

Safeguards Monitoring Report

Semi-Annual Report
April 2019

Viet Nam: Water Sector Investment Program – Tranche 3

Cua Lo Subproject: Upgrading and Expanding Cua Lo Water Supply System, Cua Lo Town, Nghe An Province

Prepared by Joint Venture of Viet Nam Water, Sanitation and Environment JSC and Meinhardt (Viet Nam) Ltd. for the Provincial People's Committee of Nghe An Province and the Asian Development Bank.

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**CUA LO TOWN WATER SUPPLY SYSTEM ENHANCEMENT AND
EXPANSION PROJECT, NGHE AN PROVINCE**

LOAN ADB No.3251-VIE

REPORT ON PERIODIC SOCIO-ENVIRONMENTAL MONITORING

Phase: from 1 January 2018 to 31 June 2018



Submitted By

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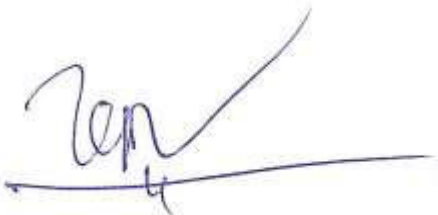
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**CUA LO TOWN WATER SUPPLY SYSTEM ENHANCEMENT AND
EXPANSION PROJECT, NGHE AN PROVINCE**

LOAN ADB No.3251-VIE

**REPORT ON PERIODIC SOCIO-ENVIRONMENTAL MONITORING
From 1 January 2018 to 31 June 2018**

CONTRACT NO: CL-CS 2
PACKAGE: CONSTRUCTION SUPERVISION
PROJECT: CUA LO WATER SUPPLY SYSTEM UPGRADING AND
EXPANDINGPROJECT

Submitted by: CONSTRUCTION SUPERVISION CONSULTANT	
JOINT VENTURE OF VIETNAM WATER, SANITATION AND ENVIRONMENT JOINT STOCK COMPANY (VIWASE) AND MEINHARDT (VIETNAM) LTD.	
For and on behalf of Team Leader:	Environmental specialist 
DO THE DUNG, Deputy Team Leader	NGUYỄN LÊ PHÚ

ABBREVIATIONS

ADB	Asian Development Bank
CEMP	Contractor Environmental Management Plan
CSC	construction supervision consultants
EMC	Environmental Monitoring Consultant
EMP	Environmental Management Plan
GAP	Gender Action Plan
GRM	Grievance Redress Mechanism
IEE	Initial Environmental Examination
JSC	Joint Stock Company
MONRE	Ministry of Natural Resources and Environment
PIC	Project Implementation Consultant
PPC	Provincial People's Committee
PMU	Project Management Unit
RP	Resettlement Plan

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1 Introduction and Project Overview

1. Cua Lo Water Supply System Upgrading and Expanding project has a total project investment estimated about USD 16,096,000. Of which ADB loan is USD 13,190,000 and the counterpart fund of Nghe An Provincial People's Committee (PPC) is USD 2,906,000.

2. The Project comprises of 3 following components:

- Construction of Nghi Hoa water supply plant in Nghi Hoa commune, Nghi Loc district with capacity 10,000 m³/day connected with existing WTP capacity 3,000 m³/day to reach 13,000 m³/day in 2020. Raw water is taken from Phuong Tich river. Main categories of the project are: Intake works, reservoir, raw water pumping station, treatment plant, water tank, secondary pumping station, chemical room, sludge collection site, and auxiliary works;
- Construction of pressure boost pumping station and office house in Nghi Huong ward, Cua Lo town consisting of water tanks, pumping station, office house, storage, guard-house, fence, etc.;
- Construction of transmission pipeline networks and distribution pipeline networks D110÷D450 with the total length of 52.6 km; service network D32÷D90 L= 241.8 km and 7,352 connection points to households. HDPE pipes will be used for the network.

3. Contract No. NA-CL-CS2 "Construction Supervision for Cua Lo Water Supply System Upgrading and Expanding project" was signed by and between Joint Venture of Viet Nam Water, Sanitation and Environment Joint Stock Company (JSC) and Meinhardt (Vietnam) Ltd. and the Cua Lo Water Supply JSC on 28 June 2016. The consultancy service package was officially commenced on 12 July 2017.

4. According to the contract documents, the construction supervision consultants as well as Cua Lo Water Supply JSC are responsible for monitoring the compliance of environmental and social safeguards during the project implementation. Specifically, the approved Environmental Management Plan (EMP), Resettlement Plan (RP), and Gender Action Plan (GAP) must be complied throughout the project implementation. The progress of updating safeguard documents is as follow:

- Revised EMP was prepared and submitted to ADB on January 9, 2017. ADB had no objection this report on 20 June 2017.
- Resettlement Due Diligence Report was prepared and submitted to ADB on 9 January 2017. ADB had no objection this report on 20 June 2017.

5. This semi-annual monitoring report is to describe the periodically monitoring results on environmental and social safeguards implementation of the project during the first six-month period of 2018 (from January to June 2018).

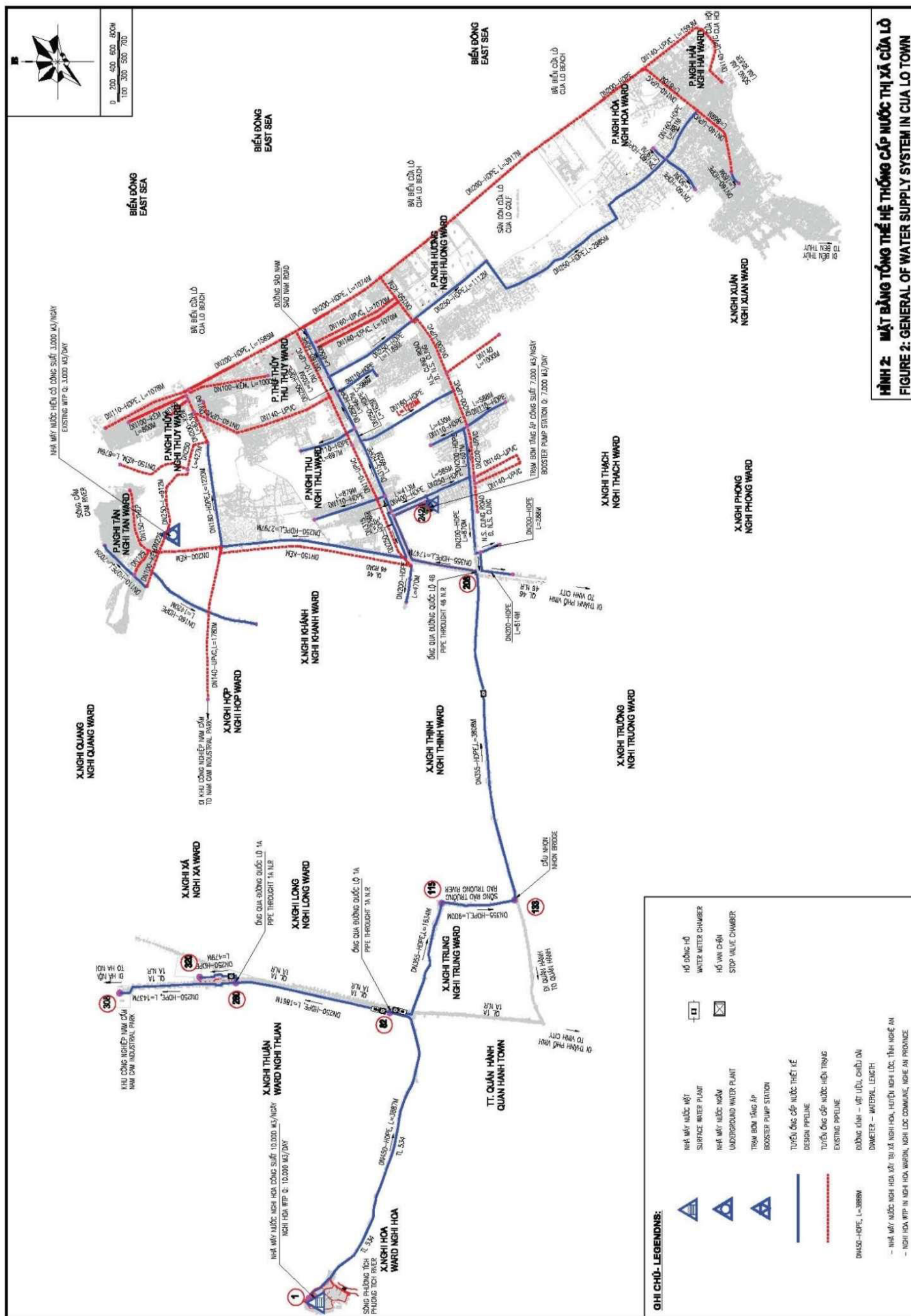
6. The environmental and social safeguard monitoring by the Consultant is carried out in accordance with the following procedures:

- (i) Work closely with construction supervision consultants (CSC) to complete the log construction process (including the content of the EMP implementation), fill in the monthly monitoring forms;
- (ii) Access to and examine records relating to the compensation, site clearance and resettlement process of the project;
- (iii) Monthly site visit to construction locations of the project; Working with contractors, CSC to understand the progress of the construction and implementation of environmental and social safeguard policies;
- (iv) Directly interview with local households affected by the project construction.

Table 1: Project Overview, Snapshot of Project Progress

Project Number and Title:	Loan 3251-VIE -Water Sector Investment Program - Tranche 3 Cua lo Water Supply System Upgrading and Expanding project	
Safeguards Category	Environment	B
	Indigenous Peoples	C
	Involuntary Resettlement	B
Reporting period:	January – June 2018	
Last report date:	July – December 2017 (December 2017) ¹	
Key project activities since last report:	<ul style="list-style-type: none"> - Nghi Hoa Water Plant: as of 31 June 2018, the progress rate is estimated at 52% - Pump booster station and office building: as of 31 June 2018, the progress rate is estimated at 55% - Transmission pipelines: as of 31 June 2018, the progress rate is estimated at 80% 	
Report prepared by:	Mr. Tran Phuc Thanh – Deputy Director of Project Management Unit (PMU)	

¹<https://www.adb.org/projects/documents/vie-41456-043-esmr>



2 Environmental Performance Monitoring

2.1 Summary of Compliance with EMP Requirements (Environmental Performance)

Table 2: Roles and Responsibilities on EMP

No.	Organization	Responsibilities
1	Project Management Unit (PMU)	<p>For strict compliance with the Environment Management Plan, the PMU should supervise the contractors' undertaking of mitigation measures. With regards to environmental monitoring, the PMU's responsibilities are:</p> <ul style="list-style-type: none"> - Monitoring of environmental related performance indicators - Unscheduled site visits to ensure contractor's compliance to mitigation measures as specified in the contracts. - Review of CSC's periodic reports to ensure compliance to mitigation measures - Review of CSC's reports on general impacts of the project - Reporting to ADB and MONRE on environmental compliance based on CSC's reports, as part of semi-annual reporting duty to ADB - Close cooperation with stakeholders in charge of water supply, environmental sanitation, waste collection etc. to monitor the operation and maintenance during the operational phase. - Coordination of the resolution of public's grievances - Cua Lo PMU's Environmental-Social officer: Mr. Trí (Phone number: +84-916-104-668)
2	Construction Supervision Consultant (CSC)	<p>Supervise construction activities; supervise technical standards and construction progress of contractors.</p> <p>For the environment, the CSC is responsible for supervising the implementation of mitigation measures of contractors according to the requirements in the EMP. This includes the following main tasks:</p> <ul style="list-style-type: none"> - Ensuring contractors and workers have been trained and instructed on environment and safety. - Ensuring that contractors assemble, maintain and clean machine or equipment daily and toilets, drainage system suitable for workers. - Ensuring that contractors have obtained all permissions on discharging wastewater and removing solid waste out of the construction sites. - Checking the safety conditions at the construction sites, such as internal roads, fences, warning signals, lights, electrical safety, and drainage system. - Conducting regular site inspections; conducting environmental effect monitoring in accordance with the monitoring plan cleared by ADB.
3	Environmental Monitoring Consultant (EMC)	<p>Responsibilities of environmental monitoring consultants include:</p> <ul style="list-style-type: none"> - Ensure that the EMP has been approved and that loan agreements related to environmental safety will be applied and followed throughout the project implementation process; - Ensure that environmental mitigation measures are established as required in project implementation aspects; - Evaluate the effectiveness of the mitigation measures applied by the contractor and CSC during the implementation process and make recommendations and recommendations to the PMU for the improvements or improvements needed to meet the requirements. safeguard;

		<ul style="list-style-type: none"> - Report periodically to the PMU on the actual implementation of the EMP during the implementation of the project. In case of necessity, more detailed assessment and / or local consultation may be required to identify potential impact and mitigation measures; - Establish standard procedures, methods and forms to assist the PMU and CSC in assessing the Contractor's progress in implementing the necessary monitoring and mitigation measures; - Assist the project management board and its environmental staff to review and examine the detailed design and relevant parts of the Contract Document to ensure compliance with environmental protection and monitoring requirements and mitigation; - Organize regular, quarterly meetings with stakeholders (project management board, contractor, CSC, community representatives and other relevant authorities) to collect Contribute to the development and revision of the plan and strategy for environmental monitoring and overall environmental management. - Organizing the implementation of programs on measurement, sampling and monitoring of environmental norms periodically (every 3 months) during the period of performing the environmental supervision contract. - Develop training materials for specialized contents on environmental management and environmental monitoring to train contractors, construction supervision consultants and relevant staff of the PMU school and coordinator of the package) perform the task. - Through the PMU discuss with relevant stakeholders (when necessary) in order to find appropriate solutions for arising problems related to environmental sanitation. - Through the guidance of the PMU, establish and maintain close coordination with the CSC to ensure that relevant environmental regulations, environmental monitoring and mitigation measures, the reporting procedure should be clearly understood and incorporated into the CSC work plan. These procedures also include the recommendation of appropriate sanctions and the procedure for recommending the suspension of construction work at the site once the construction contractor fails to comply with the requirements for environmental safeguards in the test. public; - Assist the CSC to prepare and implement emergency action plans where needed for environmental damage or problems encountered during construction; - Co-ordinate with the PMU and the construction supervision consultant to provide environmental management and minimize the impact necessary to the contractor; - Provide the necessary support to community representatives in the preparation and implementation of community-based environmental management plans. - Assist the PMU to establish and maintain an organizational structure for the environmental management system, monitoring and reporting obligations in coordination with the relevant local environmental management agencies; - Provide support and assistance for environmental training and capacity building programs upon request; <p>Provides general guidance on the environment required by the PMU to</p>
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		enhance the overall effectiveness of project implementation.
4	Contractors	<ul style="list-style-type: none"> - Being obliged to undertake mitigation measures and comply with approved EMP throughout the construction of the project. - throughout the construction of the project, being subjected to the strict supervision of PMU, CSC and EMC, environmental agencies and local communities on EMP compliance

