

# Semi-Annual Environmental Monitoring Report

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Project Number: 49107-006

Period: November 2018–April 2019

Submission Date: September 2019

## IND: West Bengal Drinking Water Sector Improvement Project

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## **WEST BENGAL DRINKING WATER SECTOR IMPROVEMENT PROJECT (WBDWSIP)**

### **PROJECT MANAGEMENT UNIT**

**1<sup>st</sup>**

### **SEMI ANNUAL ENVIRONMENT MONITORING REPORT ADB Loan 3696-IND (Period November 2018 to April 2019)**

**September 2019**

**PUBLIC HEALTH ENGINEERING DEPARTMENT  
GOVT. OF WEST BENGAL**

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## **ABBREVIATIONS**

AC	- Asbestos Cement
ADB	- Asian Development Bank
BOD	- Biochemical Oxygen Demand
COD	- Chemical Oxygen Demand
CPCB	- Central Pollution Control Board
CTE	- Consent to Establish
CTO	- Consent to Operate
DBO	- Design Build Operate
DSC	- District Steering Committee
DG	- Diesel Generator
DO	- Dissolved Oxygen
DSISC	- Design, Supervision and Institutional Support Consultants
EA	- Executing Agency
EARF	- Environmental Assessment and Review Framework
EHS	- Environment, Health & Safety
EIA	- Environmental Impact Assessment
EMP	- Environmental Management Plan
EMR	- Environment Monitoring Report
ESSR	- Environment and Social Safeguard Unit
GESI	- Gender Equality and Social Inclusion
GLSR	- Ground Level Storage Reservoir
GRC	- Grievance Redressal Committee
GRM	- Grievance Redress Mechanism
HDPE	High Density Poly ethylene
HSGB	- Head Safeguards Gender Officer
IEE	- Initial Environmental Examination
LOA	- Letter of Acceptance
LPG	- Liquefied Petroleum Gas
MoEFCC	- Ministry of Environment and Forest & Climate Change, Government of India
NGO	- Non-Government Organization
NTP	- Notice to Proceed
OHR	- Overhead Reservoir
O&M	- Operation and Maintenance
PHED	- Public Health Engineering Department
PIU	- Project Implementation Unit
PMC	- Project Management Consultant
PMU	- Project Management Unit
PM <sub>x</sub>	- Particulate Matter with size x micron
PUC	Pollution Under Control
RF	- Resettlement Framework
RP	- Resettlement Plan
SBR	- Sundarban Biosphere Reserve
SEMP	- Site Environment Management Plan

SGS	-	Safeguard and Gender Cell
SPS	-	Safeguard Policy Statement
TMP	-	Traffic Management Plan
USD	-	US Dollar
WBDWSIP	-	West Bengal Drinking Water Sector Improvement Project
WBPCB	-	West Bengal Pollution Control Board
WTP	-	Water Treatment Plant

## I. INTRODUCTION

### A. Background

1. Public Health Engineering Department (PHED), Govt of West Bengal (the Executing Agency) through its Project Management Unit and Project Implementing Unit is implementing the “**West Bengal Drinking Water Sector Improvement Project**” (WBDWSIP). The Loan for WBDWSIP (ADB Loan 3696- IND) was signed on 3<sup>rd</sup> October 2018 between Government of India and the Asian Development Bank. Government of India has agreed to make the proceeds of the loan available to the Government of West Bengal upon terms and conditions satisfactory to the Asian Development Bank.

2. WBDWSIP will be implemented over years between 2018 and 2024. In order to provide safe and sustainable drinking water as per the standards set by the Government of India, the Government of West Bengal through Government of India has requested Asian Development Bank for financing to create infrastructure and strengthen institutions of the PHED and the institutions of the identified districts, blocks, and villages for piped water supply. The selected areas identified are affected with arsenic, fluoride, and salinity in the districts of Bankura, North 24 Parganas and Purba Medinipur of West Bengal where around 1.65 million people are residing.

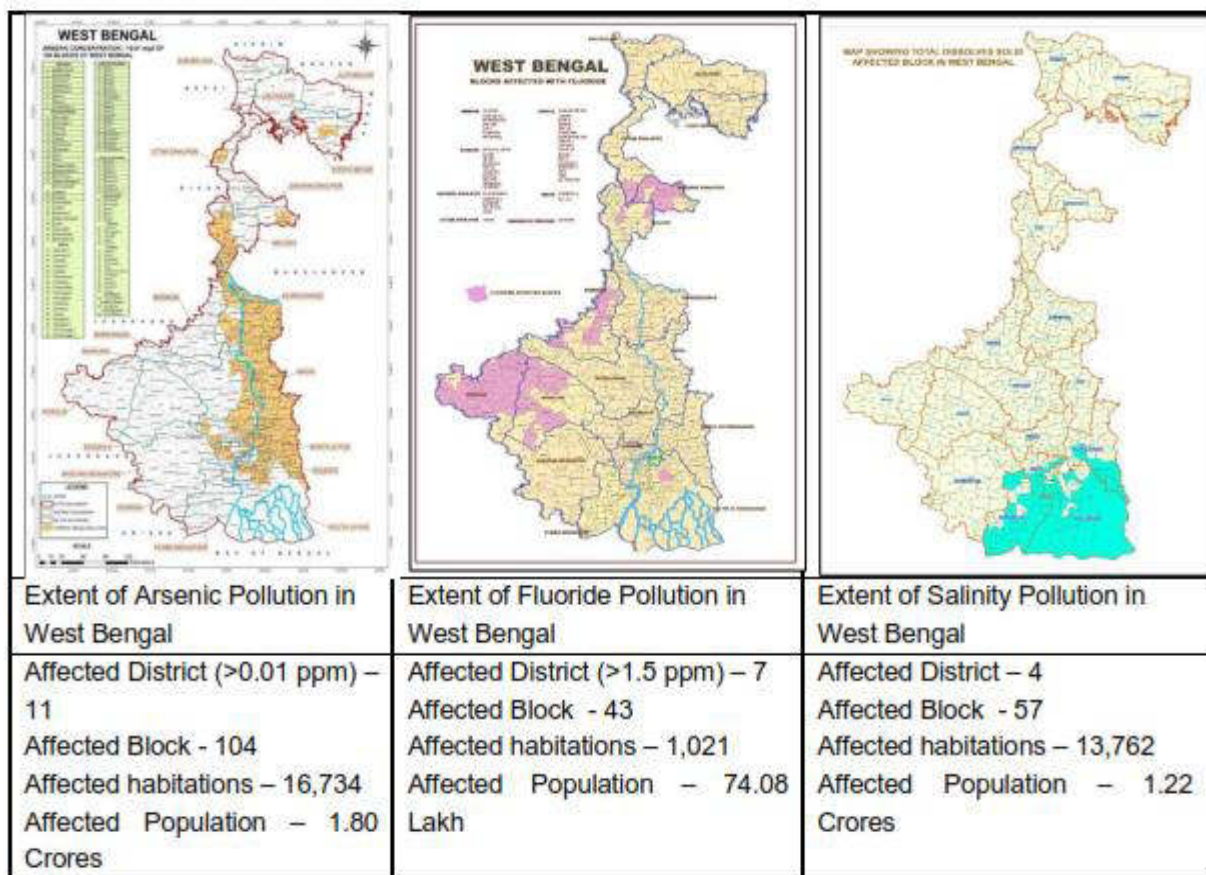
3. The project will adopt a sector approach. All subprojects will be selected and proposed for funding adhering to the agreed subproject selection criteria for the project. The subprojects proposed under the project stem from a district-wide comprehensive water quality and sustainability planning and completion of the Drinking Water Quality Action Plan for the concerned district. The Drinking Water Quality Action Plan for the project districts supported by the project were prepared by the executing Contractor, the Public Health Engineering Department of the Government of West Bengal, with support of project preparatory consultants from the Asian Development Bank, and has been adopted by Public Health and Engineering Department to guide present and future drinking water improvement in the districts.

4. Total WBDWSIP investment envisaged is USD 349 million and based on 70% ADB financing. ADB's loan would be USD (240+3) million ADB funding (Ordinary Capital Resources +Trust Fund) and 30% counterpart funding by Government of West Bengal would be around USD 106 million. The implementation period of WBDWSIP is from 2018 to 2024.

5. The impact of the project would ensure drinking water security in West Bengal as envisioned in Vision 2020 and national sub-mission on Arsenic and Fluoride to have an outcome of safe, sustainable, and inclusive drinking water service received in project districts. The outputs of the project are,

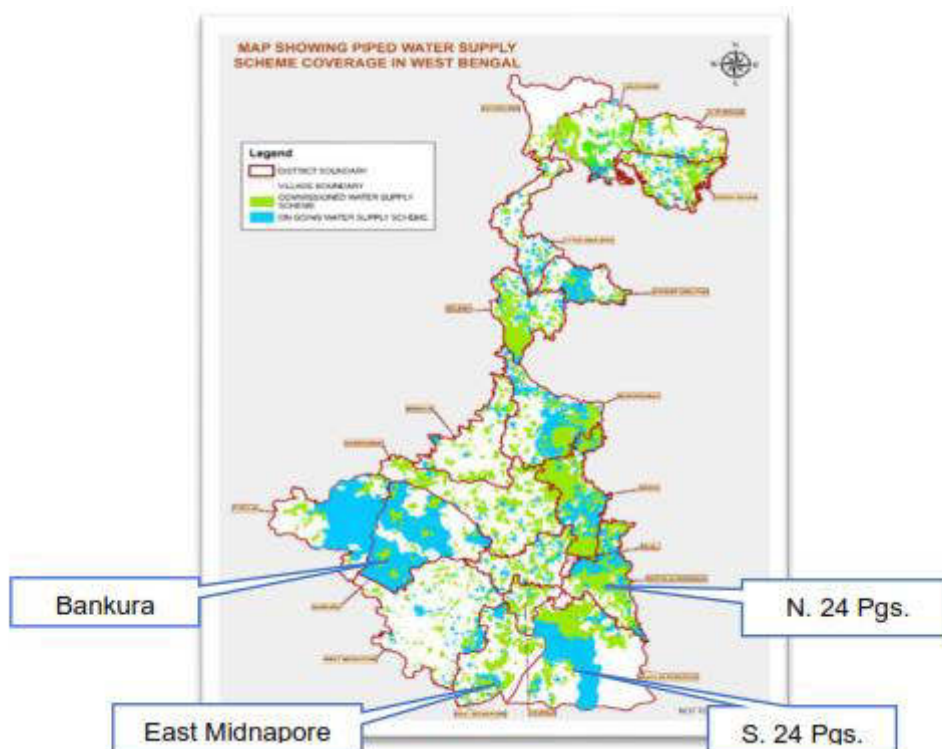
- ✓ **Output 1:** Climate resilient drinking water infrastructure constructed.
- ✓ **Output 2:** Institutions and capacity of stakeholders for drinking water service delivery strengthened

6. The following figures show the area covered under WBDWSIP works and the works proposed under WBDWSIP.



**Extent of Arsenic, Fluoride and Salinity Pollution in West Bengal**

**Figure 1: Arsenic, Fluoride and Salinity affected area**



**Figure 2: Location of District under the project**





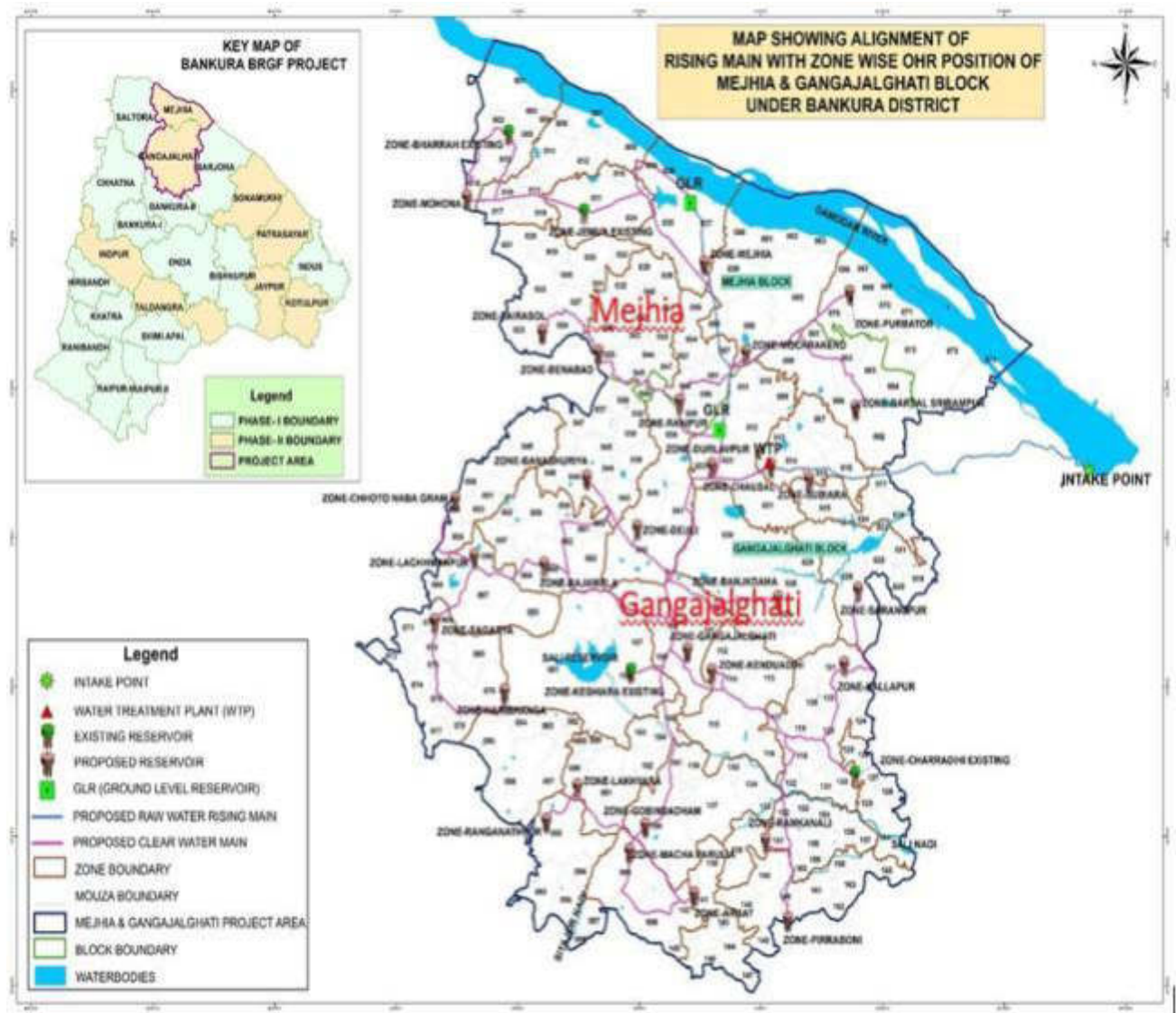
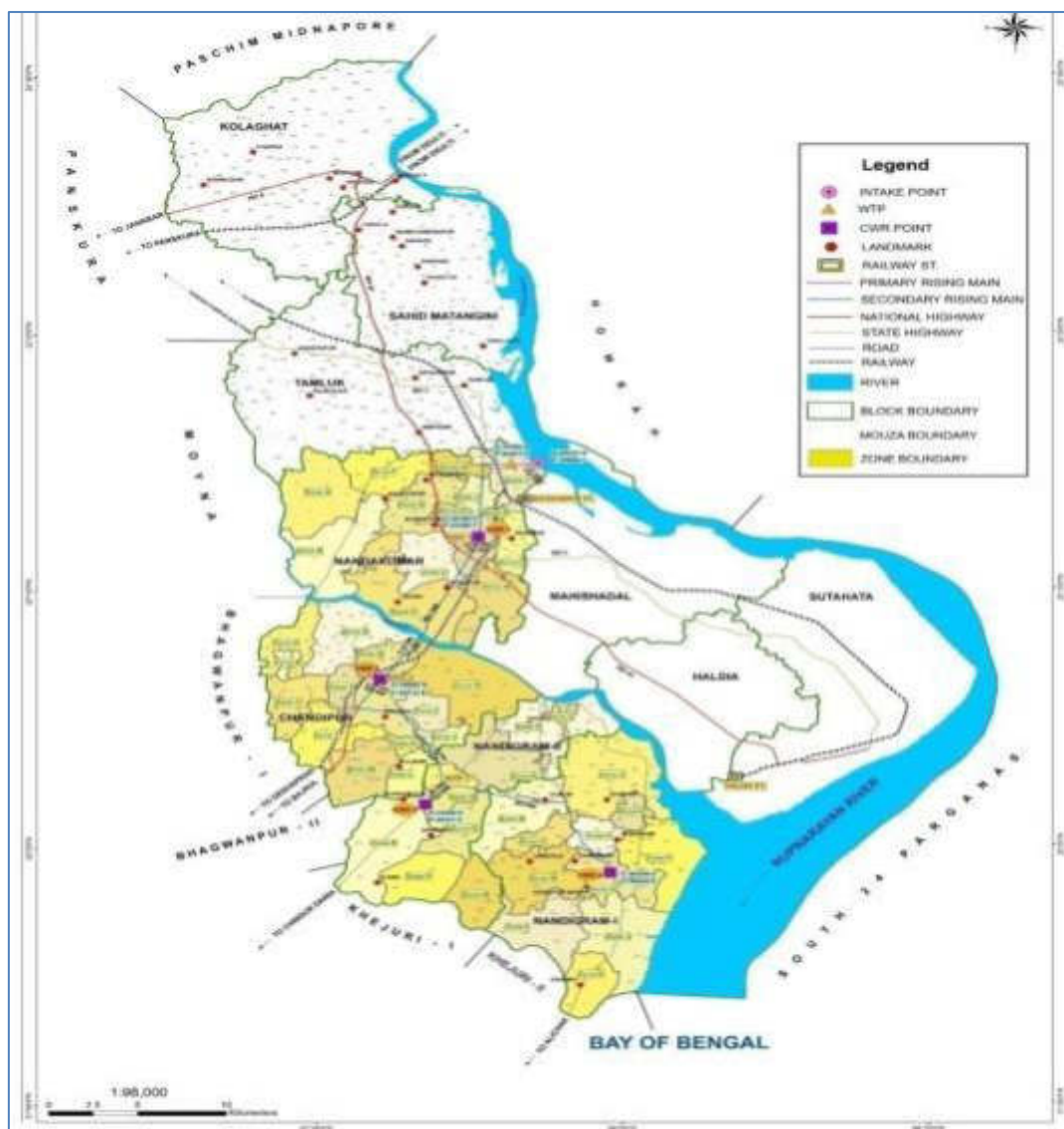


Figure 4B: Location of Two Work Blocks under Bankura District



**Figure 5: Water Supply infrastructure planned in East Midnapore District**

## **B. Project & Report Purpose**

7. Sub Projects under **WBDWSIP** has been classified by ADB as environmental assessment category B (some negative impacts but less significant than category A) and the impacts of subprojects were assessed through Initial Environmental Examination (IEE), prepared according to ADB Safeguard Policy (SPS 2009).

8. This report is the 1<sup>st</sup> semi-annual environment monitoring report (SEMR) of WBDWSIP covering period from **November 2018 to April 2019** and describes the implementation of the environmental management plan (EMP) in respect of each subproject as laid down in the approved IEE.

9. The Semi-Annual Environmental Monitoring Report presents the status of sub project implementation, details of compliance with environmental regulations of the Government and policies of ADB, details of compliance with environmental loan covenants, details of complaints received and their redressal and the status of compliance with various aspects of EMP as stated in the IEE reports.

10. This report consists of the following content:



- Status of Subprojects;
- Implementation Arrangement;
- Safeguard Implementation Arrangement;
- Environmental Legal Requirement;
- Compliance with Environmental Legal Requirements;
- Compliance of Safeguard Loan Covenants;
- Compliance status with the environmental management and monitoring plan;
- Environmental monitoring and evaluation;
- Consultations and disclosures conducted;
- Grievance redress mechanism;
- Findings and recommendations including Corrective Action Plan; and
- Appendix

## II. IMPLEMENTATION PROGRESS

### A. Status of Subprojects

11. There are 10 work sub project packages under WBDWSIP. Summary of work contracts including type of contract (upto 30<sup>th</sup> April 2019) is shown below.

Parameters	DBO Type Contract	Item Rate Contract
Total Number of Packages	4	6
Contracts Executed/Completed	0	0
Contracts under Implementation	3	5
Bidding under Progress	1	1
Planning and Design	0	0

12. Other than that, of 10 civil work packages, there are 2 small packages of \$2 million as grant from the Japan Fund for Poverty Reduction. Package - SAN/01, Pilot Fecal Sludge and Septage Management Plant - Small works packages under the JFPR grant, Package STWM (Smart Water Management)/ 01, Gram Panchayat level smart water management equipment - Multiple packages under the Japan Fund for Poverty Reduction Plant have been considered. These 2 packages are under Smart Water Management for “Institutions and capacity of stakeholders for drinking water service delivery strengthened”.

13. **Table 1** shows the sub projects and the works packages including the status of award of contracts as on 30<sup>th</sup> April 2019. The contract agreements for 4 packages have been signed and project work just started for 2 packages. For 2 packages (N-24P/NCB/01/2017-18 and BKP/01/2017-18) actual physical work will be started shortly. Letter of Acceptance has been issued for 4 packages located at Bankura. Agreement process will be completed shortly for those packages.

