Other training provided by contractors during this quarter has covered: spill prevention and response, waste management, erosion and sediment control, water management, tree felling, fauna awareness, refueling and spill response, environmental aspects for supervisors and hydrocarbon and chemical management.

Verification, monitoring, assessment and audit processes, and incident management and non-conformance management procedures are essential to measuring the Project's performance and identifying areas for improvement.

8.1 Verification

During the second quarter, the Project conducted 150 site verifications across all active construction worksites. Site verification reports listing the major field observations, non-conformances, and other actions continued to be completed and provided to personnel for action.

Field verification visits were undertaken by both contractor and Project personnel on a regular basis at all sites. The scope of these visits was to verify implementation of relevant mitigation and management measures. It is through this process that field observations (both positive and negative) and non-conformances were raised. Each field observation and non-conformance was reported in accordance with designated severity levels (refer to *Appendix 3*) and assigned a corrective or remedial action which will be tracked to closure.

Field verifications completed for each Project area by contractor and the Project are presented in Table 8.1. The Project verification visits outlined in this table represent the number of times a Field Environmental Advisor visited a contractor's site in a specific area and was included in a written report to the Site Construction Lead. In addition to this formal tracking, for contractor sites with a permanent Field Environmental Advisor (such as the LNG plant site), actual number of times 'visited' is higher.

A weed inspection was also undertaken. Pre-clearance inspections were undertaken at 31 locations. Weekly inspections were also undertaken at geotechnical investigation sites, the terminal and construction camp area, the laydown site, the workshop area, the access road and Pioneer Camp.

Table 8.1 – Number of field verification visits

Responsible Party	Area	Number of Verification Visits During the Second Quarter 2010
Contractor	Hides	11
	Northern Logistics Route	20
	Kantobo	10
	Southern Logistics Route	20
	Komo Airfield	12
Project	Hides	9
	Northern Logistics Route	28
	Kantobo	15
	Komo Airfield	0
	Southern Logistics Route	72
	LNG plant site	13
	Port Moresby Construction Training Facility	2

8.2 Monitoring

Acceptance of the Project's Environmental Monitoring Plan is a key step in finalizing the ESMP. During this quarter, the Project informally presented the draft Environmental Monitoring Plan to the DEC, and invited comments. At a meeting in late June 2010, all outstanding DEC comments were resolved. The Plan will be finalized for formal submission to the DEC in the third quarter 2010.

8.3 Assessments and Audits

No environmental audits or assessments were completed by the Project during the second quarter. A Regulatory Compliance Assessment is scheduled in the third quarter 2010.

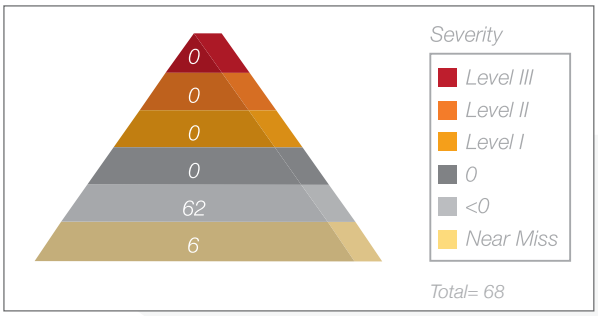
Project activities were subject to a monitoring visit undertaken by the Independent Environmental and Social Consultant in April/May 2010. The Independent Environmental and Social Consultants visit report will be made publicly available in the third quarter 2010 and will be accessible on the Project's website (www.pnglng.com).

For Komo Airfield construction activities, a number of audits have been undertaken and reported by the contractor including two hazardous goods, one commitments register, two erosion and sediment control and one waste audit.

8.4 Incidents, Non-Conformances and Corrective Action

8.4.1 Incident Summary

Figure 8.1 – Environmental incident summary



Project-wide, 62 environmental and regulatory incidents occurred in the second quarter comprising:

- 52 minor hydrocarbon spills (average of 7 liters per spill, predominately cause by hydraulic hose failure).
- Eight grey water spills (overflow of treatment facilities, such as rainfall events and pump failure).
- One Project administrative regulatory incident (submitted a regulatory report late to the Department of Petroleum and Energy making a non-compliance with the ESMP).
- One procedural breach (three trees identified and demarcated by the contractor were accidentally cut down due to a communication misunderstanding).

There were six environmental near misses, all related to preventing spills.

All environmental and regulatory incidents were classified as Severity < 0 (very minor). Corrective actions were implemented to ensure the ESMP requirements were being met. The majority of corrective actions have been fully implemented or are in the process of being implemented and the incidents then closed. A 30-day target period is set as the goal for complete closure.

ExxonMobil aims to continue the historical trend in spill reduction. As a Company there is increased emphasis on equipment reliability, individual accountability in daily activities to reduce human error, training to address high spill risk areas, and increased infrastructure inspections. Environmental management processes are guided by the ExxonMobil *Protect Tomorrow. Today.* initiative where the approach is to communicate expectations, measure progress, and strive to continuously improve environmental performance. This approach was demonstrated, when a predominance of hydrocarbon spills led to a focus on spill prevention and awareness. This is detailed in *Case Study Three: Spill Prevention*.

Notable aspects related to incidents for this quarter are as follows:

- The hydrocarbon and grey water spill rate continues to show a decreasing trend.
- An environmental stand-down at Oiyarip camp involving positive recognition for reporting all spills and cleaning spills appropriately and a focus on careless spills (overfilling tanks, not following procedures).
- Contractor risk assessments (large spills, water extraction/discharge, spoil dumping) were in development.

Figure 8.2 – Environmental incident and near miss causal factors

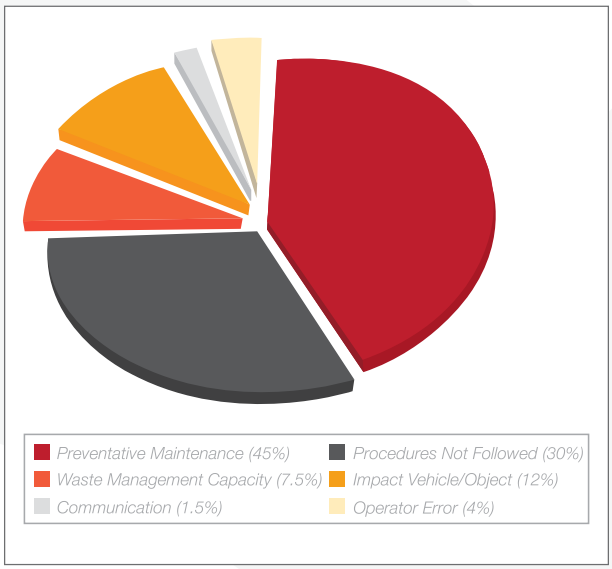
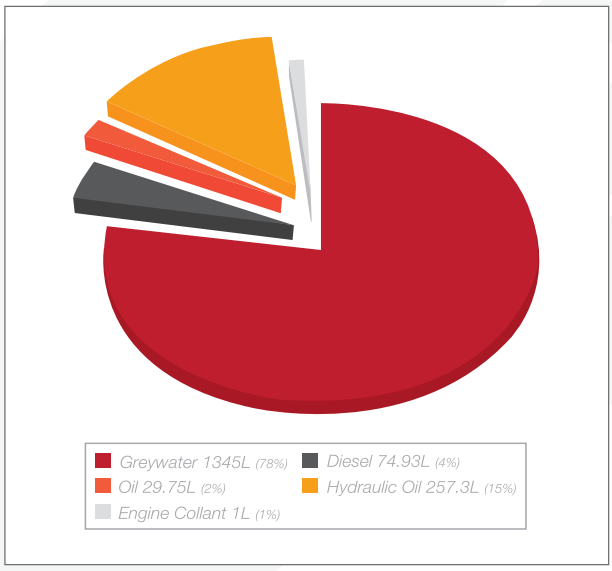


Figure 8.3 – Environmental spill type



8.4.2 Non-Conformance and Field Observation Performance

Across the Project, the following non-conformances and field observations were reported:

- One Level II non-conformance.
- Seven Level I non-conformances.
- 93 field observations.
- 35 positive field observations.

A corrective actions process has been implemented to assist in meeting the ESMP requirements. Corrective actions are taken to address all non-conformances and field observations. A 30-day target period has been established as the goal for complete closure, providing an improvement in closeout rates since the first quarter. Figure 8.5 demonstrates the second quarter closure status.

Figure 8.4 – Environmental non-conformance/field observation summary

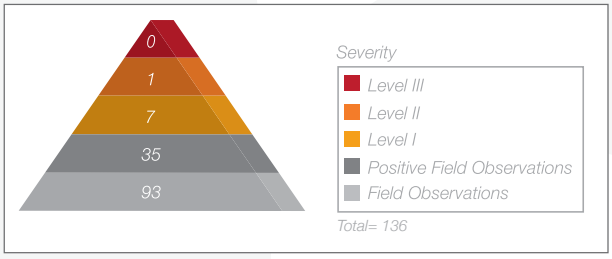
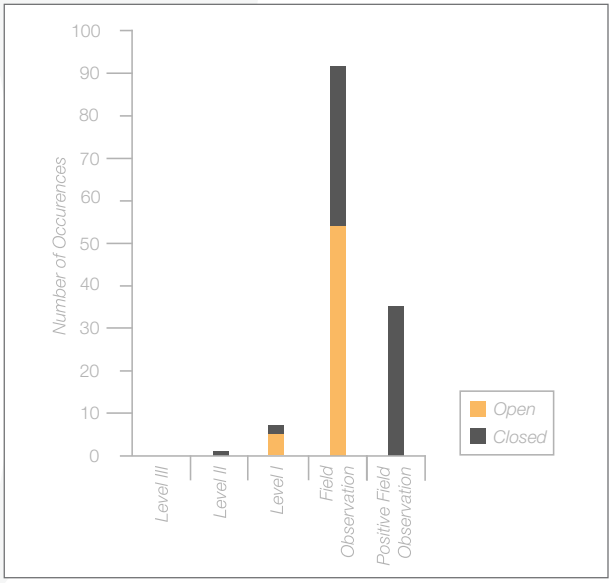


Figure 8.5 – Project field observation and non-conformance closure status



8.4.3 Summary

Key observations in relation to the second quarter non-conformances are as follows:

- A Level II non-conformance was raised related to the commencement of piling at Kopi without containment around a 10,000 liter diesel tank onboard the piling barge. This had been identified as a risk in the pre-work risk assessment but had not been addressed prior to commencement of work. Work was halted and a bund wall was constructed around the tank prior to recommencement of work.