ADB = Asian Development Bank, CSC = construction supervision consultants, EMC = Environmental Monitoring Consultant, PMU = Project Management Unit, MONRE = Ministry of Natural Resources and Environment

7. Thanks to the close co-operation between the Investor, CSC and contractors, the EMP has been submitted to and approved by the CSC and is implemented strictly at the construction sites. Contractors are implementing environmental protection measures during the construction period as prescribed. Specifically:

2.1.1. General evaluation of all site locations:

- The investor has hired a functional demining unit at the construction site of Nghi Hoa Water Treatment Plant and the construction of a pump booster station and office building before the commencement of construction. Acceptance records for clearance of mines in the project area are attached as Appendix2 to this report.
- Investors and contractors have carried out proper consultations with and close coordination with local authorities and people around the project area;
- A copy of the environmental management plan is kept at the field office of the contractor for regular comparison during the implementation process;
- The contractor set up a campsite, including temporary toilets at the site. The camps are neatly managed, hygienic, with electricity and clean water supply;
- Workers are equipped with adequate labor protection as prescribed;
- The construction and installation of water pipelines along the roads shall be carried out by rolling, completing and returning the road immediately after the completion of each short section. Plumbing materials and building materials are neatly assembled, safe in the location of the land on both sides of the road.



Figure 2.Photos of Construction Sites (taken in June 2018)

2.1.2. Evaluation of Nghi Hoa water supply plant

- The construction site is located near traffic road with low-density traffic. There are no nearby residential areas. Thus, socio-environmental impacts affecting people are assessed as low or insignificant.

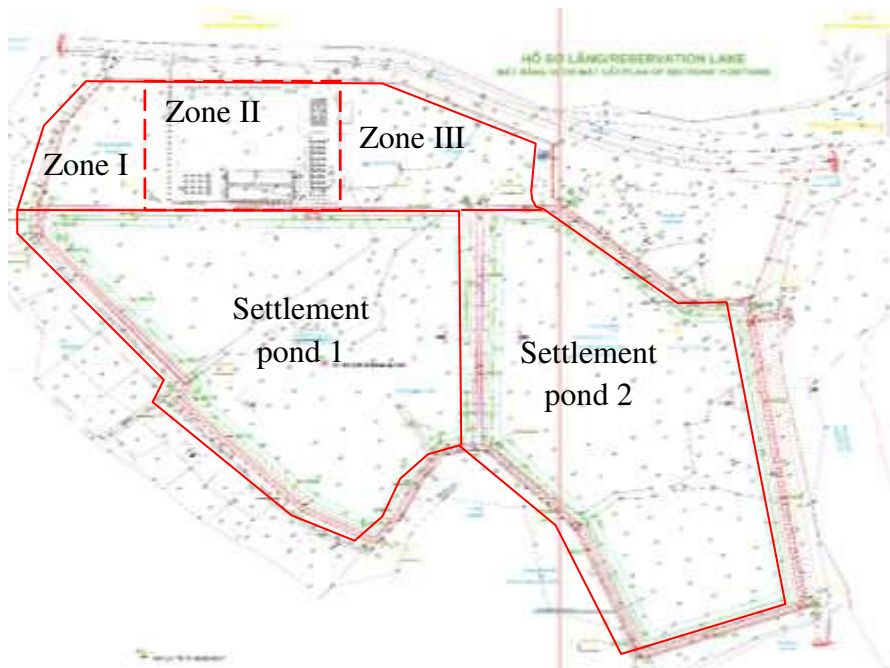







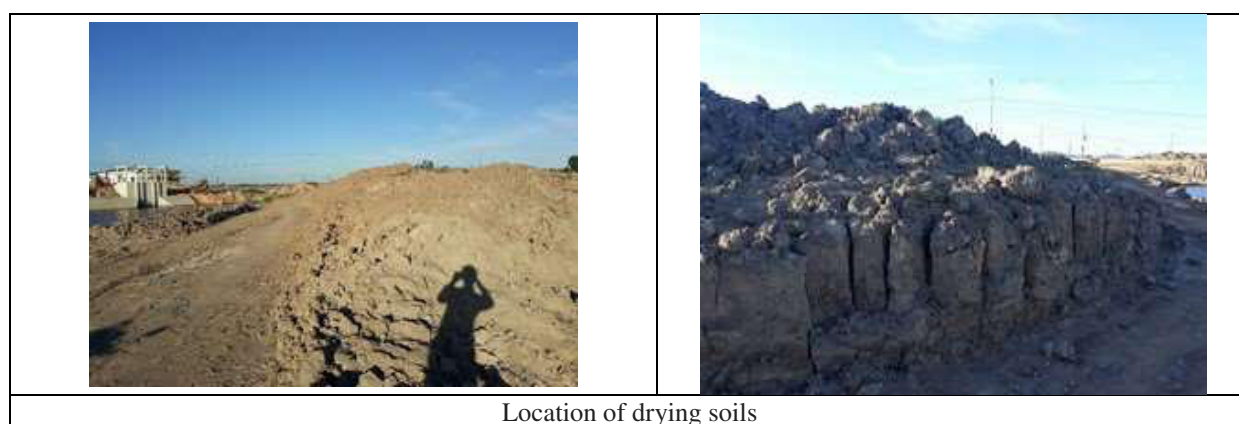
Figure 3. Site layout of Nghi Hoa water plant.

- Requirements on quality of leveling soil for Nghi Hoa water plant site
 - + For zone I and zone III: These are reserve areas for future development of the plant. Therefore, the construction activities are limited including construction of walls and embankments, the excavated sludge/soil from the construction can be re-used as the leveling soils at these zones.
 - + For zone II: This area is for construction of the water treatment plant. The leveling soils for zone II (about 41,000 m³) need to have high physical quality with K factor (soil erodibility factor) reaching 0.95 (very highly compacted soil). This amount of leveling soil was transported to the site from a licensed soil quarry under operation located in Yen Thanh district, with a distance of about 15km to the north from the construction site of the plant. The leveling activities was completed during late 2017.
- The construction site is huge. Construction materials are gathered neatly and safely. Transportation vehicles are cleaned up before going out the construction site. Traffic route used for material transportation is being watered daily.
- The number of workers daily working on construction site varies from 20 to 40 persons. Those persons mainly are local people, own houses or rented houses near construction site, usually back to their home at the end of working day. Some security guards are arranged to stay overnight at the construction site.
- Daily waste and construction waste on the site are collected, stored and transported in accordance with regulations.
 - + Domestic solid wastes: estimated an amount of 10÷20kg/day of domestic solid wastes generated within the construction site by the workers. The wastes include

waste foods and plastic packs/bags, paper...This waste amount is collected into a 100L plastic bin setup at the camp area. Daily after working hours, the staffs of Nghi Loc Green Environment JS Company come to collect and transport to the Solid Waste Treatment Complex located in Nghi Yen commune of Nghi Loc district.

- + Construction solid wastes: about 15kg/day, included empty packs, waste wood, steel, etc. This waste amount is composed of inert and non-hazardous substances, some can be recycled or reused for other purposes. The remains are to be collected within the site and transported and treated by the Nghi Loc Green Environment JS Company.
- As of the time of reporting, there has been no recorded complaint from local authorities and people on socio-environmental negative issues caused by the project.

	
<p>Concrete pumping of Nghi Hoa water treatment plant</p> 	<p>Pouring of concrete reservoir at Nghi Hoa water plant</p> 
	



Location of drying soils

Figure 4. Photos of Nghi Hoa Water Treatment Plant (taken in June 2018).

Table 3: Summary of Compliance with EMP Requirements (Environmental Performance) at Nghi Hoa Water Treatment Plant

No.	EMP Requirements	Comment or Reasons for Compliance / Non-Compliance	Issues for Further Action
1	Implementation arrangement		
1.1	Disseminate safety principles to workers	Yes	
1.2	License	Yes	
1.3	Equipping work safety clothing for workers	Yes	
1.4	First-aid kit at camps	Yes	
1.5	Periodical health check for workers	Yes	
1.6	Camp		
-	Clean water for workers	Yes	
-	Sanitary and safe kitchen	Yes	
-	Wastewater from camps is not stagnant	Yes	
-	Self-decomposing latrines at camp	Yes	
1.7	Mobilizing officers who are in charge of environmental safety to be at the site regularly to receive feedback from the community.	Yes	
1.8	Project and contractor's signboard, (indicating name and phone number of site managers)	Yes	
1.9	Relationship between site manager and local authority	Yes	
1.10	Relationship between site manager,	Yes	

No.	EMP Requirements	Comment or Reasons for Compliance / Non-Compliance	Issues for Further Action
	workers and local people		
2	Mitigation measures		
2.1	Minimizing dust/exhaust fumes		
-	Watering sprinkling at specific locations in the dry season.	Yes	
-	Fence/temporary cover for areas near local residences	Yes	
-	Clean mud, soil on truck's wheels.	Yes	
-	Tilting trucks/ means of transportation.	Yes	
-	Trucks carrying sand, soil, stone are not overloaded.	Yes (There is no evidence of load violation recorded so far)	
-	Clean the site after construction	Yes	
-	Trucks/machines are maintained regularly	Yes	
-	Forbidding on-site waste incineration, waste is removed within 24h	Yes	
-	Keeping hazardous waste away from local residence	Yes	
2.2	Reduce noise/vibration		
-	Equip safety clothing for workers	No. (Workers exposed to loud noise were not equipped with noise-canceling ear plugs).	Providing noise-canceling ear plugs for workers who are exposed to loud noise.
-	Avoid construction which causes big noise before 5A.M and after 10P.M.	Yes	
-	Suitable construction measures, not causing ground settlement, break to houses and other constructions.	Yes	
2.3	Mud from excavation, waste form house around.		
-	Daily Collecting and discharging at yard agreed by locality.	Yes	
-	Place dust bins at construction sites	Yes	

No.	EMP Requirements	Comment or Reasons for Compliance / Non-Compliance	Issues for Further Action
-	Collecting waste and moved to agreed places, transported to and treated accordingly.	Yes	
2.4	Pollution of surface water caused by construction activities and camps of workers		
-	There is gutter collecting wastewater/stormwater at the site leading to the main sewer of the district	Yes	
-	There are self-decomposing latrines at camp	Yes	
-	Keeping hazardous waste away from water sources.	Yes	
2.5	Risks of being flooded temporarily in raining season when drainage system has not been completed.		
-	Preparing plan for dealing with emergency flood	Yes	
2.6	Impacts on transportation		
-	Place warning signs / instructions	Yes	
-	Constructing temporary bypasses where needed.	The project does not require this activity	
-	Trucks carrying materials/wastes are not overloaded	Yes (There is no evidence of load violation recorded so far)	
2.7	Public safety and health		
-	There are regulations, and training for workers on the regulations and communication to community	Yes	
2.8	Impact on business/socio-economic activities.		
-	Clean construction site every day after construction implementation.	Yes	
-	Recovering breakdown of	N/a	

No.	EMP Requirements	Comment or Reasons for Compliance / Non-Compliance	Issues for Further Action
	electricity/water supply/communication due to construction implementation.	(There have been no breakdown of electricity/water supply/communication)	
2.9	Fire prevention		
-	There is fire regulations/plan	Yes	
-	Equip fire equipment at warehouse.	Yes	
2.10	Social evils		
-	There are construction regulations, such as curfew, alcohol and gambling prohibition	Yes	

2.1.3. Evaluation of the pumping station and Office building:

- Construction site located near traffic road with low-density traffic. Construction activities carried out within site's fence. Thus, socio-environmental impacts affecting people are assessed as low or insignificant.
- The construction site is huge. Construction materials are gathered neatly and safely.
- The number of workers daily working on construction site varies from 20 to 40 persons. Those persons mainly are local people, own houses or rented houses near construction site, usually back to their home at the end of working day. Some security guards are arranged to stay overnight at construction site.
- Daily waste and construction waste on the site are collected, stored and transported in accordance with regulations. Specifically,
 - + Domestic solid wastes: estimated an amount of 10÷20kg/day of domestic solid wastes generated within the construction site by the workers. The wastes include waste foods and plastic packs/bags, paper... This waste amount is collected into a 100L plastic bin setup at the camp area. Daily after working hours, the staffs of Nghi Loc Green Environment JS Company come to collect and transport to the Solid Waste Treatment Complex located in Nghi Yen commune of Nghi Loc district.
 - + Construction solid wastes: about 15kg/day, included empty packs, waste wood, steel, etc. This waste amount is composed of inert and non-hazardous substances, some can be recycled or reused for other purposes. The remains are to be collected within the site and transported and treated by the Nghi Loc Green Environment JS Company.
- As of the time of reporting, there have been no recorded complaints from local authorities and people on socio-environmental negative issues caused by the project.



Figure 5. Photos of Pumping Station and Office Building (taken in June 2018).

