

# Environmental Monitoring Report

---

2<sup>nd</sup> Semestral Report  
January 2021

## CAM: Second Greater Mekong Subregion Corridor Towns Development Project

Prepared by the Ministry of Public Works and Transport for the Kingdom of Cambodia and the Asian Development Bank.

This environmental monitoring report is a document of the borrower. The views expressed herein do not necessarily represent those of ADB's Board of Directors, Management, or staff, and may be preliminary in nature.

In preparing any country program or strategy, financing any project, or by making any designation of or reference to a particular territory or geographic area in this document, the Asian Development Bank does not intend to make any judgments as to the legal or other status of any territory or area.

# **Semi-Annual Environmental Monitoring Report**

---

**KINGDOM OF CAMBODIA**

**Ministry of Public Works and Transport**

---

Project Number: 46443-002

## **Second Greater Mekong Subregion Corridor Towns Development Project**

**Sub-Project**

## **Wastewater Collection & Treatment and Urban Drainage in Kampot Town**

**Reporting Period: July-December 2020**

**SEMR Report Number: 2**

## Contents

1	ENVIRONMENTAL SAFEGUARDS SUMMARY .....	1
1.1	Summary of Project Progress .....	1
1.2	Summary of EMP Implementation .....	1
1.3	Summary of EMP Monitoring .....	2
1.4	Summary of Complaints, Issues and Corrective Action .....	2
2	SAFEGUARDS STAFF, TRAINING AND DOCUMENTATION .....	3
2.1	Implementation Arrangements .....	3
2.2	Training & Capacity Building .....	4
2.3	ADB Approvals .....	5
2.4	National Approvals .....	6
2.5	Construction Environmental Management Plan (CEMP) Approvals .....	6
3	EMP IMPLEMENTATION .....	6
3.1	Environmental Performance .....	6
3.2	Health and Safety Performance .....	10
4	EMP MONITORING .....	12
4.1	Environmental Quality Monitoring .....	12
4.2	Construction Phase Affected People Consultation .....	13
5	COMPLAINTS, ISSUES, CORRECTIVE ACTION .....	14
5.1	Information Disclosure .....	14
5.2	Grievance Redress Mechanism .....	14
5.3	Corrective Action .....	15
6	CONCLUSION & RECOMMENDATION .....	16

## Tables

Table 1 Project Progress Summary .....	1
Table 2. Status of Environmental Safeguard Roles .....	3
Table 3. Environmental Safeguards Training Provided and Planned .....	4
Table 4. Status of Environmental Safeguard Documents .....	5
Table 5. Status of National Approvals for Environmental Documents .....	6
Table 6. Status of CEMP Approvals .....	6
Table 7. Status of EMP Compliance for CW 01 Sewerage & Drainage .....	7
Table 8. Status of EMP Compliance for CW02 Landfill .....	8
Table 9. EMP– Actions Needed for Compliance for CW01 Sewerage & Drainage .....	8
Table 10. EMP– Actions Needed for Compliance for CW02 Landfill.....	9
Table 11. EMP Compliance Outstanding Issues from SEMR Previous Report(s) for CW01 Sewerage & Drainage .....	9
Table 12. Status of Community and Occupational Health and Safety Compliance - ALL subprojects..	10
Table 13. Health and Safety Actions Needed for Compliance - ALL subprojects.....	11
Table 14. EMP Environmental Quality Monitoring Requirements for CW01 and CW02.....	12
Table 15. EMP Environmental Quality Monitoring implemented .....	13
Table 16. Construction Phase Affected People Consultation .....	13
Table 17. Information Disclosure .....	14
Table 18. Project Complaints or Issues .....	15
Table 19. Project Complaints or Issues – Not resolved from previous reports .....	15
Table 20. Corrective Action Issued.....	15

## Annexes

Annex 1 Environmental Quality Monitoring Results (from IESIA report) .....	18
Annex 2 Photo Record – Visits, Monitoring .....	24

## 1 ENVIRONMENTAL SAFEGUARDS SUMMARY

1. The second Semi-annual Environment Monitoring Report (SEMR) covers the period of (July – December 2020) for Second Greater Mekong Subregion Corridor Towns Development. The SEMR has been prepared to fulfil the safeguard policy requirement of ADB.
2. The SEMR is prepared by support consultant and checked by PMU.

### 1.1 Summary of Project Progress

3. The following table gives a brief summary of the project progress for contract award/Civil Works (CW) packages, construction and key activities in this reporting period:

**Table 1 Project Progress Summary**

Safeguards Category	Environment	B	
Reporting Period:	July to December/ 2020	Date Last Report Issued:	Not Applicable
Contracts Awarded to Date:	SBPH ENGINEERING AND CONSTRUCTION CO., LTD (CW01) Contract awarded: 21 <sup>st</sup> October 2019 Starting date: 25 <sup>th</sup> October 2019 Contract duration: 720 days  CW02 Kampot Solid Waste Management – Contract not awarded yet		
Construction Progress to Date:	As of December 2020, the physical construction progress is - CWO1 Kampot Wastewater Treatment Plant (WWTP) and Drainage work: 30 %		
Key Sub-project Activities in this Reporting Period:	Construction Activities CW01 <ol style="list-style-type: none"> <li>1. Establishing of Transformer 160KV at WWTP.</li> <li>2. Checking Rebar, Form Work and Casting Concrete of Wall for Anaerobic Pond at WWTP</li> <li>3. Install Re-Bars, Form Work and Casting Concrete for U-Drain.</li> <li>4. Install Re-Bars, Form Work and Casting Concrete for Top Slab at C1 Pumping Station.</li> <li>5. Install Re-Bars, Form Work and Casting Concrete of Bottom Slab for Anaerobic Pond at WWTP.</li> <li>6. Testing of HDPE 250 mm and 450 mm for force Main</li> <li>7. Cleaning of existing drainage</li> <li>8. Excavation and Installation of U-Drain at Line 3 (LHS)</li> <li>9. Excavation and Installation of HDPE 450mm at Force Main Line</li> <li>10. Checking of Alignment for U-Drain</li> <li>11. Checking of Anaerobic Pond and Cleaning Existing Drainage</li> </ol>		

### 1.2 Summary of EMP Implementation

4. EMP implementation is summarised in the following points, for this reporting period:
  - PPE is now adequate on the construction site.
  - No issues affecting project environmental performance are observed at CW01 or CW02 construction sites.
  - GRM cards have been prepared by the contractor for CW02

- CW01 WWTP construction camp flooded therefore implementation of camp mitigation measures has been affected.