- There were seven Level I non-conformances raised. These were categorized as two spill prevention and response, two waste, one weeds, plant pathogens and pests, one raw materials, and one ecology.
- There was an improvement in managing and closing-out incident and non-conformance corrective actions as well as conducting risk assessments.

Positive field observations covered a range of topics covering waste, sediment control, vegetation clearance, spill management, speed controls (for dust and safety), water quality, hazardous materials storage, cultural heritage chance finds, and ecological survey.

For the third quarter 2010, recommendations and the forward plan are as follows:

- Incident and non-conformance/field observation management is to be included within the Information Management System, which started development in this quarter.
- Improved communications through additional training on spill prevention and awareness at personnel and Lanco level. The leading cause of spills in this quarter was attributed to preventative maintenance.
- Work with contractors in closing-out incident and non-conformance corrective actions.
- Further refine and develop the contractor risk assessments for:
  - Large spills.
  - Environmental and social water extractions.
  - Water discharges.
- Increase the size of the Project Environmental Field team to help manage contractor environmental performance.
- Fully roll-out risk-based checklists to expand scope of environmental verification.
- Work on closing actions from the IESC monitoring visit.

CASE STUDY THREE: SPILL PREVENTION

Spill prevention is a key part of the Project's environmental policy reflecting the priority ExxonMobil places on preventing spills through effective operations integrity management

During April 2010, the Project's spill number rose, identifying the need to improve equipment maintenance and prevent potential 'short cuts' to correct working procedures.

An Environmental Leadership Challenge - Spill Prevention and Awareness Program - was established, incorporating training and awareness raising activities for maintenance crews, equipment operators, spotters and supervisors.

The program focused around four main messages:

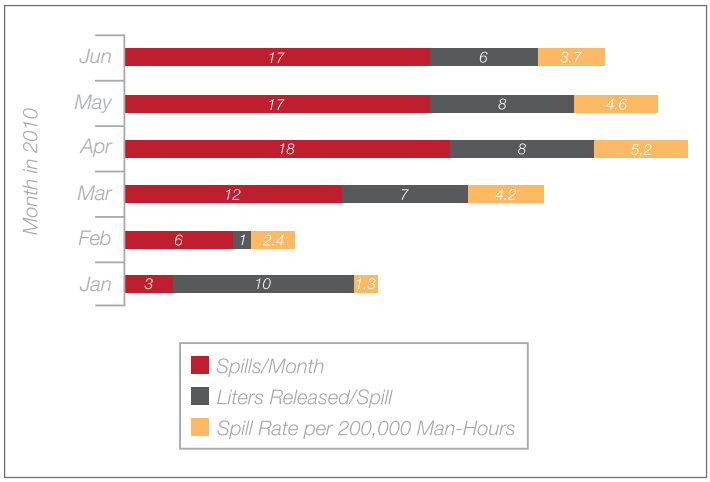
- Recognize and minimize the hazard.
- Prepare the worker.
- Carry out the work.
- Benefits of spill prevention.

A key component of the program was establishing an understanding of the importance of reporting all spills, regardless of how small they may be. Keeping a thorough record of all spills helps to identify key causes and trends, therefore reducing the risk of future spills. The importance of regularly inspecting permanent and temporary liquid storage tanks was also emphasized.

All workers have now undertaken thorough training in spill prevention and response procedures. They have also been trained to check all machinery and tubing systems for stress tears and for signs of leaking seals, gaskets and glands prior to work and at lunchtime.

The recently launched Environmental Leadership Challenge Program has already directly contributed to a reduction in spills per month, spill rate (per man-hours worked), and liters released per spill in both May and June 2010. Along with frequent communication and training, this is helping bring the Project closer to its aim of zero spills.

Hydrocarbon and chemical spill performance



The Project places greater emphasis on spill rate (per man-hours worked), rather than the actual number of spills per month, as an indicator of performance. With nearly four million hours worked to date, the Project's spill performance is shown above. The black bar represents the liters of hydrocarbons released per spill. During the second quarter, an average of seven liters of hydrocarbon was released per spill (two gallons). The red bar represents the number of spills in relation to man-hours worked, also called the spill rate.

CASE STUDY THREE: SPILL PREVENTION

Examples of spill response and prevention

Mechanic doing inspection of equipment on site

Service truck refueling equipment on-site in line with the Company's refueling procedure

Mud accumulating in the tracks is manually removed during lunch hour

Continuous spill response and prevention awareness by the Company Field Environmental Advisor during a toolbox meeting

9.0 POLLUTION PREVENTION AND ABATEMENT

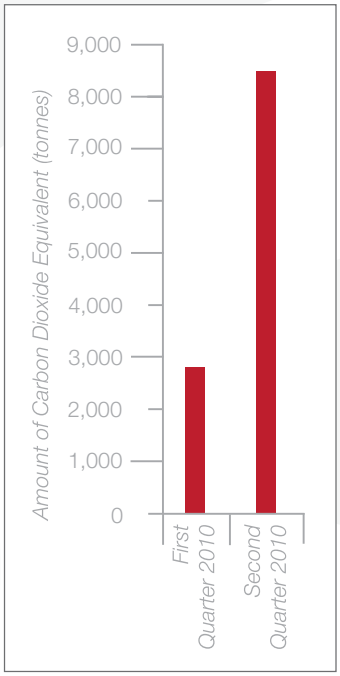
The Project is committed to avoiding or minimizing adverse impacts on human health and the environment by identifying and evaluating potential risks, minimizing pollution and reducing emissions that contribute to climate change.

9.1 Air Emissions

At the end of the second quarter, waste incinerators had been installed at Oiyarip Camp (near Mendi) and Moro B Camp. Other worksites were using existing third party incinerators at Nogoli, Gobe, Kopi and Ridge Camp for disposal of non-restricted waste on an interim basis pending delivery and commissioning of additional Project incinerators.

In order to control emissions from incinerators their operation has been in accordance with vendor specifications. Upon commissioning the Oiyarip Camp incinerator, the vendor was present to verify that the required combustion temperature could be met. Incinerator operators have been trained and competency assessed. They have undergone training in the segregation of waste to ensure the proper separation of restricted/non-restricted and combustible/non-combustible wastes. The majority of incinerator burns during this quarter were for domestic waste. Less than five percent of waste incinerated was categorized as restricted. The majority of restricted wastes were hydrocarbon contaminated materials. Incinerator operators ensured that the unit was operating at full temperature prior to the combustion of restricted waste.

Figure 9.1 – Greenhouse gas emissions per quarter



Greenhouse gas emissions were documented for this quarter, with diesel being the only fuel recorded. The Upstream Infrastructure contractor's diesel usage was 3,124 kiloliters (the first quarter was 1,040 kiloliters), which gives a greenhouse gas emissions value of 8,279 tons of carbon dioxide equivalent emitted when calculated using the Australian Government's Department of Climate Change, National Greenhouse Accounts Factors, June 2009. The figure for the first quarter was 2,755 kiloliters. The increase in emissions reflects the increase in transport and construction activity necessitating increased fuel consumption.

9.2 Waste Management

Waste management objectives outlined in the Waste Management Plan are:

- Contain, transport, handle and dispose of solid and liquid waste arising from Project construction activities in such a manner as to minimize impacts to human health and the environment.
- Dispose of waste at Project approved facilities, for which disposal is the only practical option.

A consistent and ongoing effort is underway to achieve the stated waste management objectives and ensure the accurate recording and completion of both the waste transfer forms and the waste management register. Waste transfer forms are used for tracking temporary storage at on-site holding locations prior to off-site disposal, while the waste management register records the volume of each type of waste generated at each site. It also states the storage location and/or disposal route.

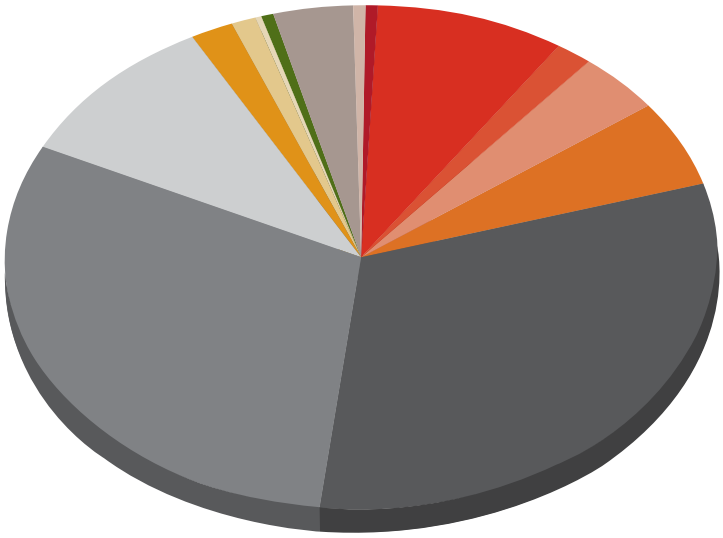
The waste transfer form enables verification that waste is delivered to Project approved facilities only. Regular reviews are undertaken to check completion of the waste transfer forms. To date there have been a few instances where forms were not completed or they were completed incorrectly, but such instances were identified in a timely manner and corrected.

Further opportunities for waste minimization and recycling are being investigated, not only to improve waste management performance but also to minimize the burden on small mobile incinerators, and ultimately reduce emissions.

A future focus will be on the provision of bottled water on-site. Water is imported in polyethylene terephthalate plastic water bottles, but as there are no recycling facilities in Papua New Guinea, this was not considered a sustainable option during the second quarter. Once the quality of drinking water supplies at the camps is proven to be safe, the use of the plastic water bottles will be reviewed.

Solid waste by type for those contractors operating on the ground in this quarter is illustrated in Figure 9.2.

Figure 9.2 – Solid waste by type, during the second quarter 2010



The following Waste Types have a value of 0%: Ash (Non-Restricted), Cleaning and Grubbing Waste, Electrical Goods and Fluro Tubes, Empty Gas Cyclinders, Paint Waste, Spent Batteries, Soil Contaminated with Restricted Waste, Unused, Spent, Expired and Contaminated Solvents, Chemicals and Additives.