Table 4: Summary of Compliance with EMP Requirements (Environmental Performance) at the Booster station and office site

No.	EMP Requirements	Comment or Reasons for Compliance / Non-Compliance	Issues for Further Action
1	Implementation arrangement		
1.1	Disseminate safety principles to workers	Yes	
1.2	License	Yes	
1.3	Equipping work safety clothing for workers	Yes	
1.4	First-aid kit at camps	Yes	
1.5	Periodical health check for workers	Yes	
1.6	Camp		
-	Clean water for workers	Yes	
-	Sanitary and safe kitchen	Yes	
-	Wastewater from camps is not stagnant	Yes	
-	Self-decomposing latrines at camp	Yes	
1.7	Mobilizing officers who are in charge of environmental safety to be at the site regularly to receive feedback from the community	Yes	
1.8	Project and contractor's signboard, (indicating name and phone number of site managers)	Yes	
1.9	Relationship between site manager and	Yes	

No.	EMP Requirements	Comment or Reasons for Compliance / Non-Compliance	Issues for Further Action
	local authority		
1.10	Relationship between site manager, workers and local people	Yes	
2	Mitigation measures	Yes	
2.1	Minimizing dust/exhaust fumes		
-	Watering sprinkling at specific locations in dry season.	No. Watering activities have not been conducted	The contractor is requested to water daily (when dry weather) on the construction site to keep a reasonable humidity to reduce dust dispersion.
-	Fence/temporary cover for areas near local residences	Yes	
-	Clean mud, soil on truck's wheels.	Yes	
-	Tilting trucks/ means of transportation.	Yes	
-	Trucks carrying sand, soil, stone are not overloaded.	Yes (There is no evidence of load violation recorded so far)	
-	Clean the site after construction	Yes	
-	Trucks/machines are maintained regularly	Yes	
-	Forbidding on-site waste incineration, waste is removed within 24h	Yes	
-	Keeping hazardous waste away from local residence	Yes	
2.2	Reduce noise/vibration	Yes	
-	Equip safety clothing for workers		
-	Avoid construction which causes big noise before 5A.M and after 10P.M.	Yes	
-	Suitable construction measures, not causing ground settlement, break to houses and other constructions.	Yes	
2.3	Mud from excavation, waste form		

No.	EMP Requirements	Comment or Reasons for Compliance / Non-Compliance	Issues for Further Action
	house around.		
-	Get agreement on area for discharging unused soil	Yes	
-	Daily Collecting and discharging at yard agreed by locality.	Yes	
-	Place dust bins at construction sites	Yes	
-	Collecting waste and moved to agreed places, transported to and treated accordingly.	Yes	
2.4	Pollution of surface water caused by construction activities and camps of workers	Yes	
-	There is gutter collecting wastewater/stormwater at the site leading to the main sewer of the district	No (Domestic wastewater was discharged into a dug drain for self-infiltration into the ground)	To request construction contractors to discharge domestic daily-life wastewater or connect it to the common waste water-drainage system.
-	There are self-decomposing latrines at camp	Yes	
-	Keeping hazardous waste away from water sources.	Yes	
2.5	Risks of being flooded temporarily in raining season when drainage system has not been completed.		
-	Preparing plan for dealing with emergency flood	Yes	
2.6	Impacts on transportation		
-	Place warning signs / instructions	Yes	
-	Constructing temporary bypasses where needed.	The project does not require this activity	
-	Trucks carrying materials/wastes are not overloaded	Yes	
2.7	Public safety and health		

No.	EMP Requirements	Comment or Reasons for Compliance / Non-Compliance	Issues for Further Action
-	There are regulations, and training for workers on the regulations and communication to community	Yes	
-	Assemble and maintain instructions, signs warning at construction sites.	Yes	
2.8	Impact on business/socio-economic activities.		
-	Clean construction site every day after construction implementation.	Yes	
-	Recovering breakdown of electricity/water supply/communication due to construction implementation.	Yes	
2.9	Fire prevention		
-	There is fire regulations/plan	Yes	
-	Equip fire equipment at warehouse.	Yes	
2.10	Social evils		
-	There are construction regulations, such as curfew, alcohol and gambling prohibition	Yes	

2.2 Issues for Further Action

Table 5: Issues for Further Action

Issue	Required Action	Responsibility and Timing	Resolution
Old issues from the previous report (July to Dec 2017)			
EMP implementation record is inadequate and lacking	Contractors are to provide further details in the log	Environmental monitoring specialist directly commented and instructed how to record the EMP diary to the contractor's staffs at the construction site.	The issue has been solved, confirmed by site inspections of the environmental consultant
Lack of fire extinguisher and first-aid kit at camps	Contractors to provide the first-aid kits and fire-extinguishers availably on site	Contractors; As soon as possible after the onsite training in Dec 2017	The issue has been solved, confirmed by site inspections of the environmental consultant

Equip safety clothing for workers (Water Treatment Plant site)	The contractors must provide adequately safety clothing for workers	Contractors; As soon as possible after the onsite training in Dec 2017	Though there were some improvement, the issue has not yet been completely solved
Issues from this period of monitoring report			
Nghi Hoa Water Treatment Plant Site			
Equip safety clothing for workers: Workers who are exposed to loud noise are not equipped with noise-canceling ear plugs.	Providing noise-canceling ear plugs for workers who are exposed to loud noise.	<ul style="list-style-type: none"> - Contractor, - Site engineers of the contractor were informed and guided about the issue. All workers must be equipped with noise-canceling ear plugs whenever working near high noise level sources. 	
Pump Station and Office Building Site			
Watering sprinkling at specific locations in dry season.	The contractor is requested to water daily (when dry weather) on the construction site to keep a reasonable humidity to reduce dust dispersion.	<ul style="list-style-type: none"> - Contractor, - Daily, when dry weather. 	
There is gutter collecting wastewater/stormwater at the site leading to the main sewer of the district	The contractor is requested to immediately collect domestic wastewater and connect it to the common waste water-drainage system.	<ul style="list-style-type: none"> - Contractor, - As soon as possibly incase rain wheather. 	

2.3 Other activities (Environmental sampling)

8. According to the periodic environmental monitoring program complying with the law, Cua Lo Water Supply JSC has cooperated with the Consulting Unit - VINAGREEN Environment and Investment Consultant JSC and Thai Duong Environmental Treatment and Monitoring JSC to sample, measure, analyze and make the reports at the site for the Q1 and Q2 of 2018 of Cua Lo Water Supply System Upgrading and Expanding Project.

9. The periodic environmental monitoring will provide an overall assessment of the environmental quality at the project area, assessments of the environmental quality of the site to meet the requirements by the competent state authority for timely warning of unusual developments or pollution risks, and provide a basis for monitoring the environmental changes of the project, helping the project owner and the authorities have measures to prevent and actively cope with environmental problems that may occur during the construction process.

2.3.1. ADB approved sampling plan

10. Table 6 shows the environmental effect monitoring plan in the IEE² approved by ADB.

Table 6: Environmental sampling plan during the Construction Phase

Mitigation Measures	Monitoring parameters	Location	Method	Frequency
Monitoring of suspended dust and noxious fumes	Dust, CO, NOx, SOx, wind,	<ul style="list-style-type: none"> - 1 point in Nghi Hoa WTP - 1 point in Booster pumping station (near Sao Nam road) - 1 point in Nguyen Hue road. - 1 point in Mai Thuc Loan road - 1 point in Nguyen Sinh Cung road - 2 point in network pipelines (Binh Minh road). 	Take air sample for analysis and compare the result with related Vietnam Standards QCVN 05:2015/BTNMT	Every quarter in 18 months
Monitoring of noise	Leq, L50 and Lmax	As the same ambient air monitoring locations as above	Measure at site and compare the results with relevant standards (QCVN 26: 2010)	Every quarter in 18 months
Monitoring of vibration	Acceleration Speed Frequency	<ul style="list-style-type: none"> - 1 point in Phuong Tich Bridge (Transmission pipelines) - 1 point in Rao Truong Bridge (Transmission pipelines) - 1 point in Sao Nam Road (distribution pipelines) - 1 point in Binh Minh Road (distribution pipelines) 	Measure at site and compare the results with relevant standards (QCVN 27: 2010)	Every quarter in 18 months
Surface water quality	pH, TSS, DO, COD, BOD5, ammonium (NH ₄) by N, nitrite, nitrate (NO ₃ ⁻), Phosphate, Floating oil Coliform	<ul style="list-style-type: none"> - 02 points in Phuong Tich River - 01 point in Rao Truong River; - 01 point in Cam River; - 02 points in pond in Cua Lo Town (01 point in pond Nghi Khanh commune; 01 point in pond Nghi Huong Ward) 	Take water sample for analysis and compare result with related Vietnam Standards (QCVN 08-mt:2015/BTNMT; QCVN 40:2011/BTNMT)	Every quarter in 18 months

²<https://www.adb.org/projects/documents/viet-nam-water-sector-investment-program-cua-lo-ws-iee>

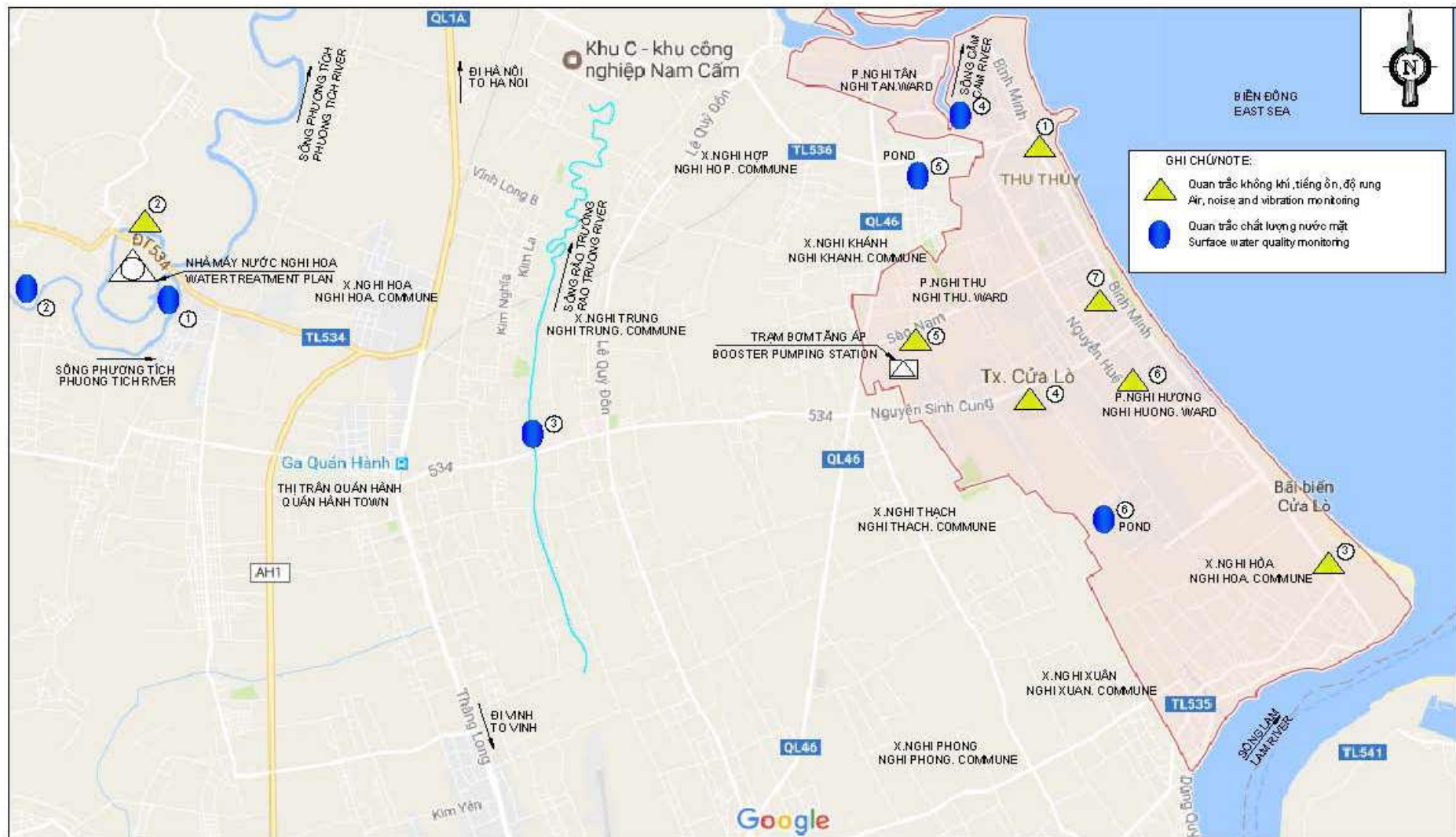


Figure 6: Sampling map

2.3.2. Environmental Quality Analytical Results

11. Although the approved sampling plan has a frequency of every quarter and though reminded onsite by the environmental monitoring specialist in the previous monitoring stage (December 2017), the contractors had not conducted environmental samplings till end of 1st quarter 2018. The first sampling stage during construction phase was only conducted for 2nd quarter 2018 (on June 15th, 2018). Therefore, in this report only the analytical results of 2nd quarter 2018 are available for assessment.

a) Results of air analysis

Table 7. Monitoring Results of Air Quality and Noise Level (Sampling on 15 June 2018)

	Parameters	Unit	Results							GHCP
			KK1	KK2	KK3	KK4	KK5	KK6	KK7	
1	Temperature	°C	28	28,2	28,5	28	27,8	28	28,2	-
2	Humidity	%	61	60,8	61,2	62	62,5	61,8	60,9	-
3	Atmospheric pressure	atm	580	595	590	582	597	590	575	-
4	Speed of winds	m/s	0,5	0,5	0,6	0,5	0,6	0,5	0,4	-
5	Wind direction	-	ĐN	ĐN	ĐN	ĐN	ĐN	ĐN	ĐN	-
6	Dust	µg/m ³	178	166	162	177	171	183	198	300
7	CO	µg/m ³	3700	3920	3940	3950	3720	3770	3500	30,000
8	SO ₂	µg/m ³	161	168	175	155	159	147	144	350
9	NO ₂	µg/m ³	144	151	159	117	121	143	125	200
10	Noise	dBA	67	64	66	64	66	64,4	64	70^(*)

(Source: Thai Duong Environmental Treatment and Monitoring JSC, June 2018)

Notes:

GHCP (allowed limit): NTR 05:2013/MONRE: National Technical Regulation about the ambient air quality.

