

**ELECTRICITY OF VIETNAM
SOUTHERN POWER CORPORATION**

RURAL DISTRIBUTION PROJECT

Credit WB 4444-VN

Sub-project:

110 KV CHAU THANH SUBSTATION, TAY NINH PROVINCE

ENVIRONMENTAL MANAGEMENT PLAN

Final version

November 2011



EVN SPC

**SOUTHERN POWER ENGINEERING AND
CONSULTING COMPANY**





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**SOUTHERN POWER PROJECT
MANAGEMENT BOARD**



Đức Thịnh
Viên Đức Thịnh

Ho Chi Minh City, November 14, 2011
**SOUTHERN POWER ENGINEERING
AND CONSULTING COMPANY**

DEPUTY DIRECTOR



Ngọc Thanh
Ho Ngọc Thanh

From: <nlien@worldbank.org>
Date: Mon, Nov 7, 2011 at 4:50 PM
Subject: Fw: Comments on the EMP for Chau Thanh Substation (Revised version #3)
To: Phong Chau Thanh <chauthanhphong1986@gmail.com>
Cc: Nguyen Tri Hung <hung_nguyen1232003@yahoo.com>

Hi Phong,

Please our last comments below and have the EMP revised accordingly.
thank you very much.

Lien.

----- Forwarded by Lien Thi Bich Nguyen/Person/World Bank on 11/07/2011 04:48 PM -----

From: Khang Van Pham/Person/World Bank
To: Hung Tien Van/Person/World Bank@WorldBank, Lien Thi Bich Nguyen/Person/World Bank@WorldBank
Date: 11/07/2011 03:07 PM
Subject: Comments on the EMP for Chau Thanh Substation (Revised version #3)

EASVS

Dear anh Hung and chi Lien,
Some simple comments are made for the revised version #3 below. Please send them to PPMU and consultant for the last revision.

- Phrase of "Public consultation and Information disclosure" should be changed to "The World Bank policy on Access to Information" (page 12).
- National regulation on ... should be changed to National technical regulation on.... (page12)
- QCVN 14:2008/TT-BTNMT should be "National technical regulation on domestic wastewater" (page 13)
- Phrase of "Information and Development Center of Vietnam" must be changed to "Vietnam Development Information Center" (page 28)
- Removes the role of construction contractors in environmental monitoring from Table 6.4 (page37)

Best regards,

Pham Van Khang
Environment Sector
Ext: 290

ABBREVIATIONS LIST

EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
EMF	Electromagnetic field
EVN	Electricity of Vietnam
HW	Hazardous waste
PAHs	Project Affected Households
PMU	Project Management Unit
PC	Power Company
ROW	Right of Ways
SIMC	Safeguards Independent Monitoring Consultant
SPC	Southern Power Corporation
WB	The World Bank

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1. INTRODUCTION

Project location

110kV Chau Thanh substation, Tay Ninh province is planned to construct at Suoi Dop village, Thai Binh commune, Tay Ninh province, 3 km far from the center of Chau Thanh district, on the left of extended Local road 3, 400m far from the intersection of Local road 2 – Local road 3, 10m far from the heart of Local road 2 and connects to the nation transportation system through Local road 3, Suoi Dop village, Thai Binh commune, Chau Thanh district, Tay Ninh province. Space in surrounding area of the substation is very open.

- In the eastern side is irrigation Tay Ninh N^o17 and land of army unit.
- In the western side is yard land for drying cassava of the local people;
- In the southern side is the extended inter-commune road N^o3;
- In the northern side is public land managed by the district people committee.

The area is open, it used to be the local dumping site, it is now a vacant area. This land is about 12,471 m² and under the management of of Chau Thanh people's committee. There's a still a garbage layer on the surface with the thickness about 0.2 to 0.6m; in some places this layer is 0.7 m to 1.0 m thick.

Project Organization

Project owner: Southern Power Corporation

Project Executive Management Unit: PMU of SPC

Consultant Unit: Southern Power Engineering and Consulting Company

Operation agency: Southern High Voltage Power Network Company.

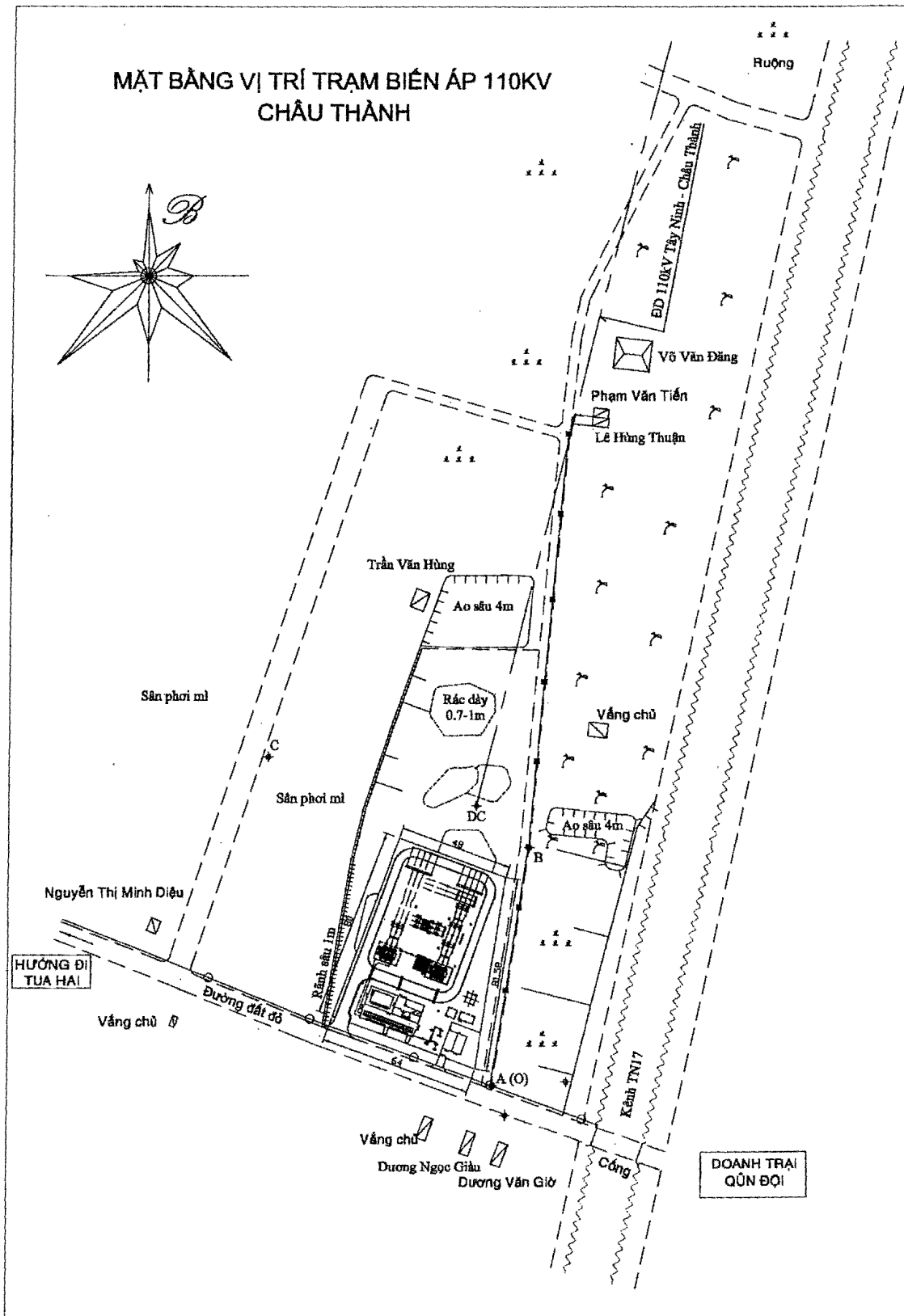


Figure 1: Sketch map of the location and ground around substation

2. PROJECT DESCRIPTION

2.1. Project scale

110kV Chau Thanh substation will be constructed with the following scale:

- Substation area: $(48+64)/2m \times 80m = 4,480m^2$.
- Shift waiting shelter area: $217.5m^2$.
- Substation model: half open, permanently guarded;
- Voltage: 110/22kV.
- Capacity: assembling a 110/22kV – 40MVA transformer and reserving position for the second transformer
- Number of 110kV routes: 02.

2.2. Main construction solutions

Total space solution:

Substation platform is designed to ensure the substation elevation is above the flood level.

- The average height of natural ground in the substation area is +13.43m.
- The average height of the substation after leveling is +14 m.
- Substation area will not be affected by flooding or by tidal.
- The outdoor substation ground area is scattered with stone 1x2, 10cm width.

Transformer's foundation:

- 110 kV transformer's foundation hole sizes 7.4 x 9.2 m; 0.9 m depth; is able to be upgraded to 63 MVA transformer in the future.
- Foundation is reinforced concrete, made on site. Around foundation is gully for oil collection in case of oil spill accident; This gully leads to oil container reserved in case of emergency (oil spill or leak).
- Foundation of internal transformer 22/0.4 kV is reinforced concrete, made on site. Size of this foundation is 1.2m x 1.2m x 1.2m (depth);
- Oil container reserved for emergency case is made by reinforced concrete frame with bricked wall 200 mm thick. The size of oil container is 6.4m x 4m x 2.4m (depth). The container is under grounded. Oil drainage pipes are steel, 140 mm diameter, 2% slope from the oil pit to the oil container for emergency case. The container is designed to contain enough oil of 63 MVA transformer.

Worker camp during construction time: Worker camp area will consist of closed warehouse, open warehouse, temporary house for workers. This area will be located and constructed in the unused public land in the North site of the substation area. At the present time, this land is bare land and under management of District. In this land there are only shrubs.

Concrete mixing location: This site will be located in the substation area. Machine for concrete mixing is small scale (as it is used for house construction of local people). Machine will be transported to the construction site by Contractor.

Source for construction materials: Construction materials will be supplied by Contractor. Usually, these materials are bought through local suppliers in Chau Thanh district.

Use of hazardous materials: Construction of substation does not require using hazardous material. The wastes of construction process mainly are cement packing papers, small pieces of metals, broken bricks, pieces of wood etc. These wastes are not hazardous materials and usually they will be reused for another purpose. Contractor will be required to manage their wastes properly. In case there is any hazardous materials occurs during construction, Contractor is required to manage hazardous material according to Government requirement on Circular 12/2011/TT-BTNMT dated 14/4/2011 on Regulation on Management of Hazardous wastes.

Outdoor cable gully: underground cable trough is made from reinforced concrete. Slope of the gully is 2%. The cable gullies toward to the gathering points of the rain water system in the substation.

Operating house:

- 1 floor house, size 14m x 24m height 3.9m;

Gates and fences: Gate's poles are built with reinforced concrete. Fence is built with bricks, sharp iron bars on the top; reinforced concrete foundation.

Road inside the substation: Road inside the substation has a concrete structure consisting of 4 layers.

