

Scanned and excerpted from the Monthly Progress Report of the Construction Supervisor for the Nationwide Electrical Power Grid and Power Plant and its Facilities by La'o Hamutuk. Emphasis in original.

For more information on this project, see <http://www.laohamutuk.org/Oil/Power/10PowerPlant.htm>

PROJECT REPORT
EXECUTIVE SUMMARY
(pages 8-12 in original report)

For the Month of November 2010

Project : CONSTRUCTION SUPERVISION SERVICES OF THE NATIONWIDE ELECTRICAL POWER GRID and POWER PLANTS and Its FACILITIES

The month of November can be divided in two period, during the first half the Contractor maintained the same slowly attitude and progress works of the previous months. During the second half the situation has improved a little bit and the progress achieved, although not to the satisfactory level required, was positive and could be considered a sign that the Contractor is shaking up and moving forward.

The good weather condition experienced during the month of November somehow contributed to the better results of the works.

Two very important events for the project that occurred in this month are:

- The arrival in Dili substation of the two main transformers 31.5 MVA, steel structures and electrical equipments.
- The beginning of stringing of the conductors along the section Hera -Dili

Problems along the transmission line are still encountered, land owners do not allow access to the towers locations pretending to get paid for the use of their land. The intervention of Chefe Suco and Aldeia in many cases did not obtained results and as a consequence the Contractor has been also obliged to execute works on some foundations under the escort of the police.

The time schedule of the Power Grid, substations and transmission line is far behind the target, The accumulated delay can be partially recovered only if CNI22 decides to engage Indonesian Subcontractors (at least four of them) for the transmission lines and sublet all the south part of the power grid. So far CNI22 made long lasting discussions with several Indonesian Contractors, but results are yet to be achieved.

In this regard the Consultant is constantly making pressure on CNI22 because the Owner requested to have the Indonesian Contractors operative on site at beginning of January 2011.

The overall progress of the Power Grid achieved at the end of November is esteemed at 21.47% against the planned 43% (These percentages do not include the two Power Plants).

In the front of the two power plants Hera and Betano the Indonesian Contractor <PURI AKRAYA Engineering Limited> is in agreement with the requirement of the Owner to divide the contractual activity in two parts : Hera power plant, top priority, with target of three generating sets to be operative by November 2011 and other four generating sets to be operative by March 2012. Betano power plant, although activity at site will start during 2011, the target is to complete the installation of the eight generating sets within end of 2012 first half of 2013.

The above requirement is mainly dictated by the budget allocation restraint.

A first portion of US\$ 40 Millions as advance payment is being allocated and the Contractor is now in the process to arrange the relevant Bank Guarantee in order to receive this amount of money.

The following activities are the highlights of the work progress for the Month of November 2010 throughout the various sections of the project.

Dili Substation

- The bricks fencing wall: remain unchanged with only plastering of the exterior and interior walls activities done.
- The building for the 20KV equipment: the brick work of the external walls is on-progress which is 45% complete.
- The main transformer No. 1 & 2 has been delivered and placed on the foundation waiting for the technicians for the installation of its components.
- The main control building: concreting of the first floor level is completed and continue for the reinforcing steel bars and formworks to the roof slab;
- The foundations of capacitors and structures were prepared and concreted;
- The two units 35m high lightning poles foundations were concreted.
- The 150KV outdoor area: the main foundations for the gantry steel structures are 100% complete including support foundations for electrical equipments; a total of 96 linear meters of main cable trench is also completed;
- The steel structures are piled up inside the 150KV area waiting for the technician to start the erection.

Manatuto Substation

- The permanent fence wall is completed on three sides except along the area
- of the camp facilities.
- The Guard house : foundations completed and the upper concrete structures
- from ground floor to roof are under preparation.
- The main transformer foundation has been completed.

Baucau Substation

- To this date no activity has been made in this site except the soil investigation.

Lospalos Substation

- No activity, a local subcontractor has been selected for the civil works and is now negotiating the contract.

Liquica Substation

- The only activity reported for this substation is the selection of subcontractor for the land clearing and site preparation. Mobilization of this contractor is
- expected in few days.

Maliana Substation

- The only activity reported is clearing the site and cutting of trees

Suai Substation

- Soil investigation end bore hole drilling is in progress.

Cassa Substation

- No other activity done after clearing the site and trees cutting.

Viqueque Substation

- The earthworks for the leveling of the area is on progress, the soil investigation and bore hole drilling is progressing. Due to the presence of hard rocks in one side, most probably the site needs to be shifted of about 15 meters.

Hera Power Plant

- After the asphalt application for the oil tank the activity is on standby waiting for the steel plates arrival that has been shipped long ago from China, the vessel transporting these materials had a breakdown almost two months ago and has now just docked to Dili port. Hopefully the oil tanks construction will start during the coming month of December.
- Construction of drainage canal and retaining wall along west side has been suspended without any justification.

Betano Power Plant

No activity

Transmission Lines

- **Hera — Dili : Total number of Double Circuit Towers = 30 units**
(9.89 Km)
 - Total number of Tower Foundation Excavated = 30
 - Total number of Tower Foundations Concreted = 29
 - Total number of Tower Erected = 28
 - Total number of Towers with conductors = 12

The remaining foundations to be concreted is the No.1 (terminal tower at Hera Power Plant). The anchor bolts are not available at site and are on the ship now sailing from China.

Installation of the conductors has started during this months and a section of 12 towers has been completed (except the installation of OPGW awaiting for the fittings).

- **Hera — Manatuto : Total number of Double Circuit Towers = 92 units**
(41.5 Km)
 - Total number of Tower Foundation Excavated = 73
 - Total number of Tower Foundations Concreted = 63
 - Total number of Tower Erected = 21
 - Total number of Excavation in progress = 7

- ➤ **Manatuto — Baucau : Total number of Single Circuit Tower = 127 units**
(60.0 Km)
 - Total number of Tower Foundation Excavated = 101
 - Total number of Tower Foundations Concreted = 92
 - Total number of Tower Erected = 6
 - Total number of excavation in progress = 5

- **Baucau — Lospalos : Total number of single circuit tower = 118 units**
(53.280 Km)

The cross section survey of each tower foundation is being carried out in preparation to start excavation works.

- **Baucau — Viqueque : Total number of single circuit tower = 96 units**
(64.00Km)

The excavation works has just started since one week along this section with a new group of 19 Chinese workers.

- **Dili — Liquica : Total number of single circuit tower = 87 units**
(36.841 Km)
 - Total number of Tower Foundation Excavated = 65
 - Total number of Tower Foundations Concreted = 45
 - Total number of towers erected = 5
 - Total number of excavation in progress = 8

- **Liquica — Maliana**

Plans and longitudinal profiles have been done for 72 towers only and submitted. For the execution of the works along this section the Indonesian contractor DCP is negotiating the prices and condition: with CNI22.

➤ **Maliana — Suai**

Field survey activity is now in progress.

➤ **Suai — Cassa**

No field survey activity done yet

➤ **Cassa — Betano**

No field survey activity done yet

➤ **Betano — Viqueque**

The field survey works for this section is completed and plans F longitudinal profiles are under preparation.

➤ **Viqueque — Lospalos**

No activity is reported, plans & longitudinal profiles are still unde preparation.

(pages 13-26 in original)

Contract RDTL - 812931

**Construction of nation-wide electrical power grid and power plants and its facilities project
of the Democratic republic of Timor Leste**

MINUTE of MEETING

Location : HERA – CNI22 Office

Date : November 16, 2010

Participants :

EDTL

Mr. Roberto Manuel Marcal (EDTL Project Manager). Busy for tower 30 Hera-Dili
Mr. Frederico dos reis da Silva (Power Plant Engineer). Not attending
Mr. Francisco Soares Pica (Substations Engineer). Busy for tower18 Dili-Liquica
Mr. Domingo dos Reis (Substation Engineer).
Mr. Gilberto Siguera (Transmission lines Engineer). Busy for tower 30 Hera-Dili
Mr. Jaime Camacho (Power Plant Engineer). Not attending
Mr. Bento Xavier (Power Plant Engineer).
Mr. Alexander de Jesus (Substations Engineer).Not attending
Mr. Jose Antonio Bobo (Administration)). Not attending
Mr. Ezequil Pinto (Transmission Line Engineer). Not attending
Mr. Delfin Dos Santos (Power Plant Engineer). Not attending
Mr. Julio Dos Santos (Substation Engineer)

CONSULTANT

Mr. Felice Maffei (Project Manager)
Mr. Virgilio Rivera (Civil Engineer).
Mr. Joko Siswadi (Electrical Engineer).
Mr. Zoltan Lukacs (QA/QC Engineer).
Mr. Jose Domingo Verasay (Electrical Engineer).
Mr. Napoleon Villanueva (Asst. Civil Engineer 1for Dili Substation).
Mr. Jaime Osvaldo Munoz (Electrical Engineer)
Mr. Felix Pascua (Environmental Specialist)

CONTRACTOR CNI22

Mr. Li Tao (Project Manager).(on leave)
Mr. Wu Yong Jun (Chief Engineer).
Mr. Hung Kaifu (chief engineer for Hera power plant).Not attending
Mr. Zhang Ming Cun (Substation Manager).
Mr. Zhang Ming Ping (Transmission Line Manager). Not attending
Mr. Zou Xiaoming (Hera power plant Manager).Not attending
Mr. Zhou Zhong Qi (Dili Substation Engineer).Not attending
Mr. Peng Liwei (Interpreter). Not Attending
Mr. Tang Zi Xian (Interpreter).Not attending
Mr. Liu Jie (Electrical Engineer).
Mr. Jiang Pei Yun (Transmission Lines Dep. Manager).
Mr. Xiao Yali (Transmission line Engineer) Not attending
Mr. Peng Li Xian (Transmission Line Engineer).Not attending
Mr. Jiang Yan (Transmission Line Engineer).
Mr. Li Dawei (Transmission Line engineer). Not attending
Mr. Zhu Ling (Designer). Not attending
Mr. Li Yui (Designer).Not attending
Mr. Cai Hui (QHSE).
Ms Dina (Interpreter).

Subject of the meeting : Coordination of the works

Agenda of the present meeting :

- 1) Comments on the last minute of meeting dated October 28, 2010.
- 2) Progress of works.
- 3) Delivery status of materials and equipment.

- 4) Drawings and technical specifications.
- 5) Insurance policy
- 6) Payment
- 7) Environment

Before entering in the various issue of the meeting the Consultant Mr. Felice Maffei introduced the newly arrived Electrical Engineer Mr. James Osvaldo Munoz, person of high experience in substations and power plants and hopefully his contribution in the project will be a valuable one. In particular Mr. Munoz will share his experience with the young Timorese engineers to form them and to make them future operators of the Power Grid.