(*): QCVN 26:2015/BTNMT: National Technical Regulation about the noise.

- + KK1: At Nguyen Sinh Cung street, coordinates X: 2084242; Y: 601032.
- + KK2: At Nguyen Hue Street, coordinates X: 2079017; Y: 602885;
- + KK3: At the area of Mai Thuc Loan Street, coordinates X: 2079133; Y: 602969;
- + KK4: At Binh Minh street (opposite Ban Toi hotel), coordinates: X: 2078428; Y: 600476;
- + KK5: At Binh Minh street (opposite Saigon - Kim Lien hotel), coordinate X: 2079017; Y: 602885;
- + KK6: At the booter pumingstation, near Sao Nam street, coordinates X: 2078904; Y: 600476;
- + KK7: At Nghi Hoa water treatment plant, coordinates X: 2080285; Y: 591345;

12. **Comments:** The results of the analysis of air and noise quality on 15 June 2018 in the project area of Cua Lo Water Supply System Upgrading and Expanding Project show that: the measurement and analysis parameters of the air and noise environment at 7 Monitoring points are within the allowed limits according to the current regulations. Thus, in the 2nd quarter of 2018, the quality of the air environment in the project area is relatively good.

b) Results of surface water analysis

Table 8. Analysis Results of surface water (Sampling on 15 June 2018)

	Parameter	Unit	Results						GHCP
			NM1	NM2	NM3	NM4	NM5	NM6	
1	PH	-	7,7	7,2	7,5	7,9	7,6	7,7	5,5-9
2	DO	mg/l	4,8	5,3	5,1	4,9	6,1	5,72	≥ 4
3	COD	mg/l	22,5	19,2	19,04	24,4	23,2	21,8	30
4	BOD ₅ (20°C)	mg/l	9,9	10,55	10,12	13,2	11,9	12,21	15
5	TSS	mg/l	46,2	42,8	39,3	40,9	38,6	41,7	50
6	NH ₄ ⁺	mg/l	0,44	0,39	0,43	0,21	0,29	0,33	0,9
7	NO ₃ ⁻	mg/l	3,8	5,1	5,5	3,2	3,5	4,1	10

8	NO ₂ ⁻	mg/l	0,033	0,042	0,049	0,041	0,048	0,035	0,05
9	PO ₄ ³⁻	mg/l	0,11	0,21	0,18	0,13	0,19	0,15	0,3
10	Grease	mg/l	0,4	0,46	0,54	0,46	0,41	0,38	1
11	Coliform	MPN/100mm l	4.800	4500	4900	4.500	4400	4700	7500

(Source: Thai Duong Environmental Treatment and Monitoring JSC, June, 2018)

Notes: GHCP: QCVN 08-MT:2015/BTNMT: National technical regulation about the surface water quality.

- + NM1: At Phuong Tich bridge(the first point), coordinates: X: 2078175; Y: 591458;
- + NM2: At Phuong Tich bridge (the second point), coordinates: X: 2079981; Y: 591657 ;;
- + NM3: Surface water on Rao Truong River (near Nhon Bridge), coordinates: X: 2077848; Y: 595975;
- + NM4: On Cam River, coordinates: X: 2085180; Y: 594907;
- + NM5: Surface water on ponds in Nghi Huong ward, coordinates: X: 2078967; Y: 602631;
- + NM6: Surface water on ponds in Nghi Khanh commune, coordinates: X: 2080250; Y: 599570;

13. **Comments:** Based on the measurement results of the surface water samples showed that the analytical parameters of the 6 surface water samples in the project area in the 2nd quarter of 2018 were within the allowed limits in QCVN 08-MT: 2015/BTNMT. Column B1).

3 Occupational, Health and Safety (OHS) Performance Monitoring

3.1 OHS for worker

14. The contractor has equipped medical cabinets and protective equipment for workers fully. The health of workers and workers on the site is generally good.

Table 9: Issues on OHS for worker

Issue	Required Action	Responsibility and Timing	Resolution
Old Issues from Previous Reports			
Lack of first-aid kits and fire-extinguishers at workers camp	Providing first-aid kits and fire-extinguishers at workers camp	Contractors; As soon as possible after the onsite training in Dec 2017	The issue has been solved
Equip safety clothing for workers (Water Treatment Plant site)	The contractors must provide adequately safety clothing for workers	Contractors; As soon as possible after the onsite training in Dec 2017	Though there are some improvement, the issue has not yet been completely solved (see above)
New Issues from This Report			
Workers who are exposed to loud noise are not equipped with noise-canceling ear plugs (Pump Station site).	Providing noise-canceling ear plugs for workers who are exposed to loud noise.	<ul style="list-style-type: none"> - Contractor, - Site engineers of the contractor were informed and guided about the issue. All workers must be equipped with noise-canceling ear plugs whenever working near high noise level sources. 	

3.2 Public Safety

Table 10: Issues on Public Safety

Issue	Required Action	Responsibility and Timing	Resolution
Old Issues from Previous Reports			
None			
New Issues from This Report			
Watering sprinkling at specific locations in dry season.	The contractor is requested to water daily (when dry weather) on the construction site to keep a reasonable humidity to reduce dust dispersion.	<ul style="list-style-type: none"> - Contractor, - Daily, when dry weather. 	

4 Information Disclosure and Socialization including Capability Building

15. During field monitoring from 25 to 29 June 2018, the consultant consulted some project area residents on environmental issues that occurred during the construction process of the contractor.

Table 11: Residents' Feedback on the Project

No.	Projects	Residents' feedbacks	Mitigation measures
1	WTP	<ul style="list-style-type: none"> - The contractor has satisfactorily controlled dust by sprinkling water during construction - Dust is minimal thanks to the wet season 	- continual CSC's and PMU's strict supervision of sanitation and environmental safeguards
2	Booster station and office	<ul style="list-style-type: none"> - The works are welcomed and encouraged by local residents, as they supply clean water and enhance living standards - Workers' activities are orderly 	- continual CSC's and PMU's strict supervision of sanitation and environmental safeguards
3	Transmission pipelines	<ul style="list-style-type: none"> - Contractor's performance is outstanding. There has been no environmental issue that affects the routines of residents along the line - Workers' activities are orderly and quiet 	- continual CSC's and PMU's strict supervision of sanitation and environmental safeguards

16. Capacity building and community protection activities during project documentation phase are detailed in the approved IEE/EMP, RP and GAP reports. During the construction phase, the following activities have been done by the environmental specialist:

- Training/guiding on site for the contractors and construction supervising engineers about the EMP implementation during construction phase;
- Training/guiding on site for the contractors and supervising engineers to fulfil the on-site construction diary, weekly monitoring forms, to disclose the construction plans to the local authorities and communities before implementation;
- Working with the local communities for guiding and instruction about the roles of the environmental community monitoring;

- Organizing meetings with PMU and CMC to discuss on the project’s EMP implementation and monitoring.
17. For this monitoring period, the environmental specialist conducted following activities:
- Re-training/guiding on site for the contractors and construction supervising engineers about the EMP implementation during construction phase;
 - Interviewing/consulting with some randomly selected local people living around the project areas about the environmental and social impacts caused by the project;
 - Organizing meetings with PMU’s staff and CMC to discuss on the project’s EMP implementation and monitoring.

5 Grievance Redress Mechanism

18. For each of the item, Grievance Redress Mechanism (GRM) has been set up to resolve complaints in a timely manner, namely:

- In each construction site, there is signage showing full information about the work, contractor, CSC, the project owner, site managers, contact details of project owner, and site manager.
- For each site, there is always the presence of a PMU officer, a CSC staff, and the site manager
- In case of grievance and complain, public members may dial the site manager, CSC, PMU’s representative or seek them at the site to express their grievance or demand to resolve, mitigate or compensate for issues.
- In case of failure to come to an agreement, public members may lodge their grievance at the sites with the PMU’s representative, CSC, site managers or at the PMU office. Within a month of admission, PMU director shall delegate an officer to work with involved parties including site managers, PMU’s representatives, CSC and affected persons on remedial or offsetting actions.
- In case of inability to come to a satisfactory resolution, public members may appeal to higher authority in accordance with legal procedures.

Table 12: Details of personnel in charge of GRM at the sites:

No	Items	Name	Position	Phone number
1	WTP	Mr.: Le Quoc Hung	Site Manager	0979874402
2	Booster station	Mr.: Tran Xuan Thai	Site Manager	0985112169
3	Transmission line	Mr.: VuAn Tuan	Site Manager	0978697313

19. Over the course of implementation, as of June 2018 there has been no complains from local authority and the public on adverse impacts on the environment and community done by the project.

Table 13: Grievances Received

Type of Grievance	Details (Date, person, address, contact details, etc.)	Required Action, Responsibility and Timing	Resolution
Old Issues from Previous Reports			
None			

New Issues from This Report			
None			

6 Resettlement, Social safeguards and Gender

6.1 . Resettlement, Social safeguards

20. Compensation and site clearance for the project had been carried out by the local authorities (Cua Lo Town People's Committee) from 2012 to 2016. Detailed compensation plans are approved in the following documents:

- For pumping station and office building in Nghi Huong ward, Cua Lo town, Nghe An province: detailed compensation plan approved in Document No. 20 / TC-KH dated 26 / 12/2012 of People's Committee of Cua Lo Town. Clean land was handed over first phase to the investor according to Decision no.44/QD-UBND dated 30 January, 2018 of Nghe An PPC's. The ground handed over is 10,739.3m², at Nghi Huong ward.
- For construction of the water treatment plant in Nghi Hoa commune, Nghi Loc district, Nghe An province: detailed compensation plan approved in Decision No. 2393 / QD-UBND dated December 28, 2012 of Nghi Loc District People's Committee. Cua Lo Water Supply JS Company signed a land lease contract no. 208/HD-TD dated 01 November, 2017 with Nghe An PPCs. Accordingly, the land area of 80,754m² was handed over Cua Lo Water Supply JS Company, with a 50-year time period, for construction of the water treatment plant.

21. A Resettlement Due Diligence Report (DDR) was prepared by the investor to consider compliance with social safeguard policies, including: compensation, assistance and resettlement policies; compensation unit price (at replacement cost); and income restoration policy of severely affected / vulnerable households by the project. Accordingly, compensation policies are assessed to comply with the current regulations of the State of Vietnam and meet the requirements of the ADB Sponsor. The DDR was approved by ADB on June 20, 2017.

22. For construction of clean water pipelines: The project affected temporarily on agricultural land of 61 households (rice fields). The project only temporarily use the land areas during the construction phase of pipelines. Compensation and payment for households is carried out in the form of direct agreement with people on compensation unit prices to ensure replacement costs. Compensation has been completed quickly under the consent of all affected households and handover of clean ground to the contractors (before May 5, 2018).

23. Results of monitoring:

- For pumping station and office building in Nghi Huong ward, Cua Lo town, Nghe An province:
 - o Till June 2018, there had been no complaints from local people and authorities recorded about the negative environmental and social impacts caused by the project construction.
 - o As noted, there are two households who do not agree to receive the compensation according to the land price of the decision of Nghe An Provincial People's Committee (VND 1,027,000/m²), with an area of 3000m². These households would like to get a higher unit price. This issue is being continued to work by the investor, Cua Lo Town People's Committee, and Cua Lo Town Land Fund Development Center.

- For construction of the water treatment plant in Nghi Hoa commune, Nghi Loc district, Nghe An province:
 - o Till June 2018, there had been no complaints from local people and authorities recorded about the negative environmental and social impacts caused by the project construction.
 - o As already mentioned in the previous periodic report, although a land lease contractor has been signed, however, there are eight (08) remaining graves on this area have not been removed. Through direct communication with representative of contractor and construction supervision consultant on site, the delay in relocation of these graves is due to the agreements on price have not been reached between Nghi Hoa CPC's and grave's owners on the removing plan. It is recommended that Nghi Hoa CPC's has responsibility for allocating land fund and removing graves. Cua Lo Water Supply JS Company should cooperate with relevant stakeholders to quickly complete removing the graves and clearance in order to carry out construction activities on schedule.
- Clean water pipelines are constructed along roads, with no permanent land acquisition effects. Pipeline construction and installation works are carried out by rolling, completing each section and returning the road immediately after construction. Transmission network includes pipes with diameters from DN250 to DN450 in a total length of 15.5 km. Cut through agricultural land of 61 households. At present, all affected households readily received the compensation.
- During construction of pipelines may cause temporary disturbances on living/business activities of households along the construction roads which include: (i) 25 households along Highway No. 46 (intersection close to Cua Lo Water Supply Joint Stock Company); (ii) 20 households along Sao Nam Road; (iii) 35 business households along Provincial Road No. 535 from Binh Minh intersection to Nghi Xuan Commune People's Committee; (iv) 25 households along Nguyen Hue Road; and (v) 30 households along Nguyen Sinh Cung Road. However, these impacts are minor since all the pipes are relatively small and occur temporally in short time period.
- The service network has diameter ranging from DN32 to DN90 connected from distribution network to convey water to consumers. Total length of the service network is 241.800 m. During construction of the service network may cause temporary disturbances to the households living along the road sides,, However these impacts are minor, only occur in short time period, could not be avoided, and could be mitigated by reasonable measures.

6.2 .Gender Action


24. Related to gender equality during approach, participation, and beneficiary from the project, Consultants has consulted to Investor and relevant contractors in order to ensure gender equality and give priorities to women, who participate into public consultation, communitybased monitoring. Representatives of the local Women's Union are always invited to the consultation meeting for comments on the project. Consultants also consulted with Investor and contractors in order to guarantee gender equality and give priorities to women, who want to work in the project (including during both construction phase and the subsequent operational phase).