- The first layer- bottom: natural soil compaction;
- The second layer: 10 cm thick concrete made with stone 4 cm x 6 cm, B10;
- The third layer: 20 cm thick concrete made by sand with stone 5 cm x 7 cm B15;
- The forth layer- top: 20 cm thick concrete made by sand with stone 1 cm x 2 cm B15;

Road to the substation: red soil road in front of the substation gate is inter-commune road N^o 3, 8m wide. Section leading to Chau Thanh substation is 4.5 m wide; 5.5 m long.

Water supplement solution

Two wells are arranged in the substation area: 1 at the shift- waiting shelter, 1 at the operating house. Water is stored in 500-liter tank on the roof of the restrooms to serve the needs of hygiene and living;

Water supply

There is no public water supply system in the Project's area. So water supplied for the substation will be exploited from the under grounded water. The depth for well drilling depends on underground water quality. Exploited water is required to meet National technical regulation on domestic water quality. Interviews of local peoples reveals that local people use digged wells; the depth of well is from 7 m to 10 m; Water quality is good as reported by local people.

Concerning that underground water quality might be effected by the presence of the existing garbage layer; water supply for the substation is planned as follows:

- Project will drill an well, take water sample for quality testing and check with National technical regulation on domestic water quality (QCVN 02:2009/BYT);
- In case water quality not meet QCVN 02:2009/BYT; a filtering and settling system for simple water treatment will be installed in order to improve water quality to meet (QCVN 02:2009/BYT); After treatment, water will be pumped to 500 l tanks installed above the WC area. This water is mainly used for washing, cleaning and flushing purpose; In this case drinking water will be bought and supplied for workers;
- In case drilled water quality meet the QCVN 02:2009/BYT water will be pumped to 500 l tanks installed above the WC area for use.

Drainage system

Domestic wastewater is collected in underground septic tank under the toilets. Wastewater after being settled and filtered by sewage system will exit through PVC pile and flow into drainage system to TN17 irrigation canal.

Rain water and surface water is collected in the manhole next to the road. Waste water will follow the drainage system to the corner of the substation. The drainage system of the substation is connected with the existing drainage trench; Project will also renovate the existing trench system to TN17 canal of the substation construction area.

2.3. The main workloads

Table 2.1. Main workloads

No	Work content	Unit	Volume
1	Ground leveling	m ³	5,554
2	Excavation	m ³	4,363
3	Ground filling	m ³	15,288
4	On site made concrete M100 for foundation	m ³	244.9
5	On site made concrete M200 for foundation	m ³	402.1
5	On site made concrete M250	m ³	402
6	Pre-made concrete M200	m ³	26.3
7	Bricks	m ³	372.2
8.	Zinc steel	ton	23.8

No	Work content	Unit	Volume
9	Steel work	ton	51.1
10	Cable installation ASCR410/51	m	345
10	Cable installation 22kV	m	304
11	Low voltage cable installation	m	8,575
12	Installation of control cable	m	9,300
14	Transformer for internal use	piece	1
15	Installation of isolation bar 110kV/24kV	set	6 / 0
16	Installation of bus bar 110kV/24kV	set	3 / 0
17	Installation of voltage regulator 110kV/24kV	set	5 / 0
18	Installation of current regulator 110kV/24kV	set	9 / 0
19	Installation of tool for lightning protection 110kV/18kV	set	9 / 0
20	Installation of ground wire (copper wire and coated copper wire)	m	2,294

2.4. Project schedule

Based on the power supply requirements and the ability of investor, expected construction schedule and time to put into operation as follows:

- Time for performing investment preparation : 3 months
- Time for procurement of supplies and equipment : 5 months
- Time for construction : 4 months
- Time for electrical installation : 4 months
- Time for experiments and completion : 2 months

Time for implementing all above stages are arranged alternately with the total project construction time and completing construction, starting operation is 9 months. After 72-hours of pre-operation, the project will be operated officially.

2.5. Project description by pictures



Picture 1. Overview of an area for the proposed Substation.

Picture 2. Local road No 3 in front of the Substation



Picture 3. The garbage presented in the area for the proposed Substation

Picture 4. Another view of the area for the proposed Substation.



3. LEGAL FRAMEWORK OF ENVIRONMENTAL IMPACT ASSESSMENT PROJECT

SAFEGUARD POLICY OF THE WORLD BANK

- OP 4.01 Environmental Assessment;
- The World Bank policy on Access to Information.

Detailed guidance on assessment methods and general impacts of transmission power line projects can be found in:

- World Bank, 1991. Source Book on Environmental Assessment, The 3rd edition.
- IFC, 1998. Guide to Environment, Health and Safety in Power Transmission and Distribution
- Policy Framework to Ensure Safety and Environmental Project for Rural Power Distribution (RD).

LAWS AND REGULATIONS OF VIETNAM

- Law on Environmental Protection of the National Association 52/2005/QH11 Republic of socialist Vietnam XI, 8th session adopted on 29/11/2005;
- Law on cultural property, dated 06/22/2001;
- Decree No. 80/2006/ND-CP dated 09/8/2006 of the Government detailing and guiding the implementation of some articles of the Law on Environmental Protection;
- Decree 21/2008/ND-CP dated 28/2/2008 of the Government amending and supplementing some articles of Decree No. 80/2006/ND-CP dated 09/8/2006 of Government on detailing and guiding the implementation of some articles of Law on Environmental Protection issued on 02/28/2008;
- Decree 29/2011/ND-CP dated 18/4/2011 of the Government Strategic environmental assessment, Environmental impact assessment and environmental commitment;
- Circular 26/2011/TT-BTNMT dated 18/7/2011 of the Ministry of Natural Resources and Environment on Guidelines for Strategic environmental assessment, environmental impact assessment and Environmental commitment;
- Decree 24/2000/ND-CP stipulating the implementation of the Law on Foreign Investment in Vietnam (Article 82) refers to the environmental protection;
- Decree 106/2005/ND-CP dated 17/08/2005 on the protection of high-voltage power grid corridor;
- Main QCVN on environment protection applied for Project construction and operation:
 - QCVN 05: 2008/BTNMT: National technical regulation on ambient air quality;

- QCVN 08: 2008/BTNMT: National technical regulation on surface water quality;
- QCVN 14: 2008/BTNMT: National technical regulation on domestic wastewater;
- QCVN 26: 2010/BTNMT : National technical regulation on noise ;
- QCVN 27: 2010/BTNMT: National technical regulation on vibration.



4. ENVIRONMENTAL IMPACT ASSESSMENT

Table 4.1 Environmental Impact Assessment of the project

No	Impact	Magnitude	Duration	Description of the impacts	Evaluation of impacts
Pre-construction phase					
1	Permanent and temporary acquisition of land	Medium	Short Long	Total permanent land acquisition within substation area is 4,480 m ² . This land is managed by Chau Thanh district. Total temporary land acquisition: 8,261 m ² . This land is the surrounding area of the project,	Mitigable
2	Impact on Project affected household	Small	None	The area is public land, not owned by any household therefore no household will be affected	No impact
3	Loss of vegetation due to land clearance for Chau Thanh substation	Small	Long	- The ground is relatively open. This land was a dumping site and now it is still vacant. - There are very few shrubs growing on the substation area. There is no tree with ecological or economic value.	Minor
4	Health risk due to explosives, chemical hazard	None	None	- The project does not use chemicals or explosives.	None
5	Impact on historical and cultural properties	None	None	- There are no historical and cultural relics near and inside the project area	None
Construction phase					
6	Surface water contamination	Medium	Short	- Ground leveling, construction of substation and substation's road might washout soil, rock to the surface water system of region; - If garbage removal is carried out in rainy time, there	Minor and Mitigable



<i>No</i>	<i>Impact</i>	<i>Magnitude</i>	<i>Duration</i>	<i>Description of the impacts</i>	<i>Evaluation of impacts</i>
				<p>will be a risk of surface water contamination;</p> <ul style="list-style-type: none"> - Chau Thanh substation ground area is 70 m far from the TN17 canal to the west. The water in the main canal and small emanating canals will likely be muddy in rainy seasons, when soil, rock and construction materials at the substation are washed away by rain. Water in irrigation canals is only used for irrigation purposes - The project area is flat therefore the risks of erosion, soil and construction materials runoff are not high. - Excavation is planned to do in dry season. Excess soil will be reused to fill in the poles' foundations. Thus there will be no soil, rock left after the project construction. - Thus the impact on surface water pollution in the project area is negligible and can be reduced 	
7	Noise and vibration	Medium	Short	<ul style="list-style-type: none"> - Noise and vibration are caused by: equipment, material transportation, project's vehicles, pole's erection and cable's pulling, generators (if there are any); - The nearest residential area is 3 km from Chau Thanh substation. Surrounding substation area is ground which is a former dumping site. 200m far from the substation is a military barrack - Materials transportation will be mainly be done through the district center and following the inter-commune road N^o3; There is always a lot of vehicles traveling on the road through district center; project's vehicle is insignificantly compared to the existing density of traffic on this road. inter-commune road N^o 	Medium and Mitigable



Subproject: 110kV Chau Thanh substation
Tay Ninh province

<i>No</i>	<i>Impact</i>	<i>Magnitude</i>	<i>Duration</i>	<i>Description of the impacts</i>	<i>Evaluation of impacts</i>
				<p>3 will be the area that is affected the most by vehicles of the project</p> <p>- Due to above reasons, the noise and vibration impact caused by the project is considered as medium, happening in a short period of time and can be minimized</p>	
8	Soil erosion	Medium	Short	<p>- The topography of the substation area is quite flat.</p> <p>- The vegetation cover of project area at the present is in medium level: rice paddies in the east,; the southern part is near inter-commune road N^o 3; district's public land is in the north, trees are sparse; people use the western area for drying cassava;</p> <p>- Excavation, backfill and ground leveling are prioritized to be done in dry season;</p> <p>- Regarding soil erosion, the impact is considered as small according to small scale of the sub-station site, short construction time. Furthermore, these impacts can be reduced to even smaller when implementing mitigation measures.</p>	Mitigable
9	Air pollution	Medium	Short	<p>- Dust generated from soil excavation, ground leveling especially during dry seasons.</p> <p>- During removal of the garbage layer, the odor might occur in the local area;</p> <p>- As the ground for the substation is used to be rural residential garbage layer. This garbage is piled up for the last 3 years and is partly degraded. An amount of 1,922.6 m³ top soil, garbage and cleared vegetation will need to be removed. This amount of removed waste will be transported to Tan Hung landfill and waste treatment plant in Tan Hung commune, Tan</p>	Medium and Mitigable



