

Environmental Monitoring Report

Semestral Report
July 2018 – June 2019

February 2020

VIE: Water Sector Investment Program - Tranche 2 - Hue City

Prepared by HueWACO for Thua Thien Hue Provincial People's Committee and the Asian Development Bank.

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VIETNAM WATER SECTOR INVESTMENT PROGRAM- TRANCHE 2

{ ADB Loan No. 2961-VIE (SF) }

Environmental Monitoring Report

JULY 2018 – JUNE 2019

**WATER SECTOR INVESTMENT PROGRAM (TRANCHE 2) - THUA THIEN HUE
WATER SUPPLY SUBPROJECT**

Prepared by

Thua Thien Hue Water Supply Joint Stock Company (HueWACO)

With support of Contract Management and Construction Supervision Consultant
Joint Venture of HaskoningDHV Nederland B.V (the Netherlands) and HaskoningDHV
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Sub-Consultant: WATECH Construction Consulting Joint Stock Company

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Preface

The Government of Vietnam and the Asian Development Bank (ADB) have agreed to implement the Viet Nam Water Sector Investment Program – Multitranche Financing Facility (MFF) - Periodic Financing Request 2 scheduled to be completed by December 31, 2019. In this tranche, six (06) water supply projects will be funded in Hai Phong, Quang Tri, Thua Thien Hue, Da Nang, Dak Lak, and Binh Duong provinces.

The Loan Agreement was signed on May 23, 2013. On September 9, 2016, Thua Thien Hue Water Supply Joint Stock Company, formerly known as Thua Thien Hue Construction and Water Supply State One Member Limited Company, signed a Consulting Services Contract for contract management and construction supervision with Joint Venture of HaskoningDHV Nederland B.V (the Netherlands) and HaskoningDHV Vietnam Co., Ltd (CMCS Consultant).

This Environmental Monitoring Report from July 2018 - June 2019 covers the main findings of the monitoring of safeguard issues of Project's activities carried out during the reporting period from July 2018 to the end of June 2019.

List of Abbreviations

ADB	Asian Development Bank
CEMP	Contractor Environmental Management Plan
CMCS	Contract Management and Construction Supervision
DED	Detail Engineering Design
DoNRE	Department of Natural Resource and Environment
EA	Executive Agency
EIA	Environmental Impact Assessment
EMoP	Environmental Monitoring Plan
EMP	Environmental Management Plan
EO	Environmental Officer
GoV	Government of Vietnam
GRM	Grievance Redress Mechanism
HueWACO	Thua Thien Hue Water Supply Joint Stock Company
IA	Implementing Agency
IEE	Initial Environmental Examination
MFF	Multitranchise Financing Facility
OHS	Occupational Health and Safety
PO	Project Owner
PPC	Provincial People's Committee
PPMS	Project Performance Monitoring System
PMU	Project Management Unit
Project	Vietnam Water Sector Investment Program- Tranche 2
SF	Study Feasibility
Subproject	Thua Thien Hue Water Supply Project
UXO	Unexploded Ordnance
VND	Vietnam Dong
WSC	Water Supply Company
WTP	Water Treatment Plant

Contents

1	EXECUTIVE SUMMARY	1
2	PROJECT OVERVIEW, GENERAL SAFEGUARD ISSUES	1
2.1	INTRODUCTION	1
2.2	PROJECT PROGRESS	2
2.2.1	Construction packages:.....	2
2.2.2	Consulting Services Packages	4
2.3	SAFEGUARD PLAN IMPLEMENTATION ARRANGEMENT	5
2.4	EMPS WERE UPDATED AND INTEGRATED WITH REQUIREMENTS FOR ENVIRONMENTAL SAFETY IN THE CONTRACT AGREEMENT	6
3	ENVIRONMENTAL PERFORMANCE MONITORING	6
3.1	EMP/EMoP IMPLEMENTATION AND COMPLIANCE.....	6
3.1.1	EMP/EMoP Implementation by Contractors.....	6
3.1.2	Environmental Monitoring by PMU.....	7
3.1.3	Monitoring Activities Carried Out by CMCS Consultant	7
3.1.4	Key Issues and Corrective Actions.....	24
3.2	HEALTH AND SAFETY	26
3.2.1	OHS for Workers.....	26
3.2.2	Public Safety.....	27
3.3	ENVIRONMENTAL IMPACT MONITORING	29
3.3.1	Monitoring plan:	29
3.3.2	Monitoring activities in the reporting period:.....	29
3.3.3	Assessment of air quality monitoring in the second annual 2018 and the first annual 2019.....	35
3.3.4	Assessment of soil quality monitoring	37
3.3.5	Assessment of surface water quality monitoring.....	38
4	COMPLIANCE WITH SAFEGUARDS RELATED PROJECT COVENANTS.....	38
5	INFORMATION DISCLOSURE AND SOCIALIZATION INCLUDING CAPAcITY BUILDING	41
5.1	PUBLIC CONSULTATION, MEETINGS AND INFORMATION DISCLOSURE	41
5.2	TRAINING – CAPACITY BUILDING	41
5.3	PRESS/MEDIA RELEASES	41
5.4	GRIEVANCE REDRESS MECHANISM.....	41
6	CONCLUSIONS AND RECOMMENDATIONS.....	41

List of Tables

Table 1: Summary of names and codes of the civil work packages to be used in the Report	2
Table 2: Subproject Overview and Progress.....	4
Table 3: Responsibilities of stakeholders in the implementation of EMP	5
Table 4: Compliance with requirements in the EMP (Environmental impactiveness)	8
Table 5: Occupation Health Safety and Public Safety Issues	27
Table 6: Locations of monitoring points in Q3 and Q4 of 2018.....	30
Table 7: Locations of monitoring points in Q1 and Q2 of 2019	32
Table 8: The results of air quality monitoring in two last quarter of 2018	33
Table 9: The results of air quality monitoring in two first quarter of 2019	34
Table 10: The results of soil quality monitoring in two last quarter of 2018.....	35
Table 11: The results of soil quality monitoring in two first quarter of 2019.....	36
Table 12: The results of soil quality monitoring in two last quarter of 2018.....	37
Table 13: The results of soil quality monitoring in two first quarter of 2019.....	37
Table 14: Summary of Compliance with Loan Covenants	38

1 EXECUTIVE SUMMARY

- In the water supply tranche-2 subproject located in Thua Thien Hue Province. There are 710km water pipe with 159 pipelines will be built in Phong Dien, Tu Ha, Loc An, Loc Bon, Hue and surrounding areas. In the reporting period, from July 2018 to June 2019, all of three construction packages were commenced. Implemented volume at the end of the reporting period around 86% of the subproject.
- **Safeguard Plan Implementation Arrangement:** Roles and responsibilities of related organizations of EA, IA, PMU, CMCS as well as environmental institutes were identified.
- **Monitoring activities in the report:**
 - EMP/EMoP were carried out by Contractor, PMU, and CMCS.
 - Compliance with the requirement in the updated EMP was implemented and monitored. There are some issues require further actions.
- **Environmental impact monitoring:**
 - The two environmental effect monitoring reports were done by Center of Natural Resources and Environment Monitoring with two times of samplings in two last quarter of 2018 and twice times in two first quarter of 2019.
 - The parameters of air, soil quality and surface water were monitored. The results showed that dust concentration and noise level in some monitoring point were higher than the prescribed standards.
- **Safeguard compliance issue:** Compliance with environmental safety under the Loan Agreement was guaranteed
- **Information disclosure and capacity building**
 - The PMU implemented communication on water pipeline installation for households using as well as benefit of clean water, improving public health and sanitation, minimizing pollution of the living environment to communes where water pipeline completion installation.
 - The PMU and CMCS carried out training on labor safety and health of workers; environmental mitigation plan during construction process; ensuring traffic safety, the traffic separation planning.
- **Key activities planned in the next reporting period**
 - The CMCS need to supervise activities on site clean-up and ground restoration for completion pipelines, require hand-over minute of the contractors and other stakeholders.
 - The CMSC supervised EMP implementation of contractors to ensure all mitigation measures will meet the requirements.
 - The PMU required CMCS and Contractors to submit quarterly monitoring reports including EMP implementations.

2 PROJECT OVERVIEW, GENERAL SAFEGUARD ISSUES

2.1 INTRODUCTION

1. The water supply tranche-2 subproject located in Thua Thien Hue Province (subproject) is one of the six tranche-2 subprojects of Viet Nam Water Sector Investment Program to be implemented under the Loan Agreement No. 2961 - VIE (SF) between Socialist Republic of Vietnam (GoV) and Asian Development Bank (ADB).
2. The implementation of the Project will (a) increase service coverage areas of WSCs; (b) improve WSCs' business planning, financial management, and asset management; and (c) reduce non-revenue water, through the implementation of prepared sub-projects.
3. Under the Loan Agreement, the sub-project consists of (i) constructing a WTP with approximately 8,000m³/day; (ii) constructing approximately 40km transmission pipelines of D400-

1,200;

and (iii) constructing approximately 378 km distribution pipelines.

4. By AIDE MEMOIRE on MFF0054 - L2961-VIE: HUE WATER SUPPLY PROJECT LOAN REVIEW MISSION on March 16, 2015, ADB agreed on the following scope of work changes for the subproject:

5. An amount of the loan which was initially earmarked for Phong Dien WTP, the D800 - 1000 Dien Bien Phu — Dong Da transmission pipelines and D500 Hue - Phu Bai pipelines under works and goods contracts has been reallocated to increase funding for the transmission and distribution network in the same project areas of Phong Dien, Tu Ha, Loc An, Loc Bon, and Hue city, also under civil works contracts. ***The total length of the network will be increased from 418 km to approximately 700 km.*** The Mission reviewed the site locations and agreed that no resettlement activities anticipated.

6. Therefore, the final components of the sub-project are:

Area 1: Phong Dien water supply area (150 km pipelines, D50-D500)

Area 2: Tu Ha water supply area (90 km pipelines, D50-D500)

Area 3: Water supply area of Hue city and surrounding areas (140 km of pipelines, D50-D1200)

Area 4: Loc Bon water supply area (230 km pipelines, D50-D600)

Area 5: Loc An water supply (100 km pipelines, D50-D400)

7. In accordance with the Loan Agreement, the Thua Thien Hue Subproject needs to adhere to the preparation of semi-annual safeguard monitoring reports. The first semi-annual report for the components of the Thua Thien Hue Subproject was in the second half of the year 2017. Two semi-annual reports were submitted to and approved by ADB. By agreement with ADB, this report will cover environmental issues of the component from July 2018 to June 2019 that means it combines two reporting periods.

8. There are 03 construction packages and 01 consulting services contracts with details as in the table below.

Table 1: Summary of names and codes of the civil work packages to be used in the Report

No.	Name of Packages	Code
1	Provide and install a ductile-iron pipeline system and fittings with diameters D400 to D1200	HUE – CW03
2	Provide and install an HDPE pipeline system and fittings in Phong Dien, Tu Ha, and Hue City	HUE – CW05
3	Provide and install an HDPE pipeline system and fittings in Loc An and Loc Bon	HUE – CW06
4	Contract management and construction supervision package	HUE – CS01

2.2 PROJECT PROGRESS

2.2.1 Construction packages:

9. The quarter 3 of 2018, all 3 packages carried out construction 76 routers of total 159 routes, of which 22 routes from the second quarter of 2018 and opening 54 additional routes, the volume of implementation: 220.659m, including HDPE plastic pipes, ductile iron of diameter sizes from DN50 to DN1200mm. In the quarter, three packages completed installation more 11 pipelines therefore all

completed routers were 22 with a length of 44.224 m, achieved 6.3% of the total length of the pipeline in the subproject.

