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SOCIALIST REPUBLIC OF VIET NAM
ELECTRICITY OF VIET NAM
POWER ENGINEERING CONSULTING COMPANY 4

Project: 14-02

E208
VOL. 13

TUY HOA-NHA TRANG 220kV TRANSMISSION LINE

FEASIBILITY STUDY REPORT

ENVIRONMENTAL MANAGEMENT PLAN (EMP)



Khanh Hoa Province, 04/2005

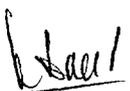


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PROJECT No.: 14 - 02

TUY HOA – NHA TRANG 220kV TRANSMISSION LINE
FEASIBILITY STUDY
ENVIRONMENTAL MANAGEMENT PLAN
(EMP)

Head of department : Nguyen Kim Dong 

Chief engineer of project : Le Hoang Thuong 

Khánh Hòa Province, 2005

FOR AND ON BEHALF OF
POWER ENGINEERING CONSULTING COMPANY 4



VAN CONG MINH

DEPUTY DIRECTOR

STAFFS PREPARING THE EMP INCLUDED

No.	Full-name	Content prepared	Signature
1	Tran Van Luyen	Presiding EMP establishment	<i>[Handwritten Signature]</i>
2	Mai Thi Hop	Establishing EMP report	
3	Dang Phuong Hao	Establishing the map of line route	

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ABBREVIATIONS

EVN	: Electricity of Vietnam .
PECC4	: Power Engineering Consulting Company 4
CPPMB	: Central Power Projects Management Board
EMP	: Environmental Management Plan
WB	: World Bank
VND	: Vietnam dong
PTC3	: Power Transmission Company No.3
WHO	: World Health Organization
PC	: People's Committee
LC	: Land Clearance
S/s	: Substation
SMIC	: Safeguard Monitoring Independent Consultant
USD	: United States Dollar
ROW	: Right-of-way
RC	: Resettlement Committee
T/L	: Transmission Line
PAHs	: Project Affected Households

I. PROJECT DETAILS

1. Location of project

The route length of Tuy Hoa – Nha Trang 220kV transmission line through Phu Yen province is 40.689km, area of permanent land acquisition is 15,950m² and area of ROW is 546,795m². The line route goes through territory of two districts namely Phu Hoa and Tuy Hoa of Phu Yen province.

The route length of Tuy Hoa – Nha Trang 220kV transmission line through Khanh Hoa province is 93.973km, area of permanent land acquisition is 36,550m² and area of ROW is 1,481,018m². The line route goes through territory of three districts (cities) namely Van Ninh, Ninh Hoa and Nha Trang City of Khanh Hoa province.

2. Main characteristics of the project:

- Voltage level : 220kV.
- Number of circuit : 02 circuits
- Starting point : 220-110kV busbar of 220-110kV Tuy Hoa substation (design) belonging to Phu Hoa District – Phu Yen Province.
- End-point : 220-110kV busbar of 220-110kV Nha Trang substation (existing) belonging to Nha Trang City – Khanh Hoa Province.
- Total route length : 134.662km in which:
 - + Route length through Phu Yen province : 40.689km
 - + Route length through Khanh Hoa province : 93.973km
- Conductor: Aluminum steel reinforced conductor of ACSR-400/51, ACSR-240/56 with grease layer for anti-erosion.
- Ground-wire: composite optical fiber overhead ground wire OPGW-68 and a galvanized steel wire GSW-70 are used on the whole line route, for incoming and outgoing sections of 220kV substation, another ground wire GSW-70 is suspended.
- Insulators and accessories: glass insulators or equivalent are used.
- Tower : two-circuit galvanized steel tower, linked by bolts
- Arms : arms with towers all-in one block are manufactured

- Foundation : Pier foundation, raft foundation (cast in place), pile foundation

- Width of ROW : 21.2m.

3. Line route topography

Tuy Hoa – Nha Trang 220kV transmission line project goes through territory of five districts (cities) of Phu Yen and Khanh Hoa Provinces with total length of 134.662km. The whole route length is divided in six sections described as follows:

* **Section 1:** From 220kV Tuy Hoa substation to G8 in 14,879 m length.

Beginning from the busbar of 220kV Tuy Hoa substation, the line crosses communes of Hoa Quang Bac, Hoa Quang Nam, Hoa Dinh Dong (Phu Hoa district) and communes of Hoa Phong, Hoa Binh 2 (Tuy Hoa district) of Phu Yen province. In this section, the route mainly crosses paddy and crop land alternatively with high eucalyptus hills and thick brambles. The altitude varies from 10-100m.

Topography and special ground object on the route section:

- + Crossing Da Rang river with riverbed width : 850m
- + Crossing National road and provincial road : twice
- + Inter-crossing with 110kV T/L : once
- + Number of houses in ROW : 12 houses

* **Section 2:** From G8 to G11 in 4,650m length

This section goes through communes of Hoa Tan Dong and Hoa Xuan Tay, Tuy Hoa district, Phu Yen province with rather flat topography, the cultivated land is mainly of ricefields.

Topography and special ground object on the route section:

- + Crossing Ban Thach river five times with riverbed width: 100m

* **Section 3:** From G11 to G17 in 15,260m length

This section goes through communes of Hoa Xuan Nam and Hoa Xuan Tay, Tuy Hoa district, Phu Yen province with rather flat topography, the cultivated land is mainly of ricefields alternatively with eucalyptus hill.

* **Section 4:** From G17 to G28 in 11,600m length

This section goes through Hoa Xuan Nam commune, Tuy Hoa district, Phu Yen province and Dai Lanh commune, Van Ninh district, Khanh Hoa province. The

altitude varies from 20-400m. The cultivated land is mainly of brambles and grass-plot alternatively with eucalyptus and fruit tree hills.

* **Section 5**: From G28 to G52 in 67,530m length

This section goes through communes of Van Tho, Van Phuoc, Van Khanh, Van Binh, Van Luong, Van Hung of Van Ninh district; communes of Ninh An, Ninh Trung, Ninh Than, Ninh Binh, Ninh Quang, Ninh Loc, Ninh Ich of Ninh Hoa district, Khanh Hoa province. In this section, the topography is rather flat, the cultivated land is mainly of ricefields alternatively with eucalyptus and fruit tree hills.

Topography and special ground object on the route section:

- + Inter-crossing with 220kV T/L : once
- + Crossing National road : once
- + Number of houses in ROW : 50 houses

* **Section 6**: From G52 to the ending point in 20,743m length

This section goes through communes of Vinh Luong, Vinh Phuong of Nha Trang City with rather complex topography, many high hills and mountain, the cultivated land is mainly of fruit trees alternatively with eucalyptus hill and in some sections, there are bomb and mines left.

Topography and special ground object on the route section:

- + Inter-crossing with 220kV T/L : once
- + Number of houses in ROW : 17 houses

In general: The line route of Tuy Hoa – Nha Trang 220kV T/L project goes through rather flat topography, mainly parallel to the existing Tuy Hoa – Nha Trang 110kV T/L. Particularly for sections through Ca pass and Co Ma pass, the topography is complex with large fluctuation altitude.

The vegetative cover is mainly of grass-plot, bramble, eucalyptus and crops of local people.

