

Environmental Monitoring Report

Semi-Annual Report (Version 3)

January – June 2015

VIE: Renewable Energy Development and Network Expansion and Rehabilitation for Remote Communes Sector Project (Dak Pring Hydropower Project)

Prepared by Central Power Corporation for Electricity Vietnam and the Asian
Development Bank

CURRENCY EQUIVALENTS

(as of 1st 2015)

Currency unit – Vietnamese Dong (VND)

VND1.00 = \$0.0000473

\$1.00 = VND21,125

ABBREVIATIONS

ADB	Asian Development Bank
CGC	Central Grid Company
CPC	Central Power Corporation
DMS	Detailed Measurement Survey
DONRE	Division of Natural Resources and Environment
DPC	District People's Committee
EIA	Environmental Impact Assessment
HPP	Hydropower Project
IEE	Initial Environmental Examination
JSC	Joint Stock Company
NRMB	Nature Reserve Management Board

WEIGHTS AND MEASURES

MW	Megawatt
Km	Kilometer
Km ²	Square kilometers
l/s	Litres per second
M	Meter
m ³	Cubic metre
m ²	Square metre
mm	Milimeter
s	seconds
mg/l	Miligram/litre
dBA	{Definition 3}

NOTE

In this report, "\$" refers to US dollars unless otherwise stated.

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TABLE OF CONTENTS

I. INTRODUCTION	7
1.1. Project information.....	7
1.2. Purpose of environmental monitoring.....	9
II. STATUS OF LEGAL AND POLICY COMPLIANCE	11
III. ENVIRONMENTAL MANAGEMENT SYSTEM	12
IV. WORK PROGRESS.....	14
V. ENVIRONMENTAL COMPLIANCE MONITORING	16
VI. PHYSICAL ENVIRONMENT MONITORING.....	40
6.1. Air and noise	40
6.2. Surface water quality.....	42
VII. KEY ENVIRONMENTAL ISSUES & ACTIONS	46
VIII. ENVIRONMENTAL MONITORING SCHEDULE	49
CONCLUSIONS AND RECOMMENDATIONS	50
Conclusions.....	50
Appendix 1: Results of environmental quality analysis	52
Appendix 2: Project location map – the project is located outside Song Thanh Nature Reserve.....	54
Appendix 3: Project documents.....	55
Appendix 4: Photos of consultations and interviews in the 1 st environmental monitoring	67
Appendix 6: Minutes of in-depth interviews	70
Appendix 6: List of consulted persons	76

LIST OF TABLES

<i>Table 1: Environmental Permits and Licenses Secured</i>	<i>11</i>
<i>Table 2: Parties and respective responsibilities in the EMS.....</i>	<i>12</i>
<i>Table 3: List of contacts/members in EMS.....</i>	<i>13</i>
<i>Table 4: Information on packages and construction contractors.....</i>	<i>14</i>
<i>Table 5: Work progress untill 20 May, 2015.....</i>	<i>14</i>
<i>Table 6: Assessment of environmental compliance</i>	<i>17</i>
<i>Table 7: Sampling locations, parameters and time for air quality monitoring.....</i>	<i>40</i>
<i>Table 8: Results of Ambient Air Quality Sampling.....</i>	<i>41</i>
<i>Table 9: Noise Quality Monitoring.....</i>	<i>41</i>
<i>Table 10: Sampling positions, parameters, time and analysis standards for surface water quality</i>	<i>42</i>
<i>Table 11: Surface water quality.....</i>	<i>45</i>
<i>Table 12: Environmental issues and follow-up actions required</i>	<i>47</i>
<i>Table 13: Environmental monitoring schedule</i>	<i>49</i>

LIST OF FIGURES

<i>Figure 1: Location of Dak Pring Hydropower Project.....</i>	<i>9</i>
<i>Figure 2: Air sampling locations.....</i>	<i>41</i>
<i>Figure 3: Surface water sampling locations.....</i>	<i>43</i>

I. INTRODUCTION

1.1. Project information

Dak Pring Hydropower Project is a sub-project of Loan 2517-VIE: Renewable Energy Development and Network Expansion and Rehabilitation for Remote Communes Sector Project which is funded by the Asian Development Bank (ADB). The implementing agency of this sub-project is Central Power Corporation (CPC). Central Grid Company is assigned by CPC to implement and manage the Project.

Project location

Dak Pring Hydropower Project (Dak Pring HPP) is located on Dak Pring Stream in Cha Val Commune, Nam Giang District, Quang Nam Province, 40 km far from Thanh My Town to the West and 160km far from Tam Ky Town to the Northwest. The project area is located within buffer zone of Song Thanh Nature Reserve and about 2 km far from the edge of its core zone. National road 14D is far from the dam site 2 km and the powerhouse site 500 m. Location of Dak Pring Hydropower Plant is shown in Figure 1.

Main objective of Project

The main objective of Dak Pring Hydropower Project is power generation for the national grid and for the local with average annual energy of 30.45 million kWh in order to improve power quality and supply the households who have not yet been provided with electricity. Furthermore, the Project will contribute to promote socio-economic development in the project area, enhance living standards of ethnic minority households which forms a part of population of Quang Nam Province in the event of formation of reservoir, supplying water for irrigation and employment creation resulting from the Project.

Main work items

According to the technical design of Dak Pring HPP approved by Central Power Corporation under Decision No.1422/QĐ-EVNCPC dated April 4, 2013, Dak Pring Hydropower Plant has the following salient figures:

Basin

- *Area of basin Flv* *296 km²*
- *Mean annual flow Qo:* *18.1 m³/s*

Reservoir:

- *Fully supply level (FSL):* *287.0 m*
- *Minimum operating level:* *286.0 m*

- Consolidated water level $P=0.5\%$: 295.98 m
- Reservoir area at FSL: 0.36 km²
- Gross storage: 3.22×10^6 m³
- Active storage: 0.36×10^6 m³

Capacity

- Installed capacity (Nlm): 7.5 MW
- Firm capacity (Ndb): 1.15 MW
- Number of generators: 02
- Mean annual energy: 30.44×10^6 kwh/year

Total project cost: 280,867,000,000 VND

Commencing time: December 2014

Intended completion time: March 2017

Project components

Key project components includes weir, spillway, diversion intake, intake gate, headrace tunnel, powerhouse and tailrace canal, 35 kV distribution station and transmission line, site office, access roads connecting the project site with National Road 14D.

Apart from the key components, there are several auxiliary works established to serve the project construction.



1.2. Purpose of environmental monitoring

In the past, the Central Rural Electricity Project Management Board (CREB) of the Central Power Corporation (CPC) was been appointed as the department to undertake the management of the implementation of sub-projects of Loan 2517-VIE. But from May 1st 2015, CPC has changed the representative for managing hydropower projects of Section 1 of Loan 2517-VIE from CREB to the Central Grid Company (CGC) (*Following to the Decision no.2396/QĐ-EVNCPC signed by Mr. Tran Dinh Nhan in April 15th 2015*).

The Hydropower Section, directly monitoring the implementation of DakPring Hydropower project, has been moving from CREB to CGC to continue managing DakPring Hydropower project. The CGC is also tasked to establish and assess the environmental performance of the sub-project and its contractors with a view of improving the environmental performance of the overall project.

This Environmental Monitoring Report presents the results of the monitoring of the construction of DakPring Hydropower project. The report documents the status of project implementation, compliance with the Environmental Management Plan (EMP), and also compliance with the environmental regulatory requirements of the Government of

Vietnam. The report also aims to present corrective or remedial measures for environmental impacts observed during the monitoring period.

The CREB reviewed and monitored the implementation of the EMP based on the Initial Environmental Examination (IEE) report which was submitted to ADB. The Environmental Compliance and Monitoring Form and Environmental Monitoring Checklist provided by ADB were used to assess the compliance of the contractors with the EMP and with ADB's Environment Safeguards. Site visits were carried out to validate implementation of the mitigation measures.

The objectives of the monitoring are:

- Monitor the sub-project's compliance with Vietnam Technical Regulations and Law on Environment;
- Monitor the sub-project's compliance with ADB's Environment Safeguards requirements;
- Monitor compliance of the contractors with mitigation measures to address construction impacts on the environment as per Contract Conditions and the EMP;
- Determine corrective actions to minimize negative impacts on the environment during the construction phase.

This report presented the result of the 1st environmental monitoring.

II. STATUS OF LEGAL AND POLICY COMPLIANCE

The Environmental Impact Assessment (EIA) report of DakPring Hydropower project was approved by Quang Nam Province People's Committee in Decision No.4000/QD-UBND on 19 December 2013. The IEE was also endorsed by ADB. The EMP in the approved IEE was included in the bid document with the contractors. The responsibility of EMP implementation during the construction phase of the project was entrusted to the contractors of the project. The implementation of the EMP by the contractors is being monitored by the field officers of the Hydropower section of CGC and Environment monitoring consultant.

The DakPring Hydropower Project has secured the following licenses and clearances for its implementation:

Table 1: Environmental Permits and Licenses Secured

<i>License/Clearance</i>	<i>License/Clearance No.</i>	<i>Issued by</i>	<i>Date Issued</i>
EIA Approval	4000/QD-UBND	Quang Nam Province People's Committee	19/12/2013
Confirmation on completion of site clearance and compensation	23/XNHTGPMB	Nam Giang DPC	31/12/2014
Notice of safety for the site to which detection and disposal of bomb, mine and explosive ordnance was conducted	1075/TB-CT	Military Region 5 High Command	29/9/2014

III. ENVIRONMENTAL MANAGEMENT SYSTEM

The Environment and Social Development Cell has not been created by CPC. Instead, a focal person on environmental matters has been appointed within CREB to audit the implementation of the EMP by the contractor and to coordinate activities related to the EMP implementation and monitoring. A monitoring system will be developed and implemented on a regular basis. Documentation of monitoring activities will be retained at the project site by the CREB.

Parties in the EMS and respective responsibilities during construction & operation phases are presented in the table below.

Table 2: Parties and respective responsibilities in the EMS

<i>Parties</i>	<i>Responsibilities</i>
CGC (instead of CREB)	Management and monitoring to ensure contractors to perform compliance in EMP implementation; Prepare semi-annual environmental monitoring report to submit to ADB and Quang Nam DONRE;
Construction Contractor	Implement contents of EMP following to the signed contract
Environmental monitoring consultant	Examine and monitor the implementation of mitigation measures for environmental impacts on natural and social environment in the project area; Provide recommendations on EMP implementation for contractors;
Quang Nam DONRE	Supervise and examine the implementation of mitigation measures for project environmental impacts according to the EIA report (Vietnamese DTM) approved by Quang Nam Provincial People's Committee;
Nam Giang District People's Committee	General management of natural resources and environment in the district area;
Natural Resources and Environment Division of Nam Giang District	Management of natural resources and environment in the district area;

<i>Parties</i>	<i>Responsibilities</i>
Chaval Commune People's Committee	General management of natural resources and environment in the commune area

The following are the personnel assigned by CPC and the contractor to monitor compliance with environmental mitigation measures:

Table 3: List of contacts/members in EMS

<i>Name of Personnel</i>	<i>Organization</i>	<i>Responsibilities</i>
Tran Ngoc Quyen	Hydropower section of CGC	Monitoring group leader – Monitor of package No. 04-DPr
Nguyen Hien	Hydropower section of CGC	Monitor of packages No. 03-DPr, No.05-DPr and No. 09-DPr
Ngo Tan Cung	Hydropower section of CGC	Monitor of package No. 06-DPr
Luu Van Hung	Hydropower section of CGC	Monitor of package No. 10-DPr
Nguyen Hai Thinh	Construction No.564 Co., Ltd	Deputy director - Contractor of access roads/operation route construction, Package No. 03-DPr
Pham Ngoc Lien	Construction No.47 JSC	Engineer - Contractor of headrace tunnel and intake gate construction, Package No. 05-DPr
Nguyen Tuan Phi	Consulting Construction & Electric power development JSC	Engineer - Contractor of power house and suspended substation construction, Package No. 06-DPr
Nguyen Xuan Tin	Ha Giang Phuoc Tuong Mechanical JSC	Commander - Contractor of construction and supply material and equipment for 35kV electric line, Package No. 10-DPr

IV.WORK PROGRESS

Packages and construction contractors are listed in the table below.