Table 14: Gender action plan

Date of update: July 3, 2018

Project output	Gender Action Plan	Updated Progress	Issues/challenges and Recommendation
Output 1: Increased coverage planning and construction of water supply and distribution systems	T.1. At least 40% of residents consulted on construction design and planning are women	The project has conducted two consultations in Nghi Tan Ward - Cua Lo and Nghi Hop Communes in Nghi Loc District on issues of water supplying to people. The total number of participants is 115 people, of which 45 are women accounting for 39.1%	
	T.2. 100% coverage of identified poor and women-headed HH within the project area.	The project area has implemented in 11 wards. There are 1763 poor households, of which 474 poor households are headed by women. At present, poor households have access to clean water services at 55%	
	A.1. Equal employment opportunities and equal pay for equal work for women and men in civil works	At the peak, the number of workers working on the site is about 40 people per site. Of which there are about 10 women, accounting for 25% Monthly amount received: VND 6 million/month Amount received/working day: VND 220,000/day	
	T3. Target 30% female laborers in unskilled civil works with support of local Women's Unions	At the peak, the number of workers working on the site is about 40 people per site. Of which there are about 10 women, accounting for 25%	
	T4. Target 30% female employment in technical (field and laboratory), community liaison and managerial roles in PMU (and or WSC)	Currently, Cua Lo Water Supply Project has 7 members, including 2 female members (accounting for 28.5%). The number of women working for Cua Lo Water Supply Company are 15 employees, accounting for 31%.	

Project output	Gender Action Plan	Updated Progress	Issues/challenges and Recommendation
		Customer service team: 90% female.	
	T5. Target 25% women in CSBs (at ward level), CRCs and PMUs	Each community monitoring board has 5 members. There are 3 males and 2 females, accounting for 40%	
	A2. Train all CSB members—men and women—on various aspects of project oversight	5 people in every community monitoring board were all trained on environmental protection monitoring until the project was completed.	
	A3. Separate women's latrines and living quarters at construction sites	At the construction site, there are separate toilets for men and women.	Built according to the technical design of the project. There are no difficulties.
Output 2: Improved business planning, asset and financial management Improve operation and maintenance, improve strategic analysis and planning of the water supply companies and effective monitoring and evaluation	A4. Water tariff increase agreed at midterm review with gender and affordability considerations	<p>According to the approved project, the water price increases according to the schedule of 2 years. Each time the increase ups to 24%.</p> <p>The ability to pay is calculated in detail according to the price increase schedule which ensures that poor households pay less than 6% of their total income is acceptable.</p>	
	A5. Provide gender awareness training for all levels of WSC, project staff, subproject steering committees, CSBs, and consultants to increase sensitivity on water and gender issues, including through exposure visits for female staff of WSC and Women's Union	<p>There is a gender training course at the Nghi Loc district People's Committee for representatives of the Women's Union and community monitoring teams in 11 communes and wards of the project.</p> <p>There were 25 participants. Of which there are 11 women, accounting for 44%</p> <p>Content: Gender Concepts, Gender Equality, Gender Prejudice, Gender Sensitivity, Gender Mainstreaming, Gender Needs, Gender Laws and</p>	

Project output	Gender Action Plan	Updated Progress	Issues/challenges and Recommendation
	members.	Policies. 	
	T6. Target 50% female staff for new recruits in each PMU and water companies/enterprises in technical and project management positions	What is the number of people taking leadership positions and technical staffs in water factories? the proportion of women? Currently, Cua Lo Water Supply Project PMU has 7 members, including 2 female staffs (accounting for 28.5%). The women staff of Cua Lo Water Supply Company are 15 employees, accounting for 31%. The customer care team has 13 women.	
	T7. Ensure 30% female staff participation in training on technical issues like water supply management, scheme operations and maintenance (including NRW reduction)	Currently, the company is sending staffs to study at the Nghe An water supply plant. Quantity: 3 people In which: Number of women: 1	
	A6. Partner with Women's Union and Community Health Centers in IEC planning and delivery that target both male and	There are two IEC (Information, Education and Communication). Direct communication was conducted through training at the Nghi Loc District People's Committee (for affected people representatives) and at the PMU (for project workers).	

Project output	Gender Action Plan	Updated Progress	Issues/challenges and Recommendations
	female residents and local authorities' representatives equally	The number of participants is 60 people. The proportion of women is 33%.	
	A7. Gender-responsive IEC materials integrating women's issues and needs, disseminated through channels accessed by women	The IEC has developed an IEC (Information, Education and Communication) document. The document contains the following core contents: - Gender balance in decision making - Gender equality in the workplace - Equal pay	
	T8. Ensure 30% of meter readers and 50% of IEC facilitators employed by WSC and PMU are women	There are 13 people who perform the clock checks, 100% of them are women Are there 11 people working as media partners? About 67% of them are women	
	A8. During construction, inform women of water supply interruption schedules to enable better household planning and minimize disruptions	Water supply stop notifications will be made prior to connecting pipeline or cutting through existing water pipelines. Time: 2 days	
	A9. Disaggregate customer feedback by sex for use in future planning and in project quarterly reports and biannual GAP Progress Reports	There are currently no feedback or complaints from the community.	
Output 3: Effective NRW	A10. Publicize water tariff roadmap which integrates gender	The route for price increase is published in the feasible study report at the People's Committees of 11	

Project output	Gender Action Plan	Updated Progress	Issues/challenges and Recommendation
reduction	and affordability concerns informed by VWU participation in roadmap planning exercises	wards/communes under the project. Prior to the preparation of the project report, the project team consulted in 11 wards, including representatives of local women's unions.	
	A11.Ensure appropriate monitoring mechanism and staff resourcing for the implementation of decree 117/2007 and Decree 124/2011 to ensure lifeline tariff and free connections to 100% of identified poor and women-headed households.	The PMU is in compliance with the law to ensure that 100% of poor and female headed households have access to clean water Mr. Tri who takes responsibility of social safeguard in PMU is assigned to monitor free connections for poor households	

CRC = Compensation and Resettlement Committee; CSB = Community Supervision Board; HH = Household; IEC = Information, Education and Communication; MBC = Metering, Billing and Collection; PMU = Project Monitoring Unit; VWU = Viet Nam Women's Union; WSC = Water Supply Company.

Overcoming some social problems from previous surveillance

- Existence: According to the field monitoring results, there are still 8 grave lands on the area of land being handed over for the construction of the water plant (identified by the naked eye). The consultant of social environment monitoring, contractor and construction supervisor has worked with Nghi Hoa People's Committee to inform the community. Arrived at the time of monitoring in June 2018 no one received so cannot relocate, clearance. So, the contractor decided not to affect these objects
- On site temporal solution: The supervision team of the social environment has agreed with the contractor that: No construction, will be the fence to protect the piece of land (suspected of having a grave).

7 Conclusion

25. By the time of reporting (June 30, 2018), basically the project's EMPs has been implemented well by the contractors and PMU. However, there are some following issues those need to be solved , including:

26. For EMP compliance:

- Although there is some improvement in equipping safety clothing for workers, the workers who are exposed to loud noise are not equipped with noise-canceling ear plugs (Pump Station site)). It is recommended that the contractor need to equip with noise-canceling ear plugs for their workers who are exposed to loud noise.
- The activities of watering sprinkling at specific locations in dry season were not conducted properly by the contractors during the construction. It is recommended that the contractor is requested to water daily (when dry weather) on the construction site to keep a reasonable humidity to reduce dust dispersion.
- There is gutter collecting wastewater/stormwater at the site leading to the main sewers of the district. The contractor is requested to collect domestic wastewater and connect it to the common wastewater drainage system.

27. For environmental quality samplings:

- Although the approved sampling plan has a frequency of every quarter and though as reminded onsite by the environmental monitoring specialist in the previous monitoring stage (December 2017), the contractors had not conducted environmental samplings till end of 1st quarter 2018.


28. Compensation and site clearance for the project had been carried out by the local authorities (Cua Lo Town People's Committee) from 2012 to 2016. The compensation process was complied with Vietnamese laws and regulations and also adapting with ADB's socialsafeguards policies. Some minor remaining issues on resettlement which need to be solved are:

- For the site of pumping station and office building: There are still two households who do not agree to receive the compensation according to the land price of the decision of Nghe An Provincial People's Committee (VND 1,027,000/m²), with an area of 3000m². These households would like to get a higher unit price. This issue is being continued to work by the investor, Cua Lo Town People's Committee, and Cua Lo Town Land Fund Development Center;
- For the site of water treatment plant in Nghi Hoa commune: There are eight (08) remaining graves on this area have not been removed. Through direct communication with representative of contractor and construction supervision consultant on site, the delay in relocation of these graves is due to the agreements on price have not been reached between Nghi Hoa CPC's and grave's owners on the removing plan. It is recommended that Nghi Hoa CPC's has responsibility for allocating land fund and removing graves. Cua Lo Water Supply JS Company should cooperate with relevant stakeholders to quickly complete removing the graves and clearance in order to carry out construction activities on schedule

29. Compensation for ground clearance is basically completed and handover of the ground in time for the work construction project. It is recommended that contractors, construction supervision consultants pay more attention to the protection of workers' health and safety; Ensure traffic safety near the construction site when people pass through here.




Appendix

Appendix 1: results of analysis of environmental samples during construction phase



**TRUNG TÂM PHÂN TÍCH VÀ ĐO ĐẠC
MÔI TRƯỜNG PHƯƠNG NAM**

Địa chỉ: Số 15 Đoàn Thị Điểm- Phường 4 – Tp. Vũng Tàu.
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Mobile: 0902.585.140(Mr. Thu) – 0908.471.418 (Mr. Năm)

BIÊN BẢN LẤY MẪU

Số:...../PHUONGNAM/.....

Hôm nay, vào lúc 10 giờ ngày 15 tháng 06 năm 2018.

Tên cơ sở: Công ty CP Cấp nước Cửu Long

Địa chỉ: Dự án xây dựng cấp và xử lý nước thải công nghiệp cấp nước Cửu Long
Thị xã Cửu Long tỉnh Nghệ An

Chúng tôi gồm có:

Ông(bà)..... Đại diện cơ sở/Khách hàng: DT.....

Ông(bà)..... Đại diện (Giám sát):.....

Ông(bà)..... Đại diện đơn vị phối hợp: Công ty PT và NT Vũng Tàu

Ông(bà)..... Đại diện: Trung Tâm Phân Tích và Đo Đạc Môi Trường Phương Nam

Tiến hành khảo sát, đo đạc quan trắc và lấy mẫu hiện trường trong điều kiện: Vào ngày 15/06/2018

Mục đích lấy mẫu: Giám sát môi trường xây dựng Dự án năm 2018

A. THIẾT BỊ QUAN TRẮC HOẶC LẤY MẪU HIỆN TRƯỜNG

STT	Tên trang thiết bị	Ký hiệu, model	Nước sản xuất
A.1. Đối với không khí xung quanh và môi trường lao động			
1	Máy đo nhiệt độ, độ ẩm, tốc độ gió	Kestrel 3000; 19-1-MDND-DA-TDG	Mỹ
2	Máy đo tiếng ồn	Tenmars TM-101; 16-MDTO	Đài Loan
3	Máy đo độ rung	Kanomax 4200; 26-MDDR	Nhật Bản
4	Thiết bị lấy mẫu không khí	Buck Libra; 18MLMK	Mỹ
5	Máy lấy bụi	Sibata Hv 500R; 32MLMB-500R	Nhật Bản
6	Ông thủy tinh Impinger	-	Trung Quốc
7	Bình lấy mẫu khí CO ₂ khóa	45-BLMK CO	Trung Quốc
8	Trụ giá để	-	Việt Nam
A.2. Đối với nước			
1	Máy đo EC/TDS, nhiệt độ	AD332; 31-MDNECTD332	Hungary
2	Máy đo pH	44-pHVS	Martini - Rumani
3	Máy đo nhanh DO	Qualytic; 05MDNDO	Đức
4	Bình Inox lấy mẫu nước	20BLMN	Việt Nam

B. PHƯƠNG PHÁP QUAN TRẮC HOẶC LẤY MẪU HIỆN TRƯỜNG VÀ BẢO QUẢN MẪU

STT	Thông số	Phương pháp quan trắc/lấy mẫu	Bảo quản mẫu
B.1. Quan trắc (đo nhanh) hiện trường đối với không khí xung quanh và môi trường lao động			
1	Nhiệt độ	QCVN 46:2012/BTNMT	-
2	Độ ẩm	QCVN 46:2012/BTNMT	-
3	Tốc độ gió	QCVN 46:2012/BTNMT	-
4	Tiếng ồn	TCVN 7878-2:2010	-
5	Độ rung	TCVN 6963:2001	-

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TRUNG TÂM PHÂN TÍCH VÀ ĐO ĐẶC MÔI TRƯỜNG PHƯƠNG NAM

Địa chỉ: Số 15 Đoàn Thị Điểm- Phường 4 – Tp. Vũng Tàu.
VP: 14 đường số 4, KDC Bình Hưng, Xã Bình Hưng, huyện
Bình Chánh, Tp. HCM

Điện Thoại: 0254.3563950 Fax: 0254.3563363
Mobile: 0902.585.140(Mr. Thu) – 0908.471.418 (Mr. Năm)



BIÊN BẢN LẤY MẪU

Số:...../PHUONGNAM-2018

Hôm nay, vào lúc 11h ngày 11 tháng 11 năm 2018.