4. Total investment cost

Construction cost	:180,036,029,730 VND
Cost for equipment installation	: 17,016,747,261 VND
Other costs	: 76,940,138,185 VND
Contingency cost	: 27,399,291,518 VND
Total Investment Cost	:301,392,206,694 VND
In round	:301,392,207,000 VND

5. Time schedule

- + Establish and submit bidding documents and construction drawings:
November 2004-May 2005
- + Construction, revision, testing, handing-over : August 2005-March 2007
- + Commissioning, energizing, put the project into operation : April 2007

TABLE OF PROJECT DETAILS

1. Project Name	Tuy Hoa – Nha Trang 220kV Transmission Line	
2. Program Name	3034-VN	
3. New project or rehabilitation project	New <input checked="" type="checkbox"/>	Rehabilitation <input type="checkbox"/>
4. Project Location i. Commune(s) ii. District(s), towns, cities iii. Province	<ul style="list-style-type: none"> • Hoa Quang Bac Commune, Phu Hoa District, Phu Yen Province • Hoa Dinh Dong, Hoa Phong, Hoa Binh 2, Hoa Tan Tay, Hoa Tan Dong, Hoa Xuan Tay, Hoa Xuan Nam communes, Tuy Hoa District, Phu Yen Province. • Dai Lanh, Van Tho, Van Phuoc, Van Long, Van Khanh, Van Thang, Van Phu, Van Binh, Van Luong, Van Hung communes, Van Ninh District, Khanh Hoa Province. • Ninh An, Ninh Trung, Ninh Than, Ninh Xuan, Ninh Binh, Ninh Quang, Ninh Hung, Ninh Loc, Ninh Ich communes, Ninh Hoa district, Khanh Hoa Province. • Vinh Phuong, Vinh Luong communes, Nha Trang City, Khanh Hoa Province. 	
5. Length and voltage of HV line	Length= 134.662 km	Voltage= 220 kV
6. Width of ROW	Width= 21.2 metres	
7. Approximate number and height of support poles	Number= 390	Height = 36.2m – 72m
8. Number of project affected households (PAHs)	79	
9. Construction commencement and completion date (month/year)	Commencement August 2005	Completion March 2007
10. Construction in wet season	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
11. Total area land acquired	Temporary: 202.7812 ha	Permanent: 5.25 ha
Cultivated land required	Temporary= 21.8644ha	Permanent= 0.7 ha
Clearing forest land required	Temporary= 44.6362 ha	Permanent= 2.71ha

Industrial land required	Temporary= 4.2463 ha	Permanent= 0.0124ha
Fruit tree land acquired	Temporary= 23.7807 ha	Permanent= 0.0312ha
Planting forest land required	Temporary= 30.2997 ha	Permanent= 0.9301ha
Residential land required	Temporary= 28.7304 ha	Permanent= 0.0582ha
Other land required	Temporary= 49.2234 ha	Permanent= 0.8081ha
12. Total project cost (VND & USD)	301,392,207,000 VND (equiv. of 19,196,955.86 USD)	

II. ENVIRONMENTAL SCREENING

IMPACT	POTENTIAL IMPACT		COMMENTS <i>(Comment on scale and level of impact)</i>
	YES	NO	
CONSTRUCTION STAGE			
<p>1. Effects on the vegetation cover: - Decreasing the vegetation cover on the land area within ROW.</p>	X		<p>The effects are in average level: * There will be the decreasing of vegetation cover area: - Cultivated land (rice and crops): 22.56 ha - Hill land with bush and grass-plot: 47.53 ha belonging to communes of Hoa Quang Bac, Hoa Dinh Dong, Phu Hoa district; Hoa Tan Tay, Hoa Tan Dong, Hoa Xuan Nam communes, Tuy Hoa district, Phu Yen province; Dai Lanh commune, Van Ninh district, Khanh Hoa province. - Land for planting industrial trees (cashew): 4.26 ha - Land for planting fruit trees: 23.82 ha - Forest land (planting eucalyptus): 31.23 ha - Residential land: 28.79 ha - Other land (vacant land, wasted hill, etc...): 50.03 ha * Number of trees cut down within ROW: Fruit trees: 1,947 trees Eucalyptus: 42,936 trees Cashew: 20,845 trees</p>
<p>2. Effects on animal creature - Effects on the displacement of cattle</p>		X	<p>No effects - The whole route line is neither close to nor through preservation area of animals. - The line route is not through the residential areas. As a result, it does not affect to the displacement of cattle.</p>

<p>3. Effects on land environment</p> <ul style="list-style-type: none"> - Decreasing the land area for planting agricultural trees, industrial trees, fruit trees, etc... - Erosion or sediment generation caused by earth excavation and filling for tower foundation construction. - Effects on the land environment due to the oil leakage when renewing oil and grease for machines during construction. 	<p>X</p> <p>X</p> <p>X</p>		<p>The effects are in low level:</p> <ul style="list-style-type: none"> - Perpetual land acquisition for tower foundation construction: 5.25 ha and temporary land acquisition for works construction: 202.78 ha <p>The effects are in low level:</p> <ul style="list-style-type: none"> - Volume of filling and excavation land including of: Excavation land of grade III: 34,700m³ Filling land of grade III: 60,000m³ Excavation land of grade IV: 42,350m³ Filling land of grade IV: 71,900 m³ Destroying the underground rock by manual for tower foundation excavation: Phu Yen province: 2,059m³ Khanh Hoa province: 2,285m³ - Making access roads at some positions with 4m width; leveling depth of 0.25m. Total quantity of leveling as follows: Phu Yen province: 9,300m³ Khanh Hoa province: 56,002m³ <p>No effects:</p> <ul style="list-style-type: none"> - Oil and grease of equipment, machines for construction do not affect to the land environment.
<p>4. Effects on air quality:</p> <ul style="list-style-type: none"> - Effects on air quality (increase dust, exhausted gas, etc...) from vehicle and equipment use and construction activities. 	<p>X</p>		<p>The affected extent is low:</p> <ul style="list-style-type: none"> - There are about 20-30 construction machines dispersedly construct on the whole route with time duration about 18 months in which the bulldozer is used for leveling the temporary access roads. - Due to tree-cutting within ROW: Fruit trees: 1,947 trees Eucalyptus: 42,936 trees Cashew: 20,845 trees Hill land with bushes and grass-plot: 47.3462 ha

<p>- Increase waste to the environment (waste from construction and from activities of workers), affect to the air quality.</p>	X		<p>The affected extent is low:</p> <p>- Number of participation workers is about 384 people divided into 4 teams dispersedly working on the whole route. Workers live in the house section in good hygienic condition. The waste from daily life activities of workers is gathered and treated before discarding outside.</p>
<p>5. Noise from construction activities:</p> <p>- Increase noise at construction area due to vehicle and equipment use.</p>	X		<p>The affected extent is too low:</p> <p>- There are about 20-30 construction machines dispersedly construct on the whole route. The construction area of tower foundation positions are far away from the residential area, the nearest section is 200m distant. As a result, the noise effect during construction is too low.</p>
<p>6. Effects on water environment:</p> <p>- Increase the turbidity of water in rainy season (due to excavation and filling for tower foundation construction).</p> <p>- Waste water from daily life activities of workers.</p>	X		<p>The affected extent is low:</p> <p>- Land for tower foundation construction is acquired on the agricultural land and forestry land. So the effect on water turbidity is unremarkable.</p> <p>- There are 384 workers divided into 4 construction teams. The waste water range area is small, only focuses on house area of workers.</p>
<p>7. Effects on cultural property, historical heritage (affect to their architecture and scenery)</p>		X	<p>No effects:</p> <p>- The line route is away from area of cultural and historical heritage.</p> <p>- During the construction of excavation and filling land and rock, if the civil contractor discovers the valuable cultural and historical heritage, the Owner and the civil contractor will be responsible for informing to the local Culture & Communication authority.</p>