**Table 1: Summary status of Subprojects under WBDWSIP (on 30<sup>th</sup> April, 2019)**

Sr. No.	Package No.	Packages	Status
1	WBDWSIP/DWW/ N-24P/NCB/01/2017- 18	Design, Construction and Operation of Water Treatment Plant, Reservoirs, Transmission Mains and Pumping Stations works in Haroa, Rajarhat, and Bhangar II.	Procurement process completed. Agreement done on 14.12.2018 NTP issued on 11.01.2019
2	WBDWSIP/DWW/N- 24P/ NCB/02A/2017-18	Design and Construction of Overhead Reservoir including design, supply and laying of Water Supply Distribution Network in Haroa Block.	Procurement process completed. Agreement done on 11.10.2018 NTP issued on 05.12.2018
3	WBDWSIP/DWW/NCB/ N-24P/02B/2017-18	Design and Construction of Overhead Reservoir including design, supply and	Procurement process completed.

Sr. No.	Package No.	Packages	Status
		laying of Water Supply Distribution Network in Bhangar II Block.	Agreement done on 11.10.2018 NTP issued on 05.12.2018
4	<b>WBDWSIP/DWW/NCB/BKP/01/2017-18</b>	Design, Construction and Operation-Maintenance of Raw Water Intake Well, Water Treatment Plant, Reservoir, Transmission Main for Indpur and Taldangra block in Bankura.	Procurement process completed. Agreement done on 22.01.2019 NTP issued on 24.01.2019
5	<b>WBDWSIP/DWW/NCB/BK/02A/2018-19</b>	Design and Construction of Intermediate Pumping Station, ground storage reservoirs, overhead reservoirs, water distribution network and metering works in Indpur block.	Contractor selected LOA issued on 08.03.2019 NTP to be issued
6	<b>WBDWSIP/DWW/NCB/BK/02B/2018-19</b>	Design and Construction of Intermediate Pumping Station, Secondary transmission mains, overhead reservoirs including water distribution network and metering works in Taldangra Block.	Contractor selected LOA issued on 08.03.2019 NTP to be issued
7	<b>WBDWSIP/DWW/NCB/BK/03/2018-19</b>	Design, Construction and Operation-Maintenance of Raw Water Intake Well, Water Treatment Plant, Raw and Clear Water Transmission Main for Mejhia and Gangajalghati Block in Bankura.	Contractor selected LOA issued on 28.02.2019 NTP to be issued
8	<b>WBDWSIP/DWW/NCB/BK/04/2018-19</b>	Design and Construction of Overhead Reservoir including Water Supply Distribution Network and Metering Works in Mejhia and Gangajalghati Blocks including Rehabilitation of Existing Schemes.	Contractor selected LOA issued on 08.03.2019 NTP to be issued
9	<b>WBDWSIP/DWW/ICB/EM/01/2018-19</b>	Design, Construction and Operation-Maintenance of Raw Water Intake Well, Water Treatment Plant, Raw and Clear Water Transmission Main for Nandakumar, Chandpur, Nandigram-I and II blocks in East Medinipur.	Last date of Bid submission extended upto 27.05.2019
10	<b>WBDWSIP/DWW/ICB/EM/02/2018-19</b>	Construction of Intermediate Pumping Station, Secondary transmission mains, overhead tanks including water distribution network and metering works in Nandigram-I and Nandigram-II block in East Medinipur.	Financial Bid Opened on 18.03.2019 and BID evaluation report send to ADB  Selection under process

14. **Table 2** shows the status of the awarded packages with details of components, starting date, and schedule date of completion, physical progress and progress of implementation of work components.

15. For all awarded packages, contractors have been mobilized and works are in different stages of implementation. Photo illustration of project locations is shown in **Appendix 1**.

**Table 2: Status of Awarded Subproject Under WBDWSIP (As on 30<sup>th</sup> April 2019)**

Package No.	Component	Start Date	Number of Days/Months to Complete Work	Target date of completion	% Physical Progress as on 30 <sup>th</sup> April 2019	Works completed and continued as of 30 <sup>th</sup> April 2019
<b>WBDWSIP/DWW/N-24P/NCB/01/2017-18</b>	<p>Design, Construction and Operation of Water Treatment Plant, Reservoirs, Transmission Mains and Pumping Stations works in Haroa, Rajarhat, and Bhangar II.</p> <ul style="list-style-type: none"> <li>Construction of WTP of 100 MLD within existing WTP complex at New Town, Rajarhat</li> <li>Clear water transmission main of 5 km (1200 mm DI pipe) from WTP to clear water reservoir at booster pumping station</li> <li>Intermediate booster pumping station cum 1 GLSR of capacity 4600 cum at Rajarhat</li> <li>Boosting station cum GLSRs of capacity 5000 cum and 3200 cum at Bhangar II and Haroa respectively</li> <li>SCADA Smart water management</li> </ul>	11.01.2019	36 months + O & M period	10.01.2022 + O & M period*	No physical progress till April 2019	<ul style="list-style-type: none"> <li>Hydraulic design is submitted by Contractor and observations are forwarded by DSISC after necessary review. Now re-submission of the design by Contractor is under progress.</li> <li>Although the contractor has not received the sites formally, yet M/s FFIL has completed soil exploration work at the WTP location. Submission of draft report is awaited.</li> </ul>
<b>WBDWSIP/DWW/N-24P/NCB/02A/2017-18</b>	Design and Construction of Overhead Reservoir including design, supply and laying of Water Supply Distribution Network in	05.12.2018	36 months + O & M period	04.12.2021 + O & M period*	0.221 %	<ul style="list-style-type: none"> <li>Contractor has completed soil investigation for five sites – Zone <ul style="list-style-type: none"> <li>1 - Amta</li> <li>17 - Shalipur</li> <li>18 - gopalpur</li> </ul> </li> </ul>

Package No.	Component	Start Date	Number of Days/Months to Complete Work	Target date of completion	% Physical Progress as on 30 <sup>th</sup> April 2019	Works completed and continued as of 30 <sup>th</sup> April 2019
	<p>Haroa Block.</p> <ul style="list-style-type: none"> <li>Construction of overhead storage reservoir 21 nos.(capacity 250 to 1000 m<sup>3</sup>)</li> <li>Distribution network 677 km HDPE</li> <li>Household service connection (MDPE pipe) 500 Km (approx.) .No. of household-52680</li> <li>SCADA Smart water management</li> </ul>					<ul style="list-style-type: none"> <li>12 - Parchanpdpur</li> <li>15 - Jinkia</li> </ul> <p>Soil reports of 3 zones like 1, 17 and 18 were approved earlier. Observation on zone 12 and 15 were sent but updated report comments compliance not received.</p> <ul style="list-style-type: none"> <li>Layout plan for Zone 1, 12 15, 17 and 18 have been approved. Superstructure drawing of OHR for Zone 18 issued to the contractor.</li> <li>Testing of HDPE pipes corresponding to order of 140 km was witnessed during the month, laying of distribution network has commenced in Zone-17 from 30.04.19</li> <li>Boundary Wall for Zone 1 and Zone 17 in progress</li> <li>Pipe laying work just started in Zone 17</li> </ul>
<b>WBDWSIP/DWW/NCB/N-24P/02B/2017-18</b>	<p>Design and Construction of Overhead Reservoir including design, supply and laying of Water Supply Distribution Network in Bhangar II Block</p> <ul style="list-style-type: none"> <li>Construction of overhead storage reservoir 18 nos.(capacity 250 to 1000 m<sup>3</sup>)</li> <li>Distribution network 712 km HDPE</li> </ul>	05.12.2018	36 months + O & M period	04.12.2021 + O & M period*	0.291	<ul style="list-style-type: none"> <li>Contractor has completed soil investigation works at four sites , Zone – <ul style="list-style-type: none"> <li>4 - Swastayangachhi</li> <li>10 – Shanpukuria</li> <li>12 – Bankachua</li> <li>13 – Baniara</li> </ul> </li> <li>Layout plans for this Zone 4,10, 12 and 13 submitted by contractor and approved.</li> <li>Distribution network design for Zone 1 and Zone 4 has been submitted for Employer's review. Observation</li> </ul>

Package No.	Component	Start Date	Number of Days/Months to Complete Work	Target date of completion	% Physical Progress as on 30 <sup>th</sup> April 2019	Works completed and continued as of 30 <sup>th</sup> April 2019
	<ul style="list-style-type: none"> <li>Household service connection (MDPE pipe) 500 Km (approx.) .No. of household-55200</li> <li>SCADA Smart water management</li> </ul>					<p>on Zone 1 has been sent to the contractor.</p> <ul style="list-style-type: none"> <li>B/W construction started for Zone 4, 10, 12 , 13</li> <li>Substructure design for those 4 designs were submitted and approved.</li> </ul>
<b>WBDWSIP/DWW/NCB/BKP/01/2017-18</b>	<p>Design, Construction and Operation-Maintenance of Raw Water Intake Well, Water Treatment Plant, Reservoir, Transmission Main for Indpur and Taldangra block in Bankura.</p> <ul style="list-style-type: none"> <li>Construction of Intake of 44MLD</li> <li>Raw water pumping main from intake to WTP of approx 3 km</li> <li>Construction of conventional WTP of 44 MLD at Khatra block</li> <li>Primary clear water rising main of 21km</li> <li>SCADA Smart water management</li> </ul>	24.01.2019	36 months + O & M period	23.01.2022 + O & M period*	No physical progress till 30 <sup>th</sup> April 2019	<ul style="list-style-type: none"> <li>Soil testing at GLSR, WTP and river crossing site continued</li> <li>Geo-technical and Topographical survey continued</li> <li>Designing of project components continued</li> </ul>

Note: \* - 2 years



## B. Implementation Arrangement

16. Public Health Engineering Department (PHED) of Government of West Bengal will be the executing and implementing agency of the WBDWSIP, responsible for management, coordination and execution of all activities funded under the loan. A project management unit (PMU), exclusively established in PHED, assist the PHED in implementation of WBDWSIP. PMU supported by district level Project Implementation Units (PIUs). PMU is headed by a Project Director in the rank of Chief Engineer. Each PIU is headed by a Superintending Engineer, reporting to the Project Director. PMU with the support of PIUs is responsible for planning, implementation, monitoring and supervision, and coordination of all activities under the WBDWSIP. Project Implementation Unit for North 24 Parganas, Bankura and East Medinipur district has already been established.

17. PMU is supported by Project Management Consultant (PMC) to supervise, monitor and oversee the implementation. Each PIU is supported by a Design, Supervision and Institutional Support Consultant (DSISC); there are three DSISCs supporting 3 PIUs respectively in North 24 Parganas, Bankura and East Medinipur districts. PIUs will appoint construction contractors to build infrastructure.

18. A Steering Committee, headed by Chief Secretary, will provide strategic guidance, and oversee the implementation of the investment project. District Steering Committee, headed by the respective District Magistrate, will be established for monitoring program implementation at districts level.

## C. Safeguard Implementation Arrangement

19. **Project Management Unit.** A Safeguard and Gender Cell (SGC) established in PMU with the overall responsibility of ensuring compliance with ADB SPS. SGC is headed by a Head Safeguards Gender Officer (HSGO) and will report to the Project Director directly. The HSGO have overall responsibility in implementation of the RF, EARF, RPs, EMPs, SEMP, GESI action plan, and appropriate monitoring and reporting responsibilities. Key environmental safeguard tasks and responsibilities at the PMU level are as follows:

- Ensure subprojects confirms to exclusion criteria and project selection guidelines as stipulated in the EARF;
- Approve subproject environmental category;
- Approve IEEs; ensure that updated IEEs/EMPs reflect final project designs;
- Ensure that EMPs are included in bidding documents and civil works contracts;
- Ensure proper implementation of EMPs by contractors;
- Facilitate and ensure compliance with all government rules and regulations regarding site and environmental clearances, as well as any other environmental requirements (e.g. location clearance certificates, environmental clearance certificates), as relevant;
- Oversee public consultation and disclosure;
- Approve quarterly EMP implementation reports;
- Review and approve semi-annual monitoring reports prepared by PMC; and submit to ADB;
- Oversee grievances redress process and ensure timely redress;
- Undertake regular review of safeguards related loan covenants, and the compliance in program implementation; and

- Organize periodic capacity building and training programs for WBDWSIP stakeholders, PHED, PMU and PIU staff on safeguards.

20. The SGC will be supported by environmental, social and gender safeguard specialists in the PMC. Key safeguard tasks and responsibilities of Environmental Specialist of the PMC on environmental safeguards are as follows:

- Review and finalize REA checklist and classify the project;
- Review and confirm project selection/ design; ensure compliance with exclusion criteria and project environmental selection guidelines;
- Review and finalize IEE reports including EMPs prepared/updated by PIUs/DSISCs;
- Oversee public consultation and information disclosure activities; ensure timely disclosure;
- Provide advise/support in obtaining government clearance/ approvals;
- Review and confirm that IEEs/EMPs are included in bids and contracts;
- Review and confirm SEMP prepared by contractor;
- Oversee the implementation of SEMP by contractors and ensure corrective actions, where necessary;
- Review and approve quarterly environmental monitoring reports submitted by PIU/DSISCs;
- Conduct site visits of project facilities and work sites to oversee implementation;
- Prepare semi-annual environmental monitoring reports and submit to PMU SGC HSGO;
- Oversee grievance redress process; advise on critical grievance related to environmental issues and concerns; and
- Organize training and capacity development programs.

21. **Project Implementation Unit.** At each PIU, an Assistant Engineer is given additional responsibilities of safeguard tasks and designated as Assistant Safeguards Officer. The Safeguards Officer will oversee the safeguards implementation at PIU level, coordinate public consultations, information disclosure, regulatory clearances and approvals, RP implementation, EMP implementation and grievance redressal. Key environmental safeguard tasks and responsibilities of Safeguards Officer are as follows:

- Coordinate public consultation and information disclosure;
- Liaise with local offices of regulatory agencies in obtaining clearances /approvals; assist PMU for clearances obtained at state level;
- Review and approve contractors SEMPs;
- Oversee day-to-day implementation of SEMPs by contractors including compliance with all government rules and regulations;
- Take necessary action for obtaining rights of way;
- Ensure continuous public consultation and awareness;
- Coordinate grievance redress process and ensure timely actions by all parties;
- Review monthly contractor's SEMP Monitoring Reports;

- Review and forward quarterly monitoring reports to PMU; and
- Inform PMU of unanticipated impacts and formulate corrective action plan; and
- Recommend issuance of work construction work completion certification to the contractor upon verification of satisfactory post-construction clean-up.

22. The PIUs will be assisted by DSISC teams which includes an Environmental Specialist and a Social Safeguards Specialist. Following are the key tasks of Environmental Specialist of DSISC:

- Assist PIU in identifying projects/components in compliance with the project exclusion criteria and selection guidelines stipulated in EARF;
- Prepare environmental screening checklists and submit to PMU for categorization; update checklist and category as and when required to reflect project changes, and report to PMU;
- Work closely with PIU and design teams to include environmental considerations in project location, design and technical specifications;
- Identify statutory clearance / permissions / approvals required for subproject; assist PIU in obtaining them;
- Assist in including standards/conditions, if any, stipulated in regulatory clearances, consents in the project design;
- Update IEE and EMP to reflect any changes in subproject during detail design / implementation; IEE shall reflect the final project design;
- Lead / assist PIU in public consultation in compliance with the EARF; reflect inputs from public consultation in IEEs, EMPs, and project design;
- Advise / assist PIU in disclosing relevant information on safeguards to stakeholders, affected people etc.;
- Assist / ensure all EMP measures related project design and location and included in the detailed designs;
- Integrate EMP into the bid and contract documents (for DBO contracts, include full IEE including EMP in bids);
- Advise contractor in preparation of SEMP as per the final design, prior to start of construction;
- Ensure that all necessary clearances/permission (including those required by Contractor) are in place prior to start of construction;
- Monitor implementation of SEMP;
- ensure Contractors including subcontractor's, if any, comply with the measures set forth in the EMP;
- Assist PIU in establishing GRM for the Project:
- Assist PIU in grievance redress, advise the contractor on appropriate actions on grievances, ensure timely resolution and proper documentation;
- Identify, if any, non-compliance or unanticipated impacts; initiate corrective actions, report to PMU;
- Review and approve monthly monitoring reports submitted by Contractor; consolidate and prepare quarterly Environmental Monitoring Reports (EMR) and submit to PMU; and

- Conduct training and capacity building activities (workshops, hands-on trainings, visits etc.,) in EMP implementation.

23. **Civil Works Contracts and Contractors.** The contractor will be required to appoint an Environment, Health and Safety (EHS) Officer to implement EMP. The EHS Officer will update the EMP and submit a SEMP for approval of PIU. Contractors will carry out all environmental mitigation and monitoring measures outlined in EMP, approved SEMP and their contracts. Key responsibilities of the EHS supervisor are:

- Prepare SEMP and submit to PIU for approval prior to start of construction;
- Conduct orientation and daily briefing sessions to workers on environment, health and safety;
- Ensure that appropriate worker facilities are provided at the work place and labour camps as per the contractual provisions;
- Records accidents and undertake remedial actions;
- Implement SEMP measures and report to PIU/DSISC if any new impacts are surfaced; seek guidance from as required in EMP implementation;
- Conduct environmental monitoring (air, noise etc.,) as per the monitoring plan
- Ensure conduct of water quality surveillance program;
- Prepare monthly EMP monitoring reports and submit to PIU;
- Work closely with PIU Safeguards Officer and consultants to ensure communities are aware of project-related impacts, mitigation measures and GRM; and
- Address any public compliance and grievances effectively and in timely manner.

24. Environment Specialist and Environment support staff of DSISC visited all construction sites every week and arranged onsite training program for contractors and supervisory staff and instructed contractors for application of corrective action measures to mitigate impacts. Environment Specialist of PMC visited work sites atleast once in a month to audit application of EMP and assess shortfall if any. **Table 3** shows detail of environment safeguard team for WBDWSIP.

**Table 3: Details of WBDWSIP Environmental Safeguard Team**

Designation	Name and Contact Details
<b>PMU, Executive Engineer – I, Head Safeguards Gender Officer (HSGO), Safeguard Gender Cell (SGC)</b>	Name: Mr. Sudip Ghosh Office Address: PHED, PMU WBDWSIP, Utility Building, 1 <sup>st</sup> Floor, Tank No.3, Action Area I, New Town, West Bengal 700156 Phone: 9434404400 Email: <a href="mailto:ee1.pmu.adb@wbphed.gov.in">ee1.pmu.adb@wbphed.gov.in</a>
<b>PIU North 24 pgs, Assistant Engineer III, Safeguard Officer (SO), Environmental and Social Safeguard Unit (ESSU)</b>	Name: Mr. Sourav Bose Office Address: PHED, PIU WBDWSIP, Utility Building, 2 <sup>nd</sup> Floor, Tank No.3, Action Area I, New Town, West Bengal 700156 Phone: 9434468635 Email: <a href="mailto:ae3.piun24p.adb@wbphed.gov.in">ae3.piun24p.adb@wbphed.gov.in</a>
<b>PIU Bankura, Assistant Engineer I, Safeguard Officer, Environmental and Social Safeguard Unit (ESSU)</b>	Name: Mr. Suman Pramanik Office Address: West Bengal Drinking Water Sector Improvement Project (WBDWSIP)

Designation	Name and Contact Details
	PHE Directorate Rabindra Sarani (Near Jail Road), Bankura, West Bengal, Pin - 722101 Phone:9002169739 Email: <a href="mailto:ae1.piubankura.adb@wbphed.gov.in">ae1.piubankura.adb@wbphed.gov.in</a>
PIU East Medinipore, Assistant Engineer I, Safeguard Officer, Environmental and Social Safeguard Unit (ESSU)	Name: Sk. Mojammel Hk. Office Address: Project Implementation Unit PHED, Govt. of West Bengal Old Zila Parishad Building Maniktala, Tamluk, East Medinipur Pin - 721636 Phone: 6291880569 Email: smhaque1968@gmail.com
PMC, Environmental Specialist	<b>Name:</b> Dr. Ardhendu Mitra <b>Office Address:</b> PHED, PMC WBDWSIP, Utility Building, 1 <sup>st</sup> Floor, Tank No.3, Action Area I, New Town, West Bengal 700156 <b>Phone:</b> 9830415953 <b>Email:</b> ardhendumitra@gmail.com
DSISC, North 24 pgs, Environmental Specialist	<b>Name:</b> Mr. Swarnabha Bandyopadhyay <b>Office Address:</b> PHED, DSISC WBDWSIP, Utility Building, 2 <sup>nd</sup> Floor, Tank No.3, Action Area I, New Town, West Bengal 700156 <b>Phone:</b> 8017668861 <b>Email:</b> swarnabhab@gmail.com
DSISC, North 24 pgs, Support Staff Environmental Safeguard	<b>Name:</b> Mr. Rohan Kumar <b>Office Address:</b> PHED, DSISC WBDWSIP, Utility Building, 2 <sup>nd</sup> Floor, Tank No.3, Action Area I, New Town, West Bengal 700156 <b>Phone:</b> 7364804746 <b>Email:</b> rohangbu2011@gmail.com
DSISC, Bankura, Environmental Specialist	<b>Name:</b> Mr. Ranjan Kumar Mallick <b>Office Address:</b> DSISC, West Bengal Drinking Water Sector Improvement Project (WBDWSIP) PHE Directorate Rabindra Sarani (Near Jail Road), Bankura, West Bengal, Pin - 722101 <b>Phone:</b> 9438200113 <b>Email:</b> mallickdevelopment@gmail.com
DSISC, Bankura, Support Staff Environmental Safeguard	<b>Name:</b> Dr. Syed Yakub Ali <b>Office Address:</b> DSISC, West Bengal Drinking Water Sector Improvement Project (WBDWSIP) PHE Directorate Rabindra Sarani (Near Jail Road), Bankura, West Bengal, Pin - 722101 <b>Phone:</b> 8509943124 <b>Email:</b> yakubali.syed@gmail.com
DSISC, East Medinipur, Environmental Specialist	<b>Name:</b> yet not appointed <b>Office Address:</b> Project Implementation Unit PHED, Gov. of West Bengal, Old Zila Parishad Building, Maniktala, Tamluk, East Medinipur Pin - 721636 <b>Phone:</b> NA

Designation	Name and Contact Details
	<b>Email:</b> NA
<b>DSISC, East Medinipur, Support Staff Environmental Safeguard</b>	<b>Name:</b> yet not appointed <b>Office Address:</b> Project Implementation Unit PHED, Govt. of West Bengal, Old Zila Parishad Building, Maniktala, Tamluk, East Medinipur Pin - 721636 <b>Phone:</b> NA <b>Email:</b> NA
<b>Contractor- North 24 pgs, Package: N-24P/NCB/02A/2017-18, Safeguard Officer, NCC</b>	Name: Mr. Saradindu Gain Office Address: Vill – Adampur P.O. + P.S. – Haroa North 24 Pgs Pin - 743425 Phone: 9775459487 Email: gain.saradindu@gmail.com
<b>Contractor- North 24 pgs, Package: N-24P/NCB/02B/2017-18, Safeguard Officer, NCC</b>	Name: Sharan Kumar Basu Office Address: Village : Jirengacha, near Health Centre, Hatisala Pin - 700135 Phone: 7365003066 Email: sharankumarbose@gmail.com
<b>Contractor- North 24 pgs, Package: N-24P/NCB/01/2017-18, Safeguard Officer, Furnace Fabrica (India) Ltd.</b>	Name: Subhankar Chattopadhyaya Office Address: Water Treatment Plant, Action Area – 1, (near tank no – 1), Rajarhat, New Town Phone: 6290016411 Email: shubhankar_chattopadhyay@rediffmail.com
<b>Contractor- Bankura, Package: BKPNCB//01/2017-18, Safeguard Officer, TechnoFab Engineering Ltd. and S N Envirotech Pvt. Ltd. Jv</b>	Name: Not yet finalized Office Address: Not yet finalized Phone: NA Email: NA

25. **Figure 6** shows institutional arrangement for safeguard application for the project.