Tên cơ sở: Dục An Môi trường cấp xã Niề xây hồ thủy cấp nước Cui Lồ

Địa chỉ: Công ty CP cấp nước Cui Lồ - Thị xã Cui Lồ - Nghệ An

Chúng tôi gồm có:

Ông(bà) Đại diện cơ sở/Khách hàng; DT

Ông(bà) Đại diện (Giám sát):

Ông(bà) Đại diện đơn vị phối hợp: Công ty CP TV - DT và MT VN

Ông(bà): Nguyễn Ngọc Sơn Đại diện: Trung Tâm Phân Tích và Đo Đặc Môi Trường
Phương Nam

Tiến hành khảo sát, đo đạc quan trắc và lấy mẫu hiện trường trong điều kiện: Trời nắng, gió nhẹ

Mục đích lấy mẫu: Quan trắc nước ngầm Quý II năm 2018

A. THIẾT BỊ QUAN TRẮC HOẶC LẤY MẪU HIỆN TRƯỜNG

STT	Tên trang thiết bị	Ký hiệu, model	Nước sản xuất
A.1. Đối với không khí xung quanh và môi trường lao động			
1	Máy đo nhiệt độ, độ ẩm, tốc độ gió	Kestrel 3000; 19-1-MDND-DA-TDG	Mỹ
2	Máy đo tiếng ồn	Tenmars TM-101; 16-MDTO	Đài Loan
3	Máy đo độ rung	Kanomax 4200; 26-MDDR	Nhật Bản
4	Thiết bị lấy mẫu không khí	Buck Libra; 18MLMK	Mỹ
5	Máy lấy bụi	Sibata Hv 500R; 32MLMB-500R	Nhật Bản
6	Ống thủy tinh Impinger	-	Trung Quốc
7	Bình lấy mẫu khí CO ₂ khóa	45 -BLMK CO	Trung Quốc
8	Trụ/giá đỡ	-	Việt Nam
A.2. Đối với nước			
1	Máy đo EC/TDS, nhiệt độ	AD332; 31-MDNECTD332	Hungary
2	Máy đo pH	44-pHVS	Martini - Ruman
3	Máy đo nhanh DO	Qualytic; 05MDNDO	Đức
4	Bình Inox lấy mẫu nước	20BLMN	Việt Nam

B. PHƯƠNG PHÁP QUAN TRẮC HOẶC LẤY MẪU HIỆN TRƯỜNG VÀ BẢO QUẢN MẪU

STT	Thông số	Phương pháp quan trắc/lấy mẫu	Bảo quản mẫu
B.1. Quan trắc (đo nhanh) hiện trường đối với không khí xung quanh và môi trường lao động			
1	Nhiệt độ	QCVN 46:2012/BTNMT	-
2	Độ ẩm	QCVN 46:2012/BTNMT	-
3	Tốc độ gió	QCVN 46:2012/BTNMT	-
4	Tiếng ồn	TCVN 7878-2:2010	-
5	Độ rung	TCVN 6963:2001	-



TRUNG TÂM PHÂN TÍCH VÀ ĐO ĐẠC MÔI TRƯỜNG PHƯƠNG NAM

Địa chỉ: Số 15 Đoàn Thị Điểm- Phường 4 – Tp. Vũng Tàu.
VP: 14 đường số 4, KDC Bình Hưng, Xã Bình Hưng, huyện
Bình Chánh, Tp. HCM
Điện Thoại: 0254.3563950 - Fax: 0254.3563363
Mobile: 0902.585.140(Mr. Thu) – 0908.471.418 (Mr. Năm)



BIÊN BẢN LẤY MẪU

Số:...../PHUONGNAM/.....

Hôm nay, vào lúc 19... ngày 30 tháng 01 năm 2021...

Tên cơ sở: Công Ty CP Cáp nước Cửu Long

Địa chỉ: Đường Nguyễn Văn Miếu, xã Phú Mỹ, huyện Phú Mỹ, tỉnh Bà Rịa - Vũng Tàu

Chúng tôi gồm có:

Ông(bà)..... Đại diện cơ sở/Khách hàng: DT.....

Ông(bà)..... Đại diện (Giám sát):.....

Ông(bà)..... Đại diện đơn vị phối hợp: Công Ty CP DV DT và DL Cửu Long

Ông(bà): Nguyễn Ngọc Sơn..... Đại diện: Trung Tâm Phân Tích và Đo Dạc Môi Trường

Phương Nam

Tiến hành khảo sát, đo đạc quan trắc và lấy mẫu hiện trường trong điều kiện: Trời nắng, gió nhẹ

Mục đích lấy mẫu: Quan trắc môi trường quy II năm 2021

A. THIẾT BỊ QUAN TRẮC HOẶC LẤY MẪU HIỆN TRƯỜNG

STT	Tên trang thiết bị	Ký hiệu, model	Nước sản xuất
A.1. Đối với không khí xung quanh và môi trường lao động			
1	Máy đo nhiệt độ, độ ẩm, tốc độ gió	Kestrel 3000; 19-1-MDND-DA-TDG	Mỹ
2	Máy đo tiếng ồn	Tenmars TM-101; 16-MDTO	Đài Loan
3	Máy đo độ rung	Kanomax 4200; 26-MDDR	Nhật Bản
4	Thiết bị lấy mẫu không khí	Buck Libra; 18MLMK	Mỹ
5	Máy lấy bụi	Sibata Hv 500R; 32MLMB-500R	Nhật Bản
6	Ống thủy tinh Impinger	-	Trung Quốc
7	Bình lấy mẫu khí CO ₂ khóa	45-BLMK CO	Trung Quốc
8	Trụ/giá đỡ	-	Việt Nam
A.2. Đối với nước			
1	Máy đo EC/TDS, nhiệt độ	AD332; 31-MDNECTD332	Hungary
2	Máy đo pH	44-pHVS	Martini - Rumani
3	Máy đo nhanh DO	Qualytic; 05MDNDO	Đức
4	Bình Inox lấy mẫu nước	20BLMN	Việt Nam

B. PHƯƠNG PHÁP QUAN TRẮC HOẶC LẤY MẪU HIỆN TRƯỜNG VÀ BẢO QUẢN MẪU

STT	Thông số	Phương pháp quan trắc/lấy mẫu	Bảo quản mẫu
B.1. Quan trắc (đo nhanh) hiện trường đối với không khí xung quanh và môi trường lao động			
1	Nhiệt độ	QCVN 46:2012/BTNMT	-
2	Độ ẩm	QCVN 46:2012/BTNMT	-
3	Tốc độ gió	QCVN 46:2012/BTNMT	-
4	Tiếng ồn	TCVN 7878-2:2010	-
5	Độ rung	TCVN 6963:2001	-

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**TRUNG TÂM PHÂN TÍCH VÀ ĐO ĐẠC
MÔI TRƯỜNG PHƯƠNG NAM**

Địa chỉ: Số 15 Đoàn Thị Điểm- Phường 4 - Tp. Vũng Tàu
Điện thoại: 0254.3563356 Fax: 0254.3563363



PHIẾU KẾT QUẢ PHÂN TÍCH

Số: 243-7-PHUONGNAM/2018

1. Khách hàng: Công ty Cổ phần tư vấn đầu tư và Môi trường VINAGREEN
2. Địa chỉ: LK 18, khu đô thị Hadico 30, xóm 20, xã Nghi Phú, Tp Vinh, Nghệ An
3. Địa điểm lấy mẫu: Khu vực dự án nâng cấp, mở rộng hệ thống cấp nước thị xã Cửa Lò, tỉnh Nghệ An.
3. Loại mẫu: Mẫu không khí, tiếng ồn
4. Vị trí lấy mẫu: Mẫu không khí, tiếng ồn
+ Khu vực đường Nguyễn Sinh Cung
+ Khu vực đường Nguyễn Huệ
+ Khu vực đường Mai Thúc Loan
5. Ngày lấy mẫu: 15/06/2018

Kí hiệu: Tọa độ:
KK1 X: 2078456 ; Y: 601044
KK2 X: 2079042; Y: 602877
KK3 X: 2079131; Y: 602965

Ngày trả kết quả: 16/07/2018

TT	Thông số	DVT	Phương pháp thử	Kết quả			QCVN 05:2013/BTNMT
				K1	K2	K3	
1	Nhiệt độ	°C	QCVN 46:2012/BTNMT	31	30,6	31,2	-
2	Độ ẩm	%	QCVN 46:2012/BTNMT	78	80,4	79	-
3	Áp suất khí quyển	atm	HD81-PPDN-ASKK	598	602	605	-
4	Vận tốc gió	m/s	QCVN 46:2012/BTNMT	0,4	0,3	0,4	-
5	Hướng gió	-	GPS 64s	ĐN	ĐN	ĐN	-
6	Bụi tổng số (TSP)*	µg/m ³	TCVN 5067:1995	198	175	182	300
7	CO	µg/m ³	HD24-PPT-CO	420 0	4020	380 0	30000
8	SO ₂	µg/m ³	TCVN 5971:1995	188	175	168	350
9	NO ₂	µg/m ³	TCVN 6137:2009	171	145	166	200
10	Tiếng ồn	dBA	TCVN 7878-2:2010	66	65	66	70 ⁽¹⁾

Ghi chú:

"-" Tức là không quy định;

- QCVN 05:2013/BTNMT: Quy chuẩn kỹ thuật quốc gia về chất lượng không khí xung quanh.

- ⁽¹⁾: QCVN 26:2010/BTNMT: Quy chuẩn kỹ thuật quốc gia về tiếng ồn.

- Kết quả chỉ có giá trị đối với mẫu thử nghiệm.

- Không được trích sao một phần kết quả này nếu không được sự đồng ý của PTN.

Trưởng phòng phân tích

Nguyễn Thị Xuân

**KT.Giám đốc Trung tâm
Phó Giám-Đốc**



Nguyễn Thị Duyên



TRUNG TÂM PHÂN TÍCH VÀ ĐO ĐẠC

MÔI TRƯỜNG PHƯƠNG NAM

Địa chỉ: Số 15 Đoàn Thị Điểm- Phường 4 - Tp Vũng Tàu.

Điện Thoại: 0254.3563356

Fax: 0254.3563363



PHIẾU KẾT QUẢ PHÂN TÍCH

Số: 238.7 /PHUONGNAM/2018

1. Khách hàng: Công ty Cổ phần tư vấn đầu tư và Môi trường VINAGREEN
2. Địa chỉ: LK 18, khu đô thị Hadico 30, xóm 20, xã Nghi Phú, Tp Vinh, Nghệ An
3. Địa điểm lấy mẫu: Khu vực dự án nâng cấp, mở rộng hệ thống cấp nước thị xã Cửa Lò, tỉnh Nghệ An.
3. Loại mẫu: Mẫu không khí, tiếng ồn
4. Vị trí lấy mẫu:
+ Tại đường Bình Minh (đối diện khách sạn Bạt Tới)
+ Tại đường Bình Minh (đối diện KS Sài Gòn – Kim Liên)
+ Tại trạm bơm tăng áp, gần đường Sào Nam
+ Khu vực Nhà máy nước Nghi Hòa
5. Ngày lấy mẫu: 15/06/2018

Kí hiệu: Tọa độ:
KK4 X: 2078428 ; Y: 601032
KK5 X: 2079017; Y: 602885
KK6 X: 2078904; Y: 600476
KK7 X: 2080285; Y: 591345

Ngày trả kết quả: 16/07/2018

TT	Thông số	DVT	Phương pháp thử	Kết quả				QCVN 05:2013/BTNM T
				KK4	KK5	KK6	KK7	
1	Nhiệt độ	°C	QCVN 46:2012/BTNMT	30,5	31	30,8	30,2	-
2	Độ ẩm	%	QCVN 46:2012/BTNMT	80,2	80,5	79,6	81	-
3	Áp suất khí quyển	atm	HD81-PPDN- ASKK	605	602	598	607	-
4	Vận tốc gió	m/s	QCVN 46:2012/BTNMT	0,4	0,5	0,5	0,45	-
5	Hướng gió	-	GPS 64s	ĐN	ĐN	ĐN	ĐN	-
6	Bụi tổng số (TSP)*	µg/m ³	TCVN 5067:1995	198	185	187	202	300
7	CO	µg/m ³	HD24-PPT-CO	4055	3820	3884	3600	30000
8	SO ₂	µg/m ³	TCVN 5971:1995	172	168	177	164	350
9	NO ₂	µg/m ³	TCVN 6137:2009	155	142	149	151	200
10	Tiếng ồn	dBA	TCVN 7878- 2:2010	66	65	64,5	65,5	70 ⁽¹⁾

Ghi chú:

"-" Tức là không quy định;

- QCVN 05:2013/BTNMT: Quy chuẩn kỹ thuật quốc gia về chất lượng không khí xung quanh.

- (1): QCVN 26:2010/BTNMT: Quy chuẩn kỹ thuật quốc gia về tiếng ồn.

- Kết quả chỉ có giá trị đối với mẫu thử nghiệm.

Trưởng phòng phân tích


Nguyễn Thị Xuân

KT.Giám đốc Trung tâm
Phó Giám Đốc


Nguyễn Thị Duyên



**TRUNG TÂM PHÂN TÍCH VÀ ĐO ĐẶC
MÔI TRƯỜNG PHƯƠNG NAM**

Địa chỉ: Số 15 Đoàn Thị Điểm- Phường 4 - Tp. Vũng Tàu
Điện Thoại: 0254 3563356 Fax: 0254.3563363



PHIẾU KẾT QUẢ PHÂN TÍCH

Số: 1467/PHUONGNAM/2018

1. Khách hàng: Công ty Cổ phần tư vấn đầu tư và Môi trường VINAGREEN
2. Địa chỉ: LK 18, khu đô thị Hadico 30, xóm 20, xã Nghi Phú, Tp Vinh, Nghệ An
3. Địa điểm lấy mẫu: Khu vực dự án nâng cấp, mở rộng hệ thống cấp nước thị xã Cửa Lò, tỉnh Nghệ An.
3. Loại mẫu: Độ rung
4. Vị trí lấy mẫu: KI hiệu: Tọa độ:
+ Tại Cầu phương Tích (tuyến ống truyền tải) R1 X: 20780177 ; Y: 591456
+ Tại Cầu Rao Trường (tuyến ống truyền tải) R2 X: 2077846; Y: 595972
+ Tại đường Sào Nam (tuyến phân phối) R3 X: 2080282; Y: 591340
+ Tại đường Bình Minh (tuyến phân phối) R4 X: 2079230; Y: 603300
5. Ngày lấy mẫu: 15/6/2018 Ngày trả kết quả: 12/07/2018

TT	Thông số	ĐVT	Phương pháp	Kết quả				QCVN 27:2010/BTNMT
				R1	R2	R3	R4	
1	Độ rung	dB	TCVN 6963:2001	70	68	67	65	75 ⁽¹⁾

Ghi chú:

"-" Tức là không quy định;

- ⁽¹⁾: QCVN 27:2010/BTNMT: Quy chuẩn kỹ thuật quốc gia về độ rung.