<p>8. Damage to property, trees, crops, architectural works, etc...</p>	<p>X</p>		<p>The effects are in average level:</p> <ul style="list-style-type: none"> - Permanent land acquisition for works construction is about 52,500m². Number of Project Affected households within ROW: 79 households (2,665.17m² of houses with tole/tile roof and 536.45 m² of houses with thatched roof). Among these houses, there are 51 houses made of flammable materials and dispersedly arranged; so it should design to increase the tower height. These households are compensated on movement and constructed houses within the remaining residential land. For 28 remaining households, the upgrading of roof earthing and increasing the tower safety coefficient is implemented.
<p>9. Effects on living environment and working condition of workers</p>	<p>X</p>		<p>The affected extent is low:</p> <ul style="list-style-type: none"> - Labor safety methods are applied for construction workers in order to minimize the labor accidents. - 348 workers will be divided into 4 teams living in areas of workers' houses with good hygienic condition. - The number of construction workers increase may create condition for spreading diseases.
<p>10. Effects caused by explosives left after war</p>		<p>X</p>	<p>No effects:</p> <ul style="list-style-type: none"> - There are some sections where bombs and mines left after war on the whole route (for example, the route section of Vinh Luong and Vinh Phuong communes of Nha Trang city, Khanh Hoa province). So it is necessary to destroy bombs and mines, so no effects occur during construction process. Destruction area as follows: <ul style="list-style-type: none"> + 0.3m depth: 116.95 ha + 3m depth: 30.85 ha + 5m depth: 1.09 ha

<p>11. Affect to public transport: - Disruption to traffic movements</p> <p>- Road foundation settlement</p>	X	<p>The affected extent is low:</p> <p>- Disruption to traffic movements due to vehicle density increase is rarely happened because trucks that transport materials, equipment, machines are on the national roads No.1A, No.26 and inter-commune roads. There are about 8 trucks.</p> <p>- The road foundation settlement only occurs when the trucks transporting materials or machines are oversized and overweighted, etc...</p>
OPERATION STAGE		
<p>12. Effects on vegetative cover due to tree - cutting during ROW clearance.</p>	X	<p>The affected extent is low:</p> <p>- Some small effects within ROW due to clearing for maintenance activities.</p>
<p>13. Effects on health of maintenance workers (Effect of electromagnetic field)</p>	X	<p>No effects</p> <p>- The conductor suspension height is designed about 29.2m-72m to ensure the safety. The intensity of electromagnetic field is within allowed limit (<5kV/m). Then people can work normally under the line route.</p>
<p>14. Interference with radio, TV or other communications.</p>	X	<p>No effects because the line route only crosses the railway twice, far from residential area and mitigation measures have been applied.</p> <p>The distance from conductor to the car road surface at inter-crossing places with the national road is in permissible limit (about 8m).</p>

III. PUBLIC CONSULTATION

1. Public consultation plan

CONSULTATION METHOD	DETAILS OF ACTIVITIES		CONSULTATION OUTCOMES
Public Notice	Date(s) of notice	08/07/2004 to 27/07/2004	- Content of public notice (See appendix 2 for details) - Result: No feedback from community.
	Location of notice	At PCs of Project affected communes.	
Public announcement/ radio	Date(s) of announcement	08/07/2004 to 20/07/2004	The Public Notice is announced in following communes: Hoa Quang Bac, Hoa Dinh Dong, Hoa Binh 2, Hoa Tan Dong, Hoa Xuan Tay, Hoa Xuan Nam, Dai Lanh, Van Tho, Van Binh, Van Luong, Van Hung, Ninh Trung, Ninh Than, Ninh Xuan, Ninh Quang, Ninh Ich.
	Time(s) of announcement	6AM and 5PM everyday at some local regions of the line route.	

2. Public disclosure

This project, when putting into operation, will create reliable power source and make contribution to the socio-economical development of local section. So there are some project affected people. These people will be consulted on brief information of the project such as the general characteristics, project impacts and mitigation measures. Forms of public consultation used in this project are posting public notice at local section and announcing its content on radio of some affected communes. During announcement the content of public notice at local section, we will summarize opinions of affected people (if any) and supplementing to the content of EMP and submit it to EVN and WB.

Draft EMP (Vietnamese) will be disclosed in Phu Yen and Khanh Hoa provinces.

Draft EMP (English) will be sent to VIDC (Vietnam Information Development Center) at WB building - 63 Ly Thai To Street, Ha Noi City for disclosure.

Draft EMP (English) will be sent to WB Information shop in W.D for disclosure.

IV. MITIGATION PLAN

Phase	Impact	Mitigating measure	Cost	Responsibility
Construction	<p>1. <i>Effects on vegetative cover</i> Decreasing the vegetative cover layer on the land area within ROW.</p>	<p>- Trees outside ROW are not allowed to be cut. - Ideological education for workers in cooking to avoid forest firing and forest resource's injuring.</p>	Included in contractor bidding price	Contractor
	<p>2. <i>Effects on animals</i> Effects on the displacement of cattle.</p>	- No effects		

Phase	Impact	Mitigating measure	Cost	Responsibility
	<p>3. <i>Soil environment</i></p> <ul style="list-style-type: none"> - Decreasing land area for planting agricultural trees, industrial trees, fruit trees, etc... - Land erosion or sediment making due to excavation and filling land and rock during tower foundation construction. - Effects on land environment due to oil leakage when renewing oil and grease for machines during construction. 	<ul style="list-style-type: none"> - Making the compensation and resettlement well so as not to affect to area outside ROW. - Using logical construction alternatives by many shifts, increasing productivity, completely finishing every item to decrease temporary land acquisition period. Only make construction of allowable items in rainy so as not to cause effects on land erosion. - Planting grass, embanking foundation by stone at great slope and erosion prone areas such as Ca pass, Ma pass, etc... - Frequently checking the operation of machines. Renewing oil at then maintenance workshop, not at construction site. 	<p>Included in contractor bidding price</p> <p>Included in contractor bidding price</p> <p>Included in contractor bidding price</p>	<p>Contractor</p> <p>Contractor</p> <p>Contractor</p>

Phase	Impact	Mitigating measure	Cost	Responsibility
	<p><i>4. Effects on air quality:</i></p> <ul style="list-style-type: none"> - Increasing dust, noise, exhausted gas, etc... from vehicle and equipment use and construction activities. - Increase waste to the environment (waste from daily life activities of workers), causing effects on air quality. 	<ul style="list-style-type: none"> - Checking machines and equipment periodically as per standards, ensuring the exhausted gas must be in permissible limit. - Trucks transporting construction materials must get cover plate. Spraying water at dusty locations on temporary roads in dry and sunny days, etc... - Waste is gathered before discarding to the environment. Waste is classified before gathering. Using waste can be re-processed. - Ideological education for workers in environmental protection. 	<p>Included in contractor bidding price</p> <p>Included in contractor bidding price</p>	<p>Contractor</p> <p>Contractor</p>
	<p><i>5. Noise from construction activities</i></p>	<ul style="list-style-type: none"> - Insure all machinery is under good operation to reduce noise during machinery operation. - Do not make evening construction. If any, prenotification to local authority and people required. 	<p>Included in contractor bidding price</p>	<p>Contractor</p>

