

# Environmental Monitoring Report

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2<sup>nd</sup> Quarterly Report  
March 2016

## VIE: Power Transmission Investment Program — Tranche 1 500/220kV Bac Ninh 2–Pho Noi Transmission Line

Prepared by Northern Power Projects Management Board for National Power Transmission Corporation and the Asian Development Bank.

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**NATIONAL POWER TRANSMISSION CORPORATION  
Northern Power Projects Management Board**

**ADB LOAN 2848-VIE**

**POWER TRANSMISSION INVESTMENT PROGRAM – TRANCHE 1**

**SUBPROJECT: 500 kV/220 kV Bac Ninh 2 – Pho Noi transmission**

# **QUARTERLY ENVIRONMENTAL MONITORING REPORT 2015**

(Quarter 2: April through June, 2015)

Submitted by:  
**Northern Power Projects Management Board**

**Hanoi, June 2015**

## **ABBREVIATION**

ADB	Asian Development Bank
CEP	Certification of Environmental Protection
CMC	Construction Monitoring Consultants
CPC	Commune People's Committee
CPMB	Central Power Project Management Board
DPC	District People's Committee
DONRE	Department of Natural Resources & Environment
EM	Environmental Monitoring
EMF	Electromagnetic Field
EMP	Environment Management Plan
ES	Environmental Staff
ES	Environmental Sanitation
IEE	Initial Environmental Examination
LIC	Local Implementation Consultant
MONRE	Ministry of Natural Resource & Environment
NPMB	Northern Power Project Management Board
EVNNPT	National Power Transmission Corporation
QCVN	Vietnam Technical Standard
ROWs	Right of Ways
SPS	Safeguard Policy Statement
S/S	Substation
TCVN	Vietnam Standard
T/L	Transmission line

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## 1. INTRODUCTION

### 1.1. Project Background

1. The Electricity of Viet Nam (EVN) plans to develop transmission networks and substations that will support economic growth in Viet Nam and ensure access to reliable supply of electricity throughout the country. The Government of Socialist Republic of Viet Nam (GOV) hopes to meet its target of connecting 90% of the population to electricity by 2020 and subsequently 100% coverage by 2025. The construction of power transmission and distribution networks will be able to accommodate the required energy of new power plants in the future.
2. A least cost development plan for Viet Nam between 2006 and 2015 was developed under the Master Plan of Power Development of Viet Nam No. VI. A program of transmission lines and substations, provision of meters and rehabilitation of urban and rural low voltage distribution networks or grids were identified in the master plan. Asian Development Bank (ADB) is financing the Power Transmission Investment Program covering the medium-term development plan for power transmission by the multi-tranche financing facility (MFF).
3. There are 4 subprojects included in the first loan tranche of the Multi tranche Financing Facility: Power Transmission Investment Program (the Facility) that finances part of the National Power Transmission Corporation's (EVNNPT) medium-term power transmission expansion program. In Viet Nam, The first tranche are financing 4 projects: (i) 500/220 kV Pho Noi substation; (ii) 500 kV/220 kV Bac Ninh 2 – Pho Noi transmission line; (iii) 220 kV Phu My 2 substation; (iv) 220 kV Song May – Uyen Hung transmission line. The Project also finances nonphysical actions including (i) consulting services for (a) procurement, construction supervision and management, and implementation of social safeguards, (b) on the job-training for preparing and implementing resettlement and ethnic minority development plans, environmental impact assessments and management plans for subsequent financing tranches, (ii) an independent monitoring agency to monitor effective implementation of social safeguards, and (iii) an independent monitoring consultant as a third-party member for the review of draft bidding documents and to participate in the evaluation of bids and thus, guarantee that affiliation of an eligible bidder with Ministry of Industry and Trade (MOIT) / Viet Nam Electricity (EVN) does not affect the integrity and fairness of the competitive bidding process.
4. The 500 kV/220 kV Bac Ninh 2 – Pho Noi transmission line and associated 500/220 kV Pho Noi substation are located in the northern part of Viet Nam. The starting point of the transmission line is the 500 kV bus bar of the Pho Noi substation that is located in the Hung Yen province and the ending point is the 220 kV bus bar of the Bac Ninh 2 substation located in the Bac Ninh province.
5. The project features of 500/220kV Bac Ninh 2 – Pho Noi transmission line is presented in Table 1:

Table 1. The project features of 500/220kV Bac Ninh 2 – Pho Noi transmission line

Items	Description/date
Contractor	JV of Song Da 11 & Song Da 11 Thang Long & IEC
Contract Amount	368.668 mil. VND
Invitation for Bids	28 <sup>th</sup> August 2012
Bid Opening	11 <sup>st</sup> October 2012
Date of submission of BER to EVNNPT	05 <sup>th</sup> November 2012
Date of submission of BER to ADB/AFD	1 <sup>st</sup> time: 14 <sup>th</sup> December 2012 Revised: 06 <sup>th</sup> February 2013, 29 <sup>th</sup> March 2013, 10 <sup>th</sup> May 2013, 28 <sup>th</sup> June 2013.

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Items	Description/date
ADB/AFD Approval of Award	04 <sup>th</sup> October 2013
EVNNPT Approval of Award	16 <sup>th</sup> October 2013
Operative L/C	NA
Contract Effectively	30 <sup>th</sup> September 2013
Orig. Contract Expiry	Delivery time: 12 months

6. The project approval dates of 500kV / 220kV Pho Noi substation and connections are as follows:

The Feasibility Study was approved by EVN/ National Power Transmission Corporation on the Decision No. 633/QD-EVNNPT dated 12th July 2010. The Technical Design and Total Estimation were approved by EVNNPT on the Decision No. 1225/QD-EVNNPT on 13th December 2011. The Bidding Plan was approved by EVNNPT on the Decision No. 1017/QD-EVNNPT dated 20<sup>th</sup> October 2011.

Items	Description/date
Contractor	- Lot 3.1: Bach Dang Construction Corporation - Lot 3.2: Power Construction Company No.1 (PCC1) - Lot 3.3: Consortium of PCC1 and Song Da 11 JSC
Invitation for Bids	19 <sup>th</sup> May 2014
Bid Opening	30 <sup>th</sup> June 2014
Date of submission of BER to EVNNPT	01 <sup>st</sup> August 2014
ADB/AFD Approval of Award	December 17 <sup>th</sup> , 2014
EVNNPT Approval of Award	5 <sup>th</sup> November 2014

7. In the implementation progress, the national experts are assisting NPMB in environmental management planning and implementation of resettlement plans.
8. To further assist NPMB to review safeguards documents to ensure compliance with ADB safeguards policy and to monitor implementation of the safeguards the local implementation consultant (LIC) – environment has been engaged in a lump-sum contract for 36 months, starting from January, 2014.

## 1.2. Purpose of the Report

9. This First Quarterly Internal Monitoring Report 2015 for Safeguard Policy will focuses on the following issues:
- (i) Subproject construction progress;
  - (ii) Environmental monitoring program;
  - (iii) Application of mitigation measures;
  - (iv) Evaluation of applied mitigation measures application;
  - (v) Progress of resolving issues/ problems identified in previous reports;
  - (vi) Key Issues and recommendation