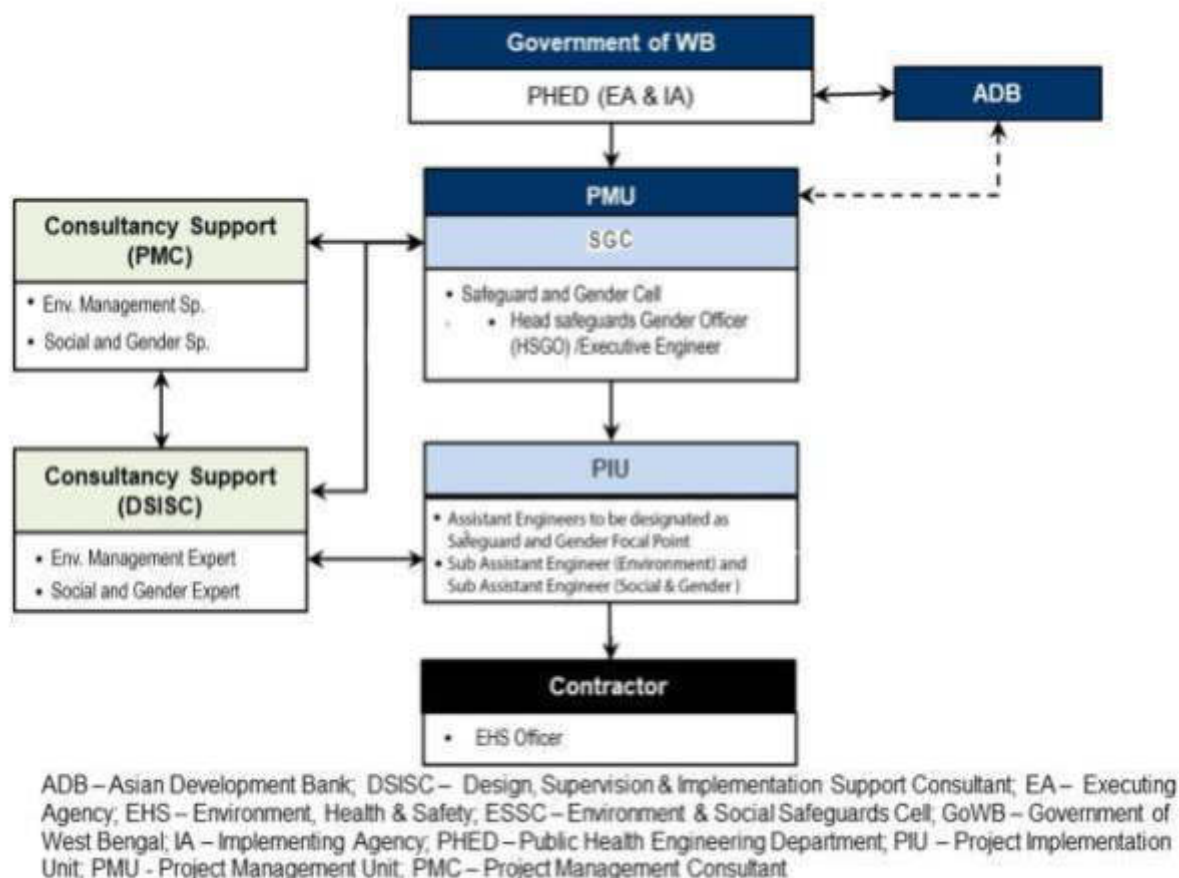


Figure 6: Institutional Arrangement – Safeguards

### III. ENVIRONMENTAL PROCEDURE REVIEW

#### A. Environmental Legal Requirement

26. For implementation of the project both national and state rules & regulations need to be followed. **Table 5** below indicates environment legal compliance status for the projects under WBDWSIP.

#### B. Compliance with Environmental Legal Requirements

27. Before and during implementation of the project, compliance with environmental policy, law and legislation is necessary.

28. Present status of Environment, forest and other clearances are mentioned below.

**Table 4: Status of Compliance with National and State Legal Requirements (upto 30<sup>th</sup> April 2019)**

District	Package No.	National & State Legal Requirement	Status on Date	Action required	Conditions of the Clearance/NOCs
North 24 PGS	WBDWSIP/DWW/N-24P/NCB/01/2017-18	The EIA notification, 2006 (and its subsequent amendments in 2009) provides for categorization of projects into category A and B, based on extent	The sub project is not covered in the ambit of the EIA notification, as this is not covered under either Category A or Category B of the	No action required	

District	Package No.	National & State Legal Requirement	Status on Date	Action required	Conditions of the Clearance/NOCs
		of impact	notification. As a result, the categorization, and the subsequent environmental assessment and clearance requirements, either from the state or the central Government is not triggered. Environmental Clearance is not required for the proposed project		
		Water (Prevention and Control of Pollution) Act of 1974, Rules of 1975, and amendments	During implementation (construction phase) compliance will be required CTE has to be received from West Bengal Pollution Control Board (WBPCB) for new WTP	Application for CTE will be required after finalization of design	
		The Air (Prevention and Control of Pollution) Act 1981, amended 1987 and The Air (Prevention and Control of Pollution) Rules, 1982	During implementation (construction phase) compliance will be required CTE and CTO for (i) diesel generator/s and (ii) hot mix plants, wet mix plants, stone crushers, batching plant etc. if installed for construction.  Pollution under control certificate (PUC) to be obtained by the contractor for all vehicles and equipment engaged in the project	CTE & CTO will be collected as per requirement and with advancement of project  PUC certificate will be collected for vehicle and equipment mobilized for the project	
		Direction of West Bengal Department of Environment under the Air Act, 1981 Direction No. EN/3170/T-IV-7	Construction activities are being carried out in compliance with the requirements		



District	Package No.	National & State Legal Requirement	Status on Date	Action required	Conditions of the Clearance/NOCs
		/001/2009 dated: 10 December 2009			
		The Indian Forest Act, 1927; Forest (Conservation) Act, 1980, amended 1988; Forest (Conservation) Rules, 1981 amended 1992 and 2003  West Bengal Trees (Protection and Conservation in Non-Forest Areas) Act, 2006- Tree felling permission	No forest land is involved. In case of tree felling NOC needs to be obtained from Forest dept./ concerned dept.	Tree felling NOC to be obtained as per requirement	
		Wild Life (Protection) Act 1972, Amendment Act, 1993 and 2002 and Wildlife (Protection) Rules, 1995	No Wildlife protected area within or nearby the project area	No action required	
		The Ancient Monument and Archaeological Sites and Remains (Amendment and Validation) Act 2010	No protected area within or nearby the project area. But chance find protocol will be maintained	Chance find protocol to be maintained	
		Labour licence under The Contract Labour (Regulation & Abolition) Act, 1970. (Central Act w.e.f. 07-09-70)	Not yet obtained	Application needs to be sent	
		Labour compensation insurance	Not yet obtained	Application needs to be sent	
<b>North 24 pgs</b>	<b>WBDWSIP/DWW/N-24P/ NCB/02A/2017-18</b>	The EIA notification, 2006 (and its subsequent amendments in 2009) provides for categorization of projects into category A and B, based on extent of impact	The sub project is not covered in the ambit of the EIA notification, as this is not covered under either Category A or Category B of the notification. As a result, the categorization, and the subsequent environmental assessment and clearance requirements, either from the state or the central Government is not triggered.	No action required	

District	Package No.	National & State Legal Requirement	Status on Date	Action required	Conditions of the Clearance/NOCs
			Environmental Clearance is not required for the proposed project		
		Water (Prevention and Control of Pollution) Act of 1974, Rules of 1975, and amendments	During implementation (construction phase) compliance will be required	Will be done as per requirement	
		The Air (Prevention and Control of Pollution) Act 1981, amended 1987 and The Air (Prevention and Control of Pollution) Rules, 1982	During implementation (construction phase) compliance will be required CTE and CTO for (i) diesel generator/s and (ii) hot mix plants, wet mix plants, stone crushers, batching plant etc. if installed for construction. Pollution under control certificate (PUC) to be obtained by the contractor for all vehicles and equipment engaged in the project	CTE & CTO will be collected as per requirement and with advancement of project  PUC certificate has been collected	
		Direction of West Bengal Department of Environment under the Air Act, 1981 Direction No. EN/3170/T-IV-7 /001/2009 dated: 10 December 2009	Construction activities are being carried out in compliance with the requirements		
		The Indian Forest Act, 1927; Forest (Conservation) Act, 1980, amended 1988; Forest (Conservation) Rules, 1981 amended 1992 and 2003  West Bengal Trees (Protection and Conservation in Non-Forest Areas) Act, 2006- Tree felling permission	No forest land is involved.  In case of tree felling NOC needs to be obtained from Forest dept./ concerned dept.	Tree felling NOC to be obtained as per requirement  Application send to Forest Dept. for felling of 11 nos. trees at one site (Gopalpur) <b>(Attached as Appendix 2)</b>	55 nos. tree need to be planted against 11 nos. tree, which to be felled
		Wild Life (Protection) Act 1972, Amendment	No Wildlife protected area	No action required	

District	Package No.	National & State Legal Requirement	Status on Date	Action required	Conditions of the Clearance/NOCs
		Act, 1993 and 2002 and Wildlife (Protection) Rules, 1995	within or nearby the project area		
		Protection of land under Sundarban Biosphere Reserve (SBR)	NOC received from Director Sundarban Biosphere Reserve on 5 <sup>th</sup> March 2019 indicating non requirement of any clearance from SBR authority since no forest area involved under the package	No action required <b>(Copy attached as Appendix 3)</b>	
		The Ancient Monument and Archaeological Sites and Remains (Amendment and Validation) Act 2010	No protected area within or nearby the project area. But chance find protocol will be maintained	Chance find protocol to be maintained	
		Labour licence under The Contract Labour (Regulation & Abolition) Act, 1970. (Central Act w.e.f. 07-09-70)	Received on 05.12.2018 and valid upto 04.12.2019	Labour licence enclosed as <b>Appendix 4</b>	
		Labour compensation insurance	Received on 04.02.2019 and valid upto 03.02.2020	Worker compensation insurance policy attached as <b>Appendix 5</b>	
<b>North 24 PGS</b>	<b>WBDWSIP/DWW/NCB/N-24P/02B/2017-18</b>	The EIA notification, 2006 (and its subsequent amendments in 2009) provides for categorization of projects into category A and B, based on extent of impact	The sub project is not covered in the ambit of the EIA notification, as this is not covered under either Category A or Category B of the notification. As a result, the categorization, and the subsequent environmental assessment and clearance requirements, either from the state or the central Government is not triggered. Environmental Clearance is not	No action required	

District	Package No.	National & State Legal Requirement	Status on Date	Action required	Conditions of the Clearance/NOCs
			required for the proposed project		
		Water (Prevention and Control of Pollution) Act of 1974, Rules of 1975, and amendments	During implementation (construction phase) compliance will be required	Will be done as per requirement	
		The Air (Prevention and Control of Pollution) Act 1981, amended 1987 and The Air (Prevention and Control of Pollution) Rules, 1982	During implementation (construction phase) compliance will be required CTE and CTO for (i) diesel generator/s and (ii) hot mix plants, wet mix plants, stone crushers, batching plant etc. if installed for construction. Pollution under control certificate (PUC) to be obtained by the contractor for all vehicles and equipment engaged in the project	CTE & CTO will be collected as per requirement and with advancement of project  PUC certificate has been collected	
		Direction of West Bengal Department of Environment under the Air Act, 1981 Direction No. EN/3170/T-IV-7 /001/2009 dated: 10 December 2009	Construction activities are being carried out in compliance with the requirements		
		The Indian Forest Act, 1927; Forest (Conservation) Act, 1980, amended 1988; Forest (Conservation) Rules, 1981 amended 1992 and 2003  West Bengal Trees (Protection and Conservation in Non-Forest Areas) Act, 2006- Tree felling permission	No forest land is involved.  In case of tree felling NOC needs to be obtained from Forest dept./ concerned dept.	Tree felling NOC to be obtained as per requirement	
		Wild Life (Protection) Act 1972, Amendment Act, 1993 and 2002 and Wildlife (Protection) Rules, 1995	No Wildlife protected area within or nearby the project area	No action required	

District	Package No.	National & State Legal Requirement	Status on Date	Action required	Conditions of the Clearance/NOCs
		Protection of land under Sundarban Biosphere Reserve (SBR)	NOC received from Director Sundarban Biosphere Reserve on 5 <sup>th</sup> March 2019 indicating non requirement of any clearance from SBR authority since no forest area involved under the package	No action required	
		The Ancient Monument and Archaeological Sites and Remains (Amendment and Validation) Act 2010	No protected area within or nearby the project area. But chance find protocol will be maintained	Chance find protocol to be maintained	
		Labour licence under The Contract Labour (Regulation & Abolition) Act, 1970. (Central Act w.e.f. 07-09-70)	Received 27.12.2018 and valid upto 26.12.2019	Labour licence enclosed as <b>Appendix 4</b>	
		Labour compensation insurance	Received on 04.02.2019 and valid upto 03.02.2020	Worker compensation insurance policy attached as <b>Appendix 5</b>	
<b>Bankura</b>	<b>WBDWSIP/DWW/NCB/BKP/01/2017-18</b>	The EIA notification, 2006 (and its subsequent amendments in 2009) provides for categorization of projects into category A and B, based on extent of impact	The sub project is not covered in the ambit of the EIA notification, as this is not covered under either Category A or Category B of the notification. As a result, the categorization, and the subsequent environmental assessment and clearance requirements, either from the state or the central Government is not triggered. Environmental Clearance is not required for the proposed project	No action required	
		Water (Prevention and	During	Application	

District	Package No.	National & State Legal Requirement	Status on Date	Action required	Conditions of the Clearance/NOCs
		Control of Pollution) Act of 1974, Rules of 1975, and amendments	implementation (construction phase) compliance will be required CTE has to be received from West Bengal Pollution Control Board (WBPCB) for new WTP	for CTE will be required after finalization of design	
		The Air (Prevention and Control of Pollution) Act 1981, amended 1987 and The Air (Prevention and Control of Pollution) Rules, 1982	During implementation (construction phase) compliance will be required CTE and CTO for (i) diesel generator/s and (ii) hot mix plants, wet mix plants, stone crushers, batching plant etc. if installed for construction. Pollution under control certificate (PUC) to be obtained by the contractor for all vehicles and equipment engaged in the project	CTE & CTO will be collected as per requirement and with advancement of project  PUC certificate will be collected	
		Direction of West Bengal Department of Environment under the Air Act, 1981 Direction No. EN/3170/T-IV-7 /001/2009 dated: 10 December 2009	Construction activities are being carried out in compliance with the requirements		
		The Indian Forest Act, 1927; Forest (Conservation) Act, 1980, amended 1988; Forest (Conservation) Rules, 1981 amended 1992 and 2003  West Bengal Trees (Protection and Conservation in Non-Forest Areas) Act, 2006- Tree felling permission	No forest land is involved.  In case of tree felling NOC needs to be obtained from Forest dept./ concerned dept.	Tree felling NOC to be obtained as per requirement	
		Wild Life (Protection) Act 1972, Amendment	No Wildlife protected area	No action required	

District	Package No.	National & State Legal Requirement	Status on Date	Action required	Conditions of the Clearance/NOCs
		Act, 1993 and 2002 and Wildlife (Protection) Rules, 1995	within or nearby the project area		
		The Ancient Monument and Archaeological Sites and Remains (Amendment and Validation) Act 2010	No protected area within or nearby the project area. But chance find protocol will be maintained	Chance find protocol to be maintained	
		Labour licence under The Contract Labour (Regulation & Abolition) Act, 1970. (Central Act w.e.f. 07-09-70)	Not yet obtained	Already applied	
		Labour compensation insurance	Received on 30.04.2019 and valid upto 29.04.2020	Worker compensation insurance policy attached as <b>Appendix 5</b>	

29. Status of land related NOC is given below. Details are discussed in Social safeguard monitoring report.

#### Project Land related NOC status

District	Major Work components	Status
North 24 pgs	Water storage reservoir lands – various stages	41 nos. land under different stages- Placed Before District Land Purchase Committee or Land already Purchased or under purchase process In some cases, application not send for purchase of land
	Water Treatment plant Intermediate Booster pumping station (IBPS)	Both the land within existing campus of Govt. agency. NOC received and process continued for transfer of land
Bankura	Water storage reservoir lands – various stages	79 nos. water storage reservoirs land under different stages- Placed Before District Land Purchase Committee or Land already Purchased or under purchase process In some cases, application not send for purchase of land
	Intake 1 from Mukutmanipur dam	NOC obtained Permissive possession obtained from I & WD Land not transferred
	WTP	NOC obtained Permissive possession obtained from I & WD Land not transferred
	Intake 2 Durgapur Barrage	NOC not obtained Under process
	WTP	NOC obtained.

	GLSR Govindapur	Process continued. Not received
	IBPS Raghunathpur	Process continued. Not received
	IBPS Taldangra	Process continued. Not received
East Mednipore	Water storage reservoir lands – various stages	29 nos. water storage reservoirs land under different stages- Placed Before District Land Purchase Committee or Land already Purchased or under purchase process In some cases, application not send for purchase of land
	Intake – electric substation	Process continued. Not received
	WTP	NOC not obtained; process continued
	GLSR and IBPS	NOC not obtained; process continued
	GLSR and IBPS	NOC obtained from Govt. Dept. Transfer under process

### C. Compliance of Safeguard Loan Covenants

30. The loan agreement for WBDWSIP was signed on 3<sup>rd</sup> October 2018 and details are available in ADB website (<http://www.adb.org/projects/documents/ind-49107-006-lna>). **Table 5** provides a summary of compliance to the loan covenants related to environmental safeguards.