Table 4: Information on packages and construction contractors

<i>Construction package</i>	<i>Description of work item in the package</i>	<i>Name of construction contractor</i>	<i>Contact</i>
No. 03-DPR	Construction of access roads/operation route	Construction No.564 Co., Ltd	Nguyen Hai Thinh
No. 04-DPR	Construction of dam and headrace tunnel	Joint venture between Nghe An Hydraulic Construction No.1 JSC and Construction No.564 Co., Ltd	Nguyen Hai Thinh
No. 05-DPR	Construction of headrace tunnel and intake gate	Construction No.47 JSC	Pham Ngoc Lien
No. 06-DPR	Construction of power house and suspended substation	Consulting Construction & Electric power development JSC	Nguyen Tuan Phi
No. 09-DPR	Construction of house for administration	Ha Giang Phuoc Tuong Mechanical JSC	Completed
No. 10-DPR	Construction and supply material and equipment for 35kV electric line	Hoang Duoc Phat Co., Ltd	Nguyen Xuan Tin

According to the report of the Dak Pring HPP supervision team of CGC dated May 20, 2015, the project implementation progress is shown as follows:

Table 5: Work progress untill 20 May, 2015

<i>Project component</i>	<i>Time started</i>	<i>Completion</i>	<i>Remarks</i>
Detection and disposal of bomb and mine	2014	100%	
Construction of access roads/operation route	11/2014	70%	Intended completion date: February 15, 2016
Construction of dam and headrace tunnel	11/2014	20%	Intended completion date: March, 2016 Progress has been



<i>Project component</i>	<i>Time started</i>	<i>Completion</i>	<i>Remarks</i>
			slower than planned schedule due to waiting for settlement and adjustment of design document.
Construction of headrace tunnel and intake gate	5/2015	0%	Camps have been established and auxiliary areas have been leveled.
Construction of power house and suspended substation	12/2014	10%	This component has been in slow progress since it has been waiting for checking of the conformity between actual terrain vis-à-vis design survey document
Construction of site office		100%	
Construction and supply material and equipment for 35kV electric line	01/2015	95%	

V. ENVIRONMENTAL COMPLIANCE MONITORING

Environmental compliance monitoring is implemented by CGC to check if all construction activities implemented by Construction Contractors follow EMP, IEE and environmental impacts to local areas/local residents during construction.

Table below describes implemented mitigation measures for anticipated impacts from IEE as well as current environmental impacts. Compliance level and Effectiveness of the implemented mitigation measures from Construction Contractors are also assessed.

Note:

- *Compliance level and effectiveness level could be ranged from 1 to 5 (1: very good; 2: Good; 3: Fair; 4: Poor; 5: very poor);*
- *“Compliance level” refers the actions which had been implemented to see if the actions follow proposed IEE or not. In “Compliance level” column, the consultant should decide marks ranged from 1-5; other than that, short passage is necessary to explain why ranking that mark.*
- *Could the impacts be reduced by mitigation measures which had been implemented? How is the impact reduced by that actions/mitigation measures? “Effectiveness level” reflects these two question. Short passage is also necessary for explanation in this column.*

Summarization of compliance monitoring

There are total 4 Compliance monitoring sheets for contractors of 4 construction packages. The table below shows average value of compliance level from 4 construction packages to represent the subproject compliance level.

In summarization, Compliance level and effectiveness of implemented mitigation measure were assessed from 1-3. Contractors have performed pretty well during construction. No accidents or incidents have occurred up to the monitoring time.

Main activities in the site are now soil excavation and site leveling which have been mainly occur in the dam and powerhouse sites. Currently, environmental issues are not significant.

Table 6: Assessment of environmental compliance

Impacts & location	Mitigation measures from IEE	Mitigation measures implemented	Compliance level	Effectiveness	Impact observed/ location	More action required & responsibilities	Contractor response
Earth works for new access roads and construction of penstock on steep slopes leading to erosion & encroachment	<p>Slopes along access roads & penstock will be provided with:</p> <ul style="list-style-type: none"> + Catchments/ cut-off drains & chutes to minimize soil erosion. + Masonry retaining structures to control landslides and runoff. + Formation of sediment basins & slope drains to collect runoff water 	Excavation and reinforcement of drainage along the positive talus bottom was being completed. Slopes have been reinforced in the areas at high risk of landslides and erosion.	2	2	Slope of negative talus in the middle of access road to the dam (about 1km far from the dam) has not yet been reinforced.	<p>Require Contractor - Construction No.564 Co., Ltd to complete reinforcement of slope of negative talus before rainy season.</p> <p>If talus landslides happen, treatment measures should be taken promptly.</p>	Contractor agreed to plant grasses on the negative talus to prevent the risk of landslide
	Maximum usage of material in fill areas	Yes	1	1		Should be maintained	Agree



<i>Impacts & location</i>	<i>Mitigation measures from IEE</i>	<i>Mitigation measures implemented</i>	<i>Compliance level</i>	<i>Effectiveness</i>	<i>Impact observed/ location</i>	<i>More action required & responsibilities</i>	<i>Contractor response</i>
	Spoils planning particularly on steep slopes with bench terracing for high cut areas & avoidance of any runoff of material on down slopes	Bench terracing, catchments, masonry are being implemented	1	2	Runoff of materials was recorded on access roads to the dam construction site (about 1km from the dam)	Landslide should be overcome timely. Monitoring of landslide should be conducted daily by all contractors.	Agree
	Tree planting programme on penstock areas, roads and surrounding areas to rehabilitate the temporary construction areas	Tree planting is planned to be carried out after completion of construction.	1	1		The areas above penstock, access roads, surrounding areas, temporary construction areas should be returned to their original state or planted with trees.	Agree



<i>Impacts & location</i>	<i>Mitigation measures from IEE</i>	<i>Mitigation measures implemented</i>	<i>Compliance level</i>	<i>Effectiveness</i>	<i>Impact observed/ location</i>	<i>More action required & responsibilities</i>	<i>Contractor response</i>
Taking of Borrow Materials with potential for loss and degradation of land	No earth will be borrowed from cultivable lands	Materials have been bought in the locality. Contractors took advantage of waste soil and rock for backfilling during construction. If there is not sufficient backfill materials, contractors will buy this type of material in the locality.	1	1		Should be maintained	Agree
	Borrowing to take place from barren, wastelands, & riverbeds.						
	For new borrow areas, all measures will be taken to avoid loss of any productive soil.						
	Any borrow areas will be refilled, re-vegetated & landscaped with tree planting.						
Taking of Quarry Materials with	Quarry materials will be obtained from existing operating sites with	Materials were bought in the locality.	1	1		Should be maintained	Agree



<i>Impacts & location</i>	<i>Mitigation measures from IEE</i>	<i>Mitigation measures implemented</i>	<i>Compliance level</i>	<i>Effectiveness</i>	<i>Impact observed/ location</i>	<i>More action required & responsibilities</i>	<i>Contractor response</i>
loss and degradation of land	proper licenses & environmental clearances New quarries to be opened only with permission of respective authorities						
Operation of construction equipment and construction activities and contamination of soils and water pollution	Fuel storage & refueling will have adequate containment and away from water bodies/channel.	Oil/fuel containers of oil/fuels were placed in a high location and away from water bodies/channel. However, there is no roof and waterproof material lining. Refueling has been carried out outdoors.	3	3	Oil/fuel storage tanks were situated in an area with high ground, without roof and waterproof material. Refueling of package was conducted outdoor.	Fuel must be stored in tanks and situated in hazardous waste storage area with high ground and roof. Construction No.47 JSC should ensure technical requirements; minimize	Agree



<i>Impacts & location</i>	<i>Mitigation measures from IEE</i>	<i>Mitigation measures implemented</i>	<i>Compliance level</i>	<i>Effectiveness</i>	<i>Impact observed/ location</i>	<i>More action required & responsibilities</i>	<i>Contractor response</i>
						infiltration of oil into soil during refueling process.	
	Equipment will be properly maintained	Equipment has been maintained, however equipment and machines were gathered in an area with no roof.	2	2	Equipment and machines of Construction No.564 Co., Ltd and Consulting Construction & Electric power development JSC were gathered in an area with no roof; therefore, leaked fuel was run-off by rainwater and infiltrate into	Contractors Construction No.564 Co., Ltd and Consulting Construction & Electric power development JSC need to gather equipment in an airy area with roof.	Agree



<i>Impacts & location</i>	<i>Mitigation measures from IEE</i>	<i>Mitigation measures implemented</i>	<i>Compliance level</i>	<i>Effectiveness</i>	<i>Impact observed/ location</i>	<i>More action required & responsibilities</i>	<i>Contractor response</i>
					soil.		
	Precautions to be taken to prevent water pollution due to increased siltation & turbidity at weir site & road construction.	Precautions to be taken to prevent water pollution due to increased siltation & turbidity at weir site & road construction.	2	2	Construction wastewater was not generated much. However, the consultant recorded that wastewater from vehicle wash of Construction No.564 Co., Ltd was not collected. Vehicles were washed at the stream that makes fuel was run-off by	Construction No.564 Co., Ltd must stopped washing vehicle at the stream. If construction machines are washed at construction site, washing area should be provided with water-proof floor and wastewater collection system.	Agree



<i>Impacts & location</i>	<i>Mitigation measures from IEE</i>	<i>Mitigation measures implemented</i>	<i>Compliance level</i>	<i>Effectiveness</i>	<i>Impact observed/ location</i>	<i>More action required & responsibilities</i>	<i>Contractor response</i>
					stream flow.		
	Designation of approved sites defined for storage & disposal of wastes materials	Designation of approved sites defined for storage & disposal of wastes materials. The monitoring results show that all 04 contractors gathered waste soil in approved area. However, some other construction wastes such as material bags and steel scrap were not collected.	2	2	Other types of construction waste such as material packing, scrap iron and steel were still on the construction site (tunnel gate site, steel processing and soil excavation areas).	Contractors (Construction No.564 Co., Ltd and Construction No.47 JSC) needs to collect material packing, scrap iron and steel on site to store at regulated places.	Agree
	Any waste petroleum products will be	Any waste petroleum products will be	2	2	Oil dropped during refueling	Contractor - Construction No.	



<i>Impacts & location</i>	<i>Mitigation measures from IEE</i>	<i>Mitigation measures implemented</i>	<i>Compliance level</i>	<i>Effectiveness</i>	<i>Impact observed/ location</i>	<i>More action required & responsibilities</i>	<i>Contractor response</i>
	collected, stored, & disposed of at approved sites.	collected, stored, & disposed of at approved sites.			by Construction No. 47, Co., Ltd. Was not collected and treated. Construction No.564 Co., Ltd and Consulting Construction & Electric power development JSC collected refuse oil; however, oil leakage has still been occurred.	47, Co., Ltd to collect, store and treat refuse oil at regulated places.	
Construction camp & residential	Construction camps will be located adjoining the dam and powerhouse	Worker camps were located away from any settlement.	1	1		Should be maintained	Agree



<i>Impacts & location</i>	<i>Mitigation measures from IEE</i>	<i>Mitigation measures implemented</i>	<i>Compliance level</i>	<i>Effectiveness</i>	<i>Impact observed/ location</i>	<i>More action required & responsibilities</i>	<i>Contractor response</i>
colony. Social impacts & pollution from wastewater & solid waste	sites & away from any settlement.						
	Manual labor will be employed locally.	The contractor hired many workers from the community	1	1		Should be maintained	Agree
	Camps & residential colony will have properly designed sewage treatment system for wastewater effluent and a solid waste collection system.	In worker camps, contractors have placed dustbins or dug waste gathering holes to gather domestic waste generated. Wastewater from toilets of workers has been treated through septic tank; However, waste gathering holes have not met hygienic and technical requirements. Also, littering has	3	3	Unhygienic waste disposal holes lead to concentration of insects and bad odor. Waste disposal hole of Consulting Construction & Electric power development JSC was waterlogged	Waste disposal holes should be located at height, lined with water-proof material and suitable size. After waste was transported from the holes, they should be daily covered or filled by soil. Waste littering	Agree



<i>Impacts & location</i>	<i>Mitigation measures from IEE</i>	<i>Mitigation measures implemented</i>	<i>Compliance level</i>	<i>Effectiveness</i>	<i>Impact observed/ location</i>	<i>More action required & responsibilities</i>	<i>Contractor response</i>
		happened in the construction sites.			causing wastewater that infiltrated into soil.	must be ended.	
Damage to existing roads	Require contractors to rehabilitate areas or road sections damaged during hauling of materials	Contractor has constructed access roads to the construction sites. If the construction of the access roads causes any damage to existing roads, contractor will rehabilitate road sections damaged during transportation of materials.	1	1	According to the monitoring results, materials transporting has not caused any impact on or damage to existing roads.	All contractors to commit to restore roads if any damage happened to them.	Agree
Emission from construction	Emission levels of all construction vehicles & equipment will conform	Emission levels of all construction vehicles & equipment will	1	1		Should be maintained	Agree