## 2. INCORPORATION OF ENVIRONMENTAL REQUIREMENTS INTO PROJECT CONTRACTUAL ARRANGEMENTS

### 2.1 Policy, legal and administrative framework

#### 2.1.1 ADB's Environmental Policies

10. All ADB financed projects must undergo environmental impact assessment classification. Based on the environmental impact scale, the environmental impact assessment report (EIA) or Initial Environmental Examination (IEE) report should be prepared. The environmental safeguards aim to ensure the environmental soundness and sustainability of projects. It also aims to support the integration of environmental considerations in the project decision-making process.
11. The SPS clarifies the rationale, scope and content of an environmental assessment as supported by technical guidelines (Environmental Assessment Guidelines 2003). The environmental assessment process calls for the initial screening of the project to determine, at the early stage, the level of assessment that is required so that appropriate studies are undertaken commensurate with the significance of potential impacts and risks.
12. SPS introduces emphasis on the effective implementation of environmental safeguards. The objectives of ADB's safeguards are to:
  - (i) Avoid adverse impacts of projects on the environment and affected people, where possible;
  - (ii) Minimize, mitigate, and/or compensate for adverse project impacts on the environment and affected people when avoidance is not possible; and
  - (iii) Help borrowers/clients to strengthen their safeguard systems and develop the capacity to manage environmental and social risks.<sup>1</sup>
13. The SPS contains a number of operational principles that includes the requirement to ensure that the measures identified during the impact assessment are included in the EMP and were implemented in agreement with the borrower. The borrower/client is required to monitor the progress of implementation of the EMP, document the monitoring results, identify necessary corrective actions, and reflect them in a corrective action plan. Periodic monitoring reports on progress of implementation of the EMP and the corrective actions, if any, are submitted to ADB on a semi-annual basis during the construction of projects with significant adverse environmental impacts and quarterly for highly complex and sensitive projects. During operation, reporting to ADB by projects with significant adverse impacts is required on an annual basis at the minimum.
14. Under SPS, the project has been evaluated considering the completion of the Environmental Categorization Form (Appendix 1) and Rapid Environmental Assessment Checklist (Appendix 2). The adverse environmental impacts of the project are considered site-specific and reversible. Therefore, it has been classified as Category B, requiring an IEE.

#### 2.1.2 Viet Nam Environmental Policies

15. The policies on environment protection, power network protection, and land and construction in Viet Nam are presented in this section. Legal documents and approvals required for the project, issued by the national and local governments, are also included. Lastly, a brief discussion on the Environmental Impact Assessment (EIA) process and requirements in Viet Nam is provided.

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<sup>1</sup> Asian Development Bank. June 2009. *Safeguard Policy Statement*, enforced January 2010.

16. Environmental Protection Law

National laws and regulations for environment protection applicable to the project are presented in Table 1. The Environment Protection Law is the main governing law. This is subsequently followed by implementation guidelines, amendments, and regulations. The related regulations on impact assessments, waste management, sanctions on administrative violations, incentives and support, and national technical regulations on quality of environmental media are also outlined in the Table 2.

Table 2. Environment Protection Law and Regulations

<b>Laws and Regulations</b>	<b>Description</b>
Environment Protection Law No. 55/2014/QH13 Date issued: 23/6/2014	Regulates environmental protection activities; policies, measures and resources for protection of the environment; and the rights and obligations of organizations, family households and individuals with respect to protection of the environment.
Decree No. 18/2015/NĐ-CP Date issued: 14/02/2015	Regulation on the strategic environmental assessment, environmental impact assessment and environmental protection commitment.
Decree No. 117/2009/ND-CP Date issued: 31/12/2009	Regulation on sanctioning administrative violations in environmental protection
Decree No. 04/2009/ND-CP Date issued: 14/01/2009	Incentives and support for environment protection activities
Decree No. 59/2006/ND-CP Date issued: 09/4/2007	Regulation on solid waste management
MONRE Circular No. 05/2008/TT-BTNMT Date issued: 08/12/2008	Guiding strategic environment assessment, environmental impact assessment, and environment protection commitment.
MONRE Circular No. 12/2011/TT-BTNMT Date issued: 14/14/2011	Regulation on hazardous waste management
MONRE Decision No. 16/2008/QĐ-BTNMT Date issued: 31/12/2008	National Technical Regulation on environment regarding surface water quality (QCVN 08: 2008/BTNMT), underground water quality (QCVN 09: 2008/BTNMT, and domestic wastewater (QCVN 14: 2008/BTNMT) among others
MONRE Circular No. 16/2009/TT-BTNMT Date issued: 07/10/2009	National Technical Regulation on air quality (QCVN 05: 2009/BTNMT) and hazardous substance in ambient air (QCVN 06: 2009/BTNMT)
MONRE Circular No. 25/2009/TT-BTNMT Date issued:	National Technical Regulation on hazardous waste threshold (QCVN 07: 2009/BTNMT), among others



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<b>Laws and Regulations</b>	<b>Description</b>
16/11/2009	
MONRE Circular No. 39/2010/TT-BTNMT Date issued: 16/12/2010	National Technical Regulation on Noise (QCVN 26:2010/BTNMT) and Vibration (QCVN 27:2010/BTNMT) among others.