10. The fourth quarter of every year is the rainy season in Hue. In 2018, the rainy season came later, so the contractors still organize construction in October and the first half of November. In fact, there were 57/159 routes were built of which 49 transitional routes from quarter 3 and 08 new routes. The volume of implementation is 142.219 m, reaching 87.7% of the plan for the fourth quarter. The number of routes completed the construction in the quarter were 28 routes, so accomplished pipelines were 50 with a length of 221.503 m of pipes, accomplishing 31.6% of the total length of the project.

11. Since the project was commenced to the end of 2018, the contractors carried out construction 88 of 159 pipelines, of which completed pipelines were 50, accomplishing 31.6% of the total length of the project.

12. In the first quarter of 2019, procedures for construction licensing and ground construction delivery were completed for most routes. There was still a number of roads were managed by specialized management units or roads were built by the local people, which were continued to apply for a separate license. The investor actively collaborated with the Contractors to get license for each route to create favourable conditions to speed up the construction progress. In fact, in the first quarter of 2019, there were 52 routes were being constructing of which 34 transitional routes and 18 new routes. Implemented volume in the quarter was 92.131 m, gaining 83% of its plan. The number of routes that completed the construction were 21 routes with a length of 101.409 m of pipe in the quarter. The number of routes to be completed from the beginning to the first quarter of 2019 were 71 routes with a length of 322.912 m, gaining 46.1% of the total length of the subproject.

13. In the quarter 2 of 2019, the contractors implemented construction 81 pipelines, including 44 routes from Q1/2019. At the end of Q2, there were 8 pipelines had not been commenced because the procedure for applying construction permits in localities was slowly carried out, the waiting time was long and some of the license expired so that it had to be applied for an extension of time. The number of pipelines that completed the construction were 50 routes with a length of 285.489 m of pipe in the quarter. The completed pipelines from the beginning to the end of the quarter were 121 routes with a length of 608.401 m, gaining 86 % of the total length of the subproject.

14. Detail the progress of each bidding package in the following items.

15. **HUE – CW03 Package:** Provide and install a ductile iron pipeline system and fittings with diameters from D400 to D1200 in locations of Phong Dien (4,3km), Tu Ha (3,0km), Hue City and surrounding areas (2,7 km) with 17 pipelines and total length is 34.405 m. This package was opened for bidding on June 2 and submitted for bidding evaluation to ADB. It was approved on July 5 by ADB. PMU signed the contract on 9 August 2017 with the contractor, Bach Dang Construction Corporation – JSC, after that PMU signed an Appendix on 08/3/2018. HUE-CW03 package was started on 9 July 2018, late a half of month according to commencement date of the contract. Date of finish as the contract is 29 October 2019, total construction time is 16 months.

16. The package was commenced on 9 July 2018 and completed 9.131m of pipe until end of the Q3. In the fourth quarter of 2018, the contractor continued accomplishing 13.025m of pipe. As a result, at the end of 2018, there were 22.156m of pipe had been installed, gaining 56% of the total length of the contract. In the two first quarters of 2019, this package had more completed 8.629m of pipe, consequently total pipeline that finished construction was 30.785m, equal 89,5% of the total volume.

17. **HUE – CW05 package:** Provide and install an HDPE pipeline system and fittings in Phong Dien (148 Km), Tu Ha (66 km), and Hue City (107 km) with 93 pipelines and total length is 321.609

m. The contract was signed on April 10, 2018 with Joint Venture of Dai Phu Thinh Company Ltd and Southern Construction Joint Stock Company.

18. The package was commenced on 24/4/2018, date of finish as the contract is 29/9/2019, total construction time is 17 months.

19. In the quarter 3 of 2018, the contractor executed 92.520m of pipe and until end of 2018 there were 171.055m of pipe had been carried out, equal 53% of the total length of the contract. In the first quarter of 2019, this package had more completed 57.766m of pipe and in the second quarter, this number was 49.662m, therefore total pipelined that accomplished construction during 4 quarters from July 2018 to June 2019 is 278.483m, gaining 86,6% of the length of the contract.

20. **HUE – CW06 Package:** Provide and install an HDPE pipeline system and fittings in Loc An (100 km) and Loc Bon (230 km) with 49 pipelines and total length is 343.822 m. The contract was signed on March 8, 2018 with Vietnam Water & Environment Investment Corporation - JSC.

21. The contractor has commenced on 12/4/2016 and date of finish as the contract is 01/10/2019, total construction time is 18 months.

22. The package was completed 119.008m of pipe until end of the Q3. In the fourth quarter of 2018, the contractor continued accomplishing 50.659m of pipe. In the two first quarters of 2019, this package had more completed 72.331m of pipe. Consequently, total pipeline that finished construction during 4 quarters from July 2018 to June 2019 was 241.968m, equal 70,3% of the total volume of the contract.

2.2.2 Consulting Services Packages

23. Contract Management and Construction Supervision Consultant: On September 9, 2016, Thua Thien Hue Water Supply Joint Stock Company, signed a Consulting Services Contract for Contract Management and Construction Supervision with Joint Venture of HaskoningDHV Nederland B.V (the Netherlands) and HaskoningDHV Vietnam Co., Ltd (CMCS Consultant). The contract is valid for 36 months. The consultant will assist the PMU in the supervision of the awarded project and support the project management.

Table 2: Subproject Overview and Progress

Project Number and Title:	ADB Loan No. 2961-VIE (SF) Viet Nam Water Sector Investment Program: Thua Thien Hue Subproject	
Safeguard Category	Environment	B
	Involuntary Resettlement	B
	Indigenous People	not applicable
Reporting period:	July 2018 - June 2019	
Last report date:	September 2019	
Key subproject activities since the last report:	Status of safety issues/licenses/agreements: - Semi-annual monitoring report of the second half of 2018 was submitted and approved by the PMU and ADB in September 2019. - Environmental impact monitoring report of second semi-annual 2018 and first semi-annual 2019 has been done by the Center of Natural	

	<p>Resources and Environment Monitoring, a unit belongs to DoNRE of Thua Thien Hue.</p> <ul style="list-style-type: none"> - The last package Hue-CW03 was commenced in July 2018. - All contractors of three packages have submitted the quarterly environmental monitoring reports to CMCS and PMU
Report prepared by:	HueWACO/ CMCS consultant

2.3 SAFEGUARD PLAN IMPLEMENTATION ARRANGEMENT

28. The institutional structure and responsibilities of stakeholders in the implementation of the EMP are set out in the updated EMPs, which have been approved by the ADB. With regard to the environmental safeguards in the EMP of Thua Thien Hue Water Supply Joint Stock Company (HueWACO) who is the project owner (PO) and the implementation agency (IA), HueWACO has formed a designated project management unit (PMU) to support it in implementing Phase I of the project and the EMP. The CMCS Consultant will assist in monitoring the EMP implementation.

29. Responsibilities of Executing Agency, Implementing Agency, PMU, CMCS, and Contractors in the implementation of the EMP are described in the table below.

Table 3: Responsibilities of stakeholders in the implementation of EMP

Name of Agency	Responsibilities
Executing Agency Thua Thien Hue PPC	<ol style="list-style-type: none"> 1. To manage in terms of giving guidelines for the project 2. To give approvals of important decisions such as procurement plans, DED, etc. 3. The EA will develop a Project Performance Monitoring System (PPMS) to monitor the overall performance of the project. The PPMS will include key indicators of environmental safeguard compliance from the EMP.
Implementation Agency HueWACO	<p>The IA (HueWACO) has the ultimate responsibility for implementation of the entire subproject, including finance and administration, technical and procurement matters, monitoring and evaluation, and environmental safeguard compliance.</p> <ol style="list-style-type: none"> 1. To direct the PMU to ensure the compliance with the loan contract and to approve important decisions for the project such as approving bidding documents and awarding decisions. 2. To give approvals of proposed activities in case of adverse financial audits or monitoring and evaluation reports.
PMU	<ol style="list-style-type: none"> 1. To update the EMP during detailed designing and engineering phases to ensure the EMP meets the detailed subproject designs. 2. To submit quarterly and annual reports of the subproject to ADB, including reports related to the implementation of the EMP. 3. To ensure compliance with the implementation of sub-projects under the guidance of environmental and social aspects of ADB. 4. To monitor Contractors in their implementation of the EMP; 5. To ensure safeguard requirements of the final EMP are adequately described in the bidding documents; 6. To ensure EMP is incorporated in detailed designs and civil contracts;

Name of Agency	Responsibilities
	7. To coordinate the capacity development program of the PMU; 8. To sign a contract with an Environmental Institute for implementation of monitoring plan of EMP; 9. To disseminate the Grievance Redress Mechanism (GRM).
Contractors	1. To implement the requirements of the EMP and related reporting requirements. 2. To develop and submit a specific CEMP to meet the requirements of the EMP. 3. To obtain necessary permits for construction of the components. 4. To appoint a full-time qualified staff to coordinate the implementation of the EMP, including environmental, health and safety issues. 5. To cooperate with the PMU to resolve complaints under the GRM. 6. To appoint environmental officers responsible for ensuring remedial measures and the EMP are implemented and reported regularly.
Contract Management and Construction Supervision Consultant (CMCS)	1. To monitor remedial measures for environmental protection. 2. To review site management and safety plans in accordance with approved safety plans, contractual obligations, and current regulations. 3. To support the PMU in supervising and coordinating EMP implementation. At the same time, the CMCS consults with specialized experts of DoNRE, offices of Natural Resources and Environment in cities/districts and People's Committees under project areas.
Environmental Institute	1. An environmental institute will sign a contract with the PMU to implement the environmental impact monitoring plan of the EMP during the construction phase of the subproject.

2.4 EMPS WERE UPDATED AND INTEGRATED WITH REQUIREMENTS FOR ENVIRONMENTAL SAFETY IN THE CONTRACT AGREEMENT

30. An updated EMP was required for the subproject. In April 2017, the updated EMP were submitted and approved by ADB.

31. The EIA report of the project was approved by DoNRE on September 4, 2015 with Decision No. 250/QD-TNMT. In the construction package contracts, contractors will be required to comply with environmental management measures defined in the EIA.

32. The contractors prepared the CEMP and submitted it to the PMU for approval. The PMU issued approval decisions before these packages were commenced. Those decisions were presented in the previous environmental safeguard report.

3 ENVIRONMENTAL PERFORMANCE MONITORING

3.1 EMP/EMOP IMPLEMENTATION AND COMPLIANCE

3.1.1 EMP/EMoP Implementation by Contractors

33. During the construction phase, the implementation of the EMP is the responsibility of the Contractors. The Contractors' responsibilities include appropriate and timely application of mitigation measures specified in the approved EMP / EMoP. The application and implementation of the mitigation

measures is to provide safeguards that will control, reduce if not eliminate unwanted effects during the Subproject implementation.