Phase	Impact	Mitigating measure	Cost	Responsibility
	<p>6. Water environment</p> <ul style="list-style-type: none"> - Increase the turbidity of water in rainy season (due to excavation and filling for tower foundation construction). - Waste water from daily life activities of workers and waste during construction. 	<ul style="list-style-type: none"> - Construction of high slope areas, erosion and runoff prone areas during dry season. Protection methods are applied when constructing the foundation in order to avoid the foundation pit landslide. - Toilet for workers is arranged with rational water treatment method (decreasing the quantity of waste matter to the environment, etc...). 	<p>Included in contractor bidding price</p> <p>Included in contractor bidding price</p>	<p>Contractor</p> <p>Contractor</p>
	<p>7. Effects on cultural relics and historical heritage (affect to their architecture and scenery)</p>	<p>No effects on the environment. It must be informed to the local culture & communication authority when underground cultural and historical heritage discovered.</p>	<p>Included in contractor bidding price</p>	<p>Contractor</p>

Phase	Impact	Mitigating measure	Cost	Responsibility
	8. Damages on assets and architectural works	Compensation policy of the project to mitigate the above-mentioned impacts as follows: - Households with damaged houses, assets, crops: compensation policy as per Vietnam law and regulations of WB are applied. - Households with affected houses have to displace, etc... further subsidy will be provided such as displace allowance, production stabilization, rehabilitation allowance, relocation bonus, etc... in order to stabilize activities for affected people at the soonest.	Included in contractor bidding price	Contractor
	9. Effects on the living environment and working condition of workers.	To ensure the construction safety, keep strictly to procedures and norms of construction, details as follows: - Machine and equipment must be checked periodically before operation. - Make frequent health inspection for workers. Checking labor tools, safety belt before working at height; the tools must be neat, light and easy to operate. - Not work at height with twilight, with fog or wind more than grade V.	Included in contractor bidding price	Contractor
		- Making signals and barriers at sections where pulling conductors to cross the barricade; making signal light at night. - When loading and unloading material and equipment by crane, take careful inspection of tying shrouds, cable hook. - Having medical measures to help workers avoid diseases such as malaria, digestion and respiration (<i>provide preventing medicine for workers</i>).		

Phase	Impact	Mitigating measure	Cost	Responsibility
	<i>10. Effects caused by explosives left after war.</i>	- Hire a standing agency for bomb and mine destroying on route section belonging to Vinh Luong and Vinh Phuong communes before construction. So no mitigation measures during construction.	Included in contractor bidding price	Contractor
	<i>11. Effects on public transport</i> - Disruption to traffic movements - Road foundation settlement	- Making scaffold and announcement to local authority and people when pulling conductor through the railway and roads. - Arrange and regulate works in a logical way during construction. - For oversized and overweighted machine and equipment, having separate transport truck to avoid damage and settlement for road surface.		
Operation	<i>12. Vegetative cover (due to tree cutting within ROW during maintenance).</i>	- For land area where high trees are cut, after cutting trees in ROW, it needs to sustain other trees impossible to reach allowable height limit in order to keep land and exclude the ability of becoming desert. - Cutting trees within ROW in accordance with the instructions.	Operation cost	Operator: PTC3
	<i>13. Effects on health of maintenance workers (Effects of electromagnetic field)</i>	No effects because the arrangement of phase on the towers and other safety spans as per the norms. The value of electromagnetic intensity under the conductors from the route center is much lower than the international standards.		
	<i>14. Effects on other communication means.</i>	<i>No effects on the environment.</i>		

V. MONITORING PLAN

Phase/ Environmental Issue	What parameter is to be monitored?	Where is the parameter to be monitored?	How is the parameter to be monitored?	When is the parameter to be monitored?	Cost	Responsibility
Construction						
1. <i>Effects on vegetative cover</i> (Decrease vegetative cover layer on the land area within ROW).	- Situation of vegetative cover after cutting. - Form of waste gathering and treatment after cutting.	Along ROW At disposal site	Assessment by visual observation	Once/month	Included in Contractor bidding price	- Contractor - Technical Supervisors of CPPMB. - SMIC
2. <i>Effects on animals</i> Effects on the displacement of cattle.	No effects	None	None	None		
3. <i>Soil environment</i> - Decrease land area for planting agricultural trees, industrial trees, fruit trees, etc...	Land area within ROW.	On the whole ROW	Assessment by visual observation and measuring by the tape.	Once/month	Included in Contractor bidding price	- Contractor - Technical Supervisors of CPPMB. - SMIC

Phase/ Environmental Issue	What parameter is to be monitored?	Where is the parameter to be monitored?	How is the parameter to be monitored?	When is the parameter to be monitored?	Cost	Responsibility
- Erosion or sediment generation caused by soil and rock excavation and filling for tower foundation construction.	Current situation of soil at construction areas.	On the whole ROW	Assessment by visual observation	Once/month	Included in Contractor bidding price	- Contractor - Technical Supervisors of CPPMB. - SMIC
- Effects on the soil environment due to the oil leakage when renewing oil and grease for machines during construction.	No effects	None	None	None		

Phase/ Environmental Issue	What parameter is to be monitored?	Where is the parameter to be monitored?	How is the parameter to be monitored?	When is the parameter to be monitored?	Cost	Responsibility
4. <i>Effects on air quality</i> - Increase dust, exhausted gas, etc... from vehicle and equipment use and construction activities.	Dust in air.	At construction site	Assessment by visual observation	Once/month	Included in Contractor bidding price	- Contractor - Technical Supervisors of CPPMB. - SMIC
- Increase waste to the environment (waste from daily life activities of workers)	Quantity of waste to the environment around the disposal area.	The disposal area of workers' houses.	Assessment by visual observation and sense.	Once/month Once/month	Included in Contractor bidding price	- Contractor - Technical Supervisors of CPPMB. - SMIC
5. <i>Noise at construction site</i> - Increase noise at construction areas.	Noise at construction site	At construction site	Hearing by ears.	Once/month	Included in Contractor bidding price	- Contractor - Technical Supervisors of CPPMB. - SMIC

Phase/ Environmental Issue	What parameter is to be monitored?	Where is the parameter to be monitored?	How is the parameter to be monitored?	When is the parameter to be monitored?	Cost	Responsibility
6. <i>Water environment</i> - Increase the turbidity of water (<i>due to excavation and filling for tower foundation construction</i>). - Waste water from daily life activities of workers and waste during construction.	Water turbidity	At tower foundation positions and drainage trench behind the workers ' houses.	Assessment by visual observation	Once/month	Included in Contractor bidding price	- Contractor -Technical Supervisors of CPPMB. - SMIC
7. <i>Effects on cultural relics and historical heritage</i> (affect to their architecture and scenery)	No effects	None	None	None		
8. <i>Damages on assets, architectural works</i>	Process of compensation and resettlement implementation	On the whole ROW	Assessment by visual observation	Once/week during compensation and resettlement stage.	Included in Contractor bidding price	- Contractor -Technical Supervisors of CPPMB. - SMIC

Phase/ Environmental Issue	What parameter is to be monitored?	Where is the parameter to be monitored?	How is the parameter to be monitored?	When is the parameter to be monitored?	Cost	Responsibility
9. <i>Effects on living environment and working condition of workers.</i>	- Living & working condition of workers. - Labor safety appliances and methods.	At construction site and the area of workers' houses	Assessment by visual observation	Once/month	Included in Contractor bidding price	- Contractor - Technical Supervisors of CPPMB. - SMIC
10. <i>Effects caused by explosives left after war.</i>	No effects	None	None	None		
11. <i>Effects on public transport</i> - Disruption to traffic movements - Road foundation settlement	The road surface on inter-commune road sections.	On the transport road	Assessment by visual observation	Once/month	Included in Contractor bidding price	- Contractor - Technical Supervisors of CPPMB. - SMIC
Operation						
12. <i>Vegetative cover (due to tree cutting within ROW during maintenance)</i>	- Situation of vegetative cover after cutting. - Form of waste gathering and treatment after cutting.	Along ROW At disposal site	Assessment by visual observation	Once/month	Included in operation cost	- Operator - Technical Supervisors of CPPMB. - SMIC