Note: This is the second quarter of waste data collection and some parameters were not measured as waste management plans evolved and were tailored to the worksites. Wastewater and sludge has not been included this quarter as systems are still being developed to consistently capture volumes across all sites.

Predominant waste materials generated in the second quarter were general construction debris, paper and cardboard, plastics and insulation, scrap metal and wood.

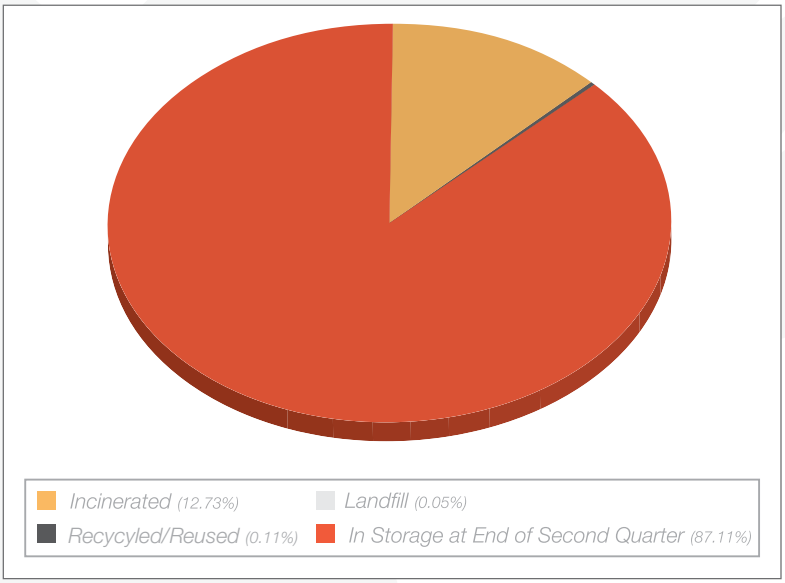
Waste lube oil generated from the operation and maintenance of the earth moving equipment accounts for the largest volume of restricted waste generated. Recycling opportunities in Papua New Guinea are relatively limited, so innovative solutions are often required to determine potential options for optimum waste disposal.

The Project and contractors are working together to determine the appropriate solution for the disposal of waste oil. A contract has been established with Oil Search Limited to inject Project waste oil into Oil Search Limited's export facilities.

Disposal methods for solid wastes in the second quarter are illustrated in Figure 9.3.

Weekly design reviews for the Hides Waste Management Area facilities were undertaken to ensure all expected waste was sufficiently considered in the design of the facilities. This includes factoring of expected drilling waste.

Figure 9.3 – Waste by disposal method (in m³)



By the end of the second quarter, five wastewater treatment plants had been installed at Oiyarip, Kopi floating hotel (Floatel), IDT10 Camp, Wellpad A Camp and Moro B Camp. Wastewater from other camps was managed via approved third party facilities. Water discharge monitoring commenced at all sites, with the exception of IDT10 Camp, where receipt of monitoring equipment was delayed and Moro B Camp where monitoring is scheduled to start in the third quarter 2010. Weekly on-site field samples were undertaken for total coliform bacteria, pH and temperature when the plant was first starting up and a full suite of parameters once per month.

Plate 9.1 – On-site waste segregation in covered area

Following plant start-up, a period of time for stabilization is required in order to achieve steady operations and allow for the necessary development of bacteria within the treatment unit. Discharge monitoring results of these facilities were analyzed and adjustments were made to the plant, when necessary, to achieve stable operations following the stabilization window.

At Oiyarip Camp, on-site monitoring was delayed due to failure of monitoring equipment to reach the site. The equipment was re-ordered. A full suite of parameters have been sampled for and the laboratory results are due early in the third quarter 2010.

A proactive approach has been taken to monitoring whilst the Project awaits formal determination and approval by the DEC of monitoring parameters and frequencies (see *Section 8.2 Monitoring*).

9.3 Hazardous Materials

The objectives of the Hazardous Materials Management Plan are to avoid the use of hazardous chemicals and materials subject to international bans or phase-outs, and to prevent uncontrolled release of any hazardous materials during transportation, handling, storage or use. In order to facilitate these objectives a list of banned chemicals and substances has been communicated to all contractor procurement teams who then ensure these chemicals are not included in any purchases.

9.4 Spill Prevention and Response

During the months of April and May 2010, spill risk assessments were completed for the Kopi and Kobalu sites. The Kopi risk assessment targeted the fuel bunkering activity for diesel fuel transfer between the supply barge and the Floatel to run the on-board generators. The risk assessment determined the maximum spill size scenario for the fuel transfer and developed a response plan based upon predicted spill trajectory taking account of river flow, turbulence and predicted diesel dissipation timeframes. The response plan accounted for downstream villages; the Project/contractor, community and government/stakeholder notification procedures and times; placement of booms; water supply and clean-up. Prior to any fuel transfer, a desktop spill drill was undertaken.

At Kobalu the spill risk assessment took an inventory of all fuel and chemicals stored on-site. The Kobalu site is a fueling location for a helicopter company and is used by a Lanco to store small amounts of fuel. In addition, camp construction was ongoing. The risk assessment identified some storage improvements, which were communicated to the parties responsible.

In response to a rise in the Project's spill number in April 2010, a Spill Prevention and Awareness Program was established (see *Case Study Three – Spill Prevention*).

The Project recognizes the high value of biodiversity resources in Papua New Guinea and is committed to operating in a way that protects the environment. The Project team is drawing on combined experience across a diverse portfolio of projects around the globe, which include remote and sensitive environments.

10.1 Ecological Management

The Ecological Management Plan aims to reduce impacts on habitat and specific ecological aspects and species arising from construction activities. The Project is undertaking pre-construction surveys to identify ecological sensitivities and define management measures. The status of these surveys is included in *Section 2.8 Pre-Construction Surveys*.

Plate 10.1 – Native rodent eating a pandanus fruit

In the second quarter, surveys led to the identification of a number of site-specific mitigation measures for species and habitats including those relating to Long Beaked Echidna *Zaglossus bartoni*, *Nothofagus* (beech) forests, Blue Bird of Paradise *Paradesea rudolpha*, Bird of Paradise display trees and display grounds, *Pandanus* swamp forests and changes to culvert design to account for crocodile habitat on the Gobe to Mubi River road. These site specific mitigation and management measures were adopted within the worksite procedures.

10.2 Quarantine Management

As discussed in *Section 3.5 Environmental and Social Milestone Schedule Update*, a quarantine program is under development for the Project. An assessment of Papua New Guinean quarantine related laws, regulations, practices and capacity forms the basis for the development of the Quarantine Management Plan.

Plate 10.2 – A Large Tree Mouse

The objectives of the Quarantine Management Plan are to ensure full compliance with Papua New Guinean laws and regulations related to quarantine. Where appropriate, Australian practices will also be utilized to: prevent the importation and spread of any pest, plant pathogen or disease via Project personnel or cargo; facilitate expedient quarantine clearance of Project freight imported to Papua New Guinea, and implement effective control measures for the export of any Project freight.

The scope of the Quarantine Management Plan extends across all current and potential future points of entry to, and exit from, Papua New Guinea. A key focus of the management measures contained in the Quarantine Management Plan is prevention through proper quarantine controls at the point of export or in transit prior to the arrival of freight and personnel to Papua New Guinea.

Responsibility for executing the Quarantine Management Plan rests largely with contractors and subcontractors. The Project will oversee this program to verify it is taking place appropriately.


Torrent Frog


Ranid Frog


Tree Frog


Torrent Frog


Tree Frog laying eggs on leaf


Tree Frog

10.3 Weed, Plant Pathogen and Pest Management

An exotic weed or pest is defined as an invasive (native or introduced) or introduced species that causes an adverse impact on the ecology and/or communities. The objectives of the Weed, Plant Pathogen and Pest Management Plan are to:

- Prevent exotic weeds, plant pathogens and pests from entering, spreading or becoming established in Project areas during construction works.
- Identify and contain, suppress or manage significant weeds, plant pathogens and pests already in Project areas to prevent spread by Project activities.
- Implement measures to reduce the risk of spread of dieback in *Nothofagus* forests.

Plate 10.4 – Strangler Fig tree at Komo

There is a requirement for contractors to produce a contract specific Weed, Plant Pathogen and Pest Management Plan.

The Project is conducting Weed, Plant Pathogen and Pest Surveys (see *Section 2.8 Pre-Construction Surveys*) of the pipeline construction corridor, processing facility sites, wellpads, new roads and access tracks, and any other relevant Project areas to identify:

- Construction areas that are a high risk for new weed and pest invasion (high risk is defined as an area that intersects a priority ecological area, for example, Hides Ridge, or anywhere that has potentially uncontrolled access).
- Particular weeds and pests for surveillance, control and management, including compilation of a list detailing priority weeds and pests such as those that have a high potential for significant adverse impacts if an incursion occurs or spread from an existing incursion occurs.
- *Nothofagus* forest susceptible to fungal disease and associated dieback that will require special hygiene measures.
- Areas infested by priority weeds or pests that require management.

The Project also considers those activities that present a high risk of spreading weeds and pests. High risk activities are considered as those that involve Project equipment or materials that a weed or pest can attach itself to, or be transported by.

The outcomes of the pre-construction surveys include geographical positioning system locations for weeds, plant pathogens, pest high risk and priority areas and identification of further measures to mitigate impacts for input to the contractor's Weed, Plant Pathogen and Pest Management Plan. The surveys continued during this quarter and the results with site-specific requirements were integrated into the pre-construction survey reports for appropriate action by the contractors.

As data is gathered from the pre-construction surveys, it is helping to develop a better understanding of the distribution of weed types throughout the Project area enabling the development of an integrated approach to the management of weeds and establish weed management priorities for different species based upon their location and distribution. This integrated approach will enable the management of weeds in a strategic manner.

Priority weed species were found at six sites: the Mubi River ferry and laydown along the Southern Logistics Route (one species); the Central Processing Facility bypass road deviation at Kantobo (one species); three bridges along the Northern Logistics Route (four species at each site), and at the HGCP (seven species). Mitigation measures identified include ensuring topsoil is not removed from any site, without a risk assessment and Project approval, nor stored near a watercourse.