17. Other Related Laws and Regulations:

Power Network Protection. The electricity law prescribes the detail for the power industry in areas such as development planning and investments, privileges and responsibilities of related organizations and individuals, protection of electric equipment and facilities, and safety, among others (Table 3). Implementation guidelines, amendments, and safety protection were detailed in succeeding government decrees and ministry circulars.

Table 3. Power Network Protection Laws and Regulations

<b>Laws and Regulations</b>	<b>Description</b>
Electricity Law No. 28/2004/QH11 Date issued: 03/12/2004	Prescribing the electricity development planning and investment; electricity saving; electricity markets; rights and obligations of organizations and individuals conducting electricity activities and using electricity; protection of electric equipment and facilities, electricity works and electric safety.
Government Decree No. 105/2005/NĐ-CP Date issued: 17/08/2005	Detailing the regulations and guidelines in the implementation of a number of articles of the Electricity Law.
Government Decree No. 106/2005/NĐ-CP Date issued: 17/08/2005	Detailing the guidelines in the implementation of a number of articles of the Electricity Law regarding the safety protection of high-voltage power grids.
Government Decree No. 81/2009/NĐ-CP Date issued: 12/10/2009	Amending and supplementing a number of articles of Government Decree No. 106/2005/NĐ-CP (Date issued: 17/08/2005) detailing the guidelines in the implementation of Electricity Law on safety protection of high voltage power grid works.
MIT Circular No. 06/2006/TT-BCN Date issued: 26/09/2006	Implementation of a number of provisions of the Government Decree No. 106/2005/NĐ-CP (Date issued: 17/08/2005) detailing the guidelines in the implementation of a number of articles of the Electricity Law regarding the safety protection of high-voltage power grid works.
MIT Circular No. 03/2010/TT-BCT Date issued: 22/01/2010	Providing for a number of contents on safety protection of high-voltage power grid works.

## 2.2 Institutional Arrangements and Responsibilities

### 2.1.1 NPMB

18. The NPMB as the Implementing Agency (IA) of the project is having the overall responsibility for the planning, design, construction, and operation of the project. The NPMB is also responsible for the implementation of environmental management, mitigation, and monitoring measures outlined in the EMP. During the design phase, the

NPMB has commissioned PECC3 to undertake the feasibility study, IEE, and RAP.

19. The NPMB has a technical monitoring unit which is responsible for the monitoring of performance of contractors which also includes periodic environmental monitoring in the project area. The unit has involved in the conduct of public consultation meetings to gather feedbacks from local residences on environmental problems arising during the construction phase, the results of which are forwarded to the NPMB. The environmental tasks of the technical unit are as follows:

- (i) Assign an environment staff to monitor and manage the implementation of the EMP.
- (ii) Ensure that the project implementation is in accordance to the requirements of the GOV and ADB on environmental management and protection.
- (iii) Manage and monitoring the activities of construction contractors, particularly in the implementation of the EMP.
- (iv) Prepare environmental monitoring reports for submission to EVNNPT and ADB.

20. In addition, a Project Implementation Consultant will be commissioned to assist NPMB in the overall project management.

### **2.1.2 Constructor**

21. The construction contractor will be responsible in implementing the mitigation measures which are recommended during the construction phase. The contractor is also required to submit monthly reports on the implementation of the mitigation measures to NPMB.

The constructor needs to prepare SEMP, responsibilities of CMC's staff consist of supervising order and procedures of capital construction, supervising technical criteria, materials mobilization and construction progress of the Contractor, etc. Besides, CMC is also in charge of supervising the Contractor's implementation of mitigation measures.

## **3. SUBPROJECT CONSTRUCTION PROGRESS**

### **3.1. 500kV/220kV Bac Ninh 2 – Pho Noi transmission line**

22. The 500kV/220kV Bac Ninh2 – Pho Noi transmission line have a total length of 30.5 km (kilometer), starting from the 500kV/220kV Pho Noi substation and ending at the 220kV/110kV Bac Ninh 2 substation. Figure 1 presents the overview of the ROW of the transmission line while Table 5 summarizes the location of the transmission towers by province, district, and commune. The transmission line will traverse two provinces, namely, Bac Ninh and Hung Yen. In Bac Ninh province, the length of the ROW is about 29.3 km which will pass through the districts of Thuan Thanh, Gia Binh, Que Vo, and Tien Du. In Hung Yen province, the transmission line is about 1.2km and will pass through Van Lam district.