1) Comments on the last minute of meeting dated October 28, 2010

The Contractor stated that for Dili substation the team expected to arrive by mid November to start the erection work of the equipment is now reported to middle of December, the reason given is that the tools to be used did not arrived in yet from China.

The Consultant replied that for the erection of the steel structures (which are piled up abruptly) all tools and equipment required are available in the local market, either to be purchased or rented.

Concerning the steel plates for the construction of the Oil Tanks in Hera, which were to arrive in Dili on November 06, the ship with this cargo is still under reparation and a new arrival date is shifted to November 20. The whereabouts of this ship the Contractor stated that he does not know.

No comments from EDTL.

No comments from those present.

Everybody present in the meeting are reminded that <the no comments> it means full approval of the contents of the minute of the previous meeting.

2) Progress of the works

Transmission lines

The promises of the Contractor to increase in the month of October the quantity of works did not materialized, now the Contractor is stating that situation will change definitively in November.

But by analyzing the result of what has been done during these 19 days since the last meeting no major improvement is seen, quantity of work remains far below the minimum requirement.

From Liquica substation up to Lospalos substation there are 458 Towers (provisional number since field survey near substations has to be completed)

The overall situation is summarized in the following table:

Section	excavation	concrete	Tower erection	Total number
Hera-Dili	28	27	27	30
Hera- Manat.	74	64	17	92
Manat.-Baucau	84	63	–	131
Dili-Liquica	62	38	–	87
Baucau-Lospa.		–	–	118
TOTAL	248	192	44	458
THIS Period of 19 days	35	38	3	

The quantity of work done during this period from October 28 up to November 16 remains unacceptable. **The Owner is very worried of this situation, the Prime Minister personally expressed concern, in his frequent travelling to Baucau HE does not remark any considerable progress.**

The Contractor is invited to give explanation about this poor performance, in particular why only 3 towers have been erected in 19 days,

The Contractor stated that is now organizing several teams to do tower erection, in this issue EDTL is now gathering Timorese workers which shall be handed over to the Contractor to be employed and trained.

The Contractor must constantly keep in mind that for every single calendar day, the minimum requirement is :

- 4 (four) Excavation complete of tower foundations
- 4 (four) Concrete complete of tower foundations
- 4 (four) Erection complete of tower structure including tightening of bolts.

The Contractor is requested to complete for each section of transmission line the survey and the final position of Terminal Towers near each substation, so the total numbers of towers can be defined.

The Contractor Stated that all field survey of all sections will be completed before end of the year except few Km on the river crossing between Liquica - Maliana

HERA – DILI (9.890 KM - No. 30 towers)

Tower foundations N1 is still in progress with excavation.

Tower foundation N30, two legs remains to be excavated (problem with landowner still persist)

Tower Foundation to be concreted remain N1-N2, now in progress and N30 two legs Tower to be erected are N1-N2-N30

From November 1st works related to stringing of the conductors started in the section between towers 15 and 20 with the tensioner and puller machines and in the section between towers 13 and 15 manually.

The Consultant remarked that this work is being performed quite roughly, conductors, fitting and insulators are handled without proper care.

The Contractor is requested to submit full calculation of the method and formula adopted for the SAG of the conductors.

DILI – LIQUICA (36.80 KM – 87 towers)

The excavation work is completed in 62 tower foundations (about 70% of the total) and is in progress in 5 foundations.

The concrete has been done in 38 towers foundations (about 43% of the total) Tower erection will start from next week.

The Contractor reported that towers 24-25-26-27 are having problems with land owners who have retained the vehicles and do not allow to make access roads to the foundation sites.

HERA – MANATUTO (41.500 KM – No. 92 towers)

The excavation work is completed in 74 tower foundations (about 80% of the total) and is in progress in 6 foundations.

The concrete has been done in 64 tower foundations (about 70% of the total) The towers erected are 17 (about 18% of the total)

MANATUTO – BAUCAU (50.065 Km -131 towers)

The excavation work is completed in 84 tower foundations (about 64% of the total) and is in progress in 10.

The concrete has been done in 63 tower foundations (about 48% of the total). Towers erection will start from next week..

BAUCAU – LOS PALOS (53.280 KM – 118 towers)

No activity is reported.

BAUCAU – VIQUEQUE (64 KM – 96 towers)

No activity is reported.

LIQUICA – MALIANA (63 KM – 112 towers)

The cross section survey of the tower foundations is in progress.

MALIANA – SUAI – CASSA – BETANO

Field survey work is in progress with one group of surveyors.

BETANO - VIQUEQUE

Plans and longitudinal profiles are under preparation

VIQUEQUE – LOSPALOS

The field survey is completed, plans and longitudinal profiles are under preparation.

Concerning the Indonesian Contractors to be utilized for the construction of the portion of the transmission line along the South Coast the situation is as follow :

CNI22 is still negotiating with <DCP> Company from Surabaya for the section Liquica-Maliana-Suai. Revised prices for the first 72 towers from Liquica to Maliana are being analyzed by CNI22

For the sections Suai-Cassa-Betano-Viqueque-Los Palos CNI22 is waiting for the others Indonesian Contractors to submit their own prices.

Substations

DILI SUBSTATION

All the foundations of the 150 KV steel structures have been completed including all small foundations blocks supporting the electrical equipment.

The main cable trench is done for a total of 90%.

On the 20KV Building work of brick wall is done about 30%.

Foundations of the pump house have been concreted.

On the main control building the columns and walls for the first floor above ground level are done, the Contractor stated that all the concrete structure of the building will be completed by the 10th of December.

The two main transformers have been transported from Dili port, unloaded and positioned on the foundations. Technical people to start erection of electrical equipment will arrive middle of December (postponed of one month).

MANATUTO SUBSTATION

The work done in this time is bricks fence wall, the total achievement about 85 %. External drainage ditch is also done in parallel with the wall.

The excavation work of the guard house is done and bottom lean concrete placed. Excavation of the transformer foundation is in progress

At present in the site the work force consists of 42 Chinese and 30 locals.

BAUCAU SUBSTATION

The soil investigation has been done.

The civil work will be sublet to local contractor as soon as construction drawings will be sent from China.

LOS PALOS SUBSTATION

Local subcontractor will do the civil works and is now negotiating the contract..

LIQUICA SUBSTATION

Local subcontractor is now negotiating the contract.

MALIANA SUBSTATION

No activity done.

SUAI SUBSTATION

No activity done.

CASSA SUBSTATION

No activity done.

VIQUEQUE SUBSTATION

The local Subcontractor is working doing site levelling and embankment. This work should be completed in a week time

The Contractor is reminded that at least temporary fence should be built in Maliana-Suai-Cassa Substations in order to avoid that local villagers occupy the land.

Hera Power Plant

No activity is reported,

Contractor stated that the steel plate for oil tanks are still on board of the ship which had a breakdown and there are no precise news of when this ship will arrive in Dili. Concerning the other major works to be completed : **Embankment, Drainage Canal up to the road crossing, Fencing Bricks Wall**, the contractor stated that is awaiting for the decision of the head office.

Betano Power Plant

No activity

3) Delivery of Material and Equipment

Handling of the material at site in Hera and loading, unloading, transporting to the working place is done in a very brutal manner. A lot of damages are reported and as evidence for this a set of photos showing the condition of cable drums, fittings, insulators, steel structures are handed over to the Contractor.

The Contractor is WARNED that material on such condition will not be paid and it may be rejected.

4) Drawings and technical specifications

Drawings submitted in this period are for Manatuto substation, Lospalos substation and Viqueque substation. Remarks on the drawings are always the same, no improvement in the quality of the presentation.

5) Insurance

Situation is unchanged. The Contractor stated that :

- Materials shipped are normally covered by marine insurance policy provided by the shipping agent.
- The workers are covered in case of accident by a insurance policy made in China by the Head Quarter.
- Concerning the All Risk Insurance requested in the contract, the Contractor is not covered and continues to work at his own risk.

The Consultant requested evidence of these insurance policies stipulated in China.

6) Payments

All the payments have been made by the Owner, the interim payment certificate No.8 for the month of October is in process to be issued.

7) The last subject discussed in this meeting is concerning **the Environment Management and Monitoring Plan.**

Mr. Felix Pascua is the International Environmental Specialist (IEC) appointed by the Consultant for this project.

In his intervention he briefed everyone on the background, rationale, salient features and milestone for the implementation of the Environmental Management and Monitoring Plan (EMMoP). He informed all the present that the Contractor CNI22 have not made any accomplishment relevant to the EMMoP since the commitment letter was signed by them in March 2010 and reminded CNI22 that it is their Contractual Obligation to implement the said Plan. Further the IES presented the results of the Audit that he concluded in June 2010 which showed no major accomplishment for the Contractor in the implementation of the EMMoP, Moreover, despite the issuance of a fifteen (15) items Field Directive in June 01, 2010 (Envi.01) as a result of the audit (June 2010), to date the Contractor still continue to show no major accomplishment and non-compliance to the requirement of the EMMoP and the Field Directive. the IES recommended that the Contractor engage a full time Environmental Specialist with a good command of the English language and that should they further persist in not implementing the EMMoP, they will be sanctioned as per the Contract Agreement.

The present meeting started at 15:00 and ended at 18:00the

Next meeting is scheduled for Tuesday 30 November at 14:30 in Hera.

