

Environmental Monitoring Report

Semestral Report
July to December 2014

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

Prepared by the Southern Vietnam Power Project Management Board (SPPMB) for the National Power Transmission Corporation and the Asian Development Bank.

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NATIONAL POWER TRANSMISSION CORPORATION
SOUTHERN VIETNAM POWER PROJECT MANAGEMENT BOARD

ADB LOAN 2848-VIE

POWER TRANSMISSION INVESTMENT PROGRAM – TRANCHE 1
SUBPROJECT: 500KV/220KV BAC NINH 2 – PHO NOI TRANSMISSION LINE

SEMI-ANNUAL ENVIRONMENTAL MONITORING REPORT No.2

(July through December, 2014)

Submitted by:

NorthernPowerProjects ManagementBoard

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ABBREVIATION

ADB	Asian Development Bank
CEP	Certification of Environmental Protection
CMC	Construction Monitoring Consultants
CPC	Commune People’s Committee
CPPMB	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
NPPMB	Northern Power Project Management Board
NPT	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 ProjectBackground

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 building 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) will finance 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 Projects 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 (NPT) medium-term power transmission expansion program. In Viet Nam, The first tranche will finance 4 projects: (i) 500/220 kV Pho Noi substation; (ii) 500 kV/220 kV Pho Noi – Bac Ninh 2 transmission line; (iii) 220 kV Phu My 2 substation; (iv) 220 kV Song May – Uyen Hung transmission line. The Project will also finance 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 Pho Noi – Bac Ninh 2 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 will be the 500 kV bus bar of the Pho Noi substation that is located in the Hung Yen province and the ending point will be the 220 kV bus bar of the Bac Ninh 2 substation located in the BacNinh 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 th August 2012
Bid Opening	11st October 2012
Date of submission of BER to EVNNPT	05 th November 2012
Date of submission of	1 st time: 14th December 2012

BER to ADB/AFD	Revised: 06 th February 2013, 29 th March 2013, 10 th May 2013, 28 th June 2013.
ADB/AFD Approval of Award	04 th October 2013
EVNNPT Approval of Award	16 th October 2013
Operative L/C	NA
Contract Effectively	30 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 20th October 2011.

7. In the implementation progress, and the national experts will assist NPPMB in environmental management planning and implementation of resettlement plans.
8. To further assist NPPMB 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 semi-annual report will describe the implementation of the EMP and compliance issues with the environmental and social management programs during the work execution phase. The main contents are as follows:
- (i) Subproject implementation progress;
 - (ii) Compliance with ADB loan covenants and applicable government laws, regulations and requirements;
 - (iii) Incorporation of safeguard requirements into project contractual arrangements;
 - (iv) Environmental mitigations and compensation measures implemented;
 - (v) Key issues and recommendation

2. INCORPORATION OF ENVIRONMENTAL REQUIREMENTS INTO PROJECT CONTRACTUAL ARRANGEMENTS

10.

2.1.1 ADB's Environmental Policies

11. 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.
12. 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.

13. 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.¹
14. 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.
15. 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

16. 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.
17. 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 1. Environment Protection Law and Regulations

Laws and Regulations	Description
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.80/2006/NĐ-CP Date issued: 09/08/2006	Detailing the guidelines in the implementation of a number of articles of the Environmental Protection Law regarding environmental standards; strategic environmental assessment; environmental impact assessment and environmental protection commitments; environmental protection in production, business and services; hazardous waste management;

¹Asian Development Bank. June 2009. *Safeguard Policy Statement*, enforced January 2010.

Laws and Regulations	Description
	and disclosure of environmental information and data.
Decree No. 21/2008/ NĐ-CP Date issued: 28/02/2008	Amending and supplementing some articles of Decree No. 80/2006/NĐ-CP detailing the guidelines in the implementation of Environment Protection Law.
Decree No. 29/2011/ NĐ-CP Date issued: 18/04/2011	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: 16/11/2009	National Technical Regulation on hazardous waste threshold (QCVN 07: 2009/BTNMT), among others
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.

18. 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 (Table3). Implementation guidelines, amendments, and safety protection were detailed in succeeding government decrees and ministry circulars.

Table 2.Power Network Protection Laws and Regulations

Laws and Regulations	Description
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.

2.1 Institutional Arrangements and Responsibilities

2.2.1 NPPMB

19. The NPPMB as the IA of the project will have the overall responsibility for the planning, design, construction, and operation of the project. The NPPMB will also be responsible for the implementation of environmental management, mitigation, and monitoring measures outlined in the EMP. During the design phase, the NPPMB commissioned PECC3 to undertake the feasibility study, IEE, and RAP.
20. The NPPMB 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 will be 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 NPPMB. 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 NPT and ADB.
21. In addition, a Project Implementation Consultant will be commissioned to assist NPPMB in the overall project management.