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Table 4. Location of alignment and transmission towers by Province, District and Commune

Province	District	Commune	Tower
Bac Ninh	Tien Du	Minh Dao	G13C, G16
		Canh Hung	G17 – G18
		Tan Chi	G13C1
		Lac Ve	G13B
		Tri Phuong	G19
	ThuanThanh	Nghia Dao	G2A
		Cham Lo	G2A1-G2A2
		An Binh	G2B
		Mao Dien	G2C
GiaBinh	Lang Ngam	G2D	
Que Vo	Chi Lang	G2E –G2E1, G2F	
Hung Yen	Van Lam	Viet Hung	G1A – G1D1, G1D2, G1E-G1F

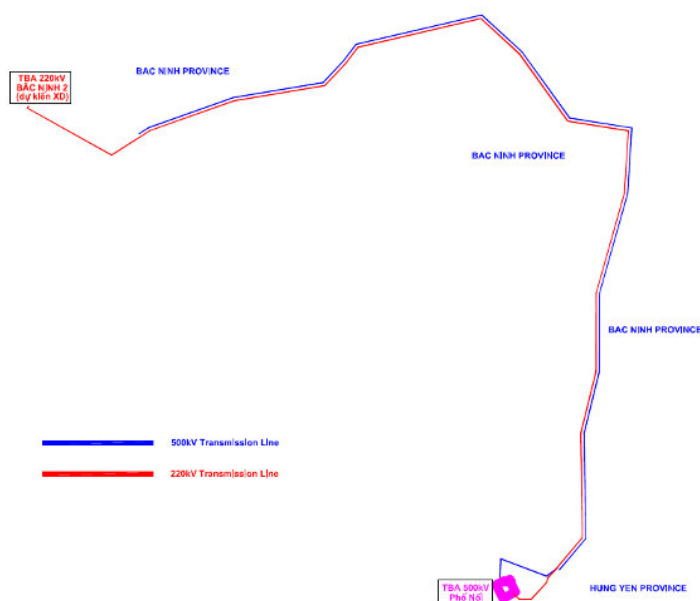


Figure 1. Overview of Transmission Line Right-of-Way

The subproject construction activities in this period include excavation of towers' foundation and tower erection. Completion works up to end of September 2014 are as in Table 5:

Table 5. Project progress of 220kV BacNinh – Pho Noi 2 transmission line

Contractor	Tower code	Number of towers	Tower Foundation	Tower erection	Wire stringing (km)
IEC	G13C-4÷G19B	22	22	20	14.0
Song Da 11	G2D÷G1A	41	41	41	9.5
Song Da 11 Thang Long	G2D÷G13C-3	29	29	29	6.3
<b>Total</b>		<b>92</b>	<b>92</b>	<b>90</b>	<b>24.8</b>
<b>% completed</b>			<b>100%</b>	<b>98%</b>	<b>83%</b>

## 4. ENVIRONMENTAL MONITORING PROGRAM

### 4.1. Bac Ninh 2 – Pho Noi 500/220kV Transmission Line

23. The environmental monitoring program undertaken by the NPMB and Contractor during the executing phase is as the below presented in Table 6.