Plate 10.5 – The weed Ludwigia

For example, works commenced during the quarter at the Highlands Highway bridge site MR-01, located adjacent to the Northern Logistics Route. The main ecological sensitivity was the riverbank and the river itself. As along the entire Northern Logistics Route, multiple priority weeds were present at this bridge site. All mitigation measures contained in the DEC approved pre-construction survey report were included in the worksite method statement that was developed for the construction site. Examples of relevant ecological mitigation measures at the MR-01 site included topsoil storage on-site and away from the river to prevent the spread of weeds and retention of riparian vegetation outside of the disturbed area. The contractor also completed a pre-construction assessment form as a final verification of the pre-construction survey results and to record the pre-construction condition of the site for reinstatement purposes. Works continued at the MR-01 site, and both the Project and contractor Environmental Field teams inspected the site regularly to verify implementation of the required mitigation measures.

Verification inspections and weed surveys undertaken during this quarter are covered in *Section 8.0 Conformance*.

Vehicle and equipment washdown is required at certain sites and in such cases Vehicle and Equipment Washdown and Inspection certificates are required to demonstrate vehicles and equipment brought on-site have been adequately inspected for weeds and appropriately treated. For the Hides area, the inspections are undertaken at Port Lae and again at the worksite boundary. The washdown strategy and inspection certificate requirement is still in development. A total of 69 such certificates were completed during this quarter for new equipment.

Surveys were completed in June 2010 on possible dieback areas with the final DNA test pending to confirm or disprove the presence of the fungus that causes dieback.

10.4 Induced Access

The Project has committed to controlling access to new Project roads in order to address potential indirect impacts related to induced access. During construction, access shall be controlled to all new Project roads. Upon finalization of construction in any area, measures shall be put in place to enable post-construction access control.

Work up to the end of this quarter has largely been undertaken on public roads, so no access control has been necessary.

However, the Gobe to Mubi River road, originally constructed by Oil Search Limited during installation of the existing oil pipeline, has been re-established as part of the Project and access control is in place along this road pursuant to the Project's commitment.

A boom gate was installed at the entrance to the Gobe to Mubi River road to prevent any access of unauthorized vehicles. All vehicles are tracked in and out of this road and all Project vehicles have a registration number and a note is made of this number by the boom gate staff. At the end of this quarter, the road terminated at the Mubi River so no access was possible from the western end. These controls are in line with the requirements of the Induced Access Management Plan and the following hierarchy:

- Use of natural terrain features and conditions such as steep slopes and watercourses.
- Removal of strategic Project infrastructure.
- Installation of operational controls, for example security guards and physical barriers.

Plate 10.6 – Landscape near Nogoli with Klinki Pine

Plate 10.7 – Green Tree Python at Juha

10.5 Biodiversity Strategy

As discussed in the first Quarterly Environmental and Social Quarterly Report, preparation of a Biodiversity Strategy for the Project is underway. The Strategy focuses on alignment with the Papua New Guinea National Biodiversity Strategy and Action Plan.

The draft Strategy has been developed following ongoing discussions with the IESC/Lender Group. It is being re-drafted to include more detailed information from the Project Environmental Impact Statement and to better integrate a new monitoring program with the Strategy's overall objectives.

The monitoring component of the Strategy significantly progressed in the second quarter through the letting of a contract to develop a remote sensing system, which will enable the monitoring of potential indirect impacts identified in the Environmental Impact Statement in the Upstream Project area.

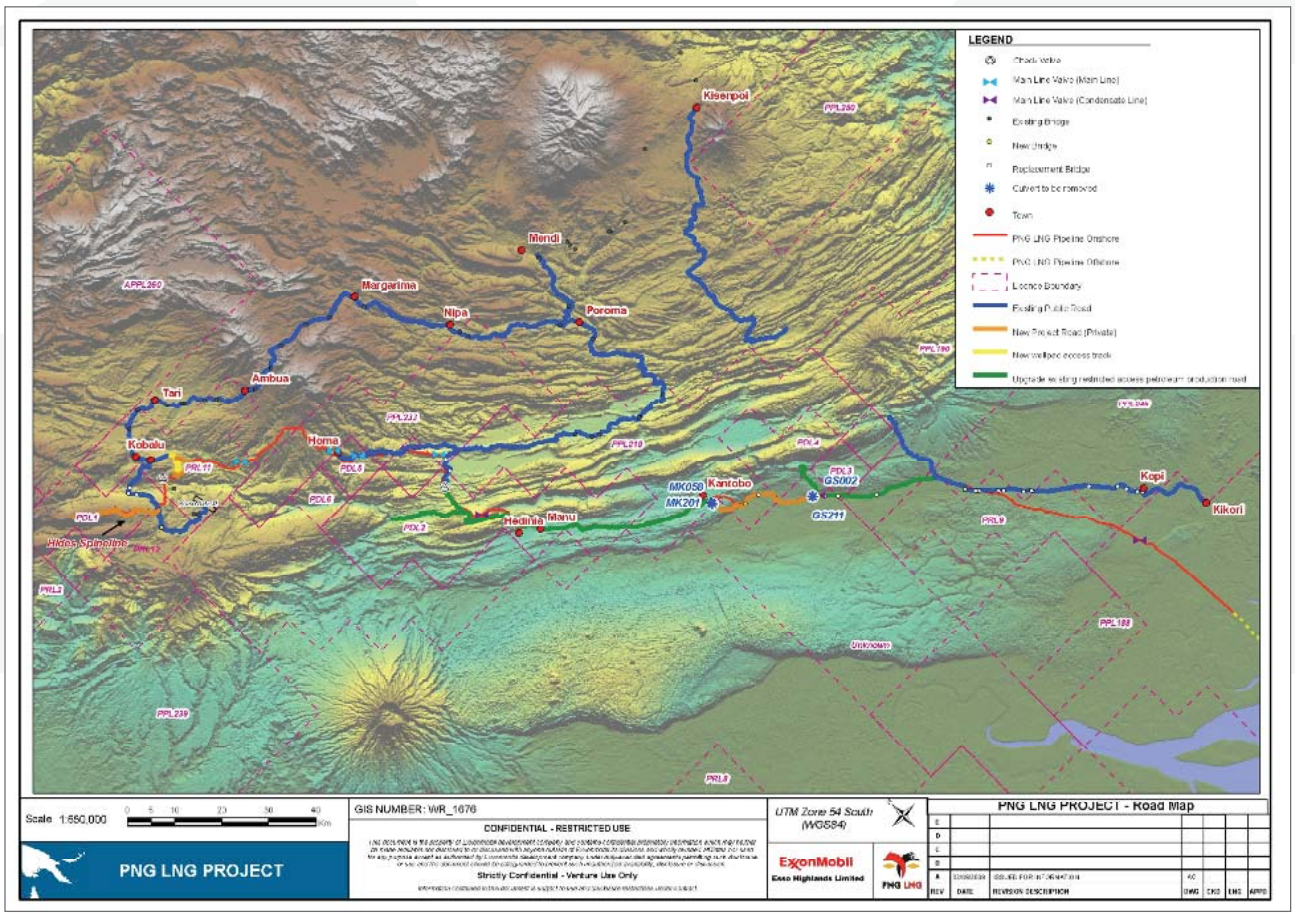
Plate 10.8 – Papuan Frogmouth

Plate 10.9 – Rhinoceros Beetle

The offset component of the Strategy progressed through preliminary and informal engagement with conservation organizations and research institutions in Papua New Guinea, the United States of America and Australia. A range of potential offset projects have been identified and are being explored. A steering group was established to drive completion and implementation of the Strategy, including the offset and monitoring components.

Finalization of the Strategy will be followed by public disclosure of the document. At this stage, formal consultation will commence with stakeholders such as Government, NGOs, industry and communities.

Figure 10.1 – Roads in the Project area



11.0 RESOURCE MANAGEMENT

The Project is committed to operating in a way that takes into account the economic and social needs of the communities where operates, including effective management of natural resources such as water and soils.

11.1 Water Management

Energy and water are intimately connected, as it takes water to produce energy and energy to extract, treat and transport water. Ensuring sufficient freshwater supply for the Project and the community involves understanding supply and demand trends, assessing potential impacts on quality and implementing steps to address trends and impacts.

Plate 11.1 – Beaver Falls

11.1.1 Usage

Monitoring of water taken from watercourses or groundwater for Project use demonstrates that environment (water extraction) permit conditions are met. Freshwater usage includes procured raw or drinking water as well as water taken from surface or ground sources.

In accordance with the Water Management Plan, risk assessments were undertaken prior to extraction and discharge to evaluate potential impacts to ecology and downstream users. The assessment requires determination of indicative surface water flow, downstream use and ecological sensitivity. The proposed extraction volume is assessed against low flow. Should the assessment determine that the extraction would impact significantly on flow or may otherwise have a negative effect on downstream users, an alternative source is used.

In the second quarter, water extraction assessments were completed at the Wellpad A, Oiyarip (Mendi), Kopi and Gobe Camps and at the Northern Logistics Route bridges ME-15 and ME-16. These assessments determined the proposed extraction would be less than ten percent of flow (substantially less than ten percent in all cases except one) and therefore would not affect downstream users. Water at other Upstream Infrastructure locations was obtained from third party suppliers.

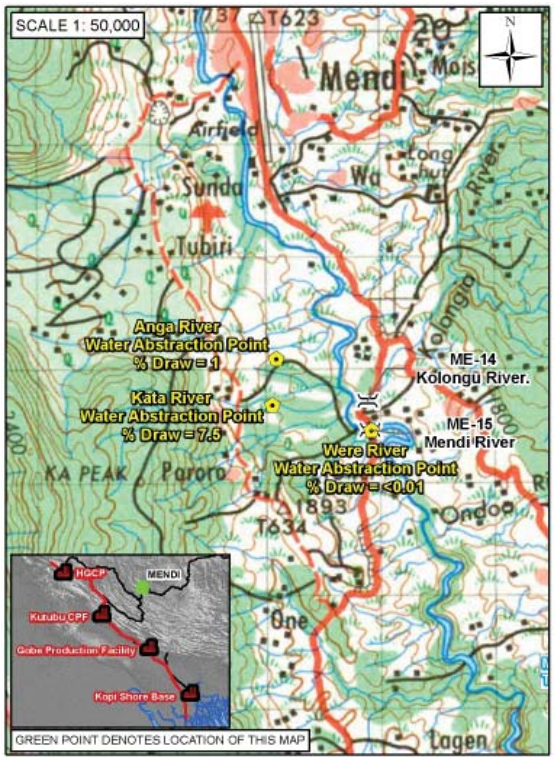
During this quarter, water in the upstream area was extracted from seven surface water locations as shown in Figures 11.1 a–d.