Phase/ Environmental Issue	What parameter is to be monitored?	Where is the parameter to be monitored?	How is the parameter to be monitored?	When is the parameter to be monitored?	Cost	Responsibility
<i>13. Effects on health of maintenance workers (Effects of electromagnetic field)</i>	<i>No effects</i>					
<i>14. Effects on other communication means.</i>	<i>No effects</i>					

Monitoring cost

No.	Item	Construction	Operation (25 years of life cycle)
1	Monitoring cost (By technical supervisor consultant of CPPMB)	The cost is covered in running cost of CPPMB	The cost is covered in running cost of Project owner
2	Monitoring cost for SMIC	1 man-month/ transmission line x 1 T/L x 10,000,000 = 10,000,00 VND	12 days/year x 100.000x 25 years = 30,000,000VND
Total: (1+2)		10,000,000VND	30,000,000VND
Total monitoring cost of project		40,000,000VND	

VI. INSTITUTIONAL DEVELOPMENT ACTIVITIES

1. Equipment Purchases

No equipment purchases included in project.

2. Training/Study Tours

<i>Type of Training</i>	<i>Number of Students</i>	<i>Duration of Training (days)</i>	<i>Start Date/End Date (for each student)</i>	<i>Venue of Training (Domestic or Abroad)</i>	<i>Institute or Organization to Provide Training</i>	<i>Cost (Local and Foreign)</i>
Environmental management training course	1	2	EVN or CPPMB (confirmed later)	Domestic	EVN or CPPMB	Account in cost of EVN or CPPMB

3. Training cost

Cost for course organizing to improve environmental management and monitoring capacity included:

- Cost for learner	: VND 200,000
- Subsistence cost for learner (temporarily counted)	: VND 500,000
- Other cost	: VND 200,000
TOTAL:	VND 900,000

(All these costs will be born by EVN)

VII. IMPLEMENTATION ARRANGEMENTS

ROLE	RESPONSIBILITIES	ORGANIZATION
Project Owner	<ul style="list-style-type: none"> • Ultimately responsible for overall project management including environmental management. 	EVN
Overall Project Management Agency	<ul style="list-style-type: none"> • Responsible for coordination and management of overall project implementation including guiding and supervising implementation of the EMP. • 	CPPMB
Environmental Consultant	<ul style="list-style-type: none"> • Help the owner to prepare EMP . 	Selected by CPPMB
Environmental Officer	<ul style="list-style-type: none"> • Specific responsibility and point of contact for environmental issues and EMP. 	Belongs to Compensation Department of CPPMB
Project Implementation Agency	<ul style="list-style-type: none"> • Responsible for day-to-day project implementation. Activities include: <ol style="list-style-type: none"> i. Planning and implementation of environmental management activities during construction ii. Coordinating with other parties in relation to environmental management activities. iii. Carrying out internal monitoring and supervising independent monitoring iv. Supervising and providing budget for monitoring activities. v. Reporting on environmental information to concerned parties 	Planning Department of CPPMB
Project Operator	<ul style="list-style-type: none"> • Responsible for operation of the project including operation stage environmental management and monitoring activities. 	PTC3
Consultant	<ul style="list-style-type: none"> • Responsible for preparation of EMP documentation. 	PECC4

ROLE	RESPONSIBILITIES	ORGANIZATION
Contractor Technical Supervision	<ul style="list-style-type: none"> • Responsible for supervision of civil works contractors during construction, including implementation of environmental management activities under the EMP 	CPPMB PECC4
Civil Works Contractor	<ul style="list-style-type: none"> • Responsible for construction works and following contractor specifications outlined in the EMP. This includes: <ol style="list-style-type: none"> i. Applying construction-phase mitigation measures. ii. Ensuring safety of construction workers and local people during construction. iii. Following Vietnam and World Bank policies on environmental protection during construction. 	Contractor selected
Safeguard Independent Monitor (SMIC)	<ul style="list-style-type: none"> • Responsible for independent monitoring of EMP implementation 	Consultant selected

VIII. MONITORING AND REPORTING SYSTEM

REPORT TYPE	PRIMARY REPORTING LEVEL			SECONDARY REPORTING LEVEL			TERTIARY REPORTING LEVEL ¹		
	BY	TO	FREQUENCY	BY	TO	FREQUENCY	BY	TO	FREQUENCY
SITE ENVIRONMENTAL MANAGEMENT	Contractor	CPPMB	Once before construction commences & monthly thereafter	-	-	-	-	-	-
ENVIRONMENTAL PERFORMANCE MONITORING: CONSTRUCTION	Technical supervisor of CPPMB	CPPMB	Monthly	CPPMB	EVN	Quarterly	EVN	World Bank	Quarterly
	SMIC	CPPMB EVN WB	Half-yearly						
ENVIRONMENTAL PERFORMANCE MONITORING: OPERATION	PTC3	CPPMB	Half-yearly	CPPMB	EVN	Annually	EVN	World Bank	Annually
	SMIC	CPPMB EVN WB	Half-yearly						

TABLE VIII.1
Example of Site Environmental Management Monitoring Report

Project Name:

Project Location:

Name of Contractor:

Commencement of project report or monthly report:

Date of report:

No.	Impact	Mitigation measures implemented	Comment
Construction stage			
1	Tree-cutting within ROW and access roads management.		
2	Turbidity of surface water and the soil erosion		
3	Noise level around the construction site and the residential area.		
4	Dust from vehicle and machines and construction activities on the transport roads and the construction on the route.		
5	Waste from construction and trees clearance within ROW after construction.		
6	Waste (waste water, waste from daily life activities of workers) and safety measures during construction.		
7	Damage to the existing road system		
8	Solid waste from soil excavation		
9	Environmental impacts caused by construction workers.		
10	Health and safety for construction workers.		

Name of person prepared this Report:

Title:

Address:

Telephone:

TABLE VIII.2 Example of Environmental performance Monitoring Report
(this Example can be used for environmental monitoring report of Technical supervisor consultant, SMIC)

Project Name: _____ Project Location: _____ Province: _____
 District: _____
 Commune: _____

Type of Report:
 Monthly report (Yes/No): _____
 Quarterly report to EVN (Yes/No): _____
 Quarterly report to WB (Yes/No): _____
 SMIC report(Yes/No): _____
 Date of Report: _____

No.	Parameter	Assessment of Consultant/ community complaints	Comments/ Recommendations
Construction stage			
1	Tree-cutting within ROW and access roads management		
2	Turbidity of surface water and soil erosion		
3	Noise level around the construction site and the residential area		
4	Dust from vehicle and machines use and construction activities on the transport roads and route construction sections		
5	Construction waste and trees clearance within ROW after construction		
6	Waste matter (waste water, waste from daily life activities of workers and safety measures during construction)		
7	Damage to the existing roads system		
8	Solid waste matter from soil excavation		
9	Environmental impacts caused by construction workers		
10	Health and safety of construction workers		
Operation stage			
11	Protection and clearance of ROW		
12	Safety issues of the voltage system		

Reporter prepared by: _____ Position: _____

Table VIII.3 Cost for EMP implementation of the whole project

No.	Content	Construction stage	Operation stage (Project lifetime of 25 years)
1	Cost for mitigation measures	The Contractor will be responsible for implementing the mitigation measures during construction.	Included in the operation cost of the project. The Operator will be responsible for implementing the mitigation measures.
2	Cost for environment monitoring plan	VND 10,000,000	VND 30,000,000
3	Cost for environmental management training course	VND 900,000	
Total (1+2+3)		VND 10,900,000	VND 30,000,000
Total cost for EMP implementation of project		VND 40,900,000	