<i>Impacts & location</i>	<i>Mitigation measures from IEE</i>	<i>Mitigation measures implemented</i>	<i>Compliance level</i>	<i>Effectiveness</i>	<i>Impact observed/ location</i>	<i>More action required & responsibilities</i>	<i>Contractor response</i>
vehicles & equipment causing air pollution	to Vietnamese emission standards.	conform to Vietnamese emission standards.					
	Pollutant parameters will be monitored during construction	Monitoring of air quality with parameters such as dust, TPS and noise was carried out.	1	1		Should be maintained	Agree
	Crushing& concrete batching plants will be away from population centers and located near the dam and power house sites.	Crushing& concrete batching plants will be away from population centers and located near the dam and power house sites.	1	1	At the time of the first environmental monitoring, concrete batching plants and portable crushers were not assembled and used.	Should be maintained	Agree
	Require drivers to slow down vehicle speed when	All drivers drive at a lower speed when	1	1		Should be maintained	Agree



<i>Impacts & location</i>	<i>Mitigation measures from IEE</i>	<i>Mitigation measures implemented</i>	<i>Compliance level</i>	<i>Effectiveness</i>	<i>Impact observed/ location</i>	<i>More action required & responsibilities</i>	<i>Contractor response</i>
	passing through populated areas.	passing through populated areas.					
Dust particulate causing health impacts for workers and villagers	All precautions to be taken to reduce dust level emissions from batching plants & portable crushers at dam and powerhouse sites.	All precautions to be taken to reduce dust level emissions from batching plants & portable crushers at dam and powerhouse sites.	1	1		At the time of the first environmental monitoring, concrete batching plants and portable crushers were not put into operation.	Agree
	Regular water spraying at all mixing sites & temporary service roads will be undertaken.	Regular water spraying at all mixing sites. However, Contractors did not conducted watering on transporting routes.	3	3	Contractors (Construction No.564 Co., Ltd, Construction No.47 JSC and Consulting Construction & Electric power	Contractors (Construction No.564 Co., Ltd, Construction No.47 JSC and Consulting Construction & Electric power	Agree



<i>Impacts & location</i>	<i>Mitigation measures from IEE</i>	<i>Mitigation measures implemented</i>	<i>Compliance level</i>	<i>Effectiveness</i>	<i>Impact observed/ location</i>	<i>More action required & responsibilities</i>	<i>Contractor response</i>
					development JSC) did not conduct water spraying on temporary service roads.	development JSC) need to conduct water spraying on temporary service roads, especially on the areas nearby residential area.	
	All delivery vehicles will be covered with tarpaulin	Soil and rock were not covered during transportation to the disposal sites.	3	3	Delivery vehicles were not covered with tarpaulin so loose materials dropped on roads generating dust.	Contractors (Construction No.564 Co., Ltd, Construction No.47 JSC and Consulting Construction & Electric power development JSC) should should covered	Agree



<i>Impacts & location</i>	<i>Mitigation measures from IEE</i>	<i>Mitigation measures implemented</i>	<i>Compliance level</i>	<i>Effectiveness</i>	<i>Impact observed/ location</i>	<i>More action required & responsibilities</i>	<i>Contractor response</i>
						loose materials during gathering and transporting.	
	Require drivers to slow down when passing through populated areas	All drivers must drive at a lower speed when passing through populated areas.	1	1		Should be maintained	Agree
Construction activities, vehicles, plant & equipment causing noise pollution	All construction equipment & plants will conform to Vietnamese noise standards	All construction equipment & plants will conform to Vietnamese noise standards	1	1		Should be maintained	Agree
	All vehicles & equipment to be fitted with noise abatement devices	Contractors should provide noise abatement devices to equipment and machines.	2	2	Contractors did not provide vehicles & equipment with noise abatement devices;	For the locations nearby residential area, contractors should arrange suitable time for operation of	Agree



<i>Impacts & location</i>	<i>Mitigation measures from IEE</i>	<i>Mitigation measures implemented</i>	<i>Compliance level</i>	<i>Effectiveness</i>	<i>Impact observed/ location</i>	<i>More action required & responsibilities</i>	<i>Contractor response</i>
					However, noise from vehicles and equipment has not caused any significant impact.	machines and equipment and avoid using equipment with high level of noise.	
	Construction workers will be provided with personal protection.	Construction workers have been provided with personal protection.	2	2	For some special construction locations, workers should use hearing protection devices.	All contractors should provide hearing protection devices for construction workers when workers request.	Agree
Noise pollution from any blasting activities at dam and	Any blasting works will be in accordance with Vietnamese Explosives Act	Contractor contracted with a specialized services provider to implement the rock blasting. According to	1	1		Should be maintained	Agree



<i>Impacts & location</i>	<i>Mitigation measures from IEE</i>	<i>Mitigation measures implemented</i>	<i>Compliance level</i>	<i>Effectiveness</i>	<i>Impact observed/ location</i>	<i>More action required & responsibilities</i>	<i>Contractor response</i>
power tunnel and penstock.		the agreement between these two parties, the specialized services provider has to implement the rock blasting in compliance with QCVN 02:2008/BCT - National technical regulation on safety in the storage, transportation, use and disposal of industrial explosive materials and ensure absolute safety when the rock blasting is performed in the project area.					
	No blasting between dusk	Rock blasting has been carried out in the	1	1		Should be	Agree



<i>Impacts & location</i>	<i>Mitigation measures from IEE</i>	<i>Mitigation measures implemented</i>	<i>Compliance level</i>	<i>Effectiveness</i>	<i>Impact observed/ location</i>	<i>More action required & responsibilities</i>	<i>Contractor response</i>
	& dawn	daytime and not in rest time of workers.				maintained	
	Residents close by will be informed well in advance of blasting schedules	Residents close by will be informed well in advance of blasting schedules	1	2	A number of residents close by have not yet known blasting schedules which were informed to local authorities.	Blasting schedules should be announced to residents close by timely and by various channels such as oral announcement and via local mass media system.	Agree
	Workers associated with blasting sites will be provided with earplugs, helmets & other personal safety devices	Workers associated with blasting sites have been provided helmets & other personal safety devices without earplugs	2	2	Workers were not provided with earplugs.	Contractors should provide earplugs for workers if necessary	Agree



<i>Impacts & location</i>	<i>Mitigation measures from IEE</i>	<i>Mitigation measures implemented</i>	<i>Compliance level</i>	<i>Effectiveness</i>	<i>Impact observed/ location</i>	<i>More action required & responsibilities</i>	<i>Contractor response</i>
Construction of dam, reservoir, tunnel, penstock with loss of vegetation & tree cover.	No trees to be removed without prior approval	Site clearance is conducted only within the site clearance boundary.	1	1		Should be maintained	Agree
	Compensation for lost trees on private land	Affected crops and trees have been measured and compensated.	1	1		Should be maintained	Agree
	Tree planting programme implemented at dam area, tunnel, penstock, temporary construction areas, roads and other elements of the project. Indigenous tree species being accorded priority over exotic species	Tree planting is expected to be performed after all construction activities are completed.	1	1		Tree planting should be carried out in the areas on which all construction activities have been completed. Native plant species are	Agree



<i>Impacts & location</i>	<i>Mitigation measures from IEE</i>	<i>Mitigation measures implemented</i>	<i>Compliance level</i>	<i>Effectiveness</i>	<i>Impact observed/ location</i>	<i>More action required & responsibilities</i>	<i>Contractor response</i>
						prioritized.	
Work force during construction causing impacts to wildlife	Construction workers to be educated on wildlife conservation with no hunting & poaching to be allowed for workers.	Construction workers to be educated on wildlife conservation with no hunting & poaching to be allowed for workers.	1	1		Should be maintained	Agree
Construction activities causing accident and safety risks	All blasting sites will have warning & clearance signals.	Warning signs have been provided in blasting areas; Regulated safety radius is about 500m far from the blasting heart.	1	1		Should be maintained	Agree
	Workers will be provided helmets, masks & safety goggles etc.	Workers have been provided helmets, masks & safety goggles etc.	1	2	A number of workers of Construction No.564 Co., Ltd and Consulting	Contractor supervisors should monitor and remind workers to use	Agree



<i>Impacts & location</i>	<i>Mitigation measures from IEE</i>	<i>Mitigation measures implemented</i>	<i>Compliance level</i>	<i>Effectiveness</i>	<i>Impact observed/ location</i>	<i>More action required & responsibilities</i>	<i>Contractor response</i>
					Construction & Electric power development JSC did not use personal protective equipment. There is no case of occupational safety loss recorded; however, not using personal protective equipment is a potential risk of occupational risk in the future.	personal protective equipment.	
	A readily available first aid unit will be available	Contractors distributed medicines to workers	2	2	No readily available first aid	Require contractor to	Agree



<i>Impacts & location</i>	<i>Mitigation measures from IEE</i>	<i>Mitigation measures implemented</i>	<i>Compliance level</i>	<i>Effectiveness</i>	<i>Impact observed/ location</i>	<i>More action required & responsibilities</i>	<i>Contractor response</i>
	with medicines and dressing materials.	for storage and use.			unit available on site, contractors will contact the nearest health clinic in the locality for first aid in case of incident.	supply the first aid kit in each camp Contractors should contact the nearest health clinic for first aid in case of incident.	
	Road safety education will be given to construction vehicle drivers;	Road safety education will be given to construction vehicle drivers;	1	1		Should be maintained	Agree
	Traffic management will be ensured during road construction periods	Traffic management will be ensured during road construction periods	1	1		Should be maintained	Agree



<i>Impacts & location</i>	<i>Mitigation measures from IEE</i>	<i>Mitigation measures implemented</i>	<i>Compliance level</i>	<i>Effectiveness</i>	<i>Impact observed/ location</i>	<i>More action required & responsibilities</i>	<i>Contractor response</i>
	Information dissemination will take place through the Commune's People's Committee regarding activities causing disruption	Information dissemination will take place through the Commune's People's Committee regarding activities causing disruption	1	1		Should be maintained	Agree
Construction activities causing disruption to Public Utilities	Any public utilities likely to be impacted, such as water supply pipe system, power/phone lines, etc. must be relocated to suitable places, in consultation with local beneficiaries.	The project implementation has not affected public water supply, electric power line and communication line.	1	1			
Any discovery of artifacts or articles of	For all finds of an historic or cultural value, work will be stopped and the find reported to the	For all finds of an historic or cultural value, work will be stopped and the find	1	1	There were no artifacts or articles of historic interest	Project Management Board is responsible for	



<i>Impacts & location</i>	<i>Mitigation measures from IEE</i>	<i>Mitigation measures implemented</i>	<i>Compliance level</i>	<i>Effectiveness</i>	<i>Impact observed/ location</i>	<i>More action required & responsibilities</i>	<i>Contractor response</i>
historic interest and importance	nearest office of the Department Culture, Sport and Tourism or the Department of Culture and Information.	reported to the nearest office of the Department Culture, Sport and Tourism or the Department of Culture and Information.			and importance detected in the project area.	implementing this regulation in case artifacts or articles of historic interest and importance are discovered.	

VI. PHYSICAL ENVIRONMENT MONITORING

6.1. Air and noise

The 1st monitoring of air and noise were conducted on 10 June, 2015. Air and noise samplings are located at dam site (KK1), power house site (KK2) and Dak Ring Bridge (KK3). Sampling locations, parameters and time for air quality monitoring are shown in the following table:

Table 7: Sampling locations, parameters and time for air quality monitoring

Code	KK1	KK2	KK3
Positions	The dam site	The power house site	Dac Ring Bridge – National road 14D
Description	Sample taken in mountainous area where construction is being conducted.	Sample taken in mountainous area where construction is being conducted	Sample taken in sparsely populated mountainous area
Coordinates	107 ⁰ 33'16.655''N, 15 ⁰ 37'50.823''	107 ⁰ 33'22.368''N, 15 ⁰ 38'10.454''	107 ⁰ 33'15.694''N, 15 ⁰ 38'20.956''
Time	09:45am June 10 2015, sunny day	2:10pm June 10 2015, sunny day	4:10pm June 10 2015, sunny day
Parameters	Noise, Total suspended particles (TSP) Particulate matter PM10	Noise, Total suspended particles (TSP) Particulate matter PM10	Noise, Total suspended particles (TSP) Particulate matter PM10
Methodology and analysis standard	Dedicated equipment was used to measure the quality of air in the area. Analysis methodology is based on the Vietnam Standards: 1. TSP, PM10: TCVN 5067- 1995 2. Noise: TCVN 7878 -2: 2010		

The following figure presents locations of air sampling:

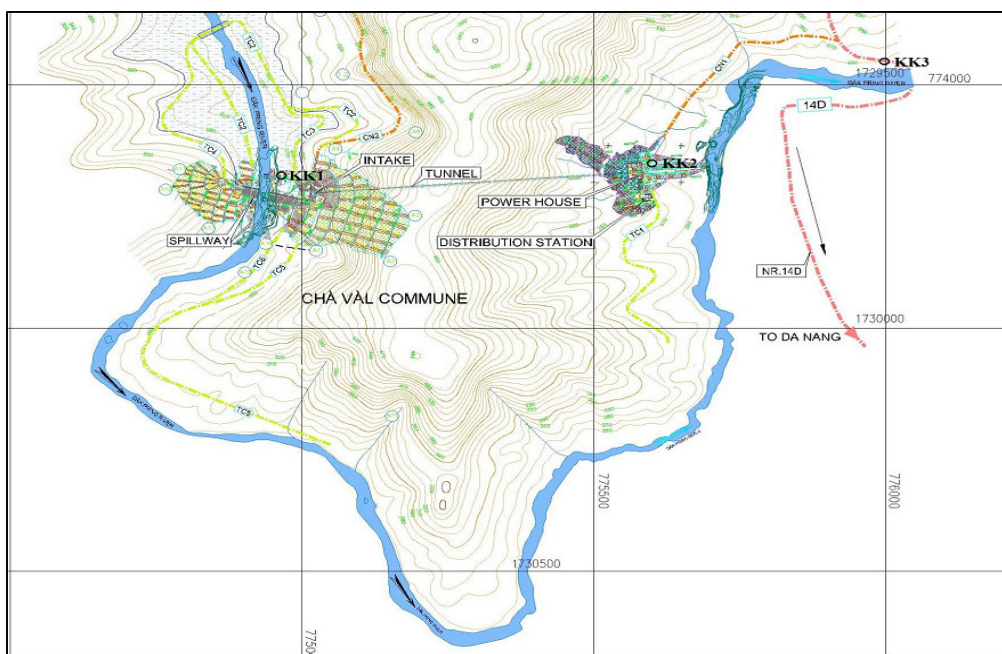


Figure 2: Air sampling locations

Results are analyzed by comparing with Vietnam standard for ambient air quality - QCVN 05:2013/BTNMT and Vietnam standard for noise – QCVN 26:2010/BTNMT which are presented in the table below.