Contract RDTL - 812931

Construction of nation-wide electrical power grid and power plants and its facilities project of the Democratic republic of Timor Leste

MINUTE of MEETING

Location : HERA – CNI22 Office

Date : November 30, 2010

Participants :

EDTL

Mr. Roberto Manuel Marcal (EDTL Project Manager).
Mr. Frederico dos reis da Silva (Power Plant Engineer). Not attending
Mr. Francisco Soares Pica (Substations Engineer). Busy for Liquica substation
Mr. Domingo dos Reis (Substation Engineer). Not attending
Mr. Gilberto Siguera (Transmission lines Engineer). Busy for Dili-Liquica
Mr. Jaime Camacho (Power Plant Engineer). Not attending
Mr. Bento Xavier (Power Plant Engineer). Not attending
Mr. Alexander de Jesus (Substations Engineer).Not attending
Mr. Jose Antonio Bobo (Administration)). Not attending
Mr. Ezequil Pinto (Transmission Line Engineer).
Mr. Delfin Dos Santos (Power Plant Engineer). Not attending
Mr. Julio Dos Santos (Substation Engineer). Not attending

CONSULTANT

Mr. Felice Maffei (Project Manager)
Mr. Virgilio Rivera (Civil Engineer)
Mr. Joko Siswadi (Electrical Engineer for transmission line).
Mr. Zoltan Lukacsi (QA/QC Engineer).
Mr. Jose Domingo Verasay (Electrical Engineer).
Mr. Napoleon Villanueva (Civil Engineer for Substations).
Mr. Jaime Osvaldo Munoz (Electrical Engineer)
Mr. Felix Pascua (Environmental Specialist). Not attending

CONTRACTOR CNI22

Mr. Li Tao (Project Manager).
Mr. Wu Yong Jun (Chief Engineer).
Mr. Hung Kaifu (chief engineer for Hera power plant)
Mr. Zhang Ming Cun (Substation Manager). Not attending
Mr. Zhang Ming Ping (Transmission Line Manager). Not attending
Mr. Zou Xiaoming (Hera power plant Manager). Not attending
Mr. Zhou Zhong Qi (Dili Substation Engineer).
Mr. Peng Liwei (Interpreter). Not Attending
Mr. Tang Zi Xian (Interpreter).Not attending
Mr. Liu Jie (Electrical Engineer). Not attending
Mr. Jiang Pei Yun (Transmission Lines Dep. Manager).
Mr. Xiao Yali (Transmission line Engineer). Not attending
Mr. Peng Li Xian (Transmission Line Engineer).Not attending
Mr. Jiang Yan (Transmission Line Engineer).
Mr. Li Dawei (Transmission Line engineer).
Mr. Zhu Ling (Designer). Not attending
Mr. Li Yui (Designer).Not attending
Mr. Cai Hui (QHSE).
Ms Dina (Interpreter).

Subject of the meeting : Coordination of the works

Agenda of the present meeting :

- 1) Comments on the last minute of meeting dated November 16, 2010.
- 2) Progress of works.
- 3) Delivery status of materials and equipment.
- 4) Drawings and technical specifications.
- 5) Insurance policy
- 6) Payment
- 7) Environment

Before starting to discuss the various issues of the meeting, the problem of the tower No. 30 (Hera – Dili) was raised once more, apparently the land owner said that this time he will not allow to do the erection of the tower unless one of his sons is employed as security guard in Dili substation. EDTL is requested to look inside this matter.

For the problem on towers 24-25-26-27 (Dili - Liquica) the Contractor stated that all the previous problems have been solved by employing workers from the concerned land owners families, four workers for each tower satisfied the request and thereafter the local community agreed to give full collaboration to the Contractor.

Since we are in the subject of EMPLOYMENT the Consultant is requesting if CNI22 has already started to recruit the persons indicated by the Owner in two separate lists:

- One list of newly graduated Timorese engineers to be incorporated in the project.
- One list of 47 Timorese holding a technical diploma to be trained for towers erection and for conductor stringing.

The Contractor so far ignored such request of the Owner and stated that he needs to study in detail this matter.

1) Comments on the last minute of meeting dated November 16 2010

The Contractor clarified the last sentence on page 3 about field survey work : Liquica -Maliana, the field survey work is completed except the river crossing which may involve three towers with special foundations.

Maliana - Suai, the field survey work is not done in a section of 26 KM due to the heavy rain which made the roads impassable.

Cassa - Betano, the field survey work is not done in a section of 23 KM due to heavy rain on the area.

The survey team is now back to Hera office.

No comments from EDTL.

No comments from those present.

Everybody present in the meeting are reminded that <the no comments> it means full approval of the contents of the minute of the previous meeting.

2) Progress of the works

Transmission lines

During this second half month of November the situation has improved a little bit, more foundations have been concreted and more towers erected. Hopefully it could be a sign that the Contractor is shaking up.

From Liquica substation up to Lospalos substation there are 458 Towers (provisional number since field survey near substations has to be completed).

The overall situation is summarized in the following table:

Section	excavation	concrete	Tower erection	Stringing conductors	Total number
Hera-Dili	30	29	27	12	30
Hera- Manat.	73	66	21	–	92
Manatuto-Baucau	101	92	6	–	131
Dili-Liquica	65	45	5	--	87
Baucau-Lospalos.	–		--	–	118
TOTAL	269	232	59	12	458
THIS Period of 14 days	21	40	15	12	

The quantity of work done during this period, from November 16 up to November 30, in 14 days

seems to be improved From the above figures it appears that the excavation work has to be accelerated in order to avoid that the concreting work teams to catch up.

The Contractor stated that 6 teams are now deployed for tower erection, and in the next two weeks 40 towers will be erected. Next month more Chinese erectors will arrive.

The Contractor is invited not to under estimate the issue of the Timorese workers to be trained as tower erectors.

HERA – DILI (9.890 KM - No. 30 towers)

Tower foundations N1 is still in progress with excavation of one leg, concreting will start next week Tower foundation N30, the two remaining legs have been excavated and concreted (problem with landowner was at last solved)

Tower to be erected are N1-N2-N30

Stringing of the conductors is in progress from tower 8 to tower 13, the total number of towers with the conductors installed (except OPGW) are now 12.

The Consultant remarked that this work is not performed in a professional way, the sagging method used by the tangent angle has yet to be verified and approved.

The Consultant raised another question regarding the scaffolding erected to cross the 20 KV existing over head line and the adjacent road.

Scaffolding made with the steel pipe is not at all adequate for the 20 KV. For roads crossing this type of scaffolding can be installed provided that timber be placed on top in order to avoid the conductors sliding and touching the steel part.

For the 20KV line protection should be done with adequate materials and tools. The Contractor should not expect to have the existing 20 KV line out of service for full day as requested, this medium voltage line serves the military base and the naval base and can be disconnected only for two or three hours maximum, the Contractor should complete with adequate protection and scaffolding the crossing in such a way that stringing operation can be performed with the 20KV line energized.

DILI – LIQUICA (36.80 KM – 87 towers)

The excavation work is completed in 65 tower foundations (about 74% of the total) and is in progress in 7 foundations. The consultant remarked that grounding cable being installed in the foundations is not accepted, the welding in particular is done by un-experienced workers

The concrete has been done in 45 towers foundations (about 51% of the total) Tower erected 5 and the work is done by two teams.

The Contractor reported that no more problems with land owners.

The tower No. 78 is to close to the river and the Consultant requested to be shifted of 10 m or to build adequate protection wall.

HERA – MANATUTO (41.500 KM – No. 92 towers)

The excavation work is completed in 74 tower foundations (about 80% of the total) and is in progress in 6 foundations.

The concrete has been done in 66 tower foundations (about 71% of the total) Towers erected are 21 (about 22% of the total)

MANATUTO – BAUCAU (50.065 Km -131 towers)

The excavation work is completed in 101 tower foundations (about 77% of the total) and is in progress in 9.

The concrete has been done in 92 tower foundations (about 70% of the total). Towers erected are 6 (0.4% of the total). Two teams of erectors are now working. Along this section are now employed 100 Chinese and 80 Timorese workers.

BAUCAU – LOS PALOS (53.280 KM – 118 towers)

The contractor stated that excavation works will start on December 20 2010.

BAUCAU – VIQUEQUE (64 KM – 96 towers)

The Contractor stated that excavation works started last week with a group of 19 Chinese workers.

LIQUICA – MALIANA (63 KM – 112 towers)

No activity is reported. The contract with Indonesian Company DCP not finalized yet.

MALIANA – SUAI – CASSA – BETANO

Field survey work is in progress with one group of surveyors.

BETANO - VIQUEQUE

Plans and longitudinal profiles are still under preparation.

VIQUEQUE – LOSPALOS

Plans and longitudinal profiles are still under preparation.

Concerning the Indonesian Contractors to be utilized for the construction of the portion of the transmission line along the South Coast the situation is as follow :
CNI22 and <DCP> Company from Surabaya for the section Liquica-Maliana-Suai have agreed on the revised price for the first 72 towers, but the contract is not finalized yet.
For the sections Suai-Cassa-Betano-Viqueque-Los Palos CNI22 is negotiating with others Indonesian Contractors : TEHATE Group – PT KARYA and others.

Substations

DILI SUBSTATION

The main activity is concentrated in the mail control building, the Contractor intends to complete the concrete structure up to the roof by the 10th of December.

The concrete work in the main cable trench is completed and now the various branches are under preparation.

On the 20KV Building external brick wall is done about 60%.

The Contractor stated that the erection of the steel structures will start in mid of December, the team of erectors and technical people for electrical equipment installation are expected to arrive from China soon

The Contractor is reminded that 31st December 2010 is the **Handing Over Contractual Time**. The contractor is now stating that the substation will be totally completed by end of March 2011.

MANATUTO SUBSTATION

The work is proceeding in the bricks fence wall, the total achievement about 60% (the 80% mentioned in the previous minute of meeting was a wrong given information). External drainage ditch is also done in parallel with the wall.

In the Guard House the foundation concrete work is done.

Foundation of the main transformer is done.

At present in the site the work force consists of 40 Chinese and 30 locals.

BAUCAU SUBSTATION

No activity is reported

LOS PALOS SUBSTATION

Local subcontractor selected to do the civil works is now negotiating the contract.

LIQUICA SUBSTATION

Local subcontractor is mobilizing in during the coming week.

MALIANA SUBSTATION

Clearing and cutting of trees in progress, the contractor for soil investigation will move in Friday December 3rd.

SUAI SUBSTATION

Soil investigation is on progress, but the land owners do not allow any other activity unless they are paid compensation for the trees to be cut.

CASSA SUBSTATION

Cutting of trees and bush is done.

The Contractor stated that access road in the middle of the village may cause problem. The consultant stated that the position of the access road will be studied when the lay-out of the substation is prepared.

VIQUEQUE SUBSTATION

The soil investigation work is almost completed.

The Contractor raised the problem of the rock in one side of the substation and requested to shift the location of about 15 meters.

The Consultant said that the issue will be verified on site.

Hera Power Plant

No activity is reported,.

Contractor stated that the ship which had a breakdown arrived yesterday in Dili port, all the steel plates for oil tanks are on board, therefore works of the oil tanks construction will start in mid of December.

Concerning the other major works to be completed : **Embankment, Drainage Canal up to the road crossing, Fencing Bricks Wall**, the contractor has to take a decision of what he intends to do.

Concerning Hera Power Plant the Contractor is informed that on 02-03-04 December,2010 a delegation of 18 people from Wartsila Indonesia will be in Dili for the <kick off meeting> of the project and CNI22 is invited to participate, the delegation will also visit Hera to see the actual condition of the site

Betano Power Plant

No activity

3) Delivery of Material and Equipment

The ship which arrived in Dili port yesterday is fully loaded with material for the project, mainly steel plates for Oil Tanks, steel structures for Baucau Viqueque and Baucau Manatuto, Conductors and shield wire.