- Kết quả chỉ có giá trị đối với mẫu thử nghiệm.

- Không được trích sao một phần kết quả này nếu không được sự đồng ý của PTN.

Trưởng phòng phân tích

Nguyễn Thị Xuân

KT. Giám đốc Trung tâm

Phó Giám Đốc



Nguyễn Thị Duyên



**TRUNG TÂM PHÂN TÍCH VÀ ĐO ĐẠC
MÔI TRƯỜNG PHƯƠNG NAM**

Địa chỉ: Số 15 Đoàn Thị Điểm- Phường 4 - Tp. Vũng Tàu.
Điện Thoại: 0254 3563356 Fax: 0254 3563363



PHIẾU KẾT QUẢ PHÂN TÍCH

Số: 24/H-T-TPHONGNAM/2018

1. Khách hàng: Công ty Cổ phần tư vấn đầu tư và Môi trường VINAGREEN
2. Địa chỉ: LK 18, khu đô thị Hadico 30, xóm 20, xã Nghi Phú, Tp Vinh, Nghệ An
3. Địa điểm lấy mẫu: Khu vực Dự án năng cấp, mở rộng hệ thống cấp nước thị xã Cửa Lò, tỉnh Nghệ An.
3. Loại mẫu: Mẫu nước mặt
4. Vị trí lấy mẫu: Nước mặt trên cầu Phương Tích (điểm 1)
Nước mặt trên cầu Phương Tích (điểm 2)
Nước mặt ở sông Rao Trường
5. Ngày lấy mẫu: 15/06/2018

Kí hiệu: Tọa độ:
NM1 X: 2080175; Y: 591458
NM2 X: 2079981; Y: 591657
NM3 X: 2077848; Y: 595975
Ngày trả kết quả: 18/07/2018

TT	Thông số	DVT	Phương pháp thử	Kết quả			QCVN 08-MT:2015/ BTNMT
				NM1	NM2	NM3	
1	pH	Thang pH	TCVN 6492:2011	7,6	7,4	7,3	5,5-9
2	DO	mg/l	TCVN 7325:2016	5,2	5,0	5,5	≥4
3	COD	mg/l	SMEWW 5220C:2012	24,2	20,5	21,8	30
4	BOD ₅ (20°C)	mg/l	TCVN 6001:2008	11,2	10,6	11,8	15
5	TSS	mg/l	TCVN 6625:2000	44,5	43,7	41,1	50
6	NH ₄ ⁺	mg/l	EPA Method 350.2	0,52	0,48	0,41	0,9
7	NO ₃ ⁻	mg/l	SMEWW 4500-NO ₃ -E:2012	3,2	4,8	4,6	10
8	NO ₂ ⁻	mg/l	TCVN 6178:1996	0,035	0,039	0,044	0,05
9	PO ₄ ³⁻	mg/l	TCVN 6202:2008	0,18	0,25	0,21	0,3
10	Dầu mỡ	mg/l	SMEWW 5520B:2012	0,6	0,52	0,61	1
11	Coliform	MPN/100 ml	TCVN 6187-2:2009	4.700	4600	4500	7.500

Ghi chú:

"-" Tức là không quy định;

- QCVN 08-MT:2015/BTNMT: Quy chuẩn kỹ thuật quốc gia về chất lượng nước mặt.

- Cột B1: Dùng cho mục đích tưới tiêu, thủy lợi hoặc các mục đích sử dụng khác có yêu cầu chất lượng nước tương tự hoặc các mục đích sử dụng như loại B2.

- Kết quả chỉ có giá trị đối với mẫu thử nghiệm.

Trưởng phòng phân tích


Nguyễn Thị Xuân

**KT.Giám đốc Trung tâm
Phó Giám Đốc**


Nguyễn Thị Duyên



**TRUNG TÂM PHÂN TÍCH VÀ ĐO ĐẠC
MÔI TRƯỜNG PHƯƠNG NAM**

Địa chỉ: Số 15 Đoàn Thị Điểm- Phường 4 - Tp. Vũng Tàu.
Điện thoại: 0254.3563356 Fax: 0254.3563363



PHIẾU KẾT QUẢ PHÂN TÍCH

Số:/PHUONGNAM/2018

1. Khách hàng: Công ty Cổ phần tư vấn đầu tư và Môi trường VINAGREEN
2. Địa chỉ: LK 18, khu đô thị Hadico 30, xóm 20, xã Nghi Phú, Tp Vinh, Nghệ An
3. Địa điểm lấy mẫu: Khu vực Dự án nâng cấp, mở rộng hệ thống cấp nước thị xã Cửa Lò, tỉnh Nghệ An.
3. Loại mẫu: Mẫu nước mặt
4. Vị trí lấy mẫu: Nước mặt tại Sông Cẩm
Nước mặt tại ao hồ phường Nghi Hương
Nước mặt ao hồ xã Nghi Khánh
5. Ngày lấy mẫu: 15/06/2018

Kí hiệu: Tọa độ:
NM4 X: 2085195; Y: 594926
NM5 X: 2078916; Y: 602599
NM6 X: 2080244; Y: 599749

Ngày trả kết quả: 18/07/2018

TT	Thông số	DVT	Phương pháp thử	Kết quả			QCVN 08-MT:2015/ BTNMT
				NM4	NM5	NM6	
1	pH	Thang pH	TCVN 6492:2011	7,7	7,4	7,9	5,5-9
2	DO	mg/l	TCVN 7325:2016	5,2	5,8	6,4	≥4
3	COD	mg/l	SMEWW 5220C:2012	25,5	21,3	24,8	30
4	BOD ₅ (20°C)	mg/l	TCVN 6001:2008	14,5	13,2	12,9	15
5	TSS	mg/l	TCVN 6625:2000	44,1	41,5	42,7	50
6	NH ₄ ⁺	mg/l	EPA Method 350.2	0,31	0,35	0,42	0,9
7	NO ₃ ⁻	mg/l	SMEWW 4500-NO ₃ :E:2012	3,8	4,1	3,7	10
8	NO ₂ ⁻	mg/l	TCVN 6178:1996	0,044	0,041	0,037	0,05
9	PO ₄ ³⁻	mg/l	TCVN 6202:2008	0,18	0,21	0,17	0,3
10	Dầu mỡ	mg/l	SMEWW 5520B:2012	0,55	0,47	0,39	1
11	Coliform	mg/l	TCVN 6187-2:2009	4.700	4600	4600	7.500

Ghi chú:

- "-" Tức là không quy định;
- QCVN 08-MT:2015/BTNMT: Quy chuẩn kỹ thuật quốc gia về chất lượng nước mặt.
- Cột B1: Dùng cho mục đích tưới tiêu, thủy lợi hoặc các mục đích sử dụng khác có yêu cầu chất lượng nước tương tự hoặc các mục đích sử dụng như loại B2.
- Kết quả chỉ có giá trị đối với mẫu thử nghiệm.

Trưởng phòng phân tích

Nguyễn Thị Xuân

**KT.Giám đốc Trung tâm
Phó Giám Đốc**

Nguyễn Thị Duyên

Appendix 2: Mine clearance results in the project area

CỘNG HÒA XÃ HỘI CHỦ NGHĨA VIỆT NAM

Độc lập - Tự do - Hạnh phúc

Nghệ An, ngày 15 tháng 7 năm 2015

**BIÊN BẢN SỐ 01 - NTHT (NỘI BỘ)
NGHIỆM THU HOÀN THÀNH HẠNG MỤC CÔNG TRÌNH
ĐỂ ĐƯA VÀO SỬ DỤNG**

1. Công trình: Nâng cấp, mở rộng hệ thống cấp nước thị xã Cửa Lò, tỉnh Nghệ An.

- Hạng mục: Rà phá bom mìn, vật nổ

2. Địa điểm xây dựng: Xã Nghi Hoa - huyện Nghi Lộc; phường Nghi Hương, thị xã Cửa Lò - tỉnh Nghệ An.

3. Thành phần tham gia nghiệm thu:

a. Đại diện đơn vị thi công: Tổng Công ty Hợp tác Kinh tế.

1. Ông: Lê Anh Xuân

- Chức vụ: Giám đốc XN RPBM

2. Ông: Nguyễn Tiến Minh

- Chức vụ: Trưởng ban KH

b. Đại diện đội thi công : Rà phá bom mìn

1. Ông: Hoàng Hữu Thư

- Chức vụ: Chỉ huy trưởng thi công

2. Ông: Nguyễn Cao Sơn

- Chức vụ: Kỹ thuật thi công

4. Thời gian tiến hành nghiệm thu :

Bắt đầu: 07 giờ 30 phút, ngày 15 tháng 7 năm 2015

Kết thúc: 16 giờ 30 phút, ngày 15 tháng 7 năm 2015

Tại hiện trường công trình: Nâng cấp, mở rộng hệ thống cấp nước thị xã Cửa Lò, tỉnh Nghệ An.

5. Đánh giá hạng mục công trình:

- Tài liệu làm căn cứ để nghiệm thu:

+ Phiếu yêu cầu nghiệm thu của đội thi công.

+ Quy trình kỹ thuật dò tìm xử lý bom mìn vật nổ ban hành kèm theo Quyết định số 95/2003/QĐ-BQP ngày 07/8/2003 của Bộ trưởng Bộ Quốc Phòng.

+ Thông tư số 121/2012/TT-BQP ngày 12/11/2012 của Bộ Quốc phòng về việc Ban hành QCVN 01:2012/BQP, Quy chuẩn kỹ thuật quốc gia về rà phá bom mìn, vật nổ.

+ Hợp đồng kinh tế số 63/HĐKT-RPBM-2014 ngày 15/6/2015 giữa Công ty TNHH một thành viên Cấp nước Cửa Lò và Tổng Công ty Hợp tác kinh tế.

+ Hồ sơ hoàn thành công trình.

+ Điều kiện chuẩn bị đưa hạng mục RPBM - VN vào sử dụng: Mặt bằng thi công đảm bảo sạch bom mìn, vật nổ. Phạm vi các cọc mốc chỉ giới hạn rà phá trên thực địa đảm bảo đúng phương án KTTC đã được duyệt.

- Về tiến độ hoàn thành hạng mục RPBM - VN.

+ Ngày khởi công: Ngày 16 tháng 6 năm 2015.

+ Ngày hoàn thành: Ngày 8 tháng 7 năm 2015.

- Về chất lượng công trình: Mặt bằng thi công đảm bảo an toàn bom mìn, vật nổ, đạt yêu cầu đề ra, đã thực hiện đúng theo phương án kỹ thuật thi công đã được

duyet ban hành kèm theo Quyết định số 815/QĐ-BTL ngày 29/5/2014 của Bộ Tư lệnh Quân khu 4.

- Khối lượng hoàn thành.

TT	Nội dung công việc	ĐVT	KL. Theo hợp đồng	KL. Thực hiện	KL. Khảo sát	KL. NT thanh toán
(1)	(2)	(3)	(4)	(5)	(6)	(7=5-6)
A	Trên cạn					
I	Thị xã Cửa Lò: Khu vực 2 (Khu nhà văn phòng Công ty và nhà máy nước thị xã Cửa Lò).					
1	Phát dọn mặt bằng thi công tương đương rừng loại 1	Ha	0,020	0,030		0,030
2	Dò tìm trên cạn đến độ sâu 0,3 m. Mật độ 2	Ha	1,225	1,482	0,08	1,4020
3	Đào xử lý TH đến độ sâu 0,3 m. Đất C1	T/hiệu	221	252		252,00
4	Dò tìm trên cạn từ độ sâu 0,3m - 3 m	Ha	1,225	1,482	0,08	1,4020
5	Đào đất xử lý 10TH đến độ sâu 3m. Đất C2	m3	27,700	30,47		30,47
II	Huyện Nghi Lộc: Khu vực 3 (Khu nhà máy xử lý nước sạch; Tuyến đường ống HDPE D355)					
1	Phát dọn mặt bằng thi công tương đương rừng loại 1	Ha	0,280	0,09		0,09
2	Dò tìm trên cạn đến độ sâu 0,3 m. Mật độ 3	Ha	13,935	4,856	0,12	4,736
3	Đào xử lý TH đến độ sâu 0,3 m. Đất C1	T/hiệu	3.971	1.351		1.351
4	Dò tìm trên cạn từ độ sâu 0,3m - 3 m	Ha	13,935	4,856	0,12	4,736
5	Đào đất xử lý 311TH đến độ sâu 3m. Đất C2	m3	462,59	157,89		157,89
B	Dưới nước					
1	Dò tìm dưới nước đến độ sâu 0,5m. Nước sâu >0,5m-3m	Ha	7,00	6,315	0,08	6,24
2	Dò tìm dưới nước từ độ sâu 0,5m-3m. Nước sâu >0,5m-3m	Ha	7,00	6,315	0,08	6,24
3	Đánh dấu tín hiệu đến các độ sâu dò tìm. Nước sâu >0,5m - 3m	T/hiệu	567,0	505		505
4	Lặn xử lý tín hiệu đến độ		560,00	499		499

	sâu 0,5m. Nước sâu >0,5m - 3m	T/hiệu				
5	Lặn xử lý tín hiệu từ độ sâu >0,5m - 1m. Nước sâu >0,5m - 3m	T/hiệu	7,00	6		6
6	Lặn xử lý tín hiệu từ độ sâu >1m - 3m. Nước sâu >0,5m - 3m	T/hiệu				

- Những sửa đổi trong quá trình thi công so với thiết kế được duyệt: Không.
- Các ý kiến khác nếu có: Không.

6. Kết luận:

- Chấp nhận nghiệm thu hoàn thành hạng mục RPBM - VN công trình: Nâng cấp, mở rộng hệ thống cấp nước thị xã Cửa Lò, tỉnh Nghệ An để bàn giao đưa vào sử dụng.

- Các tồn tại về chất lượng cần phải sửa chữa khắc phục: Không.
- Các yêu cầu khác nếu có: Không.