### **1.3 Summary of EMP Monitoring**

5. EMP monitoring is summarised in the following points, for this reporting period:
- Number of Monitoring Visits to Construction Site and wider area:
    - Every week visits by PIU
    - Every day visits by CSC
    - Monthly visit by Project Implementation Support and Capacity Building (PISCB) team (national environment specialist)
  - Number of Environmental Samples Tested: not start yet for CW01

### **1.4 Summary of Complaints, Issues and Corrective Action**

6. Any complaints, issues and corrective action identified or implemented are summarised in the following points, for this reporting period:
- Issues Raised: No issues raise on construction sites
  - Grievances Raised with GRM: None
  - Corrective Action issued by project to Contractor:
    - Contractor must rearrange the worker camp
    - Contractor must reconstruct toilets after flooding in WWTP
    - Contractor must provide the traffic sign in Force Main construction site

## 2 SAFEGUARDS STAFF, TRAINING AND DOCUMENTATION

### 2.1 Implementation Arrangements

7. The EMP defines the Environmental Safeguards roles and responsibilities. The roles are required to be filled in order to meet the EMP requirements. The following table gives the status of the key roles for EMP implementation:

Table 2. Status of Environmental Safeguard Roles

Safeguards Role	Status & Comment		
	Date Started:	February 2018	Full Time/ Part Time [PT]
<b>PISCB N/IES</b> <ul style="list-style-type: none"> <li>Provide technical advice/assistance, e.g., preparation of Semi-Annual EMR for ADB, review of results of environmental effects monitoring.</li> <li>Environmental related training for PMU, PIU, contractors and other stakeholders</li> <li>Support PMU/PIU with appropriate consultation</li> <li>Site visits to check on construction, EMP implementation and affected people, in collaboration with PMU</li> </ul>	<b>Comment</b>	Ms. Rachel Wildblood (International) and Mr. Chea Mong (National)	
<b>PMU-ESO</b> <ul style="list-style-type: none"> <li>PMU- Environmental Safeguard Officer (ESO)</li> <li>Conduct inspections and spot checks to monitor the performance of the Contractor in implementing the C-EMP/EMP</li> <li>Review &amp; verify (through site visits) Monthly Environmental Progress Reports of Contractor</li> <li>EMP implementation site visits</li> <li>Review environmental quality monitoring results.</li> <li>Prepare the Project's Semi-Annual environmental Monitoring Reports for submission to ADB.</li> <li>Implement the Grievance Redress Mechanism (GRM) for environmental issues</li> <li>Conduct appropriate consultation and monitoring of effect of construction on affected people</li> <li>Participate in training provided by PISCB</li> </ul>	<b>Date Started:</b>	May-2020	Full Time/Part Time [PT]
	<b>Comment</b>	Mr. Penh Socheat	
<b>PIU Environmental And Social Safeguards Staff</b>	<b>Date Started:</b>	December-2019	Full Time/ Part Time [PT]



<ul style="list-style-type: none"> <li>Collate monthly EMRs of Contractor, and submit to the PMU.</li> <li>If a licensed laboratory will be engaged to do independent environmental quality monitoring, oversee &amp; manage the quarterly conduct of the environmental effects monitoring</li> <li>Prepare the draft Semi-Annual EMR and submit to the PMU for finalization and incorporation to the Project's Semi-Annual EMR.</li> <li>Implement the GRM for environmental issues</li> <li>Conduct appropriate consultation and monitoring of effect of construction on affected people</li> <li>Participate in training provided by PISCB</li> </ul>	<b>Comment</b>	Mr. Kong Rasmey	
		<b>Date Started:</b>	20-08-2020 [FT]
		<b>Comment</b>	Mr. Sy Hayean (12-02-2020 Mr. Morm Chandaro)
<b>CSC</b> <ul style="list-style-type: none"> <li>EMP monitoring during construction</li> <li>Preparing monthly monitoring report</li> </ul>	<b>Date Started:</b>	01-11-2019 [FT]	
		Mr. Streng Kreasna	
		<b>Comment</b>	
<b>Contractor Environment Health &amp; safety Staff</b> <ul style="list-style-type: none"> <li>Appoint a qualified Environment Health and Safety (C-EHS) staff member to be responsible for EMP implementation and reporting</li> <li>Implement mitigation measures &amp; conduct internal EMP implementation monitoring.</li> <li>Conduct environmental quality monitoring as prescribed in SPS-compliant EMP. (If an independent Licensed Laboratory will not be engaged.)</li> <li>Prepare Monthly EMRs.</li> </ul>	<b>Date Started:</b>	01-11-2019 [FT]	
		Mr. Streng Kreasna	
		<b>Comment</b>	

8. The project concludes that the environmental safeguards roles are enough to mitigate the impact from the project but there is not enough budget and time to be involved in detail in the project.

## 2.2 Training & Capacity Building

9. The following table gives the environmental safeguards training courses that have been completed during this reporting period and the planned training courses for the next six months:

Table 3. Environmental Safeguards Training Provided and Planned

Training Course Title	Training Date	Participants	Training Provider
-----------------------	---------------	--------------	-------------------

Second Greater Mekong Sub-region Economic Corridor towns development project

EMP development and implementation (CW 01) <sup>1</sup>	02-05-2019	PIU=7 persons; PMU=0	PISCB Team
CEMP development and implementation (CW 01)	13-01-2020	PMU=2; NJS/KCC=9; SBPH=4 PIU=2;	PISCB Team
GRM (CW 01)	14-01-2020	PMU=2; NJS/KCC=6; PIU=2; Local Authority=19; SBPH=2	PISCB Team
Consultation with affected people	Q 1 of 2021	PMU, PIU	PISCB Team
Environmental protection	Q 1 of 2021	PMU, PIU, Contractor	PISCB Team
Environmental monitoring	Q 1 of 2021	PMU, PIU, Contractor	PISCB Team

Note: future training is required but dates will be confirmed in compliance with any requirements for protection against COVID-19

## 2.3 ADB Approvals

10. The following table gives information on the status of the safeguards documents.

**Table 4. Status of Environmental Safeguard Documents**

Safeguards Documents	Update Issued (Latest Version)	Submitted to PMU	Submitted to ADB	ADB Approval Status
IEE – Consolidated	12-02-2020 IEE split by subproject Oct. 2020	-	-	IEE split requested by ADB
IEE Kampot Drainage, Sewerage & WWTP (CW01)	14-12-20 to include scope change and variation order	14-12-20	Dec 2020	Awaiting approval/disclosure.
EMP for drainage and Sewerage system (CW01)	14-12-20 to include scope change and variation order	14-12-20	Dec 2020	Awaiting approval/disclosure.
IEE Kampot Landfill (CW02)	See ADB website	-	November 2020	Approved & Disclosed
EMP for Kampot landfill (CW02)	See ADB website	-	October 2020	Approved & Disclosed