Table 6. Monitoring program

Environmental issues	Monitoring Location	Monitoring Activities	Monitoring Frequency	
			Contractor	NPMB
Clearing of vegetation	ROW and transportation routes	Monitor tree cutting	Daily	Monthly
Erosion and sedimentation	Tower foundation area	Inspection of excavation works, silt arising from exposed soil surface, implementation of erosion control measures	Daily	Monthly
Dust	<ul style="list-style-type: none"> <li>- Local road,</li> <li>- Surrounding residential area,</li> <li>- Construction site.</li> </ul>	<ul style="list-style-type: none"> <li>- Monitor and inspect dust condition around construction area and transportation routes,</li> <li>- Consult with local people on dust problem during construction.</li> </ul>	Daily	Monthly
Noise	Surrounding residential area	<ul style="list-style-type: none"> <li>- Monitor noise during materials delivery and operation of construction equipment,</li> <li>- Consult with local people on noise caused by construction activities</li> </ul>	Daily	Monthly
Waste management	Workers' camp sites	<ul style="list-style-type: none"> <li>- Inspection of worker camp site condition,</li> <li>- Check proper solid waste disposal</li> </ul>	Daily	Monthly
Health and safety	Transmission line construction	Review contractor/ construction worker health and safety plan and training activities on health and safety	Daily	Monthly
Damage/nuisance	<ul style="list-style-type: none"> <li>- ROW and around the project area,</li> <li>- Public road</li> </ul>	<ul style="list-style-type: none"> <li>- Monitor and inspect impact on community's infrastructure, river, irrigation and drainage system,</li> <li>- Monitoring and inspect public road condition</li> </ul>	Daily	Monthly

24. NPMB Monitoring responsibilities

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The NPMB's staff for environmental and technical supervision regularly presents on visit the construction site and monitors the safeguard compliance of the constructors. The undertaken safeguards activities are as following:

- Supervise the Contractors in their performance of safety methods and safety regulations on the site.
- Examine, request, and supervise the Contractor in its implementation of traffic organization methods within the site and at the locations crossing the existing roads.
- Instruct and supervise the Contractors to carry out the environmental and social management programs during the work execution;
- Examine and supervise the environment protection methods in favor of the workers on the site and the surrounding environment proposed by the Contractor, including: anti-dust, anti-n dust and noise mitigation measures noise, waste treatment and site clearing methods.

### **25. Contractors Monitoring responsibilities**

- o Contractors mobilize enough human, technical resources to timely prevent or mitigate possible advert environmental impacts caused by construction works or recovery works at site. Contractors daily implement mitigation measures and undertake internal monitoring safeguards compliance including conducts detailed inventory of the identified environmental and social impacts that will be caused by executing the works.
- o Contractors timely prevent or mitigate possible advert environmental and social impacts caused by construction works and recovery works.

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The result of environmental compliance monitoring during the third quarter 2015 is presented in Table 7

Table 7. Summary of environmental compliance activities for Bac Ninh 2 – Pho Noi 500/220kV Transmission Line

Environmental issues	Mitigation measures	Compliant	Remarks	Follow-Up action
		Yes/No		Needed
Dust and exhaust fumes	Cover the trucks in charge of material transport to prevent spill of materials. Water the transport roads and construction sites in dry weather. The machines should possess appropriate certificates.	Yes	N/A	
Noise and vibration	The construction work should be performed on day, not at night or in resting hours.	Yes	N/A	
Construction waste water	Arrange waste water collection ditches around the foundation pit and retention pit to reduce turbidity before discharge to local canals. Avoid spillage oil at the construction site Cover and protect construction material	N/A	On-going tower erection	
Soil pollution, soil erosion	Conduct the construction work properly to ensure the construction progress. The excavated soil should be used for backfilling the foundations. Grow grass, build stone embankment around foundations on large slopes or places with weak geology. The restoration work should be conducted for all borrowed areas	Yes	N/A	
Solid waste	The excavated soil should be used for backfilling the excavations. Collect all superabundant material	Yes	Some wastes like paper placed between tower bars were not collected at the tower No. G13C-4 (on-going tower erection)	The contractor should collect as soon as tower erection completed
Solid waste	The excavated soil should be used for backfilling the excavations. Collect all superabundant material	Yes	Some wastes like paper placed between tower bars were not collected at the tower No. G13C-4 (on-going tower erection)	The contractor should collect as soon as tower erection completed
Traffic obstruction and damages	Use trucks with loads appropriate to roads. Install signs near roads. Repair segments of roads and other public properties damaged by the material transport. Make access roads and carry out site restoration for borrowed land.	Yes	A damaged section road in Tri Phuong commune due to accessories transportation. The contractor has paid fund for repair.	The contractor should use a suitable truck for transportation
Impacts on people' health	Manage the construction sites, collect waste and dispose it in designate places. Propagandize and raise workers' awareness of social evils. Conduct health examination for workers periodically. Register for workers' residences with the authorities. Equip workers with personal safety equipment and require them to use it at work.	Yes		

## 5. PROGRESS OF RESOLVING ISSUES AND PROBLEMS IDENTIFIED IN PREVIOUS REPORT

26. The NPMB cooperated with Contractors, local authorities and other related agencies to deal with the issues/problem identified in the previous quarterly report as in Table 9.