**Table 5: Compliance of Loan Covenants – Environment part**

Serial no. as per loan agreement	Program Specific Covenants	Status / Issues	Action required
<b>Environment</b>			
6	The Borrower shall ensure or cause the EA to ensure that the preparation, design, construction, implementation, operation and decommissioning of the Project, and all projects' facilities comply with (a) all applicable laws and regulations of the Borrower and the State relating to environment, health, and safety; (b) the Environmental Safeguards; (c) the EARF; and (d) all measures and requirements set forth in the respective IEE and EMP, and any corrective or preventative actions set forth in a Safeguards Monitoring Report.	<p><b>Under compliance</b></p> <p>Document is prepared/ or under preparation by complying all relevant State and National Laws, Safeguard Policy Statement (SPS 2009) of ADB, Environment Assessment Review Framework (EARF)</p> <p>Initial Environmental Examination (IEE), Environment Management Plan (EMP) report prepared and approved by ADB.</p> <p>IEE will be revised further in case of any change of scope and location.</p> <p>All measures and requirements as prescribed in IEE/EIA and EMP are being considered during implementation.</p> <p>Corrective or preventive action plans will be reflected in</p>	<p>IEE will be updated in case of change in project scope and location</p> <p>Application of EMP as per approved IEE during implementation of the project</p>



Serial no. as per loan agreement	Program Specific Covenants	Status / Issues	Action required
		Environment Monitoring Report and project implementation authority will take care of such actions when required.	
<b>Human and Financial Resources to Implement Safeguards Requirements</b>			
10	The Borrower shall make available, or cause the EA to make available, all necessary budgetary and human resources to fully implement the EMP required.	<p><b>Under Compliance</b></p> <p>Budgetary provisions have been included in EMP</p> <p>Executive Engineer in-charge of Environment and Social Safeguard is in place in Project Management Unit heading Safeguard Monitoring Unit</p> <p>An Environment Specialist is in place within Project Management Consultancy (PMC)</p> <p>An Environmental Specialist of DSISC, for implementation of EMPs, is in place/ under placement for regular monitoring to secure complete compliance.</p>	Filling up vacant position in DSISC is required
<b>Safeguards – Related Provisions in Bidding Documents and Works Contracts</b>			
11.	<p>The Borrower shall ensure, or cause the EA to ensure, that all bidding documents and contracts for Works contain provisions that require contractors to:</p> <p>(a) comply with the measures and requirements relevant to the contractor set forth in the IEE, the EMP, the RP and the IPP (to the extent they concern impacts on affected people during construction), and any corrective or preventative actions set out in a Safeguards Monitoring Report;</p> <p>(b) make available a budget for all such environmental measures;</p> <p>(c) provide the EA with a written notice of any unanticipated environmental risks or impacts that arise during construction, implementation or operation of the Project that were not</p>	<p><b>Under compliance</b></p> <p>EMP, BOQ line items, reinstatement to pre-project conditions included in the contract agreement.</p> <p>Contractors done base line pre construction monitoring and survey of pre- works condition. Budget has been allocated for EMP application and monitoring. Pre construction documents submitted by contractors for those packages (N 24 pgs/02A and 02B) where actual physical construction started</p> <p>(a) Approved IEE, EMP for is attached in Bidding documents. This process will be followed for all the projects</p> <p>In case of any change of scope, revised IEEs with EMP(s) will be prepared and corrective measures will be</p>	In case of any change of scope, revised IEEs with EMP(s) will be prepared and corrective measures will be disclosed to the contractor

Serial no. as per loan agreement	Program Specific Covenants	Status / Issues	Action required
	<p>considered in the IEE, the EMP, the RP or the IPP;</p> <p>(d) adequately record the condition of roads, agricultural land and other infrastructure prior to starting to transport materials and construction; and</p> <p>(e) fully reinstate pathways, other local infrastructure, and agricultural land to at least their pre-project condition upon the completion of construction.</p>	<p>disclosed to the contractor and same will be reflected in the "Environment Monitoring Report".</p> <p>(b) IEE includes budgetary provisions for implementation of EMP for all the packages. Contractors will submit monitoring budget details shortly</p> <p>(c) During implementation of any project if additional impacts/risks arise due to change in scope/area that will be reflected in the revised IEEs, EMPs and Environment Monitoring Report and accordingly project Executing Contractor will inform the Construction Contractor for taking relevant corrective measures. Till date no as such situation create for the packages 02A and 02B of North 24 pgs which under implementation.</p> <p>(d) Haul roads will be marked properly (by avoiding residential and agricultural land) before commencement of transportation of materials.</p> <p>(e) Pathways, infrastructure and land which are likely to be affected for varying periods during implementation of the sub project will be restored by concerned construction Contractor before acceptance of the work. Restoration status will be reflected in post construction monitoring report. At present construction just started for only 2 locations as mentioned above. Before acceptance of the work affected part if any will be restored</p>	
<b>Safeguards Monitoring and Reporting</b>			
12	<p>The Borrower shall cause the EA to do the following:</p> <p>(a) submit semi-annual Safeguards Monitoring Reports to</p>	<p><b>Under compliance</b></p> <p>(a) Preparation of semi-annual environment monitoring report started for the period</p>	<p>Semi Annual Environment Monitoring Report will be submitted as per schedule</p>

Serial no. as per loan agreement	Program Specific Covenants	Status / Issues	Action required
	<p>ADB and disclose relevant information from such reports to affected persons promptly upon submission;</p> <p>(b) if any unanticipated environmental and/or social risks and impacts arise during construction, implementation or operation of the Project that were not considered in the IEEs, the EMPs, promptly inform ADB of the occurrence of such risks or impacts, with detailed description of the event and proposed corrective action plan; and</p> <p>(c) report any breach of compliance with the measures and requirements set forth in the EMPs, promptly after becoming aware of the breach.</p>	<p>November 2018- April 2019 which to be submitted in May 2019</p> <p>(b) During implementation of any project, if additional impacts/risks arise due to change in scope/area, those will be reflected in revised IEEs with EMPs and accordingly Executing Contractor (EA) will inform the ADB such change along with corrective action plan which will be reflected in the subsequent Monitoring Reports.</p> <p>(c) in case of any breach of compliance with the measures and requirements set forth in the EMP, EA will promptly inform ADB and suitable corrective action program will be planned/initiated.</p>	<p>IEE/ EMP will be revised in case of inclusion of additional impact and change in location/ scope for the project</p>
<b>Prohibited List of Investments</b>			
13	The Borrower shall ensure or cause the State to ensure that no proceeds of the Loan are used to finance any activity included in the list of prohibited investment activities provided in Appendix 5 of the SPS.	<p><b>Complied</b></p> <p>There is no violation of prohibited investment activities as per ADB SPS (2009) Appendix 5.</p>	
<b>Labour Standards</b>			
14	The EA shall ensure that civil works contracts under the Project follow all applicable labourer laws of the Borrower and the State, and that these further include provisions to the effect that contractors: (a) carry out HIV/AIDS awareness programs for labourer and disseminate information at worksites on risks of sexually transmitted diseases and HIV/AIDS as part of health and safety measures for those employed during construction; and (b) follow and implement all statutory provisions on labourer (including not employing or using children as labourer, equal pay for equal work), health, safety, welfare, sanitation, and working conditions. Such contracts will	<p><b>Complied in Bid documents and being complied during implementation</b></p> <p>Provision are included (as per EMP &amp; BID document) to carry out HIV/AIDS awareness programs for construction contractor, application of all relevant labour laws for health and safety including child labour law and engagement of local labours (preferably from economically backward group) covering women labours. Labour license available for 2 packages (N 24 pgs/ 02A and 02B, where construction started.</p>	<p>HIV/AIDS awareness programs need to be conducted by the contractors</p> <p>Labour license will be submitted shortly by other contractors All labour laws need to be comply for all packages</p>

Serial no. as per loan agreement	Program Specific Covenants	Status / Issues	Action required
	also include clauses for termination in case of any breach of the stated provisions by the contractors.	<p>HIV/ AIDS awareness program to be conducted shortly by contractors</p> <p>Induction training just started for the awarded packages, where actual physical work started.</p> <p>For rest 2 awarded packages (DBO contract) design undergoing. Field activity will be started shortly. Before that all documents will be submitted by contractors</p> <p>In case of any breach of provision, necessary corrective measures as per contract clauses shall be taken.</p> <p>All activities including awareness program will be reflected in "Monitoring Report".</p>	

#### IV. COMPLIANCE STATUS WITH THE ENVIRONMENTAL MANAGEMENT AND MONITORING PLAN

31. There are 4 environment sensitive subprojects under implementation. Site Environment plans including site specific EMPs were submitted by the contractors before starting of each construction package. These EMPs will be revised semi-annually as per progress of construction work. **Appendix 6** shows sample Site Specific EMP. **Table 6** shows package wise EMP implementation status.

**Table 6: Package wise EMP Implementation Status**

Package No	Components	Design status (Preliminary Design Stage/ Detailed Design Completed)	Final IEE based on Detailed Design				Site specific EMP (or construction EMP) approved by Project Director (Yes/ No)	Remarks
			Not yet due (detailed design not yet completed)	Submitted to ADB (provide date of submission)	Disclosed on project website (provide link)	Final IEE provided to Contractors (Yes/No)		
WBDWSIP/DWW/ N-24P/ NCB/01/2017-18	Design, Construction and Operation of Water Treatment Plant, Reservoirs, Transmission Mains and Pumping Stations works in Haroa, Rajarhat, and	Detailed design under progress for DBO contract	Final IEE will be done after finalization of design	-	Draft IEE disclosed in ADB website  ( <a href="https://www.adb.org/projects/documents/ind-49107-006-iee">https://www.adb.org/projects/documents/ind-49107-006-iee</a> )	Draft IEE only provided to contractor	No – not yet	-

Package No	Components	Design status (Preliminary Design Stage/ Detailed Design Completed)	Final IEE based on Detailed Design				Site specific EMP (or construction EMP) approved by Project Director (Yes/ No)	Remarks
			Not yet due (detailed design not yet completed)	Submitted to ADB (provide date of submission)	Disclosed on project website (provide link)	Final IEE provided to Contractors (Yes/No)		
	Bhangar II.							
<b>WBDWSIP/DWW/ N-24P/ NCB/02A/2017-18</b>	Design and Construction of Overhead Reservoir including design, supply and laying of Water Supply Distribution Network in Haroa Block.	Preliminary design done. Detailed design continuing component wise	Final IEE will be done after finalization of design	-	Draft IEE disclosed in ADB website  ( <a href="https://www.w.adb.org/projects/documents/ind-49107-006-iee-0">https://www.w.adb.org/projects/documents/ind-49107-006-iee-0</a> )	Draft IEE only provided to contractor	Prepared and approved	EMP under implementation
<b>WBDWSIP/DWW/ N-24P/ NCB/02B/2017-18</b>	Design and Construction of Overhead Reservoir including design, supply and laying of Water Supply Distribution Network in Bhangar II Block.	Preliminary design done. Detailed design continuing component wise	Final IEE will be done after finalization of design	-	Draft IEE disclosed in ADB website  ( <a href="https://www.w.adb.org/projects/documents/ind-49107-006-iee-0">https://www.w.adb.org/projects/documents/ind-49107-006-iee-0</a> )	Draft IEE only provided to contractor	Prepared and approved	EMP under implementation
<b>WBDWSIP/DWW/ NCB/ BKP/01/2017-18</b>	Design, Construction and Operation-Maintenance of Raw Water Intake Well, Water Treatment Plant, Reservoir, Transmission Main for Indpur and Taldangra block in Bankura.	Detailed design under progress for DBO contract	Final IEE will be done after finalization of design	-	Draft IEE disclosed in ADB website  ( <a href="https://www.w.adb.org/projects/documents/ind-49107-006-iee-1">https://www.w.adb.org/projects/documents/ind-49107-006-iee-1</a> )	Draft IEE only provided to contractor	No – not yet	-
<b>WBDWSIP/DWW/ NCB/ BKP/02A/2018-19</b>	Design and Construction of Intermediate Pumping Station, ground storage reservoirs, overhead reservoirs, water distribution network and metering works in Indpur block., Bankura	Not Awarded	Final IEE will be done after finalization of design	-	Draft IEE disclosed in ADB website  ( <a href="https://www.w.adb.org/projects/documents/ind-49107-006-iee-4">https://www.w.adb.org/projects/documents/ind-49107-006-iee-4</a> )	Draft IEE to be provided to contractor after award	No. Work not awarded	-
<b>WBDWSIP/DWW/ NCB/ BKP/02B/2018-19</b>	Design and Construction of Intermediate Pumping Station,	Not Awarded	Final IEE will be done after finalization of design	-	Draft IEE disclosed in ADB website ( <a href="https://www.w.adb.org/projects/documents/ind-49107-006-iee-4">https://www.w.adb.org/projects/documents/ind-49107-006-iee-4</a> )	Draft IEE to be provided to contractor after award	No. Work not awarded	-

Package No	Components	Design status (Preliminary Design Stage/ Detailed Design Completed)	Final IEE based on Detailed Design				Site specific EMP (or construction EMP) approved by Project Director (Yes/ No)	Remarks
			Not yet due (detailed design not yet completed)	Submitted to ADB (provide date of submission)	Disclosed on project website (provide link)	Final IEE provided to Contractors (Yes/No)		
	Secondary transmission mains, overhead reservoirs including water distribution network and metering works in Taldangra Block.				w.adb.org/projects/documents/ind-49107-006-iee-2)			
<b>WBDWSIP/DWW/NCB/BK/03/2018-19</b>	Design, Construction and Operation-Maintenance of Raw Water Intake Well, Water Treatment Plant, Raw and Clear Water Transmission Main for Mejhia and Gangajalghati Block in Bankura	Not Awarded	Final IEE will be done after finalization of design	-	Draft IEE disclosed in ADB website  (https://www.adb.org/projects/documents/ind-49107-006-iee-3)	Draft IEE to be provided to contractor after award	No. Work not awarded	-
<b>WBDWSIP/DWW/NCB/BK/04/2018-19</b>	Design and Construction of Overhead Reservoir including Water Supply Distribution Network and Metering Works in Mejhia and Gangajalghati Blocks including Rehabilitation of Existing Schemes., Bankura	Not Awarded	Final IEE will be done after finalization of design	-	Draft IEE disclosed in ADB website (https://www.adb.org/projects/documents/ind-49107-006-iee-1)	Draft IEE to be provided to contractor after award	No. Work not awarded	-
<b>WBDWSIP/DWW/ICB/EM/01/2018-19</b>	Design, Construction and Operation-Maintenance of Raw Water Intake Well, Water Treatment Plant, Raw and Clear Water Transmission Main for Nandakumar, Chandpur, Nandigram-I and II blocks	Not Awarded	Final IEE will be done after finalization of design	-	Draft IEE disclosed in ADB website  (https://www.adb.org/projects/documents/ind-49107-006-iee-7)	Draft IEE to be provided to contractor after award	No. Work not awarded	-

Package No	Components	Design status (Preliminary Design Stage/ Detailed Design Completed)	Final IEE based on Detailed Design				Site specific EMP (or construction EMP) approved by Project Director (Yes/ No)	Remarks
			Not yet due (detailed design not yet completed)	Submitted to ADB (provide date of submission)	Disclosed on project website (provide link)	Final IEE provided to Contractors (Yes/No)		
	in East Medinipur.							
WBDWSIP/DWW/1 CB/ EM/02/2018-19	Construction of Intermediate Pumping Station, Secondary transmission mains, overhead tanks including water distribution network and metering, East Medinipur	Not Awarded	Final IEE will be done after finalization of design	-	Draft IEE disclosed in ADB website  ( <a href="https://www.adb.org/projects/documents/ind-49107-006-iee-5">https://www.adb.org/projects/documents/ind-49107-006-iee-5</a> )	Draft IEE to be provided to contractor after award	No. Work not awarded	-

WBDWSIP Project website link: <https://wbdwsip.org/safeguard-documents> - Disclosed IEEs available

32. Environment Specialist from DSISC and PMC carried out periodic monitoring of EMP implementation through desk review of contractor's records and site inspections. Sample site inspection report as prepared by DSISC is shown in **Appendix 7**. Package wise findings are presented in **Table 7** (package: N-24P/ NCB/02A/2017-18) and **Table 8** (package: N-24P/ NCB/02B/2017-18). Contractor starts submitting of monthly Environment Monitoring Report.

33. Preliminary survey work and designing has been started for package N24P/NCB/01/2017-18 and BKP/NCB/01/2017-18. EMP monitoring will be started shortly for this package. Contractor for package BKP/01/2017-18 have already collected Workman Compensation Policy for workers (**Appendix 5**).

34. It may be noted that while sites are mostly environmentally compliant but there are scopes for further improvement in site management measures as mentioned below:

- ✓ Improvement of housekeeping, access to working area (Haroa – Zone1, Bhangar II – Zone 10, 13)
- ✓ Installation of proper work display board and repairing/replacement of old board (Bhangar II – Zone 10, 13)
- ✓ Complete use of PPEs, particularly use of working shoes, hand gloves ear plug (Haroa – Zone 17, Bhangar II – Zone 12)
- ✓ Further improvement in respect of house-keeping and provision of basic facilities (like bed, fuel for cooking) to labourers in the construction camp sites (Haroa – Zone1, Bhangar II – Zone 10, 13)
- ✓ Management of wastewater at camp sites (Haroa – Zone1, Bhangar II – Zone 10, 13)
- ✓ Maintenance of toilet waste at camp sites, use of pit latrines are serious concern (Bhangar II – Zone 10, 13)
- ✓ Storage of materials at Zone 13 for Bhangar II



**Table 7: Compliance to EMP for the Package WBDWSIP/DWW/NCB/N24P/02A/2017-18: Water Supply Distribution at Haroa Block**

Impacts	Mitigation Measures	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation
<b>Design Phase</b>							
Source sustainability and efficiency	(i) Gravity distribution system: designing the entire system to maintain optimal flow and terminal pressure, and optimizing the overall energy usage (ii) Implementation of a water quality surveillance program including development of a laboratory as part of the project to ensure that supplied water meets the drinking water standards (iii) Minimizing water losses from pipelines by perfect jointing and alignments using appropriate techniques (iv) Reducing the incidence of water borne diseases by providing 100% population including urban poor with potable water supplies	<ul style="list-style-type: none"> <li>Design philosophy</li> <li>Project QA/QC plan</li> <li>Selection methodology for distribution network</li> </ul>	Document review and LOP Survey	All project locations	Before commencement of final design	Environment Specialist of DSISC and PMC	Complied; Distribution network finalized only for Zone-17: Shalipur. Rest under progress
Socio economic impact – loss fishery area	(i) Avoid using low-lying lands / ponds for construction of OHRs; alternative private lands may be explored within the vicinity; (ii) Review the applicability of West Bengal Inland Fisheries Act, 1984, whether the site falls under the definition of fisher area; obtained permission from Fisheries Department if required prior to start of construction	List of selected location for OHRs	Site survey	All OHR sites	Before commencement of final design	Environment Specialist of DSISC and PMC	Complied; No low-lying lands or ponds are being filled for construction.
Tree cutting	(i) Minimize removal of trees by adopting to site condition and with appropriate layout design of OHRs within the sites (ii) Avoid cutting of trees by adopting suitable alignment changes as required during laying of pipelines; (iii) In unavoidable cases, obtain prior permission for tree cutting	<ul style="list-style-type: none"> <li>Tree felling requirement – site layout plan</li> <li>NOC – paper documents from line agency</li> </ul>	Site survey and review of site layout/ pipeline alignment plan	All project locations	Before commencement of final design	Environment Specialist of DSISC and PMC	Complied; except Zone 18: Gopalpur no other sites requirement for tree felling has been envisaged till date



Impacts	Mitigation Measures	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation
	(iv) Plant and maintain 5 trees for each tree that is removed						
<b>Pre-Construction Phase</b>							
Telephone lines, electric poles and wires, water lines within proposed project area	(i) Identify and include locations and operators of these utilities in the detailed design documents to prevent unnecessary disruption of services during construction phase; and (ii) Require construction contractors to prepare a contingency plan to include actions to be taken in case of unintentional interruption of services. (iii) Require contractors to prepare spoils (waste) management plan and traffic management plan	List of affected utilities if any and operators	Observation and document checking	Specific project location	Before commencement of construction	Environment Specialist of DSISC and PMC	Under Compliance; only 100m pipeline has been installed in Zone 17: Shalipur (Sample Spoil Management Plan – <b>Appendix 8</b> & sample Traffic Management Plan – <b>Appendix 9</b> )
Conflicts with local community; disruption to traffic flow and sensitive receptors	(i) Prioritize areas within or nearest possible vacant space in the project location; (ii) If it is deemed necessary to locate elsewhere, consider sites that will not promote instability and result in destruction of property, vegetation, irrigation, and drinking water supply systems; (iii) Do not consider residential areas; (iv) Take extreme care in selecting sites to avoid direct disposal to water body which will inconvenience the community. (v) For excess spoil disposal, ensure (a) site shall be selected preferably from barren, infertile lands. In case agricultural land needs to be selected, written consent from landowners (not lessees) will be obtained; (b) debris disposal site	<ul style="list-style-type: none"> <li>List of selected location for OHRs</li> <li>Involvement of traffic dept.</li> <li>Road closure planning</li> </ul>	<ul style="list-style-type: none"> <li>Site observation</li> <li>Review of documents</li> <li>Grievance Register</li> </ul>	Specific project location	Before commencement of final design and commencement of construction	Environment Specialist of DSISC and PMC	Complied and to be maintained