2.2.2 Constructor

22. 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 NPPMB.

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

3.1500kV/220kV Bac Ninh 2 – Pho Noi transmission line

23. The 500kV/220kV Bac Ninh 2 – Pho Noi transmission line will have a total length of 30.5 km (kilometre), starting from the 500kV/220kV Pho Noi substation and ending at the 220kV/110kV Bac Ninh2 substation. Figure 1 presents the overview of the ROW of the transmission line while Table 3 summarizes the location of the transmission towers by province, district, and commune. The transmission line will traverse two provinces, namely, BacNinh and Hung Yen. In BacNinh province, the length of the ROW is about 29.3 km which will pass through the districts of ThuanThanh, GiaBinh, Que Vo, and Tien Du. In Hung Yen province, the transmission line is about 1.2km and will pass through Van Lam district.

Table 3. 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

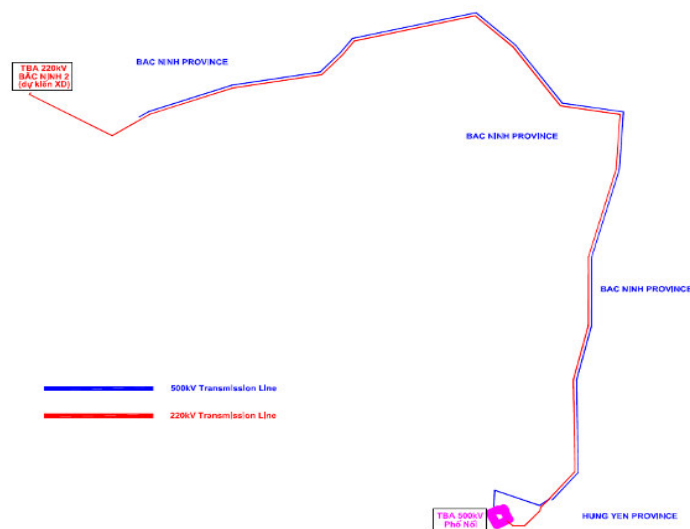


Figure 1.Overview of Transmission Line Right-of-Way

17. 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 4:

Table 4. Project progress of 220kV BacNinh – Pho Noi 2 transmission line

Contractor	Tower code	Number of towers	Tower Foundation	Tower erection	Wire stringing (km)
IEC	22	18	10	0	22
Song Da 11	41	34	28	0	41

Song Da 11 Thang Long	29	28	24	0	29
Total	92	80	62	0	92
% completed		87%	67%	0%	

4. ENVIRONMENTAL MANAGEMENT PROGRAM

24. The mitigating measures to minimize the environmental impacts on environmental quality include the followings:

Air quality: It shall apply measures to avoid and minimize air pollution caused by the construction activities such as regularly maintained construction vehicles to limit exhaust fumes generation, water sprinkling in access road near communities to reduce dust during dry and windy conditions.

Water quality: It shall apply measures to prevent waste water running off from construction site, material storage area and worker camps to drainage and irrigation system.

Noise quality: The contractor shall apply appropriate measures to control noise and vibration, creating by construction equipment such as regularly checking and maintaining vehicles and equipment, limit to use powered equipment at night near residential and school areas.

Solid waste management: Excavated materials to be reused as fill material and the other construction debris will be disposed in an approved site by the village authorities. Domestic solid waste will be stored in a covered container and periodically collected by functional agency.

Hazardous management: Hazardous waste will be managed accordance with the Circular 12/2011/TT-BTNMT dated 14/4/2011.

Soil Environment: It shall apply technical measures to minimize negative impacts on soil environment.

Biodiversity and natural resources: It shall identify and inventory the affected trees by the construction activities and the workers only allow cutting permitted trees and prohibit from harvesting wood in the project area.

Health and safety: Training courses and orientation will be conducted for workers to improve their knowledge and skill on construction health and safety management. Health and safety program will be prepared and strictly implemented by the constructors including provide first-aid facilities, properly sanitation, water supply and personal safety devices for workers; provision of signs, barriers, and gates/posts surrounding transmission towers particularly in built-up areas.

Living conditions: the constructors apply measures to limit and reduce negative impact on living condition of local people including avoiding disturbance of field crops within one month of harvest wherever possible.