34. All contractors, Bach Dang Construction Corporation - JSC, Joint Venture of Dai Phu Thinh Company Ltd and Southern Construction Joint stock company, Vietnam Water & Environment Investment Corporation - JSC, assign 2 staffs with responsibilities on environment and safety.
35. The contractors carried out the approved CEMP on the construction sites according to their contract progress and submitted quarterly reports to the CMCS and PMU.
36. The Contractor ensure that the environmental management staff has a monthly work diary on site that records all matters related to site safety inspections and related incidents.
37. The Contractor shall have a method of raising awareness on environmental impact mitigation on the construction site for the Contractor's staffs and the surrounding local communities.
38. In case mitigation measures of the contractor are inefficient to reduce environmental impacts, the contractor has to carry out further actions to solve them. All further action that determined in the previous report will be inspected by CMCS and mentioned in the next reporting period.

3.1.2 Environmental Monitoring by PMU

39. During the construction phase, the inspection, evaluation and documentation of EMP and EMoP compliance by contractors will be conducted by the CMCS Consultant under the supervision of the PMU.
40. In this reporting period, PMU hired the Centre of Natural Resources and Environment for sampling and reporting on the environmental impact monitoring of the subproject. The environmental impact monitoring report has been submitted to the PMU and DoNRE periodically in December 2018 and June 2019.
41. PMU also inspects reporting on the implementation of mitigation measures by contractors and CMCS. Construction contractors are required to submit brief monthly reports on environmental issues and mitigation activities to the CMCS/PMU. The CMCS must prepare quarterly reports on the EMP to the PMU.

3.1.3 Monitoring Activities Carried Out by CMCS Consultant

42. The CMCS Consultant carried out daily inspections and maintained a record of the Contractors' mitigation measures and activities specified in the approved CEMP / EMP and EMoP of the subproject. CMCS's responsibility is to supervise the entire contract performance process from procurement confirmation to installation, commissioning, inspection, acceptance and handover to the operator.
43. The inspection and evaluation records will be consolidated by the CMCS in their Monthly and Quarterly Progress Reports. The reconciliation and synthesis of the CMCS in compliance with the Contractor's requirements for EMP and EMoP will be summarized in the report to be submitted to the PMU within 15 days at the end of every quarter.
44. During the construction, the CMCS Consultant will conduct construction and environmental supervision and provide support and advices to the Contractors in implementation of EMP/EMoP and assist the PMU in compiling monitoring reports for submission to ADB.
45. In the reporting period, supervision consultant coordinates with the Contractors, focusing on completing the results of testing, verifying, pressure testing, rinsing and disinfecting the completed pipelines or branches of the service lines. Regarding to the pipelines can connect with the existing

systems, CMCS require the contractors concentrate on completing the handover procedures for investors to use supplying water for households.

46. The CMCS Consultant's review on the assessment of the safeguards compliance with the requirements of the EMP and EMOF by the Contractors is summarized in below Table 4.

Table 4: Compliance with requirements in the EMP (Environmental impactiveness)

EMP Requirements (Mitigation Measures)	Compliance Status (Yes, No, Partial)	Comment or Reasons for Non- Compliance	Issues for Further Action
(1)	(2)	(3)	(4)
PRE-CONSTRUCTION PHASE			
Hue-CW03 Package			
Implement information disclosure and activate grievance redress mechanism	Complied The Contractor and Hue WACO informed their activities and the GRM to communities before commencement.		
Ensure updated EMP is included in contractor tender documents and this tender documents specify that implementation of CEMP must be included in cost estimates of the contractor	Complied		
The contractors developed their CEMP and submitted to PMU for approval before commencement	Complied The HueWACO approved CEMP of the Hue-WC03 package on June 28, 2018 by Decision QD 414A/QD-CNH		
UXO survey	Complied		
CONSTRUCTION PHASE			
Hue-CW03 Package:			
Worker camp operation	Complied Solid waste was generated according to number of workers therefore it was fluctuation in the reporting period. In two last quarters of 2018, number of workers were around 70 people, but in the first annual 2019, the workers were more a half of previous time, 40 people. Solid waste was collected into available bins in workers' camps		

EMP Requirements (Mitigation Measures)	Compliance Status (Yes, No, Partial)	Comment or Reasons for Non- Compliance	Issues for Further Action
(1)	(2)	(3)	(4)
	and operating offices. This waste was collected daily by the environment and urban company of Hue City to disposal sites. Installation of mobile toilets at worker camps in construction areas with septic tank systems and the wastewater was collected by the URENCO of Hue City to disposal sites. There were no complaints from the local people about worker camp operation of the contractor.		
Tree and vegetation removal, and site restoration subplan	Complied No trees and vegetation were removed in the construction sites of the contractor in this reporting period. Whenever completing the construction activities of each pipeline, the contractor cleaned up the site, including transporting all unused materials, relocating, dismantling all machinery, temporary works, working ground		The CMCS needs to inspect site clean-up activities of the contractor; Handing-over minute have to be signed by all related stakeholders.
Civil works	Complied Earthworks were conducted during dry periods All kind of waste were collected; No waste of any kind was to be discarded on land or in forests/plantations or rivers, lakes, canals Soil falling on the road during trench digging and rebuilding was cleared every day or when a part of the works was completed. Use tarpaulin to cover trucks to ensure that the spoils did not fall on roads.		
Cultural chance finds	Complied No finding in the reporting period.		

EMP Requirements (Mitigation Measures)	Compliance Status (Yes, No, Partial)	Comment or Reasons for Non- Compliance	Issues for Further Action
(1)	(2)	(3)	(4)
Noise, vibration sub-plan for all construction activities	<p>Complied</p> <p>Reduce noise: Noise come from vehicles/machines such as excavator, truck, compactor, concrete mixer, generator Contractor carried out mitigation measure: check machines regularly to avoid damages and carry out maintenance and testing works periodically. In construction sites locate in resident areas, the contractor works during working hours to minimize impact to local people.</p> <p>Reduce dust: Dust from dry soil temporarily dumped along the construction road waiting for re-construction, dust generate when mixing concrete; vehicles transport soil and stones which was dropped on the road generate dust. Dry soil to use for reconstruction that dumped along the construction road is calculated assemblage for enough using. Clean falling soil on the road to reduce dust Transported soil on trucks to dumpsites was covered with tarpaulin to prevent dust from being swept away by the wind. Water was sprayed to reduce dust on roads around construction sites.</p> <p>Air pollution: Exhausted air come from vehicles/machines such as excavator, truck. The contractor only used machine in good working condition on sites with inspection licenses and checked them regularly to avoid</p>		

EMP Requirements (Mitigation Measures)	Compliance Status (Yes, No, Partial)	Comment or Reasons for Non- Compliance	Issues for Further Action
(1)	(2)	(3)	(4)
Solid and liquid construction waste management sub-plan	<p>damage and carried out maintenance works in time.</p> <p>Complied</p> <p>Solid waste: Cement bags, residue iron, steel, and zinc are collected to sell. Cement bags were generated around 7000 bags during two last quarter of 2018 and approximated 2000 bags in two first quarters of 2019.</p> <p>Falling concrete approximated 13m³ for 4 quarters of this reporting period, around a year so this was small amount. Contractor placed the steel plates on the ground from the mixer to the containers, around the formwork of the manholes to catch the falling concrete, collected and reused it.</p> <p>Waste grease: In the reporting period, no damaged machines in the construction sites, as a result no waste grease on the site. Regarding to periodic maintenance, used oil will be collected and processed.</p> <p>Hazardous waste: (welding rods) To retain welding rods and use them all and avoid leaving any residue. Use a 20-liter plastic container to store excess welding rods and put it in the welding area, then collect them and place in a 100-liter plastic container with lid. Do not bury or throw welding rods at construction sites. At the end of the contract, total weight of welding rods will be transferred to a functional unit to</p>		The contractor needs to maintain a hazardous waste monitoring book during the construction phase.

EMP Requirements (Mitigation Measures)	Compliance Status (Yes, No, Partial)	Comment or Reasons for Non- Compliance	Issues for Further Action
(1)	(2)	(3)	(4)
	treat as regulation on hazardous waste.		
Excavation spoil management sub-plan	Complied Excess soil and rock regularly generated during construction process when digging and embanking ditches to lay pipes. Excavated soil from trench digging and backfilling was dumped onto trucks to transport to disposal sites as prescribed.		
Construction Drainage sub- plan	Complied Wastewater discharged from manholes and used to clean construction equipment contained no substances that may cause environmental pollution. This water was dumped on the soil around the manholes and then absorbed into the soil or flowed into existing roadside drainage ditches or temporary drainage ditch systems.		
Construction materials acquisition, transport, and storage sub-plan	Complied All aggregate loads on trucks of the contractor were covered by tarpaulin The contractor carries a sufficient amount of pipeline to their construction sites, which would be installed promptly, to avoid obstructing the traffic		
Utility and power disruption subplan	Complied Construction of some pipelines need to have cut water supply and electricity, the Contractor informed to local utilities and services with schedule, and identify contingency back-up plans for outages or water		
Erosion / land slide subplan	Complied The Contractor placed plastic sheet fencing around all		

EMP Requirements (Mitigation Measures)	Compliance Status (Yes, No, Partial)	Comment or Reasons for Non- Compliance	Issues for Further Action
(1)	(2)	(3)	(4)
	excavations areas near surface water to prevented erosion. The Contractor regularly checked reconstruction routes to detect subsidence and conduct settlement compensation.		
Worker and public safety sub-plan	Complied Installing fences, works ahead signs, and speeding signs, and use signal lights at night ... for traffic participants knew that there was construction site ahead so that they can slow down their speed to avoid any collisions or accidents.		
Construction and local vehicle traffic sub-plan	Complied Arranging traffic control workers at both ends of construction sites during rush hours to separate and regulate traffic to avoid traffic jams. Applying successive construction form; carrying out excavation, filling and restoration activities in daytime to shorten impact times to minimum. No cases of traffic accidents, traffic jams, congestion caused by the contractor's construction site. There were no complaints from the local people about traffic obstruction or impacts caused by the construction site of the contractor.		
Hue-CW05 Package			
Worker camp operation	Complied The contractor ensure Solid waste was collected into available bins in workers' camps and operating offices. This waste was collected daily by the environment and urban company of Hue City to disposal sites.		