APPENDICES

1. License of environmental standards
2. Contents of Public Notice (at Hoa Quang Bac and Hoa Dinh Dong communes, Phu Hoa district, Phu Yen province).
3. Confirmation of local authority (Confirming that the Public Notice has been posted at Hoa Quang Bac and Hoa Dinh Dong communes, Phu Hoa district, Phu Yen province).
4. Map of the line route

BỘ TÀI NGUYÊN VÀ MÔI TRƯỜNG CỘNG HOÀ XÃ HỘI CHỦ NGHĨA VIỆT NAM
Độc lập - Tự do - Hạnh phúc

Số: 4452..... /BTNMT -TĐ

Hà Nội, ngày 06 tháng 12 năm 2004

PHIẾU XÁC NHẬN
BẢN ĐĂNG KÝ ĐẠT TIÊU CHUẨN MÔI TRƯỜNG
Dự án “Đường dây 220 kV Quy Nhơn – Tuy Hoà - Nha Trang”

BỘ TÀI NGUYÊN VÀ MÔI TRƯỜNG
XÁC NHẬN

Điều 1. Tổng Công ty Điện lực Việt Nam (dưới đây gọi là Chủ dự án) đã trình Bản đăng ký đạt tiêu chuẩn môi trường Dự án “Đường dây 220 kV Quy Nhơn – Tuy Hoà - Nha Trang” kèm theo Công văn số 5523/CV-EVN-KHCNMT&VT ngày 04 tháng 11 năm 2004.

Điều 2. Chủ dự án có trách nhiệm thực hiện đúng những nội dung được nêu trong Bản đăng ký đạt tiêu chuẩn môi trường, thực hiện đầy đủ các quy định của pháp luật về đất đai, di dân, tái định cư, đền bù, giải phóng mặt bằng, khoáng sản, bảo vệ môi trường và các quy phạm kỹ thuật khác có liên quan.

Điều 3. Bản đăng ký đạt tiêu chuẩn môi trường của Dự án là cơ sở để các cơ quan quản lý nhà nước về bảo vệ môi trường kiểm tra việc thực hiện bảo vệ môi trường của Dự án.

Điều 4. Sau khi hoàn thành các hạng mục công trình của Dự án, Chủ dự án phải có báo cáo bằng văn bản gửi Cơ quan quản lý nhà nước về bảo vệ môi trường để kiểm tra.

Điều 5. Ủy nhiệm Sở Tài nguyên và Môi trường các tỉnh Bình Định, Phú Yên và Khánh Hoà theo dõi, giám sát và kiểm tra việc thực hiện các nội dung bảo vệ môi trường đã được đề xuất trong Bản đăng ký đạt tiêu chuẩn môi trường này và định kỳ 06 tháng một lần có báo cáo về công tác trên gửi về Vụ Thẩm định và Đánh giá tác động môi trường để theo dõi.

Nơi nhận:

- Chủ dự án,
- UBND các tỉnh Bình Định, Phú Yên, Khánh Hoà,
- Sở TN&MT các tỉnh Bình Định, Phú Yên, Khánh Hoà (để phối hợp),
- Lưu HS, VT, Vụ TĐ.

TL. BỘ TRƯỞNG
BỘ TÀI NGUYÊN VÀ MÔI TRƯỜNG
VỤ TRƯỞNG
VỤ THẨM ĐỊNH VÀ
ĐÁNH GIÁ TÁC ĐỘNG MÔI TRƯỜNG



Nguyễn Khắc Kinh

YẾT THỊ CÔNG CHỨNG ĐƯỜNG DÂY 220 KV TUY HOÀ – NHA TRANG

Tên dự án: Đường dây 220 kV Tuy Hoà – Nha Trang

Địa điểm đi qua: xã Hoà Quang Bắc, huyện Phú Hoà, tỉnh Phú Yên

1. Mục đích Dự án

- Tạo ra nguồn điện cung cấp đáng tin cậy, ổn định cho tỉnh Phú Yên, Khánh Hoà và khu vực.

- Góp phần phát triển cơ sở hạ tầng, kinh tế - xã hội tại địa phương và mang nguồn điện đến với các hộ dân nằm xa lưới điện hiện có.

2. Giới thiệu dự án

- Cấp điện áp: 220kV
- Tổng chiều dài tuyến: 134.662m
- Tổng số cột dự định trên tuyến: 390 cột
- Hành lang an toàn tuyến: 21,2m
- Thời gian dự kiến xây dựng: 08/2005 đến 03/2007
- Thời gian thí nghiệm và hoàn thiện: 03/2007

3. Ảnh hưởng của dự án qua địa bàn xã

- Đất nông nghiệp (lúa + hoa màu)	:	0,8	Ha
- Đất lâm nghiệp (Bạch đàn)	:	1,03	Ha
- Đất công nghiệp (điều)	:	0	Ha
- Đất đồi núi có trồng cỏ và cây bụi	:	1,07	Ha
- Đất khác (đất hoang, ao, hồ, sông suối,...)	:	5,35	Ha
- Đất thổ cư	:	0	Ha
- Số hộ dân bị ảnh hưởng	:	0	Hộ
- Số hộ dân phải di dời	:	0	Hộ
- Số hộ dân cần tái định cư	:	0	Hộ
- Chiều dài tuyến qua địa bàn xã	:	5.117	m
- Số cột trên địa bàn xã	:	14	cột

4. Các vấn đề môi trường và kế hoạch giảm thiểu

- **Ảnh hưởng đến thảm phủ thực vật trên hành lang tuyến:**

Khi giải phóng mặt bằng sẽ thông báo thời gian và địa điểm khi tiến hành giải toả trong phạm vi hành lang an toàn.

Chi trả đền bù và giải phóng mặt bằng đúng tiến độ.

Các biện pháp giải phóng mặt bằng được áp dụng chủ yếu bằng phương pháp thủ công và có biện pháp thu gom cây cỏ hợp lý.

- **Ảnh hưởng đến các loài động vật:** Không ảnh hưởng.

- **Ảnh hưởng đến môi trường đất:**

Đối với những khu vực đất dễ rửa trôi, xói mòn sẽ tổ chức thi công vào mùa khô, trồng cỏ và kê móng tránh rửa trôi, xói mòn.

Làm tốt công tác đền bù giải phóng mặt bằng, tổ chức thi công hợp lý.

Kiểm tra thiết bị, máy móc thường xuyên. Không để rò rỉ dầu trong khi thay dầu, mỡ của các thiết bị, xe máy.