4.1 500/220 kV Pho Noi substation

25. Under construction bidding

4.2 500kV/220kV Bac Ninh 2 – Pho Noi transmission line

4.2.1 Environment compliance at construction site

26. The Table 5 shows the implemented mitigation measures on environmental and compensation during construction phase.

Table 5. Summary of environmental compliance activities for Bac Ninh 2 – Pho Noi 500/220kV Transmission Line

Location/Time	Negative Impact	Implemented mitigation measures	Implementation Agency/Inspection Agency	Recommendation/action required
Assess road, Construction area, Material transportation route	Air quality	<ul style="list-style-type: none"> ▪ Sprayed water on the assess road and construction site; ▪ Limited speed and cover the vehicles with canvas sheet in order to minimize the pollution. ▪ Prohibited burning debris or other materials on the site or at camps. ▪ Requested vehicles, while parked on the site have their engines turn off. ▪ Conducted checking all equipment and machinery on the site and make all necessary corrections and/or repair to ensure compliance with safety and air pollution requirements and properly record checking, correction results. ▪ Covered dump trucks transporting raw materials to and from site by canvas tarpaulins, or other acceptable type of cover to prevent debris and/or materials falling from or being blown of the vehicle(s). 	Contractor:JV of Song Da 11 & Song Da 11 Thang Long & IEC	<ul style="list-style-type: none"> ▪ The Contractor shall daily cleanassess road surfaces of debris/spills from construction equipment, haulage trucks and vehicles; ▪ Locate any stationary emission sources (e.g., portable diesel generators, compressors, etc.) as far as is practical from sensitive receptors.

Location/Time	Negative Impact	Implemented mitigation measures	Implementation Agency/Inspection Agency	Recommendation/action required
Assess road, Construction area	Noise and Vibration	<ul style="list-style-type: none"> ▪ Used construction equipment and vehicles that limited generation noise and vibration. ▪ Minimized using powered equipment at sensitive areas such as residential areas. 	Contractor:JV of Song Da 11 & Song Da 11 Thang Long & IEC	<ul style="list-style-type: none"> ▪ Noisy construction-related activities will not be carried out during the night. ▪ Truck drivers and equipment operators shall minimize the use of horns
Worker camp, Construction area,	Waste management	<ul style="list-style-type: none"> ▪ Domestic waste is collected and transported by functional agency; ▪ Kept the site reasonably free from all unnecessary obstruction; Stored or disposed of any equipment or non-used materials and clear away and remove from the site any wreckage, rubbish or temporary works no longer required at the site. ▪ Reused, recycled and disposed construction waste materials on the site in accordance with the best available technology. ▪ Managed and collected construction solid waste to ensure that no debris deposited on public or private right of way as result of construction activities as well as the 	Contractor:JV of Song Da 11 & Song Da 11 Thang Long & IEC	<ul style="list-style-type: none"> ▪ The Contractor shall prepare inventory for chemical materials and material safety data sheet for each chemical material such as solvents, lubes oils ▪ Ensure all storage containers are in good condition with proper labeling. ▪ Regularly check containers for leakage and undertake necessary repair or replacement

Location/Time	Negative Impact	Implemented mitigation measures	Implementation Agency/Inspection Agency	Recommendation/action required
		<p>movement of construction vehicles.</p> <ul style="list-style-type: none"> ▪ Kept debris and any excavated materials from existing stream courses and drains within, and adjacent to the construction site. ▪ Materials and poisonous chemicals are stored at high level ground that prevent from flood; ▪ Hazardous waste such as wiping cloth infected oil and lubricant, packing boxes with hazardous chemical or batteries were managed accordance with Circular 12/2011/TT-BTNMT dated 14/4/2011 		
<p>Material storage area, Construction area, Natural water body</p>	<p>Water quality</p>	<ul style="list-style-type: none"> ▪ Prohibited washing tools or machinery in any water sources or areas that drain into an existing watercourse, stream, and canal. ▪ Prevented run-off from the construction site deposited directly into any existing watercourse, stream, and canal. ▪ Prevented chemicals, concrete agitator washing deposited into existing watercourse, stream, and canal. ▪ Avoided obstruction in the natural water flow and local 	<p>Contractor:JV of Song Da 11 & Song Da 11 Thang Long & IEC</p>	<ul style="list-style-type: none"> ▪ The Contractor shall check all of its equipment regularly to timely correction, repair to prevent leak of oil, lubrication into water body; ▪ Replacement of oil, lubrication for equipment, machinery is performed only when appropriate measures were taken to prevent oil and lubrication discharge into water body.