Water extraction volumes per extraction point are within the annual limits set by the Environment Permit (September 9, 2009) and, based on the draw in this quarter and camp population predictions, are expected to be well within required limits for 2010.

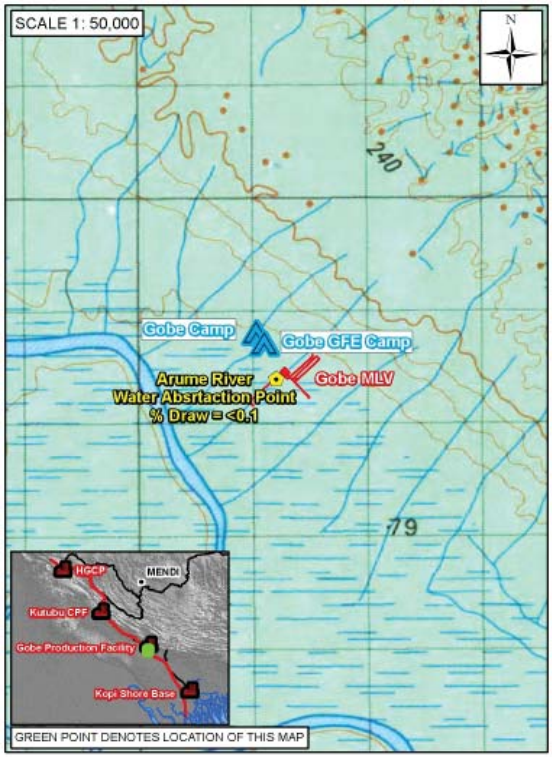
Water usage amounted to 5,500 kiloliters for this quarter. This compares to 1,285 kiloliters for the first quarter, again reflecting the increase in construction activity. The volume of water usage for this quarter by location is shown in Figure 11.2.

Figure 11.1 a–d – Surface water extraction points and percent of flow extracted

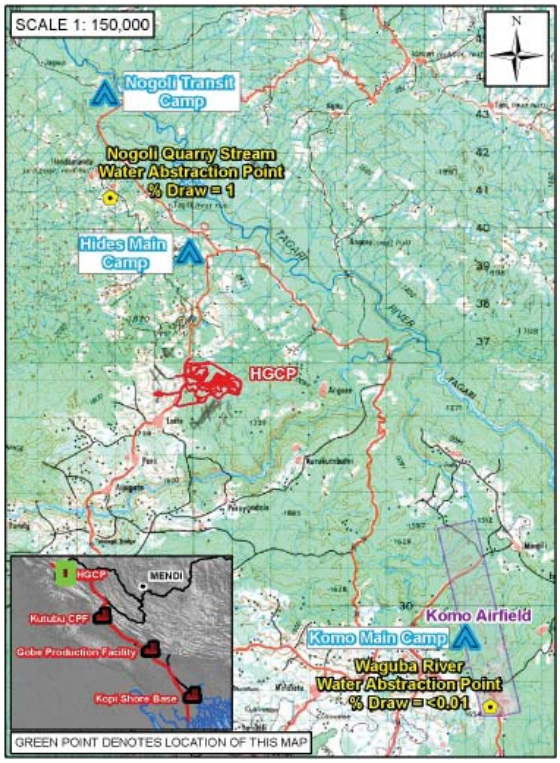
a) Anga



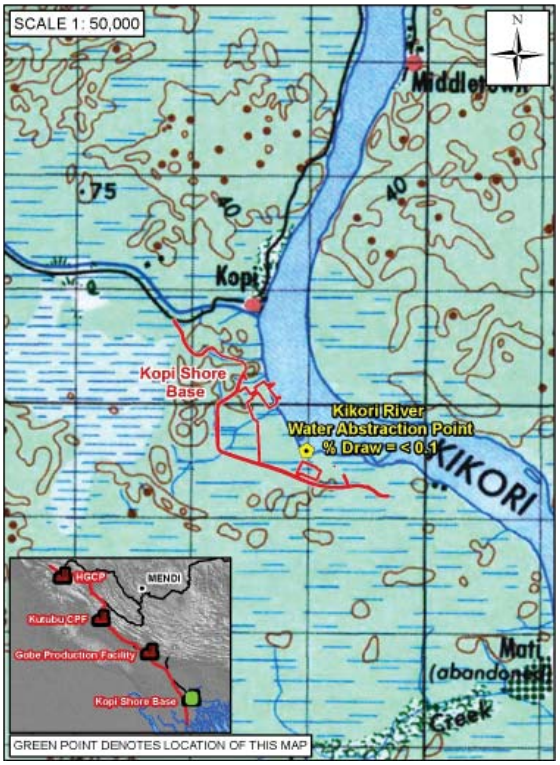
b) Arume, Kata, Were



c) Nogoli Quarry Stream and Tributary of Waguba



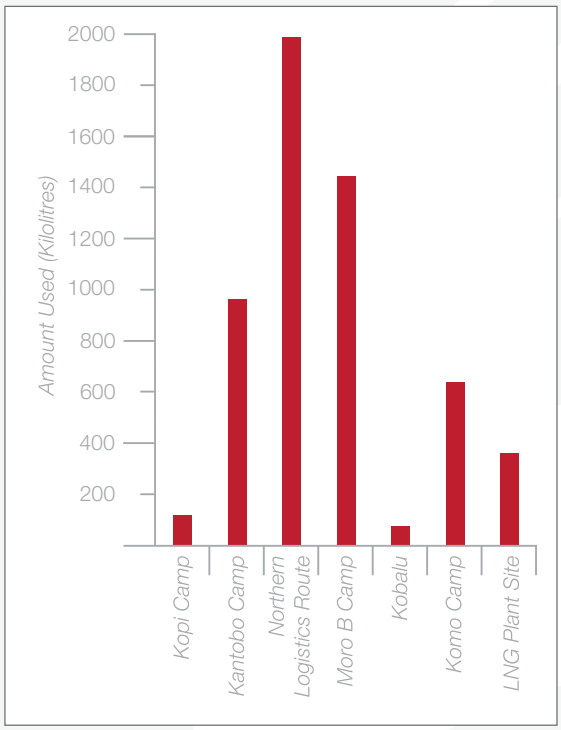
d) Kikori



The following notes apply to the second quarter figures:

- Gobe is not included, as water draw had not commenced at the end of the second quarter.
- The Northern Logistics Route total shows the combined draw from Oiyarip Camp and Northern Logistics Route bridges ME-15 and ME-16.
- During the second quarter some contractors lived in third party accommodation.
- For Kopi Camp, water draw does not include water draw from the Floatel. This data is under review and will be reported next quarter.
- Moro B Camp data applies for both May and June 2010 when the camp was active.
- Kobalu does not have any full-time accommodated staff, as construction is ongoing hence the low water draw figures.
- Water at the LNG plant site was used for archaeological artifact washing and sieving and dust control during construction of the LNG plant site bypass road. For the archaeology, work water was trucked in whilst for dust suppression it was obtained from a standing water pond adjacent to the bypass route. An assessment was conducted to determine water extraction from the standing pond had no impact.

Figure 11.2 – Water usage in the second quarter 2010



11.1.2 Quality

Water quality and wastewater discharge are addressed in *Section 9.2 Waste Management*.

Water sampling is undertaken upstream and downstream from Komo Camp and at the camp soak-away. The monitoring criteria are those prescribed in the Water Management Plan. Monitoring was undertaken in May and June 2010 and results indicate compliance with the required quality criteria.

In order to address dry season monitoring requirements, water quality and biological sampling was undertaken in June 2010 at locations on Tugubi Creek, Kaimari Creek, Mandali River and Aiur River. Wet season sampling had previously been undertaken in October 2009. The purpose of the sampling is to establish a pre-construction baseline against which future sampling during construction can be compared.

11.2 Raw Materials

One new quarry has been established during the reporting period at Kopi (referred to as Pinnacle 17). Most material was sourced from existing third party (operating and abandoned) quarries. In accordance with the objectives of the Raw Materials Management Plan, existing quarries will continue to be utilized in preference to new quarries.

Environmental pre-construction surveys were completed during the quarter for three proposed new quarries in the Hides area. The survey results are under review.

During the quarter, seven quarries were in use, as outlined in Table 11.1.

Table 11.1 – Quarries in use and extracted volumes

Area	Quarry Name	Volume Extracted m^3 During the Second Quarter
Mendi	MM09	9,250
	MM10	1,660
Hides	Quarry 1	12,446
	Quarry 2	812
Southern Logistics Route	Pinnacle 17	283,046
	Mubi River Quarry	5,602
	Kikori River South (Quarry 33)	30,222

Only small volumes of timber have been required for the Project up to the end of the second quarter, principally for walkways in camps and typically about five cubic meters per campsite. This timber was sourced from local Lanco operated suppliers (with one exception see *Section 8.4.2 Non-Conformance and Field Observation Performance*).

A larger timber volume of 2,552 cubic meters was sourced from trees felled as part of the site clearance for the Komo Airfield. This timber was required for the installation of the boundary fence.

Spoil is actively managed to prevent weeds, erosion and to maintain microbial activity.

11.3 Erosion and Sediment Control

Plate 11.2 – Timber used for walkways in camps

Requirements for erosion and sediment control are determined as part of the pre-construction surveys for all worksites and the required management measures are incorporated in worksite procedures.

Erosion and sedimentation control devices are installed at all active worksites. The Gobe to Mubi River road worksite, which has over 30 river crossings, had particular challenges relating to the management of sedimentation. The Gobe to Mubi River road was originally constructed during the installation of the existing oil pipeline and subsequently the culverts were removed and the road was abandoned. Work was required in multiple locations of the stream to re-establish this road. Increased sediment levels could not be avoided. Downstream assessments were undertaken in order to identify sensitive environments such as fish breeding areas, swamps or other habitat. These assessments were completed up to 500 meters downstream of each crossing. No sensitive habitats were found. Erosion and sediment control measures have been installed at all culverts on this road ranging from small sediment fences to rock-filled baskets at some of the high-energy watercourses. Due to the heavy rainfall in the area, the erosion and sediment control structures are frequently checked and maintained.