The situation of handling the material, loading, transporting and unloading has not improved at all. A lot of damages are being reported by the supervisors on site.

The Contractor is WARNED once more that material on such condition will not be paid for and if the situation persist this material will be rejected and the Contractor officially ordered to replace at its own cost.

4) Drawings and technical specifications

Drawings submitted in this period are for Dili substation, Lospalos substation, for Hera fire control of oil tanks, lay-out of Maliana and Suai substations. Remarks on the drawings are always the same, poor English translation and lack of details.

5) Insurance

Situation is unchanged. The Contractor stated that :

- Materials shipped are normally covered by marine insurance policy provided by the shipping agent
- The workers are covered in case of accident by a insurance policy made in China by the Head Quarter, but evidence has not been submitted to the Consultant as many time requested.
- Concerning the All Risk Insurance requested in the contract, the Contractor is not covered and continues to work at his own risk.

6) Payments

All the payments have been made by the Owner, the last one is the interim payment certificate No.8 for the month of October which is in process for payment.

7) Environment

The Consultant brought up this issue because the Contractor is doing very little or nothing concerning the protection of the environment.

The local communities near the camps, where transmission lines Chinese workers are living, complained already several time for the filth scattered around.

Just travelling along the main roads can be seen rubbish with CNI22 marks abandoned here and there

Along the transmission line in each tower location it can be seen empty cement bags, plastic sheets, plastic bottle, empty cans etc.

The Contractor seems to be indifferent to the report and to the instructions issued by Mr. Felix Pascua, the International Environmental Specialist (IEC) appointed by the Consultant for this project.

The Contractor is advised not to make any complains when local communities throw stones at Chinese workers for the reason above stated.

The present meeting started at 15:00 and ended at 18:00the

Next meeting is scheduled for Tuesday 14 December, 2010 at 14:30 in Hera.

FINANCIAL PROJECT STATEMENT

(pages 36-39 of original report)

1) Contract with CNI22

- A.) Contract signed on 25 October 2008. The total contract value of US \$ 360,366,947.00.
- B.) Amendment No. 1 signed on 27 February 2009. Total contract value unchanged of \$360,366,947.00 split in:
- (I) US \$ 91,038,377.00 for Power Plant, and its Facilities.
 - (II) US \$ 269,328,570.00 (Equivalent to Foreign Currency RNB 1,885,300,000.00) for Power Grid and it's Facilities.
- In addition to the above
- (III) US \$ 3,000,000.00 per year per a period of 5 years, and operation of the whole Power Plant, and Power Grid and Training of owner's nominated personnel.
- C.) Amendment No. 2 signed on 21 December 2009. The contract value has been increased of US \$ 6,764,277.00 due to the adjustment of the exchange rate between US \$ and Chinese currency RNB Renminbi.

New total contract price US\$ 367,131,224.00 split in:

- (I) US \$ 91,038,377.00 for Power Plant, and it's Facilities (unchanged)
- (II) US \$ 276,092,847.00 for Power Grid and it's Facilities,
- (III) US \$ 3,000,000.00 per year per 5 year period for management and operation of the whole Power Plant, and Power Grid and Training of owner's nominated personnel.

Fixed Contract Price not subject to any variation US \$ 367,131,224.00

A. Disbursement Schedule:

10% Advance Payment		\$ 36,713,122.00
• US \$ 10,000,000.00	Paid on April 2009	Against Bank Guarantee of same amount
• US \$ 10,550,000.00	Paid on December 2009	Against Bank Guarantee of US \$ Twelve Million
• US \$ 1,450,000.00	Paid on February 2010	Covered by above Bank Guarantee
• US \$ 14,713,122.00	Paid on August 2010, covered by the performance security of US \$ 36,713,122.00	

90% of the contract price ----- \$ 330,418,102.00
To be paid to the Contractor in monthly installment, in accordance to the progress of the works and as per the price schedule items.

The interim payments submitted, paid /or under process are:

Interim payment No.	Gross amount US\$	Net Amount US\$
1	5,872,855.58	4,699,733.18 paid
2	4,117,847.41	3,294,319.58 paid
3	3,439,526.40	2,756,729.20 paid
4	800,321.83	640,257.46 paid
5	4,891,259.53	3,915,378.36 in process
6	5,569,325.60	4,456,218.22 paid
7	13,593,524.11	10,877,498.39 in process
8	10,454,635.75	8,374,646.12
9	10,552,8873.93	8,463,473.67
Total	59,292,182.13	47,478,254.17

The cost for the management and operation in the amount of US \$ 3,000,000.00 per year per a period of 5 years, shall be disbursed starting from the date of issuance of Operational Certificate.

From CNI22 Contract the portion relevant to the power Plants (US \$ 91,038,377.00) including Operation and Maintenance (US \$ 3,000,000.00 x 5 years period) has been removed.

The Contract which will be amended (Amendment No. 3) will consist only of the power Grid : 715 Km (about) of Transmission lines 150 KV, nine (9) substations 150/20 KV, 120 Km (about) of Distribution lines 20 KV.

The summary (gross amount) of above interim payments represent 21.47% of the Power Grid Value (US \$ 276,092,847.00).

2.) Contract with Puri Akraya Engineering Limited for Power Plants

A) Contract signed on September 15, 2010 of value US \$ 352,569,123.00 split in:

- (I) Hera power plant US \$ 164,532,257.00
- (II) Betano power plant US \$ 188,036,866.00

A. Disbursement Schedule

- 25 % advance payment US \$ 88,142,281.00
- 75 % by Letter of Credit US \$ 264,426,842.00

The amount of the LC will be split and withdrawn over a period of 16 months during the length of the contract.

B. Expected Budget of Performance

1. WORKS & SUPPLY

Year	Monthly Schedule of Disbursement (USD)				Amount
	Jan-Mar	Apr.-Jun	Jul-Sep	Oct-Dec	
2009		10,000,000.00		10,550,000.00	10,550,000.00
2010	Feb-Mar	Apr.-Jun	Jul-Sep	Oct-Dec	
	1,450,000.00	9,990,702.99	27,324,566.81	85,915,281.42	124,680,551.22
2011	Jan-Mar	Apr.-Jun	Jul-Sep	Oct-Dec	
	80,000,000.00	100,000,000.00	100,000,000.00	100,000,000.00	380,000,000.00
2012	Jan-Mar	Apr.-Jun	Jul-Sep	Oct-Dec	
	30,000,000.00	30,000,000.00	30,000,000.00	23,431,418.78	113,431,418.78
TOTAL					628,661,970.00

2. MANAGEMENT & OPERATIC (Indicative only)

Year	Monthly Schedule of Disbursement (USD)				Amount
	Jan-Mar	Apr.-Jun	Jul-Sep	Oct-Dec	
2012		750,000.00	750,000.00	750,000.00	2,250,000.00
2013	Jan-Mar	Apr.-Jun	Jul-Sep	Oct-Dec	
	750,000.00	750,000.00	750,000.00	750,000.00	3,000,000.00
2014	Jan-Mar	Apr.-Jun	Jul-Sep	Oct-Dec	
	750,000.00	750,000.00	750,000.00	750,000.00	3,000,000.00
2015	Jan-Mar	Apr.-Jun	Jul-Sep	Oct-Dec	
	750,000.00	750,000.00	750,000.00	750,000.00	3,000,000.00
2016	Jan-Mar	Apr.-Jun	Jul-Sep	Oct-Dec	
	750,000.00	750,000.00	750,000.00	750,000.00	3,000,000.00
2017	Jan-Mar	Apr.-Jun	Jul-Sep	Oct-Dec	
	750,000.00				750,000.00
TOTAL					15,000,000.00

NOTE:

Expected payments done by the Owner in accordance with the progress of the works.

(pages 50-57 of original report)

a) Summary of Contracts Contractual Data

a-1 The 2nd Amendment to Contract Agreement No. RDTL – 812931 now effective as from December 21, 2009.

SCOPE OF WORKS:

The Contractor shall provide a complete National Electrical System consisting of Power Plants and Electrical Power Grid. The electrical system shall cover the whole country, shall be reliable and produce electric power to full capacity of the installed Power Plants and will be fully maintainable without interruption. The Power Plants and Electric Power Grid consist of the following, referred to as Works;

One (1) Power Plant located at Hera (N-E of Timor-Leste) with a capacity of not less than 120MW and One Power Plant at Betano (S-W of Timor-Leste) with a capacity of not less than 60MW including the relevant step up and switching Substations which shall have 20KV Distribution capability of not less than 5MW each.

As stipulated in the Amendment, the Owner requires to change the second hand engines with a brand new one and to increase the Power Plant capacity in **Betano from 60MW to 130MW**. For this new condition, the Contractor shall submit corresponding Proposal subject to verification and negotiation wherein the price of the second hand engines as per the previous Contract will be deducted from this Proposal and the differential amount will be added to the contract signed on December 21, 2009, and;

- (i) The existing Comoro and Hera and Betano Power Plants will be connected through the Power Grid.
- (ii) Around 715 Km length of the National Power Grid shall consist of 58 Km double circuits, 657 Km single circuit 150 KV transmission lines and 9 substations located at Dili, Baucau, Liquica, Manatuto, Lospalos, Viqueque, Cassa, Suai and Maliana. The actual length of Transmission Lines measured from Gantry to Gantry of each substations shall have no effect to the Total Contract Price in case there will be variance in plus or minus compared to the distance measured in the maps.
- (iii) 120 Km of 20 KV Distribution Lines to connect Aileu, Gleno, Same, and Ainaro from the nearest 150/20KV Substations, and connection of the Substation to the 20KV Power Grid. This total length of the Lines is fixed and additional kilometers of lines, if requested will be paid as an additional amount to the Contract prices in accordance to the unit rates indicated in the Contract Agreement;
- (iv) The possible relocation of the Power Plant in Betano shall be technically negotiated with no effect the Contract Price.

CONTRACT PRICE:

The Owner hereby agrees to pay to the Contractor in consideration of the performance by the Contractor of its obligations hereunder amounting to US\$ 367,131,224.00 aggregate of:

- (a) US\$ 91,038,377.00 (Ninety One Million Thirty Eight Thousand Three Hundred Seventy Seven US Dollars) for the two (2) Power Plants and their Facilities;
- (b) US\$ 276,092,847.00 (Two Hundred Seventy Six Million Ninety Two Thousand Eight Hundred Forty Seven US Dollars) for Power Grid 150 / 20 KV and its Facilities.