<sup>1</sup> Waste water collection & Treatment and Urban drainage in Kampot town  
Second Greater Mekong Sub-region Economic Corridor towns development project

## 2.4 National Approvals

11. The following table gives an update on the necessary national approvals required for the project to proceed.

**Table 5. Status of National Approvals for Environmental Documents**

Documents	Submitted to MoE	Approved By MoE:	Status – if not approved	Comment
Initial Environmental and Social Impact Assessment (IESIA) (Drainage and Sewerage system)	Final submission 04-09-2019	21-06-2019		
IESIA (Landfill)	First submission: 08-04-2020	23-11 2020		

## 2.5 Construction Environmental Management Plan (CEMP) Approvals

12. The following table confirms the status of the Construction Environmental Management Plan (CEMP) for each Civil Works package:

**Table 6. Status of CEMP Approvals**

Civil Works Package/ Subproject	CEMP Given to PMU	Approved By PMU:	Comment:
Waste water collection & Treatment and Urban drainage (CW01)	30 days after contract award	Yes	Easy to monitor, generally complies with ADB.
Landfill (CW02)	N/A	N/A	N/A

## 3 EMP IMPLEMENTATION

### 3.1 Environmental Performance

13. The following table gives the environmental impact mitigation measures in the Borrower (Project) EMP and the corresponding CEMP and how the project is progressing with implementing the mitigation measures, for each subproject.

14. The evidence for the compliance is through a combination of:

Second Greater Mekong Sub-region Economic Corridor towns development project

- Site visits to observe site practices;
- Regular environmental monitoring/reporting from CSC, Contractor.

**Table 7. Status of EMP Compliance for CW 01 Sewerage & Drainage**

No	EMP Requirement (Mitigation Measure)	Compliance & Description (Yes, No, Partial)	Comment or Further Explanation if Needed	Reasons for Not Full Compliance
1	Flora	Yes	- No unnecessary flora damage	
2	Water Quality	Not Applicable	- Water sampling didn't start. No impacts on water observed.	
3	Noise and Dust Management	Yes	- The heavy construction and work near community has not yet started.	
4	Spoil Management Plan implementation	Yes	- The contractor arrange the site for stocking the spoil during excavation.	-
5	Waste Management Plan implementation	Yes	- The contractor provides bins and waste is collected by waste collection company.	-
6	Camp Management Plan implementation	Partial	- The worker camp is moved during the flooding period, flooded July 2020	- The contractor needs to rearrange the worker camp after flooding and provide the camp facilities such as toilet, Firefighting etc...
7	Community Health, Safety and Urban Access Plan implementation	Partial	-	- The contractor needs to provide traffic sign in construction site and do the public consultation with local people regarding timing of construction works.
8	Traffic Management Plan implementation	Partial	- The construction work is starting along the road.	- The contractor need to provide the traffic sign along the force main construction site.

9	Transport, Storage and Use of Construction Materials	Yes	- Trucks all covered during transport of materials	-
10	Machinery & Equipment	Yes	- Machinery well maintained	-
11	Storage and Use of chemicals and fuels	No	- The contractor needs to prepare the concrete bund around the fuel tank	-

**Table 8. Status of EMP Compliance for CW02 Landfill**

No	EMP Requirement (Mitigation Measure)	Compliance & Description (Yes, No, Partial)	Comment or Further Explanation if Needed	Reasons for Not Full Compliance
1	N/A		-	

15. For all 'Partial' or 'No' compliance issues in the table above, the actions needed to solve the compliance issues are in the table below:

**Table 9. EMP- Actions Needed for Compliance for CW01 Sewerage & Drainage**

No.	EMP Requirement	Further Action to Take	Date for Action	Who will Implement Action	Resolution?
6	Camp Management Implementation: Reconstruction of Worker Camp at WWTP	Contractor needs to reconstruct the new worker camp after flooding	Contractor-31 <sup>st</sup> January 2021	Contractor	<b>Not yet completed</b>
7	Public consultation with local people	Contractor needs to do public consultation in every road section before starting construction.	31 <sup>st</sup> January 2021	Contractor	<b>Not yet completed</b>

No.	EMP Requirement	Further Action to Take	Date for Action	Who will Implement Action	Resolution?
8	Traffic Management Plan Implementation	Install signs for traffic along force main construction site	31 <sup>st</sup> January 2021	Contractor	<b>Not yet completed</b>
11	Fuel storage on impermeable surface with bund	Contractor needs to prepare fuel storage area.	Contractor – 31 <sup>st</sup> January 2021	Contractor	<b>Not yet completed. The contractor needs to rearrange the worker camp.</b>

Table 10. EMP– Actions Needed for Compliance for CW02 Landfill

No.	EMP Requirement	Further Action to Take	Date for Action	Who will Implement Action	Resolution?
	N/A				

16. The following table gives information on environmental performance issues from previous Environmental Monitoring Reports. This table confirms that the action was completed or that the action is outstanding. Note the previous SEMR did not include CW02 because landfill works had not started.

Table 11. EMP Compliance Outstanding Issues from SEMR Previous Report(s) for CW01 Sewerage & Drainage

No.	EMP Requirement	Further Action to Take	Responsibility and Timing	Resolution	Required Action
6	PPE	All workers to be given and wear safety clothing	May 2020	Resolved. The contractor provided the PPE to all workers	

1	GRM card	The contractor needs to preparing the GRM card	June 2020	Resolved. The contractor prepared the GRM card	
-	Water Quality; Air quality, noise and Vibration	The contractor needs to conduct the sampling during the six month period	Jan 2021		The contractor needs to undertake monitoring on Water Quality; Air quality, noise and Vibration
11	Fuel storage on impermeable surface with bund	Contractor needs to prepare fuel storage area.	May 2020	Not resolved.	The contractor has not completed this. It is required as part of the reconstruction of worker camp and storage area.

### 3.2 Health and Safety Performance

17. The following table gives the Health and Safety impact mitigation measures in the Borrower EMP and how the project is progressing with implementing the mitigation measures, for all subprojects.