7. Các bên tham gia nghiệm thu: Chịu trách nhiệm trước pháp luật về quyết định nghiệm thu này. ✓✓

ĐẠI DIỆN ĐƠN VỊ THI CÔNG
TUQ. TÔNG GIÁM ĐỐC



Trung tá Lê Anh Xuân

ĐẠI DIỆN ĐỘI THI CÔNG
CHỈ HUY THI CÔNG

Thiếu tá Hoàng Hữu Thư

Appendix 3: List of households receiving compensation support along the pipeline

BẢNG THÔNG KE TÀI SẢN HỖ TRỢ ĐẾN BÙ DƯ ẢN NƯỚC SẠCH CỬA LÒ - NGHE AN
Địa điểm: Khối Hoà Đình, phường Nghi Thu, thị xã Cửa Lò

Tt	Chủ sử dụng	Địa chỉ	Số lượng	Tổng diện tích (m ²)	Đơn giá (đồng)	Thành tiền (đồng)	Tổng tiền thực nhận (đồng)	Ký nhận	Các loại tài sản	Ghi chú
1	Nguyễn Thị Hải	Khối Hoà Đình		30.6	5,000	153000	153000	<i>Hải</i>	Rau muống	5.000 đồng/m ²
2	Phùng Thị Hoa Lê Thị Hải Nguyễn Thị Xuân	Khối Hoà Đình		45	5,000	225000	225000	<i>Thái</i>	Rau muống	5.000 đồng/m ²
3	N Thị Trạ Giang Nguyễn Thị Thê	Khối Hoà Đình		21	5,000	105000	105000	<i>Giàng</i>	Rau muống	5.000 đồng/m ²
4	Phùng Ba Viên	Khối Hoà Đình		33	5,000	165000	165000	<i>Vu</i>	Rau muống	5.000 đồng/m ²
5	Hoàng Thị Cúc	Khối Hoà Đình		39	5,000	195000	195000	<i>Thái</i>	Rau muống	5.000 đồng/m ²
6	Hoàng Thị Nam Hoàng Thị Tiếp	Khối Hoà Đình		30	5,000	150000	150000	<i>Thê</i>	Rau muống	5.000 đồng/m ²
7	Nguyễn Thị Hải Cao Thị Hiền	Khối Hoà Đình		27	5,000	135000	135000	<i>Hải?</i>	Rau muống	5.000 đồng/m ²
8	Hoàng Thị Tam Chế Thị Thái Hoàng Thị Thanh	Khối Hoà Đình		27	5,000	135000	135000	<i>Thái</i>	Rau muống	5.000 đồng/m ²
9	Hoàng Thị Hương Hoàng Minh Nhật	Khối Hoà Đình		27	5,000	135000	135000	<i>Hải?</i>	Rau muống	5.000 đồng/m ²

10	Nguyễn Thị Phương	Khối Hoà Đình		27	5,000	135000	135000	5,000 đồng/m2
11	Lê Thanh Nghị	Khối Hoà Đình	4		30,000	120000	120000	30.000 đồng/bụi
Tổng:			4	306.6			1,653,000	

Ngày tháng 4 năm 2018

Khối trưởng Hoà Đình

Phùng Bà Nào

Ngày 17 tháng 5 năm 2018

Công chức địa chính

Le Tài Hòa

Ngày 17 tháng 5 năm 2018

Chủ tịch UBND Phường

Phùng Trọng Thọ

Ngày tháng năm 2018

Đại diện chủ đầu tư

PHÙNG TRỌNG THỌ

BẢNG THÔNG KÊ TÀI SẢN HỒ TRỢ ĐỀN BÙ DƯ ẢN NƯỚC SẠCH CỬA LÒ - NGHỆ AN

Địa điểm: Khối Đồng Quyền, phường Nghi Thu, thị xã Cửa Lò

Tt	Chủ sử dụng	Địa chỉ	Số lượng	Tổng diện tích (m2)	Đun giá (đồng)	Thành tiền (đồng)	Tổng tiền thực nhận (đồng)	Ký nhận	Các loại tài sản	Ghi chú
1	Phùng Bá Phương	Khối Đồng Quyền		316	5.000	1580000	1580000	<i>[Signature]</i>	Rau ruộng	5.000 đồng/m2
2	Phùng Thị Hiền	Khối Cát Liêu		158	7.000	1106000	1106000	<i>[Signature]</i>	Ngô nếp ta	7.000 đồng/m2
				32	4.500	144000	144000		Lạc	4.500 đồng/m2
3	Phùng Bá Khoa	Khối Cát Liêu		86	7.000	602000	602000	<i>[Signature]</i>	Ngô nếp ta	7.000 đồng/m2
4	Võ Văn Lương	Khối Hiếu Hạc		335	4.500	1507500	1507500	<i>[Signature]</i>	Lúa 2 vụ	4.500 đồng/m2
Tổng:				895			4.939.500			

Ngày tháng năm 2018 Ngày tháng năm 2018 Ngày tháng năm 2018

Đại diện chủ đầu tư

Chủ tịch UBND Phường

Công chức địa chính

Khối trưởng

Đồng Quyền Hiếu Hạc Cát Liêu



[Signature]
Phùng Bá Phương
Hoàng Văn Khoa
Lê Thị Hiền

PHÙNG TRỌNG THỌ

BẢNG THÔNG KÊ TÀI SẢN HỖ TRỢ ĐẾN BƯ ĐƯ ẢN NƯỚC SẠCH VINH - CỬA LỎ

Địa điểm: Xóm Trung Tiến, xã Nghi Quang, huyện Nghi Lộc

TT	Chủ sử dụng	Địa chỉ	Số lượng các loại cây (Cây)	Tổng diện tích (m ²)	Đơn giá (đồng)	Thành tiền (đồng)	Tổng tiền thực nhận (đồng)	Ký nhận	Các loại tài sản	Ghi chú
1	Hoàng Văn Thái	Xóm Trung Tiến	10	194	5.000	970.000	1.195.000	<i>Nguyễn Văn Thái</i>	Ban Mường	5.000 đồng/m ²
2	Lương Thị Hoa	Xóm Trung Tiến	5		10.000	100.000			Chuối chừa thu hoạch	10.000 đồng/Cây
3	Nguyễn Đình Tiến	Xóm Trung Tiến		37,2	25.000	125.000	260.400	<i>Nguyễn Đình Tiến</i>	Chuối Sáp thu hoạch	25.000 đồng/Cây
4	Hoàng Văn Cát	Xóm Trung Tiến		26	7.000	260.400			Ngô Nếp địa phương	7.000 đồng/m ²
5	Nguyễn Đình Phương	Xóm Trung Tiến		34,2	3.100	80.600			Cà pháo	3.100 đồng/m ²
6	Nguyễn Kế Vinh	Xóm Trung Tiến		19,5	7.000	239.400	407.750	<i>Nguyễn Kế Vinh</i>	Ngô Nếp địa phương	7.000 đồng/m ²
7	Nguyễn Đình Tuyên	Xóm Trung Tiến		21,45	4.500	87.750			Lúa trên đất 2 lúa	4.500 đồng/m ²
8	Nguyễn Đình Kỳ	Xóm Trung Tiến		28,8	4.500	96.525	96.525	<i>Nguyễn Đình Kỳ</i>	Lúa trên đất 2 lúa	4.500 đồng/m ²
9	Nguyễn Đình Công	Xóm Trung Tiến		24,75	4.500	129.600	129.600	<i>Nguyễn Đình Công</i>	Lúa trên đất 2 lúa	4.500 đồng/m ²
10	Trần Văn Hồng	Xóm Trung Tiến		16,6	7.000	111.375	111.375	<i>Trần Văn Hồng</i>	Lúa trên đất 2 lúa	4.500 đồng/m ²
11	Trần Thị Hương	Xóm Trung Tiến		18,9	7.000	116.200	116.200	<i>Trần Thị Hương</i>	Ngô Nếp địa phương	7.000 đồng/m ²
12	Nguyễn Đình Tý	Xóm Trung Tiến		32,4	7.000	132.300	132.300	<i>Nguyễn Đình Tý</i>	Ngô Nếp địa phương	7.000 đồng/m ²
13	Hoàng Văn Bình	Xóm Trung Tiến		48,96	7.000	226.800	226.800	<i>Hoàng Văn Bình</i>	Ngô Nếp địa phương	7.000 đồng/m ²
14	Nguyễn Văn Hồng	Xóm Trung Tiến		54,95	7.000	342.720	342.720	<i>Nguyễn Văn Hồng</i>	Ngô Nếp địa phương	7.000 đồng/m ²
15	Trần Xuân Sơn	Xóm Trung Tiến		57,35	7.000	384.650	384.650	<i>Trần Xuân Sơn</i>	Ngô Nếp địa phương	7.000 đồng/m ²
16	Nguyễn Văn Nga	Xóm Trung Tiến		64	7.000	401.450	401.450	<i>Nguyễn Văn Nga</i>	Ngô Nếp địa phương	7.000 đồng/m ²
17	Nguyễn Đình Hoà	Xóm Trung Tiến		63,2	7.000	448.000	448.000	<i>Nguyễn Đình Hoà</i>	Ngô Nếp địa phương	7.000 đồng/m ²
18	Trần Văn Nường	Xóm Trung Tiến		24	7.000	442.400	442.400	<i>Trần Văn Nường</i>	Ngô Nếp địa phương	7.000 đồng/m ²
				37,6	7.000	168.000	168.000	<i>Nguyễn Đình Hoà</i>	Ngô Nếp địa phương	7.000 đồng/m ²
				108	4.000	263.200	263.200	<i>Trần Văn Nường</i>	Trồng lúa trên đất lúa 1 vụ/năm	4.000 đồng/m ²
				112	4.000	432.000	432.000	<i>Trần Văn Nường</i>	Trồng lúa trên đất lúa 1 vụ/năm	4.000 đồng/m ²
						448.000	448.000			

Chủ sử dụng	Địa chỉ	Số lượng các loại cây (Cây)	Tổng diện tích (m2)	Đơn giá (đồng)	Thành tiền (đồng)	Tổng tiền thực nhận (đồng)	Ký nhận	Các loại tài sản	Ghi chú
19 Trần Văn Trường	Xóm Trung Tiến		102	4.000	408.000	408.000	Trần Văn Trường	Trồng lúa trên đất lúa 1 vụ/năm	4.000 đồng/m2
20 Trần Thị Hoa	Xóm Trung Tiến		78	4.000	312.000	312.000	Trần Thị Hoa	Trồng lúa trên đất lúa 1 vụ/năm	4.000 đồng/m2
21 Trần Văn Nhật	Xóm Trung Tiến		114	4.000	456.000	456.000	Trần Văn Nhật	Trồng lúa trên đất lúa 1 vụ/năm	4.000 đồng/m2
22 Nguyễn Mạnh Hùng	Xóm Trung Tiến		114	4.000	456.000	456.000	Nguyễn Mạnh Hùng	Trồng lúa trên đất lúa 1 vụ/năm	4.000 đồng/m2
23 Nguyễn Ngọc Thái	Xóm Trung Tiến		94	4.000	376.000	376.000	Nguyễn Ngọc Thái	Trồng lúa trên đất lúa 1 vụ/năm	4.000 đồng/m2
24 Nguyễn Văn Thâm	Xóm Trung Tiến		94	4.000	376.000	376.000	Nguyễn Văn Thâm	Trồng lúa trên đất lúa 1 vụ/năm	4.000 đồng/m2
25 Nguyễn Thị Phương	Xóm Trung Tiến		114	4.000	456.000	456.000	Nguyễn Thị Phương	Trồng lúa trên đất lúa 1 vụ/năm	4.000 đồng/m2
26 Hoàng Văn Bình	Xóm Trung Tiến		94	4.000	376.000	376.000	Hoàng Văn Bình	Trồng lúa trên đất lúa 1 vụ/năm	4.000 đồng/m2
27 Trần Thị Trường	Xóm Trung Tiến		114	4.000	456.000	456.000	Trần Thị Trường	Trồng lúa trên đất lúa 1 vụ/năm	4.000 đồng/m2
28 Nguyễn Văn Hồng	Xóm Trung Tiến		96	4.000	384.000	384.000	Nguyễn Văn Hồng	Trồng lúa trên đất lúa 1 vụ/năm	4.000 đồng/m2
29	Trần Văn Ngạch	20		10.000	200.000		Trần Văn Ngạch	Chuối chum thu hoạch	10.000 đồng/Cây
		5		25.000	125.000			Chuối Sáp thu hoạch	25.000 đồng/Cây
		3		10.000	30.000			Mít loại di chuyển được	10.000 đồng/Cây
		3		25.000	75.000			Ôi còn nhỏ di chuyển được	25.000 đồng/cây
		2		25.000	50.000	1.488.000		Quýt còn nhỏ di chuyển được	25.000 đồng/cây
		2		80.000	160.000			Cây bạch đàn đường kính (10-20	80.000 đồng/cây
		10		10.000	100.000			Trẻ loại cây sử dụng được	10.000 đồng/Cây
30	Nguyễn Thị Phương		187	4.000	748.000		Nguyễn Thị Phương	Cỏ voi	4.000 đồng/m2
			94	7.000	658.000	658.000		Ngô nếp địa phương	7.000 đồng/m2
			45,2	7.000	316.400	316.400		Ngô nếp địa phương	7.000 đồng/m2
			25,6	7.000	179.200	179.200		Ngô nếp địa phương	7.000 đồng/m2
			56,8	7.000	397.600	397.600		Ngô nếp địa phương	7.000 đồng/m2
			46	7.000	322.000	322.000		Ngô nếp địa phương	7.000 đồng/m2
			60	7.000	420.000	420.000		Ngô nếp địa phương	7.000 đồng/m2
31	Nguyễn Văn Hậu						Nguyễn Văn Hậu		
32	Nguyễn Văn Hương						Nguyễn Văn Hương		
33	Nguyễn Văn Khẩn						Nguyễn Văn Khẩn		
34	Trần Hữu Thọ						Trần Hữu Thọ		
35	Nguyễn Văn Từ						Nguyễn Văn Từ		