In addition US\$ 3,000,000.00 (Three Million US Dollars) per year for management and operation of the whole Power Plants and Power Grid including training of Owner's nominated personnel, computed from the issuance of the Certificate of Operational Acceptance of the Works or part thereof. For the management, operation and training of Owner's nominated personnel of the complete power grid of one (1) year the cost is included and spread in

above yearly amount.

The value of the Power Plants remains unchanged although the capacity of Betano has been increased;

Hera 120 MW

Betano from 60 MW to 130 MW

The increment of the Contract Price of US\$ 6,764,277.00 (Six Million Seven Hundred Sixty Four Thousand Two Hundred Seventy Seven US Dollars) due to the adjustment of the rate of exchange US\$/Renminbi has been added to the cost of the Power Grid.

NOTE : Following the decision of the Owner to cancel from CNI22's contract the two power plant of Hera and Betano, a new contract has been signed with the Indonesian Contractor <Puri Akraya Engineering Limited (contract signed on September 15, 2010) to build the two power plants using double combustion system gen/Set supplied by Wartsila of Finland, the value of the project is now as follow:

Power Grid (transmission lines and substations including 20KV distribution line)	US \$ 276,092,847.00
Hera Power Plant	US \$ 164,532,257.00
Betano Power Plant	<u>US \$ 188,036,866.00</u>
TOTAL	US \$ 628,661,970.00

To the above figure should be added the cost related to additional works not originally foreseen in the contract such as the Jetty to unload and pump the HFO to the tanks and all administrative buildings.

These additional costs are now under evaluation and once approved will be included in the monthly report.

b) SUMMARY OF CONTRACT STATUS

I. HERA POWER PLANT

No activity from CNI22 is done on the site of the power plant.

The steel plates for the construction of the oil tanks have just arrived at Dili port (after two months laying on the ship which had breakdown).Tanks construction may start soon in December.

The Indonesian Contractor <Puri Akrya Engineering Limited> that shall make the installation of Wartsila Generating Sets is now organizing for the Kick Off Meeting of the project.

II. BETANO POWER PLANT

Works program shall be discussed during the Kick Off Meeting.

III. SUBSTATIONS

• DILI SUBSTATION

The activity is concentrated in the civil works:

- Bricks fencing wall plastering is along the river side is almost completed.
- For the 20KV Building the construction of the external bricks wall is done about 45%.
- For the Main Control Building the concrete structures are done up to the first floor and the work is now centered in the preparation for the upper concrete structure up to the roof level.
- The two main transformers have been transported from China and are now placed on the foundations.
- The 150KV outdoor steel structures have been transported in the site and are ready to be erected.
- The main cable trench is done.
- The concrete structures of the pump house is completed from foundation up to ground level and preparation for the upper part is in progress.

• MANATUTO SUBSTATION

- The fence wall is completed on three sides of the substation.
- The main transformer foundation is done.
- The Guard house is under construction from ground level up to the roof.

• BAUCAU SUBSTATION

- No activity is reported.

• LOS PALOS SUBSTATION

- No activity is reported.

• LIQUICA SUBSTATION

- No activity is reported.

• MALIANA SUBSTATION

- The only activity reported is the clearing of the site

• SUAI SUBSTATION

- The soil investigation is the only activity in progress

- CASSA SUBSTATION
 - No activity is reported
- VIQUEQUE SUBSTATIONS
 - Earthworks and leveling of the site is in progress
 - Soil investigation and bore hole drilling is in progress

IV. TRANSMISSION LINES

- HERA – DILI (9.89 KM) total number of double circuit towers: 30 units.
 - Total number of tower foundations excavated: 30
 - Total number of tower foundations concreted: 29
 - Total number of towers erected: 28
 - Stringing of conductors Number of towers: 12
- HERA – MANATUTO (41.5 KM) total number of double circuit towers : 92 units.
 - Total number of tower foundations excavated: 73
 - Total number of tower foundations concreted: 63
 - Total number of towers erected : 21
- MANATUTO – BAUCAU (60.00 KM) total number of single circuit towers:127 units.
 - Total number of tower foundations excavated: 101
 - Total number of tower foundations concreted: 92
 - Total number of towers erected : 6
- BAUCAU – LOS PALOS (53.28 KM) total number of single circuit towers :118 units.
 - No activity done.
- BAUCAU – VIQUEQUE (64.00 KM) total number of single circuit towers : 96 units.
 - The excavation work in progress : 6
- DILI – LIQUICA (36.84 KM) total number of single circuit towers : 87 units.
 - - Total number of tower foundations excavated : 65
 - - Total number of tower foundations concreted : 45
 - - Total number of tower erected : 5
- LIQUICA – MALIANA (63.0 KM) total number of single circuit towers : 112
 - No activity is reported.
- MALIANA - SUAI
 - Field survey work is in progress.
- SUAI – CASSA
 - No activity is reported.
- BETANO – VIQUEQUE
 - No activity is reported.
- VIQUEQUE – LOSPALOS
 - No activity is reported.

C-1 Work Schedule / Program

(pages 59-62 of original report)

NO.	Activity	Duration	2009		2010				2011				2012			
			Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2		
			Commencement Date	Completion Date												
0	Progress schedule of Timor - Leste Electrical Power Project	913d	2009-10-1	2012-03-31												
1	Design	458d	2009-10-1	2010-12-31												
2	Procurement & Delivery	716d	2009-01-15	2011-12-31												
3	Construction	913d	2009-10-1	2012-03-31												
4	Power Plant Project															
5	Hera Power Plant (Phase I)	913d	2009-10-1	2012-03-31												
6	Hera Power Plant (Phase II)	547d	2009-10-1	2010-12-31												
7	Betano Power Plant	396d	2010-3-1	2011-03-31												
8	Substation project															
9	Dili Substation	854d	2009-10-1	2012-01-31												
10	Liquica Substation	365d	2009-10-1	2010-9-30												
11	Same Substation	214d	2010-4-1	2010-10-31												
12	Sual Substation	212d	2010-9-1	2011-3-31												
13	Malliana Substation	212d	2011-2-1	2011-8-31												
14	Manatuto Substation	215d	2011-07-1	2012-1-31												
15	Baucau Substation	304d	2009-12-1	2010-9-30												
16	Lospalos Substation	214d	2010-6-1	2010-12-31												
17	Viqueque Substation	212d	2010-11-1	2011-4-30												
18	Transmission Line Project															
19	Dili - Hera Transmission Line	214d	2011-4-1	2011-10-31												
20	Dili - Liquica Transmission Line	913d	2009-10-1	2012-03-31												
21	Same - Betano Transmission Line	181d	2009-10-1	2010-6-30												
22	Same - Viqueque Transmission Line	184d	2010-5-1	2010-30-1												
23	Betano - Sual Transmission Line	153d	2010-6-1	2010-12-31												
24	Same - Sual Transmission Line	304d	2010-11-1	2011-8-1												
25	Sual - Malliana Transmission Line	275d	2011-3-1	2011-11-30												
26	Malliana - Liquica Transmission Line	214d	2011-6-1	2011-12-31												
27	Hera - Manatuto Transmission Line	213d	2011-9-1	2012-3-31												
28	Manatuto - Baucau Transmission Line	212d	2010-2-1	2010-8-31												
29	Baucau - Lospalos Transmission Line	245d	2010-5-1	2010-12-31												
30	Baucau - Viqueque Transmission Line	273d	2010-8-1	2011-4-30												
31	Viqueque - Los Pelos Transmission Line	274d	2010-12-1	2011-8-31												
32		335d	2011-4-1	2012-2-29												