Table 12. Status of Community and Occupational Health and Safety Compliance - ALL subprojects

No	Health and Safety Requirement	Compliance & Description (Yes, No, Partial)	Comment or Further Explanation if Needed	Reasons for Not Full Compliance
1	Occupational H&S Plan Workers Need to wear protective clothing, boot, helmet and gloves	Yes	Subproject: CW01 Workers have adequate PPE	
2	First Aid kit needed on site	No	Subproject: CW01 First Aid Kit not available in site offices	For fire fighting/emergency procedures are not in place

Second Greater Mekong Sub-region Economic Corridor towns development project

					- Repreparing worker camp at WWTP - Work has started (e.g. site clearance) but no First Aid kits are on the active site. - There is only temporary camp site for pre-cast concrete work.
3	Emergency Procedures	No		<b>Subproject: CW01</b> The fire fighting equipment not available on site	
4	Reconstruct of worker camp	<b>Partial</b>		<b>Subproject: CW01</b> The worker camp is not construction	- There is only temporary small cottage in WWTP site
5	Community Health and Safety Measures	<b>Partial</b>		<b>Subproject: CW01</b> The contractor doesn't provide enough traffic sign in Force Main construction site. Note: Only in Force Main construction site	- Re-issue safety on traffic sign

18. For all 'Partial' or 'No' compliance issues in the table above, the actions needed to solve the compliance issues are in the table below:

**Table 13. Health and Safety Actions Needed for Compliance - ALL subprojects**

No	Health and Safety Requirement	Further Action to Take	Date for Action	Who will Implement Action	Action was in previous SEMR (Y/N)?
2	First Aid kit needed on site CW01	Providing first aid kit in worker camps site	<b>31<sup>st</sup> January 2020</b>	Contractor	Yes, deadline April 2020
3	Emergency procedures and equipment is needed CW01	Provide fire fighting equipment at camps and offices	<b>31<sup>st</sup> January 2020</b>	Contractor	Yes, deadline April 2020
4	Reconstruct of worker camp CW01	Reconstruction of worker camp in WWTP site	<b>31<sup>st</sup> January 2020</b>	Contractor	No



5	Community H&S - Traffic sign CW01	Providing traffic sign in construction site	31 <sup>st</sup> January 2020	Contractor	No
---	--------------------------------------	------------------------------------------------	-------------------------------	------------	----

## 4 EMP MONITORING

### 4.1 Environmental Quality Monitoring

19. Environmental quality monitoring requirements are defined in the Monitoring Plan section of the EMP. The following table gives a summary of the environmental quality monitoring requirements for each subproject. PISCB is responsible for ensuring baseline monitoring is conducted, either via a suitable organisation or via the national IEIA. The Contractor is responsible for monitoring during construction. For CW01 Baseline monitoring for surface water was undertaken during IEIA preparation in March 2018. The results are in the appendices of this SEMR.

Table 14. EMP Environmental Quality Monitoring Requirements for CW01 and CW02

Subproject	Environmental Issue Monitored	Location	Parameters	Responsible Organisation	Frequency	Monitoring Timing During Construction (indicative)
CW01	Ambient air quality	1- Main pumping station (MPS)	As per EMP	PISCB / Contractor	Pre-Construction / every 6 months during construction	Every April & October from April 2020
CW01	Ambient noise and Vibration	2-WWTP Site 3-Hospital 4-Central Market	As per EMP	PISCB / contractor	Pre-Construction / every 6 months during construction	Every April & October from April 2020
CW01	Surface water quality:	Kbal Romeas river Prek Kampong Bay Sample x2	As per EMP	PISCB / Contractor	Pre-Construction / every 6 months during construction	Every April & October from April 2020
CW02	Ambient air quality	Receptor houses 1 & 2	As per EMP	PISCB / Contractor	Pre-Construction / every 3 months during construction	To be confirmed on contract award
CW02	Noise	Receptor houses 1 & 2	As per EMP	PISCB / Contractor	Pre-Construction / every 3 months during construction	To be confirmed on contract award

Second Greater Mekong Sub-region Economic Corridor towns development project

					construction	
CW02	Surface Water	Nearest Agricultural Pond	As per EMP	PISCB / Contractor	Pre-Construction / every 6 months during construction	To be confirmed on contract award
CW02	Ground Water	Site g/w well	As per EMP	Contractor	Once after well completion	To be confirmed on contract award

20. The following table gives information on the environmental quality monitoring implemented, during this reporting period. CW01 monitoring is overdue: the last monitoring was conducted 31 May-1<sup>st</sup> June 2020. Some baseline from IESIA for CW02 (Kampot landfill) is shown in table below and results are in annex 1 because this information was not presented in the 1<sup>st</sup> SEMR

**Table 15. EMP Environmental Quality Monitoring implemented**

Subproject	Environmental Issue Monitored	Location	Monitoring Date
CW02	Ambient air quality	X=414163, Y=1183802	Baseline Monitoring conducted 28 October 2019
CW02	Ambient noise and Vibration	X=414163, Y=1183802	Baseline Monitoring conducted 28 October 2019
CW02	Surface water quality	X=414307, Y=1183989	Baseline Monitoring conducted 25 October 2019

## 4.2 Construction Phase Affected People Consultation

21. During the construction phase, the following table gives information on the consultations that were undertaken in order to understand the impact of the project on Affected People and how effective the EMP Mitigation measures are for residents, businesses and other affected people around the construction sites.

22. No consultation has taken place so far. This did not happen as planned from May 2020, therefore it will take place in Q1 2021 as long as COVID-19 restrictions allow.

**Table 16. Construction Phase Affected People Consultation**

Subproject	Consultation Date	Person Consulted / Location	Outcome / Issues	Corrective Action Needed	Action Implemented by (person/date)
No consultation to date					

--	--	--	--	--	--

## 5 COMPLAINTS, ISSUES, CORRECTIVE ACTION

### 5.1 Information Disclosure

23. The following table gives information on any information disclosure activities undertaken during this reporting period.

Table 17. Information Disclosure

Topic / Reason for Information	Disclosure Date	Method of Disclosure	Outcome / Results
IEE CW02	Nov. 2020	ADB website	<a href="https://www.adb.org/projects/documents/cam-46443-002-iee">https://www.adb.org/projects/documents/cam-46443-002-iee</a>
EMP CW02	Oct. 2020	ADB website	<a href="https://www.adb.org/projects/documents/cam-46443-002-emp-1">https://www.adb.org/projects/documents/cam-46443-002-emp-1</a>

### 5.2 Grievance Redress Mechanism

24. The Grievance Redress Committee (GRC) was established in 2017. The member of GRC include: deputy governor, director of PDPWT, director of PDE&F, director of PDLMUP&C, director of MoE, director of provincial military police, Teuk Chhou district governor, provincial town governor, Kg Trach district vice-governor, related chiefs of Sangkat/commune and chiefs of villages.