Impacts	Mitigation Measures	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation
	shall be at least 200 m away from surface water bodies; (c) no residential areas shall be located within 50 m downwind side of the site; and (d) site is minimum 250 m away from sensitive locations like settlements, ponds/lakes or other water bodies.						
Extraction of materials can disrupt natural land contours and vegetation resulting in accelerated erosion, disturbance in natural drainage patterns, ponding and water logging, and water pollution.	(i) Obtain construction materials only from government approved quarries with prior approval of PIU; (ii) PIU to review, and ensure that proposed quarry sources have all necessary clearances/ permissions in place prior to approval (iii) Contractor to submit to PIU on a monthly basis documentation on material obtained from each source (quarry/ borrow pit) (iv) Avoid creation of new borrow areas, quarries etc., for the project; if unavoidable, contractor to obtain all clearances and permissions as required under law, including Environmental Clearance prior to approval by PIU	<ul style="list-style-type: none"> <li>List of approved quarry sites and sources of materials</li> <li>Construction Contractor documentation</li> </ul>	<ul style="list-style-type: none"> <li>Checking of records</li> <li>Visual inspection of sites</li> </ul>	Quarries and material source areas	Daily visit by construction supervisor of DSISC. Weekly visit by Construction Manager and Environment Team of DSISC at operational sites.	DSISC Construction Management and Environmental Safeguard Team	Complied; Approval obtained from DSISC before procurement.
Failure to obtain necessary consents, permits, NOCs, etc. can result to design revisions and/or stoppage of works	(i) Obtain all necessary consents, permits, clearance, NOCs, etc. prior to award of civil works. (ii) Ensure that all necessary approvals for construction to be obtained by contractor are in place before start of construction (iii) Acknowledge in writing and provide report on compliance all obtained consents, permits, clearance, NOCs, etc. (iv) Include in detailed design drawings and documents all conditions and	List of applicable legislation	Checking of documents	All project locations	Before commencement of construction	Environment Specialist of DSISC and PMC	Complied and to be continued

Impacts	Mitigation Measures	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation
	provisions if necessary						
Health risk due to exposure to asbestos materials	(i) Obtain details on location of underground AC pipes (ii) Locate the new piper carefully to avoid encountering AC pipes (ii) Leave the AC pipes undisturbed in the ground.	Rubbish containing asbestos cement	Site inspection	Specific project location	Daily visit by construction supervisor of DSISC. Weekly visit by Construction Manager and Environment Team of DSISC of operational sites.	DSISC Construction Management and Environmental Safeguard Team	Complied. Till date no rubbish containing asbestos cement has been found
<b>Construction Phase</b>							
Irreversible impact to the environment, workers, and community	(i) Project manager and all key workers will be required to undergo training on EMP implementation including spoils/waste management, Standard operating procedures (SOP) for construction works; occupational health and safety (OHS), core labor laws, applicable environmental laws, etc.	Induction & Awareness Trainings Toolbox Talks Safeguard Trainings	Review of Training records Site Inspections	Project Locations	-	Environment Specialist of DSISC and PMC	Under compliance; Site Environmental Safety training and awareness arranged by contractor on regular basis (Sample attached as <b>Appendix 10</b> ) Awareness program cum training arranged by DSISC which shown in <b>Appendix 11</b>
Emissions from	<b><u>For all construction works</u></b>	• Location of	Site inspection	Project	Daily visit by	Environment	Under

Impacts	Mitigation Measures	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation
construction vehicles, equipment, and machinery used for installation of pipelines resulting to dusts and increase in concentration of vehicle-related pollutants such as carbon monoxide, sulfur oxides, particulate matter, nitrous oxides, and hydrocarbons.	<p>(i) Comply with the air pollution / dust control measures for construction activities stipulated by the “Direction of West Bengal Department of Environment under the Air Act, 1981 Direction No. EN/3170/T-IV-7 /001/2009 dated: 10 December 2009”</p> <p>(ii) Damp down the soil and any stockpiled material on site by water sprinkling;</p> <p>(iii) Use tarpaulins to cover the loose material (soil, sand, aggregate etc.) when transported by trucks;</p> <p>(iv) Provide a dust screen/high compound wall around the construction sites (OHRs)</p> <p>(v) Clean wheels and undercarriage of haul trucks prior to leaving construction site/quarry</p> <p>(vi) Control dust generation while unloading the loose material (particularly aggregate, soil) at the site by sprinkling water and unloading inside the barricaded area</p> <p>(vii) Stabilize surface soils where loaders, support equipment and vehicles will operate by using water and maintain surface soils in a stabilized condition</p> <p>(viii) Apply water prior to leveling or any other earth moving activity to keep the soil moist throughout the process</p> <p>(ix) Control access to work area, prevent unnecessary movement of vehicle, public trespassing into work areas; limiting soil disturbance will minimize dust generation</p> <p>(x) Ensure that all the construction</p>	<p>stockpiles</p> <ul style="list-style-type: none"> <li>Complaints from sensitive receptors</li> <li>Monitoring data</li> <li>Heavy equipment and machinery with air pollution control</li> <li>Water sprinkling arrangement</li> <li>Cover materials</li> </ul>	Public grievance register	locations	construction supervisor of DSISC. Weekly visit by Construction Manager, Visit by Environment Specialist and Support Environment staff	Specialist of DSISC and PMC	<p>compliance; only 100m pipeline has been installed in Zone 17: Shalipur</p> <p>Water sprinkling done as per requirement. Pre-construction air quality monitoring done as per IEE (Complete result certificates available in DSISC office as back up paper) Most of the PUC certificate obtained for Vehicle and Equipment</p>

Impacts	Mitigation Measures	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation
	<p>equipment and machineries are fitted with pollution control devises, which are operating correctly, and have a valid pollution under control (PUC) certificate</p> <p><b>Pipeline works</b></p> <p>(i) Barricade the construction area</p> <p>(ii) Initiate site clearance and excavation work only after barricading of the site is done</p> <p>(iii) Confine all the material, excavated soil, debris, equipment, machinery (excavators, cranes etc.), to the barricaded area</p> <p>(iv) Limit the stocking of excavated material at the site; remove the excess soil from the site immediately to the designated disposal area</p> <p>(v) Undertake the work section wise</p> <p>(vi) Conduct work sequentially - excavation, pipe laying, backfilling; conduct pipe testing section-wise (for a minimum length as possible) so that backfilling, stabilization of soil can be done.</p> <p>(vii) Remove the excavated soil of first section to the disposal site; as the work progresses, sequentially, by the time second section is excavated, the first section will be ready for back filling, use the freshly excavated soil for back filling, this will avoid stocking of material, and minimize the dust.</p> <p>(viii) Backfilled trench at any completed section after removal of barricading will be the main source of dust pollution. The traffic, pedestrian movement and wind</p>						

Impacts	Mitigation Measures	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation
	will generate dust from backfilled section. Road restoration shall be undertaken immediately.						
Mobilization of settled silt materials, and chemical contamination from fuels and lubricants during construction can contaminate nearby surface water quality. Ponding of water in the pits / foundation excavations	<p>(i) All earthworks be conducted during the dry season to prevent the problem of soil run-off during monsoon season;</p> <p>(ii) Avoid stockpiling of earth fill especially during the monsoon season unless covered by tarpaulins or plastic sheets;</p> <p>(iii) Prioritize re-use of excess spoils and materials in the construction works. If spoils will be disposed, only designated disposal areas shall be used;</p> <p>(iv) Install temporary silt traps or sedimentation basins along the drainage leading to the water bodies;</p> <p>(v) Place storage areas for fuels and lubricants away from any drainage leading to water bodies;</p> <p>(vi) Store fuel, construction chemicals etc., on an impervious floor, also avoid spillage by careful handling</p> <p>(vii) Dispose any wastes generated by construction activities in designated sites; and</p> <p>(viii) Conduct surface quality inspection according to the Environmental Management Plan (EMP).</p> <p>(ix) Create a temporary drainage channel around the work area to arrest the entry of runoff from upper areas into the work area</p> <p>(x) Pump out the water collected in the pits / excavations to a temporary sedimentation pond; dispose of only</p>	<ul style="list-style-type: none"> <li>• Areas for stockpiles, storage of fuels and lubricants and waste materials</li> <li>• Number of silt traps installed along drainages (in slope) leading to water bodies</li> <li>• Entry routes of pollutant in nearby Water bodies</li> </ul>	Site inspection Public grievance register	All project locations	Do	Environment Specialist of DSISC and PMC	<p>Mostly Complied except Zone 1: Amta;</p> <p>Wastewater management at Zone 1: Amta to be improved; construction material should not be put in the pond located within this site. Silt traps / sediment basin should be installed prior to discharge of construction wastewater from site.</p> <p>Fuel storage not started. Surface water quality monitoring done All safety aspect maintained</p>

Impacts	Mitigation Measures	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation
	clarified water into drainage channels/streams after sedimentation in the temporary ponds (xi) Consider safety aspects related to pit collapse due to accumulation of water						
Increase in noise level due to earth-moving and excavation equipment, and the transportation of equipment, materials, and people	(i) Plan activities in consultation with PIU so that activities with the greatest potential to generate noise are conducted during periods of the day which will result in least disturbance; (ii) Horns should not be used unless it is necessary to warn other road users or animals of the vehicle's approach; (iii) Minimize noise from construction equipment by using vehicle silencers, fitting jackhammers with noise-reducing mufflers, and use portable street barriers to minimize sound impact to surrounding sensitive receptor; and (iv) Identify any buildings at risk from vibration damage and avoiding any use of pneumatic drills or heavy vehicles in the vicinity (v) Horns should not be used unless it is necessary to warn other road users or animals of the vehicle's approach; (vi) Consult local communities in advance of the work to identify and address key issues, and avoid working at sensitive times, such as religious and cultural festivals.	<ul style="list-style-type: none"> <li>Complaints from sensitive receptors</li> <li>Use of silencers in noise-producing equipment and sound barriers</li> <li>Monitoring data</li> </ul>	<ul style="list-style-type: none"> <li>Checking of records</li> <li>Visual inspection of sites</li> </ul>	All project locations	Do	Environment Specialist of DSISC and PMC	Mostly Complied. No such noise generating problem near the project location. Pre-construction, monitoring done. Monitoring will be continued as per IEE. (Complete result certificates available in DSISC office as back up paper). However, use of ear plugs by labourer should be ensured during noisy activities.
Impacts due to excess excavated earth, excess construction materials, and	(i) Prepare and implement a Construction Waste Management Plan (ii) As far as possible utilize the debris and excess soil in construction purpose, for example for raising the ground level	<ul style="list-style-type: none"> <li>Waste Management List</li> <li>Stockpile Management</li> </ul>	<ul style="list-style-type: none"> <li>Checking of records</li> <li>Visual inspection of sites</li> </ul>	Project locations	Do	Environment Specialist of DSISC and PMC	Complied Excess earth used mostly for backfilling Excess spoils are



Impacts	Mitigation Measures	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation
solid waste such as removed concrete, wood, packaging materials, empty containers, spoils, oils, lubricants, and other similar items.	<p>or construction of access roads etc.,</p> <p>(iii) Stockpiles, lubricants, fuels, and other materials should be located away from steep slopes and water bodies;</p> <p>(iv) Avoid stockpiling any excess spoils at the site for long time. Excess excavated soils should be disposed of to approved designated areas immediately;</p> <p>(v) If disposal is required, the site shall be selected preferably from barren, infertile lands; site should be located away from residential areas, forests, water bodies and any other sensitive land uses</p> <p>(vi) Domestic solid wastes should be properly segregated in biodegradable and non-biodegradable for collection and disposal to designated solid waste disposal site; create a compost pit at workers' camp sites for disposal of biodegradable waste; non-biodegradable / recyclable material shall be collected separately and sold in the local recycling material market</p> <p>(vii) Residual and hazardous wastes such as oils, fuels, and lubricants shall be disposed of in disposal sites approved by local authorities/West Bengal Pollution Control Board (WBPCB);</p> <p>(viii) Prohibit burning of construction and/or domestic waste;</p> <p>(ix) Ensure that wastes are not haphazardly dumped thrown within and around the project site and adjacent areas; provide proper collection bins, and create awareness to use the dust bins.</p>	<ul style="list-style-type: none"> <li>Complaints from Sensitive receptors</li> <li>PMU/PIU/DSI SC to report in writing that the necessary environmental restoration work has been done</li> </ul>					not generally stockpiled

Impacts	Mitigation Measures	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation
	(x) Conduct site clearance and restoration to original condition after the completion of construction work; PIU to ensure that site is properly restored prior to issuing of construction completion certificate						
Disruption of service and damage to existing infrastructure at specified project location	(i) Prepare a list of affected utilities and operators if any; (ii) Prepare a contingency plan to include actions to be done in case of unintentional interruption of service	<ul style="list-style-type: none"> <li>List of affected utilities if any and operators</li> <li>Public grievance</li> </ul>	Observation And document checking	Project locations	Do	Environment Specialist of DSISC and PMC	Complied as Per requirement. Consultation with utility dept. as and when required
Loss of vegetation and tree cover	(i) Minimize removal of vegetation and disallow cutting of trees, by adopting best site layout and pipeline alignments (ii) If tree-removal will be required, obtain tree-cutting permit and (iii) Plant 5 native trees for every one that is removed.	Tree felling requirement and afforestation after final design	<ul style="list-style-type: none"> <li>Checking of records</li> <li>Visual inspection of sites</li> </ul>	Project locations	Do	Environment Specialist of DSISC and PMC	As of now, tree felling will be required at Zone 18: Gopalpur. Application to concerned authority has been done
Traffic problems and conflicts near project locations and haul road	<b>Hauling (material, waste/debris and equipment) activities</b> (i) Plan transportation routes so that heavy vehicles do not use narrow local roads, except in the immediate vicinity of delivery sites (ii) Schedule transport and hauling activities during non-peak hours; (iii) Locate entry and exit points in areas where there is low potential for traffic congestion; (iv) Drive vehicles in a considerate manner (v) Notify affected public by public information notices, providing sign	<ul style="list-style-type: none"> <li>Traffic Management Plan</li> <li>Public grievance</li> <li>Number of signages placed at subproject location</li> </ul>	Site visit and document review	Project locations	Do	Environment Specialist of DSISC and PMC	Complied; as of now only 100m pipeline has been laid in Zone 17: Shalipur Barricading will be done as per requirement Local people will be informed before start of work

Impacts	Mitigation Measures	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation
	<p>boards informing nature and duration of construction works and contact numbers for concerns/complaints.</p> <p><b>Pipeline works</b></p> <p>(i) Confine work areas along the roads to the minimum possible extent; all the activities, including material and waste/surplus soil stocking should be confined to this area. Provide barricading; avoid material/surplus soil stocking in congested areas – immediately removed from site/ or brought to the as and when required</p> <p>(ii) Leave spaces for access between mounds of soil to maintain access to the houses / properties</p> <p>(iii) Provide pedestrian access in all the locations; provide wooden/metal planks over the open trenches at each house to maintain the access.</p> <p>(iv) Inform the affected local population 1-week in advance about the work schedule</p> <p>(v) Plan and execute the work in such a way that the period of disturbance/ loss of access is minimum.</p> <p>(vi) Keep the site free from all unnecessary obstructions;</p> <p>(vii) Coordinate with Police for temporary road diversions, where necessary, and for provision of traffic aids if transportation activities cannot be avoided during peak hours</p>						
Generation of temporary employment and	<p>(i) Employ local labor force as far as possible</p> <p>(ii) Comply with labor laws</p>	Employment record	Checking of records	Project locations	Do	Environment Specialist of DSISC and	Direct and indirect employment for

Impacts	Mitigation Measures	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation
increase in local revenue						PMC	local population - noted
Occupational hazards which can arise during work	<p>(i) Comply with all national, state and local core labor laws</p> <p>(ii) Develop and implement site-specific occupational health and safety (OHS) Plan which will include measures such as: (a) excluding public from the site; (b) ensuring all workers are provided with and use personal protective equipment like helmet, gumboot, safety belt, gloves, nose musk and ear plugs; (c) OHS Training for all site personnel; (d) documented procedures to be followed for all site activities; and (e) documentation of work-related accidents;</p> <p>(iii) Ensure that qualified first-aid can be provided at all times. Equipped first-aid stations shall be easily accessible throughout the site;</p> <p>(iv) Provide medical insurance coverage for workers;</p> <p>(v) Secure all installations from unauthorized intrusion and accident risks;</p> <p>(vi) Provide supplies of potable drinking water;</p> <p>(vii) Provide clean eating areas where workers are not exposed to hazardous or noxious substances;</p> <p>(viii) Provide health and safety orientation training to all new workers to ensure that they are apprised of the basic site rules of work at the site, personal protective protection, and preventing injuring to fellow workers;</p>	<ul style="list-style-type: none"> <li>Site-specific Health and Safety (H&amp;S) Plan</li> <li>Equipped first-aid stations;</li> <li>Medical insurance coverage for workers</li> <li>Number of accidents</li> <li>Supplies of potable drinking water;</li> <li>Record of H&amp;S orientation trainings</li> <li>Personal protective equipment</li> <li>Sign boards for hazardous areas such as energized electrical devices and lines, service</li> </ul>	<ul style="list-style-type: none"> <li>Checking of records</li> <li>Visual inspection of sites</li> </ul>	Project locations	Do	Environment Specialist of DSISC and PMC	<p>Site-specific Health and Safety (H&amp;S) Plan under implementation. Copy of the approved Health and Safety plan available with DSISC.</p> <p>H &amp; S training done on regular basis. Sample training document is attached as <b>Appendix 10,11</b></p> <p>PMC arranged Environment, Health Safety workshop for contractor, PIU, PMU and DSISC, detail attaché as <b>Appendix 12.</b></p> <p>Drinking water and first aid box available at site. Site photo enclosed in <b>Appendix 1.</b></p> <p>Tie up letter with</p>

Impacts	Mitigation Measures	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation
	(ix) Provide visitor orientation if visitors to the site can gain access to areas where hazardous conditions or substances may be present. Ensure also that visitor/s do not enter hazard areas unescorted; (x) Ensure the visibility of workers through their use of high visibility vests when working in or walking through heavy equipment operating areas; (xi) Ensure moving equipment is outfitted with audible back-up alarms; (xii) Mark and provide sign boards for hazardous areas such as energized electrical devices and lines, service rooms housing high voltage equipment, and areas for storage and disposal. Signage shall be in accordance with international standards and be well known to, and easily understood by workers, visitors, and the general public as appropriate	rooms					nearby health center in case of emergency needs to be arranged. Instruction has been given to contractor  Insurance arranged for the labourer (see <b>Appendix 5</b> ). Accident/ First aid register is maintained at each site (see sample copy in <b>Appendix 13</b> )
Health risks associated with AC pipes	(i) leave AC pipes in-situ untouched	Decommissioned AC Pipes	Site inspection	Project locations	Do	Environment Specialist of DSISC and PMC	Till date no AC pipes has been found
Impact on community safety. Traffic accidents and vehicle collision with pedestrians during material and waste transportation	(i) Restrict construction vehicle movements to defined access roads and demarcated working areas (unless in the event of an emergency) (ii) Enforce strict speed limit (20-30 kph) for playing on unpaved roads, construction tracks (iii) Night-time haulage will be by exception only, as approved by the PIU to minimize driving risk and disturbance to communities	Public grievance	Review of documents	Project Locations	Do	Environment Specialist of DSISC and PMC	No pedestrian accident has been recorded till date.  However, the ICDS Centre running at Zone 17: Shalipur should be shifted immediately to

Impacts	Mitigation Measures	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation
	(iv) Adopt standard and safe practices for micro tunneling (vi) Temporary traffic control (e.g. flagmen) and signs will be provided where necessary to improve safety and provide directions (vii) All drivers will undergo safety and training (viii) Public access to all areas where construction works are on-going will be restricted through the use of barricading and security personnel (ix) Warning signs, blinkers will be attached to the barricading to caution the public about the hazards associated with the works, and presence of deep excavation (x) The period of time when the pipeline trench is left open will be minimized through careful planning (xi) Control dust pollution – implement dust control measures as suggested under air quality section (xii) Maintain regularly the vehicles and use of manufacturer-approved parts to minimize potentially serious accidents caused by equipment malfunction or premature failure. (xiii) Provide road signs and flag persons to warn of on-going trenching activities.						prevent children being exposed to construction risk Pipe line laying work just started. All safety measures arranged. No trench will be kept open after pipe laying. Caution tape will be placed.
Impact on work camps and work site. Temporary air and noise pollution from machine	(i) As far as possible located the camp site within the work sites; if any camp to be established outside these, then select a camp site away from residential areas (at least 100 m buffer shall be maintained)	<ul style="list-style-type: none"> <li>Public grievance</li> <li>Accommodation</li> <li>Water and sanitation</li> </ul>	Site inspection and review of documents	Construction camps	Do	Environment Specialist of DSISC and PMC	Partially Complied mostly. However, housekeeping, toilet facility, testing of

Impacts	Mitigation Measures	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation
operation, water pollution from storage and use of fuels, oils, solvents, and lubricants Unsanitary and poor living conditions for workers	(ii) Avoid tree cutting for setting up camp facilities (iii) Camp site shall not be located near (100 m) water bodies, flood plains flood prone/low lying areas, or any ecologically, socially, archeologically sensitive areas (iv) Separate the workers living areas and material storage areas clearly with a fencing and separate entry and exit (v) Provide proper temporary accommodation with proper materials, adequate lighting and ventilation, appropriate facilities for winters and summers; ensure conditions of livability at work camps are maintained at the highest standards possible at all times; (vi) Consult PIU before locating project offices, sheds, and construction plants; (vii) Minimize removal of vegetation and disallow cutting of trees (viii) Ensure conditions of livability at work camps are maintained at the highest standards possible at all times; living quarters and construction camps shall be provided with standard materials (as far as possible to use portable ready to fit-in reusable cabins with proper ventilation); thatched huts, and facilities constructed with materials like GI sheets, tarpaulins, etc., shall not be allowed as accommodation for workers (ix) Camp shall be provided with proper drainage, there shall not be any water accumulation (x) Provide drinking water, water for	facilities for employees • Housekeeping – regular disposal of solid waste					drinking water, provision of fuel for cooking, provision of solid waste and wastewater disposal are some of the aspects requiring improvement.