Table 8: Results of Ambient Air Quality Sampling

<i>Parameter</i>	<i>Results</i>	<i>QCVN 05:2013/ BTNMT</i>	<i>Remarks</i>
Total suspended particulates			
KK1	0.01 mg/m ³	≤0.3 mg/m ³	Pass
KK2	< 0.01 mg/m ³		Pass
KK3	0.02 mg/m ³		Pass
PM10			
KK1	< 0.01 mg/m ³	≤ 0.3 mg/m ³	Pass
KK2	< 0.01 mg/m ³		Pass
KK3	< 0.01 mg/m ³		Pass

Table 9: Noise Quality Monitoring

<i>Parameter</i>	<i>Results</i>	<i>QCVN 26:2010/ BTNMT</i>	<i>Remarks</i>
Noise			
KK1	74 dBA	≤70 dBA	Not Pass
KK2	75 dBA		Not Pass
KK3	64 dBA		Pass

Content of TSP and PM10 measured at all sampling positions is within the allowable limit of the QCVN 05:2013/BTNMT. Noise is mainly generated from excavation and transportation of rock and soil and site preparation. Noise level measured at the dam site and the power house site exceeds that of the allowable limit of the QCVN 26:2010/BTNMT. However, the noise level is not much higher than that specified in the allowable limit. Noise level measured at the sampling position on National Road 14D-section nearby Dak Ring Bridge is within the allowable limit of the QCVN 26:2010/BTNMT. In general, construction activities at the time of sampling work did not cause significant impact on ambient air and noise quality.

6.2. Surface water quality

The 1st monitoring of surface water were also implemented on 10 June, 2015. Surface water samplings are located at Dak Pring stream. Sampling locations, parameters and time for surface water quality monitoring are shown in the following table:

Table 10: Sampling positions, parameters, time and analysis standards for surface water quality

<i>Code</i>	<i>NM1</i>	<i>NM2</i>	<i>NM3</i>
Position	Sample taken in Dak Pring stream, 300m far from the dam toward the upstream	Sample taken in the stream section between the dam and the powerhouse	Sample taken in Dak Pring stream - Dak Ring Bridge - 300m far from the power house toward the downstream
Description	Low water level, slow flow, construction is happening	Low water level, slow flow, construction is happening	Low water level, slow flow
Coordinates	107°33'16.655"N, 15°37'50.823"	107°33'22.368"N, 15°38'10.454"	107°33'15.554"N, 15°38'20.955"
Time	09:15am June 10 2015	2:40pm June 10 2015, sunny day	4:15pm June 10 2015, sunny day

Code	NM1	NM2	NM3
Parameters	pH, Turbidity, DO, BOD ₅ , Total lubricant, Coliforms		
Methodology and analysis standard	TCVN 6663 -1:2011 TCVN 6663-1:2008 TCVN 5994: 1995 TCVN 6663-6: 2008		

The following figure indicates locations of surface water sampling.

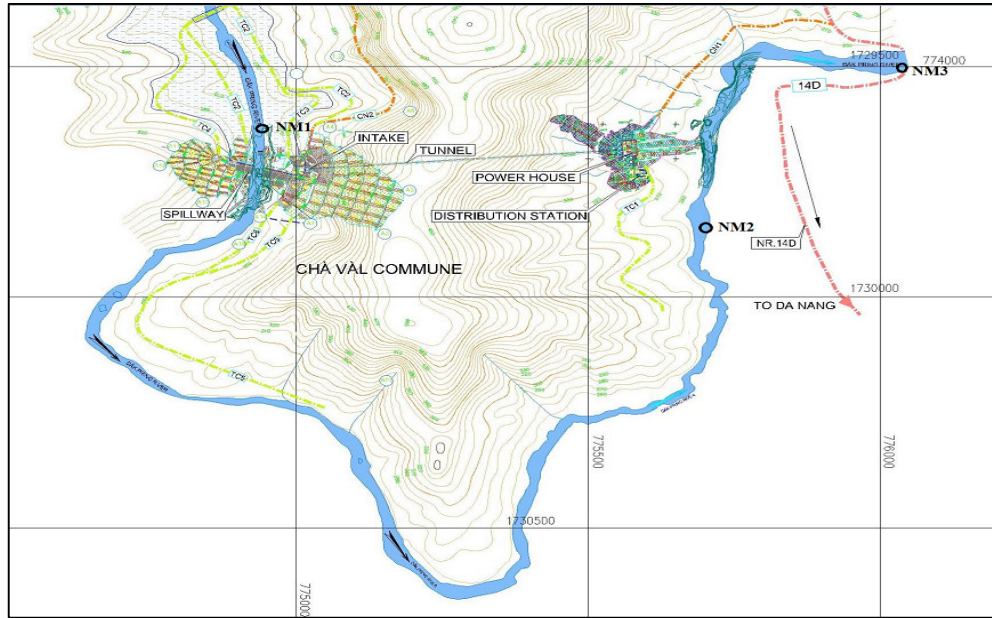


Figure 3: Surface water sampling locations

The analyzed results are compared with Vietnam standard for surface water quality QCVN 08:2008/BTNMT. Results are presented in the table below.

Notes:

- ✓ NM1 sampling station: Unstream of dam
- ✓ NM2 sampling station: The stream section between the dam and the powerhouse
- ✓ NM3 sampling station: Downstream of dam
- ✓ A1 – Use for the purpose of supplying the running water and others purposes as: A2, B1, B2
- ✓ A2 – Use for the purpose of supplying the running water after treating, preserving the aquatic life and others purposes as: B1, B2
- ✓ B1 – Use for the purpose of the irrigation and others purposes as: B2
- ✓ B2 – Use for the purpose of the river traffic and other purposes required the low quality water.



The analysis results of surface water quality show that parameters of pH, BOD₅, and Coliforms are all within the allowable limit of the QCVN 08:2008/BTNMT. Except parameter of lubricant, other parameters all satisfy Column A1 of QCVN 08:2008/BTNMT (use for domestic purposes). Content of total lubricant in all three samples are higher than the allowable limits of QCVN 08:2008: BTNMT.



Table 11: Surface water quality

Parameter	NM1	NM2	NM3	QCVN 08: 2008/BTNMT				Comment
				A1	A2	B1	B2	
pH	7.11	7.62	6.9	6-8.5	6-8.5	5.5-9	5.5-9	Pass
Turbidity (mg/l)	13	24	15	No specified	No specified	No specified	No specified	-
Dissolved oxygen (mg/l)	5.42	4.56	4.52	≥ 6	≥ 5	≥ 4	≥ 2	Pass
BOD ₅ (mg/l)	1.2	1.0	1.0	≤ 4	≤ 6	≤ 15	≤ 25	Pass
Total lubricant (mg/l)	<0.3	0.4	<0.3	≤ 0.01	≤ 0.02	≤ 0.1	≤ 0.3	Not Pass
Coliforms (MPN/100ml)	92	36	30	$\leq 2,500$	$\leq 5,000$	$\leq 7,500$	$\leq 10,000$	Pass

VII. KEY ENVIRONMENTAL ISSUES & ACTIONS

The Dak Pring hydropower project and components are not passing through any wildlife sanctuary or national park. There are no sensitive areas or conuments of cultural and historical importance that is affected by the project activities.

At the 1st monitoring time, there are 04 contractors on site including: (i) Construction No.564 Co., Ltd, (ii) Nghe An Hydraulic Construction No.1 JSC and (iii) Construction No.47 JSC; (iv) Consulting Construction & Electric power development JSC.

Activities performed include: (i) Formation of temporary service roads; (ii) Construction of dam; (iii) Establishment of worker camps and leveling auxiliary areas to prepare for construction of tunnel and intake gate; (iv) Excavation of foundation of powerhouse and suspended substation.

The following are the key issues that were identified during the 1st monitoring (January – June 2015):

1. There is the risk of landslide on the negative steep slope of the access road (at location as about 1km far from dam). Runoff of materials was recorded on access roads to the dam construction site.
2. Equipment and machines of Construction No.564 Co., Ltd and Consulting Construction & Electric power development JSC were gathered in an area with no roof; therefore, leaked fuel was run-off by rainwater and infiltrate into soil.
3. Water spraying and covering materials during transportation and formation of access roads have not implemented by contractors.
4. Analysis results show that content of total lubricant in DakPring stream water is higher than that of the allowable limit as per QCVN 08:2008/BTNMT due to oil leaking from material delivery vehicles when crossing the stream and vehicle wash in the stream at dam site.
5. Solid waste littering occurred in some construction locations. Waste rock was not collected and was scattered along access road to dam site.
6. Blasting schedules were not disclosed widely to all residents and there were some cases where workers did not use personal protective equipment while working on site.
7. A number of workers did not use personal protective equipment. There is no case of occupational safety loss recorded; however, not using personal protective equipment is a potential risk of occupational risk in the future.
8. No readily available first aid unit available on site, contractors will contact the nearest health clinic in the locality for first aid in case of incident.

Table below summarizes the follow-up actions and the timeframe for implementation:

Table 12: Environmental issues and follow-up actions required

<i>Follow-up actions required</i>	<i>Timeframe</i>	<i>Responsible parties</i>	<i>Reporting to</i>
Landslide of the steep slope of access road and the runoff of materials	Immediately	Construction No.564 Co., Ltd	Construction supervision officer CGC
Contractors need to gather equipment and fuel in an airy area with roof.	Immediately	Construction No.564 Co., Ltd Consulting Construction & Electric power development JSC	Construction supervision officer CGC
Regular water spraying on delivery roads, especially intersection with National Highway 14D	From July, 2015	Construction No.564 Co., Ltd	Construction supervision officer CGC
Prevent oil leaking from delivery to the stream	Immediately	Contractors conducting materials delivery	Construction supervision officer CGC
Daily collection, classification for proper recycling and burying of workers' solid waste	From July, 2015	All contractors	Construction supervision officer CGC
Blasting schedules must be informed publicly to residents close by the Project area.	From July, 2015	Construction No.564 Co., Ltd Middle Central Area Mining Chemical Industry Company Chaval Commune People's Committee	Construction supervision officer CGC
Remind workers to use personal protective equipment.	Immediately	Contractors	Construction supervision officer CGC

<i>Follow-up actions required</i>	<i>Timeframe</i>	<i>Responsible parties</i>	<i>Reporting to</i>
Supply the first aid kit in the each camps	Immediately	Contractors	Construction supervision officer CGC

VIII. ENVIRONMENTAL MONITORING SCHEDULE

Environmental monitoring visit is conducted every 6 months. Monitoring of surface water and air quality is implemented every 3 months. Schedule for the environmental monitoring visits during the construction phase is presented in table below:

Table 13: Environmental monitoring schedule

Activities	Month											
	1	2	3	4	5	6	7	8	9	10	11	12
2015												
Preparation of the inception report												
The 1 st environmental monitoring												
Monitoring of air and surface water quality												
The 2 nd environmental monitoring												
2016												
Monitoring of air and surface water quality												
The 3 rd environmental monitoring												
The 4 th environmental monitoring												
2017												
Monitoring of air and surface water quality												
The 5 th environmental monitoring												

As per the schedule above, the 2nd environmental monitoring will be carried out in December 2015. During the time between two monitoring visits (the first and the second), there is one monitoring visit of surface water and air quality to be conducted in September 2015.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Up to the 1st environmental monitoring time (June 2015), the main construction activities in two construction sites include leveling, reinforcement and site preparation for construction of the dam, headrace tunnel and the power house. Regarding construction of the two access roads, excavation has mostly reached the design level and soil compaction has been completed. It is expected that the construction of the roads will be completed in October, 2015. The following conclusions are drawn from the 1st monitoring results:

In terms of implementation of the environmental management plan, some lapses of the contractor were noted such as:

- Risk of the landslide and runoff of materials
- Water spraying and covering materials have not been implemented
- Oil leaking runs off to the stream
- Blasting schedules were not disclosed widely
- A number of workers did not use personal protective equipment
- There are no available first aid kit on site.