<i>No</i>	<i>Impact</i>	<i>Magnitude</i>	<i>Duration</i>	<i>Description of the impacts</i>	<i>Evaluation of impacts</i>
				<p>Chau district, Tay Ninh province. Tan Hung landfill and waste treatment plant is 27 km far from the proposed substation. The road for transportation is along local road N^o3, local road N^o 2, National road N^o 22, provincial road N^o 785 to reach Tan Hung landfill and waste treatment plant;</p> <ul style="list-style-type: none"> - An amount of soil will be excavated, a large amount of construction materials will be transported to the project area; - Dust generates by the transportation of construction materials and equipment during the project construction. The transportation of raw materials, construction materials and equipments for the project is relatively significant. It also causes dust and air pollution. - The Project site is away from residential and urban areas therefore air pollution (dust) does not affect much on people living in the project area; The most affected area by air pollution will be the area along inter-commune road N^o3; - The nearest residential area is 3 km away from Project site, so impact can considered as medium and mitigable. 	
10	Air pollution along the road used for transportation of removed garbage and vegetation from the Project site to Tan Hung landfill and waste treatment plant.	Medium	Short term	- As it was mentioned in Item 9. Table 4.1, Project will require removing about 1,922.6 m ³ of vegetation and top soil, degraded garbage. This removed mass will be transported to Tan Hung landfill and waste treatment plant in Tan Hung commune, Tan Chau district, Tay Ninh province. This site is about 27 km far from the substation. The route for transportation is along an extended local inter-commune road No3, No 2 and	Medium and mitigable



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<i>No</i>	<i>Impact</i>	<i>Magnitude</i>	<i>Duration</i>	<i>Description of the impacts</i>	<i>Evaluation of impacts</i>
				<p>than National road 22 , provincial road 785 to reach to Tan Hung landfill and waste treatment plant;</p> <ul style="list-style-type: none"> - Vehicles used for transportation will be covered to avoid spills of materials and avoid emission of an odor from the garbage; - There is very sparse population. Houses are not building along the roads. Vegetation covers along the road are in good quality. - The plan for removal is scheduled with 15 days; in average there will be 10 to 15 vehicles (5 tons) used for transportation along the route. This number of vehicles does not noticeably increase traffic in the region. - This impact is assessed as medium level and mitigable; - See paragraph 4.2. For more information. 	
11	Ecological impact	Small	Short	<ul style="list-style-type: none"> - Proposed substation is located in very intensively used by human activities. - Since proposed substation location is not yet used land under management of Chau Thanh district so main tree growing in the substation area as well as in surrounding area are shrubs. They have no special ecological value. These tree species in the substation area are similar to those are presented in the surrounding area, they are not rare species. - Trees presented in surrounding area of the substation are also common species, they are mainly planted fruit trees (mango, banana, jack fruit, papaya...) in the garden, cassava etc. 	Small and mitigable



<i>No</i>	<i>Impact</i>	<i>Magnitude</i>	<i>Duration</i>	<i>Description of the impacts</i>	<i>Evaluation of impacts</i>
				<ul style="list-style-type: none"> - Construction activities of the substation do not cause the cutting trees of the surrounding areas and do not cause other impact on the vegetation cover in the area as well. - There is also no special impact caused by Project on fauna. 	
12	Traffic disturbance	Medium	Short	<ul style="list-style-type: none"> - Transportation of material and equipment will disturb the normal traffic in the areas during short period of time; - The substation is located in an open area, the transportation of construction materials is generally easy due to relatively developed traffic system in the project area; - The transportation of construction materials and equipments for the project will not exceed the capacity of the existing traffic flow in the area. 	Medium and Mitigable
13	Degradation of the existing rural roads	Small	Short	<ul style="list-style-type: none"> - Transportation of construction materials with high frequency may cause damage to the inter-commune road N^o2 and N^o3; these local roads are soil roads. <p>Currently at Chau Thanh district, Tay Ninh province as well as other areas, local authorities and people supervise the management of rural road quite well. Large load transportations are not allowed to run through roads whose quality is not good enough. This is also an issue that the contractors have to comply and thoroughly calculate transporting options to avoid rural road degradation.</p>	Minor
14	Solid wastes generated from removal of the	Medium	Short	<ul style="list-style-type: none"> - Construction of the substation requires removing vegetation, top soil. The top soil is mixed with the garbage that local people disposed in the past. The 	Medium and mitigable



Subproject: 110kV Chau Thanh substation
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<i>No</i>	<i>Impact</i>	<i>Magnitude</i>	<i>Duration</i>	<i>Description of the impacts</i>	<i>Evaluation of impacts</i>
	vegetation, garbage existing in the ground for the proposed substation (the garbage is rural residential wastes)			<p>garbage is rural residential waste. The recycle things such as wrappings, packing, used containers, bottles, wooding parts, waste papers are recycled or used by the local people, especially in the rural areas of Vietnam.</p> <ul style="list-style-type: none"> - Investigation reveals that the garbage is consisted of old wrapping, packing materials; shells; old plastic bottles, glasses; old clothes; etc. - An amount of removed top soil, garbage and vegetation is estimated as 1,922.6 m³. - These removed matters will be transported to Tan Hung landfill and waste treatment plant. The owner of Tan Hung treatment plant is Urban Service facilities agreed to receive this removed materials. Cost for removal and transportation to Tan Hung site is estimated as 167.5 million VND. 	
15	Solid waste generated from soil excavation	None	Short	Excess soil and materials will be used for poles' foundations filling. The volume of excess soil is often not enough for foundations, sometimes it has to purchase and transport from other places. Therefore it could be said that no impact is caused	None
16	Environmental impacts caused by construction workers	Small	Short	<ul style="list-style-type: none"> - Construction work is expected to last in 6 months. The remaining time is mainly reserved for the installation of substation equipments; - It is expected to be 100 workers, divided into 4-5 teams for project implementation. Workers will be chosen from the skilled ones in the region. - The camping sites include warehouses, open storage areas, temporary houses for workers and will be constructed on the vacant land in the north of the 	Minor and Mitigable



<i>No</i>	<i>Impact</i>	<i>Magnitude</i>	<i>Duration</i>	<i>Description of the impacts</i>	<i>Evaluation of impacts</i>
				substation; - Other ancillary constructs such as bathrooms, toilets will be built for workers to use. - Camping sites will dispose solid waste that can cause environmental pollution. - Almost workers will be local people, only a small number of workers needs to stay in the camps. - Thus the impact is considered as minor and mitigable.	
17	Conflict between construction worker and local people	Small	Short	- Conflict might cause because of: Difference in incomes, cultures, behaviors; - Project is implemented in well developed area with high population density; the number of workers is not considerable in comparison with local peoples. - Stay duration of workers in each site is short (6 months); The impact therefore considered as minor	Minor
18	Health and safety	Medium	Short	- Accidents might happen during construction if the safety issues are not well considered. - Accidents might happen to the workers or local people living around the project area - Surface and ground water might be contaminated by the presence of the existing garbage site; - Contractor and Project owner will supply water for construction workers from the good water quality source. In case underground water is drilled to supply for workers, Contractor is required to do analytical test for water quality. If the drilled water is met QCVN	Mitigable



Subproject: 110kV Chau Thanh substation
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<i>No</i>	<i>Impact</i>	<i>Magnitude</i>	<i>Duration</i>	<i>Description of the impacts</i>	<i>Evaluation of impacts</i>
				02:2009/BYT, it can be supplied for workers. If not, Contractor is required to pump water from the household near the substation site.	
	<i>Operation phase</i>				
19	Development and poverty alleviation	Large	Long	<ul style="list-style-type: none"> - Project actively supports for the development of the area. - Increase the quality of life for local residents due to sufficiency and stability of power supply. 	Positive
20	Improvement of landscape, environment and rural sanitation	Large	Long	- There was a garbage site in the past, by construction of the substation the view, landscape, environment of the area are considerably improve. Rural sanitary conditions are better as well.	Positive
21	Health and safety	Small	Long	<ul style="list-style-type: none"> - There are no habitants in the substation area. The number of employments in the substation is small (about 10-15 people divided into shifts). The safety regulations in the substation are guaranteed so there will be no impact on health and safety of workers; - If safety regulations are not complied, it might affect on heath workers, however this case is extremely rare. 	Mitigable
22	Impact on worker and staff health if supplied water is contaminated (due to the garbage site in the past)	Small	Long term	<ul style="list-style-type: none"> - Surface and ground water might be contaminated due to presence of garbage site in the past; - Project owner and design consultant has planned to test water quality during construction phase. In case drilled water quality not meets QC 02-2009/BYT, filtering and settling water system will be installed to simply treat water for washing, cleaning, flushing purpose. Drinking water will be bought and supplied for worker or from the source meeting QC 02-2009/BYT. 	Minor and mitigable



Subproject: 110kV Chau Thanh substation
Tay Ninh province

<i>No</i>	<i>Impact</i>	<i>Magnitude</i>	<i>Duration</i>	<i>Description of the impacts</i>	<i>Evaluation of impacts</i>
23	EMF	None	None	- The power line is designed according to existing technical specification, EMF will not exceed permissible value (5kV/m).	None
24	Oil, hazardous waste contamination	Small	Long	- No PCBs containing oil and other toxic chemicals will be used during the project's construction and operation; - No chemicals will be used in the project.	None

4.2. ADDITIONAL ENVIRONMENTAL IMPACT ASSESSMENT OF REMOVAL OF VEGETATION AND GARBAGE EXISTING IN THE SITE

4.2.1. Contents of garbage layer

- The existing garbage layer is rural residential waste. Local people disposed these wastes in the last few years. Part of the garbage is degraded. - Main contents of garbage dump are old, used plastic bags; old wrapping, packing materials; shells; old plastic bottles, glasses; old clothes; etc. Materials and wastes that can be recycled such as good wrapping, packaging materials; small wooden residues; waste papers are intensively recycled in Vietnam, especially in the rural areas.
- Beside the garbage, vegetation residues cut from the substation ground will be also removed and transported to Tan Hung site;
- The removed mass is estimated as 1,922.6 m³ including garbage and vegetation residues.

4.2.2. Method for garbage transportation

- Garbage and cut vegetation will be removed, collected and transported by vehicles with well covers;
- This removed mass will be transported to Tan Hung landfill and waste treatment plant in Tan Hung commune, Tan Chau district, Tay Ninh province;
- Route for transportation is along extended local road No3, local road No 2; National road 22, provincial road 785 to reach to Tan Hung site. The distance is about 27 km.
- Transportation roads are in good quality. The route is not passing through dense population area. Houses are building about 10 to 20 m far from the road edge. Vegetation cover along the road is in good condition.
- About 200 to 230 shipments (5 tons/each shipment) are required. These shipments will be done during 15 days. There will be about 10 to 15 shipment per day. It means that every day there will be about 10- 15 vehicles going in the planned roads. So it can be assessed that vehicles used for transportation is not considerable and will not affect traffic in the area.



Picture 5. Some pictures along the transportation route

4.2.3. Area receiving removed mass

- Tan Hung landfill and waste treatment system has come into operation since the end of 2007. Its area is about 30 ha, where 20 ha is used as landfill. The landfill is designed with water collecting system with 10,000 m³ volume. Working capacity of this landfill is 200 tons/day.

- Treated waste by Tan Hung site is used as fertilizer for rubber plantation in Tay Ninh province. Selling fertilizer generate income for Tan Hung site.
- Tan Hung site provides service for Tay Ninh province, including Hoa Thanh, Trang Bang, Chau Thanh, Tan Chau districts etc.