Other than those measures put in place for the stabilization of worksites throughout Project areas to control erosion and sedimentation, there has been no requirement up to the end of this quarter for active reinstatement.

By the end of the second quarter, aggregate extraction works were completed at the Gobe 2000 quarry and are near completion at Northern Logistics Route bridge site ME-16, near Mendi. Site-specific reinstatement procedures are under development for each of these sites.

Plates 11.3 a-c – Erosion control measures at the LNG plant site and POM Tech

12.0 CULTURAL HERITAGE

The Project seeks to understand and protect cultural heritage by consulting with stakeholders and acting with respect toward individuals from diverse cultures. The Project's Cultural Awareness Plan describes in detail how community awareness programs, the provision of information, dialogue, and collaboration with local communities are to be conducted.

12.1 Cultural Heritage Management

The objectives of the Project's Cultural Heritage Management Plan are to:

1. Avoid known cultural heritage sites, including both archaeological sites and oral tradition sites where necessary and practicable;
2. Where avoidance is not possible, manage cultural heritage sites in consultation with the Papua New Guinean Government and landowners.

Pre-construction Project Cultural Heritage Surveys are conducted to ensure each worksite is characterized and appropriate site-specific mitigation and management measures are identified. Such measures need to be endorsed by the Papua New Guinean Government Department of Conservation before construction starts. The Cultural Heritage Management Plan, overseen by the Project archaeologist, also includes 'salvage programs' for managing known sites of archaeological significance, and procedures for managing 'chance finds' of any description during Project work.

During the second quarter, pre-construction surveys identified archaeological sites in three Project activity locations. These sites were:

- Northern Logistics Route – burial sites, clan boundary ditches, sacred lakes, men's houses, ritual healing and meeting sites (including stone club head), ceremonial sites, ritual resource sites and sacrificial sites.
- Hides – settlement sites, burial sites, bachelor cult sites, men's houses, sacrificial sites, clan boundary ditches, sacred sites and ceremonial sites.
- Middle Kikori/Kopi/Gulf region – chert (rock) flakes, ossuary and burial sites and ritual sites.

Plate 12.1 – Stone club head used in healing rituals

12.2 Management of Known Sites

Cultural Heritage Salvage Programs have been undertaken where cultural heritage interest was identified through the findings of the Environmental Impact Statement. Active sites during this quarter were at the HGCP site and the LNG plant site.

At the HGCP site, a four month Salvage Program commenced in February 2010 in conjunction with Monash University, Melbourne involving international and Papua New Guinean archaeologists and labor assistants from the Hides area. The program involved recording both surface and sub-surface archaeological deposits by way of surface collection and excavations, as well as recording the oral tradition of sites through detailed interviews with local landowners. During this quarter, the sieving of all material excavated to date was completed and the material was sent to Australia for analysis. This process is expected to take six months to complete. Due to a number of constraints, including camp accommodation, social, security and landowner issues, the rate of salvage progress during this second phase was less than anticipated, and ultimately the Archaeological team was demobilized. Alternative strategies for finalizing this work are under consideration and will be developed in consultation with the Papua New Guinean National Museum and Art Gallery.

The LNG plant site Cultural Heritage Salvage Program commenced in September 2009 and salvage excavation activities concluded in March 2010. During the second quarter, sorting and sieving of material at the site was completed, and all excavated material was transferred to Monash University, Melbourne for analysis and documentation. This process is expected to take up to 18 months to complete. After this time, the material will be returned to Papua New Guinea and custody will be transferred to the Papua New Guinea National Museum and Art Gallery. The Salvage Program involved both surface collection and excavation of two primary areas on the LNG plant site and the site's bypass road corridor where the main construction activities are expected to take place.

Plate 12.2 – Archaeologists busy at an excavating site

12.3 Incidents of Disturbance to Known Cultural Heritage Sites

There have been no incidents of disturbance of known cultural heritage sites during the second quarter.

Plate 12.3 – Bogi 1 excavation site at the LNG plant site

Plate 12.4 – Shell Adze from Bogi excavation site

However, there has been one near miss recorded during this quarter. This near miss was investigated and lessons learned were captured to prevent a repeat of this type of incident. The area at the Kikori River bridge site had previously been subject to surface salvage prior to construction after the finding of an un-hafted stone axe (without a handle or hilt) during the pre-construction survey. Archaeologists determined no further mitigations were required and the construction works could proceed subject to the application of the Project's Chance Finds Protocol.

At this site, vegetation clearing using excavators started without the presence of an archaeologist or other trained personnel as required by the Chance Finds Protocol. The site foreman was aware of this requirement, so as soon as the situation came to his attention he stopped the work and reported the non-conformance. Prior to the re-commencement of the work, an archaeologist visited the site to determine if any damage had occurred. The archaeologist's survey and report confirmed that no damage had been sustained and construction work re-commenced with the presence of an archaeologist to monitor earthworks.

Corrective actions after this near miss included the weekly issue of a site-by-site environmental clearance summary to Area Construction Managers, and a new permit-to-work system that addresses a set of comprehensive environmental requirements to address this type of near miss and to prevent any uncontrolled access.

12.4 Chance Finds

The Project Chance Finds Protocol has been implemented to manage as yet unknown or unrecorded archaeological sites during the construction phase at Komo Airfield. During construction, the on-site archaeologist will continuously monitor earthworks for possible artifacts being uncovered and advise on sites, which may not have been identified during the pre-construction surveys.

Stone artifact called a "devil stone" as found on-site at Juni Construction Training Facility

Devil stones' is the generic term given to unusually shaped stones, which were used in traditional Huli ritual practices. The unusual shape of these stones can be man-made (e.g. archaeological artifacts such as bowls or mortars and pestles) or naturally occurring. These stones were originally referred to as 'dama' (spirit) stones; the missionaries introduced the term 'devil' stones when the Huli people were Christianized. These stones have cultural significance due to their past use in rituals, and archaeological significance in cases where they are man-made (artifacts).

During the second quarter there were five chance finds: two in the Upstream Infrastructure area, and three in the Komo Airfield area. At Juni, the find was a ground-out stone bowl later dated as 7000 years old and believed to have spiritual significance to the people of this region. It is called a 'devil stone' and is passed down throughout generations. At the Gobe to Mubi River road, the find was an un-hafted axe head (age undetermined). All finds were discovered by trained excavator operators, demonstrating the effectiveness of the Chance Finds training. Both finds were managed in accordance with the Chance Finds Protocol. Work was stopped, the sites were cordoned off and construction activities were redirected elsewhere at the worksite. In both cases, archaeologists were called in to inspect the finds and determine their significance. At Juni, no further artifacts were found in the area and without this archaeological context, the find was determined to be of low significance. On the Gobe to Mubi River road site a limited number of associated artifacts were found and the site was declared by archaeologists to be of medium significance. The artifacts were collected for recording and hand-over to the Papua New Guinea National Museum and Art Gallery, and construction work continued. The other chance find areas were demarcated in the field and are awaiting assessment. These were a burial site, a pig sacrifice site and another cultural site of undetermined significance.

13.0 STAKEHOLDER ENGAGEMENT

Stakeholder engagement is a critical aspect of the Project as, globally, the focus on energy-related issues, transparency, and accountability has grown among an increasingly diverse range of stakeholders. The Project had significant interactions with key stakeholders during the second quarter aimed at understanding and anticipating stakeholder concerns and opportunities for shared outcomes, communicating proactively with stakeholders about proposed and current Project activities, and fostering understanding, trust and cooperation.

13.1 Government

In May 2010, the Project team met with Members of Parliament to provide an update on the Project's status. This included key national content initiatives in the areas of training, business and workforce development. These quarterly briefing sessions with both members of the National Government and the opposition parties ensure a continuous and transparent flow of information to elected Papua New Guinean officials. This process is supported by both sides of Parliament, which is a positive reflection of their support of transparency.

In June 2010, DEC officials toured the early works site at the LNG plant site, including the main access road and bypass road. The Department confirmed that early works activities were within their expected scope and requested to be kept informed of approvals from other Government agencies.

The Project Government Interface team engages with the Papua New Guinea Gas Project Coordination Office on a weekly basis. The Gas Project Coordination Office was established by the Government as the liaison between the Project and Government agencies to improve Government processes, and to identify and implement solutions to potential problems that may affect the Project's schedule.

These meetings are supplemented by the following key focus areas identified by the Project's Government Interface team.

13.1.1 People Processes

The Project is working with the Papua New Guinean Government to ensure agencies such as the Department of Labour and Industrial Relations and Immigration and Citizenship Service (part of the Department of Foreign Affairs) will have the infrastructure and resources to manage the large number of people required for successful Project completion.

Bi-monthly meetings are being held with key Government agencies and contractors to identify opportunities to ensure effective and efficient mobilization of Project labor into Papua New Guinea.

During the second quarter, the Government made several procedural changes to enable the Project to more readily mobilize labor requirements and meet schedule commitments. One of the Government's major initiatives was the 'Express Processing' concept, whereby work permits and working visas may be approved within ten working days of filing a complete application. A separate proposal may use existing Papua New Guinean consulates to accept bulk packages of visa applications in offshore locations such as Manila, Kuala Lumpur and Brisbane.

13.1.2 Materials and Tax

As well as making many purchases locally, the Project will import substantial quantities of materials required to construct the various LNG plants, pipelines and other facilities. The Project is working with key Government agencies, including the Papua New Guinean Customs Service and National Agricultural Quarantine Inspection Authority as well as some private sector operators, to implement procedures that meet the Government's requirements and will actively facilitate the movement of materials.

The Project's contractual structure is complex, raising several issues relating to the application of duties and taxes. The Government Interface team is in active discussions with the Government about the process for ensuring that the duty and tax concessions granted to Project companies via the Gas Agreement are not used in a way that would be detrimental to Papua New Guinea's interest.

13.1.3 Infrastructure and Government Support

Successful construction activities rely on mobilizing materials and equipment into the areas where they are required. The Project is working with Government agencies such as the Department of Lands and Physical Planning and Department of Works on scoping and facilitating the key logistics required for achieving this.