Impacts	Mitigation Measures	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation
	<p>other uses, and sanitation facilities for employees</p> <p>(xi) Prohibit employees from cutting of trees for firewood; contractor should be providing proper facilities including cooking fuel (oil or gas; fire wood not allowed)</p> <p>(xii) Train employees in the storage and handling of materials which can potentially cause soil contamination</p> <p>(xiii) Recover used oil and lubricants and reuse or remove from the site</p> <p>(xiv) Manage solid waste according to the following preference hierarchy: reuse, recycling and disposal to designated areas; provide a compost pit for biodegradable waste, and non-biodegradable / recyclable waste shall be collected and sold in local market</p> <p>(xv) Remove all wreckage, rubbish, or temporary structures which are no longer required</p> <p>(xvi) At the completion of work, camp area shall be cleaned and restored to pre-project conditions, and submit report to PIU; PIU to review and approve camp clearance and closure of work site</p>						
Unsatisfactory compliance to EMP	<p>(i) Appointment of (I) Environment, Health and Safety (EHS) Supervisor to ensure EMP implementation</p> <p>(ii) Timely submission of monitoring reports including pictures</p>	<ul style="list-style-type: none"> <li>Appointment letter</li> <li>Monitoring records</li> </ul>	Review of records	-	-	Environment Specialist of DSISC and PMC	Although safety officer is serving as environmental focal for the package but yet to receive official communication.
Damage due to debris, spoils,	(i) Remove all spoils wreckage, rubbish, or temporary structures (such as	<ul style="list-style-type: none"> <li>Stockpile Management</li> </ul>	Review of documents and	Project Locations	Do	Environment Specialist of	Complied; only 100m pipeline

Impacts	Mitigation Measures	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation
excess construction materials	buildings, shelters, and latrines) which are no longer required; and (ii) All excavated roads shall be reinstated to original condition. (iii) All disrupted utilities restored (iv) All affected structures rehabilitated/compensated (v) The area that previously housed the construction camp is to be checked for spills of substances such as oil, paint, etc. and these shall be cleaned up. (vi) All hardened surfaces within the construction camp area shall be ripped, all imported materials removed, and the area shall be top soiled and re-grassed using the guidelines set out in the re-vegetation specification that forms part of this document. (vii) The contractor must arrange the cancellation of all temporary services. (viii) Request PIU to report in writing that worksites and camps have been vacated and restored to pre-project conditions before acceptance of work.	<ul style="list-style-type: none"> <li>Spoil Management</li> <li>Restoration of sites</li> </ul>	site inspections			DSISC and PMC	has been laid in Zone 17: Shalipur

**Table 8: Compliance to EMP for the Package WBDWSIP/DWW/NCB/N24P/02A/2017-18: Water Supply Distribution at Bhangar Block**

Impacts	Mitigation Measures	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation
<b>Design Phase</b>							
Source sustainability and	(i) Gravity distribution system: designing the entire system to maintain optimal	<ul style="list-style-type: none"> <li>Design philosophy</li> </ul>	Document review and LOP	All project locations	Before commencement	Environment Specialist of	Under compliance; Distribution network

Impacts	Mitigation Measures	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation
efficiency	flow and terminal pressure, and optimizing the overall energy usage (ii)Implementation of a water quality surveillance program including development of a laboratory as part of the project to ensure that supplied water meets the drinking water standards (iii)Minimizing water losses from pipelines by perfect jointing and alignments using appropriate techniques (iv) Reducing the incidence of water borne diseases by providing 100% population including urban poor with potable water supplies	<ul style="list-style-type: none"> <li>Project QA/QC plan</li> <li>Selection methodology for distribution network</li> </ul>	Survey		of final design	DSISC and PMC	not finalized
Socio economic impact – loss fishery area	(i) Avoid using low-lying lands / ponds for construction of OHRs; alternative private lands may be explored within the vicinity; (ii)Review the applicability of West Bengal Inland Fisheries Act, 1984, whether the site falls under the definition of fisher area; obtained permission from Fisheries Department if required prior to start of construction	List of selected location for OHRs	Site survey	All OHR sites	Before commencement of final design	Environment Specialist of DSISC and PMC	Complied; No low-lying lands or ponds are being filled for construction.
Tree cutting	(i) Minimize removal of trees by adopting to site condition and with appropriate layout design of OHRs within the sites (ii)Avoid cutting of trees by adopting suitable alignment changes as required during laying of pipelines; (iii)In unavoidable cases, obtain prior permission for tree cutting (iv)Plant and maintain 5 trees for each tree that is removed	<ul style="list-style-type: none"> <li>Tree felling requirement – site layout plan</li> <li>NOC – paper documents from line agency</li> </ul>	Site survey and review of site layout/ pipeline alignment plan	All project locations	Before commencement of final design	Environment Specialist of DSISC and PMC	Under compliance, no tree felling has been envisaged yet
<b>Pre-Construction Phase</b>							
Telephone lines,	(i) Identify and include locations and	List of affected	Observation	Specific	Before	Environment	Under Compliance;

Impacts	Mitigation Measures	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation
electric poles and wires, water lines within proposed project area	operators of these utilities in the detailed design documents to prevent unnecessary disruption of services during construction phase; and (ii) Require construction contractors to prepare a contingency plan to include actions to be taken in case of unintentional interruption of services. (iii) Require contractors to prepare spoils (waste) management plan and traffic management plan	utilities if any and operators	and document checking	project location	commencement of construction	Specialist of DSISC and PMC	construction of distribution network not yet started (Sample Spoil Management Plan – <b>Appendix 8</b> & sample Traffic Management Plan – <b>Appendix 9</b> )
Conflicts with local community; disruption to traffic flow and sensitive receptors	(i) Prioritize areas within or nearest possible vacant space in the project location; (ii) If it is deemed necessary to locate elsewhere, consider sites that will not promote instability and result in destruction of property, vegetation, irrigation, and drinking water supply systems; (iii) Do not consider residential areas; (iv) Take extreme care in selecting sites to avoid direct disposal to water body which will inconvenience the community. (v) For excess spoil disposal, ensure (a) site shall be selected preferably from barren, infertile lands. In case agricultural land needs to be selected, written consent from landowners (not lessees) will be obtained; (b) debris disposal site shall be at least 200 m away from surface water bodies; (c) no residential areas shall be located within 50 m downwind side of the site; and (d) site is minimum 250 m away from sensitive locations like settlements, ponds/lakes or	<ul style="list-style-type: none"> <li>List of selected location for OHRs</li> <li>Involvement of traffic dept.</li> <li>Road closure planning</li> </ul>	<ul style="list-style-type: none"> <li>Site observation</li> <li>Review of documents</li> <li>Grievance Register</li> </ul>	Specific project location	Before commencement of final design and commencement of construction	Environment Specialist of DSISC and PMC	Complied and to be maintained

Impacts	Mitigation Measures	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation
	other water bodies.						
Extraction of materials can disrupt natural land contours and vegetation resulting in accelerated erosion, disturbance in natural drainage patterns, ponding and water logging, and water pollution.	(i) Obtain construction materials only from government approved quarries with prior approval of PIU; (ii) PIU to review, and ensure that proposed quarry sources have all necessary clearances/ permissions in place prior to approval (iii) Contractor to submit to PIU on a monthly basis documentation on material obtained from each source (quarry/ borrow pit) (iv) Avoid creation of new borrow areas, quarries etc., for the project; if unavoidable, contractor to obtain all clearances and permissions as required under law, including Environmental Clearance prior to approval by PIU	<ul style="list-style-type: none"> <li>List of approved quarry sites and sources of materials</li> <li>Construction Contractor documentation</li> </ul>	<ul style="list-style-type: none"> <li>Checking of records</li> <li>Visual inspection of sites</li> </ul>	Quarries and material source areas	Daily visit by construction supervisor of DSISC. Weekly visit by Construction Manager and Environment Team of DSISC of operational sites.	DSISC Construction Management and Environmental Safeguard Team	Complied; Approval obtained from DSISC before procurement.
Failure to obtain necessary consents, permits, NOCs, etc. can result to design revisions and/or stoppage of works	(i) Obtain all necessary consents, permits, clearance, NOCs, etc. prior to award of civil works. (ii) Ensure that all necessary approvals for construction to be obtained by contractor are in place before start of construction (iii) Acknowledge in writing and provide report on compliance all obtained consents, permits, clearance, NOCs, etc. (iv) Include in detailed design drawings and documents all conditions and provisions if necessary	List of applicable legislation	Checking of documents	All project locations	Before commencement of construction	Environment Specialist of DSISC and PMC	Complied and to be continued
Health risk due to exposure to asbestos materials	(i) Obtain details on location of underground AC pipes (ii) Locate the new piper carefully to avoid encountering AC pipes (ii) Leave the AC pipes undisturbed in	Rubbish containing asbestos cement	Site inspection	Specific project location	Daily visit by construction supervisor of DSISC. Weekly	DSISC Construction Management and Environmental	Complied. Till date no rubbish containing asbestos cement has been found

Impacts	Mitigation Measures	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation
	the ground.				visit by Construction Manager and Environment Team of DSISC of operational sites.	Safeguard Team	
<b>Construction Phase</b>							
Irreversible impact to the environment, workers, and community	(i) Project manager and all key workers will be required to undergo training on EMP implementation including spoils/waste management, Standard operating procedures (SOP) for construction works; occupational health and safety (OHS), core labor laws, applicable environmental laws, etc.	Induction Awareness Trainings & Toolbox Talks Safeguard Trainings	Review of Training records Site Inspections	Project Locations	-	Environment Specialist of DSISC and PMC	Under compliance; Site Environmental Safety training and awareness arranged by contractor on regular basis (Sample attached as <b>Appendix 10</b> ) Awareness program cum training arranged by DSISC which shown in <b>Appendix 11</b>
Emissions from construction vehicles, equipment, and machinery used for installation of pipelines resulting to dusts and increase in concentration of vehicle-related pollutants such as carbon monoxide,	<b>For all construction works</b> (i) Comply with the air pollution / dust control measures for construction activities stipulated by the "Direction of West Bengal Department of Environment under the Air Act, 1981 Direction No. EN/3170/T-IV-7 /001/2009 dated: 10 December 2009" (ii) Damp down the soil and any stockpiled material on site by water sprinkling; (iii) Use tarpaulins to cover the loose material (soil, sand, aggregate etc.,)	<ul style="list-style-type: none"> <li>Location of stockpiles</li> <li>Complaints from sensitive receptors</li> <li>Monitoring data</li> <li>Heavy equipment and machinery</li> </ul>	Site inspection Public grievance register	Project locations	Daily visit by construction supervisor of DSISC. Weekly visit by Construction Manager, Visit by Environment Specialist and Support Environment staff	Environment Specialist of DSISC and PMC	Under compliance; Pipe laying work yet to be started  Water sprinkling done as per requirement. Pre-construction air quality monitoring done as per

Impacts	Mitigation Measures	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation
sulfur oxides, particulate matter, nitrous oxides, and hydrocarbons.	<p>when transported by trucks;</p> <p>(iv) Provide a dust screen/high compound wall around the construction sites (OHRs)</p> <p>(i) Clean wheels and undercarriage of haul trucks prior to leaving construction site/quarry</p> <p>(vi) Control dust generation while unloading the loose material (particularly aggregate, soil) at the site by sprinkling water and unloading inside the barricaded area</p> <p>(vii) Stabilize surface soils where loaders, support equipment and vehicles will operate by using water and maintain surface soils in a stabilized condition</p> <p>(viii) Apply water prior to leveling or any other earth moving activity to keep the soil moist throughout the process</p> <p>(ix) Control access to work area, prevent unnecessary movement of vehicle, public trespassing into work areas; limiting soil disturbance will minimize dust generation</p> <p>(x) Ensure that all the construction equipment and machineries are fitted with pollution control devises, which are operating correctly, and have a valid pollution under control (PUC) certificate</p> <p><b>Pipeline works</b></p> <p>(i) Barricade the construction area</p> <p>(ii) Initiate site clearance and excavation work only after barricading of the site is done</p> <p>(iii) Confine all the material, excavated soil, debris, equipment, machinery (excavators, cranes etc.), to the</p>	<p>with air pollution control</p> <ul style="list-style-type: none"> <li>• Water sprinkling arrangement</li> <li>• Cover materials</li> </ul>					<p>IEE (Complete result certificates available in DSISC office as back up paper)</p> <p>Most of the PUC certificate obtained for Vehicle and Equipment</p>



Impacts	Mitigation Measures	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation
	<p>barricaded area</p> <p>(iv) Limit the stocking of excavated material at the site; remove the excess soil from the site immediately to the designated disposal area</p> <p>(v) Undertake the work section wise</p> <p>(vi) Conduct work sequentially - excavation, pipe laying, backfilling; conduct pipe testing section-wise (for a minimum length as possible) so that backfilling, stabilization of soil can be done.</p> <p>(vii) Remove the excavated soil of first section to the disposal site; as the work progresses, sequentially, by the time second section is excavated, the first section will be ready for back filling, use the freshly excavated soil for back filling, this will avoid stocking of material, and minimize the dust.</p> <p>(viii) Backfilled trench at any completed section after removal of barricading will be the main source of dust pollution. The traffic, pedestrian movement and wind will generate dust from backfilled section. Road restoration shall be undertaken immediately.</p>						
<p>Mobilization of settled silt materials, and chemical contamination from fuels and lubricants during construction can contaminate</p>	<p>(i) All earthworks be conducted during the dry season to prevent the problem of soil run-off during monsoon season;</p> <p>(ii) Avoid stockpiling of earth fill especially during the monsoon season unless covered by tarpaulins or plastic sheets;</p> <p>(iii) Prioritize re-use of excess spoils and materials in the construction works. If</p>	<ul style="list-style-type: none"> <li>Areas for stockpiles, storage of fuels and lubricants and waste materials</li> <li>Number of silt traps</li> </ul>	<p>Site inspection</p> <p>Public grievance register</p>	<p>All project locations</p>	<p>Do</p>	<p>Environment Specialist of DSISC and PMC</p>	<p>Mostly Complied except Zone 4 and 10;</p> <p>Wastewater management at Zone 4 and 10 to be improved; construction</p>

Impacts	Mitigation Measures	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation
nearby surface water quality. Ponding of water in the pits / foundation excavations	spoils will be disposed, only designated disposal areas shall be used; (iv) Install temporary silt traps or sedimentation basins along the drainage leading to the water bodies; (v) Place storage areas for fuels and lubricants away from any drainage leading to water bodies; (vi) Store fuel, construction chemicals etc., on an impervious floor, also avoid spillage by careful handling (vii) Dispose any wastes generated by construction activities in designated sites; and (viii) Conduct surface quality inspection according to the Environmental Management Plan (EMP). (ix) Create a temporary drainage channel around the work area to arrest the entry of runoff from upper areas into the work area (x) Pump out the water collected in the pits / excavations to a temporary sedimentation pond; dispose of only clarified water into drainage channels/streams after sedimentation in the temporary ponds (xi) Consider safety aspects related to pit collapse due to accumulation of water	installed along drainages (in slope) leading to water bodies • Entry routes of pollutant in nearby Water bodies					material should not be put in the ponds located near these sites. Silt traps / sediment basin should be installed prior to discharge of construction wastewater from these sites. Improper storage (material stored in slope) of construction materials at zone 13 reservoir site
Increase in noise level due to earth-moving and excavation equipment, and the transportation of equipment,	(i) Plan activities in consultation with PIU so that activities with the greatest potential to generate noise are conducted during periods of the day which will result in least disturbance; (ii) Horns should not be used unless it is necessary to warn other road users or	• Complaints from sensitive receptors • Use of silencers in noise-	○ Checking of records ○ Visual inspection of sites	All project locations	Do	Environment Specialist of DSISC and PMC	Mostly Complied. No such noise generating problem near the project location. Pre-construction,

Impacts	Mitigation Measures	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation
materials, and people	<p>animals of the vehicle's approach;</p> <p>(iii) Minimize noise from construction equipment by using vehicle silencers, fitting jackhammers with noise-reducing mufflers, and use portable street barriers to minimize sound impact to surrounding sensitive receptor; and</p> <p>(iv) Identify any buildings at risk from vibration damage and avoiding any use of pneumatic drills or heavy vehicles in the vicinity</p> <p>(v) Horns should not be used unless it is necessary to warn other road users or animals of the vehicle's approach;</p> <p>(vi) Consult local communities in advance of the work to identify and address key issues, and avoid working at sensitive times, such as religious and cultural festivals.</p>	<p>producing equipment and sound barriers</p> <ul style="list-style-type: none"> <li>Monitoring data</li> </ul>					<p>monitoring done. Monitoring will be continued as per IEE. (Complete result certificates available in DSISC office as back up paper). However, use of ear plugs by labourer should be ensured during noisy activities.</p>
Impacts due to excess excavated earth, excess construction materials, and solid waste such as removed concrete, wood, packaging materials, empty containers, spoils, oils, lubricants, and other similar items.	<p>(i) Prepare and implement a Construction Waste Management Plan</p> <p>(ii) As far as possible utilize the debris and excess soil in construction purpose, for example for raising the ground level or construction of access roads etc.,</p> <p>(iii) Stockpiles, lubricants, fuels, and other materials should be located away from steep slopes and water bodies;</p> <p>(iv) Avoid stockpiling any excess spoils at the site for long time. Excess excavated soils should be disposed of to approved designated areas immediately;</p> <p>(v) If disposal is required, the site shall be selected preferably from barren, infertile lands; site should be located away from residential areas, forests,</p>	<ul style="list-style-type: none"> <li>Waste Management List</li> <li>Stockpile Management</li> <li>Complaints from Sensitive receptors</li> <li>PMU/PIU/DSI SC to report in writing that the necessary environmental restoration work</li> </ul>	<ul style="list-style-type: none"> <li>Checking of records</li> <li>Visual inspection of sites</li> </ul>	Project locations	Do	Environment Specialist of DSISC and PMC	<p>Complied</p> <p>Excess earth used mostly for backfilling</p> <p>Excess spoils are not generally stockpiled</p>

Impacts	Mitigation Measures	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation
	<p>water bodies and any other sensitive land uses</p> <p>(vi) Domestic solid wastes should be properly segregated in biodegradable and non-biodegradable for collection and disposal to designated solid waste disposal site; create a compost pit at workers' camp sites for disposal of biodegradable waste; non-biodegradable / recyclable material shall be collected separately and sold in the local recycling material market</p> <p>(vii) Residual and hazardous wastes such as oils, fuels, and lubricants shall be disposed of in disposal sites approved by local authorities/West Bengal Pollution Control Board (WBPCB);</p> <p>(viii) Prohibit burning of construction and/or domestic waste;</p> <p>(ix) Ensure that wastes are not haphazardly dumped thrown within and around the project site and adjacent areas; provide proper collection bins, and create awareness to use the dust bins.</p> <p>(x) Conduct site clearance and restoration to original condition after the completion of construction work; PIU to ensure that site is properly restored prior to issuing of construction completion certificate</p>	has been done					
Disruption of service and damage to existing infrastructure at specified project	<p>(i) Prepare a list of affected utilities and operators if any;</p> <p>(ii) Prepare a contingency plan to include actions to be done in case of unintentional interruption of service</p>	<ul style="list-style-type: none"> <li>List of affected utilities if any and operators</li> <li>Public grievance</li> </ul>	Observation And document checking	Project locations	Do	Environment Specialist of DSISC and PMC	Complied as Per requirement. Consultation with utility dept. as and when required

Impacts	Mitigation Measures	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation
location							
Loss of vegetation and tree cover	(i) Minimize removal of vegetation and disallow cutting of trees, by adopting best site layout and pipeline alignments (ii) If tree-removal will be required, obtain tree-cutting permit and (iii) Plant 5 native trees for every one that is removed.	Tree felling requirement and afforestation after final design	<ul style="list-style-type: none"> <li>Checking of records</li> <li>Visual inspection of sites</li> </ul>	Project locations	Do	Environment Specialist of DSISC and PMC	As of now, tree felling requirement is not envisaged.
Traffic problems and conflicts near project locations and haul road	<p><b>Hauling (material, waste/debris and equipment) activities</b></p> <p>(i) Plan transportation routes so that heavy vehicles do not use narrow local roads, except in the immediate vicinity of delivery sites</p> <p>(ii) Schedule transport and hauling activities during non-peak hours;</p> <p>(iii) Locate entry and exit points in areas where there is low potential for traffic congestion;</p> <p>(iv) Drive vehicles in a considerate manner</p> <p>(v) Notify affected public by public information notices, providing sign boards informing nature and duration of construction works and contact numbers for concerns/complaints.</p> <p><b>Pipeline works</b></p> <p>(i) Confine work areas along the roads to the minimum possible extent; all the activities, including material and waste/surplus soil stocking should be confined to this area. Provide barricading; avoid material/surplus soil stocking in congested areas – immediately removed from site/ or brought to the as and when required</p>	<ul style="list-style-type: none"> <li>Traffic Management Plan</li> <li>Public grievance</li> <li>Number of signages placed at subproject location</li> </ul>	Site visit and document review	Project locations	Do	Environment Specialist of DSISC and PMC	Under compliance; as of now laying of distribution network not started