Picture 6. Entry to Tan Hung landfill and waste treatment site.

Picture 7. Tan Hung landfill and waste treatment plant



- Tay Ninh Urban Facility Company agreed to receive the Project's removed mass.
- Cost for removal and transportation of the removed vegetation and garbage is estimated as 167 millions VND.

4.2.4. Main environmental impacts related to garbage layer existing in the Project site

Garbage layer might cause surface and ground water contamination

- Rain water might wash solid wastes and micro-organism into surface water in the Project's surrounding areas.
- However, there are only very small water pools, small irrigation canal. Local people do not use these water for domestic use. There is no free moving animal rising, so animal also do not use these water for drinking;
- These water sources are not used for domestic purpose to there will be no impact on human and animal health.
- Site investigation and local people interviews reveals that local people use digged wells for domestic water. The depth of wells is about 8 to 10 m. Local people report that water quality is quite good. There is no abnormal sign of water quality effect human health.

Risk for groundwater contamination due to presence of garbage layer

This risk is very minor due to the following reasons:

- The garbage site is unprompted site; area and volume of garbage is not much;
- Main contents of garbage are rural residential wastes; there are no hazardous components such as heavy metals; organic compounds etc.



Scheme of route for transportation of garbage from the Substation to Tan Hung landfill

5. PUBLIC CONSULTATION AND INFORMATION DISCLOSURE

During project preparation stage (2009-2010), the following activities were carried out:

Activity 1: Investigate and discussion with local authorities about cable location

Activity 2: Site investigation, preparation of Environmental Protection Commitment (EPC) and Environmental Management Plan for the project

Activity 3: Organizing public consultation.

The meetings with local people was carried out at the office of People's committee of Chau Thanh district- Tay Ninh Province at 8:30 am on 18/11/2010 and 14h on 18/11/2010 in People's Committee hall of Tay Ninh town, Tay Ninh Province. Project owner and Consulting Company held public consultation for 02 Environmental management plans of Chau Thanh 110kV Substation and 110 kV power line Tay Ninh-Chau Thanh project. The representatives of Project Owner and Consulting Company presented to the public on the following main issues:

- Project description: route of power line, the substation location, the necessity of construction of the above-mentioned two projects;
- The potential environmental impacts might be caused by the project;
- Measures to mitigate the impact.

Public's representatives invited to attend public consultation meetings include: representatives of affected households, government representatives, people associations and local power company (See detailed list in Appendix 4)

Table 5.1. Summary of comments at the public consultation meetings

<i>No</i>	<i>Venue/ Time/ Number of participants</i>	<i>Comments received</i>
1	- Office of Chau Thanh district People's Committee - 8:30 am- 18/11/2010 - 86 participants	- Provide the specific time on project implementation; the width of ROW and arrangement? - Inform the project's compensation policies ; - The project implementation brings a great significance to local. The project information should be public
2	- Office of Tay Ninh town. People's committee, Tay Ninh Province - 14:00- 18/11/2010 - 111 participants	- In the next meetings, all the households who have land in the commune but do not live here should be invited so they are informed about the project; - The Project owner and consultant company should announce to people on detailed impacts on housing, land after completing measurement and survey; - Local people and government representatives do support the project, and agree with the designed cable way to avoid people's inhabitation; - There should be adequately compensation policies for



No	Venue/ Time/ Number of participants	Comments received
		<p>people; During the construction process should try to avoid maximally the effects on production activities of people;</p> <p>- The next meetings should be carried out in the evening so that more people can attend. Documents' content should be written more concisely in order to help people to read and understand more easily; Meeting venue should be at the locations near populated areas;</p>

The representatives of project owner and consulting company has answered questions related to Projects such as Project implementation plan, width of the ROWs etc... in parallel Project owner and Consultant also received comments of the participants and will consider during updating of the EMP report as well as gaining experiences in activities for future project.

Activity 4: Review and edit the EMP according to collected ideas. Continue to receive feedback for affected households

Activities 5: Disclosure of the EMP

- The Vietnamese version of EMP report will be disclosure at the office of Chau Thanh district People's Committee- Tay Ninh town- Tay Ninh province and at office of Thai Binh commune people committee so that interested public and organizations can access or investigate

- English and Vietnamese versions of EMP report will be sent to the Vietnam Development Information Center- 63 Ly Thai To- Hanoi so that interest public and organizations can read and give out feedback.

- English version of EMP report will be sent to Info shop of the WB at Washington to be disclosure.

Activities 6: Further public consultation during Project construction

- During Project construction phase, safeguard independent monitoring consultant will be hired to monitor the implementation of EMP as well as to cooperate with Project owner to consult local authorities, NGOs, affected HHs about the implementation of EMP. Received comments (if there is any) will be sent back to the Project owner to work with Contractor for proper implementation or updating this EMP (if it is required).

6. ENVIRONMENTAL MANAGEMENT PLAN

Table 6.1. Organization for EMP implementation of the Project

<i>Role</i>	<i>Responsibilities</i>	<i>Responsible Agencies</i>
Project Owner	- Highest responsibility for management of the project, including environmental management	SPC (Southern Power Corporation)
Environmental staff of SPC	- Specific responsibilities and key contacts for environmental issues	SPC (Southern Power Corporation)
Project management and implementation agency	- Sign and implement contracts of EP in EMP - Responsible for coordinating and managing the overall implementation of the project, including guiding and directing the EMP - Plan and implement environmental management activities during construction; - Coordinate with other partners on the perspective of environmental management activities; - Conduct internal monitoring and supervise independent monitoring; - Monitor and fund for monitoring activities; - Report on environmental information to interested parties.	PMU of SPC
Project operating agency	- Responsible for operating the project including operation management and environmental monitoring in operation phase	Southern High Voltage Power Network Company
Consultant	- Responsible for supporting SPC to draft EMP	Southern Power Engineering and Consulting Company
Contractor Supervisor	- Responsible for supervision of construction contractor during construction, including implementation of environmental activities according to EMP	Supervisor of PMU of SPC
Construction Contractor	- Responsible for construction and compliance with regulations for contractor in EMP (i) Apply mitigation measures during construction; (ii) Ensure safety for workers and local people during construction	- Selected by PMU of SPC
SIMC	- Responsible for independent monitoring of EMP implementation	Selected by PMU of SPC
Local authorities and people	- Responsible for co-supervision of implementation of EMP by Contractor and Project owner. - Inform Project owner or Contractor if any construction activity is not properly done or cause impact to environment and their life. - Comment on draft EMP and give more comments in later stage if it is necessary.	- Local authorities and people.



6.1. MITIGATION MEASURES:

Table 6.2. Mitigation measures for the environmental impacts

<i>No</i>	<i>Impact</i>	<i>Mitigation measures applied</i>	<i>Implementation Responsibilities</i>
<i>Pre-construction phase</i>			
1	Permanent and temporary land acquisition	<ul style="list-style-type: none"> - Careful site survey, consult with local peoples for optimum route selection; - Proper compensation for land acquisition for Chau Thanh district. Estimated cost of compensation is VND 2,871,523,200 	<ul style="list-style-type: none"> - Design Consultant; - Project owner coordinates with local government.
2	Loss or encroachment of historical and cultural properties	<ul style="list-style-type: none"> - No need to apply minimizing measures. - During soil excavation, if there will be found any historical or cultural valuable subject, local department of Culture and Information will be reported by Contractor and Project owner for further consideration according to Vietnam Law on Cultural properties. - See Table 6.2 for a chance finding procedures and appropriate response in emergency. 	<ul style="list-style-type: none"> - Project owner; - Contractor performing ground leveling
3	Health risk due to explosives and chemicals	<ul style="list-style-type: none"> - The project does not use explosives and chemicals therefore there is no need to apply any minimizing measures 	<ul style="list-style-type: none"> - No need
<i>Construction phase</i>			
4	Surface water contamination	<ul style="list-style-type: none"> - Soil excavation, especially the process for removal of garbage layer needs to be carried out in the shortest period. - Soil excavation, garbage removal and ground leveling will not be carried out in rainy season; in rainy days; - Construction materials will be kept in the store with cover to protect from rain; shielding or isolating piles of materials, creating drainage around the piles so that 	<ul style="list-style-type: none"> - Project owner - Construction contractor



<i>No</i>	<i>Impact</i>	<i>Mitigation measures applied</i>	<i>Implementation Responsibilities</i>
		materials cannot flow into water sources. - Select a right place for concrete mixing. - Design proper water runoff system to protect foundations and avoid soil erosion; - Design proper water treatment systems at camping sites of workers.	
5	Noise and Vibration	- Use the construction machines that have noise level under permitted limits. - No construction work is allowed to carry out during evening time. If it is necessary to carry out work during evening time, contractor should ask for permission from local authorities and affected communities; - Encourage drivers not use horns in vehicle;	- Project owner - Construction contractor
6	Soil erosion	- No excavation works is allowed in rainy season in areas having high risk of erosion; - Create dykes, barriers to avoid soil erosion and land slides; - Excavating, earth-moving and ground leveling activities will be schedule in the not rainy days and dry season.	- Project owner - Construction contractor
7	Air pollution	- Minimize the construction time; - In the process of substation's ground leveling; on substation's road and on windy and dry days; Spray water regularly to decrease dust. - Use wind fences in case of strong wind; - Ensure that trucks carrying soil, sand or any other granual materials are properly covered when travelling. Check the tightness before departure to make sure that materials do not drop along the way. Special attention will be paid for vehicles used for transportation of removed garbage; - Removal of top soil, vegetation and garbage need to be carried out in the shortest period of time in order to avoid an odor. Vehicles used for transportation need to have	- Project owner - Construction contractor



Subproject: 110kV Chau Thanh substation
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<i>No</i>	<i>Impact</i>	<i>Mitigation measures applied</i>	<i>Implementation Responsibilities</i>
		well cover to avoid dropping out as emission of odor to an ambient air; - Vehicles, machineries for the project must meet technical standards.	
8	Traffic disturbance	- Use warning signs in construction sites. - Minimize the duration of traffic disruption. Arrange worker to instruct traffic when materials/equipment are being unloaded at roadside and/or lines are being installed along the road; - Cooperate with local authority for traffic arrangement.	- Project owner - Construction contractor
9	Degradation of the existing rural roads	- Arrangement of material trucks should be reasonable with the tolerance of the road system in order to avoid landslides, road damage and affecting the local traffic - In case of road damage, contractor have to be responsible for repairing and returning the good condition of roads and other degrading rural infrastructures due to the project's activities	- Project owner - Construction contractor
10	Biomass from vegetation clearance and removed garbage from the ground of the proposed substation.	- Biomass from vegetation clearance and removed garbage will be collected and transported to Tan Hung landfill and waste treatment plant in Tan Hung commune, Tan Chau district, Tay Ninh province. This landfill is about 27 km far from the Project site; - Tay Ninh Urban Facility Company agreed to receive this removed mass. - Cost for removal and transportation of this mass is estimated as 167.5 mill. VND and is included in the cost for ground leveling of the substation. - See more information in Paragraph 4.2.	- Project owner - Construction contractor and Project owner.
11	Solid waste generated from soil excavation	- Construction contractor need to commit to clean the site and disposal solid waste in the permitted places.	- Project owner - Construction contractor
12	Environmental impacts caused by construction	- Minimizing solid waste: The solid waste must be dumped to the regulated sanitary landfill. Contract with local hygiene and environment agencies to clean up the solid waste	- Project owner - Construction