The contractors were notified about these lapses in the implementation of EMP, to which they immediately agreed to implement.

As of June 30th, 2015, the contractor implemented the following measures:

- Clean up materials near of stream sides
- Spray water and cover materials when transporting
- Decrease oil leaking from vehicles by maintaining, washing vehicles regularly, cleaning up oil leaking
- Inform the blasting schedules to Government, local people
- Require all of workers to use personal protection
- Supply some first aid kit on site but not enough, and the quality, quantity of medicine in that are not good


Environmental quality:

- *Air quality:* At the time of the 1st environmental monitoring, impact on the air quality is mainly noise generated from construction activities: (i) Noise level measured in the dam site and the power house site exceeds the allowable limit of the QCVN 26:2010/BTNMT; (ii) Content of total suspended particles, particulate matter PM10 at sampling positions met the allowable limits of the QCVN 05:2013/BTNMT.

- *Surface water quality:* Samples of surface water were taken in the upstream and the downstream of the dam and the stream section between the dam and the power house. Parameters of pH, BOD₅ and Coliforms were all within the allowable limits of the QCVN 08:2008/BTNMT. Parameter of DO in one out of three surface water samples position meets the allowable limit of the QCVN 08:2008/BTNMT. Content of total lubricant in three samples was higher than that of the allowable limit of the QCVN 08:2008/BTNMT. The analysis results of total lubricant prove that there is a sign of lubricant pollution in the Dak Pring stream. The reason for sign of lubricant pollution is lubricant leaked from transporting vehicles crossing the stream and vehicles wash at the stream at the dam site.
- *Erosions and landslides:* Erosions happened on the access roads to the dam site and the power house site. Erosion on negative talus has not affect worker's safety and the project construction activities.


Appendix 1: Results of environmental quality analysis

Air and noise



SỞ TÀI NGUYÊN & MÔI TRƯỜNG TP. ĐÀ NẴNG
TRUNG TÂM KỸ THUẬT MÔI TRƯỜNG
 DANANG DEPARTMENT OF NATURAL RESOURCES & ENVIRONMENT
 DANANG ENVIRONMENT ENGINEER CENTER

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 Email : tikmt@danang.gov.vn
 Web : http://www.deec.vn



Số/No: 109-DVK/TKM

Ngày/date: 19/6/2015

PHIẾU KẾT QUẢ THỬ NGHIỆM

(TEST REPORT)

(Phiếu kết quả này không được lập lại nếu không có sự đồng ý bằng văn bản của PTN)
 (This test report will not be reproduced without the written approval of Laboratory)

1. Tên mẫu (Name of sample): **KHÍ (AIR)**

2. Ký hiệu mẫu (Mark of sample): **K₁, K₂, K₃**

3. Số lượng mẫu (Quantity): **03**

4. Ngày nhận mẫu (Receiving date): **12/6/2015**

5. Ngày phân tích (Analysing date): **12-18/6/2015**

6. Khách hàng (Client): **Thủy điện Đak Pring (Dak Pring Hydropower Project)**

7. Địa chỉ (Address): **Xã ChaVal, Nam Giang, Quảng Nam (ChaVal Commune, Nam Giang District, Quang Nam Province)**

8. Kết quả thử nghiệm (Test results):

STT (Order)	Tên chỉ tiêu (Characteristics)	ĐV tính (Unit)	PP thử -Tbị (Test methods)	Kết quả (Test results)		
				K ₁	K ₂	K ₃
1	Tiếng ồn (Noise)	dBA	TCVN 7878 - 2:2010	74	75	64
2	Bụi tổng (TSP)	mg/m ³	TCVN 5067:1995	0,01	< 0,01	0,02
3	Bụi PM10 (TSP PM10)	mg/m ³	40 CFR Part 50 Appendix J	< 0,01	< 0,01	< 0,01

Ghi chú (Notes):


K₁: Mẫu khí lấy tại khu vực tuyến đập nhà máy Thủy điện.
 Sample taken at the dam site

K₂: Mẫu khí lấy tại khu vực nhà máy Thủy điện.
 Sample taken at the powerhouse

K₃: Mẫu khí lấy tại Quốc lộ 14D - khu vực cầu Đắc Ring
 Sample taken at National Road 14D- near Dac Ring Bridge


- Thông tin chi tiết về tình trạng mẫu thể hiện trong Biên bản lấy mẫu kèm theo.
 Details of these samples are shown in the Minutes of Sampling attached herein.

TRẠM TRƯỞNG
TRẠM QUAN TRẮC VÀ PHÂN TÍCH
 Head of Monitoring Station.




Trần Đình Sơn

GIÁM ĐỐC
 Director




Nguyễn Văn Anh

Surface water



SỞ TÀI NGUYÊN & MÔI TRƯỜNG TP. ĐÀ NẴNG
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Số/No: 109-DVN/TKM

Ngày/date: 19/6/2015

PHIẾU KẾT QUẢ THỬ NGHIỆM (TEST REPORT)

(Phiếu kết quả này không được lập lại nếu không có sự đồng ý bằng văn bản của PTN)
 (This test report will not be reproduced without the written approval of Laboratory)

1. Tên mẫu (Name of sample): **NƯỚC MẶT (SURFACE WATER)**
2. Ký hiệu mẫu (Mark of sample): **NM₁, NM₂, NM₃**
3. Số lượng mẫu (Quantity): **03**
4. Ngày nhận mẫu (Receiving date): **12/6/2015**
5. Ngày phân tích (Analysing date): **12-18/6/2015**
6. Khách hàng (Client): **Thủy điện Đak Pring (Đak Pring Hydropower Project)**
7. Địa chỉ (Address): **Xã ChaVal, Nam Giang, Quảng Nam (ChaVal Commune, Nam Giang District, Quang Nam Province)**
8. Kết quả thử nghiệm (Test results):

STT (Order)	Tên chỉ tiêu (Characteristics)	ĐV tính (Unit)	PP thử -Tbị (Test methods)	Kết quả (Test results)		
				NM ₁	NM ₂	NM ₃
1	pH	-	TCVN 6492:2011	7,11	7,62	6,9
2	Độ đục (Turbidity)	mg/L	TOA WQC 22A	13	24	15
3	DO	mg/L	TCVN 7325:2004	5,42	4,56	4,52
4	BOD _{5(°)}	mg/L	TCVN 6001 - 1:2008	1,2	1,0	1,0
5	Tổng dầu, mỡ (Total Lubricant)	mg/L	SMEWW 5520B:2012	< 0,3	0,4	< 0,3
6	Coliforms _(*)	MPN/100mL	TCVN 6187-2:1996	92	36	30

Ghi chú:

NM₁: Mẫu nước sông Đak Pring, cách tuyến đập khoảng 300m về phía thượng lưu.
 Surface water sample taken from Dak Pring River, 300m from the dam site toward upstream


NM₂: Mẫu nước sông Đak Pring giữa đập và nhà máy.
 Surface water sample taken from Dak Pring River, section between the dam and the powerhouse

NM₃: Mẫu nước sông Đak Pring tại cầu Đắc Ring, cách nhà máy khoảng 300m về phía hạ lưu.
 Surface water sample taken from Dak Pring River, at Dac Ring Bridge, 300m toward downstream


(*) : Các chỉ tiêu được công nhận theo ISO/IEC 17025:2005 (VILAS 222)
 Criteria are approved as ISO/IEC 17025:2005 (VILAS 222)



- Thông tin chi tiết về tình trạng mẫu thể hiện trong Biên bản lấy mẫu kèm theo.
 Details of these samples are shown in the Minutes of Sampling attached herein.

TRẠM QUẢN TRẮC VÀ PHÂN TÍCH
 Head of Monitoring Station.

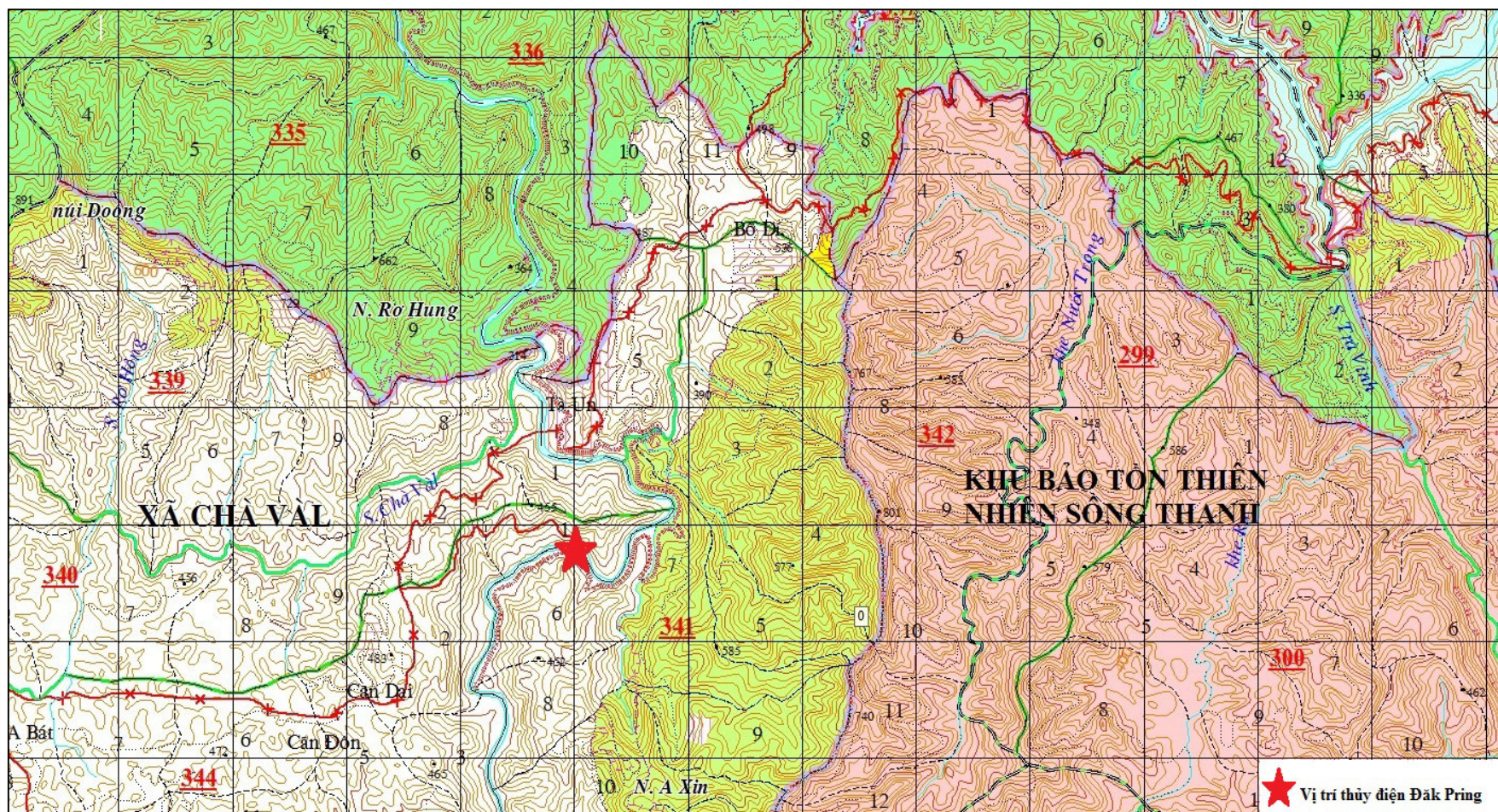


GIÁM ĐỐC
 Director



Appendix 2: Project location map – the project is located outside Song Thanh Nature Reserve



Appendix 3: Project documents***Decision on approval of the Environmental Impact Assessment Report for the Project***

BẢN SAO

ỦY BAN NHÂN DÂN
TỈNH QUẢNG NAM

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

Số 400 /QĐ-UBND

Quảng Nam, ngày 19 tháng 12 năm 2013

QUYẾT ĐỊNH

Phê duyệt Báo cáo đánh giá tác động môi trường của Dự án thủy điện Đăk Pring tại xã Chà Vål, huyện Nam Giang, tỉnh Quảng Nam