Impacts	Mitigation Measures	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation
	(ii) Leave spaces for access between mounds of soil to maintain access to the houses / properties (iii) Provide pedestrian access in all the locations; provide wooden/metal planks over the open trenches at each house to maintain the access. (iv) Inform the affected local population 1-week in advance about the work schedule (v) Plan and execute the work in such a way that the period of disturbance/ loss of access is minimum. (vi) Keep the site free from all unnecessary obstructions; (vii) Coordinate with Police for temporary road diversions, where necessary, and for provision of traffic aids if transportation activities cannot be avoided during peak hours						
Generation of temporary employment and increase in local revenue	(i) Employ local labor force as far as possible (ii) Comply with labor laws	Employment record	Checking of records	Project locations	Do	Environment Specialist of DSISC and PMC	Direct and indirect employment for local population - noted
Occupational hazards which can arise during work	(i) Comply with all national, state and local core labor laws (ii) Develop and implement site-specific occupational health and safety (OHS) Plan which will include measures such as: (a) excluding public from the site; (b) ensuring all workers are provided with and use personal protective equipment like helmet, gumboot, safety belt, gloves, nose musk and ear plugs; (c) OHS Training for all site personnel; (d)	<ul style="list-style-type: none"> <li>Site-specific Health and Safety (H&amp;S) Plan</li> <li>Equipped first-aid stations;</li> <li>Medical insurance coverage for workers</li> </ul>	<ul style="list-style-type: none"> <li>Checking of records</li> <li>Visual inspection of sites</li> </ul>	Project locations	Do	Environment Specialist of DSISC and PMC	Site-specific Health and Safety (H&S) Plan under implementation. Copy of the approved Health and Safety plan available with DSISC. H & S training done

Impacts	Mitigation Measures	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation
	<p>documented procedures to be followed for all site activities; and (e) documentation of work-related accidents;</p> <p>(iii) Ensure that qualified first-aid can be provided at all times. Equipped first-aid stations shall be easily accessible throughout the site;</p> <p>(iv) Provide medical insurance coverage for workers;</p> <p>(v) Secure all installations from unauthorized intrusion and accident risks;</p> <p>(vi) Provide supplies of potable drinking water;</p> <p>(vii) Provide clean eating areas where workers are not exposed to hazardous or noxious substances;</p> <p>(viii) Provide health and safety orientation training to all new workers to ensure that they are apprised of the basic site rules of work at the site, personal protective protection, and preventing injuring to fellow workers;</p> <p>(ix) Provide visitor orientation if visitors to the site can gain access to areas where hazardous conditions or substances may be present. Ensure also that visitor/s do not enter hazard areas unescorted;</p> <p>(x) Ensure the visibility of workers through their use of high visibility vests when working in or walking through heavy equipment operating areas;</p> <p>(xi) Ensure moving equipment is outfitted with audible back-up alarms;</p> <p>(xii) Mark and provide sign boards for hazardous areas such as energized</p>	<ul style="list-style-type: none"> <li>• Number of accidents</li> <li>• Supplies of potable drinking water;</li> <li>• Record of H&amp;S orientation trainings</li> <li>• Personal protective equipment</li> <li>• Sign boards for hazardous areas such as energized electrical devices and lines, service rooms</li> </ul>					<p>on regular basis. Sample training document is attached as <b>Appendix 10, 11</b></p> <p>PMC arranged Environment, Health Safety workshop for contractor, PIU, PMU and DSISC, detail attaché as <b>Appendix 12.</b></p> <p>Drinking water and first aid box available at site. Site photo enclosed in <b>Appendix 1.</b></p> <p>Tie up letter with nearby health center in case of emergency needs to be arranged. Instruction has been given to contractor Insurance arranged for the labourer (see <b>Appendix 5</b>). Accident/ First aid register is maintained at each site (see sample</p>



Impacts	Mitigation Measures	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation
	electrical devices and lines, service rooms housing high voltage equipment, and areas for storage and disposal. Signage shall be in accordance with international standards and be well known to, and easily understood by workers, visitors, and the general public as appropriate						copy in <b>Appendix 13)</b>
Health risks associated with AC pipes	(i) leave AC pipes in-situ untouched	Decommissioned AC Pipes	Site inspection	Project locations	Do	Environment Specialist of DSISC and PMC	Till date no AC pipes has been found
Impact on community safety. Traffic accidents and vehicle collision with pedestrians during material and waste transportation	(i) Restrict construction vehicle movements to defined access roads and demarcated working areas (unless in the event of an emergency) (ii) Enforce strict speed limit (20-30 kph) for playing on unpaved roads, construction tracks (iii) Night-time haulage will be by exception only, as approved by the PIU to minimize driving risk and disturbance to communities (iv) Adopt standard and safe practices for micro tunneling (vi) Temporary traffic control (e.g. flagmen) and signs will be provided where necessary to improve safety and provide directions (vii) All drivers will undergo safety and training (viii) Public access to all areas where construction works are on-going will be restricted through the use of barricading and security personnel (ix) Warning signs, blinkers will be	Public grievance	Review of documents	Project Locations	Do	Environment Specialist of DSISC and PMC	No pedestrian accident has been recorded till date.  Pipe line work not started. No trench will be kept open after pipe laying. Caution tape will be placed.

Impacts	Mitigation Measures	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation
	<p>attached to the barricading to caution the public about the hazards associated with the works, and presence of deep excavation</p> <p>(x) The period of time when the pipeline trench is left open will be minimized through careful planning</p> <p>(xi) Control dust pollution – implement dust control measures as suggested under air quality section</p> <p>(xii) Maintain regularly the vehicles and use of manufacturer-approved parts to minimize potentially serious accidents caused by equipment malfunction or premature failure.</p> <p>(xiii) Provide road signs and flag persons to warn of on-going trenching activities.</p>						
Impact on work camps and work site. Temporary air and noise pollution from machine operation, water pollution from storage and use of fuels, oils, solvents, and lubricants. Unsanitary and poor living conditions for workers	<p>(i) As far as possible located the camp site within the work sites; if any camp to be established outside these, then select a camp site away from residential areas (at least 100 m buffer shall be maintained)</p> <p>(ii) Avoid tree cutting for setting up camp facilities</p> <p>(iii) Camp site shall not be located near (100 m) water bodies, flood plains flood prone/low lying areas, or any ecologically, socially, archeologically sensitive areas</p> <p>(iv) Separate the workers living areas and material storage areas clearly with a fencing and separate entry and exit</p> <p>(v) Provide proper temporary accommodation with proper materials, adequate lighting and ventilation,</p>	<ul style="list-style-type: none"> <li>• Public grievance</li> <li>• Accommodation</li> <li>• Water and sanitation facilities for employees</li> <li>• Housekeeping – regular disposal of solid waste</li> </ul>	Site inspection and review of documents	Construction camps	Do	Environment Specialist of DSISC and PMC	Partially Complied mostly. However, housekeeping, toilet facility, testing of drinking water, provision of fuel for cooking, provision of solid waste and wastewater disposal are some of the aspects requiring improvement.

Impacts	Mitigation Measures	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation
	<p>appropriate facilities for winters and summers; ensure conditions of livability at work camps are maintained at the highest standards possible at all times;</p> <p>(vi) Consult PIU before locating project offices, sheds, and construction plants;</p> <p>(vii) Minimize removal of vegetation and disallow cutting of trees</p> <p>(viii) Ensure conditions of livability at work camps are maintained at the highest standards possible at all times; living quarters and construction camps shall be provided with standard materials (as far as possible to use portable ready to fit-in reusable cabins with proper ventilation); thatched huts, and facilities constructed with materials like GI sheets, tarpaulins, etc., shall not be allowed as accommodation for workers</p> <p>(ix) Camp shall be provided with proper drainage, there shall not be any water accumulation</p> <p>(x) Provide drinking water, water for other uses, and sanitation facilities for employees</p> <p>(xi) Prohibit employees from cutting of trees for firewood; contractor should be providing proper facilities including cooking fuel (oil or gas; fire wood not allowed)</p> <p>(xii) Train employees in the storage and handling of materials which can potentially cause soil contamination</p> <p>(xiii) Recover used oil and lubricants and reuse or remove from the site</p> <p>(xiv) Manage solid waste according to</p>						

Impacts	Mitigation Measures	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation
	the following preference hierarchy: reuse, recycling and disposal to designated areas; provide a compost pit for biodegradable waste, and non-biodegradable / recyclable waste shall be collected and sold in local market (xv) Remove all wreckage, rubbish, or temporary structures which are no longer required (xvi) At the completion of work, camp area shall be cleaned and restored to pre-project conditions, and submit report to PIU; PIU to review and approve camp clearance and closure of work site						
Unsatisfactory compliance to EMP	(i) Appointment of (I) Environment, Health and Safety (EHS) Supervisor to ensure EMP implementation (ii) Timely submission of monitoring reports including pictures	Appointment letter Monitoring records	Review of records	-	-	Environment Specialist of DSISC and PMC	Although safety officer is serving as environmental focal for the package but yet to receive official communication.
Damage due to debris, spoils, excess construction materials	(i) Remove all spoils wreckage, rubbish, or temporary structures (such as buildings, shelters, and latrines) which are no longer required; and (ii) All excavated roads shall be reinstated to original condition. (iii) All disrupted utilities restored (iv) All affected structures rehabilitated/compensated (v) The area that previously housed the construction camp is to be checked for spills of substances such as oil, paint, etc. and these shall be cleaned up. (vi) All hardened surfaces within the construction camp area shall be ripped, all imported materials removed, and the	Stockpile Management Spoil Management Restoration of sites	Review of documents and site inspections	Project Locations	Do	Environment Specialist of DSISC and PMC	Under Compliance, Spoil Management Plan has been submitted however construction of distribution network not yet started

Impacts	Mitigation Measures	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring	Compliance Status/ Explanation
	<p>area shall be top soiled and regrassed using the guidelines set out in the revegetation specification that forms part of this document.</p> <p>(vii) The contractor must arrange the cancellation of all temporary services.</p> <p>(viii) Request PIU to report in writing that worksites and camps have been vacated and restored to pre-project conditions before acceptance of work.</p>						

35. Based on the foregoing observations, findings and environmental monitoring carried out from December 2018 to April 2019, it may be concluded that the subprojects have been implemented in almost full compliance of the required environmental safeguards. Overall compliance level is shown in **Table 9** below.

**Table 9: Overall Compliance with Environmental Management Plan**

No.	Sub-project Name	EMP Part of Contract Documents (Y/N)	EMP Being Implemented (Y/N)	Status of Implementation (Excellent/Satisfactory / Partially Satisfactory, Below Satisfactory)	Action Proposed and Additional Measures Required
<b>1</b>	<b>Over Head Reservoir Including Water Supply Distribution Network and Metering work</b>				
a.	Package WBDWSIP/DWW/NCB/ N24P/02A/2017-18: Haroa Block	Y	Y	Satisfactory	1.Improvement of facilities in Construction Camps, especially sleeping arrangements, toilet facilities, provision of drinking water and fuel for cooking, waste and wastewater management 2.The ICDS functioning inside Zone 17: Shalipur should be shifted from the work site immediately 3.The pond located inside the Zone 1: Amta should be protected from being contaminated due to discharge of domestic and construction wastewater
b.	Package WBDWSIP/DWW/NCB/ N24P/02B/2017-18: Bhangar - II Block	Y	Y	Satisfactory	1.Improvement of facilities in Construction Camps, especially sleeping arrangements, toilet facilities, provision of drinking water and fuel for cooking, waste and wastewater management 2.The pit latrines installed at Zone 10 and 13, may cause faecal coliform contamination to groundwater and should be replaced with better systems 3.The pond located adjacent to the Zone 10: Shanpukuria

No.	Sub-project Name	EMP Part of Contract Documents (Y/N)	EMP Being Implemented (Y/N)	Status of Implementation (Excellent/Satisfactory / Partially Satisfactory, Below Satisfactory)	Action Proposed and Additional Measures Required
					should be protected from being contaminated due to discharge of domestic and construction wastewater

## V. ENVIRONMENTAL MONITORING AND EVALUATION

36. For effective monitoring, selected environmental parameters have been identified as indicators which will be qualitatively and quantitatively measured and compared over a period of time in order to assess/ensure the compliance of EMP. The environmental performance indicators are physical, biological and social characteristics identified as most important in affecting the environment at critical locations all along the subproject locations. The parameters identified as performance indicators are:

- Air, noise and water quality
- Compliance to EMP
- Compliance to local/state/national environmental regulations

37. In addition to desk reviews and site inspections, monitoring of selected environmental parameters have been conducted during the reporting period. The frequencies of the environmental monitoring activities are commensurate to the type and significance of the impacts. For 2 sub projects at North 24 pgs ambient air quality, noise levels and water quality were monitored to establish baseline of environmental qualities in the project area. Baseline monitoring for other awarded packages will be started shortly after finalization of design.

38. In accordance with the IEE, the Contract document includes following requirements for the baseline monitoring

Monitoring Field	Monitoring Location	Monitoring Parameters	Frequency
Ambient air quality	5 locations (to be selected during implementation to represent the overall project area)	PM10, PM2.5, NO2, SO2, CO	Once before start of construction Quarterly (yearly 4-times) during construction (2-year period considered)
Ambient noise	5 locations (same as air quality monitoring)	Day time and night time noise levels (24 hours)	Once before start of construction Quarterly (yearly 4-times) during construction (2-year period considered)
Surface water quality	2 locations (to be selected during implementation)	pH, Oil and grease, Cl, F, NO3, TC, FC, Hardness, Turbidity, BOD, COD, DO, Total Alkalinity	Once before start of construction Half yearly during construction (2-year construction period considered)

39. In order to determine the baseline monitoring locations, following matrices were developed for each package.



OHT No.	Presence of Environmental Sensitivities					
	Hospital	Educational Institute	Religious Place	Dense Population	Wetland	Others
1						
2						

Zone No.	Presence of Environmental Sensitivities					
	Hospital	Educational Institute	Religious Place	Dense Population	Wetland	Others
1	Node X - Y					
2	****					

40. Based on outcome of above exercise air quality, noise level and surface water quality monitoring locations were selected for the individual packages. These locations and results for each of the packages shown in **Tables 10 to 13**. All test certificates are available in DSISC office as back up paper. Monitoring locations are shown in **Figure 7 and 8**.

41. For both Haroa and Bhangar-II blocks, PM<sub>10</sub> and PM<sub>2.5</sub> result are found to be exceeding the limits prescribed in National Ambient Air Quality Standard. However, CO, SO<sub>2</sub> and NO<sub>2</sub> concentration levels – typically emitted due to combustion of fossil fuels – were all found within the prescribed limits for both the packages. Therefore, it can be inferred that the increased levels of PM<sub>10</sub> and PM<sub>2.5</sub> are due to high background concentration. Contractors are being advised regularly to take necessary action on dust suppression by sprinkling of water whenever required.

42. In case of noise level, while the limits are exceeded when the monitoring was conducted near schools in both the packages however, in other locations the noise levels were found to be within the stipulated limits.

43. Water quality results were compared against CPCB's limits for outdoor bathing – prevalent use of these water bodies. Based on the results obtained it can be concluded that release of wastewater, mostly having biological loading has caused contamination of these water bodies and rendered these sources unsuitable for outdoor bathing.

**Table 10: Ambient Air Quality Monitoring Data at working sites**

Package	Monitoring location	Monitoring stage	Date of monitoring	Parameters				
				SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>	PM <sub>2.5</sub> µg/m <sup>3</sup>	PM <sub>10</sub> µg/m <sup>3</sup>	CO µg/m <sup>3</sup>
Over Head Reservoir Including Water Supply Distribution Network and Metering work in Haroa (Contract Package WBDWSIP/DW W/NCB/N24P/02 A/2017-18)	Nebutala Abada- Zone 2	Base line	15-16.02.2019	13.1	37.9	137	273	528
	Kulti Uposasthya Kendra- Zone 5	Base line	18-19.02.2019	9.6	35.8	89	177	684
	Paschim Bhaida Primary School- Zone 13	Base line	14-15.02.2019	11.2	37.5	123	235	601
	Near Majanpur High School- Zone 17	Base line	14-15.02.2019	10.4	36.0	106	215	579
	Haroa Market- Zone 21	Base line	15-16.02.2019	11.7	39.9	143	261	773
		<b>Average Base line</b>		<b>11.2</b>	<b>37.42</b>	<b>119.6</b>	<b>232.2</b>	<b>633</b>
Over Head Reservoir Including Water Supply Distribution Network and Metering work in	Nangla Palpur- Zone 9	Base line	21-22.02.2019	11.4	35.5	68	137	570
	Dharmatala Pachuria- Zone 1	Base line	20-21.02.2019	10.3	32.3	98	185	595
	Swastayan Gacchi Near School- Zone 4	Base line	20-21.02.2019	12.9	38.3	103	217	673

Package	Monitoring location	Monitoring stage	Date of monitoring	Parameters				
				SO <sub>2</sub> µg/m <sup>3</sup>	NO <sub>2</sub> µg/m <sup>3</sup>	PM <sub>2.5</sub> µg/m <sup>3</sup>	PM <sub>10</sub> µg/m <sup>3</sup>	CO µg/m <sup>3</sup>
Bhangar – II Block (Contract Package WBDWSIP/DW W/NCB/N24P/02 B/2017-18)	Near Coach Pukur Primary School- 15	Base line	21-22.02.2019	9.0	31.9	87	198	553
	Near Paschim Majarhat Primary School- Zone 10	Base line	18-19.02.2019	12.0	36.7	146	251	709
		<b>Average Base line</b>		<b>11.12</b>	<b>34.94</b>	<b>100.4</b>	<b>197.6</b>	<b>620</b>
	<b>STANDARD</b>			<b>80.0</b>	<b>80.0</b>	<b>60.0</b>	<b>100.0</b>	<b>2000.0</b>

Note: National level Central Pollution Control Board's (Govt. of India) guideline/ protocol used for sampling, For analysis. INDIAN STANDARD IS 5182 and USEPA CFR 40 (International protocol) used for analysis

**Table 11: Noise Level Monitoring Data at Working Sites**

Table 11: Noise Level Monitoring Data at Working Sites					
Package	Sampling Locations	Implementation Stage	Date of Monitoring	Day Time Leq dB(A)	Night Time Leq dB(A)
Over Head Reservoir Including Water Supply Distribution Network and Metering work in Haroa (Contract Package WBDWSIP/DWW/NCB/N24P/02A/2017-18)	Nebutala Abada- Zone 2 (R)	Base line	16-17.02.2019	56.2	50.1
	Kulti Uposasthya Kendra- Zone 5 (S)	Base line	18-19.02.2019	53.9	47.2
	Paschim Bhaida Primary School- Zone 13 (S)	Base line	14-15.02.2019	57.2	46.5
	Near Majanpur High School- Zone 17 (S)	Base line	14-15.02.2019	51.8	47.7
	Haroa Market- Zone 21 (C)	Base line	15-16.02.2019	65.6	56.1
		Average Base line		56.9	49.5
Over Head Reservoir Including Water Supply Distribution Network and Metering work in Bhangar – II Block (Contract Package WBDWSIP/DWW/NCB/N24P/02B/2017-18)	Nangla Palpur- Zone 9 (R)	Base line	21-22.02.2019	56.2	50.1
	Dharmatala Pachuria- Zone 1(R)	Base line	20-21.02.2019	65.6	56.1
	Swastayan Gacchi Near School- Zone 4 (S)	Base line	20-21.02.2019	51.8	47.7
	Near Coach Pukur Primary School- 15 (S)	Base line	21-22.02.2019	53.9	47.2
	Near Paschim Majarhat Primary School- Zone 10 (S)	Base line	18-19.02.2019	57.2	46.5
		Average Base line		56.9	49.5
Standard		Day time: Industrial area:75 Commercial: 65 Residential area: 55 Silence zone: 50 Night time: Industrial area:70 Commercial: 55 Residential area: 45 Silence zone: 40			
Note: National level Central Pollution Control Board's , CPCB's (Govt. of India) guideline/ protocol used for sampling					

**Table 12: Water Quality Results: Contract Package WBDWSIP/DWW/NCB/N24P/02A/2017-18**

Site no.	Date of Sampling	Site Location	Parameters (Government Standards)												
			pH	Turbidity (NTU)	Chloride (mg/)	Fluoride (mg/)	Nitrate (mg/)	COD (mg/)	BOD (mg/l)	Oil & Grease (mg/)	DO (mg/l)	Total Alkalinity (mg/l)	Hardness (mg/l)	Total Coliform (MPN/100)	Faecal Coliform (MPN/100)
<b>Zone-2</b>	14.02.2019	Pond water near Nebutola Abada	8.17	5.2	746	0.89	<0.5	137	36.4	2.4	6.62	154	400	2.0	Not Detected
<b>Zone-13</b>	14.02.2019	Pond water in Zone-13	7.45	12	83.53	0.43	<0.5	19.6	5.1	5.8	4.8	189	220	9.0	3.0
<b>CPCB (Outdoor bathing)</b>			<b>6.5-8.5</b>	<b>--</b>	<b>--</b>	<b>1.5</b>	<b>--</b>	<b>--</b>	<b>3</b>	<b>--</b>	<b>5</b>	<b>--</b>	<b>--</b>	<b>500</b>	<b>--</b>