- **Ảnh hưởng đối với môi trường không khí:**
Xe chuyên chở vật liệu phải có bạt che phủ.
Tưới nước tại các nơi có nhiều bụi (đoạn đường tạm thi công).
Các phương tiện đảm bảo trong thời gian vận hành tốt.
Tập trung rác thải tại các bãi rác, giáo dục ý thức công nhân bảo vệ môi trường.
- **Ảnh hưởng đến môi trường nước:**
Bố trí nhà ở nhà vệ sinh hợp lý cho công nhân.
- **Tác động đến các di tích lịch sử di sản văn hoá:** Không ảnh hưởng.
- **Thiệt hại về tài sản, cây cối, hoa màu, công trình kiến trúc:** Áp dụng theo những quy định của Chính phủ Việt Nam và hướng dẫn của WB. Chi trả đúng tiền độ và trợ cấp cho những hộ bị ảnh hưởng.
- **Tác động đến môi trường sống và điều kiện làm việc của công nhân:**
Tuân thủ nghiêm ngặt các biện pháp an toàn lao động như kiểm tra máy móc, kiểm tra sức khoẻ cho công nhân, không làm việc trên cao khi trời tối,...
Có biện pháp y tế phòng chống dịch bệnh.
- **Tác động do chất nổ còn lại trong chiến tranh:** Thuê các đơn vị chuyên trách tháo gỡ tại những khu vực còn sót bom mìn trên hành lang tuyến. Đảm bảo rà phá bom mìn trước khi thi công xây dựng.
- **Ảnh hưởng đến giao thông công cộng:**
Đoạn kéo dây qua đường sắt, đường giao thông phải bắc giàn giáo và báo cho chính quyền và người dân được biết.
Khi vận chuyển thiết bị máy móc qua khổ quá tải phải thuê xe chuyên dụng.
- **Tác động đến thảm phủ thực vật do các hoạt động chặt hạ khi vận hành tuyến đường dây:** Trồng lại các cây trong giới hạn cho phép trên đất thuộc hành lang tuyến. Tiến hành chặt hạ cây đúng quy cách trong hành lang an toàn của đường dây.

5. Cam kết thực hiện

Các kế hoạch giảm thiểu tác động môi trường sẽ được các đơn vị thi công và vận hành thực hiện trong từng giai đoạn của dự án.

6. Các ý kiến phản hồi

Trong trường hợp người dân có bất kỳ ý kiến góp ý hoặc cần tìm hiểu thêm thông tin về các vấn đề môi trường của Dự án xin liên hệ với Phòng Thủy văn – Môi trường, Công ty Tư vấn Xây dựng Điện 4 trong khoảng thời gian từ ngày 7 đến ngày 22 tháng 7 năm 2004.

Địa chỉ liên hệ: **Phòng Thủy văn – Môi trường**
Công ty Tư vấn Xây dựng Điện 4 -
137 Thống Nhất - Nha Trang - Khánh Hoà
Điện thoại : 058.810.990
Fax: 058.824.208

YẾT THỊ CÔNG CHỨNG
ĐƯỜNG DÂY 220 KV TUY HOÀ – NHA TRANG

Tên dự án: Đường dây 220 kV Tuy Hoà – Nha Trang

Địa điểm đi qua: xã Hoà Định Đông, huyện Tuy Hoà, tỉnh Phú Yên

1. Mục đích Dự án

- Tạo ra nguồn điện cung cấp đáng tin cậy, ổn định cho tỉnh Phú Yên, Khánh Hoà và khu vực.

- Góp phần phát triển cơ sở hạ tầng, kinh tế - xã hội tại địa phương và mang nguồn điện đến với các hộ dân nằm xa lưới điện hiện có.

2. Giới thiệu dự án

- Cấp điện áp: 220kV
- Tổng chiều dài tuyến: 134.662m
- Tổng số cột dự định trên tuyến: 390 cột
- Hành lang an toàn tuyến: 21,2m
- Thời gian dự kiến xây dựng: 08/2005 đến 03/2007
- Thời gian thí nghiệm và hoàn thiện: 03/2007

3. Ảnh hưởng của dự án qua địa bàn xã

- Đất nông nghiệp	:	0	Ha
- Đất lâm nghiệp (Bạch đàn)	:	0,88	Ha
- Đất công nghiệp	:	0	Ha
- Đất rừng	:	0,71	Ha
- Đất khác	:	2,09	Ha
- Đất thổ cư	:	0	Ha
- Đất vườn	:	5,94	Ha
- Số hộ dân bị ảnh hưởng	:	0	Hộ
- Số hộ dân phải di dời	:	0	Hộ
- Số hộ dân cần tái định cư	:	0	Hộ
- Chiều dài tuyến qua địa bàn xã	:	4.536	(m)
- Số cột trên địa bàn xã	:	13	(cột)

4. Các vấn đề môi trường và kế hoạch giảm thiểu

- Ảnh hưởng đến thảm phủ thực vật trên hành lang tuyến:

Khi giải phóng mặt bằng sẽ thông báo thời gian và địa điểm khi tiến hành giải toả trong phạm vi hành lang an toàn.

Chi trả đền bù và giải phóng mặt bằng đúng tiến độ.

Các biện pháp giải phóng mặt bằng được áp dụng chủ yếu bằng phương pháp thủ công và có biện pháp thu gom cây cỏ hợp lý.

- Ảnh hưởng đến các loài động vật: Không ảnh hưởng.

- Ảnh hưởng đến môi trường đất:

Đối với những khu vực đất dễ rửa trôi, xói mòn sẽ tổ chức thi công vào mùa khô, trồng cỏ và kê móng tránh rửa trôi, xói mòn.

Làm tốt công tác đền bù giải phóng mặt bằng, tổ chức thi công hợp lý.

Kiểm tra thiết bị, máy móc thường xuyên. Không để rò rỉ dầu trong khi thay dầu, mỡ của các thiết bị, xe máy.

- Ảnh hưởng đối với môi trường không khí:

Xe chuyên chở vật liệu phải có bạt che phủ.

Tưới nước tại các nơi có nhiều bụi (đoạn đường tạm thi công).

Các phương tiện đảm bảo trong thời gian vận hành tốt.

Tập trung rác thải tại các bãi rác, giáo dục ý thức công nhân bảo vệ môi trường.

- Ảnh hưởng đến môi trường nước:

Bố trí nhà ở nhà vệ sinh hợp lý cho công nhân.

- Tác động đến các di tích lịch sử di sản văn hoá: Không ảnh hưởng.

- Thiệt hại về tài sản, cây cối, hoa màu, công trình kiến trúc: Áp dụng theo những quy định của Chính phủ Việt Nam và hướng dẫn của WB. Chi trả đúng tiền độ và trợ cấp cho những hộ bị ảnh hưởng.

- Tác động đến môi trường sống và điều kiện làm việc của công nhân:

Tuân thủ nghiêm ngặt các biện pháp an toàn lao động như kiểm tra máy móc, kiểm tra sức khoẻ cho công nhân, không làm việc trên cao khi trời tối,...

Có biện pháp y tế phòng chống dịch bệnh.

- Tác động do chất nổ còn lại trong chiến tranh: Thuê các đơn vị chuyên trách tháo gỡ tại những khu vực còn sót bom mìn trên hành lang tuyến. Đảm bảo rà phá bom mìn trước khi thi công xây dựng.

- Ảnh hưởng đến giao thông công cộng:

Đoạn kéo dây qua đường sắt, đường giao thông phải bắc giàn giáo và báo cho chính quyền và người dân được biết.

Khi vận chuyển thiết bị máy móc qua khổ quá tải phải thuê xe chuyên dụng.

- Tác động đến thảm phủ thực vật do các hoạt động chặt hạ khi vận hành tuyến đường dây:

Trồng lại các cây trong giới hạn cho phép trên đất thuộc hành lang tuyến. Tiến hành chặt hạ cây đúng quy cách trong hành lang an toàn của đường dây.

5. Cam kết thực hiện

Các kế hoạch giảm thiểu tác động môi trường sẽ được các đơn vị thi công và vận hành thực hiện trong từng giai đoạn của dự án.

6. Các ý kiến phản hồi

Trong trường hợp người dân có bất kỳ ý kiến góp ý hoặc cần tìm hiểu thêm thông tin về các vấn đề môi trường của Dự án xin liên hệ với Phòng Thủy văn – Môi trường, Công ty Tư vấn Xây dựng Điện 4 trong khoảng thời gian từ ngày 8 đến ngày 23 tháng 07 năm 2004.