EMP Requirements (Mitigation Measures)	Compliance Status (Yes, No, Partial)	Comment or Reasons for Non- Compliance	Issues for Further Action
(1)	(2)	(3)	(4)
	Waste from latrines will be collected and treated appropriately through a contract with Thua Thien Hue Urban Environment Company. There were no complaints from the local people about worker camp operation of the contractor.		
Tree and vegetation removal, and site restoration subplan	Complied Whenever completing the construction activities of each pipeline, the contractor cleaned up the site, including transporting all unused materials, relocating, dismantling all machinery, temporary works, working ground, replant trees and grasses if the request had been agreed in advance with the road / area management unit		The CMCS needs to inspect site clean-up activities of the contractor; Handing-over minute have to be signed by all related stakeholders.
Civil works	Complied The workers were not allowed to clean tools or machines directly at the water source and the area where can affects to water source. Soil falling on the road during trench digging and rebuilding was cleared every day or when a part of the works was completed. The contractor covers all trucks to ensure that the spoils did not fall on roads. Earthworks were conducted during dry periods. Solid waste were collected; No waste was to be discarded on land or in forests/plantations or rivers, lakes, canals		
Cultural chance finds	No finding in the reporting period.		
Solid and liquid construction waste management	Complied Construction waste was collected, transported and disposed at		

EMP Requirements (Mitigation Measures)	Compliance Status (Yes, No, Partial)	Comment or Reasons for Non- Compliance	Issues for Further Action
(1)	(2)	(3)	(4)
	<p>landfills approved by local authorities.</p> <p>The disposal of solid waste into canals, ditches, rivers, streams, fields as well as public areas must be strictly prohibited;</p> <p>The contractor did not burn construction waste and household waste</p> <p>Put waste bins in the workers' camps and operating offices and collect rubbish daily.</p> <p>Signing a contract with Thua Thien Hue Urban Environment Company to collect, transport and treat domestic waste and solid waste from septic tanks as well as other sources;</p> <p>The discharge of liquids using in drilling process was carefully monitored to an area where was approved by local authorities.</p> <p>Hazardous waste:</p> <p>Fuels, chemicals, paints must be stored in covered areas. Refueling activities must be carried out inside and secured by fence walls to avoid leaking into the external environment.</p> <p>Ensure all hazardous waste containers are in good condition and properly labeled;</p> <p>Collection, transportation and disposal are performed under contracts with companies licensed to operate in hazardous waste treatment.</p>		
Excavation spoil management sub-plan	Complied Excavated soil from trench digging and backfilling was dumped onto trucks to transport to disposal sites as prescribed.		
Construction Drainage sub- plan	Complied		

EMP Requirements (Mitigation Measures)	Compliance Status (Yes, No, Partial)	Comment or Reasons for Non- Compliance	Issues for Further Action
(1)	(2)	(3)	(4)
	<p>Using the temporary ditch system so rainwater flow out of the construction area to the receiving place with the consent of the supervise consultant.</p> <p>Strict management of humus generated from drilling holes to avoid spreading to the outside environment.</p> <p>The ground plan must be designed to ensure that rainwater overflows the surface from the construction sites and does not directly flow into the surrounding agricultural land areas.</p>		
Air pollution, noise, and vibration reduction sub-plan for all construction activities	<p>Complied</p> <p>The contractor sprayed water roads in the construction area to control dust pollution.</p> <p>All inactive vehicles to switch off the engine.</p> <p>The Contractor inspected all equipment and machinery periodically, maintenance or repair to ensure compliance with safety requirements and reduce air pollution.</p> <p>The speed of construction vehicles must be limited to avoid causing suspended particles.</p> <p>All trucks must be covered with tarpaulin to prevent dust from being swept away by the wind and not allowed to overload.</p> <p>The contractor's storage was covered and at least 50 meters away from sensitive points such as houses, schools, hospitals ...</p> <p>Cover materials with tarpaulin to avoid environmental pollution from cement dust, sand ...</p> <p>Use construction machines and equipment that meet the</p>		

EMP Requirements (Mitigation Measures)	Compliance Status (Yes, No, Partial)	Comment or Reasons for Non- Compliance	Issues for Further Action
(1)	(2)	(3)	(4)
	<p>emission, noise and vibration standards prescribed by the Government.</p> <p>The contractor carried out measures to reduce impact to workers who are exposed directly: provide earplugs to workers, do not operate the machine continuously, take breaks 2 or 3 times per shift, rotate operating workers</p>		
Construction materials acquisition, transport, and storage sub-plan	<p>Complied</p> <p>The contractor only transports sufficient construction material to each site to avoid collecting the remaining after installation completion.</p> <p>All aggregate on trucks were covered to reduce dust overspreading.</p>		
Utility and power disruption subplan	No water or power disruption during the reporting period		
Erosion / land slide subplan	<p>Complied</p> <p>In the areas with weak soil and trenches/pits, each 0.5m layer was excavated; the trench/hole walls were strengthened with steel piles and plates.</p> <p>Installing fences to prevent vehicles from going near the trenches/ holes; Re-digging to avoid the impact of heavy loads near the trench/hole walls which can cause landslides.</p>		
Worker and public safety sub-plan	<p>Complied</p> <p>Installing temporary barriers at construction sites to prevent unauthorized people from entering and leaving the construction sites;</p> <p>Personnel are not allowed to enter high-risk areas (excavation areas</p>		

EMP Requirements (Mitigation Measures)	Compliance Status (Yes, No, Partial)	Comment or Reasons for Non- Compliance	Issues for Further Action
(1)	(2)	(3)	(4)
	and areas where heavy equipment is under construction); Having electric lighting system at night time.		
Construction and local vehicle traffic sub-plan	Complied Limiting the speed of transportation vehicles at road sections across residential areas to avoid any collisions or accidents. Arranging traffic control workers at both ends of construction sites during rush hours to separate and regulate traffic to avoid traffic jams. Applying successive construction form; carrying out excavation, filling and restoration activities in daytime to shorten impact times to minimum		
Hue-CW06			
Construction drainage subplan	Complied Loc An and Loc Bon are mainly rural areas, so rainy water drainage systems mainly flow into rivers, streams and fields. When the contractor complete installation of pipelines, they will carried out the site clean-up immediately, so there was very little standing water on the road and in the construction area.		
Erosion, landslide subplan	Complied When digging ditches to place water supply pipes in LB4, LB3 and LB6 routes, due to the ground is sandy soil leading to landslide. However, these locations are located in areas of rice fields and graveyards, so it does not affect people		

EMP Requirements (Mitigation Measures)	Compliance Status (Yes, No, Partial)	Comment or Reasons for Non- Compliance	Issues for Further Action
(1)	(2)	(3)	(4)
	Reinforce ditch against landslide. Installing fences to prevent vehicles from going near the trenches/ holes; Re-digging to avoid the impact of heavy loads near the trench/hole walls which can cause landslides.		
Solid and liquid construction waste management	Complied Reuse excavated soil and formwork as much as possible. Clear out all waste before the contractor left the site. Grease was collected in sealed containers to ensure safety and finally brought to storage. Chemical containers were placed in a covered area and protected from rainwater. Placing waste bins in workers' camps to collect domestic waste and sign contract with URENCO to transport the waste to landfill. Construction waste was collected, transported and disposed at landfills approved by local authorities		
Cultural chance finds	No finding in the reporting period.		
Excavation spoil subplan	Complied Transport excavated materials out of residential areas as soon as possible. Remaining excavated soil after reusing was shovelled onto trucks, carried to dumpsite where prescribed by DONRE		
Construction and local vehicle traffic sub-plan	Complied All motor vehicles must be inspected for safety. Installing fences, works ahead signs, and speeding signs, and use signal lights at night ...		

EMP Requirements (Mitigation Measures)	Compliance Status (Yes, No, Partial)	Comment or Reasons for Non- Compliance	Issues for Further Action
(1)	(2)	(3)	(4)
	Assigning workers to coordinate traffic when trucks enter or exit construction sites or when dismantling goods. Contractor arranged traffic regulators during peak hours, so as not to cause traffic jams, traffic accidents due to obstructions or impacts of the construction.		
Air pollution, noise, and vibration sub plan	Complied Maintaining construction machine and equipment periodically to reduce noise and emissions. Requesting drivers turn off the engine when stopping work. All trucks must be covered with tarpaulin to prevent dust from being swept away by the wind and not allowed to overload. In hot and dry weather, the contractor watered the on-going construction works (daily). Removing excavated soil from residential areas as soon as possible. Collecting soil and stones scattered on the road.		
Construction materials acquisition, transport, and storage sub- plan	Complied The contractor has performed well the fire prevention and fighting, electrical safety, not to cause fire, explosion Keep gasoline and chemicals away from combustible materials. Chemical containers were placed on special floors so that leaking chemicals can be collected in a certain area. Chemical packaging was located away from cooking and energy sources.		
Worker camp operation subplan	Complied		

EMP Requirements (Mitigation Measures)	Compliance Status (Yes, No, Partial)	Comment or Reasons for Non- Compliance	Issues for Further Action
(1)	(2)	(3)	(4)
	The Contractor arranged adequate restrooms, drainage and treatment systems (septic tanks) at the worker camp in order to wastewater was treated before discharging to the public drainage system, avoid surface water pollution.		
Utility and power disruption subplan	No water or power disruption during the reporting period		
Civil work sub-plan	Complied Using construction machinery with appropriate load so that it does not cause damage to existing roads. Any damaged road by vehicles of the contractor need to be repaired. Checking and supervising the movement of the contractor's machines to ensure safety of electric cables. All areas where materials are gathered must be away from crowded roads		
Worker and public safety sub-plan	Complied Place and maintain barriers and warning boards at the construction sites. Place fence notice boards on open trenches, on top of deep pits or on any other dangerous site that the contractor can identify. Workers were not allowed to load materials such as bricks taller than 2.5 m		
Tree and vegetation removal, and site restoration subplan	Complied Do not build worker camps, or put construction materials on the vegetation Whenever completing the construction activities of each pipeline, the contractor cleaned		The CMCS needs to inspect site clean-up activities of the contractor; Handing-over minute have to be signed by all

EMP Requirements (Mitigation Measures)	Compliance Status (Yes, No, Partial)	Comment or Reasons for Non- Compliance	Issues for Further Action
(1)	(2)	(3)	(4)
	up the site, including transporting all unused materials, relocating, dismantling all machinery, temporary works, working ground.		related stakeholders.

Hue-CW03



Reinforcing ditch against landslide



Water spraying to reduce dust and clean the road



When finishing construction, worker site cleaning immediately



Working at the deep ditch



Fence and sign boards at the construction site



Reinforcing ditch to avoid affecting other underground infrastructure works

Hue-CW06



Warning signs and information board of the subproject



Excavators working under high-voltage wires may cause wire-breaking incidents



Restoration of the construction ground after pipeline installation



Contractor carried out work without affection to surrounding trees

Hue-CW05	
	
Site clean up afte completion work	Water spraying to reduce dust
	
Fence and sign boards at the construction site	Restoration of the construction ground after pipeline installation

Figure 1: Some photos on the Construction Sites

3.1.4 Key Issues and Corrective Actions

Remedial Actions for Issues Mentioned in the Previous Report

47. **UXO issue:** The CMCS inspected all UXO clearance issue for installation of each pipelines based on PMU's construction permit document and construction site handover document between PMU and contractors.