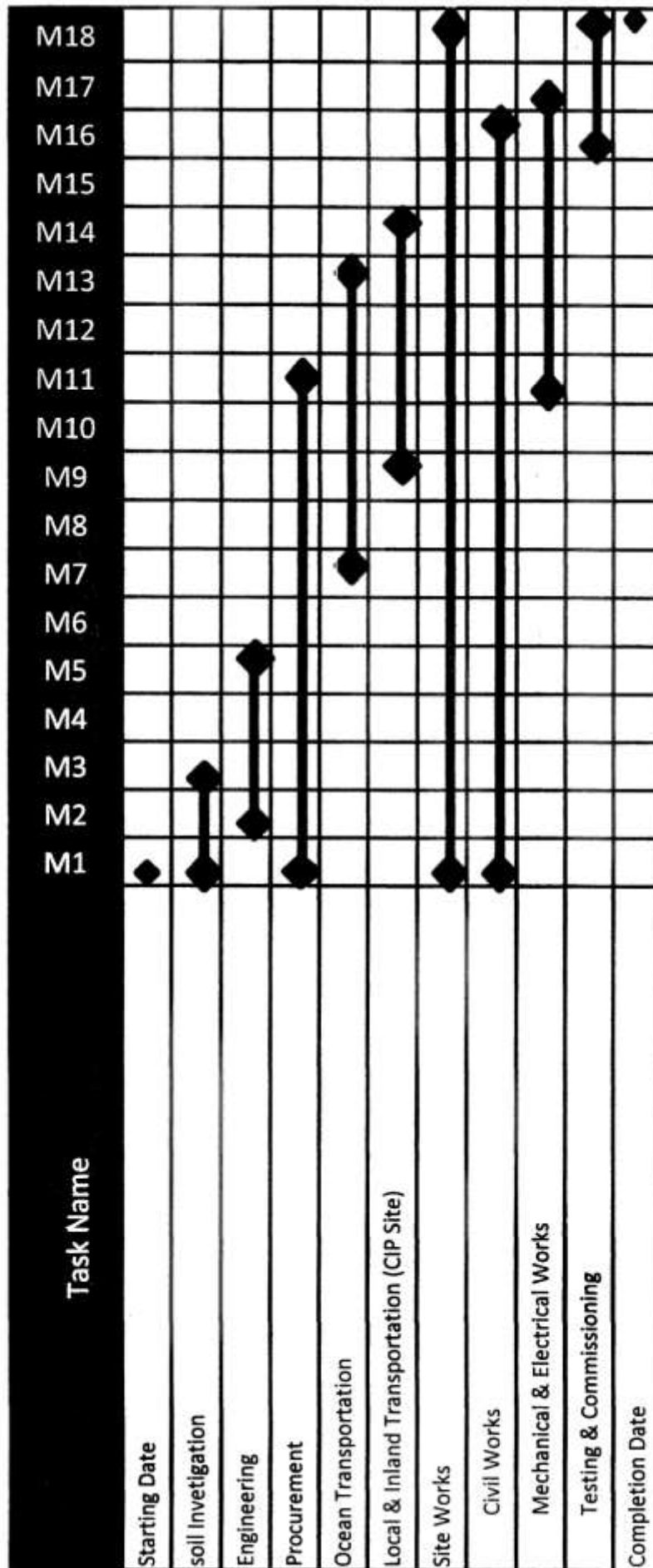
CONTRACT TIME SCHEDULE REVISED AS PER CNI 22 AMENDMENT N0 2

Updated Work Schedule																													
Activity	Duration	Commercement		2010												2011												2012	
		Date	Date	March	April	May	Jun	Jul	Aug	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	April	May	Jun	Jul	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.			
Progress Schedule	667	10-3-5	11-12-31																										
Transmission Line	667	10-3-5	11-12-31																										
Dili-Hera (10 km)	215	10-3-5	10-10-5																										
Hera-Manatuto (40km)	229	10-6-1	11-1-15																										
Manatuto-Baucau (69 km)	265	10-7-20	11-4-10																										
Dili-Liquica (32 km)	222	10-9-1	11-4-10																										
Baucau-Lospalos (80 km)	249	10-11-15	11-9-10																										
Liquica-Maliana (63 km)	252	10-12-1	11-8-9																										
Baucau-Viqueque (64 km)	249	11-12-1	11-8-9																										
Maliana-Suai (58 km)	272	11-3-1	11-11-27																										
Viqueque-Betano (98 km)	304	11-3-1	11-12-29																										
Lospalos-Viqueque (80 km)	306	11-3-1	11-12-31																										
Suai-Cassa (69 km)	244	11-4-1	11-11-30																										
Betano- Cassa (36 km)	184	11-4-30	11-10-30																										
Substation Project	517	10-7-1	11-11-29																										
Dili Substation	183	10-7-1	10-12-30																										
Manatuto Substation	183	10-9-1	11-3-2																										
Lospalos Substation	243	10-10-1	11-5-31																										
Viqueque Substation	243	10-11-1	11-7-1																										
Baucau Substation	243	10-12-1	11-7-31																										
Liquica Substation	243	11-1-1	11-8-31																										
Suai Substation	243	11-1-1	11-8-31																										
Maliana Substation	243	11-3-1	11-10-29																										
Cassa substation	243	11-4-1	11-11-29																										

TRANSMISSION LINES AND SUBSTATIONS

HERA - BETANO POWER PLANTS

PURI AKRAYA ENGINEERING LIMITED



TIME SCHEDULE

From ELC/Bonifica's November 2010 monthly progress report

(pages 109-135 of original report)

a) ENVIRONMENTAL MANAGEMENT PLANS

November 2010

A. INTRODUCTION

An Environmental Management and Monitoring Plan (EMMP) was prepared by the Consultants (ELC in association with Bonifica S. p. A.) in August of 2009 for the National Electrical Power System For Timor Leste (Contract RDTL-92896). The Contractor - China Nuclear Industry 22nd Construction Company Limited (CNI22) — signed the Commitment Letter for the implementation of the EMMP in late March of 2010 binding the Company (CNI22) to the tenets and requirements of the said EMMP. This report discusses the status of the implementation of the EMMP as of November 2010. Areas covered by this report are the following:

- Hera Power Plant Site
- Transmission Towers from Hera to Dili
- Transmission Towers from Hera to Manatuto
- Transmission Towers from Dili to Liquica
- Transmission Towers from Baucau to Manatuto
- Dili Sub-Station
- Manatuto Sub-Station
- Vemassee Camp
- Lacro Camp
- Liquica Camp
- Baucau Camp

B. DESCRIPTION OF PROJECT

The project involves the development of a system of electrification which will cover the whole Timor Leste, at the most cost effective manner, reliable and should be maintained without interruption. The project has the following components:

- Construction of Heavy Fuel Oil Power Plants with a total generating capacity of 180MW;
- Construction of 9 Sub-stations all over East Timor
- Laying of transmission lines — 715 kilometers
- Distribution lines linking the High Voltage Grid to the existing Medium Voltage Grid

C. ENVIRONMENTAL REGULATORY REQUIREMENTS FOR TIMOR LESTE

GoTL requires projects to conform to relevant environmental guidelines such as Guideline 1 (amended March 2003): Environmental Requirements for Development Proposals. The Contractor (CNI22) have yet to secure the requisite permits and clearances from the National Directorate of Environmental Services (DoE) under the Ministry for Economy and Development of the Government of Timor Leste (GoTL).

D. ENVIRONMENTAL MANAGEMENT AND MONITORING PLAN

The environmental management plan and environmental monitoring program for the National Electrical Power System for the Timor Leste was designed to determine the extent of variations and changes in the levels of pollutants in the environment and other parameters and indicators considering the implementation or operation of the project. The EMMP was based on the internationally accepted environmental management and conservation practices, the existing environmental laws and regulations of the Government of Timor Leste (GoTL) and the Kyoto Protocol.

ENVIRONMENTAL MANAGEMENT

The Environmental Management Plan (EMP) is designed to ensure that the mitigating measures recommended to address the adverse impacts of the project on environment, life, and property are

properly followed, while positive impacts are enhanced to gain maximum benefits. Table 1 presents the Summary Environmental Management Checklist as of November 2010.

a) DESIGNATION OF AN ENVIRONMENTAL OFFICER

The Contractor has the following personnel designated as Safety/Environmental Officers:

- Mr. Cai Hui
- Mr. Lui Jianguo
- Mr. Wang Jinan
- Mr. Chen Jiangtao

It has been recommended during the Coordination Meeting of 16 November 2010 by the Supervising Consultants that the Contractor engage a full-time Environmental Specialist that has a good command of the English language. This was raised in view of the minimal accomplishment and non compliance of the Contractor to the EMMoP since commencement of works.

b) DESIGNATION OF A HEALTH/MEDICAL OFFICER

The Contractor has on-site Dr. Wang as the designated Health/Medical Officer. However, the medical officer services aside from the Hera Power Plant, the workers in Dili Sub-Station, Manatuto Sub-Station and the Baucau, Vemasse, Laclo, and Liquica Camps.

c) PREPARATION OF HEALTH AND SAFETY (HSP) AND SOLID WASTE MANAGEMENT PLANS

The QHSE Management Plan as submitted during the Audit of May 2010 has yet to be revised as per Envi Field Directive No. 1 of 01 June 2010. As reported in the previous Audit, the Contractor has yet to prepare the Solid Waste Management Plan for all the facilities and work areas.

d) SPILL CONTINGENCY/EMERGENCY RESPONSE PLAN

The Site Emergency Contingency as submitted during the Audit of May 2010 has yet to be revised as per Envi Field Directive No. 1 of 01 June 2010. The Oil Spill Contingency Plan, as per information from the Contractor, will be prepared after the Oil Tanks are erected.

e) PREVENTION OF POLLUTION (AIR, WATER AND NOISE)

As reported in the previous Audit, the Contractor undertakes regular wetting/watering of exposed grounds to prevent re-suspension of particulates on a daily basis. Service vehicles, trucks, heavy equipment and machineries are regularly maintained.

The toilet and bath areas at the camp of the Transmission Tower Group (Sub-Contractor) adjacent to the Hera Power Plant are still unsanitary and have not been improved since May 2010. This presents itself as a health and safety risk not only to the occupants of the camp (Transmission Tower Group) but also to the people living in the Main Facility. This was cited in the Envi Field Directive No. 1 issued on 01 June 2010. Since the previous Audit, no improvements have been made to address this concern. Proper sanitary facilities (Toilet and Bath) should be provided the workers/camps to prevent pollution and degradation of the surrounding areas.

CONSTRUCTION SUPERVISION SERVICES FOR THE BUILDING OF A NATIONAL ELECTRICAL POWER SYSTEM FOR TIMOR-LESTE. (CONTRACT RDTL-92896)

TABLE 1. ENVIRONMENTAL MANAGEMENT CHECKLIST — NOVEMBER 2010

PROJECT ACTIVITY	POTENTIAL ENVIRONMENTAL IMPACT	PROPOSED MITIGATION MEASURE	COMPLIANCE YES NO		RESPONSIBLE ENTITIES	REMARKS
PRE-CONSTRUCTION PHASE						
LAND ACQUISITION	Loss of land	Just and fair compensation to landowners.	X		CNI22/ CSC/EDTL	ROW for both Transmission Towers and Access Roads have already been resolved. No pending Issue on this.
PLANNING SITE ACTIVITIES	Health hazards and risks to workers and residents of nearby communities	Prepare Occupational Health and Safety Plan	X		CNI22/ CSC/EDTL	The plan as submitted May 2010 has yet to be revised.
	Social conflicts with local residents	Undertake consultations with local residents prior to mobilization	X		CNI22/ CSC/EDTL	Proper Consultations with the local leaders and communities have been undertaken and is a continuing activity.
		Priority employment for local workers	X		CNI22/ CSC/EDTL	Local laborers are employed by the Contractor.
		Establishment of grievance/complaints desk at site offices		X	CNI22/ CSC/EDTL	No formal complaints/grievance desk has yet been established by the Contractor.
CONSTRUCTION PHASE						
ESTABLISHING CONSTRUCTION SITES	Generation of dust from clearing and grubbing	Minimize clearing to required area only	X		CNI22/ CSC/EDTL	Clearing of work areas are undertaken in required area only.
		Regular watering of exposed areas	X		CNI22/ CSC/EDTL	Undertaken daily.
ESTABLISHING CONSTRUCTION SITES	Soil Erosion due to exposure of topsoil	Re-vegetate when possible and practicable		X	CNI22/ CSC/EDTL	No re-vegetation of cleared areas has been undertaken to date.
	Generation of solid waste	Prepare Solid Waste Management Plan (SWMP)		X	CNI22/ CSC/EDTL	No SWMP have been prepared by the Contractor to date.
	Conflicts with local residents	Undertake consultations with local residents	X		CNI22/ CSC/EDTL	Proper consultations with the local leaders and communities have been undertaken primarily by the Consultants. This is an on-going activity.
SITE DEVELOPMENT AND CONSTRUCTION OF FACILITIES	Acute elevated levels of TSP/SO ₂ /NO _x	Minimize and control dust generation through regular spraying of exposed areas			CNI22/ CSC/EDTL	Undertaken daily
		Regular maintenance of heavy equipment, vehicles and machineries			CNI22/ CSC/EDTL	Undertaken regularly
	Siltation and sedimentation of nearby water bodies	Containment and construction of siltation ponds and silt curtains		X	CNI22/ CSC/EDTL	None has been installed to date.
		Minimum vegetative removal	X		CNI22/ CSC/EDTL	
		Proper management, handling and disposition of spoils and unsuitable materials	X		CNI22/ CSC/EDTL	