Successful engagements have included development of plans for upgrading the Northern Logistics Route including the refurbishment of bridges and the upgrading of Tari Airport.

Plate 13.1 – The Southern Highlands Provincial Administration Induction Workshop

13.1.4 Advocacy

Members of the Government Interface team, Socio-economic, Land and Community Affairs and the Project Infrastructure team attended the Southern Highlands Provincial Administration Induction Workshop in May 2010.

The Workshop was opened by Southern Highlands Provincial Governor, Anderson Agiru, and included presentations by the Acting Chief Secretary of Papua New Guinea, Manusupe Zurenouc and Member for Komo, Margarima Francis Potape.

This Workshop is part of a series of meetings planned with Provincial administrations in the areas potentially affected by the Project. These meetings will provide a forum to discuss the potential impacts of the Project.

Plate 13.2 – Department of Petroleum and Energy visit Kido

The Government Interface team also met with the National and Southern Highlands Provincial Government and the National Content Committee on several occasions to review the progress of the commitments made in the Umbrella Agreement and License Based Benefits Sharing Agreement, which address allocation and sharing of Project benefits.

Members of the Government Interface team traveled to Kido Village in Central Province to conduct a Plant Site License Based Benefits Sharing Awareness session as part of the 'program of awareness' sessions.

13.2 Communities

Through its Stakeholder Engagement Plan, the Project is committed to establishing and maintaining positive community relations through effective communication and consultation. Both the Project and contractors are responsible for engaging with communities. Some of the second quarter community engagement activities are highlighted below.

13.2.1 Engagement Activities

Extensive stakeholder mapping has identified approximately 120,000 stakeholders to the Project. Over 53,000 of these stakeholders are in the Project Impact Area, another 20,000 to 30,000 along the Northern Logistics Route between Mendi and Hides, and 30,000 to 40,000 in Port Moresby.

Stakeholder engagement activities are tracked in the Stakeholder Engagement database. This database, which was introduced in 2009, is migrating to more sophisticated software to be implemented in the third quarter 2010. This software will allow greater efficiency with tracking and planning a range of Project-stakeholder interactions such as:

- Records of stakeholder meetings.
- Stakeholder issues and comments.
- Agreements and compensation paid for land access and use.
- Records of grievances and outcomes.

Plate 13.3 – Community stakeholders looking at Project information

During the second quarter, the Stakeholder Engagement team held a three-day open house to share Project information with Port Moresby stakeholders including businesses, local NGOs, government and internal stakeholders. Posters and videos in English were displayed and stakeholder engagement staff were available to answer questions and record comments. The open house included a one-day workshop for established local businesses to obtain information on the Project. This was followed by three days of scheduled meetings with representatives of Project's EPC contractors, to enable local companies to identify and pursue potential business opportunities.

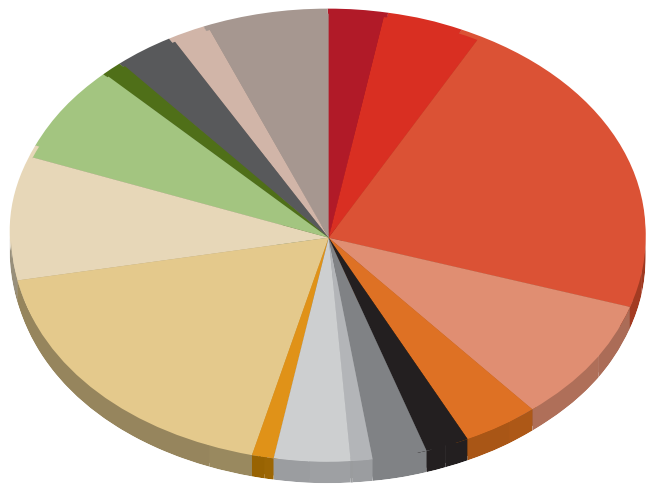
Plate 13.4 – Open house community meeting

Between April and May 2010, stakeholder engagement on the Northern Logistics Route continued in the form of meetings with communities, church congregations and schools between Poroma Junction and Hides. In addition to a general project overview, the engagements focused on information about the Road Maintenance and Bridge Building Program for the relevant sections of the Highlands Highway. During this period, 18 community meetings were held and 4,354 stakeholders chose to register their attendance at the meetings.

In the Hides and Komo regions, the early works for the new Komo Airfield, Heavy Haul Road and the HGCP are underway. After two years of Project-community interaction, formal engagement with stakeholders began in this area in June 2010 with a total of 11

meetings, where 1,558 community members registered attendance. Community issues raised at the meetings are shown in Figure 13.1.

Figure 13.1 – Issues raised by stakeholders in the Hides and Komo area (June 2010)



- *Employment 3%*
- *Training 5%*
- *Social Services, Facilities and Infrastructure 22%*
- *Supporting Local Businesses 9%*
- *Health, Safety and Standard of Living 4%*
- *Concerns about Government Investments in Communities 2%*
- *Trust 3%*
- *Broader Economic Impacts 1%*
- *Conflict, Violence and Social Disruption 4%*
- *Existing Socioeconomic Conditions 1%*
- *Compensation and Resettlement 18%*
- *Benefits Sharing Agreement 9%*
- *Stakeholder Engagement 7%*
- *Suggestions for Cooperation 1%*
- *Roads and Bridges 3%*
- *Environmental Issues 2%*
- *PNG LNG Project Issues 6%*

The Project's Land and Community Affairs team, which is the frontline interface between communities and Project activities, has maintained a strong presence in the Hides, Komo and Juni regions for over two years. The Land and Community Affairs team is involved in activities related to land access, compensation, and the resolution of land disputes. It is primarily a field-based organization operating from six geographic locations. It is anticipated that the Land and Community Affairs team will consist of approximately:

- 100 back-to-back rotational field supervisors, Land and Community Affairs field officers and administrative support.
- 12 back-to-back rotational field-based business development specialists.
- Ten Port Moresby based staff including the Land and Community Affairs Manager, land access and grievance management specialists.
- 45 village based liaison officers.

Overall, the Land and Community Affairs team helps to ensure compliance with the provisions of the Papua New Guinea *Oil and Gas Act 1998* and the *Land Act* for land acquisition and compensation.

During the second quarter the Land and Community Affairs team conducted 12 meetings with principal landowning groups to sign In-Principle Compensation Agreements. Weekly coordination meetings were held with Oil Search Limited on land, business development, community affairs and legacy topics. Additional meetings were held with the Department of Lands and Physical Planning and Department of Petroleum and Energy to discuss topics such as land acquisition, incorporated land groups identification, and legacy oil project matters.

Approximately 1,250 field trips and 600 meetings were conducted by the Land and Community Affairs team to help landowners understand the need for the Project to secure land access for construction. Landowners were provided with information on construction schedules, the nature of the work, potential impacts, requirement for local labor hire, rates of pay and duration of employment.

In addition, community awareness raising consultations were completed in the Onshore Pipeline and other Upstream Project area villages, totaling 36 villages and sites, on the application and selection processes for trainees during the construction period and during operations.

Plate 13.5 – Sharing Project information

The format of every stakeholder engagement meeting is tailored to meet the community's wishes and cultural sensitivities. Wherever possible, the Stakeholder Engagement team uses an open house format, which encourages smaller group discussions. This ensures all community members have the opportunity to raise questions, comment and receive responses to their questions/comments, and allows the Project team to engage more closely with all participants, including women and children.

Flyers in English and Tok Pisin are distributed at meetings to enable community members to share the information with others, and comment sheets are made available for those who wish to comment at a later date. The Project has also provided churches and schools with posters for their notice boards.

Plate 13.6 – Stakeholder engagement meeting

13.2.2 Media

The Project issued its first Quarterly Environmental and Social Report covering activity from January to March 2010. It was published on the Project website (www.pnglng.com) as well as in hard copy for distribution to a wide network of stakeholders. Additionally, the executive summary was distributed in Tok Pisin and English through a suite of national papers including the *Post Courier*, *The National*, *Wontok* and the *Sunday Chronicle*.

In addition to the two Highlands Highway radio programs broadcast earlier in the year, two more programs have been scripted – another for the Highlands Highway communities and one for those in the Hides and Komo region.

CASE STUDY FOUR: WORLD ENVIRONMENT DAY

Over 300 local school children and adults recently joined Project representatives for World Environment Day celebrations at Komo Catholic Primary School.

Organized by the United Nations Environment Program, World Environment Day aims to be '*the biggest, most widely celebrated, global day for positive, environmental action*'. It has been officially commemorated by the United Nations on June 5 every year since 1972.

This year's theme, 'Many Species. One Planet. One Future', is strongly aligned with the Project and the ExxonMobil's vision of *Protect Tomorrow. Today*. and highlighted the importance of a sustainable way of looking after the land and environment.

The day's celebrations began with an opening prayer by a priest from the Komo Catholic mission and continued with songs and performances by the Komo students and lessons on sustainable living.

Welcome poster

Drama being acted out as part of the event

Project Senior Field Environmental Advisor talking about sustainability

World Environment Day celebration participants

CASE STUDY FOUR: WORLD ENVIRONMENT DAY

Children were advised on general measures they can take to conserve the environment. Representatives said it was important to continue to educate local children about preserving the land and environment in the Komo area.

The children were taught lessons on biodiversity and the Huli's way of sustainable living, the dangers of introducing foreign species and the importance of waste management.

The Project also took the opportunity to continue its community road safety education program with a talk on safety around heavy machines on the local roads.

The Project donated gifts and prizes to the school as part of the celebrations.