48. Hue-CW05 Package:

- The contractor needs to have a contract with related units to collect and dispose waste grease and hazardous waste. The contractor needs to maintain a hazardous waste monitoring book until end of the construction phase: *This task is being done for this reporting period.*
- The contractor and CMCS need to identify areas with weak soil before excavating trenches/pits to avoid accidents: *There was not any accident during this reporting period with the CMCS's supervision.*

- Regarding to construction site at Huong Xuan commune, where the concentration of TSP at the monitoring point (K_{CTN3}) in the resident area was exceeded the permitted limit according to QCVN 05:2013/BTNMT, the contractor must to do corrective actions: (i) water spraying every day after finishing work on the site, (ii) excavated soil was keeping to recovery trenches/holes must be covered with tarpaulin to prevent dust from being swept away by the wind, (iii) daily clean construction site and move mud on the roads: *Those remedial activities were done in this reporting period with the CMCS's supervision.*
- Regarding to noise measurement points were exceeded QCVN 26:2010/BTNMT standards at construction site in Sia Town, Huong Xuan, Phong Son commune, these monitoring points were the resident areas, the noise come from not only means of the contractor but also local traffic and civil activities. The contractor is usually check machines regularly to avoid damages and carry out maintenance and testing works periodically as well as avoid constructing at noon and nighttime. However, it is required that the contractor must to carry out following measures to reduce impact to workers who are exposed directly: provide earplugs to workers, do not operate the machine continuously, take breaks 2 or 3 times per shift, rotate operating workers: *Those remedial activities were done in this reporting period with the CMCS's supervision*

49. Hue-CW06 Package

- The contractor needs to maintain a hazardous waste monitoring book: *It has been implementing in the reporting report.*
- The CMCS must inspect all licenses of the contractor to ensure the licenses are valid during the period of the contract: *All licenses of the contractor were checked by CMCS periodically.*
- The CMCS needs to inspect regularly chemical storage of the contractor: *this task has been carrying out with site visit every day of the CMCS.*

Environmental Key Issues for Further Actions from this report period

50. Several issues have been identified in this reporting period based on Table 4 on Compliance with EMP requirements and tables the results of air/soil/surface water quality monitoring (see part 3.3 Environmental impact monitoring) for all three packages Hue-CW03; Hue-CW05 and Hue-CW06:

51. The CMCS needs to inspect site clean-up activities of the contractor and keep handing-over minute of completion installation pipelines which would be signed by all related stakeholders.

52. Regarding to construction sites where the concentration of TSP of 5 monitoring points were over value of QCVN 05:2013/BTNMT for both two sampling in two last quarter of 2018. There were K_{CTN1}, - Phong Dien Industrial Zone; K_{CTN2}, - Along Dinh Tien Hoang Str.; K_{CTN3} - Area from Kim Long Str. To Nguyen Hoang Str. in Hue City; K_{CTN14} - Tu Ha Industrial Zone; K_{CTN15} - The resident area An Gia, Sia Town, both belonged to Tu Ha area; K_{CTN17} - Along to Thuan Hoa Str, Phu Bai – Thuy Luong ward, Huong Thuy District in Loc Bon area. The contractors must to do corrective actions: (i) water spraying every day after finishing work on the site, (ii) excavated soil was keeping to recovery trenches/holes must be covered with tarpaulin to prevent dust from being swept away by the wind, (iii) daily clean construction site and move mud on the roads

53. Regarding to noise measurement points were exceeded QCVN 26:2010/BTNMT standards two last quarter of 2018: 8 points exceeded the prescribed standards of which K_{CTN2}, K_{CTN4}, K_{CTN5}, K_{CTN16} were over the standard for only one sampling, meanwhile points K_{CTN1}, K_{CTN14}, K_{CTN15}, K_{CTN17} were

over the standards for two samplings. These monitoring points were industrial zones, main streets of Hue City, the resident areas, the noise come from not only means of the contractor but also local traffic and civil activities. The contractor is usually check machines regularly to avoid damages and carry out maintenance and testing works periodically as well as avoid constructing at noon and nighttime. However, it is required that the contractor must to carry out following measures to reduce impact to workers who are exposed directly: provide earplugs to workers, do not operate the machine continuously, take breaks 2 or 3 times per shift, rotate operating workers

54. The CMSC has required the contractors implemented corrective activities to reduced impact of those issues and regularly monitoring on the construction sites. Therefore, in two first quarter of 2019, all parameters of air quality were met the prescribed standards.

3.2 HEALTH AND SAFETY

3.2.1 OHS for Workers

55. There was no occupational accident occurred during the reporting period for all three packages.

56. HUE-CW03 Package:

- The contractor PPE for workers such as helmets, shoes, masks, glasses and reflective jackets and took the following measures to minimize harmful effects of noise and dust for direct construction workers: provide ear protection devices, require workers taking break 2-3 times / shift, each time is from 10-15 minutes; rotating workers' shifts; provide masks and glasses to workers who use concrete mixers.
- Arrange rules for firefighting, fire extinguishers in fuel depots, do not organize cooking, burning rubbish near fuel depots.
- Install safety switches / CBs, check electrical wiring for electrical leakage
- Disseminate and regularly remind workers on fire prevention and fighting rules and safety during weekly meeting.
- The contractor registered temporary residence with the local police and regularly disseminated rules and regulations at the construction site on worker management.

57. HUE-CW05 Package: Mitigation measures were carried out by the contractor to ensure OHS for workers as below:

- Establish safety measures in accordance with the law and the best construction practices; provide first aid equipment which workers have convenient access to;
- The Contractor ensure providing drinking water to workers everyday
- The contractor proactively supplied all PPE for workers such as helmets, shoes, masks, glasses and reflective jackets and ear protection devices.
- To avoid occupational accidents, workers must observe and check the safety of trenches/ pits before working in the trenches/pits. The contractor organized occupational safety training regularly.
- The contractor registered temporary residence with the local police and regularly disseminated rules and regulations at the construction site on worker management. There was no disturbance of social order and security at the construction site during the reporting period.

- For fire, explosion and electric shocks: Installing fire regulations and fire extinguishers in fuel stations; no cooking or rubbish burning near fuel stations; installing switches / circuit breakers when connecting wires; hanging wires from above; no wires on the ground; checking whether the load of electrical equipment was suitable for the wire section; electricity with high load or too many electrical equipment causing overloads for the line were not installed; Checking switches / circuit breakers regularly to see if they work and checking the wires to see if they are leaking.

58. HUE-CW06 Package: The contractor implemented mitigation measures to ensure OHS for workers:

- Equipping workers with PPE including gloves and masks, boots and supervising their work wear compliance.
- There was not allow materials such as bricks to be stacked higher than 2.5 m during transportation
- Providing first aid kits in worker's camps.
- Some construction sites in soft soil areas have been eroded. Specifically, when digging ditches to install water supply pipelines at LB4, LB3, and LB6 routes, landslides occurred due to the sandy soil. The contractor used tarpaulins and pillars to reinforce the banks of the ditches to ensure the safety of construction workers.

3.2.2 Public Safety

59. PMU consulted related local authorities and road management agencies about UXO in the project area before starting construction. UXO was removed during the construction of roads parallel with water pipelines. No public safety issues were identified.

60. The contractors of all three packages provided warning signs, lights, and notice boards at the construction sites and installed fences and warning signs on open ditches and pits to ensure traffic safety for people and vehicles. There was no traffic accident from activities of the contractors during this reporting period

61. HUE-CW05: Installation of temporary barriers in construction areas to prevent unauthorized people from entering and leaving the construction site; unauthorized personnel are not allowed to enter high-risk areas such as excavation and areas where heavy equipment is under construction); having electric lighting system at night time; limiting the speed of transportation vehicles in road sections across residential areas.

62. Besides, to prevent disturbance of social order and security from workers, the contractor carried out: registering temporary residence with the local police for the number of workers and control the absent workers, disseminate and regularly remind workers of construction site rules, regulations on management of workers, limit alcohol drink or unacceptable activities ...

63. HUE-CW06: Inform the contractor's construction plan to the local communities as soon as possible when commencement a pipeline; notify people at least 1 day before starting to dig or cut off power; place fences / signals on open trenches, deep pits and any other dangerous site that the contractor can identify.

64. Issues needed to be considered about health and safety are presented in the below table:

Table 5: Occupation Health Safety and Public Safety Issues

Issue	Required Action	Responsibility and Timing	Resolution
Old issues from previous report			
For construction sites in narrow alleys, ensuring traffic safety was very difficult. Contractors did not regularly install remote warning signs so there were complaints	Contractors provided enough warning signs and install them in a suitable time.	Contractor, PMU, CMCS	PMU/CMCS need a meeting between contractors and local authority to talk to the affected people and inform them that for narrow alleys (<2m wide), temporary roads would be constructed to ensure a smooth traffic flow or contractors were required to execute at night shift (9pm to 5am): <i>This action had done during regularly inspection of CMCS and PMU in the reporting period</i>
Workers did not wear fully PPE during work on the construction site	Contractors supervise wearing PPE of workers before working on the construction site	Contractors, CMCS	The CMCS supervise at the site based on the Site Instructions provided and followed up the Contractor's Work Diary. <i>This action had done during regularly inspection of CMCS and PMU in the reporting period.</i>
New issues from this report			
Construction sites along with main roads where are usually crowded with many traffic vehicles, the contractors must maintain the traffic separation throughout the construction process to reduce the impact on people traveling and minimize accidents.	Contractors provide enough warning signs and fence divider; assign staffs in charge for traffic separation at both starting point and ending point of the road	Contractors, CMCS	The CMCS daily supervise at the site, remind the contractors supply necessary sign boards, fence divider.



Figure 2: Some photos on OHS and public safety issues

3.3 ENVIRONMENTAL IMPACT MONITORING

3.3.1 Monitoring plan:

65. The monitoring plan focuses on all three phases (pre-construction, construction and operation phase) of the project and provides environmental indicators, sampling location & frequency, data collection methods, responsible parties and estimated costs. The monitoring plan for the quarterly environmental monitoring is centred on the ongoing working sites at each pipeline of the component.

66. The purpose of the monitoring plan is to determine the effectiveness of impact mitigation measures and to document any positive or negative environmental impacts of the project.

67. PMU hired the Centre of Natural Resources and Environment Monitoring belonging to DoNRE Thua Thien Hue to implement the environmental impact monitoring plan of the subproject. This organization meets the requirements of standards for environmental monitoring organization.

3.3.2 Monitoring activities in the reporting period:

68. In this report, the environmental monitoring plan was implemented four times in quarter 3 and quarter 4 of 2018, quarter 1 and quarter 2 of 2019. The monitoring points are located on the main construction routes and large roads with large vehicle flow, representing the construction areas of the project. For surface water monitoring points that will be taken near pumping stations of water plants. The number of monitored samples is adjusted for each pipeline depending on the progress of construction, or areas affected to the environmental components.

69. During the reporting period, the monitoring points were at the construction sites in Hue City and surrounding area, Phong Dien, Tu Ha, Loc An and Loc Bon, where construction were ongoing. In two last quarter of 2018, the subproject implemented construction many pipeline systems which spread in the five area, so sampling monitoring was carried out at 20 points of air quality and soil quality of which Hue city were 8 points, the others were equal 3 points. Surface water sampling

were 3 points at Huong River, Sia River and Cau Hai Lagoon. Times for monitoring was August – September and November – December of 2018.