25. The GRM dissemination to Local Authorities took place through training on 14th January 2020.

26. The following table gives information on complaints about the project the Project Team is aware of, during this reporting period. The table includes:

- Complaints made thorough GRM entry points
- Issues raised in consultation;
- Issues raised any other way that the project team is aware of.

27. For issues that have already been solved, this is confirmed in the final column of the table. Where possible the project tries to solve all issues as quickly as possible through informal discussions between the affected people and the contractor.

**Table 18. Project Complaints or Issues**

Details of Complaint / Issue Raised	Detail of Person (Date, Name, Contact Details)	Action Needed & Date	Comment / Resolved?
No Complaints Raised			

28. The following table gives information on all issues raised in previous SEMRs which are not yet resolved:

**Table 19. Project Complaints or Issues – Not resolved from previous reports**

Details of Complaint	Detail of Person (Date, Name, Contact Details)	Action Needed & Date	Reason this is still not resolved
Not Applicable			

### 5.3 Corrective Action

29. The following table gives information on any formal corrective action that has been issued to the contractor in order to improve environmental performance. This does not include any informal corrective action that the CSC issues on site when immediate issues are presented:

**Table 20. Corrective Action Issued**

Reason for Corrective Action	Date Issued	Outcome	Comment / Follow Up
------------------------------	-------------	---------	---------------------

1	No traffic sign in Force Main Construction site	22 December 2020	31 <sup>st</sup> January 2021	Contractor needs to provide the traffic sign
2	No formal worker camp at WWTP	19 November 2020	31 <sup>st</sup> January 2021	Contractor needs to reconstruct the worker camp at WWTP
3	No toilets for workers and staffs	19 November 2020	31 <sup>st</sup> January 2021	Contractor needs to construct the toilets for workers and staffs

## 6 CONCLUSION & RECOMMENDATION

### Conclusion:

30. For the safeguarding documentation, the project now has two IEEs, one for each sub-project, which are up to date, incorporating ADB's suggestions and are awaiting the disclosure of the remaining IEE and EMP on ADB's website in early Q1 2021.
31. For CW01, the construction activities in the urban centre are starting with the installation of u-drains. To date there are no significant environmental issues of which the project team is aware.
32. Environmental quality monitoring is now overdue. For CW01, the last monitoring took place in June 2020. The contract start date was October 2019, meaning at least pre-construction and the first two 6 monthly monitoring events should have taken place.
33. Consultation is now overdue for CW01. This is particularly necessary for CW01 which is being implemented close to affected people in the urban centre. See Annex 2 photos from drainage construction.
34. The project has been affected by a number of events outside its control. Firstly significant flooding for Kampot, resulting in the need to reconstruct the worker camp for the CW01 team. This includes the provision of health and safety equipment and sanitation facilities. Secondly, challenges remain regarding COVID-19 and since March 2020 the national and international safeguard specialists from PISCB have not been able to conduct joint training or site visits as international travel is not advised at the moment.
35. Corrective action has been issued to the contractor to provide an appropriate camp and sanitation. In addition to this formal corrective action, the Contractor has also been advised of the issues identified such as lack of impermeable fuel storage area.
36. The contractor has resolved two issues from the previous SEMR regarding the PPE provision and use for staff and GRM contact cards which can be provided to affected people.

### Recommendations:

1. **The contractor** will follow the recommendations from CSC and NJS/KCC consultant as follows:

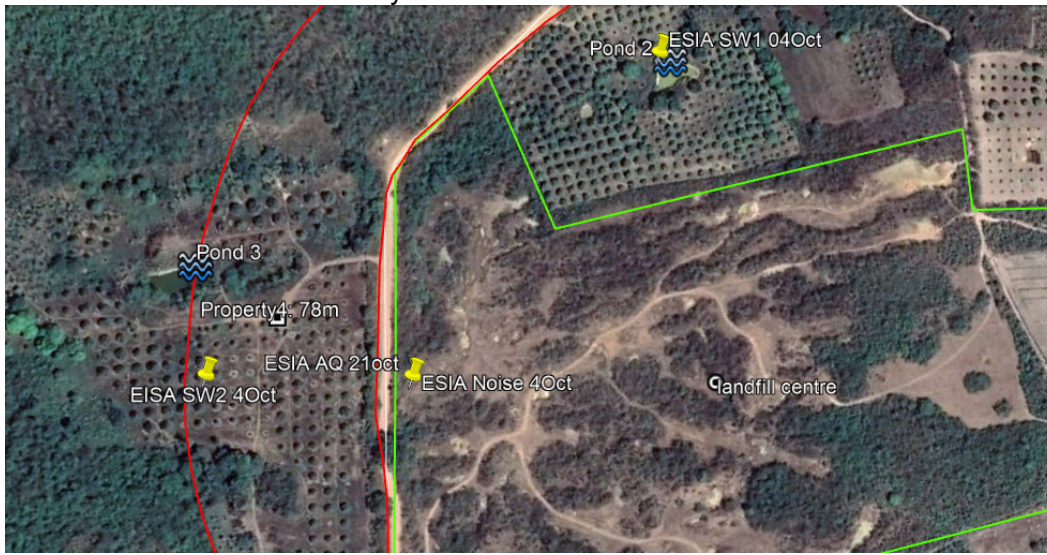
- Implement Actions in Table 9 regarding outstanding issues for EMP compliance for CW01
- Complete overdue actions not yet completed from previous SEMR
- Undertake the environmental quality monitoring identified in the EMP
- 2. **The PISCB will:**
  - Deliver training on consultation
  - Support the PIU in the field with conducting informal or formal consultation as part of its on-going EMP monitoring.
  - Support the PMU in ensuring EMP requirements are implemented across the subprojects.
- 3. **The PIU will:**
  - Begin consultation which is overdue from the previous SEMR.
  - Ensure site visits to check on Worker Camp installation progress.
- 4. **The PMU will:**
  - Ensure Contractor supplies CEMP for PMU to review within 30 days of contract award for CW02.
  - Ensure the CW01 contractor understand the importance of completing the outstanding issues identified in this report
  - Ensure environmental monitoring is completed according to the agreed frequency and locations for CW01 and CW02
  - Ensure follow up on the corrective actions and other actions needed to ensure compliance with ADB's Safeguard requirements.