<i>No</i>	<i>Impact</i>	<i>Mitigation measures applied</i>	<i>Implementation Responsibilities</i>
	worker	<ul style="list-style-type: none"> - Arrange septic tanks toilets for the camping sites of construction workers - An appropriate water supply and collecting waste water is needed in the camps of the workers at construction site. - Ensure that waste water and municipal wastes do not lead to unhygienic conditions at the site. For example, by install drainage channel suitable to practical conditions at the site, bury the wastes where waste collection service is not available; - The Contract is required to clean up before acceptance. 	contractor
13	Conflict between construction worker and local people	<ul style="list-style-type: none"> - Hire as much as possible local citizens for the simple construction work to increase local community income and avoid the influx of migrants. - In cases where the worker camps are near the communes, the Contractor needs to provide accurate, timely and regular information about the construction team to the People's Committees in affected areas. With open communication and information, the People's Committee and Contractor will be able to make a joint informed decision about the management of construction team accommodation; - Tidy up: The general terms of the contract must include: after the end of the project, the camps must be clean and set up area must be return to its original state. - Inform Commune People's Committee (CPC) prior to the commencement of construction phase. Request CPC to coordinate with the Employer and contractor in encouraging community to participate in environmental monitoring activities and to timely report/address environmental concerns; - Workers need to be registered and get permission from local authorities for staying at the area 	<ul style="list-style-type: none"> - Project owner - Construction contractor
14	Health and Safety	<ul style="list-style-type: none"> - Inform workers the safety regulations and procedures; - To comply with safety regulations; Equip temporary camps with first-aid kits; Provide First aid kit for each working group; 	<ul style="list-style-type: none"> - Project owner - Construction contractor



SPECC

Subproject: 110kV Chau Thanh substation
Tay Ninh province

<i>No</i>	<i>Impact</i>	<i>Mitigation measures applied</i>	<i>Implementation Responsibilities</i>
		<ul style="list-style-type: none"> - Install and maintain warning signboards at dangerous locations (unfinished poles' foundations, high risk of electrical shock etc); - Project owner states specifically in bidding document to require the contractor the need to have short training for workers on safety issues and environmental guarantee before they start to work for the Project. - Install signs and banners reminding of the regulations on EP and safety; monitor implementation. - Check water quality: if water quality meets QCVN 02:2009/BYT, this water can be used for domestic water supply; if not, water for domestic purpose will be pumped and supplied for workers from households nearby. 	
Operation phase			
15	Health and Safety	<ul style="list-style-type: none"> - Disseminate the information on electricity safety regulations to the users. - Follow the Government Decree 54 on network protection. - Regular training for local technicians and people on safety issues. - Use signs, barriers (e.g. locks on doors, use of gates, use of steel posts surrounding transmission towers etc. to prevent public contact with potentially dangerous equipment; - Set up conducting objects (e.g. fences or other metallic structures) installed near power lines, to prevent shock; - Check water quality: if water quality meets QCVN 02:2009/BYT, this water can be used for domestic water supply; if not, install filtering and settling system for simple water treatment and this water will be use for cleaning, flushing purpose; in this case drinking water will be bought and supplied for staffs working in the Substation. 	<ul style="list-style-type: none"> - Southern High Voltage Power Network Company (substation operating unit)
16	Oil hazardous waste	<ul style="list-style-type: none"> - Oil refilling of transformers shall be done in the Workshop. - Use oil collectors during maintenance services for unexpected oil spills into 	<ul style="list-style-type: none"> - Southern High Voltage Power



Subproject: 110kV Chau Thanh substation
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<i>No</i>	<i>Impact</i>	<i>Mitigation measures applied</i>	<i>Implementation Responsibilities</i>
	contamination	environment. - Carry out regular check and maintenance the transformers so as any leakage and/or failure risks can be detected timely; - Replace or repair transformer as soon as possible after leakage from transformers is detected. Isolate the leakage and fix the problem to ensure that the leakage does not cause pollution in water sources nearby; - Maintain and regularly check the fire protection devices at Chau Thanh substation	Network Company (substation operating unit)

Table 6.3. Chance finding procedures and emergency and action plan

<i>No.</i>	<i>Situation</i>	<i>Action</i>	<i>Responsibility</i>
1	Artefacts found during excavation works	<ul style="list-style-type: none"> ▪ Contractor shall protect the site and report to the Construction Supervisor/PC company and local museum/ cultural management authority ▪ Deliver the object found to local museum/ cultural management authority. • Determine whether construction can be continued or halted for further investigation • The Directors of the provincial Department of Culture, Sport and Tourism; and local Museum shall be responsible for the subsequent handling of the objects found in accordance with Article 21 of the Decree No. 92/2002 guiding the Implementation of the Law on Cultural Heritage 	<p>Contractor, construction supervisor to coordinate</p> <p>Contractor</p> <p>Department of Culture, Sport and Tourism</p>
2	Remains found during excavation works	<ul style="list-style-type: none"> ▪ Protect the site and report to local authority ▪ Determine who/where/how to address and propose next actions ▪ Implement the proposed actions 	<p>Contractor</p> <p>All relevant authorities</p>
3	There are complaints from community about environmental problems related to construction activities	<ul style="list-style-type: none"> ▪ Fix the problem immediately if possible ▪ Take note in log book ▪ Discuss with the Employer/local authority where conflicts occur 	<p>Contractor</p> <p>Contractor, Power Company and local authority</p>
4	Accidents caused by/related to construction/operation activities	<ul style="list-style-type: none"> ▪ Carry out first aid where possible and transfer victim the nearest clinic/hospital if necessary ▪ Set up danger signs ▪ Prepare incident notes 	<p>Worker/people at the site</p> <p>Contractor, Project Owner and local authority</p>
6	Explosives found	<ul style="list-style-type: none"> ▪ Protect the site and report to local authority ▪ Report to local authority ▪ Contact with local military unit to request support 	<p>Contractor and local authority</p>

6.2. ENVIRONMENTAL MONITORING

Table 6.4. Parties involving in environment monitoring

<i>No</i>	<i>Parties</i>	<i>Main responsibilities</i>	<i>Content and format for report</i>
1	Technical supervisor of PMU	<ul style="list-style-type: none"> - Monitor (by observation) and assess of the environmental parameters suggested by this EMP report; - Report to PMU 	- Refer to Appendix 4
2	Safeguard Independent Monitoring Consultant (SIMC)	<ul style="list-style-type: none"> - Monitor (by observation) and assess environmental quality based on parameters suggested by this EMP report. - Conduct public consultation to received comment, assessment of local people on environmental management of the Project. 	- Refer to Appendix 4
3	Local authorities and people	<ul style="list-style-type: none"> - Supervise, monitor (by observation) about Project activities that are not as proposed in EMP or any Project activity cause impact on environment and life of local people. - Inform to PMU or Contractor (by phone or by written notices) and follow up the correction measures applied by MPU and Contractor 	

Table 6.5. Environmental monitoring plan

<i>No</i>	<i>Parameters</i>	<i>Monitoring method</i>	<i>Frequency</i>	<i>Responsible bodies</i>
1. CONSTRUCTION PHASE				
1	Surface water turbidity and soil erosion	1) Visual observation to assess whether the excavation and other construction activities cause any pollution to the surface water, especially in term of making water to be more turbid. 2) The measures applied by Contractor to avoid the pollution of surface water in term of turbidity. 3) Measurement should be taken when there are some complaints from local people; Recommended emphasize places for supervision: the nearest irrigation canal area of the project.	- Monthly during construction period	- PMU (Technical supervisors of PMU implant) - SIMC (to be hired by PMU and will submit report to the WB every six months.)
2	Noise level around construction sites and adjacent residential areas	1) Assessment (by field observation) whether (i) the noise level is unacceptable in the Project's residential areas (ii) The construction machines annoy local people. 2) The mitigation measures applied by the Contractor to avoid the noise impact 3) The measurement should be taken when there are some complaints from local people	As above	



<i>No</i>	<i>Parameters</i>	<i>Monitoring method</i>	<i>Frequency</i>	<i>Responsible bodies</i>
3	Dust	<p>1) Assessment (by visual observation) whether (i) the dust caused by construction is serious; (ii) the measures that Contractors are taken to control the dust level</p> <p>2) The mitigation measures applied by the Contractor to avoid the dust level increasing in the area</p> <p>3) The measurement should be taken when there are some complaints from local people</p> <p>Recommended areas to be monitored: Local road 2, Local road 3 near the substation</p>	As above	
5	Solid waste and site cleaning up after the construction	<p>Assessment by visual observation whether:</p> <p>1) Construction residues are clean up after the construction</p> <p>2) The way that Contractor disposes the solid wastes from construction.</p> <p>3) Check the removal and transportation of the removed mass to Tan Hung landfill.</p>	As above	As above
6	Workers' sanitation facilities and safety management	<p>Assessment by visual observation:</p> <p>(1) Status of solid waste and waste water disposal in camping sites</p> <p>(2) Hygiene and safety issues in camping site</p> <p>(3) In case of home stay, check the agreement with commune's people committees.</p>	As above	As above
7	Transportation disturbance	<p>Assessment by visual observation:</p> <p>(1) Whether the construction and other project's activities such as pole's erection, cable pulling cause any serious disturbance to the local traffic;</p> <p>(2) Necessary measures are taken to avoid the disturbance of traffic</p>	As above	As above

<i>No</i>	<i>Parameters</i>	<i>Monitoring method</i>	<i>Frequency</i>	<i>Responsible bodies</i>
		such as: warning signs for construction work, avoiding of heavy traffic hours etc.(see more details on Mitigation measures)		
8	Road degradation	<p>Assessment by visual observation</p> <p>(1) The construction activities and other activities of the project cause any damage to the local road system and how is the level of damage</p> <p>(2) The vehicles used for Project is overloaded that potentially cause the damage to the existing road system?</p> <p>(3) The Contractor has taken any measure to repair the roads that were damaged during transportation of Project's equipment and material.</p> <p>(4) There are any complaints from local peoples on the issue</p>	As above	As above
9	Status of application of safety measures and protection of worker health	<p>Assessment of safety issue during construction:</p> <ul style="list-style-type: none"> - Personal safety equipment - Technical and safety regulations to avoid the electricity shocks, electrical hazards etc. - Check the water supply source. If water supply is from ground water exploited in the Substation area, check whether water quality is analyzed? met QCVN 02:2009/BYT? 	As above	As above
10	Construction material management	<p>Assessment by visual observation:</p> <p>(1) The management of construction material in the warehouses</p> <p>(2) The management of construction material in the construction site</p>	As above	As above
OPERATION PHASE				
11	Health and safety	Collect the following statistics during the operating substations process:	Annually	- Tay Ninh province