Location/Time	Negative Impact	Implemented mitigation measures	Implementation Agency/Inspection Agency	Recommendation/action required
		irrigation system.		
Near drainage system	Erosion and sedimentation	<ul style="list-style-type: none"> ▪ Built temporary dyke and canal to prevent water flow into the drainage system; ▪ Covered and fenced wall around the material areas to prevent water from running off from that caused sedimentation for other site; ▪ Used appropriate technical construction methodology to minimize impact on soil environment ▪ Checked road status and potential risk in the project area ▪ Residual soil from filling power foundation hole uses for embankment internal road or surrounding household if receives agreement from local people and authority. 	Contractor:JV of Song Da 11 & Song Da 11 Thang Long & IEC	<ul style="list-style-type: none"> ▪ The Contractor shall regularly inspect and maintain the irrigation canal and all drainage channels to ensure they are free of obstructions.
	Impact on petro gas line	<ul style="list-style-type: none"> ▪ Workers need to observe carefully in case working near the petro gas lines. ▪ Workers are aware on safety and appropriate measures when they are working near the petro gas lines. ▪ Contractor cooperates with petro gas line owner to have reasonably working methodologies. 	Contractor:JV of Song Da 11 & Song Da 11 Thang Long & IEC	<ul style="list-style-type: none"> ▪ The Contractor should establish hotline with petro gas line owner and other related agencies to timely solve an accident

2.2.2 Community Health and safety (CHS) aspects

Table 6. Community Health and safety (CHS) aspects

Location/Time	Negative Impact	Implemented mitigation measures	Implementation Agency/Inspection Agency	Recommendation/action required
Worker camp, construction site	Safety and hygienic condition	<ul style="list-style-type: none"> ▪ The contractor conducted training courses and regularly meetings for workers on safety and environmental hygiene; ▪ The contractor provides personal safety devices for workers such as hard hats, safety gloves and safety belt; 	Contractor:JV of Song Da 11 & Song Da 11 Thang Long & IEC	<ul style="list-style-type: none"> ▪ The Contractor shall provide first aid facilities that are readily accessible by workers.
Residential area near the construction site	safety issues	<ul style="list-style-type: none"> ▪ The vehicle speed has been reduced and keep at 5km/h in construction site and residential area; ▪ Warning signs have been put on the towers, around the construction sites and road near the construction sites. 	Contractor:JV of Song Da 11 & Song Da 11 Thang Long & IEC	<ul style="list-style-type: none"> ▪ The Contractor shall provide prior notification to the community regarding the schedule of construction activities.
Construction site	Public safety	<ul style="list-style-type: none"> ▪ Contractors work closely with local agencies such as local people committee, policeman, fire fighting and prevention agency; ▪ Wall fencing round the construction sites to protect illegal entrance was placed 		<ul style="list-style-type: none"> ▪ The Contractor shall implement a 24 hour community complaints hotline

3. Compare the environmental compliance of two quarters

Table 7. The result of community health and safety monitoring during the third quarterly report and the fourth quarterly report xx

Environmental issues	Mitigation measures	QUARTERLY REPORT No.3	QUARTERLY REPORT No.4
		ThirdQuarterly Report, (July through September, 2014) Compliant Yes/No	FourthQuarterly Report, (October through December, 2014) Compliant Yes/No
Dust and exhaust fumes	<ul style="list-style-type: none"> Cover the material transported trucks to prevent falls. Water the roads and construction sites in dry weather. The machines should possess appropriate certificates. 	Yes	Yes
Noise and vibration	<ul style="list-style-type: none"> The construction work should be performed at day time, not at night time or in the resting hours. 	Yes	Yes
Construction waste water	<ul style="list-style-type: none"> Arrange waste water collection ditches around the foundation pit and retention pit to reduce turbidity before discharge to the local canals. Avoid spillage oil at the construction site Cover and protect construction material 	N/A	N/A
Soil pollution, soil erosion	<ul style="list-style-type: none"> 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	Yes
Solid waste	<ul style="list-style-type: none"> The excavated soil should be used for backfilling the excavations. Collect all superabundant material 	Yes	Yes

Environmental issues	Mitigation measures	QUARTERLY REPORT No.3	QUARTERLY REPORT No.4
		ThirdQuarterly Report, (July through September, 2014) Compliant Yes/No	FourthQuarterly Report, (October through December, 2014) Compliant Yes/No
Traffic obstruction and damages	<ul style="list-style-type: none"> • 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	Yes
Impact on daily living activities of local people	<ul style="list-style-type: none"> • Provision of signs, barriers, and gates/posts surrounding transmission towers particularly in built-up areas • Signboards (Danger Warning Signs) need to be put on every tower as well as on the conductors where crossing community centers, roads and rivers. • Grounding of conducting objects such as fences or other metallic structures near power lines. • Conduct orientation seminar on community health and safety programs 	Yes	Yes