## Annex 1 Environmental Quality Monitoring Results (from IESIA report)



### Initial Environmental Social Impact Assessment (IESIA) Sampling locations (2019):

SW=Surface, Water Noise=Noise & Vibration, AQ=Air Quality  
Green line =landfill site boundary



Surface water 1– Agricultural Pond (Pond 2 in IEE receptors)

ព្រះរាជាណាចក្រកម្ពុជា

ជាតិ សាសនា ព្រះមហាក្សត្រ



ក្រសួងបរិស្ថាន

អគ្គនាយកដ្ឋានគាំពារបរិស្ថាន

មន្ទីរពិសោធន៍

LABORATORY

លេខ/N°: ២៩៩-១ ព.ស

ព្រឹត្តិប័ត្រវិភាគ

ANALYSIS REPORT

ប្រភពសំណាក/Sample Source : ក្រុមហ៊ុន Key Consultants (Cambodia) ថ្ងៃ ខែ ឆ្នាំទទួលសំណាក/Date: 04 October, 2019 ប្រភេទសំណាក/Type of Sample: ទឹកស្រះ គម្រោងអភិវឌ្ឍន៍ក្រុងបៀងនៃមហាអនុតំបន់មេគង្គទី២ សម្រាប់អនុគម្រោងការគ្រប់គ្រងសំណល់ក្នុងកំពត ស្ថិតនៅក្នុងភូមិត្រពាំងប្រាប ឃុំថ្មី ស្រុកទឹកឈូ ខេត្តកំពត, UTM 48 P 0414307 / 1183989					
No	ប៉ារ៉ាម៉ែត្រ Parameter	ឯកតា Unit	លទ្ធផល Result	បង្ហាញ Standard	វិធីសាស្ត្រវិភាគ Reference Method
1	pH	-	6.96	6.5-8.5	Method pH Meter
2	Temperature	°C	24.40	<45	Method Thermometer
3	Turbidity	NTU	24.00	NV	Method Digital Turbidimeter
4	Dissolved Oxygen( DO )	mg/L	6.20	7.5-2.0	Method DO Meter
5	Total Dissolved Solid(TDS)	mg/L	42.00	<1000	Method ino-Lab Meter
6	Total Suspended Solid (TSS)	mg/L	32.00	1.0-15	Method 2540 D
7	Biochemical Oxygen Demand( BOD)5	mg/L	1.20	<30	Method 5210 B
8	Chemical Oxygen demand (COD)Mn	mg/L	3.35	1.0-8.0	Method JIS K 0102
9	Oil and Grease	mg/L	3.80	<5.0	Method 5520 D
10	Detergent( MBAS)	mg/L	ND	NV	Method 5540 C
11	Sulphate(SO4)	mg/L	10.00	<300	Method 4500-SO4 <sup>2-</sup> B
12	Total Nitrogen(TN)	mg/L	1.01	0.1-0.6	Method JIS K 0102 45
13	Total Phosphorus( TP)	mg/L	0.10	0.005-0.05	Method JIS K 0102 46
14	Arsenic( As)	mg/L	0.0007	<0.01	Method 3500-As D
15	Cadmium( Cd)	mg/L	ND	<0.001	Method 3500-Cd C
16	Iron( Fe-total)	mg/L	0.43	<1.0	Method 3500-Fe C
17	Lead( Pb)	mg/L	0.05	<0.01	Method 3500-Pb C
18	Mercury( Total)	mg/L	ND	<0.0005	Method ICP-MS
19	Total Coli form	MPN/100ml	1.4x10 <sup>3</sup>	<1000	Method NF T90-413
ចំណាំ: 1- ការយកសំណាក ការរក្សាទុក និងការដឹកជញ្ជូនសំណាកមកមន្ទីរពិសោធន៍ព្រឹត្តិប័ត្រ (តំបន់) អនុវត្តតាមប្រព័ន្ធនិង 2- Standards បង្ហាញ និងស្តង់ដារគុណភាពទឹកស្រះសម្រាប់ គម្រោងអភិវឌ្ឍន៍សំណល់ក្នុងកំពត និងទស្សនៈ (ប្រកាសលេខ២០ ប្រ.ក ប.ស ចុះថ្ងៃទី ១១ ខែ មេសា ឆ្នាំ ២០១៨) 3- ND Mean Not Detected (Lower than LUL), NV Mean No Value 4- គោលបំណងនៃការវិភាគ តាមដានគុណភាពបរិស្ថាន					

ចេញអោយនៅ ថ្ងៃទី ២៩ ខែ តុលា ឆ្នាំ២០១៩

ចេញអោយនៅ ថ្ងៃទី ២៩ ខែ តុលា ឆ្នាំ២០១៩

បានឃើញនៅថ្ងៃទី ២៩ ខែ តុលា ឆ្នាំ២០១៩

អគ្គនាយក:

Was seen on date:

Director General

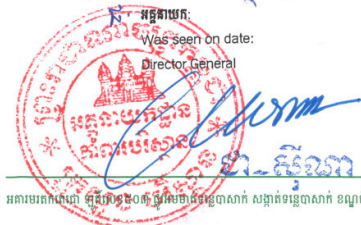
ប្រធានមន្ទីរពិសោធន៍

Date of Issue:

Director

អគ្គិសនី

Analyzer



*[Signature]*  
តេច រដ្ឋ

*[Signature]*  
អ៊ុយ ឈី

អគ្គនាយកដ្ឋានគាំពារបរិស្ថាន អគ្គនាយកដ្ឋានគាំពារបរិស្ថាន ស្ថានភាពបរិស្ថាន ខណ្ឌចំការមន ភ្នំពេញ

The Heritae Techo Building, Lot 503, Tonle Bassac, Chamkarmorn, Phnom Penh, ទូរស័ព្ទ ០២៣-២១៣៩០៨



Surface water 2– Near Pond 3 in IEE receptors)