Địa chỉ liên hệ: **Phòng Thủy văn – Môi trường**
Công ty Tư vấn Xây dựng Điện 4 -
137 Thống Nhất - Nha Trang - Khánh Hoà
Điện thoại : 058.810.990
Fax: 058.824.208



Xác nhận của địa phương

Hoa Ducung, Hoa ngay, 7 thong, 7 nam 2004

(C6 noi dung yet thi dinh kern)

Ngay 7/7/2007 - 19/7/2007

Hinh thuc tham van cong dong: Ban yet Thi tai dia phuong va thong ban Ten Dai tuyen thuan va Ban ngay ko bi

Thoi gian tham van: 7/7/2007

den dia phuong tham van cong dong ve cong tinh: Duong duy 2005 V lug Hoa - Nha hang Duong duy 2005 V lug Hoa - 18A 220 NV lug Hoa

Xac nhan doan cong tac cong dong cua Cong ty Tu van Xay dung Dien 4 da

MR NO, xa Hoa Ducung, huyen Phu Hoa, tinh Phu Yen

GIẤY XÁC NHẬN

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CỘNG HÒA XÃ HỘI CHỦ NGHĨA VIỆT NAM
Độc lập - Tự do - Hạnh phúc

GIẤY XÁC NHẬN

103110....., xã: Hoa Thới Hưng huyện Phước Hòa tỉnh Phước Yên

Xác nhận đoàn công tác tham vấn cộng đồng của Công ty Tư vấn Xây dựng Điện 4 đã
đến địa phương tham vấn cộng đồng về công trình Đường dây 220KV

Đường dây Nhà Trống

Thời gian tham vấn: 08/7/2004

Hình thức tham vấn cộng đồng: Nội yết thị của địa phương
ngày 20/11/2004. Công thời thông báo trên phương
tiện đài truyền thanh của xã Hòa Hưng

(Có nội dung yết thị đính kèm)

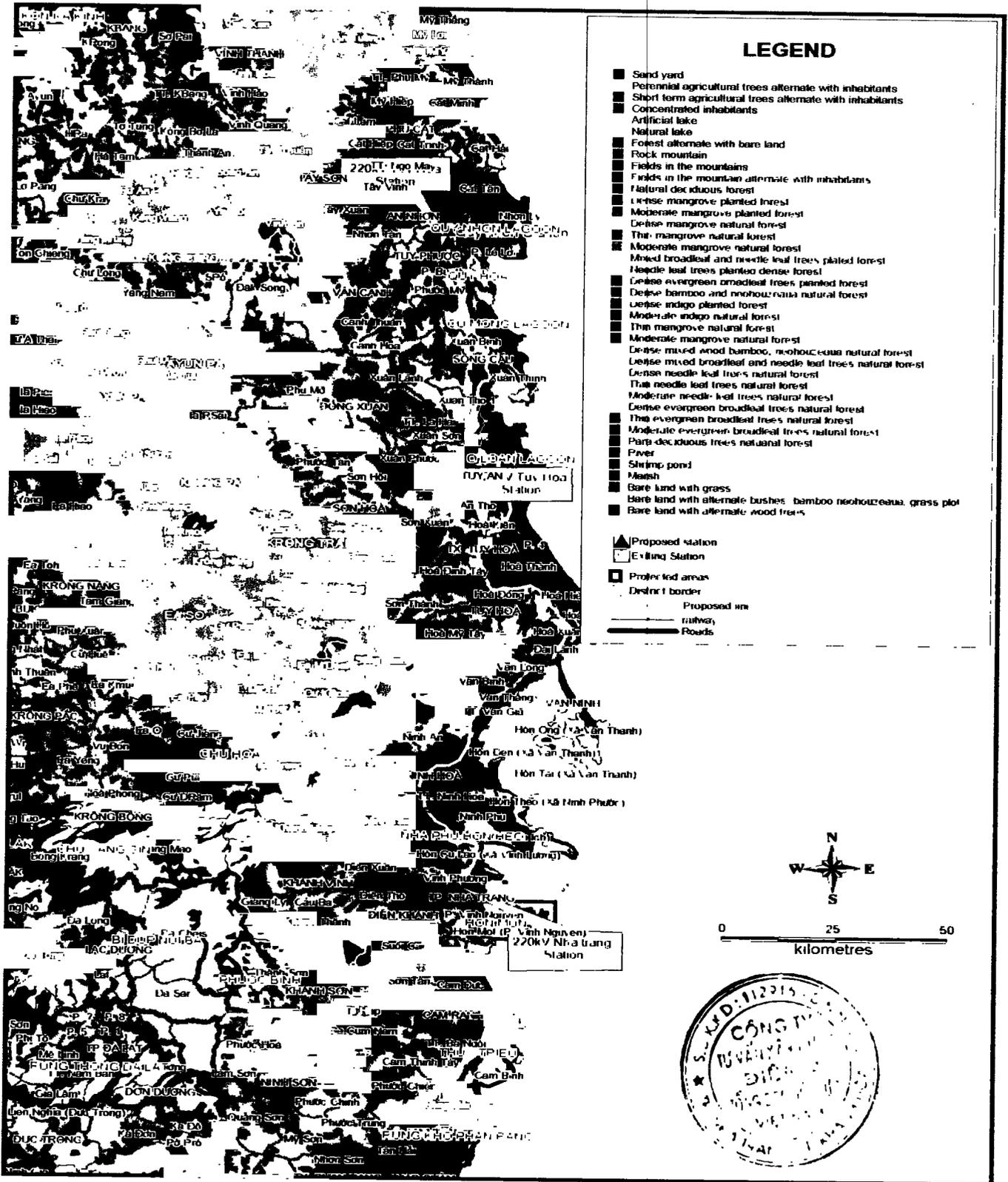
Hoa Thới Hưng, ngày 08 tháng 7 năm 2004



CHỦ TỊCH

Lê Văn Hòa

MAP OF 220KV QUY NHON - TUY HOA - NHA TRANG TRANSMISSION LINES



LEGEND

- Sand yard
- Perennial agricultural trees alternate with inhabitants
- Short term agricultural trees alternate with inhabitants
- Concentrated inhabitants
- Artificial lake
- Natural lake
- Forest alternate with bare land
- Rock mountain
- Fields in the mountains
- Fields in the mountain alternate with inhabitants
- Natural deciduous forest
- Intense mangrove planted forest
- Moderate mangrove planted forest
- Dense mangrove natural forest
- Thin mangrove natural forest
- Moderate mangrove natural forest
- Mixed broadleaf and needle leaf trees planted forest
- Needle leaf trees planted dense forests
- Dense evergreen broadleaf trees, planted forest
- Dense bamboo and neohououa natural forest
- Intense indigo planted forest
- Moderate indigo natural forest
- Thin mangrove natural forest
- Moderate mangrove natural forest
- Dense mixed wood bamboo, neohououa natural forest
- Dense mixed broadleaf and needle leaf trees natural forest
- Dense needle leaf trees natural forest
- Thin needle leaf trees natural forest
- Moderate needle-leaf trees natural forest
- Dense evergreen broadleaf trees natural forest
- Thin evergreen broadleaf trees natural forest
- Moderate evergreen broadleaf trees natural forest
- Semi-deciduous trees natural forest
- Paver
- Shrimp pond
- Marsh
- Bare land with grass
- Bare land with alternate bushes, bamboo neohououa, grass plot
- Bare land with alternate wood trees
- ▲ Proposed station
- Existing Station
- Protected areas
- District border
- Proposed 110kV railway
- Roads