Table 8. Resolving issues/problem identified in previous report

Item	Issues/Problem	Progress of resolving
1	Apply additional safety measures	The NPMB issued a letter on enhancing safety works to prevent local people and workers from accident. The subproject's Contractor equipped more safety signals to be warning local people and workers.
2	Improve awareness on safeguard policy	The Contractor propagandized safeguard policies for workers via regularly meeting.
3	Resolve social and environmental claims	There is no claim from affected people on social and environmental issues

## 6. CONCLUSION AND RECOMMENDATION

### 6.1 Achievements

27. Civil work has almost accomplished with 92/92 tower foundations have been constructed which equivalent to 98% work amount; 90/92 towers have been erected which equivalent to 92% work amount and more than 24km/30km of electric wire has been strung which equivalent to 83% of work amount; The monitoring results show that:

- (i) there are no significant environmental impact since civil work has almost finished;
- (ii) the construction of tower foundation, tower erection and wire stringing have temporarily affected the agriculture practice but these impacts were compensated by the contractors/NPMP;
- (iii) Scaffolds were used to minimize the impact on the rice field;
- (iv) Scaffolds were also used to prevent the affect on the local electric system;
- (v) Rehabilitation of the project area upon completion of site work has been mostly conducted by contractors;
- (vi) Some sections of the existing roads were used as access road. The contractors have consolidated or repaired after construction completion.
- (vii) Construction material is properly covered and stored and worker camp is rather well organized;

### 6.2 Outstanding matters

28. The contractors complied with the mitigation measures to minimize the impact on the environment and the residents' life. In particular, there are some issues as following:

Even the contractors have been complied with labor safety regulations by providing labor

protective equipment, especially helmet, safety belt for workers; some workers are not using boots and gloves at the construction site.

### **6.3 Recommendation**

29. CMC should enhance responsibilities in environmental management. For environmental problems, it is necessary to have solutions to minimize arising impacts during construction.
30. NPMB, the Contractor and CMC should further coordinate with local authority to better control problems during construction, including: (i) construction waste management at site; (ii) reasonable compensation for project affected holds and facilitating performance of the Contractor to complete works as scheduled.
31. The contractor is required to pay more attention to environmental safety and labor safety. Worker's awareness and understanding on environmental safety and labor safety should be enhanced through training courses and strict management of the Contractor.



## 7. ANNEXES

### Annex No. 1. Constructor Environmental compliance monitoring report

Project: 2848 – VIE Power Transmission Investment Program – Tranche 1;  
 Monitor name: CMC/LIC  
 Monitoring timing: Morning  
 Monitoring date: 12/6/2015

Subproject: BacNinh 2 – Pho Noi 500/220kV Transmission Line  
 Contractor: JV of Song Da 11 & Song Da 11 Thang Long & IEC  
 Weather condition: Sunny, breeze  
 Monitoring location: Bac Ninh, Hung Yen province

#### 1. Contractor:

Contractor(s) environmental awareness	Yes/No	Actions Required	Contractor response/comment
Does the contractor aware of the mitigation measure should be applied?	Yes	N/A	N/A
Does the contractor have a copy of Environmental Management Plan (EMP)?	Yes	N/A	N/A

#### 2. Mitigation compliance inspection

Impact / Mitigation measures (From EMP)	Mitigations implemented (Yes/No)	Mitigations effective? (1 to 5)*	Impact observed/ Location	Action required	Contractor response/ comment	Endorsed by	
						Implementing agency	Monitoring agency
<ul style="list-style-type: none"> <li><b>Dust and exhaust fumes</b></li> <li>- Cover the trucks in charge of material transport to prevent spill of materials.</li> <li>- Water the transport roads and construction sites in dry weather.</li> <li>- The machines should possess appropriate certificates</li> </ul>	N/A	4	Material has not been properly covered Dust could be seen at the site	Material will be properly covered More water spraying will be conducted	Agreed	Agreed	Agreed
<ul style="list-style-type: none"> <li><b>Noise and vibration</b></li> <li>- The construction work should be performed on day, not at night or in resting hours.</li> </ul>	N/A	2	Noise is sometime noticed during the construction	Noise control should be taken care	Agreed	Agreed	Agreed
<ul style="list-style-type: none"> <li><b>Construction waste water</b></li> <li>- Arrange waste water collection ditches around the foundation pit and retention pit to reduce turbidity</li> </ul>	N/A	3	No wastewater, Material is	Material should be more properly covered	Agreed	Agreed	Agreed