ព្រះរាជាណាចក្រកម្ពុជា  
ជាតិ សាសនា ព្រះមហាក្សត្រ

ក្រសួងបរិស្ថាន  
អគ្គនាយកដ្ឋានគាំពារបរិស្ថាន

មន្ទីរពិសោធន៍  
LABORATORY

លេខ/៧៖ ២៩៩-៧ ព.ស

ព្រឹត្តិប័ត្រវិភាគ  
ANALYSIS REPORT

ប្រភពសំណាក/Sample Source : ក្រុមហ៊ុន Key Consultants (Cambodia)					
ថ្ងៃ ខែ ឆ្នាំទទួលសំណាក/Date: 04 October, 2019					
ប្រភេទសំណាក/Type of Sample: ទឹកអណ្តូង គម្រោងអភិវឌ្ឍន៍ក្រុងបៀងនៃមហាអនុតំបន់មេគង្គទី២ សម្រាប់អនុគម្រោងការគ្រប់គ្រងសំណល់ក្នុងកំពត ស្ថិតនៅក្នុងក្រុងព្រៃនៃប្រាសាទ ឃុំថ្មី ស្រុកទឹកល្អ ខេត្តកំពត, UTM 48 P 0414048 / 1183803					
ល.រ No	ប៉ារ៉ាម៉ែត្រ Parameter	ខ្នាត Unit	លទ្ធផល Result	ចំណុច Standards	វិធីសាស្ត្រវិភាគ Reference Method
1	pH		6.49	6.5-8.5	Method pH Meter
2	Electrical Conductivity (EC)	µs/cm	244.00	500-1500	Method ino-Lab Meter
3	Total Dissolved Solid (TDS)	mg/L	108.00	<800	Method ino-Lab Meter
4	Turbidity	NTU	6.00	<5.0	Method Digitalturbidi Meter
5	Total Hardness (as CaCO3)	mg/L	90.00	<300	Method 2340 C
6	Chloride (Cl-)	mg/L	14.00	<250	Method 4500-Cl F
7	Fluoride (F-)	mg/L	0.13	<1.5	Method 4500-F F
8	Nitrate (NO3)	mg/L	0.18	<50	Method 4500-NO3 C
9	Sulphate (SO4)	mg/L	17.00	<250	Method 4500-SO4 <sup>2-</sup> B
10	Aluminum (Al)	mg/L	1.25	<0.2	Method 3500-Al C
11	Arsenic (As)	mg/L	0.002	<0.05	Method 3500-As D
12	Cadmium (Cd)	mg/L	ND	<0.003	Method 3500-Cd C
13	Chromium (Cr-total)	mg/L	0.003	<0.05	Method 3500-Cr C
14	Iron (Fe-total)	mg/L	2.69	<0.3	Method 3500-Fe C
15	Manganese (Mn)	mg/L	0.02	<0.1	Method 3500-Mn C
16	Mercury (Hg-total)	mg/L	ND	<0.001	Method ICP-MS
17	Thermo tolerant Coli form (E-Coli)	MPN/100ml	0	0	Method NF T90-413
18	Total Coli form	MPN/100ml	30	0	Method NF T90-413

**សំគាល់៖**  
 1- ការយកសំណាក ការរក្សាទុក និងការដឹកជញ្ជូនសំណាកបង្កើនសោតស្រែកប្រហុន (កំពុង) អនុវត្តដោយខ្លួនឯង។  
 2- ព័ត៌មាន និងលទ្ធផលសំណាកទឹកត្រូវបានផ្តល់ជូនដល់អ្នកប្រគល់សំណាក គម្រោងអភិវឌ្ឍន៍ក្រុងបៀងនៃមហាអនុតំបន់មេគង្គទី២ និងទេសចរណ៍ (ប្រកាសលេខ១២០ ប្រ.ក ប.ស ចុះថ្ងៃទី ១១ ខែ មេសា ឆ្នាំ ២០១៨)  
 3- ND Mean Not Detected (Lower than LDL), NV Mean No Value  
 4- គោលបំណងនៃការវិភាគ តាមដានគុណភាពបរិស្ថាន

ចេញអោយនៅ ថ្ងៃទី ២៩ ខែ តុលា ឆ្នាំ២០១៩

ចេញអោយនៅ ថ្ងៃទី ២៩ ខែ តុលា ឆ្នាំ២០១៩

បានឃើញនៅថ្ងៃទី ២៩ ខែ តុលា ឆ្នាំ២០១៩

ឯ, អគ្គនាយក:

Was seen on date:

Director General

ប្រធានមន្ទីរពិសោធន៍

Date of Issue:

Director

អ្នកវិភាគ

Analyzer



*[Signature]*  
លោក ឌុំ

*[Signature]*  
លោក ឌុំ



Air quality – Boundary of landfill by road



**ព្រះរាជាណាចក្រកម្ពុជា**  
**ជាតិ សាសនា ព្រះមហាក្សត្រ**

**ក្រសួងបរិស្ថាន**  
**អគ្គនាយកដ្ឋានគាំពារបរិស្ថាន**  
**មជ្ឈមណ្ឌលសាងសង់**  
**LABORATORY**

លេខ/ៈ: ..... ០.៧

**ព្រឹត្តិប័ត្រវិភាគ**  
**ANALYSIS REPORT**

ប្រភពសំណាក/Sample Source: **ក្រុមប្រឹក្សាបរិស្ថាន** Key Consultants (Cambodia)

កន្លែងយកសំណាក/Survey Point: ក្នុងតំបន់គម្រោងអភិវឌ្ឍន៍ក្រុងបៀងនៃមហាអនុវត្តបំប៉នមេគង្គទី២ សម្រាប់អនុវត្តគម្រោងការគ្រប់គ្រងសំណល់រឹងក្នុងក្រុងកំពតរបស់ **ក្រុមស្ថាបនាសាងសង់ការ និងជីវកម្ម** ស្ថិតនៅក្នុងភូមិថ្មី ឃុំថ្មី ស្រុកទឹកឈូ ខេត្តកំពត, UTM 48 P 0414163 & 1183802

ថ្ងៃយកសំណាក/Sampling date: 21 October, 2019

រយៈពេល/Sampling Period: 14:30 PM to 14:30 PM next day

១៥ ៣៣

ល.រ No	ប៉ារ៉ាម៉ែត្រ Parameter	ឯកតា Unit	លទ្ធផល Result	បទដ្ឋាន Standard	វិធីសាស្ត្រវិភាគ Reference Method
1	Carbon Monoxide (CO)	mg /m <sup>3</sup>	1.37	<20 (8 ម៉ោង)	Method Carbon Monoxide Passive Dosilube
2	Nitrogen Dioxide (NO <sub>2</sub> )	mg /m <sup>3</sup>	0.018	<0.1 (24 ម៉ោង)	Method Saltzman
3	Sulfur Dioxide (SO <sub>2</sub> )	mg /m <sup>3</sup>	0.010	<0.3 (24 ម៉ោង)	Method Pararosaniline
4	Ozone (O <sub>3</sub> )	mg /m <sup>3</sup>	0.027	<0.2 (1 ម៉ោង)	Method Professional Gas Detector GT-901 03
5	Total Suspended Particles (TSP)	mg /m <sup>3</sup>	0.074	<0.33 (24 ម៉ោង)	Method Weight Concentration Measuring
6	PM10	mg /m <sup>3</sup>	0.043	<0.05 (24 ម៉ោង)	Method Weight Concentration Measuring
7	PM2.5	mg /m <sup>3</sup>	0.015	<0.025 (24 ម៉ោង)	Method Weight Concentration Measuring
8	Lead (Pb)	mg /m <sup>3</sup>	ND	<0.005 (24 ម៉ោង)	Method 3500-Pb C (HNO <sub>3</sub> , HCl Digestion)