Environmental issues	Mitigation measures	QUARTERLY REPORT No.3	QUARTERLY REPORT No.4
		ThirdQuarterly Report, (July through September, 2014) Compliant Yes/No	FourthQuarterly Report, (October through December, 2014) Compliant Yes/No
Working safety	<ul style="list-style-type: none"> • Conduct training and orientation of workers on construction health and safety management. • Require the wearing of PPEs by workers within the project site. • Strictly require the contractor and its workers to follow construction health and safety program. • Provide first-aid facilities for workers. • All site workers will be accommodated in the provided construction camps unless they are recruited from nearby communes. • The construction camp site and surrounding areas will be kept clean. Inspections of the camp sites will be carried out weekly. Adequate number of rubbish bins will be provided. • Portable water supply and/or water tank will be provided for workers. All potable water supply sources and storage facilities will be secured. • Regular collection of waste/rubbish at the camp to be taken to a managed waste disposal facility. • Conduct seminar/workshop for community on health and safety during construction. 	Yes	Yes
Worker Camps	<ul style="list-style-type: none"> • Provide temporary toilet facilities with septic tanks at the construction camp. • Implement appropriate solid waste and construction waste collection and disposal system. 	Yes	Yes

4 SUMMARY OF KEY ISSUES

5.1 Achievements

27. In the initial period of execution, the contractor focused on preparing ground for execution, excavating foundations at the towers that the ground has been handed over to the contractor. Most of the positions are located in the paddy fields, which is far from the residential areas and traffic roads. The contractors returned the ground for the foundations that have been finished, erecting towers and continuing excavating the foundations at which the ground has been handed over to the contractor.
28. Contractor repaired the community road that was damaged by transporting materials. The current status of the road is better than its original condition;
29. Contractor collected and classified the cement bags and Xika cans at the construction sites for reusing and recycling.

5.2 Outstanding matters

30. Selecting appropriate locations for building worker camps;
31. Keeping environmental sanitation around the temporary worker camps;
32. Providing workers with labor equipment suitable with their works at construction site;
33. Keeping safety during operating machines at sites;
34. Status of safety on construction sites (warning signs and barriers ...)
35. Preparing for first aid;
36. Educating workers on transmission of social diseases such as HIV/AIDS;
37. Transporting safety and community rest.

5.3 Additional Action Required

38. CMC should enhance responsibilities in environmental management. For environmental problems, it is necessary to have solutions to minimize arising impacts during construction.
39. Staff of Community Environmental Management should be trained for environmental knowledge. Their awareness on public environment protection and participation in implementation of local works should be intensified.
40. NPPMB, the Contractor (JV of Song Da 11 & Song Da 11 Thang Long & IEC) 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.
41. The Contractor is required to pay more attention to environmental safety and labour safety. Worker's awareness and understanding on environmental safety and labour safety should be enhanced through training courses and strict management of the Contractor.

5. CONCLUSION AND RECOMMENDATION

6.1 Conclusion

42. The environmental monitoring system has been maintained during execution of construction items

with different levels and modes.

43. NPPMB made many efforts in instructing CMC and the Contractor to ensure environmental criteria and in coordinating with local authority to solve affects of construction on residential areas.
44. CMC made many efforts in the following works: implementing environmental mitigation measures and safety construction methods, ensuring environmental sanitation, participate in meetings with NPPMB, and sufficiently implement all monitoring forms.
45. Rubbish gathered at site has not been thoroughly solved yet.
46. Construction safety and traffic safety have not been seriously considered by the Contractor.

6.2 Recommendation

47. Contractor should enhance responsibilities in environmental management. For environmental problems, it is necessary to have solutions to minimize arising impacts during construction.
48. NPPMB and the Contractor (JV of Song Da 11 & Song Da 11 Thang Long & IEC) 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 households and facilitating performance of the Contractor to completed works as scheduled.
49. The Contractor (JV of Song Da 11 & Song Da 11 Thang Long & IEC) 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

Annex No.1 Attachment: (notes, photographs)

		
<p>Photos 1: Worker is covering the material</p>	<p>Photos 2: Consolidation by excavation</p>	<p>Photos 3: Temporary camps</p>
		
<p>Photos 4: Worker is Pulling string</p>	<p>Photos 5: Access road consolidated to the tower No G2B</p>	<p>Photos 6: Construction site is quite clean</p>



Photos 1: Worker is covering the material



Photos 2: Consolidation by excavation



Photos 3: Temporary camps



Photos 4: Worker is covering the material



Photos 5: Scaffolds were also used to prevent the affect on the local electric system



Photos 6: Workers wear labour protective clothing during tower erection