CONSTRUCTION SUPERVISION SERVICES FOR THE BUILDING OF A NATIONAL ELECTRICAL POWER SYSTEM FOR TIMOR-LESTE. (CONTRACT RDTL-92896)

PROJECT ACTIVITY	POTENTIAL ENVIRONMENTAL IMPACT	PROPOSED MITIGATION MEASURE	COMPLIANCE		RESPONSIBLE ENTITIES	REMARKS
			YES	NO		
Contamination of nearby water bodies		Installation of oil and grease traps in drainage systems from workshops, vehicle and plant washing facilities and service and fuelling areas		X	CNI22/ CSC/EDTL	None has been Installed to date.
		Construction of bund walls of adequate capacity around fuel, oil and solvent storage tanks	X		CNI22/ CSC/EDTL	
		Proper handling and storage of petroleum products and toxic and hazardous substances	X		CNI22/ CSC/EDTL	
		Installation of sanitation facilities in camps and site offices	X		CNI22/ CSC/EDTL	Main camps of the Contractor are provided with the requisite sanitation facilities; however, those of the sub-contractors (Transmission Tower Group) are unacceptable.
		Installation of waste treatment facilities In ancillary facilities such as batching plants and related facilities		X	CNI22/ CSC/EDTL	None have been established to date.
Acute elevated levels of noise		Operation of heavy equipment and other appurtenant facilities will be limited during daytime - 0800-1700. Should operation beyond these hours is required, proper notification shall be given the concerned local government officials	X		CNI22/ CSC/EDTL	On-going
		Regular maintenance of heavy equipment and machineries	X		CNI22/ CSC/EDTL	On-going
		Establishment of buffers between nearby settlement areas and work areas		X	CNI22/ CSC/EDTL	None have been established to date.
Loss of habitat		Cutting of trees and clearing of vegetative cover to be undertaken only when necessary	X		CNI22/ CSC/EDTL	
		Relevant permits and clearances will be secured prior to cutting and clearing activities		X	CNI22/ CSC/EDTL	No permits have been presented to date.
Migration/Loss of wildlife		Habitat development and generation through planting of Indigenous species		X	CNI22/ CSC/EDTL	None undertaken to date.
		Re-vegetation of cleared areas		X	CNI22/ CSC/EDTL	None
Loss of aesthetic values		Landscape development and design when possible and practicable		X	CNI22/ CSC/EDTL	None

- Contractor, China Nuclear Industry 22nd Construction Company Ltd.; CSC – Construction Supervision Consultants; EDTL – Electricidade Da Timor Leste; DoE – Directorate for Environment

The toilet and bath areas of the Vemassee camp comprise mainly makeshift structures located along the beach area at the back of the main camp. Human waste is directly discharged into the sea with no proper treatment before final discharge into the receiving water body. This is highly unacceptable as this adversely impacts the receiving waters and marine life in the area.

As in the other camps of the transmission tower group, the camp in La'clo also does not have the proper sanitation and bath facilities. Makeshift structures and dug holes are utilized as toilet and bath areas.

The camp in Baucau of the transmission tower group barely contains the basic requirements for decent living. There exists no sanitary facility to address the requirements of the occupants of the camp. The toilet consists mainly of only an open pit located at the back of the compound and there is no bath area provided.

There are no sanitation facilities provided the workers in the Liquica Camp and the area is very unsanitary and unkempt with no basic housekeeping being implemented. Noxious odor emanates from the makeshift toilet area. The residents are complaining of the bad odor which is a nuisance and a health risk to them.

Improvements need to be made in this aspect as the unsanitary conditions in the camps make it unhealthy and unsafe, not only for the workers living in the camps but also for the residents in the adjacent settlement areas. The conditions existing in the said camps provide very good breeding grounds for mosquitoes and other pests and make it susceptible to the occurrence and spread of diseases. Health and safety risks are very high in these camps.

All the camps of the transmission tower group that was visited, with the exception of the camp in Baucau, have no basic housekeeping being implemented in the facility. Materials, supplies, food and solid waste litter most of the camps and are not properly stored and disposed. This presents itself as a health and safety risks which could adversely affect the workers residing in the camp and the residents in the adjacent areas.

Overcrowding in the camps, specifically the camp in Liquica, which houses over 100 Chinese workers, is also prevalent in most of the facilities. This is a high risk situation for health and safety concerns.

As was observed during the site visits in the transmission tower work areas, solid waste, litter and excess materials are scattered all over the work area. Empty bottles of mineral water, used bags of cement, etc. are commonly left in the work sites and are not properly collected and disposed.

f) PROTECTION OF TREES AND VEGETATION

Clearing of areas with trees and vegetation are only undertaken in required areas. There are no major issues or concerns relative to this aspect of the ENNoP

g) RELATIONS WITH LOCAL COMMUNITIES AND AUTHORITIES

Consultations are still regularly conducted with the affected communities by the Consultants to inform the local leaders and populace of the on-going works. This serves as a monitoring activity as to the issues and concerns of the stakeholders relevant to the project.

As in most projects of this type, land acquisition and hiring of local workers is the major issue that normally arises. The ROW acquisition for Facilities and Transmission Towers, which is the responsibility of the GoTL, has been adequately and expeditiously addressed.

ROW for access roads for the works currently being undertaken, which is the responsibility of the Contractor, have already been acquired. All ROW issues and concerns have been resolved to date.

Table 2 presents the ROW issues raised from May to November 2010.

TABLE 2. ROW PROBLEMS DURING WORKS, MAY — NOVEMBER 2010

DATE	SUBJECT OF COMPLAINT	WORK SITE	SUB-SECTION	REMARKS
12 May 2010	Tower Foundation	N5/N28/N29	Hera to Dili	Resolved
05 July 2010	Tower Foundation	N26/N27/N28/N29	Hera to Dili	Resolved
17 July 201	Tower Foundation	N8/N10	Hera to Dili	Resolved
19 July 2010	Access Road	N27/N28/N29	Hera to Dili	Resolved
04 August 2010	Tower Foundation	N8A	Hera to Manatuto	Resolved
16 September 2010	Tower Foundation	N79	Dili to Liquica	Resolved
17 September 2010	Tower Foundation	N32/N78/N79	Baucau to Manatuto	Resolved
14 October 2010	Tower Foundation	N31	Baucau to Manatuto	Resolved
26 November 2010	Tower Foundation/ Access Road	N78	Dili to Liquica	Resolved

h) PRIVATELY OR COMMUNITY OWNED SERVICES AND STRUCTURES

Compensation for private property that has been affected by the works is expeditiously addressed by the GoTL to the extent possible. Public services have not been affected by the current works.

i) OCCUPATIONAL HEALTH AND SAFETY

PROTECTIVE CLOTHING AND SAFETY EQUIPMENT

As reported in the previous Audit, workers are provided the basic PPE such as hard hats (Timorese and Chinese) and safety shoes (only for Chinese workers). Consultants were provided safety shoes and hard hats by ELC & Bonifica.

MEDICAL AND FIRST AID FACILITIES

The Contractor has on-site (Hera Power Plant Facility) a room designated as a clinic and a Medical Officer to service the medical requirements of the workers. However, the medical officer services, aside from the Hera Power Plant, the workers in Dili Sub-Station, Manatuto Sub-Station and the Baucau, Vemasse, Lacro, and Liquica Camps.

SUPPLY OF DRINKING WATER AND SANITATION

Water for the Vemasse camp is sourced from a well drilled within the facility. As per information gathered from the workers residing in the facility, the water is not suitable for human consumption. The water is salty owing to the fact that the aquifer is already salt water intruded as it is located in close proximity of the sea. Drinking water is secured from commercial sources (bottled water) or water is boiled before consumption.

There is no source of domestic water in the Baucau Camp on site and water is delivered to the Compound and stored in a concrete tank. This however is not potable and unfit for human consumption and is mainly utilized for bathing and washing. The workers have to buy bottled water for drinking purposes.

Potable water supply for the Liquica camp is sourced from the Dili Water Distribution System and is conveyed to an overhead tank where it is stored.

TEMPORARY FACILITIES FOR WORKERS INCLUDING SANITATION AND WASTE DISPOSAL

The Camp of the Transmission Tower Group (Sub-Contractor) in Hera Power Plant has been provided with makeshift tents however this is still unacceptable. The sanitation facilities have not been improved since the last audit done in may 2010.

The accommodations provided in the Vemasse Camp are acceptable. This houses approximately 100 Chinese workers doing the Baucau to Manatuto Transmission Line. As mentioned in previous sections of this report, the sanitation facilities in the camp are unacceptable and should be

improved.

The makeshift structures utilized as toilet and bath areas in the Lacro Camp, similar to those in the other camps, are unacceptable

There exist no sanitary facilities to address the requirements of the occupants of the Baucau camp. The toilet consists of only an open pit located at the back of the compound and there is no bath area provided.

There are no sanitation facilities provided the workers residing in the Liquica Compound the area is very unsanitary and unkempt with no basic housekeeping being implemented. Noxious odor emanates from the makeshift toilet area. The residents are complaining of the bad odor which is a nuisance to them.

As was observed in all the facilities of the Contractor, basic housekeeping is not strictly implemented. In most of the camps and facilities visited, solid waste, materials, etc are scattered and are not properly stored, handled and disposed

TRAFFIC MANAGEMENT

There is no traffic management being implemented in the facilities and no traffic management plan submitted by the Contractor to the Consultants.

1. ENVIRONMENTAL MONITORING

An integral part of the environmental protection is the continuous monitoring of the condition of the receiving environment to determine if any undesirable changes are occurring as a result of the project. The effects to the living receptors are received mainly through the surface water, air and surrounding area. Environmental monitoring principally requires quantitative measurements of the amount of pollutants present in the environmental media.

The Contractor has yet to commence the conduct of the Baseline Survey and Monthly Monitoring for Air, Noise and Water Quality. This activity should have been conducted upon induction of the Contractor to the site.

2. REPORTING REQUIREMENTS

As was reported in the previous audit (May 2010), the Contractor have not submitted any monthly environmental management and monitoring report since mobilization in January 2010. As per the EMMoP prepared for the Project, the Contractor is contractually obligated to prepare monthly environmental monitoring reports covering the implementation of the EMMoP and discussing the environmental aspects of the project. The Contractor has not complied with this requirement since his induction in the project.