**សំគាល់:** 1- ប៉ារ៉ាម៉ែត្រ និងស្តង់ដារសម្រាប់ពិនិត្យគុណភាពខ្យល់សម្រាប់គម្រោងអភិវឌ្ឍន៍ក្រុងបៀងនៃមហាអនុវត្តបំប៉នមេគង្គទី២ និងទេសចរណ៍ (ឧបសម្ព័ន្ធនៃប្រកាសលេខ១២០ប្រកបស្ន ១១មសក ឆ្នាំ២០១៨)  
2- ខ្យល់មានល្បឿន 0.4 m/s – 2.1 m/s ។

ចេញអោយនៅ ថ្ងៃទី ២៤ ខែ តុលា ឆ្នាំ២០១៩

បានឃើញនៅថ្ងៃទី ២៤ ខែ តុលា ឆ្នាំ២០១៩

**អនុនាយក:**  
Was seen on date:  
Director General

ចេញអោយនៅ ថ្ងៃទី ២៤ ខែ តុលា ឆ្នាំ២០១៩

**ប្រធានមជ្ឈមណ្ឌលសាងសង់**  
Date of Issue:  
Director

ចេញអោយនៅ ថ្ងៃទី ២៤ ខែ តុលា ឆ្នាំ២០១៩

**អ្នកវិភាគ**  
Analyzer








Noise / Vibration – Boundary of landfill by road



ព្រះរាជាណាចក្រកម្ពុជា  
ជាតិ សាសនា ព្រះមហាក្សត្រ

ក្រសួងបរិស្ថាន  
អគ្គនាយកដ្ឋានគាំពារបរិស្ថាន  
មន្ទីរពិសោធន៍  
LABORATORY  
លេខ/៖ ៤៤៧ ៥ ៣.៧

ព្រឹត្តិប័ត្រវិភាគ  
ANALYSIS REPORT

ប្រភពសំណាក/Sample Source: ក្រុមហ៊ុន Key Consultants (Cambodia)  
កន្លែងយកសំណាក/Survey Point: ក្នុងតំបន់គម្រោងអភិវឌ្ឍន៍ក្រុងបៀងនៃមហាអនុតំបន់មេគង្គទី២ សម្រាប់អនុគម្រោងការគ្រប់គ្រងសំណល់រឹងក្នុងកំពតរបស់  
ក្រសួងសាធារណៈការ និងដឹកជញ្ជូន ស្ថិតនៅក្នុងភូមិថ្មី ឃុំថ្មី ស្រុកទឹកឈូ ខេត្តកំពត, UTM 48 P 0414163 & 1183802  
ថ្ងៃយកសំណាក/Sampling date: 21 October, 2019  
រយៈពេល/Sampling Period: 14:30 PM to 14:30 PM next day

Time	Survey Period	Noise Level dB(A)				Remarks
		L <sub>Aeq</sub>	Standard( Leq)	L <sub>max</sub>	L <sub>min</sub>	
Day	6:00 - 7:00	51.6	70	68.6	35.5	
	7:00 - 8:00	44.5		62.9	35.7	
	8:00 - 9:00	41.5		53.4	35.4	
	9:00 - 10:00	38.3		47.0	36.5	
	10:00 - 11:00	40.2		57.9	37.0	
	11:00 - 12:00	38.8		43.7	35.3	
	12:00 - 13:00	40.0		49.3	34.7	
	13:00 - 14:00	40.7		52.1	35.4	
	14:00 - 15:00	42.4		56.9	38.1	
	15:00 - 16:00	42.3		55.5	36.0	
	16:00 - 17:00	42.7		55.0	35.2	
	17:00 - 18:00	42.2		55.4	36.3	
Evening	18:00 - 19:00	43.5	65	56.3	35.2	
	19:00 - 20:00	44.1		59.4	34.8	
	20:00 - 21:00	41.8		59.7	35.9	
	21:00 - 22:00	42.4		52.1	37.4	
Night	22:00 - 23:00	44.5	50	59.5	35.1	
	23:00 - 00:00	42.3		58.6	34.7	
	00:00 - 1:00	41.7		54.5	36.2	
	1:00 - 2:00	41.7		55.5	36.2	
	2:00 - 3:00	40.9		52.3	35.0	
	3:00 - 4:00	41.2		51.5	35.8	
	4:00 - 5:00	42.7		53.5	37.2	
	5:00 - 6:00	43.3		52.6	35.4	
24 hours Average		42.3		55.1	35.8	

សំគាល់: ចំណាំមុន និងស្តង់ដារសម្រាប់កម្រិតសំឡេង សម្រាប់គម្រោងអភិវឌ្ឍន៍ស៊ីវិលបេតុងចេតាស្ទីន និងទេសចរណ៍ (ឧបសម្ព័ន្ធនៃប្រកាសលេខ១២០ប្រកបស្ត ១១មេសា ឆ្នាំ២០១៤), Sound Level Meter NL-42NX

ចេញអោយនៅ ថ្ងៃទី ២៥ ខែ ឧសភា ឆ្នាំ២០១៩ ចេញអោយនៅ ថ្ងៃទី ២៥ ខែ ឧសភា ឆ្នាំ២០១៩

បានឃើញនៅថ្ងៃទី ២៥ ខែ ឧសភា ឆ្នាំ២០១៩  
 វ. អគ្គនាយក:  
 Was seen on date:  
 Director General

ប្រធានមន្ទីរពិសោធន៍  
 Date of Issue:  
 Director

អ្នកវិភាគ  
 Analyzer

អគ្គនាយកដ្ឋានគាំពារបរិស្ថាន  
 អគ្គនាយកដ្ឋានគាំពារបរិស្ថាន  
 អគ្គនាយកដ្ឋានគាំពារបរិស្ថាន

អគ្គនាយកដ្ឋានគាំពារបរិស្ថាន  
 អគ្គនាយកដ្ឋានគាំពារបរិស្ថាន  
 អគ្គនាយកដ្ឋានគាំពារបរិស្ថាន

Annex 2 Photo Record – Visits, Monitoring

			
Construction activities in WWTP and flooding situation			
			
Construction activities in C 1 pumping station		Casting Concrete for U-Drain	
			
		Casting Concrete for U-Drain	



				Existing drainage clearance
				
Construction activities for drainage		Construction activities for Force Main installation		

Photographs of Environmental Quality Monitoring

Not Applicable

Photographs of Consultation

Not Applicable