70. Location of the monitoring points is presented in Table 6 below:

Table 6: Locations of monitoring points in Q3 and Q4 of 2018

Location of sampling	Symbol of air sampling	Symbol of soil sampling	Time	Area of the component
Phong Dien Industrial Zone	K _{CTN1}	D _{CTN1}	Aug 2018 Nov 2018	Phong Dien are
Along Dinh Tien Hoang Str.	K _{CTN2}	D _{CTN2}	Sep 2018 Dec 2018	Hue City and surrounding area
Area from Kim Long Str. To Nguyen Hoang Str.	K _{CTN3}	D _{CTN3}	Dec 2018	Hue City and surrounding area
At Nguyen Hoang Str.	K _{CTN4}	D _{CTN4}	Aug 2018 Nov 2018	Hue City and surrounding area
The resident area at Phu Dien Commune	K _{CTN5}	D _{CTN5}	Nov 2018 Dec 2018	Loc Bon area
The resident area of Phong An - Phong Xuan	K _{CTN6}	D _{CTN6}	Oct 2018	Phong Dien District
Area of provincial road 4	K _{CTN7}	D _{CTN7}	Aug 2018 Nov 2018	Hue City and surrounding area
At the Cau Tuan	K _{CTN8}	D _{CTN8}	Aug 2018 Nov 2018	Hue City and surrounding area
The resident area of Huong Ho commune	K _{CTN9}	D _{CTN9}	Aug 2018 Nov 2018	Hue City and surrounding area
The resident area of Huong Vinh commune	K _{CTN10}	D _{CTN10}	Nov 2018 Dec 2018	Tu Ha area
The resident area Thuy Bang commune	K _{CTN11}	D _{CTN11}	Nov 2018 Dec 2018	Hue City and surrounding area
The resident area of Huong Can commune	K _{CTN12}	D _{CTN12}	Aug 2018 Nov 2018	Hue City and surrounding area
The resident area Phong Hien commune	K _{CTN13}	D _{CTN13}	Aug 2018 Nov 2018	Phong Dien are
Tu Ha Industrial Zone	K _{CTN14}	D _{CTN14}	Aug 2018 Nov 2018	Tu Ha area
The resident area An Gia, Sia Town	K _{CTN15}	D _{CTN15}	Nov 2018 Dec 2018	Tu Ha area
The resident area Vinh Giang commune	K _{CTN16}	D _{CTN16}	Aug 2018 Nov 2018	Loc An area
Along to Thuan Hoa Str, Phu Bai – Thuy Luong ward, Huong Thuy District	K _{CTN17}	D _{CTN17}	Aug 2018 Nov 2018	Loc Bon area
The resident area Vinh Thanh commune	K _{CTN18}	D _{CTN18}	Dec 2018	Loc Bon area

The resident area Vinh Hien commune	KCTN19	DCTN19	Aug 2018	Loc An area
The resident area Loc Dien commune	KCTN20	DCTN20	Nov 2018	Loc An area
Surface water sampling				
Sampling point at Huong River	NM CTN1		Aug 2018	Hue City and surrounding area
			Nov 2018	
Sampling point at Sia River	NM CTN2		Nov 2018	Tu Ha area
			Dec 2018	
Sampling point at Cau Hai Lagoon	NM CTN3		Nov 2018	Loc An & Loc Bon area

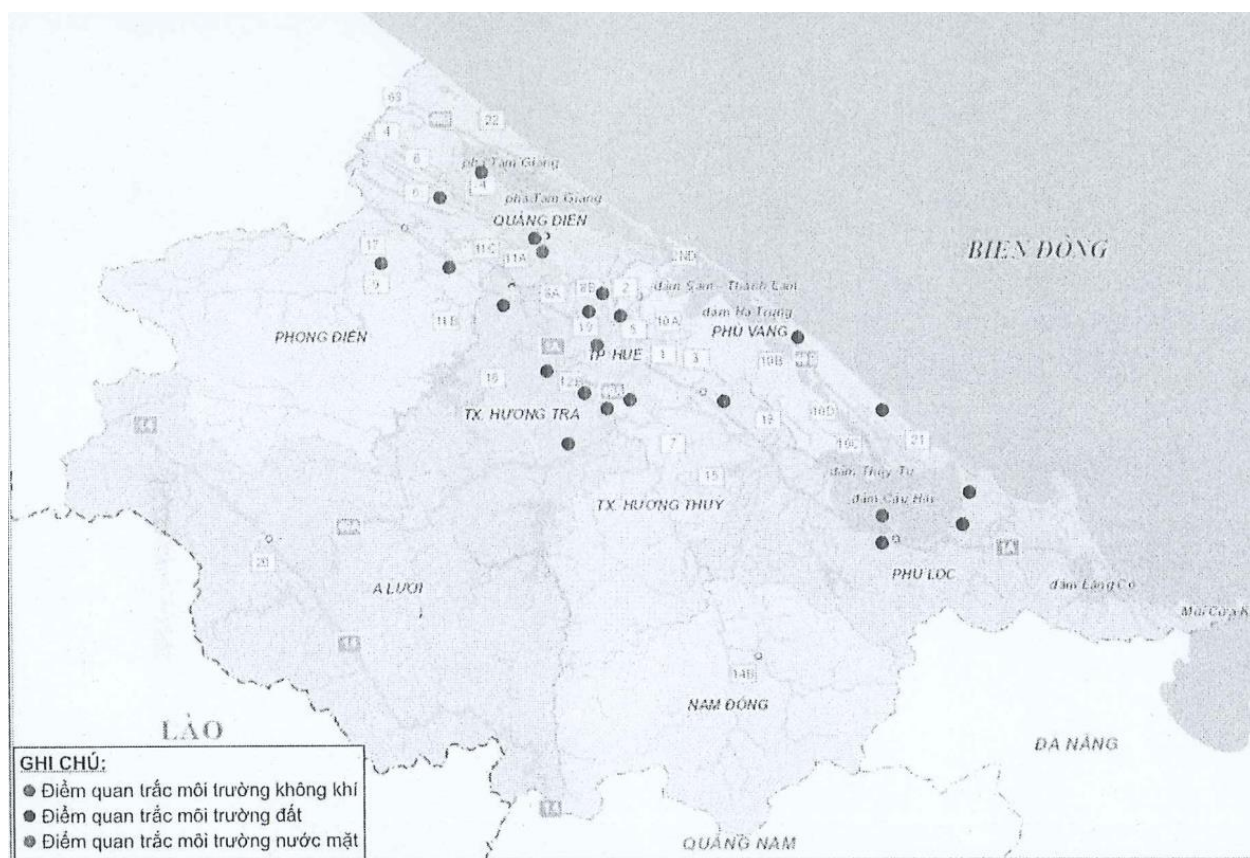


Figure 3: Locations of monitoring points on the map, Q3&4 - 2018

71. In two first quarter of 2019, many pipeline systems of the subproject have completed construction therefore sampling monitoring was carried out at 5 points of air quality and soil quality in Phong Dien, Tu Ha, Loc An and Loc Bon. Surface water sampling were 3 points at O Lau River, An Cuu River and Truoi Bridge. Times for monitoring was January – March and June of 2019.

72. Location of the monitoring points is presented in Table 7 below

Table 7: Locations of monitoring points in Q1 and Q2 of 2019

Location of sampling	Symbol of air sampling	Symbol of soil sampling	Time	Area of the component
Area of Quang Loi commune	KCTN1	DCTN1	Jan 2019 Mar 2019	Tu Ha area
Area of provincial road 9	KCTN2	DCTN2	Mar 2019	Phong Dien are
Area of provincial road 10A, Phu Luong commune	KCTN3	DCTN3	Jun 2019	Loc Bon area
Area from QL1A to La Son Industrial Zone	KCTN4	DCTN4	Jan 2019	Loc An area
Area of Loc Son – Loc An commune	KCTN5	DCTN5	Jan 2019	Loc An area
Surface water sampling				
Sampling point at O Lau River	NM CTN1		Mar 2019	Phong Dien area
Sampling point at An Cuu River	NM CTN2		Jun 2019	Hue City
Sampling point at Truoi Bridge	NM CTN3		Jan 2019	Loc An area

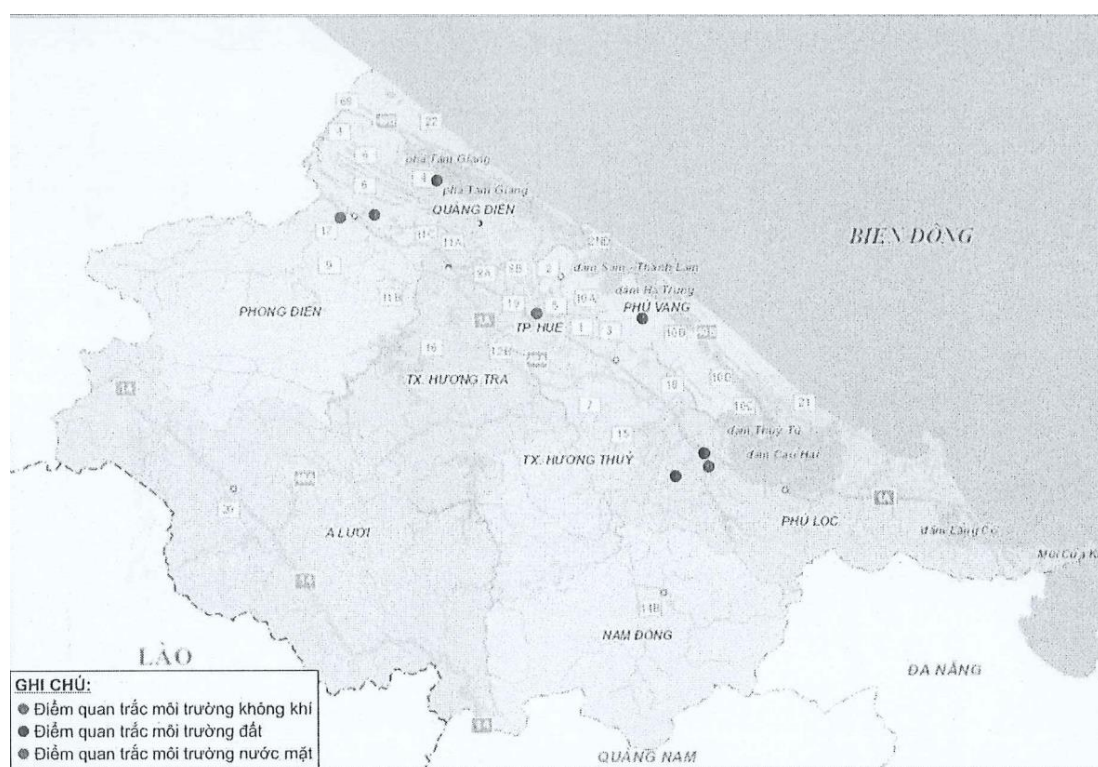


Figure 4: Locations of monitoring points on the map, Q1&2 - 2019

73. The parameters were monitored for air quality: noise, vibration, TSP, SO₂, CO, and NO₂; and soil quality: As, Cd, Pb, Cr, Cu, Zn. These monitoring parameters were determined based on a monitoring plan, construction schedule and construction site characteristics. This report includes two

monitoring period, from July 2018 to June 2019, there were 6 sampling points of surface water had been taken at the rivers near construction sites of the subproject.