<i>No</i>	<i>Parameters</i>	<i>Monitoring method</i>	<i>Frequency</i>	<i>Responsible bodies</i>
		<ul style="list-style-type: none">- The number of accidents occurring during substation operation;- The observance of the labor rule provision, protection equipments, implementation of FP regulations;		power company;
12	Use and phenomenon of oil pollution and other hazardous chemical at the substation positions	Assessment by visual observation: (1) There is leakage of oil, chemicals from electrical equipments to the environment or not? (2) Where are the maintenance and reparation of electrical equipments implanted? Are these activities safe to health and environment? (3) To comply with the regulation on environmental management or not (Submit periodic reports to the Department of Natural Resources and Environment; Register ownership for hazardous waste, and other regulations).	Annually	<ul style="list-style-type: none">- Southern High Voltage Power Network Company;- SIMC

EXAMPLE ENVIRONMENTAL TERMS OF REFERENCE FOR SIMC OF WB

The Safeguard Independent Monitoring Consultant of WB will:

- **Observe at construction sites and give out comments on the following issues (and including other relevant issue which are not mentioned):**
 - General clean up after construction works;
 - Excessive clear cutting of trees beyond ROW in communal or forest land,
 - Measures taken by the contractor for cleaning up woody residues after tree cutting
 - Status of access roads (have they been closed if in a protected area, are they still being used and to what extent, how are they being controlled/managed and by whom),
 - Application of mitigation measures for or sign of soil erosion along T/L due to tree cutting and/or around tower foundation
 - Status of re-vegetation in the ROWs and tower foundation
 - Impacts on construction works (level of noise, dust, and damage to roads due to earthworks and transportation of building materials)
 - Status of construction worker camps and sanitation facilities for them
 - Proper distance between the houses and T/L,
 - Status of implementation of safety measures (signboards, restricted zone, fences, isolation etc.)
- **Conduct public consultation to:**
 - Assess the level of involvement by the local authorities in dealing with environmental issues (dust, noise, and damage to roads due to the transport of construction materials, tree cutting on public lands and protected areas).
 - Identify any other environmental issues and record environmental complaints from the PAHs.
 - Report on responses (if any) from appropriate local authorities on environmental complaints or non-compliance

6.3. CAPACITY BUILDING

Future training includes the following:

- **EVN training:** Internal training course on how to monitor site EMPs and how to report environmental results as part of semi-annual and annual project reports. The training will also include the methods for corrective action plan if some of EMP activities do not go well or are different
- **SPC training:** The following training will be provided for the staff of local power service and partly for local peoples:

Safety training: Regular training on safety issues related to the distribution network maintenance;

Monitoring and reporting of environmental management plan for stakeholders of the Project's district or communes: The training will give guidance to the local stakeholders about the participation of local peoples during implementation of EMP. The training will also include the methodology for site observation and monitoring check sheet filling.

Training on environmental management and hazardous waste management.

Table 6.6. Proposed program and time for training activities in environmental protection

<i>No</i>	<i>Content</i>	<i>Time and place</i>
<i>EVN trainings</i>		
1	- Site environmental management; Preparation of regular environmental management report; other work related to environmental management of RD Project	- Every two year at EVN head office
<i>SPC trainings</i>		
2	- Safety and maintenance of distribution network	- Yearly at provincial power company
3	- Environmental protection and hazardous waste management (in cooperation with EVN)	- Yearly at SPC head office
4	- Methodology for supervision of EMP implementation for RD Project	- Yearly at SPC head office

Table 6.7. The estimating cost for future trainings

<i>No</i>	<i>Training</i>	<i>Cost (VND)</i>
CONSTRUCTION PHASE		
1	EVN annual training for all units	Included in operating cost of EVN SPC will have to pay for accommodation, travel fees for their staff involved in the project. 3 people from PMU of SPC will attend. 3 people x 2 days x VND 5,000,000 per person = VND 30,000,000
2	Workshop on experiences on the preparation of EIA. EMP and implement of EMP	Included in operating cost of EVN 2 people x 2 days x VND 5,000,000 per person = VND 20,000,000
3	EMP implement training	4 people of Southern High Voltage Power Network Company attend. 2 people x 2 days x VND 5,000,000 per person = VND 20,000,000
	Total for construction phase	VND 70,000,000
OPERATION PHASE		
4	SPC training on safety (usually conducted by provincial power company)	Included in operating cost of Southern high voltage power network company. 8 people of the project in Tay Ninh 8 people x 1 day x VND 1,000,000 per person x 20 years of project life cycle = VND 160,000,000
	Total for the entire project life cycle	VND 230,000,000



6.4. REPORTING REQUIREMENTS OF ENVIRONMENTAL MONITORING

Table 6.8. Environmental reporting requirement

<i>No</i>	<i>Issues to be reported</i>	<i>1st reporting level</i>	<i>2nd reporting level (a copy should be sent to DoNRE)</i>	<i>3rd reporting level</i>
	Construction phase			
1	Implementation of mitigation measures and site environmental management	By: the Contractor Frequency: Monthly To: PMU of SPC	By: PMU of SPC Frequency: Half-yearly To: SPC	By: SPC Frequency: Half-yearly To: The WB, EVN
2	Environmental monitoring	By: Technical supervisors of the PMU Frequency: Monthly To: PMU	By: PMU Frequency: Half-yearly To: SPC	By: SPC Frequency: Half-yearly To: The WB, EVN
		By: SIMC Frequency: Half-yearly To: WB , PMU (SPC) and SPC	-	-
3	Environmental supervision by local authorities and people	By: Local authorities and people Frequency: When it is necessary To: PMU or Contractor	By: PMU Frequency: Half-yearly To: SPC	By: SPC Frequency: Half-yearly To: The WB, EVN
	Operation phase			
1	Environmental monitoring including safety issues	By: Technician of Southern High Voltage Power Network Company Frequency: Half-yearly To: SPC	By: SPC Frequency: Yearly To: EVN, the WB	By: SPC Frequency: Half-yearly To: The WB, EVN

Table 6.9: Estimated costs for implementation of the EMP (VND)

<i>No</i>	<i>Item</i>	<i>Construction</i>	<i>Operation (20 years of life cycle)</i>
1	Mitigation measures	The costs are covered in Contract with Construction Contractors	The cost is covered in production cost of the Southern High Voltage Power Network Company
2	Monitoring costs for the Project. (By technical supervisor consultant of PMU)	The cost is covered in running cost of PMU	The cost is covered in running cost of Project owner
3	Cost for removal and transportation of vegetation and garbage in the ground area of the Substation (to Tan Hung landfill)	167,500,000 (this cost is included in the cost for ground leveling of the Substation)	-
3	Monitoring costs for SIMC in 6 months of project construction (2 times)	Lump-sum 30,000,000	-
5	Capacity building	70,000,000	160,000,000
	TOTAL	267,500,000	160,000,000 This cost is covered in production cost of the agency assigned to operate the SPC project (Southern High Voltage Power Network Company)
	GRAND TOTAL FOR WHOLE PROJECT	427,500,000 VND	



REFERENCES

- 1 Compensation Plan of the Project
- 2 World Bank Environmental Assessment Source Book
- 3 Statistical Yearbook 2008 – Statistical Publisher
- 4 Project investment report
- 5 Framework for Applying Environment Safeguards to RD Project- WB 2007.



APPENDIX 1

LIST OF EMP PREPARERS

1	Hoang Ngoc Thanh Phong	Southern Power Engineering and Consulting Company	Team leader
2	Truong Phi Hoang	Southern Power Engineering and Consulting Company	Member
3	Dao Cong Tan	Southern Power Engineering and Consulting Company	Member
4	Le Thi Ngoc Quynh	Vietnam Electricity	Member and editor
5	Other collaborative from Institute of Vietnam Environment and Sustainable Development Institute.		



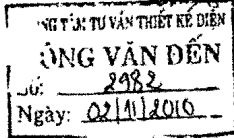
APPENDIX 2

ENVIRONMENTAL PROTECTION COMMITMENT

ỦY BAN NHÂN DÂN CỘNG HÒA XÃ HỘI CHỦ NGHĨA VIỆT NAM
HUYỆN CHÂU THÀNH Độc lập - Tự do - Hạnh phúc

Số: 38/GXN-UBND

Châu Thành, ngày 27 tháng 10 năm 2010



**GIẤY XÁC NHẬN ĐĂNG KÝ
BẢN CAM KẾT BẢO VỆ MÔI TRƯỜNG**

Của dự án: “ Trạm biến áp 110 kV Châu Thành, tỉnh Tây Ninh ”

Căn cứ Luật Tổ chức Hội đồng nhân dân và Ủy ban nhân dân ngày 26 tháng 11 năm 2003;

Căn cứ Luật Bảo vệ môi trường ngày 29 tháng 11 năm 2005;

Căn cứ Nghị định số 80/2006/NĐ-CP ngày 09 tháng 8 năm 2006 của Chính phủ về việc quy định chi tiết và hướng dẫn thi hành một số điều của Luật Bảo vệ môi trường;

Căn cứ Nghị định số 21/2008/NĐ-CP ngày 28 tháng 02 năm 2008 của Chính phủ về sửa đổi, bổ sung một số điều của Nghị định số 80/2006/NĐ-CP ngày 09 tháng 8 năm 2006 của chính phủ về việc quy định chi tiết và hướng dẫn thi hành một số điều của Luật Bảo vệ môi trường;

Căn cứ Thông tư số 05/2008/TT-BTNMT ngày 08 tháng 12 năm 2008 của Bộ Tài nguyên và Môi trường về việc hướng dẫn về đánh giá môi trường chiến lược, đánh giá tác động môi trường và cam kết bảo vệ môi trường;

Theo đề nghị của phòng Tài nguyên và Môi trường tại Tờ trình số 104 ngày 10 tháng 10 năm 2010 về việc xác nhận đăng ký Bản cam kết bảo vệ môi trường của dự án “ Trạm biến áp 110 kV Châu Thành, tỉnh Tây Ninh ”.

**ỦY BAN NHÂN DÂN HUYỆN
XÁC NHẬN**

Điều 1. Chủ đầu tư: Tổng Công ty Điện lực Miền Nam có văn bản số: 3451/EVN SPC - QLĐT ngày 17 tháng 09 năm 2010 đăng ký bản cam kết bảo vệ môi trường của dự án “ Trạm biến áp 110 kV Châu Thành, tỉnh Tây Ninh ”.