Impact / Mitigation measures (From EMP)	Mitigations implemented (Yes/No)	Mitigations effective? (1 to 5)*	Impact observed/ Location	Action required	Contractor response/ comment	Endorsed by	
						Implementing agency	Monitoring agency
before discharge to local canals. - Avoid spillage oil at the construction site - Cover and protect construction material			covered				
<ul style="list-style-type: none"> <li><b>Soil pollution, soil erosion</b>                              Conduct the construction work properly to ensure the construction progress.                              The excavated soil should be used for backfilling the foundations.                              Grow grass, build stone embankment around foundations on large slopes or places with weak geology.                              The restoration work should be conducted for all borrowed areas</li> </ul>	<b>Yes</b>	1	Borrow land has not been returned	Will be returned after construction completion	Agreed	Agreed	Agreed
<ul style="list-style-type: none"> <li><b>Solid waste</b>                              - The excavated soil should be used for backfilling the excavations.                              - Collect all superabundant material</li> </ul>	<b>Yes</b>	2	Cement cover has not been collected	Collect the cement cover after use	Agreed	Agreed	Agreed
<ul style="list-style-type: none"> <li><b>Traffic obstruction and damages</b>                              - Use trucks with loads appropriate to roads.                              - Install signs near roads.                              - Repair segments of roads and other public properties damaged by the material transport.                              - Make access roads and carry out site restoration for borrowed land</li> </ul>	<b>Yes</b>	4	Access road has not been repaired	Will be repaired after the construction completion	Agreed	Agreed	Agreed
<ul style="list-style-type: none"> <li><b>Impacts on people' health</b>                              Manage the construction sites, collect waste and dispose it in designate place.                              Propagandize and raise workers' awareness of social evils.                              Conduct health examination for workers periodically.                              Register for workers' residences with the authorities.                              Equip workers with personal safety equipment and require them to use it at work.                              Provide workers with all medical facilities and medicines.                              Keep workers' camps clean; provide wastebaskets for waste collection</li> </ul>	<b>Yes</b>	3	No waste bin found in camps	PPE should be worn Waste bin should be adequately supplied	Agreed	Agreed	Agreed

Mitigation effective rating criteria (indicative examples)

1 Very good (all required mitigation implemented)

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- 2 Good (the majority of required mitigation implemented)
- 3 Fair (some mitigations implemented)
- 4 Poor (few mitigations implemented)/ Very poor (very few mitigations implemented)
- 5 Very poor (few mitigations implemented)

**3. Environmental incidents during reporting period (if relevant)**

Environmental incidents (accidents, spills, complaint)	Date/ Location	Reported by	Description/ Location	Action taken	Further action required	Endorsed by	
						Implementing agency	Monitoring agency
N/A							

**4. Summary of Actions required and follow-up (if relevant)**

Action required	Timeframe	Responsible parties	Follow-up (to be completed if inspection/ monitoring indicates actions are required)
To be safety during tower erection, rehabilitating the temporary land, to ensure traffic safety during erection	Next month	Contractor	<b>Action required: Environmental compliance inspection in the next monitoring</b>
Provision of awareness signs and barriers at construction sites	Next month	Contractor	<b>Effective: Yes</b>

**Inspection completed by:** CMC/LIC

**Date:**12/6/2015

**Signature:** TANG CHI ANH

Annex No. 2 Attachment: (notes, photographs)



Photos 1: Tower was erected



Photos 2: Rehabilitation upon completion of tower foundation



Photos 3: Workers wear labor protective clothing during tower erection



Photos 4: Civil work has almost accomplished