ỦY BAN NHÂN DÂN TỈNH QUẢNG NAM

Căn cứ Luật Tổ chức HĐND và UBND ngày 26/11/2003;
Căn cứ Luật Bảo vệ môi trường ngày 29/11/2005;
Căn cứ Nghị định số 29/2011/NĐ-CP ngày 18/4/2011 của Chính phủ quy định về đánh giá môi trường chiến lược, đánh giá tác động môi trường, cam kết bảo vệ môi trường;
Căn cứ Thông tư số 26/2011/TT-BTNMT ngày 18/7/2011 của Bộ Tài nguyên và Môi trường quy định chi tiết một số điều của Nghị định số 29/2011/NĐ-CP ngày 18/4/2011 của Chính phủ quy định về đánh giá môi trường chiến lược, đánh giá tác động môi trường, cam kết bảo vệ môi trường;
Theo đề nghị của Giám đốc Sở Tài nguyên và Môi trường tại Tờ trình số 297/TTr-STNMT ngày 11 tháng 12 năm 2013 và hồ sơ kèm theo,

QUYẾT ĐỊNH:

Điều 1. Phê duyệt nội dung Báo cáo đánh giá tác động môi trường Dự án thủy điện Đăk Pring tại xã Chà Vål, huyện Nam Giang của Ban quản lý Dự án điện nông thôn Miền Trung (sau đây gọi là Chủ Dự án) với các nội dung chủ yếu như sau:

1. Phạm vi, quy mô của Dự án:

a) Phạm vi: Dự án thủy điện Đăk Pring có tổng diện tích khoảng 71 07 (theo Thông báo số 355/TB-UBND ngày 27/9/2013 của UBND tỉnh về chủ trương thu hồi đất để thực hiện dự án Nhà máy thủy điện Đăk Pring tại xã Chà Vål, huyện Nam Giang); giới hạn được xác định:

- Phía Đông: giáp xã Tà Bình, huyện Nam Giang;
- Phía Tây: giáp xã La ÊÊ, huyện Nam Giang;
- Phía Bắc: giáp xã Zuôih, huyện Nam Giang;
- Phía Nam: giáp xã Đăk Pring, Đăk Pree, huyện Nam Giang.

b) Quy mô (Theo Quyết định số 1422/QĐ-EVNCPC ngày 04/4/2013 của Tổng Công ty Điện lực miền Trung), dự án có một số thông số chính như sau:

- Diện tích lưu vực F_h : 296 km²;
- Công suất lắp máy N_{lm} : 7,5 MW;
- Số tổ máy: 02

- Số giờ sử dụng công suất lắp máy: 4.060 h;
- Điện năng trung bình năm E_{tb}: $30,45.10^6$ kWh;
- Mức nước dâng bình thường MNDBT: 287 m;
- Mức nước chết: 286 m;
- Mức nước già cưa: 295,98 m;
- Dung tích hồ chứa: $3,22.10^9$ m³;
- Dung tích hữu ích: $0,36.10^9$ m³;
- Diện tích mặt hồ ứng với MNDBT: 0,36 km².

2. Yêu cầu bảo vệ môi trường đối với dự án: Chủ Dự án có trách nhiệm thực hiện những nội dung đã được nêu trong Báo cáo đánh giá tác động môi trường đã được phê duyệt và những yêu cầu bắt buộc sau:

a) Xây dựng phương án và tổ chức giám sát chặt chẽ việc chặt hạ cây trong khu vực lòng hồ, khu vực xây dựng các hạng mục công trình của Dự án được cấp thẩm quyền giao đất; có biện pháp phối hợp với kiểm lâm và chính quyền địa phương trong việc quản lý đội ngũ công nhân thi công xây dựng Dự án nhằm ngăn chặn các hành vi phá rừng, săn bắt động vật hoang dã trong và xung quanh khu vực thực hiện Dự án và các vùng phụ cận giáp với vùng thực hiện Dự án;

b) Xây dựng phương án thu dọn lòng hồ, phương án xử lý chất độc OB trình Sở Tài nguyên và Môi trường thẩm định và phê duyệt; Hợp đồng với đơn vị chức năng tiến hành rà phá bom mìn, chất độc hóa học chiến tranh còn tồn lưu trước khi tích nước;

c) Phải đảm bảo dòng chảy tối thiểu, thực hiện chế độ điều tiết dòng chảy, bảo đảm nhu cầu sử dụng nước và bảo vệ môi trường sinh thái cho đoạn sông sau cửa xả nhà máy và vùng hạ du sau đập Thủy điện Đăk Pring, đặc biệt là đoạn sông chết sau đập theo quy định tại Nghị định 112/2008/NĐ-CP ngày 20/10/2008 về quản lý, bảo vệ, khai thác tổng hợp tài nguyên và môi trường các hồ chứa thủy điện, thủy lợi và Nghị định số 120/2008/NĐ-CP ngày 01/12/2008 về quản lý lưu vực sông;

d) Phối hợp với chính quyền địa phương thực hiện công tác giải phóng mặt bằng theo đúng quy định hiện hành; quy hoạch, bố trí các lán trại công nhân, kho tàng chứa nguyên vật liệu, bãi chứa chất thải những nơi phù hợp, bảo đảm các yêu cầu về an toàn và bảo vệ môi trường;

e) Thực hiện đầy đủ các biện pháp nhằm giảm thiểu các tác động tiêu cực đến chất lượng không khí, tiếng ồn trong quá trình thi công và vận hành công trình, đảm bảo xử lý đạt Quy chuẩn Việt Nam về tiếng ồn như cam kết trong Báo cáo đánh giá tác động môi trường nhằm hạn chế các tác động bất lợi đến hệ động thực vật khu vực xung quanh;

f) Thu gom, xử lý chất thải rắn sinh hoạt và các loại chất thải rắn xây dựng trong quá trình thi công xây dựng công trình, bảo đảm các yêu cầu về vệ

RẮN SẠO

sinh môi trường hiện hành, an toàn trong và sau khi đóng cửa, đảm bảo nước hồ sau khi tích nước không bị ô nhiễm;

g) Tuân thủ các quy định hiện hành về an toàn thi công và phòng chống cháy nổ; lập kế hoạch an toàn thi công, ứng cứu sự cố và bảo đảm ứng phó kịp thời các sự cố xảy ra; tiến hành công tác kiểm tra an toàn và thông báo cho các đơn vị liên quan, cộng đồng dân cư ở khu vực thượng và hạ lưu biết để phối hợp ứng cứu khi xảy ra sự cố;

h) Thực hiện đầy đủ chương trình giám sát môi trường như đã nêu trong Báo cáo đánh giá tác động môi trường, báo cáo kết quả giám sát môi trường cho Sở Tài nguyên và Môi trường, Phòng Tài nguyên và Môi trường huyện Nam Giang để theo dõi, quản lý. Số liệu giám sát phải được cập nhật đầy đủ và lưu giữ làm cơ sở để cơ quan quản lý nhà nước kiểm tra, đánh giá diễn biến về chất lượng môi trường của khu vực Dự án;

i) Lập, phê duyệt và niêm yết công khai kế hoạch quản lý môi trường của Dự án tại UBND xã Chà Vål, trong đó chỉ rõ: chủng loại, khối lượng các loại chất thải; công nghệ, thiết bị xử lý chất thải; mức độ xử lý theo các thông số đặc trưng của chất thải so với quy chuẩn quy định; các biện pháp khác về bảo vệ môi trường; nghiêm túc thực hiện các yêu cầu về bảo vệ môi trường trong giai đoạn chuẩn bị đầu tư và giai đoạn thi công xây dựng Dự án;

k) Thiết kế chi tiết và xây lắp các công trình xử lý môi trường theo đúng quy định hiện hành về đầu tư và xây dựng công trình; lập hồ sơ đề nghị kiểm tra, xác nhận việc đã thực hiện các công trình, biện pháp bảo vệ môi trường phục vụ giai đoạn vận hành của Dự án gửi cơ quan có thẩm quyền để kiểm tra, xác nhận trước khi đưa dự án vào vận hành chính thức theo quy định tại Thông tư số 26/2011/TT-BTNMT ngày 18 tháng 7 năm 2011 của Bộ Tài nguyên và Môi trường quy định chi tiết một số điều của Nghị định số 29/2011/NĐ-CP ngày 18 tháng 4 năm 2011 của Chính phủ quy định về đánh giá môi trường chiến lược, đánh giá tác động môi trường, cam kết bảo vệ môi trường.

Điều 2. Báo cáo đánh giá tác động môi trường của Dự án thủy điện Đak Pring tại xã Chà Vål, huyện Nam Giang, tỉnh Quảng Nam được phê duyệt tại quyết định này là cơ sở để các cơ quan quản lý nhà nước có thẩm quyền kiểm tra, kiểm soát việc thực hiện công tác bảo vệ môi trường của Dự án.

Điều 3. Trong quá trình thực hiện nếu Dự án có những thay đổi so với các khoản 1 và 2 Điều 1 của quyết định này, Chủ dự án phải có văn bản báo cáo UBND tỉnh Quảng Nam, Sở Tài nguyên và Môi trường và chỉ được thực hiện những nội dung thay đổi sau khi được UBND tỉnh Quảng Nam phê duyệt.

Điều 4. Giao Sở Tài nguyên và Môi trường chủ trì, phối hợp với UBND huyện Nam Giang, UBND xã Chà Vål thường xuyên kiểm tra, giám sát việc thực hiện các nội dung và các biện pháp bảo vệ môi trường trong Báo cáo đánh giá tác động môi trường đã được phê duyệt và các yêu cầu nêu tại Điều 1 của quyết định này.

Điều 5. Chánh Văn phòng UBND tỉnh, Giám đốc các Sở: Tài nguyên và Môi trường, Công Thương, Nông nghiệp và Phát triển nông thôn, Kế hoạch và Đầu tư, Xây dựng; Chủ tịch UBND huyện Nam Giang; Chủ tịch UBND xã Cha Vải, Giám đốc Ban quản lý Dự án điện nông thôn Miền Trung, thủ trưởng các đơn vị và cá nhân có liên quan có trách nhiệm thi hành quyết định này.

Quyết định này có hiệu lực kể từ ngày ký. *h*

Nơi nhận:

- Như diện 5;
- PCT TT Nguyễn Ngọc Quang;
- LĐVP;
- PC 49 CA tỉnh;
- Lưu: VT, KTN.

**TM. ỦY BAN NHÂN DÂN
KT. CHỦ TỊCH
PHÓ CHỦ TỊCH**



Nguyễn Ngọc Quang

Quyết định phê duyệt Báo cáo ĐTM này đã được đăng ký Nhà nước tại Sở Tài nguyên và Môi trường Quảng Nam.

Số đăng ký: 20 ĐK/ĐTM ngày 19 tháng 12 năm 2013.

SỞ TÀI NGUYÊN VÀ MÔI TRƯỜNG

**KT. GIÁM ĐỐC
PHÓ GIÁM ĐỐC**

**CHỨNG THỰC
BẢN SAO DÙNG VỚI BẢN CHÍNH**

Ngày: 19/02/14

Số: 7/2014 Quyển số: 7

UBND P. HÒA THUAN ĐÔNG
Q. BÀ CHAU, TP. ĐÀ NẴNG



**KT. CHỦ TỊCH
PHÓ CHỦ TỊCH**

Nguyễn Ngọc Dũng

Nguyễn Khoa Diệu Thanh



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QUANG NAM PROVINCIAL
PEOPLE'S COMMITTEE

SOCIALIST REPUBLIC OF VIETNAM
Independence – Freedom – Happiness

No. 4000 QĐ/UBND

Quang Nam, 19 December, 2013

DECISION ON

Approval of Environmental Impact Assessment Report of Dak Pring Hydropower Project in Cha Val Commune, Nam Giang District, Quang Nam Province

QUANG NAM PROVINCIAL PEOPLE'S COMMITTEE

Pursuant to Law on Organization of People's Councils and People's Committee, dated 26/11/2013

Pursuant to Law on Environmental Protection, dated 29/11/2005

Pursuant to Government's Decree No. 29/2011/NĐ-CP providing strategic environmental assessment, environmental impact assessment and environmental protection commitment

Pursuant to Circular No. 26/2011/TT-BTNMT, dated 18/07/2011 by MONRE detailing a number of articles of the Government's Decree No. 29/2011/ND-CP of 8 April 2011 on strategic environmental assessment, environmental impact assessment and environmental protection commitment

Pursuant to proposal of the Director of Quang Nam Department of Natural Resources and Environment under Submission No. 297/TTr-STNMT, dated 11/12/2013 and attached documents.