E. ISSUES AND CONCERNS

- As was cited in the previous audit and as per Field Directive Envi 01 dated 01 June, the Contractor is obligated to secure the requisite **Environmental Permits and Clearances from the National Directorate for Environmental Conservation**. To date, the Contractor has not presented the necessary Development Permits and Clearances as required by the National Laws, Rules and Regulations of the GoTL.
- As was cited in the previous audit, the EMMoP stipulates that a Baseline Survey for Air, Noise and Water Quality. The Contractor was directed to immediately comply with this requirement in the Field Directive Envi 01 dated 01 June 2010. The Contractor has not yet conducted this activity to date.
- As was cited in the previous audit, the EMMoP stipulates that Monthly Environmental Monitoring for Air, Noise and Water Quality be conducted as expounded in Table 3 of the said EMMP. The Contractor was directed to immediately comply with this requirement in the Field Directive Envi 01 dated 01 June 2010 but has yet to conduct this activity to date.

- As was cited in the previous audit, the Contractor should submit a Monthly Environmental Management and Monitoring Report, the format for which is presented in Annex B of the said EMMP. The Contractor was directed to immediately comply with this requirement in the Field Directive Envi 01 dated 01 June 2010 but has yet to comply to date.
- As was cited in the previous audit and as per Field Directive Envi 01 dated 01 June 2010, a formal grievance and complaints desk should be established by the Contractor in the facilities to receive complaints, issue and concerns of the stakeholders. The Contractor should have on his staff a Community Relations Officer (CRO) that will liaise and coordinate with the local communities together with the local staff of the Consultants. This has yet to be complied with by the Contractor
- As was cited in the previous audit and as per Field Directive Envi 01 dated 01 June 2010 the EMMoP stipulates that (see Item 4.1.3) the Contractor should prepare a Solid Waste Management Plan and submitted to the Consultants within one (1) month of his arrival on-site. The Contractor has yet to comply with this requirement to date.
- As was cited in the previous audit and as per Field Directive Envi 01 dated 01 June 2010 the Contractor was directed to construct siltation ponds to address discharge of silted runoff into nearby receiving bodies of water. To date, the Contractor has yet to comply with this requirement.
- Oil and grease traps in drainage systems from workshops, vehicle washing facilities and service and fuelling areas have yet to be installed by the Contractor. The Contractor was already cited for this in the previous audit and the Field Directive Envi 01 issued in 01 June 2010.
- As was cited in the previous audit and as per Field Directive Envi 01 dated 01 June, appurtenant pollution control devices should be installed in the ancillary facilities such as the Batching Plant within the Hera Power Plant. Particulate Matter (PM) and wastewater generated by the operation of the plant need to be addressed to mitigate health risk to workers and mitigate further degradation of nearby water bodies. The Contractor has yet to comply with this requirement.
- As was cited in the previous audit and as per Field Directive Envi 01 dated 01 June, the Site Emergency Contingency Plan and the Quality, Health, Safety and Environment Management System as prepared by the Contractor should be revised to include pertinent operational details. This has yet to be complied with by the Contractor.
- As was cited in the previous audit and as per Field Directive Envi 01 dated 01 June, the Contractor was directed to provide a separate medical facility for the Dili Sub Station with the requisite medical officer, equipment and supplies. This should also be undertaken in the other facilities and camps. No compliance has been made by the Contractor on this item.
- As was cited in the previous audit and as per Field Directive Envi 01 dated 01 June, the accommodations provided the Transmission Tower Construction Group adjacent to the main facility in Hera is unacceptable, unsanitary and unhygienic and poses a grave health and safety risk to the workers. The Contractor was directed to rectify this but has yet to comply. Proper accommodations with the requisite sanitation facilities should also be provided the other camps in the project.

F. RECOMMENDATIONS

1. As contained in the site instruction Envi. No. 01 issued on 01 June 2010, proper accommodations with the requisite sanitation facilities should be provided the Transmission Tower Group located adjacent to the main Hera Camp.
2. The Contractor engage a full-time Environmental Specialist for the Project, preferably with a good command of the English language to be responsible for the implementation of the EMMoP and other environmental concerns.

3. Work areas, specifically Transmission Tower Sites, should be kept free of solid waste and litter every end of work day. Solid waste and litter should be collected and transported to the main camps and properly disposed off in sanitary disposal areas.
4. The Vemassee Camp should be provided with sanitary toilet and bath facilities with the requisite treatment facilities so as not to adversely impact the receiving body of water adjacent to the Camp. Discharge of untreated effluents should be discontinued until proper treatment facilities are established in the Camp.
5. Potable water supply should also be provided the Vemassee camp to preclude the occurrence of attendant diseases related to the ingestion of non-potable water.
6. The accommodations provided in the Vemassee camp are cramped with an average of 15 workers occupying each room. Additional rooms should be constructed as this condition is unhealthy and is very conducive to the spread of contagious diseases.
7. Proper housekeeping and materials storage should be implemented in the Vemassee Camp. This would prevent conditions that would allow pests, rodents and other vectors to proliferate in the area.
8. With an estimated 100 workers in the Vemassee Camp, it is imperative that proper medical facilities be provided. This should include the requisite medical officer and equipment and ample supplies to cater to the medical requirements of the workers.
9. Proper accommodations and facilities with the requisite sanitation facilities should be provided the, Vemassee, La'clo, Liquica and Baucau Camps. Basic housekeeping should be implemented in the said camps.
10. Medical/health facilities with the requisite medical officer, equipment and supplies should be provided the Manatuto Sub-Station and all other major facilities and camps.
11. The lined canal where the effluent from the Manatuto Sub-Station is discharged should be properly maintained and regularly declogged. Treatment of the effluent should be undertaken before final discharge.

G. CONCLUSIONS

There has been no major accomplishment in the implementation of the Environmental Management and Monitoring Plan and in the general environmental aspects by the Contractor reckoned from the previous audit undertaken in June 2010. To date, the Contractor has yet to commence the implementation of the EMMoP. As such, they are not fulfilling the agreement as it is their contractual obligation to implement this as part of their works by virtue of the Commitment Letter they signed in March 2010.

[The report contains 26 photographs illustrating unsanitary and unsafe conditions.]

QUALITY CONTROL

The procedures implemented to all the activities in this project shall be in strict compliance to the International Standard Practice.

A. RECEIVING SECTION

- Handling, storage and preservation of materials and equipments at the designated stock yard; *Visual inspection of the materials and receiving verification of Manufacturer's Certificate.*

B. INSTALLATION

- *Grade & site inspection*
- *Formwork inspection*
- *Reinforcing Bars and embedded items inspection*
- *Gravel and sand visual inspection for impurity and soil content*
- *Concrete Sampling, Testing & Concrete Placing observation*
- *Testing, calibration and commissioning of concrete Batching Plant*

SAFETY

The overall safety program is still below the standard construction practice and the Consultant is imposing strict procedures to avoid any accident throughout the duration of the project.

DILI SUB STATION AND HERA POWER PLANT

- ✓ Warning sign showing «you are entering a construction area» Ex. CAUTION DRIVE WITH CARE CONSTRUCTION AREA AHEAD; SLOW DOWN EQUIPMENT CROSSING etc. to be place visibly before and after the main gate at least 50 meters.
- ✓ At excavation place warning signboard such as; DEEP ECAVATION
- ✓ To any moving equipments such as crane; DANGER HEAVY LIFTING IN PROGRESS.
- ✓ ALWAYS PUT LADDER for excavation exceeding 1.5 meter depth and put railings to any working platform with a minimum height of 2.0 meters above the ground surface.
- ✓ Place at the main gate of every site signboard — SAFETY BEGINS HERE, ALWAYS WEAR YOUR (PPE) PERSONAL PROTECTIVE EQUIPMENTS, hard hat, safety shoes and proper working clothes.

TRANSMISSION LINES

- ✓ Foundation area to be circumscribed with RED/YELLOW WARNING RIBBON to keep onlookers away.
- ✓ In each excavation pit, a LADDER must be placed for fast evacuation of workers in case of danger.
- ✓ Place on every foundation place the safety sign-boards : SAFETY BEGIN HERE ALWAYS WEAR THE PERSONAL PROTECTIVE EQUIPMENT, hard hat, safety shoes, safety gloves and proper working clothes.
- ✓ For towers erection and conductors stringing sign-boards : ALWAYS WEAR SAFETY HAT, SAFETY BELT, SAFETY SHOES, SAFETY GLOVES and PROPER WORKING CLOTES.
- ✓ In preparing access roads to transmission lines towers AVOID VERY STEEP SLOPE AND SHARP CURVES; PROVIDE SIGN BOARDS TO EVERY JUNCTION WITH PUBLIC ROADS.
- ✓ ALWAYS PROVIDE WARNING SIGN to every equipments placed along the roads visible to all passing vehicles including falling objects coming from work activities above.
- ✓ CLEANING the site from left over material and waste once the work is completed in order to protect the ENVIRONMENT.

(pages 137-138 of original report)

PROBLEMS / ISSUES AND RECOMMENDATIONS

Problems/Issues Encountered:

1. *Communication problems* for technical staff and workers of the contractor who cannot speak nor understand the English Language.
2. Constantly delay in submission of Construction Drawings for Consultant's review and approval.
3. Supervisors of the Consultant are obliged to be constantly present on site otherwise the quality of workmanship is deteriorating due to the carelessness of the Contractor in general and of the Chinese workers of very low skill.
4. No cohesive planning department of the Contractor to make a constantly follow up of the office and of the field activities.
5. Mishandling of tower materials during unloading, loading and transporting from the yard to the site (galvanized steel structures, conductors, insulators and fittings).
6. Safety practices at the jobsite are far below regulations.
7. Environmental negligence on site, debris and garbage scattered around.
8. Obstructions made by Landowners who oppose any construction inside their property without compensation.

Recommendations/Actions:

1. The Contractor must *provide* technical staff fluent or an average understanding of the English language to facilitate easy communications and field instruction.
2. The Contractor is always reminded/instructed to submit on time the construction drawings to avoid delay for the review and approval.
3. The Contractor is verbally instructed that supervisors, particularly QA/QC personnel, must be always present on site to inspect and monitor that the work activities are carried out according to the plans and specifications.
4. The Contractor is reminded that Planning Engineer must keep an eye with the progress according to the approved time schedule. Keep the record, update daily the general accomplishments and find remedy to recover delay.
5. The Contractor is reminded that more qualified staff is required to handle the materials to prevent being damaged in unloading and transporting to site. Any damaged structures will be rejected and must be replaced, all that will cause inevitable delay.
6. The Contractor is reminded to supply the workers with Personal Protective Equipment (PPE), which must be worn on the jobsite always. Provide barricades to every excavation or provide warning tape around the excavation clearly visible at all times.
7. All completed works on site must be cleaned free from left over from the construction materials used and others rubbish in order to prevent environmental pollution.
8. Contractor must familiarize himself to manage with the local community whenever entering to the property prior to start the works.