Điều 2. Chủ đầu tư có trách nhiệm thực hiện đúng và đầy đủ những nội dung về bảo vệ môi trường nêu trong bản cam kết bảo vệ môi trường và những yêu cầu bắt buộc sau:

1. Công trình xây dựng trong khu dân cư phải có biện pháp bảo đảm không phát tán bụi, tiếng ồn, độ rung, ánh sáng vượt quá tiêu chuẩn cho phép;

2. Việc vận chuyển vật liệu xây dựng phải được thực hiện bằng các phương tiện bảo đảm yêu cầu kỹ thuật không làm rò rỉ, rơi vãi, gây ô nhiễm môi trường;

3. Nước thải, chất thải rắn và các loại chất thải khác phải được thu gom, xử lý đạt tiêu chuẩn môi trường;

4. Bảo đảm nguồn lực, trang thiết bị đáp ứng khả năng phòng ngừa và ứng phó sự cố môi trường, đặc biệt là đối với dự án có sử dụng chất phóng xạ, chất dễ gây cháy, nổ;

5. Báo cáo về phòng Tài nguyên và Môi trường huyện Châu Thành bằng văn bản về những thay đổi so với nội dung bản đăng ký đạt tiêu chuẩn môi trường đã được xác nhận để xem xét các biện pháp về bảo vệ môi trường cần bổ sung.

Điều 3. Bản Cam kết Bảo vệ môi trường của dự án và Giấy xác nhận này là cơ sở để các cơ quan quản lý nhà nước bảo vệ môi trường giám sát, kiểm tra, thanh tra việc thực hiện bảo vệ môi trường trong suốt quá trình thi công xây dựng và vận hành dự án.

Điều 4. Giấy xác nhận này có hiệu lực kể từ ngày ký. *Quốc Dũng*

Nơi nhận:

- Chủ dự án;
- Sở TN&MT;
- Phòng TN&MT;
- Lưu VT.

**TM. UBND HUYỆN
KT. CHỦ TỊCH
PHÓ CHỦ TỊCH**



Nguyễn Quốc Dũng



SPECC

Subproject: 110kV Chau Thanh substation
Tay Ninh province

APPENDIX 3

MAP OF THE PROJECT AREA

CÁC ĐƠN VỊ HÀNH CHÍNH ĐƯỢC ĐÁNH SỐ TRÊN BẢN ĐỒ

- TX. Tây Ninh
- 1. P. Hiệp Ninh
- 2. Phường 4
- H. Hòa Thành
- 3. Xã Long Thành Bắc

KHU VỰC DỰ ÁN/ LOCATION OF PROJECT TAY NINH PROVINCE



GHI CHÚ



Trạm 110kV hiện hữu

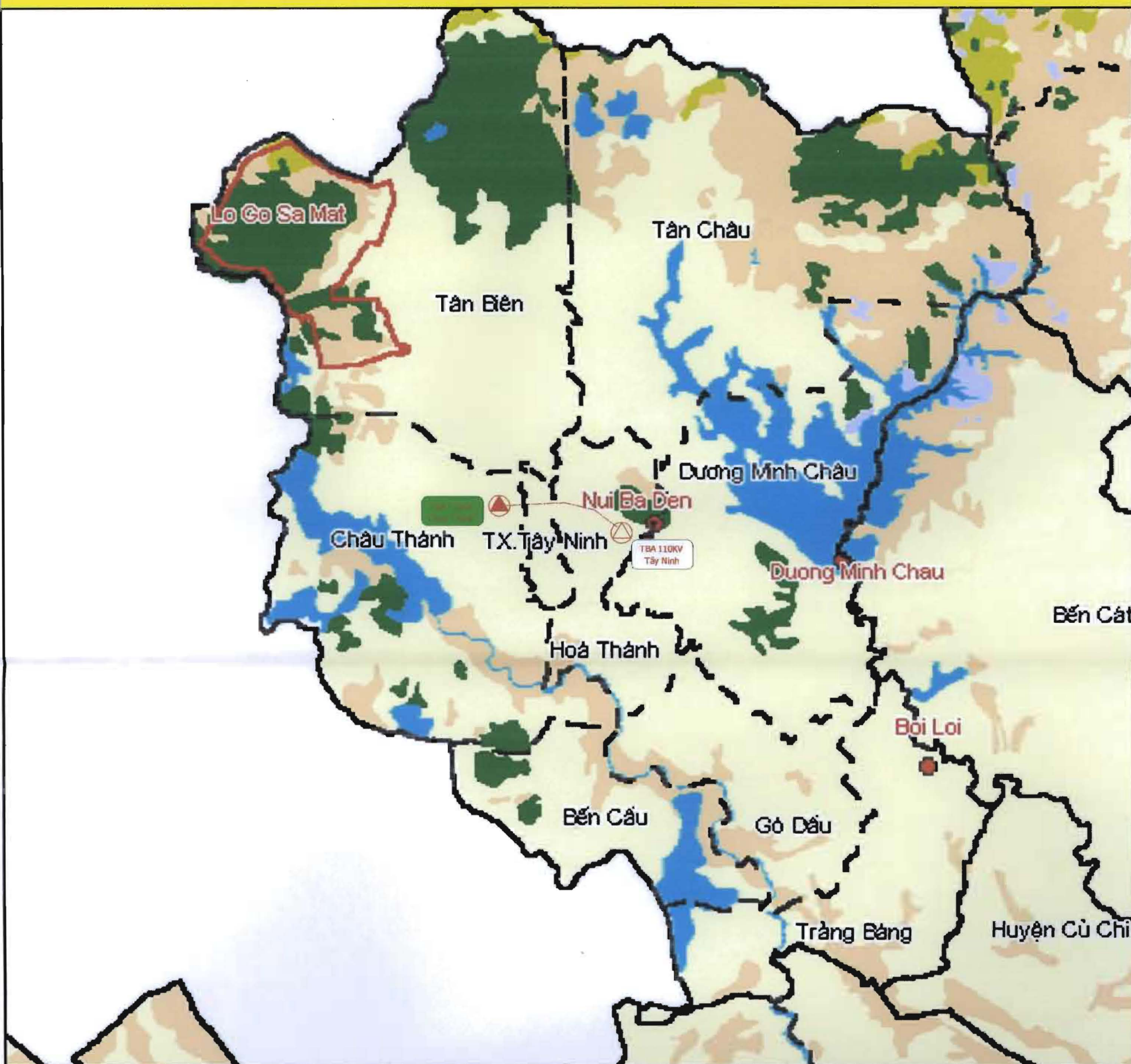


Trạm 110kV dự kiến xây dựng



Đường dây 110kV dự kiến

KHU VỰC DỰ ÁN/ LOCATION OF PROJECT TAY NINH PROVINCE



Vegetation type / Kiểu rừng

- Evergreen forest / Rừng thường xanh
- Coniferous forest / Rừng lá kim
- Deciduous forest / Rừng rụng lá (khộp)
- Semi-deciduous forest / Rừng nửa rụng lá
- Limestone forest / Rừng núi đá
- Bamboo / Rừng tre nứa
- Plantation forest / Rừng trồng
- Grassland and scrub / Đất trống
- Agricultural land / Đất nông nghiệp
- Water bodies / Mặt nước
- Mangrove / Rừng ngập mặn
- Melaleuca / Rừng tràm

Legend / Chú giải

- Protected area / Khu bảo vệ
- Provincial border / Ranh giới tỉnh
- District border / Ranh giới huyện
- Đường dây 110kV dự kiến
- ▲ Trạm 110kV dự kiến xây dựng
- △ Trạm 110kV hiện hữu





APPENDIX 4

EXAMPLE OF MONITORING REPORTS

Example of Site Environmental Management Monitoring Report

Project name:

Project location:

Name of Contractor:

Commencement of Project report or monthly report:

Date of report:

<i>No</i>	<i>Impact</i>	<i>Mitigation measures implemented</i>	<i>Comment</i>
	<i>Construction phase</i>		
1	Surface water contamination		
2	Noise and vibration		
3	Soil erosion		
4	Air pollution		
5	Traffic disturbance		
6	Damaging the existing road system		
7	Solid waste generated from soil excavation		
8	Environmental impacts caused by construction worker		
9	Conflict between construction worker and local people		
10	Health and Safety; water quality supplied for worker camp.		
11	Rremoval and transportation of the removed mass to Tan Hung landfill.		

Name of person prepared this Report:

Title:

Address:

Telephone:



An Example of Environmental Performance Monitoring Report
(This Example can be used for environmental monitoring report of Technical supervisor consultant, SIMC)

Project name:

Project location: Province:

District:

Commune:

Type of Report:

Monthly report (Yes/No): Half-yearly Report to EVN (Yes/No):

Half-yearly Report to the WB (Yes/No):

SIMC report (Yes/No):

Date of report:

<i>No</i>	<i>Parameter</i>	<i>Assessment of Consultant/ community complaints</i>	<i>Comments/ Recommendations</i>
	During construction phase		
1	Surface water contamination and soil erosion		
2	Noise and vibration		
3	Dust		
4	Solid waste and clean the ground after construction		
5	Sanitary equipments for workers and safety		
6	Impact on traffic		
7	Road degradation		
8	The status of implementation of safety measures		
9	Construction materials management		
10	Signs of invading historical and cultural relics		
11	Rremoval and transportation of the removed mass to Tan Hung landfill.		
12	Other environmental issues (if		



	any)		
	During operation phase		
13	The use and management of chemicals, oil and grease of the project		
14	Oil and grease management in the Substation.		
15	Health and safety issues		

Report prepared by:

Position:

APPENDIX 5

RECORDS OF PUBLIC CONSULTATION MEETING AND PICTURES

CỘNG HOÀ XÃ HỘI CHỦ NGHĨA VIỆT NAM
Độc Lập - Tự Do - Hạnh Phúc

BIÊN BẢN HỌP THAM VẤN CỘNG ĐỒNG

Nội dung: Các ý kiến thắc mắc và đóng góp của cộng đồng về Báo cáo kế hoạch quản lý môi trường (EMP) của các hộ bị ảnh hưởng bởi dự án và các tổ chức trong khu vực công trình "Đường dây 110kV Tây Ninh - Châu Thành, tỉnh Tây Ninh" và "Trạm biến áp 110kV Châu Thành, tỉnh Tây Ninh" thuộc dự án lưới điện phân phối nông thôn vay vốn Ngân hàng thế giới (WB).

Thời gian:giờ.....phút, ngày 18 tháng 11 năm 2010.

Địa điểm: Hội trường UBND huyện Châu Thành, tỉnh Tây Ninh.

Thành phần: Gồm đại diện các cơ quan, ban ngành, đoàn thể, tổ chức xã hội, nhân dân có trong danh sách đính kèm.

Diễn biến cuộc họp:

Đại diện của chủ đầu tư công trình "Đường dây 110kV Tây Ninh - Châu Thành, tỉnh Tây Ninh" và "Trạm biến áp 110kV Châu Thành, tỉnh Tây Ninh" trình bày tóm tắt nội dung của Dự án.

Đại diện Trung Tâm Tư vấn Thiết kế Điện trình bày tóm tắt báo cáo đánh giá tác động môi trường bao gồm các tác động môi trường và các biện pháp giảm thiểu ảnh hưởng trong 03 giai đoạn của Dự án: Tiền xây dựng, xây dựng và vận hành. Các tác động môi trường của Dự án gồm các loại: đất bị trung dụng để xây dựng trạm và đường vào trạm, nhà nằm trong hành lang, đất bị chiếm dụng để trồng cột và hành lang tuyến, cây cối trong hành lang tuyến bị chặt hạ, bụi - tiếng ồn - rác thải - xói mòn - ô nhiễm nguồn nước do vận chuyển nguyên vật liệu và thi công, điện từ trường - tai nạn điện - rò rỉ dầu máy biến áp trong giai đoạn vận hành và các ảnh hưởng về mặt xã hội và tài nguyên khác.