DECIDES

Article 1. Approval of Environmental Impact Assessment Report of Dak Pring Hydropower Project in Cha Val Commune, Nam Giang District, Quang Nam Province of the Central Rural Electricity Project Management Board (hereinafter referred to as the Project Investor).

Article 2. Requirements on environmental protection for the Project: The Project investor has responsibility to take all measures envisaged in the approved EIA report and the following involuntary actions:

- a) Planning and close monitoring of cutting down trees within reservoir bed, construction sites of the Project that were allocated by competent agencies; Cooperation with forest rangers and local authorities in management of construction workers to prevent workers from deforestation, hunting and poaching within and surrounding the project area and in its vicinity;

- b) Preparing reservoir clearance plan, OB toxic substance treatment plan to submit to DONRE for appraisal and approval; Contracting a specialized unit for bomb, mine and explosive ordnances before conducting water retaining;
- c) Ensuring minimum flow, regulating flow, ensuring demand of water use and protection of ecological environment for the river section behind discharge gate of powerhouse and downstream area behind the dam of Dak Pring Hydropower Plant, especially dry river section behind the dam in accordance with Decree No. 112/2008/NĐ-CP, dated 20/10/2008 on management, protection and integrated exploitation of resources and environment of hydropower and irrigation reservoirs and Decree No. 120/2008/NĐ-CP, dated 01/12/2008 on river basin management.
- d) Cooperation with local government in site clearance performance in compliance with current regulations; planning and arrangement of worker camps, materials storages, waste disposal sites satisfying requirements on safety and environmental protection;
- e) Meaningful implementation of mitigation measures for negative impacts on air quality, noise during construction and operation to ensure compliance with Vietnam National Technical Regulation on noise as committed in EIA report to minimize negative impacts on flora in surrounding areas.
- f) Collection and treatment of domestic and construction solid wastes in compliance with current regulations on environmental hygiene and safety during and after closing the reservoir to ensure reservoir water is not polluted.
- g) Compliance with current regulations on work safety and fire and explosion prevention and fighting, preparation of plan on work safety and response to incidents; inspection of safety and inform relevant stakeholders and residents in the upstream and downstream areas to coordinate in responding to incidents;
- h) Adequate implementation of environmental monitoring as envisaged in EIA report, reporting results of environmental monitoring to Department of Natural Resources and Environment of Quang Nam Province and Division of Natural Resources and Environment of Nam Giang District for monitoring and management. Monitoring data must be updated and stored and considered as the basis for state agencies to inspect and assess environmental quality in the project area.
- i) Preparation, approval and posting environmental management plan of the Project at Cha Val CPC office, specifying type and quantity of wastes; waste treatment technology and equipment; treatment level according to specific parameters vis-à-vis allowable limits of regulations; other environmental protection measures; meaningfully implementation of requirements on environmental protection in preparation and construction phases of the Project.
- j) Designing and forming environmental treatment works in accordance with current regulations on work investment and construction; preparation of documents on proposals on inspection and confirmation of completion of works and measures for environmental protection in operation phase to submit to respective competent agency before the Project is officially put into operation as per Circular No.

26/2011/TT-BTNMT, dated 18/07/2011 by MONRE, detailing a number of articles of the Government's Decree No. 29/2011/ND-CP of 8 April 2011 on strategic environmental assessment, environmental impact assessment and environmental protection commitment.

Article 2. EIA report of Dak Pring Hydropower Project in Cha Val Commune, Nam Giang District, Quang Nam Province approved under this decision is the basis for competent State agencies to inspect and control the implementation of environmental protection of the Project.

Article 3. During implementation, if any changes compared to Clauses 1 and 2 of Article 1 of this decision arise, Project investor has to report to Quang Nam PPC and Quang Nam DONRE in writing and no change to be happened without prior approval of Quang Nam PPC.

Article 4. Quang Nam DONRE was assigned to preside over and cooperate with Nam Giang DPC, Cha Val CPC to examine and monitor the implementation of environmental protection measures envisaged in the approved EIA report and requirements under Articles of this decision.

Article 5. Chief of PPC Office, Director of Departments of Natural Resources and Environment, Industry and Trade, Agriculture and Rural Development, Investment and Planning, Construction, Nam Giang DPC Chairman, Cha Val CPC Chairman, Director of the Central Rural Electricity Project Management Board, Head of relevant units and individuals are responsible for implementation of this decision.

This decision takes effect as from the date of signing.

Receivers:
As aforesaid in Article 5.
Saved in office

ON BEHALF OF PEOPLE'S COMMITTEE
PP. CHAIRMAN
DEPUTY CHAIRMAN
Signed and sealed

Nguyen Ngoc Quang

Confirmation of completion of site clearance and compensation payment

UBND HUYỆN NAM GIANG
TRUNG TÂM PHÁT TRIỂN
QUỸ ĐẤT
Số: 23/XNHTGPMB

CỘNG HÒA XÃ HỘI CHỦ NGHĨA VIỆT NAM
Độc lập - Tự do - Hạnh phúc
Nam Giang, ngày 31 tháng 12 năm 2014

XÁC NHẬN
HOÀN THÀNH BỒI THƯỜNG GIẢI PHÓNG MẶT BẰNG
Công trình: Thủy điện Đăk Pring
Địa điểm: Xã Chà Vål, huyện Nam Giang, tỉnh Quảng Nam

Kính gửi: Ban Quản lý dự án Điện nông thôn miền Trung

Căn cứ văn bản số 224/CV-UBND ngày 07/5/2013 của UBND huyện Nam Giang về việc chấp thuận phương án tổng thể về bồi thường, hỗ trợ và tái định cư dự án nhà máy thủy điện Đăk Pring;



Căn cứ các Quyết định từ số 2057/QĐ-UBND đến số 2108/QĐ-UBND ngày 04/9/2014, các quyết định từ số 2277/QĐ-UBND đến số 2318/QĐ-UBND ngày 18/9/2014 của UBND huyện Nam Giang về việc thu hồi đất của hộ gia đình, cá nhân để thực hiện dự án nhà máy thủy điện Đăk Pring, hạng mục khu đầu mối, đường thi công vận hành, khu nhà máy, lòng hồ và đường dây truyền tải, cấp điện thi công 35KV;

Căn cứ các Quyết định số 2348/QĐ-UBND ngày 30/9/2014, số 2393/QĐ-UBND ngày 15/10/2014 và số 2834/QĐ-UBND ngày 09/12/2014 của UBND huyện Nam Giang về việc phê duyệt phương án bồi thường, hỗ trợ và giải phóng mặt bằng công trình thủy điện Đăk Pring, hạng mục: Đường thi công kết hợp quản lý vận hành, cụm đầu mối, khu nhà máy, lòng hồ và đường dây truyền tải, cấp điện thi công 35KV;

Ban Quản lý dự án Điện nông thôn miền Trung đã phối hợp cùng Trung tâm Phát triển quỹ đất huyện Nam Giang, UBND xã Chà Vål đã thực hiện xong việc chi trả tiền bồi thường, hỗ trợ cho các hộ gia đình, cá nhân bị ảnh hưởng bởi dự án nhà máy thủy điện Đăk Pring theo các Quyết định đã phê duyệt.

Trung tâm Phát triển quỹ đất huyện Nam Giang xác nhận Ban QLDA thực hiện xong công tác chi trả tiền bồi thường, hỗ trợ cho các hộ dân bị ảnh hưởng, hoàn thành công tác bồi thường giải phóng mặt bằng cho tất cả các hạng mục thuộc dự án nhà máy thủy điện Đăk Pring tại xã Chà Vål, huyện Nam Giang, tỉnh Quảng Nam để làm cơ sở cho Ban QLDA Điện nông thôn miền Trung thực hiện các bước tiếp theo.

Nơi nhận:
- Như trên;
- UBND huyện (b/c);
- Lưu TTPTQĐ;

GIÁM ĐỐC


NGUYỄN CÔNG BÌNH



**NAM GIANG DISTRICT PEOPLE'S
COMMITTEE
CENTER FOR LAND FUND
DEVELOPMENT**

**SOCIALIST REPUBLIC OF VIETNAM
Independence – Freedom – Happiness**

No.:23/XNHTGPMB

Nam Giang, 31 December, 2014

**CONFIRMATION OF
COMPLETION OF SITE CLEARANCE AND COMPENSATION PAYMENT**

Project: Dak Pring Hydropower Project

Location: Cha Val Commune, Nam Giang District, Quang Nam Province

To: Central Rural Electricity Project Management Board

Pursuant to Letter no. 224/CV-UBND dated 07/05/2013 by Nam Giang District People's Committee on approval of overall compensation, assistance and resettlement plan for Dak Pring Hydropower Project;

Pursuant to Decisions from no. 2057/QD-UBND to no.2108/QD-UBND, dated 04/09/2014, Decisions from no. 2277/QD-UBND to no. 2318/QD-UBND dated 18/09/2014 by Nam Giang DPC on acquisition of land of households, individuals for implementation of Dak Pring Hydropower Plant, head works, access roads, power house, reservoir and 35kV transmission line;

Pursuant to Decisions no. 2348/QD-UBND dated 30/09/2014, no.2393/QD-UBND dated 15/10/2014 and no.2834/QD-UBND dated 09/12/2014 by Nam Giang DPC, approving detailed compensation and assistance plan for Dak Pring Hydropower Project, components: access roads, head works, powerhouse, reservoir, 35kV transmission line;

The Central Rural Electricity Project Management Board cooperated with Center for Land Fund Development of Nam Giang District, and Cha Val CPC to complete compensation and assistance payment to households and individuals affected by Dak Pring Hydropower Project as per approval decisions.

Center for Land Fund Development of Nam Giang District has confirmed that Project Management Board completed compensation and assistance payment to affected households and individuals and site clearance for all project components in Cha Val Commune, Nam Giang District, Quang Nam Province which is the basis for the Central Rural Electricity Project Management Board to take next steps.

Receivers:

- As aforementioned;
- DPC (to report);
- Saved by DCLFD;

DIRECTOR

Signed and sealed

NGUYEN CONG BINH

Announcement about site safe and free from bomb and explosive ordnances

BỘ TƯ LỆNH QUÂN KHU 5
CÔNG TY TNHH MTV
ĐẦU TƯ XÂY DỰNG VẠN TƯỜNG

Số: 1075/TB-CT

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

Đà Nẵng, ngày 29 tháng 9 năm 2014

**THÔNG BÁO AN TOÀN
MẶT BẰNG ĐÃ ĐƯỢC RÀ PHÁ BOM Mìn, VẬT NỔ**

Kính gửi : - Ban Quản lý dự án Điện nông thôn miền Trung;
- Các đơn vị xây lắp có liên quan trên địa bàn.

Thực hiện Hợp đồng thi công rà phá bom mìn số: 289/10/13/HĐ-CREB-KH ngày 17 tháng 10 năm 2013 giữa Ban Quản lý dự án Điện nông thôn miền Trung và Công ty TNHH MTV Đầu tư xây dựng Vạn Tường về việc thực hiện Gói thầu số 18 - DPR: Thi công rà phá bom mìn, Dự án: Nhà máy thủy điện Đăk Pring, tỉnh Quảng Nam.

Nay, Công ty TNHH MTV Đầu tư xây dựng Vạn Tường xin thông báo:

* Kể từ ngày 29 tháng 9 năm 2014, toàn bộ mặt bằng Dự án nhà máy thủy điện Đăk Pring đã được rà phá và xử lý xong bom mìn, vật nổ, đủ điều kiện để Chủ đầu tư tiến hành các công việc tiếp theo của mình.

* Phạm vi mặt bằng, độ sâu, mốc ranh giới an toàn rà phá bom mìn, vật nổ được xác định trên thực địa bằng các cọc bê tông và cọc gỗ sơn đỏ và bản vẽ hoàn công kèm theo, với tổng diện tích đã được rà phá và xử lý xong bom mìn, vật nổ theo đúng yêu cầu của Chủ đầu tư. Cụ thể như sau :

a. Phạm vi mặt bằng: Theo đúng ranh giới cọc mốc do chủ đầu tư bàn giao tại hiện trường (trùng với mặt bằng cần rà phá theo yêu cầu hợp đồng).

b. Tổng diện tích rà phá bom mìn, vật nổ hoàn thành: **35,71 ha**; Trong đó:

+ Rà phá bom mìn, vật nổ trên cạn : 35,09 ha

+ Rà phá bom mìn, vật nổ dưới nước : 0,62 ha

c. Độ sâu rà phá bom mìn, vật nổ :

+ Rà phá bom mìn, vật nổ trên cạn đến độ sâu 0,3m : 15,91 ha

+ Rà phá bom mìn, vật nổ trên cạn đến độ sâu 3m : 29,14 ha

+ Rà phá bom mìn, vật nổ trên cạn đến độ sâu 5m : 5,95 ha

+ Rà phá bom mìn, vật nổ dưới nước đến độ sâu 5m : 0,62 ha

(Tính từ mặt đất tự nhiên hoặc đáy nước hiện tại trở xuống)

d. Hành lang an toàn :

+ Đường thi công vận hành: Tính từ chân ta luy thiết kế ra mỗi bên 3m

+ Khu phụ trợ, lán trại; Cụm công trình đầu mối; Khu nhà máy: Tính từ mép chu vi đường biên ngoài ra 5m

Công ty TNHH MTV Đầu tư xây dựng Vạn Tường xin thông báo đến Chủ đầu tư được biết để triển khai các công việc tiếp theo theo ranh giới khu vực đã rà phá bom mìn; ngoài phạm vi diện tích và độ sâu kể trên Công ty TNHH MTV Đầu tư xây dựng Vạn Tường không chịu trách nhiệm.