74. The results of air quality monitoring in two last quarter of 2018 are described in table 8:

Table 8: The results of air quality monitoring in two last quarter of 2018

Parameter Results	Time of sampling	Noise dB	Vibratio n dB	TSP $\mu\text{g}/\text{m}^3$	CO $\mu\text{g}/\text{m}^3$	NO ₂ $\mu\text{g}/\text{m}^3$	SO ₂ $\mu\text{g}/\text{m}^3$
K _{CTN1}	Aug 2018	74,6	39,5	314,8	1886	<25	<20
	Nov 2018	73,1	39,8	302,2	1930	<25	<20
K _{CTN2}	Sep 2018	70,3	38,4	146,2	1506	<25	<20
	Dec 2018	62,8	36,4	92,2	1110	<25	<20
K _{CTN3}	Dec 2018	64,2	35,0	305,4	1579	<25	<20
K _{CTN4}	Aug 2018	72,6	39,5	110,7	1535	<25	<20
	Nov 2018	66,6	37,2	212,4	1005	<25	<20
K _{CTN5}	Nov 2018	66,9	36,8	99,0	1014	<25	<20
	Dec 2018	70,1	38,9	140,6	959	<25	<20
K _{CTN6}	Oct 2018	68,9	37,4	152,0	890		
K _{CTN7}	Nov 2018	67,0	33,5	110,4	924	<25	<20
	Dec 2018	67,1	36,8	89,5	828	<25	<20
K _{CTN8}	Aug 2018	63,4	36,3	148,6	825	<25	<20
	Nov 2018	60,8	31,3	150,0	937	<25	<20
K _{CTN9}	Aug 2018	66,6	37,5	149,3	968	<25	<20
	Nov 2018	66,4	41,2	130,2	758	<25	<20
K _{CTN10}	Nov 2018	69,9	33,5	99,4	1450	<25	<20
	Dec 2018	67,8	35,4	82,6	1300	<25	<20
K _{CTN11}	Nov 2018	67,8	34,5	213,5	1220	<25	<20
	Dec 2018	67,2	36,8	140,6	1082	<25	<20
K _{CTN12}	Aug 2018	63,1	39,8	156,4	751	<25	<20
	Nov 2018	64,5	34,5	178,3	934	<25	<20
K _{CTN13}	Aug 2018	61,1	34,6	215,9	995	<25	<20
	Nov 2018	62,8	33,1	215,3	1050	<25	<20
K _{CTN14}	Aug 2018	73,2	40,2	315,8	1741	<25	<20
	Nov 2018	71,1	41,0	304,6	1863	<25	<20

KCTN15	Nov 2018	70,4	40,1	320,0	1288	<25	<20
	Dec 2018	71,6	41,8	327,2	1465	<25	<20
KCTN16	Aug 2018	69,8	38,1	154,2	1000	<25	<20
	Nov 2018	70,2	41,8	100,1	1588	<25	<20
KCTN17	Aug 2018	72,5	42,5	308,6	1720	<25	<20
	Nov 2018	74,6	42,2	313,4	1117	<25	<20
KCTN18	Dec 2018	68,2	37,8	98,6	1220	<25	<20
KCTN19	Aug 2018	65,7	36,5	108,1	1102	<25	<20
KCTN20	Nov 2018	60,1	35,8	118,3	1245	<25	<20
QCVN 05:2013/B TNMT		-	-	300	30.000	200	350
QCVN 26:2010/B TNMT		70	-	-	-	-	-
QCVN 27:2010/B TNMT		-	70	-	-	-	-

55. The results of air quality monitoring in two first quarter of 2019 are described in table 9

Table 9: The results of air quality monitoring in two first quarter of 2019

Parameter Results	Time of sampling	Noise dB	Vibration dB	TSP $\mu\text{g}/\text{m}^3$	CO $\mu\text{g}/\text{m}^3$	NO ₂ $\mu\text{g}/\text{m}^3$	SO ₂ $\mu\text{g}/\text{m}^3$
KCTN1	Jan 2019	69,7	35,5	205,4	1234	<25	<20
	Mar 2019	66,4	30,3	101,8	1203	<25	<20
KCTN2	Mar 2019	67,0	33,0	103	754	<25	<20
KCTN3	Jun 2019	70,0	40,0	141	954	<25	<20
KCTN4	Jan 2019	67,2	33,7	72,0	<500	<25	<20
KCTN5	Jan 2019	60,8	<30	231,5	<500	<25	<20
QCVN 05:2013/BTNMT		-	-	300	30.000	200	350
QCVN 26:2010/BTNMT		70	-	-	-	-	-
QCVN 27:2010/BTNMT		-	70	-	-	-	-

3.3.3 Assessment of air quality monitoring in the second annual 2018 and the first annual 2019

56. In the second annual 2018, the concentrations of CO, NO₂, and SO₂ in air at the monitoring points were measured and met the prescribed standards on QCVN 05:2013/BTNMT – National regulation on ambient air quality;

- The concentration of TSP at 15 monitoring points was within the permitted limit according to QCVN 05:2013/BTNMT while there were 5 monitoring points were over value of QCVN for both two sampling. There were K_{CTN1}, - Phong Dien Industrial Zone; CTN₂, - Along Dinh Tien Hoang Str.; K_{CTN3} - Area from Kim Long Str. To Nguyen Hoang Str. in Hue City; K_{CTN14} - Tu Ha Industrial Zone; K_{CTN15} - The resident area An Gia, Sia Town, both belonged to Tu Ha area; K_{CTN17} - Along to Thuan Hoa Str, Phu Bai – Thuy Luong ward, Huong Thuy District in Loc Bon area. The reason was that those area has a lot of traffic, so it was affected by dust.

- There were 12 out of 20 noise measurement points meeting QCVN 26:2010/BTNMT standards and 8 points exceeded the prescribed standards of which K_{CTN2}, K_{CTN4}, K_{CTN5}, K_{CTN16} were over the standard for only one sampling, meanwhile points K_{CTN1}, K_{CTN14}, K_{CTN15}, K_{CTN17} were over the standards for two samplings.

- The vibration of all monitoring points met QCVN 27:2010/BTNMT standards

57. In the first annual 2019, all parameters of air quality were within permitted limit according to the prescribed standards of related QCVN.

58. The results of soil quality monitoring in two last quarter of 2018 are described in table 10:

Table 10: The results of soil quality monitoring in two last quarter of 2018

Parameter Results	Time of sampling	As mg/ kg	Cd mg/ kg	Pb mg/ kg	Cr mg/ kg	Cu mg/ kg	Zn mg/ kg
D _{CTN1}	Aug 2018	8,03	<0,8	17,85	11,6	22,2	23,10
	Nov 2018	7,61	<0,8	16,09	16,17	10,56	34,23
D _{CTN2}	Sep 2018	0,57	<0,8	17,03	11,33	7,49	5,02
	Dec 2018	0,43	<0,8	21,45	13,44	8,51	9,5
D _{CTN3}	Dec 2018	7,69	<0,8	21,63	11,21	7,16	46,15
D _{CTN4}	Aug 2018	19	<0,8	13,4	13,4	10,19	12,19
	Nov 2018	16,85	<0,8	23,63	22,11	18,7	6,82
D _{CTN5}	Nov 2018	17,87	<0,8	17,37	28,65	18,77	8,34
	Dec 2018	11,73	<0,8	27,46	13,09	11,29	22,01
D _{CTN6}	Oct 2018	11,18	<0,8	25,74	18,92	19,21	6,91
D _{CTN7}	Nov 2018	7,29	<0,8	14,4	16,59	22,16	8,44
	Dec 2018	5,07	<0,8	13,28	28,89	15,19	22,91

D _{CTN8}	Aug 2018	6,97	<0,8	16,52	18,66	10,61	30,37
	Nov 2018	7,69	<0,8	20,15	13,7	8,16	51,38
D _{CTN9}	Aug 2018	10,83	<0,8	40,25	29,23	15,22	22,23
	Nov 2018	13,09	<0,8	28,91	29,45	18,11	4,5
D _{CTN10}	Nov 2018	18,32	<0,8	18,41	11,5	18,16	11,2
	Dec 2018	18,46	<0,8	29,15	15,89	12,14	7,82
D _{CTN11}	Nov 2018	1,85	<0,8	15,33	25,52	13,99	12,09
	Dec 2018	1,23	<0,8	20,75	27,48	22,16	6,82
D _{CTN12}	Aug 2018	2,11	<0,8	18,8	16,91	9,1	8,39
	Nov 2018	8,7	<0,8	24,35	17,22	15,1	22,24
D _{CTN13}	Aug 2018	12,14	<0,8	14,77	17,8	11,26	6,8
	Nov 2018	7,69	<0,8	14,24	29,0	9,92	8,35
D _{CTN14}	Aug 2018	18,50	<0,8	15,71	22,36	10,2	29,91
	Nov 2018	26,44	<0,8	15,3	17,08	8,33	19,17
D _{CTN15}	Nov 2018	7,35	<0,8	14,82	29,13	9,54	40,12
	Dec 2018	6,44	<0,8	13,78	29,0	10,81	22,25
D _{CTN16}	Aug 2018	11,24	<0,8	23,63	19,84	15,16	4,59
	Nov 2018	13,12	<0,8	19,44	14,65	9,56	18,26
D _{CTN17}	Aug 2018	17,13	<0,8	20,36	23,34	9,71	9,82
	Nov 2018	13,19	<0,8	19,52	10,89	18,16	23,1
D _{CTN18}	Dec 2018	7,89	<0,8	18,42	10,9	21,36	34,23
D _{CTN19}	Aug 2018	5,67	<0,8	22,35	18,7	16,65	5,02
D _{CTN20}	Nov 2018	6,89	<0,8	21,75	24,55	15,21	23,1
QCVN 03MT:201 5/BTNMT		20	5	200	250	200	300

59. The results of soil quality monitoring in two last quarter of 2018 are described in table 11

Table 11: The results of soil quality monitoring in two first quarter of 2019

Parameter	Time of sampling	As mg/ kg	Cd mg/ kg	Pb mg/ kg	Cr mg/ kg	Cu mg/ kg	Zn mg/ kg
Results							

D _{CTN1}	Jan 2019	0,6	<0,8	17,8	10,0	7,49	6,82
	Mar 2019	0,43	<0,8	16,09	13,44	10,71	8,34
D _{CTN2}	Mar 2019	2,11	<0,8	23,63	11,6	15,3	8,5
D _{CTN3}	Jun 2019	8,7	<0,8	17,3	16,17	18,94	7,07
D _{CTN4}	Jan 2019	18,66	<0,8	16,49	15,9	16,37	8,44
D _{CTN5}	Jan 2019	13,09	<0,8	6,86	22,09	9,13	22,91
QCVN 03MT:2015/BTNMT		20	5	200	250	200	300

3.3.4 Assessment of soil quality monitoring

60. In both reporting period, the parameters of soil quality assessment at the monitoring points met the QCVN 03 MT:2015/BTNMT – National technical regulation on soil quality