Poem written by Komo Primary School children to celebrate World Environment Day

14.0 ACRONYMS

AIDS	Acquired immune deficiency syndrome
AusAID	Australian Agency for International Development
DEC	Department of Environment and Conservation, Papua New Guinean Government
EPC	Engineering, Procurement and Construction
ESMP	Environmental and Social Management Plan
HGCP	Hides Gas Conditioning Plant
HIV	Human Immunodeficiency Virus
IESC	Independent Environmental and Social Consultant
Lanco	Landowner Company
LNG	Liquefied Natural Gas
MCCP	Malaria Chemoprophylaxis Compliance Program
MCP	Malaria Control Program
NASFUND	Papua New Guinea National Superannuation Fund
NCP	National Content Plan
NGO	Non-government organization
PNG	Papua New Guinea
POM Tech	Port Moresby Technical College
US$	United States Dollars

APPENDIX 1 – PROJECT CONTRACTORS AND WORK SCOPES

Table A1.1 – Summary of contractors and work scopes

Contract	Description of Work Scope
Upstream Infrastructure Clough Curtain Brothers Joint Venture	• This is a program of infrastructure upgrades in advance of main construction activities in the Gulf Province and Southern Highlands Province. • Camps – Gobe, Oiyarip (new camps), Nogoli (existing camp extension), IDT10 (Moro Camp refurbishment). • Construction of a landfill site at Hides.
LNG Plant Early Works Curtain Brothers Papua New Guinea Limited	• A program of early works at the LNG plant site. • Upgrade of existing road from Motukea Island to LNG plant site. • New bypass road (re-routing of existing public road, which transects with the LNG plant site).
Telecommunications TransTel Engineering	• Installation of a telecommunications system to support construction and operations.
Offshore Pipeline Saipem	• Construction and installation of the Offshore Pipeline from Omati River landfall to LNG plant landfall site. • Pipeline tie-in at Omati River landfall and shore crossing at the LNG plant landfall site.
LNG Plant and Marine Facilities Chiyoda and JGC Corporation	• Onshore aspects including LNG trains, condensate storage tanks, LNG storage tanks, boil-off compressor, utilities, flare, waste disposal area, laydown area, permanent accommodations, construction camp, heliport and telecommunications. • Marine aspects including LNG/condensate export berths.
Hides Gas Production Facilities and Hides Wellpads CBI Clough Joint Venture	• HGCP processing facilities. • Construction camp. • Hides wellpads.
Onshore Pipelines and Infrastructure SpieCapag	• Onshore gas/condensate/Mono Ethylene Glycol (MEG) pipelines, flowlines, spinelines, above ground facilities (such as mainline valve stations, meter stations, pig launcher/receiver stations, cathodic protection equipment), power and optic telecommunications cables. • Vehicle washdown stations. • Construction camps.
Komo Airfield McConnell Dowell and Consolidated Contractor Group Offshore	• Airfield and supporting infrastructure.
Associated Gas Facility Upgrades Aker Solutions	• Upgrades and modifications to Kutubu Central Processing Facility and Gobe Production Facility including gas dehydration, metering and condensate handling.
Nabors Drilling International Limited	• Drill 12 new wells and execute two workovers.
Permanent office and housing Company (to be determined)	• Construction of office accommodation with housing.
Port Moresby Construction Training Facility (POM Tech) Eos	• Construction of training premises.

APPENDIX 2 – DEFINITION OF VERIFICATION, MONITORING, ASSESSMENT AND AUDIT

The ESMP commits the Project to monitoring, by sampling and analysis, the management and mitigation activities for which it is responsible:

- Contractors have a field based environmental monitoring (sampling and analysis) program.
- The Project checks and corrects any errors discovered in contractors' monitoring documentation.
- The Project undertakes environmental monitoring (sampling and analysis) at all worksites.

Contractors provide both a Construction Environmental Report and a Construction Social Report to the Project each month. These reports provide the details and results of all monitoring undertaken during the reporting period.

Verification, Monitoring, Assessment and Audit

The ESMP requires verification, monitoring, assessment and audit activities as detailed in the following sections.

Verification

The Project will undertake verification of the management and mitigation activities for which it is responsible as defined in the ESMP.

In addition to checking and reviewing contractors' and subcontractors' inspection and verification documentation, the Project will undertake inspection and verification at all worksites.

Contractors and subcontractors shall implement a Field Based Inspection Program in order to verify and document the due implementation of, and in some cases the effectiveness of, mitigation measures identified in contractor and subcontractor ESMP documents.

Monitoring

The Project will monitor and manage mitigation activities for which it is responsible as defined in the ESMP.

In addition to checking and reviewing contractors' and subcontractors' monitoring documentation, the Project will conduct environmental monitoring (sampling and analysis) and social monitoring at all worksites.

Contractors and subcontractors shall implement a Field Based Environmental Monitoring (Sampling and Analysis) Program and a Social Monitoring Program in order to monitor the effectiveness of management and mitigation measures, assess impacts and demonstrate compliance with applicable legal and other requirements.

Assessment

The Project will undertake internal assessments of management and mitigation activities for which it is responsible as defined in the ESMP.

The Project will undertake periodic assessments, evaluating the implementation and effectiveness of contractors' and subcontractors' environmental and social programs. Such assessments will be undertaken in accordance with predetermined protocols agreed with the contractors.

Contractors shall undertake internal assessments in order to evaluate the implementation and effectiveness of the contractors' and subcontractors' Environmental and Social Program.

Audit

At its discretion, the Project may undertake environmental and social audits of contractors' and subcontractors' activities and worksites, including camps.

The IESC will, on behalf of the Lender Group, undertake periodic environmental and social audits of the Project's activities and worksites, including camps.

Co-venture parties may, at their discretion, undertake environmental and social audits of the Project's activities.

The DEC may, at its discretion, undertake environmental and social audits of the Project's activities.

APPENDIX 3 – DEFINITION OF NON-CONFORMANCES

The Project has assigned three levels of non-conformance and two additional field observations levels, as presented in Table A3.1.

Table A3.1 – Non-conformance levels

Level	Description	Disposition
Positive Field Observation	A positive field observation of a mitigation, commitment or situation that is properly being implemented or handled in alignment with the ESMP requirements. Potential for sharing lessons learned or environmental point of emphasis.	Positive field observations are examined regularly to determine if sharing across the Project and contractors would be beneficial.
Field Observation	A potential non-conformance situation that could eventually become inconsistent with stated ESMP requirements and where an observation, intervention, and rapid resolution is achieved and noted by the Project and/or contractor personnel. Potential for sharing lessons learned or environmental point of emphasis.	Field observations will be communicated to contractors for further action. Field observations that are not closed-out in a timely manner or repeat field observations may also generate a formal Non-Conformance Notice.
Level I	A non-conformance situation not consistent with stated ESMP requirements, but not believed to represent an immediate threat or impact to an identified important resource or community. Typically aligned with the Project's definitions for Severity Level 0 and <0 Incidents.	Level I non-conformances will generate a corrective action request or a recommendation for further action. Level I non-conformances that are not closed-out in a timely manner or repeat non-conformances may also generate a formal Non-Conformance Notice. Repeated Level I non-conformance may have the disposition and tracking escalated to a Level II non-conformance level if left unresolved.
Level II	A non-conformance situation that has not yet resulted in clearly identified damage or irreversible impact to a sensitive or important resource, but requires prompt corrective action and site-specific attention to prevent such effects. Typically aligned with Project definitions for Severity Level 1 Incidents with the additional inclusion of any violation of a stated numerical limit (for example, permit condition, mitigation measure) and any Severity Level 0 spill incidents.	Level II non-conformances will generate a corrective action request and a formal Non-Conformance Notice. Level II non-conformances will result in a Stop Work Order in situations where work activity is ongoing and will cause immediate damage/impact. Repeated Level II non-conformance may have the disposition and tracking escalated to a Level III non-conformance level if left unresolved.
Level III	A critical non-conformance situation, typically including observed damage to, or a reasonable expectation of, impending damage or irreversible impact to an identified resource or community. Typically aligned with Project definitions for Severity Level 2 and 3 Incidents. Intentional disregard of specific prohibitions or Project standards is also classified as Level III non-conformance.	Level III non-conformances will result in a Stop Work Order, in situations where work activity is ongoing, and will generate a corrective action request and formal Non-Compliance Notice.

The contractors' monthly Construction Environmental Report and Construction Social Report shall include details and status of all non-conformances and field observations identified during the contractors' verification, monitoring, assessment and audit processes.

The Project shall report to the IESC/Lender Group any non-conformances identified during the verification, monitoring, assessment and audit processes as follows:

- Level III non-conformances will be notified to the IESC/Lender Group as an incident using an Incident Reporting Form.
- Level II non-conformances will be reported to the IESC/Lender Group in summary form as part of the Quarterly Environmental and Social Report.
- Level I non-conformances will be reported to the IESC/Lender Group as a numeric total as part of the Quarterly Environmental and Social Report.

All documentation relating to any non-conformances will be made available as part of the periodic audits undertaken by the IESC/Lender Group.

Field observations will not be reported to the IESC/Lender Group directly, however, all documentation relating to any field observation will be made available as part of the periodic audits undertaken by the IESC/Lender Group.

Incidents

All environmental and social incidents will be documented and reported in accordance with established Project procedures. An Incident Management Procedure has been developed by the Project, which indicates the method, level and timing required for reporting an incident dependent upon the severity classification level (Level <0, 0, 1, 2, 3).

A summary of the requirements of the Incident Management Procedure, as it pertains to environmental and social incidents, is presented below.

Contractors must notify the Project immediately following the occurrence/discovery of an environmental or social incident at any Project worksites.

Environmental or social incidents include, but are not limited to:

- Spills (oil, chemical, drilling fluids). All spills are reportable to the Project and Exxon Mobil Development Company.
- Chemical and light hydrocarbon releases into the atmosphere (reportable quantities).
- Unauthorized use of land.
- Community incidents (contractors shall work closely with the Project prior to commencement of work to define these).
- Damage to, or destruction of, public infrastructure.
- Unauthorized damage to cultural artifacts.
- Permit and regulatory compliance excursions (for an event that involves multiple excursions, each excursion must be reported independently).
- Violations of any applicable local, state, national or international law or rule, regardless of whether or not it is cited in a permit.
- Fines.
- Enforcement proceedings.
- Near miss incidents.
- Worker unrests/strikes.

In all cases, the report shall contain, as a minimum, the date, time, location and description of events, materials involved, volumes for spills and releases, root cause analysis, remedial actions taken and corrective actions required to prevent future occurrences.

Corrective Actions

An Environmental and Social Action Tracking System is maintained by both the Project and contractors to include the details of all environmental and social incidents, identify remedial/corrective action required, assign actions and timings to responsible parties and indicate the status of the remedial/corrective action. The monthly contractors' Construction Environmental Report and Construction Social Report includes a summary of all incidents having occurred in the reporting period and the status of the associated remedial/corrective action.

This Report, which is provided to the IESC/Lender Group, includes a summary of all incidents (including contractor and subcontractor incidents) that have occurred in the reporting period.

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