Nơi nhận:

- Như trên;

- Lưu VT

VT.QT.10/B.33



Đại tá Lê Đình Phúc

Lần BH: 03



**HIGH COMMAND OF MILITARY REGION
5
VAN TUONG CONSTRUCTION
INVESTMENT ONE MEMBER COMPANY
LTD.**

**SOCIALIST REPUBLIC OF VIETNAM
Independence – Freedom – Happiness**

No.:1075/TB-CT

Da Nang, 29 September, 2014

**ANNOUNCEMENT ABOUT
SITE SAFE AND FREE FROM BOMB AND EXPLOSIVE ORDNANCES**

To: - Central Rural Electricity Project Management Board

- Related contractors

Pursuant to Contract no. 289/10/13/HĐ-CREB-KH on bomb and mine detection and disposal signed on 17/10/1013 between Central Rural Electricity Project Management Board and Van Tuong Construction Investment One-member Company Ltd., implementing Package 18-DPR: Detection and disposal of bomb, mine and explosive ordnance for Dak Pring Hydropower Plan, Quang Nam Province.

Van Tuong Construction Investment One-member Company Ltd. has now announced that:

* As from 29/09/2014, the entire site of Dak Pring Hydropower Project is safe and free from bomb, mine and explosive ordnance and satisfied the conditions for which Investor can conduct its works.

* Area, depth and demarcation of detection and disposal is determined on field by concrete piles or red painted wooden piles and also shown on shop-drawing indicating total area of site free of bomb, mine and explosive ordnance as per requirement of Investor, specifically:

a. Area of site: the same as the demarcation that was handed over by Investor on field (the same as the area specified in the contract)

b. Total area to which the detection and disposal were completed: 35.71ha; of which:

+ Detection and disposal of bomb, mine and explosive ordnance on land: 35.09ha

+ Detection and disposal of bomb, mine and explosive ordnance in water: 0.62ha

c. Depth for detection and disposal of bomb, mine and explosive ordnance:

+ Detection and disposal of bomb, mine and explosive ordnance on land in the depth of 0.3m: 15.91ha

+ Detection and disposal of bomb, mine and explosive ordnance on land in the depth of 3m: 29.14ha

- + Detection and disposal of bomb, mine and explosive ordnance on land in the depth of 5m: 5.95ha

- + Detection and disposal of bomb, mine and explosive ordnance in water in the depth of 5m: 0.62ha

d. Right of Way:

- + Temporary service roads: 3m from talus foot to each sides

- + Auxiliary area, camps, head works, power house: 5m from the edge of perimeter of the outer line

Van Tuong Construction Investment One-member Company Ltd. has now notified Investor of the completion of bomb, mine and explosive ordnance detection and disposal so that Investor can carry out next steps within the area free of bomb and explosive ordnance; The Company is not responsible for the area outside the aforementioned area and the depth.

Receiver:

- As aforesaid;
- Save in office

GENERAL DIRECTOR

(Signed and sealed)

Colonel Le Dinh Phuc

Appendix 4: Photos of consultations and interviews in the 1st environmental monitoring



*Consultation with the representative of
Nam Song Bung Protection Forest
Management Board*



*Consultation with the representative of
Song Thanh NRMB*



Consultation with the representative of Nam Giang DONRE



Interviews with contractor representatives



Consultation with authorities of Cha Val Commune



Interviews with households in the project area



*Air sampling and measurement at dam
site*

*Air sampling and measurement at power
house site*



Air sampling and measurement on National road 14D – Dak Ring Bridge



Sampling and measurement of surface water in the upstream of the dam



Sampling and measurement of surface water in the downstream of the dam

Appendix 6: Minutes of in-depth interviews

DAK PRING HYDROPOWER PROJECT

Environmental Monitoring

Minutes of In-depth interview

Content: Interview with **contractor** on environmental issues of Dak Pring Hydropower Project – Nam Giang District – Quang Nam Province

Information of Interviewee:

Full name: Nguyen Dang Khoa

Age: 42 Gender: Male

Position: Construction engineer

Workplace: Construction No.564 Co., Ltd

I. Information of contractor

1. Construction period: 12/11/2014
2. Number of workers: 40
3. Number of camps: 01

II. Mitigation measures for environmental impacts

1. Mitigation measures for impacts on air quality

a) During transportation of construction materials

Currently, the volume of materials transported to construction site is not large so it is not necessary to take mitigation measures for dust emission.

b) During concrete mixing

- Concrete batching plant has not yet been operated.

2. Mitigation measures for noise

The quantity of construction equipment and machines is not significant; area of construction site is large and equipment and machines located away from each other so no big noise is generated.

3. Mitigation measures for impacts on surface water

N/A

4. Mitigation measures for impacts by erosion and landslide
 - Formation of talus slope drains
5. Mitigation measures for fire and explosion risks
 - Engagement of a specialized unit to conduct blasting, no storage of mine
 - Oil is stored in 10,000liter- tank, sand was
6. Mitigation measures for domestic solid waste, construction solid waste and hazardous waste
 - a) Domestic solid waste
 - Domestic solid wastes were collected, buried and burned.
 - b) Construction solid waste
 - Construction solid wastes were gathered at disposal sites.
 - c) Hazardous waste
 - Hazardous wastes were hardly generated.
7. Measures for ensuring traffic safety in the project area:
 - Placing road signs on access roads
8. Measures for ensuring occupational safety and workers' health:
 - Minimizing entrance of local residents into construction sites
 - Providing personal protective equipment and medicine cabinets for workers
9. Difficulties in implementing these abovementioned measures:
 - There is currently no difficulty arisen.
10. Other outstanding issues:
 - There is currently no issue arisen.

Cha Val, 10 June, 2015

Interviewer
(signed)

Ha Anh

Interviewee
(signed)

Nguyen Dang Khoa

DAK PRING HYDROPOWER PROJECT**Environmental Monitoring****Minutes of In-depth interview**

Content: Interview with **contractor** on environmental issues of Dak Pring Hydropower Project – Nam Giang District – Quang Nam Province

Information of Interviewee:

Full name: Nguyen Tuan Phi

Age: 37 Gender: Male

Position: Site superintendent

Workplace: Consulting Construction & Electric power development JSC

III. Information of contractor

4. Duration of construction: Commenced on 15/01/2015 and expected to be completed 2 years later
5. Number of workers: currently 10 workers; 30 workers are expected to be mobilized in peak period
6. Number of camps: 01

IV. Mitigation measures for environmental impacts

11. Mitigation measures for impacts on air quality
 - c) During transportation of construction materials
 - Vehicles in construction sites are washed before running to National highway. Currently, vehicles in construction sites have been driven at slow speed so there is no dust emission.
 - d) During concrete mixing
 - Concrete mixing has not yet conducted
12. Mitigation measures for noise
 - The number of vehicles and equipment is currently not large and they have been operated at slow speed so no big noise has been generated.
13. Mitigation measures for impacts on surface water
N/A
14. Mitigation measures for impacts by erosion and landslide
 - Reinforcement of talus and formation of talus slope drains

15. Mitigation measures for fire and explosion risks
 - Fuel used for equipment and plants is stored in 10,000liter-tank in an airy place, away from worker camps and power source.
16. Mitigation measures for domestic solid waste, construction solid waste and hazardous waste
 - d) Domestic solid waste
 - Domestic solid wastes were collected and buried
 - e) Construction solid waste
 - Construction solid wastes were gathered and transported to waste disposal sites planned by the Project
 - f) Hazardous waste
 - Used fuel tanks are gathered. Volume of hazardous wastes on site is insignificant.
17. Measures for ensuring traffic safety in the project area:
 - Warning signs were situated on construction sites. All vehicles travel in sites at low speed.
18. Measures for ensuring occupational safety and workers' health:
 - Providing personal protective equipment such as boots, clothes, helmets
 - Providing medicines for every worker
19. Difficulties in implementing these abovementioned measures:
 - The weather conditions in the project area are severe.
20. Other outstanding issues:
 - There is no outstanding issue arisen.

Cha Val, 11 June, 2015

Interviewer
(signed)
Tran Quang Huy

Interviewee
(signed)
Nguyen Tuan Phi

DAK PRING HYDROPOWER PROJECT**Environmental Monitoring****Minutes of In-depth interview**

Content: Interview with **contractor** on environmental issues of Dak Pring Hydropower Project – Nam Giang District – Quang Nam Province

Information of Interviewee:

Full name: Pham Ngoc Lien

Age: 35

Gender: Male

Position: Site superintendent

Workplace: Construction Joint Stock Company 47

I. Information of contractor

1. Duration of construction: June 2015 to October 2016
2. Number of workers: 10
3. Number of camps: 01

II. Mitigation measures for environmental impacts

1. Mitigation measures for impacts on air quality
 - a) During transportation of construction materials
 - Tunnel has not yet constructed so materials transportation has not been carried out.
 - b) During concrete mixing
 - Concrete mixing has not yet conducted
2. Mitigation measures for noise
 - Vehicles and equipment have not operated so no noise generated
3. Mitigation measures for impacts on surface water
 - Volume of wastewater generated is insignificant.
4. Mitigation measures for impacts by erosion and landslide
 - Construction has not carried out so no erosion and landslide were occurred.
5. Mitigation measures for fire and explosion risks
 - Exclusive mine storage was established with watch tower, water and sand tanks, lightning arrester rod, fence and drains.

6. Mitigation measures for domestic solid waste, construction solid waste and hazardous waste
 - a) Domestic solid waste
 - Domestic solid wastes were collected and buried
 - b) Construction solid waste
 - Construction solid wastes were not generated.
 - c) Hazardous waste
 - Hazardous wastes are expected not to generate.
7. Measures for ensuring traffic safety in the project area:
 - Hauling of materials was not carried out so there is no impact on traffic safety.
8. Measures for ensuring occupational safety and workers' health:
 - Providing personal protective equipment such as boots, clothes, helmets
9. Difficulties in implementing these abovementioned measures:
 - No difficulty
10. Other outstanding issues:
 - No outstanding issue arisen

Cha Val, 10 June, 2015

Interviewer
(signed)

Ha Anh

Interviewee
(signed)

Pham Ngoc Lien

Appendix 6: List of consulted persons

No.	Full name	Gender	Ethnicity	Address/Position
1.	Tran Dinh Phuc	Male	Kinh	Head of Hydropower Department – Central Grid Company
2.	Nguyen Hien	Male	Kinh	Member of supervision team – Central Grid Company
3.	Pham Huu Nghia	Male	Kinh	Supervisor - Song Thanh Nature Reserve Management Board
4.	Nguyen Van Truong	Male	Kinh	Nam Giang Division of Natural Resources and Environment
5.	Mr. Nhut	Male	Kinh	Supervision staff - Nam Song Bung Protection Forest Management Board
6.	Nguyen Tuan Phi	Male	Kinh	Work Superintendent – Consulting Construction and Electric Power Development Joint Stock Company
7.	Pham Ngoc Lien	Male	Kinh	Work Superintendent – Construction Joint Stock Company 47
8.	Nguyen Dang Khoa	Male	Kinh	Construction Engineer – Construction Company Limited 564
9.	Nguyen Van Thang	Male	Kinh	Worker - Construction Company Limited 564
10.	To Den Minh	Male	Co Tu	Head of Cha Val Office of Public Security
11.	BNuoch Denh	Male	Co Tu	Cadastral officer of Cha Val Commune
12.	To Den Tho	Male	Co Tu	Cadastral officer of Cha Val Commune
13.	BNuoch Bong	Male	Co Tu	Forester of Cha Val Commune
14.	BNuoch Thi Muoi	Female	Co Tu	Ta Un Village – Cha Val Commune
15.	BNuoch Dung	Male	Co Tu	Ta Un Village – Cha Val Commune
16.	Un Day	Female	Co Tu	Ta Un Village – Cha Val Commune
17.	A Rat Thi Hau	Female	Co Tu	Can Don Village – Cha Val Commune
18.	Khom Thi Van	Female	Co Tu	Can Don Village – Cha Val Commune
19.	Pham Trung Kien	Male	Co Tu	Can Don Village – Cha Val Commune