61. The results of surface water quality in two last quarter of 2018 are described in table 12

Table 12: The results of soil quality monitoring in two last quarter of 2018

No	Parameter	Unit	Result					QCVN 08:2015/BTNMT		
			NM _{CTN1}		NM _{CTN2}		NM _{CTN3} Nov 2018	A1	A2	B1
			Aug 2018	Nov 2018	Nov 2018	Dec 2018				
1	pH	-	7,4	7,1	7,3	7,8	8,2	6-8,5	6-8,5	5,5-9
2	Độ đục	NTU	12	39,8	57	103	49,74	-	-	-
3	DO	mg/l	5,8	4,8	5,4	5,1	4,3	>=6	>=5	>=4
4	TSS	mg/l	5,6	5,2	10,8	22,2	23,2	20	30	50
5	COD	mg/l	<9	<9	<9	11,2	<9	10	15	30
6	BOD5	mg/l	<1	1,2	2,1	2,4	1	4	6	15
7	NH ₄ ⁺ -N	mg/l	0,026	0,085	0,231	0,055	0,053	0,3	0,3	0,9
8	NO ₃ ⁺ - N	mg/l	0,23	0,093	0,461	0,122	0,081	2	5	10
9	PO ₄ ⁺ - P	mg/l	<0,016	<0,016	<0,016	0,036	<0,016	0,1	0,2	0,3
10	Fe	mg/l	<0,09	0,68	0,34	0,59	0,15	0,5	1	1,5
11	Coliform	MNP/100ml	4	21	1100	460	54	2500	5000	7500

62. The results of surface water quality in two first quarter of 2019 are described in table 13

Table 13: The results of soil quality monitoring in two first quarter of 2019

No	Parameter	Unit	Result			QCVN 08:2015/BTNMT		
			NM _{CTN1}	NM _{CTN2}	NM _{CTN3}	A1	A2	B1
1	pH	-	7,3	7,6	8	6-8,5	6-8,5	5,5-9
2	Turbidity	NTU	87,1	49,4	21,25	-	-	-
3	DO	mg/l	4,9	4,6	4,7	≥6	≥5	≥4
4	TSS	mg/l	19,6	3,2	12	20	30	50
5	COD	mg/l	<9	<9	<9	10	15	30
6	BOD5	mg/l	2,6	1,9	<1,2	4	6	15
7	NH ₄ ⁺ -N	mg/l	<0,016	0,621	<0,016	0,3	0,3	0,9
8	NO ₃ ⁺ - N	mg/l	<0,017	1,18	<0,017	2	5	10
9	PO ₄ ⁺ - P	mg/l	<0,016	<0,016	<0,016	0,1	0,2	0,3
10	Fe	mg/l	0,27	0,36	0,09	0,5	1	1,5
11	Coliform	MNP/100m l	240	2400	93	2500	5000	7500

Note: The classification of surface water sources for assessing and controlling water quality, for different purpose of water:

A1 - Good use for domestic water supply and other purposes, such as type A2, B1 and B2.

A2 - Used for domestic water supply, but must apply the appropriate treatment technology, conservation of

aquatic animals and plants, or other purposes, such as type B1 and B2.

B1 - For irrigation purposes or other purposes requiring similar quality standards or for the purposes as type B2.

B2 - Water transport and other purposes with low quality water requirements. Assessment of surface water quality monitoring

3.3.5 Assessment of surface water quality monitoring

63. In the two last quarters of 2018, almost of the parameters met the prescribed standards of type A1 or A2 except DO which was permitted limit according to type B1 for some samplings. In sampling monitoring point of Huong River, DO met the standards of type B1 in November; DO of monitoring point of Sia River met the standards of type A2 for both times while DO of Cau Hai Lagoon only met standards of type B1.

64. In the two first quarter of 2019, all parameters met the standards of type A1 except DO and Ammonium NH₄⁺. DO parameter was permitted limit according to type B1 only in all monitoring points of O Lau river, An Cuu river and Truoi Bridge. Ammonium at monitoring point of An Cuu river was higher than double of the prescribed standards of type A1 or A2 but was still within permitted limit of type B1.

4 COMPLIANCE WITH SAFEGUARDS RELATED PROJECT COVENANTS

85. The compliance status of the safeguards related to the Loan Agreement is detailed in table 14 below.

Table 14: Summary of Compliance with Loan Covenants

Schedule	Para No.	Description	Remarks/Issues
5	4	<p><i>Environment</i></p> <p>The Borrower, Project Executing Agencies and WSCs shall ensure that the preparation, design, construction, implementation, operation and commissioning of each Subproject and all Project's facilities comply with (a) all applicable laws and regulations of the Borrower related to environment, health, and safety; (b) the Environmental Safeguards; (c) the EARF; and (d) all measures and requirements specified in the respective IEE and EMP, and any corrective or preventative actions outlined in the Safeguard Monitoring Report.</p>	<p>Complied</p> <p>IEE of the subproject was approved by ADB</p> <p>EMP was prepared by EA and submitted ADB. ADB issued NOL in April 2017</p> <p>All environmental requirements in EMP was integrated into the bidding documents.</p> <p>All measures and requirements specified in the respective IEE and EMP outlined in the Environmental Safeguard Monitoring Reports.</p>
5	8	<p><i>Human and Financial Resources to Implement Safeguard Requirements</i></p> <p>The Borrower, Project Executing Agencies and WSCs shall provide the necessary human resources and budget to fully implement EMP, RP and EMDP.</p>	<p>Complied</p> <p>PMU had 1 staff in charge of environmental management of the project.</p> <p>Budget for implementing the EMP was allocated</p>
5	9	<p><i>Safeguards-related Provisions in Bidding Documents and Works Contracts</i></p> <p>The Borrower, Project Executing Agencies and WSCs shall ensure that all bidding documents and contracts for Works containing provisions that require contractors to:</p> <p>(a) comply with the contractor-related measures and requirements outlined in IEE, EMP, RP and EMDP (to the extent they care about the impact on those affected during construction) and any corrective or preventive action outlined in the Safeguard Monitoring Report;</p> <p>(b) prepare a budget for all environmental and social measures;</p> <p>(c) send the Borrower, Project Executing Agencies and the WSCs with written notices of any unforeseen risks or impacts related to the environment, resettlement or indigenous people arising during the construction, implementation or operation of the Project that are not considered in IEE, EMP, RP or EMDP;</p>	<p>Complied</p> <p>a. The IEE, EMP was integrated into the bidding documents.</p> <p>b. Budget for implement the EMP was allocated.</p>
5	10	<p><i>Safeguard Monitoring and Reporting</i></p>	<p>Being complied</p>

Schedule	Para No.	Description	Remarks/Issues
		<p>The Borrower, Project Executing Agencies and WSCs shall perform the followings:</p> <p>(a) submit Semi-Annual Safeguard Monitoring Reports to ADB and disclose relevant information from such reports to affected people promptly upon submission; if there are any unforeseen social risks and/or risks arising during the construction, implementation or operation of the Project that are not considered in the IEE, EMP, RP or EMDP, ADB must be promptly informed of the occurrence of such risks or impacts, with a detailed description of the event and a proposed corrective action plan;</p> <p>(b) promptly report any actual or potential breach of non-compliance with the measures and requirements specified in the EMP, RP or EMDP after having become aware of it.</p>	<p>Semi-Annual Safeguard Monitoring Reports were submitted to ADB.</p>
5	11	<p><i>Labor and Health Standards</i></p> <p>The Borrower, Project Executing Agencies and WSCs shall ensure that</p> <p>(a) all Project contractors (i) comply with all applicable Borrower labor laws and relevant international treaty obligations and do not employ child labor, (ii) employ female workers and provide equal wages or benefits to working men and women, (iii) provide basic water and sanitation facilities for men and women in construction sites (iv) provide safe working conditions for male and female workers, (v) provide day care services for female construction workers with childcare needs and (vi) implement awareness campaigns and education on human trafficking / HIV / AIDS, STI and human trafficking in construction sites; and</p> <p>(b) All Works contracts must include provisions requiring complying with the above requirements. Compliance is closely monitored.</p> <p>(c) Provide sufficient budget to all signed contracts.</p>	<p>Being Complied</p> <p>Contractors are complying with Vietnamese Labor laws. Contractors provided PPE for workers and sufficient basic facilities in worker camps.</p>

5 INFORMATION DISCLOSURE AND SOCIALIZATION INCLUDING CAPACITY BUILDING

5.1 PUBLIC CONSULTATION, MEETINGS AND INFORMATION DISCLOSURE

86. In 2019, the PMU implemented communication on water supply pipe installation plans for household using, price incentives and water consumption price promotion program in the first months of use to poor households and women-headed households in some wards and communes in the project area where the pipeline has been completed installation. This program was included benefit of clean water, improving public health and sanitation, minimizing pollution of the living environment, and ensuring the sustainability of public benefits.

5.2 TRAINING – CAPACITY BUILDING

87. Four members of the PMU of Hue Subproject has been provided with a training course on environmental social safeguards by ADB (i) Gender issue: Workshop on “Promoting Gender Equality and Empowering Women in ADB-financed project” in Ho Chi Minh City on April 3, 2013 and in Nha Trang on August 21, 2013 (ii) Environmental issue: ADB environmental safeguard implementation, monitoring and reporting in Hanoi on August 20, 2013.

88. The PMU has coordinated with the CMCS to developed and organized training courses on labour safety and health of workers; environmental mitigation plan during construction process; ensuring traffic safety, mandatory equipment during the construction process, the traffic separation planning and signs, remote warning in the quarter two of 2019.

5.3 PRESS/MEDIA RELEASES

89. In order to expand the disclosure of Project information, the implementation status and lessons learnt from the ADB-financed Projects have been published on the website of HueWACO (<http://huewaco.com.vn/>) since the beginning of the project. These publications aim to share experiences about Project’s activities and its progress within the water industry network, partners and stakeholders.

5.4 GRIEVANCE REDRESS MECHANISM

90. A 24/7 Call Centre (Phone no.: 02343 890 890) has been set up in HueWACO’s Customer Service Department in March 2014. The Call Centre receives any complaints and queries from customers and directly connect to the Grievance Unit operated by Construction Enterprise since December 2017.

91. In the reporting period, no written grievance has been received and no oral complaints have been reported.

6 CONCLUSIONS AND RECOMMENDATIONS

92. The results of EMP / EMoP implementation have shown that all requirements of EMP and EMoP have been followed by the contractors and PMU. However, the implementation of some requirements must fully meet the expectations set forth in Part 3 of this report.

93. This reporting is combined two periods, from July 2018 to June 2019, therefore it covers almost time of construction phase of the packages. The overall implementation/compliance of the subproject for the EMP/EMoP was assessed to be satisfactory in this reporting period. Although there are some parameters of air quality have not yet met the prescribed standards in the two last quarters of 2018 but

by strict supervision of the CMCS/PMU, all parameters of air quality in the two first quarter of 2019 are within permitted limit.

94. At the end of the reporting period, 86% of construction volume are completed with many pipelines are available to operate, as a result, restoration of ground and site clean-up activities need to be strictly supervised by the PMU and the CMCS. All minute on handing-over of construction ground to the authorized organizations have to be collected and filed.

95. In the remaining time of the contracts, the PMU/CMCS shall require the Contractors carry out installation pipelines in fully compliance with the approved EMP / EMoP regulations so that there are no environmental issues need to be resolved when the contract is finished.