Các đại biểu tham gia có các ý kiến thắc mắc, đóng góp và được giải đáp như sau:

Đ. Trần Ngọc Thuận - Người dân ấp Cây Xương, xã Đông Khê:

Thời gian thi công của dự án như thế nào?

Trả lời:

Các công việc thi công hàng tháng 2 năm cũ kiến trong các năm 2011-2012.

Đ. Trần Văn Thời - Người dân ấp Cây Xương, xã Đông Khê:

Hành lang tuyến của công trình đường dây là bao nhiêu mét?

Trả lời:

Đường dây 110kV từ qua khu vực rừng dân cư có chiều các từ 15m, khu vực khu vực rừng dân cư có chiều các từ 7m.

Công trình như thế nào thực trạng các quy trình quy hoạch?

lý Huật

Ông Phạm Văn Khuynh - Hội đồng dân huyện Châu Thành

Chức danh: Chủ tịch Ủy ban nhân dân xã

Trà Lôi

Chức danh: Ủy viên Hội đồng quản trị Ủy ban nhân dân xã Trà Lôi do Hội đồng dân xã Trà Lôi bầu ra, theo các quy định của UBND tỉnh Tây Ninh

Ông Lê Văn Hào - Người dân ấp Sỏi Dập, xã Trà Lôi

Chức danh: Ủy viên Hội đồng quản trị xã rất trẻ, phục vụ địa phương của tỉnh Tây Ninh, từ ngày có công bố thông tin về các người dân được bầu

Trà Lôi

Đã an sẽ được công bố thông tin một cách rộng rãi tại địa phương (từ UBND huyện) bao gồm các tên lửa có liên quan và để an sẽ cho những người dân có được thông tin về địa phương

Bà Nguyễn Thị Thu Ba - Đại diện hội phụ nữ huyện

Thống nhất chức danh của chủ tịch, tùy thuộc từ nghị chủ tịch xã có tên trên danh sách, tranh luận dài lâu anh hùng của người dân, nhất là công tác xã hội

Trà Lôi

Công nhân sẽ được thực hiện theo các phương pháp được nêu chi tiết công. Tiến độ các công nhân của công nhân xã được ra trong 2 năm 2011 - 2012

DANH SÁCH ĐẠI BIỂU THAM DỰ CỤC HỢP THAM VẤN CÔNG ĐỒNG

Đính kèm theo: Biên bản cuộc họp ngày/.. tháng 11 năm 2010

Tại hội trường UBND huyện Châu Thành, tỉnh Tây Ninh

TT	Họ và tên	Địa chỉ	Thành phần xã hội	Ký tên
1	HỒ VĂN MINH	Ap Cây Xiêng, xã Đồng Khởi, huyện CT		<i>Minh</i>
2	ĐẶNG THANH LÂM	Ap Cây Xiêng, xã Đồng Khởi, huyện CT		<i>Lâm</i>
3	LÊ CHI HÙNG	Ap Cây Xiêng, xã Đồng Khởi, huyện CT		<i>Hùng</i>
4	ĐẶNG THỊ HÀ	Ap Cây Xiêng, xã Đồng Khởi, huyện CT		<i>Hà</i>
5	ĐẶNG THANH NHÀN	Ap Cây Xiêng, xã Đồng Khởi, huyện CT		<i>Nhàn</i>
6	ĐÀO VĂN LAI	Ap Cây Xiêng, xã Đồng Khởi, huyện CT		<i>Lai</i>
7	TRẦN ĐÌNH AN	Ap Cây Xiêng, xã Đồng Khởi, huyện CT		<i>An</i>
8	TRẦN VĂN HÙNG	Ap Cây Xiêng, xã Đồng Khởi, huyện CT		<i>Hùng</i>
9	PHÙNG VĂN CUNG	Ap Cây Xiêng, xã Đồng Khởi, huyện CT		<i>Cung</i>
10	TRẦN NGỌC THẠCH	Ap Cây Xiêng, xã Đồng Khởi, huyện CT		<i>Thạch</i>
11	NGUYỄN TẤN THỜI	Ap Cây Xiêng, xã Đồng Khởi, huyện CT		<i>Thời</i>
12	TRẦN THẠNH PHƯỢNG	Ap Cây Xiêng, xã Đồng Khởi, huyện CT		<i>Phượng</i>
13	NGUYỄN THỊ THU THUY	Ap Cây Xiêng, xã Đồng Khởi, huyện CT		<i>Thu Thủy</i>
14	YẾN VĂN TUỆT	Ap Cây Xiêng, xã Đồng Khởi, huyện CT		<i>Tuyết</i>
15	TRẦN THẠNH AN	Ap Cây Xiêng, xã Đồng Khởi, huyện CT		<i>An</i>
16	LÊ VĂN NHỊ	Ap Cây Xiêng, xã Đồng Khởi, huyện CT		<i>Nhị</i>
17	TRẦN MINH SINH	Ap Cây Xiêng, xã Đồng Khởi, huyện CT		<i>Sinh</i>
18	MAI VĂN BÉ	Ap Cây Xiêng, xã Đồng Khởi, huyện CT		<i>Bé</i>
19	TRẦN LÊ XUÂN	Ap Cây Xiêng, xã Đồng Khởi, huyện CT		<i>Xuân</i>
20	TRẦN BÍCH HUỖ	Ap Cây Xiêng, xã Đồng Khởi, huyện CT		<i>Huồ</i>
21	PHẠM TRẦN VŨ	Ap Cây Xiêng, xã Đồng Khởi, huyện CT		<i>Vũ</i>
22	NGUYỄN VĂN HOÀNG	Ap Cây Xiêng, xã Đồng Khởi, huyện CT		<i>Hoàng</i>
23	LAI VĂN ĐÔNG	Ap Cây Xiêng, xã Đồng Khởi, huyện CT		<i>Đông</i>
24	TRƯƠNG VĂN TẤN	Ap Cây Xiêng, xã Đồng Khởi, huyện CT		<i>Tấn</i>
25	TRƯƠNG THANH PHONG	Ap Cây Xiêng, xã Đồng Khởi, huyện CT		<i>Phong</i>
26	PHẠM VĂN HOÀI	Ap Cây Xiêng, xã Đồng Khởi, huyện CT		<i>Hoài</i>

BIÊN BẢN THAM VẤN CÔNG ĐỒNG

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TT	Họ và tên	Địa chỉ	Thành phần xã hội	Ký tên
27	NGUYỄN VĂN LIÊM	Áp Cây Xiêng, xã Đồng Khởi, huyện CT		<i>Liêm</i>
28	VÕ VĂN CHIÊM	Áp Cây Xiêng, xã Đồng Khởi, huyện CT		<i>Chiêm</i>
29	PHẠM THỊ ĐỒNG	Áp Cây Xiêng, xã Đồng Khởi, huyện CT		<i>Đồng</i>
30	NGUYỄN VĂN TĂNG	Áp Cây Xiêng, xã Đồng Khởi, huyện CT		<i>Tăng</i>
31	CHUNG VĂN DẦU	Áp Cây Xiêng, xã Đồng Khởi, huyện CT		<i>Dầu</i>
32	NGUYỄN VĂN PHÚ	Áp Tua 2, xã Đồng Khởi, huyện CT		<i>Phú</i>
33	NGUYỄN VĂN ĐÀO	Áp Tua 2, xã Đồng Khởi, huyện CT		<i>Đào</i>
34	NGUYỄN THỊ ANH	Áp Tua 2, xã Đồng Khởi, huyện CT		<i>Anh</i>
35	NGUYỄN THỊ NGOAN	Áp Tua 2, xã Đồng Khởi, huyện CT		<i>Ngan</i>
36	NGUYỄN THỊ BẾN	Áp Suối Dộp, xã Thái Bình, huyện CT		<i>Bến</i>
37	PHAN THỊ NỠ	Áp Suối Dộp, xã Thái Bình, huyện CT		<i>Nỡ</i>
38	NGUYỄN VĂN PHÚ	Áp Suối Dộp, xã Thái Bình, huyện CT		<i>Phú</i>
39	NGUYỄN VĂN LÂN	Áp Suối Dộp, xã Thái Bình, huyện CT		<i>Lân</i>
40	NGUYỄN VĂN DŨNG	Áp Suối Dộp, xã Thái Bình, huyện CT		<i>Dũng</i>
41	NGUYỄN VĂN HÙNG	Áp Suối Dộp, xã Thái Bình, huyện CT		<i>Hùng</i>
42	LÊ NGỌC KHÁNH	Áp Suối Dộp, xã Thái Bình, huyện CT		<i>Khánh</i>
43	ĐINH VĂN HÙNG	Áp Suối Dộp, xã Thái Bình, huyện CT		<i>Hùng</i>
44	LƯƠNG TÙNG VÂN	Áp Suối Dộp, xã Thái Bình, huyện CT		<i>Vân</i>
45	PHAN VĂN CHÍ	Áp Suối Dộp, xã Thái Bình, huyện CT		<i>Chí</i>
46	ĐẶNG THỊ TÂN THIÊN	Áp Suối Dộp, xã Thái Bình, huyện CT		<i>Thiên</i>
47	TRẦN BÁ LỘC	Áp Suối Dộp, xã Thái Bình, huyện CT		<i>Loc</i>
48	TRẦN VĂN BỬU	Áp Suối Dộp, xã Thái Bình, huyện CT		<i>Bửu</i>
49	PHẠM VĂN SỸ	Áp Suối Dộp, xã Thái Bình, huyện CT		<i>Sỹ</i>
50	VÕ VĂN VIỆT	Áp Suối Dộp, xã Thái Bình, huyện CT		<i>Việt</i>
51	HUỲNH VĂN BÉ	Áp Suối Dộp, xã Thái Bình, huyện CT		<i>Bé</i>
52	MAI HOÀNG SƠN	Áp Suối Dộp, xã Thái Bình, huyện CT		<i>Sơn</i>
53	NGUYỄN VĂN MAU	Áp Suối Dộp, xã Thái Bình, huyện CT		<i>Mau</i>
54	NGUYỄN VĂN TOÀN	Áp Suối Dộp, xã Thái Bình, huyện CT		<i>Toàn</i>
55	VÕ VĂN ĐĂNG	Áp Suối Dộp, xã Thái Bình, huyện CT		<i>Đăng</i>

BIÊN BẢN THAM VẤN CỘNG ĐỒNG

Trang 2/4



SPECC

Subproject: 110KV Chau Thanh substation
Tay Ninh province



Picture 1: Mrs. Nguyen Thi Thu Ba- Representative of Women Union of Chau Thanh district speaks at the meeting in Chau Thanh district.



Picture 2: Mr. Nguyen Viet Cuong – representative Department of Industry and Trade speaks at the meeting- Chau Thanh district