**Table 13: Water Quality Results: Contract Package WBDWSIP/DWW/NCB/N24P/02B/2017-18**

Site no.	Date of Sampling	Site Location	Parameters (Government Standards)												
			pH	Turbidity (NTU)	Chloride (mg/)	Fluoride (mg/)	Nitrate (mg/)	COD (mg/)	BOD (mg/l)	Oil & Grease (mg/)	DO (mg/l)	Total Alkalinity (mg/l)	Hardness (mg/l)	Total Coliform (MPN/100)	Faecal Coliform (MPN/100)
<b>Zone-10</b>	22.02.2019	Pond water in zone 10 (Majerhat)	7.57	6.8	71.88	<0.1	<0.5	58.8	15.9	1.8	4.14	224.4	256	30.0	8.0
<b>Zone-15</b>	22.02.2019	Pond water of Zone15 (Koach-pukur)	7.59	9.8	56.34	<0.10	<0.5	39.2	10.3	1.0	5.06	198	220	110.0	22
<b>CPCB (Outdoor bathing)</b>			<b>6.5-8.5</b>	<b>--</b>	<b>--</b>	<b>1.5</b>	<b>--</b>	<b>--</b>	<b>3</b>	<b>--</b>	<b>5</b>	<b>--</b>	<b>--</b>	<b>500</b>	<b>--</b>

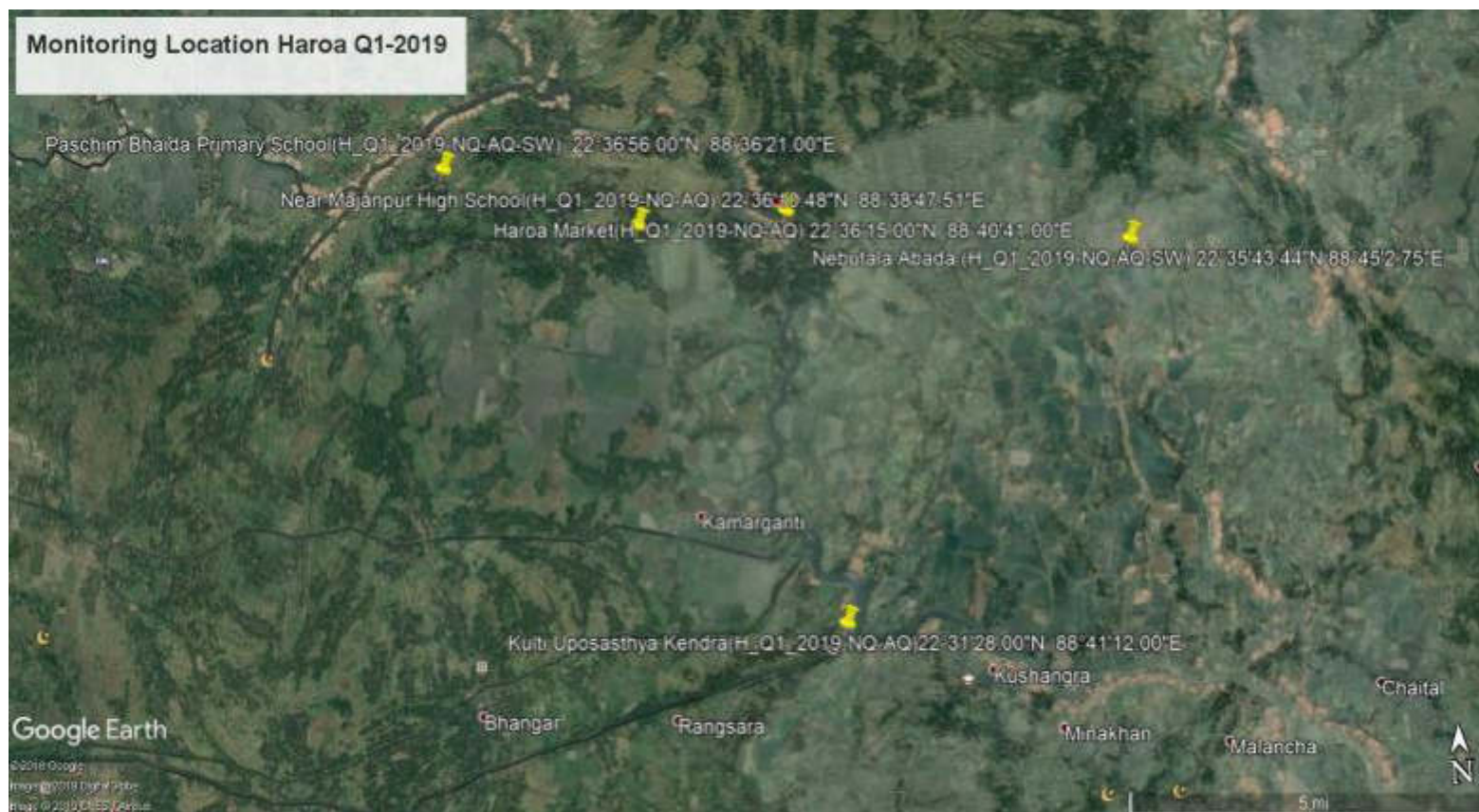
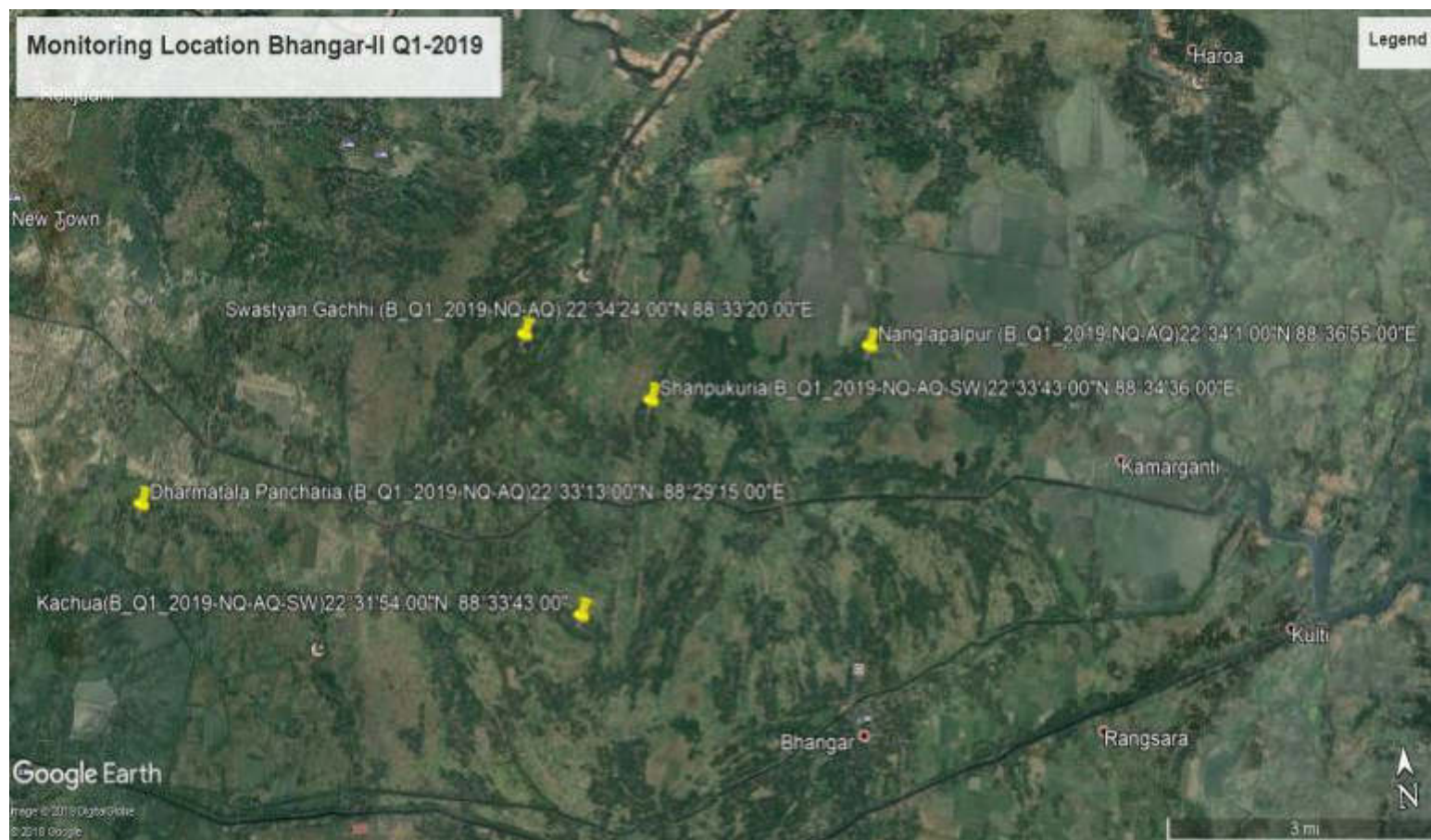


Figure 7: Ambient Air Quality, Noise Level and Surface Water Monitoring Stations in Haroa Block (Package: WBDWSIP/DWW/NCB/N24P/02A/2017-18)





**Figure 8: Ambient Air Quality, Noise Level and Surface Water Monitoring Stations in Bhargar-II Block (Package: WBDWSIP/DWW/NCB/N24P/02B/2017-18)**

## VI. CONSULTATIONS AND DISCLOSURES CONDUCTED

44. As per approved IEE, consultations and disclosure will be a continuous process throughout project implementation involving public consultations and focus group discussions. Informal consultations were carried out with local people, pedestrian, etc.

45. Presently for both the packages work continued at confined location, pipe laying work just started. Shortly public consultation will be carried out around pipe laying areas. Moreover, due to General Election of country any project related discussion banned till June 2019. After June 2019 FGD will be started.

46. The indicative schedule for consultations and disclosure is presented in **Table 14**.

**Table 14: Indicative Schedule for Consultations and Disclosure**

Type of Consultation/ Disclosure	Target Date	Location	Target Participants	Responsible Person and Source of Funds
Local level consultation	Weekly – to be continued	At all construction locations	General public, shop keepers, pedestrian population	Construction supervisor, Environment & safety officer of contractor Project budget – continuous process
Consultation – safety issues, implementation of EMP	During May to October 2019 and continued	At WBDWSIP office and project site office	Supervisor Engineer, PIU Engineer, all safety and environment staff of contractors	Construction Manager, Environment specialist of DSISC and PMC

47. Field level training program on safety and environment has been arranged for contractors, supervisors by DSISC's Environment Specialist on regular basis.

48. There are series of informal discussions by the DSISC engineering Consultants with PIU mainly on understanding current situation and optimum design to be adopted in order to attain the safeguard objectives.

49. **Appendix 10** shows sample internal training documents as submitted by contractors.

50. **Appendix 11** indicates training components on environment, Health and safety issues as conducted by DSISC at project site.

## VII. GRIEVANCE REDRESSAL

51. A common GRM will be in place to address social, environmental, or any other project and/or subproject related grievances. The GRM has been developed in consultation with stakeholders. A public awareness campaign will be conducted to ensure that awareness of the project and its grievance redress procedures is generated. The campaign will ensure that the poor, vulnerable, and others are made aware of grievance redress procedures and entitlements according to the project entitlement matrix, and PMU and concerned PIUs will be responsible for addressing their grievances.

52. GRM consists of the following three tiers, one tier at project level and two beyond project level, as shown in **Figure 9**. Each tier identifies the persons responsible for addressing grievances and provides a time limit for this.

- For the project level GRM, a Grievance Redress Cell will be established at PIU; the safeguards officers (Assistant Engineer and Junior Engineer of PIU) of the ESSU PIU, supported by the social safeguards specialist of DSICS will be responsible for conducting periodic community meetings with affected communities to understand

their concerns and help them through the process of grievance redressal including translating the complaints into Bengali or English, recording and registering grievances of non-literate affected persons and explaining the process of grievance redress mechanism.

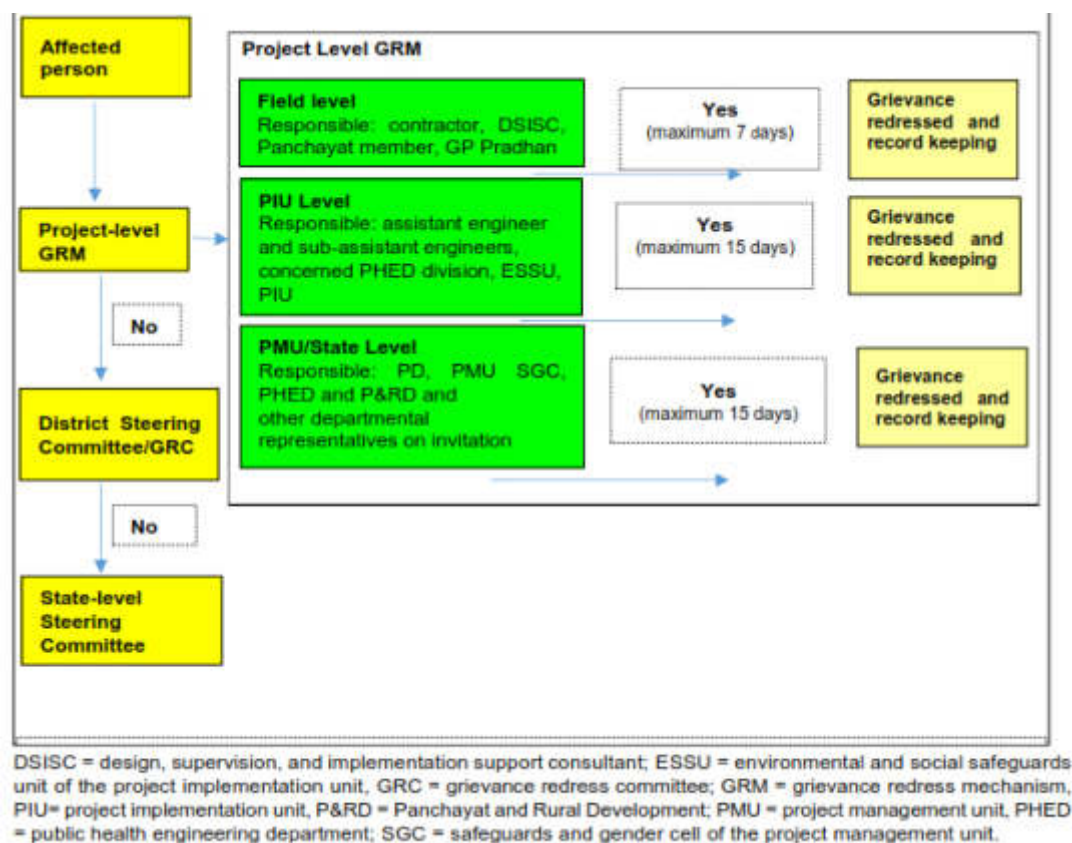
- All expedient and minor grievances will be resolved at field level; should the PIU fail to resolve any grievance within the stipulated time period, the PMU will be consulted and suggested actions by PMU taken by PIU with DSISC support, within specified time. PIU will also be responsible for follow-through for each grievance, periodic information dissemination to complainants on the status of their grievance and recording their feedback (satisfaction/dissatisfaction and suggestions). In the event that certain grievances cannot be resolved at project level, they will be referred to the District Steering Committee (DSC), which will also act as grievance redress committee (GRC), particularly in matters related to land purchase/acquisition, payment of compensation, environmental pollution etc. Any higher than district level inter-departmental coordination or grievance redress required will be referred to the state level Steering Committee.

53. The GRM aims to provide a time-bound and transparent mechanism to voice and resolve social and environmental concerns linked to the project. All grievances – major or minor, will be registered. In case of grievances that are immediate and urgent in the perception of the complainant, the contractor, and supervision personnel from the PIU supported by DSISC will try to successfully resolve them in consultation with the Member, Panchayat and the Gram Panchayat Pradhan. In case of larger issues, they will seek the advice and assistance of the Superintending Engineer PIU. Grievances not redressed through this process within/at the project level within stipulated time period will be referred to the DSC/GRC.

54. The DSC will be set up to monitor project implementation in each district. In its role as a GRC, the DSC will meet every month (if there are pending, registered grievances), determine the merit of each grievance, and resolve grievances within specified time upon receiving the complaint-filing which the grievance will be addressed by the state-level steering committee. The steering committee will resolve escalated/unresolved grievances received. Grievances remaining unresolved by steering committee may be referred by affected persons to appropriate courts of law. The GRC will continue to function throughout the project duration.

55. An aggrieved person shall have access to the country's legal system at any stage, and accessing the country's legal system can run parallel to accessing the GRM and is not dependent on the negative outcome of the GRM.





**Figure 9: Grievance Redress Mechanism**

### ***Composition of the Grievance Redress Committee***

56. The DSC, acting as GRC will have District Magistrate (Chairperson), Superintending Engineer, PIU as Member Secretary, Additional Executive Officer, Zilla Parishad, Assistant (Social and Environmental) Safeguard Officers of the Environment and Social Safeguard Units (ESSU) of the PIU, Institutional Support and Capacity Building Officer, PIU, Block Development Officers from respective blocks, and representatives from the affected village panchayat and / or community, if any, eminent citizens, CBOs and NGOs.

57. The DSC/GRC must have a minimum of two women members. In case of any indigenous people impacts in future subprojects, the DSC/GRC must have representation of the affected indigenous people community, including at least one female indigenous person, the chief of the tribe or a member of the tribal council as traditional arbitrator (to ensure that traditional grievance redress systems are integrated) and an NGO working with indigenous people groups.

58. The State level Steering Committee will include Chief Secretary, as chair, Principal Secretary/Additional Chief Secretary, PHED, Principal Secretary, Panchayat and Rural Development, Principal Secretary, Finance, Principal Secretary, Irrigation and Waterways Development Department, Principal Secretary, Public Works Department, Engineering in Chief, PHED, Member Secretary, and Others as invitees.

### ***Areas of Jurisdiction***

59. The areas of jurisdiction of the district level GRC, headed by the District Magistrate, will be (i) all locations or sites within the district where subproject facilities are proposed or being implemented, or (ii) their areas of influence within the district. The state-level steering committee will have jurisdictional authority across the state (i.e., areas of influence of subproject facilities beyond district boundaries, if any).

### **Consultation Arrangements**

60. Consultations will include regular group meetings and discussions by the social safeguards personnel of DSISC and PIUs with affected persons, at least twice during resettlement plan preparation. During the first year of project implementation, such meetings will take place on a quarterly basis, while in subsequent years they will be held at least twice a year. The consultation arrangements thus envisaged are intended to address both general and/or specific individual grievances through a participatory approach. The consultative process is meant to be flexible to provide timely mitigation of grievances of the affected persons.

### **Recordkeeping**

61. Records of all grievances received, including contact details of complainant, date the complaint was received, nature of grievance, agreed corrective actions and the date these were affected and final outcome will be kept by PIU (with the support of DSISC) and submitted to PMU

### **Information Dissemination Methods of the Grievance Redress Mechanism**

62. The PIU, assisted by DSISC will be responsible for information dissemination to affected persons on grievance redressal procedure. Gram Panchayat/coverage area/affected area-wide public awareness campaigns will ensure that awareness on grievance redress procedures is generated through the consultation and participation plan. Public awareness campaign will be conducted to ensure that awareness on the project and its grievance redress procedures is generated. The PIU safeguard officers (environment and social) will be assisted by DSISC safeguards specialists with information/collateral/awareness material etc. and in conducting project awareness campaigns. The campaign will ensure that the poor, vulnerable and others are made aware of grievance redress procedures and entitlements per agreed entitlement matrix including whom to contact and when, where/ how to register grievance, various stages of grievance redress process, time likely to be taken for redressal of minor and major grievances, etc. Grievances received and responses provided will be documented and reported back to the affected persons. The number of grievances recorded and resolved and the outcomes will be displayed/disclosed in the PMU and PIU offices, Gram Panchayat/concerned local panchayat notice boards and on the web, as well as reported in the semi-annual environmental and social monitoring reports to be submitted to ADB.

63. **Periodic review and documentation of lessons learned.** The PMU safeguards and gender cell will periodically review the functioning of the GRM and record information on the effectiveness of the mechanism, especially on the PIU's ability to prevent and address grievances.

64. **Costs.** All costs involved in resolving the complaints (meetings, consultations, communication and reporting/information dissemination) will be borne by the PMU. Cost estimates for grievance redress are included in resettlement cost estimates.

65. Till 30<sup>th</sup> April, the GRC has not yet been constituted, which is under process. Grievance Registration Form as proposed for the project is presented in **Appendix 14** However, a Grievance Redressal Register is maintained at each of the package sites. Sample Grievance Redressal Register as maintained in the sites is furnished in **Appendix 15**.

## **VIII. FINDINGS AND RECOMMENDATIONS**

66. Status of EMP application discussed in earlier section. Some partial compliance issues have been noted during report period.

67. **Table 15** provides the recommended corrective action plan that has been devised and target dates that have been set so as to remove these non-compliances. The concerned

Contractors have been suitably advised. Contractors have also been advised to provide written commitment for implementation of corrective action plan.

**Table 15: Corrective Action Plan**

Sr no.	Partial complied issues	Action Required	Responsible-Implementation	Target Date	Responsible – Monitoring	Responsible – Reporting	Indicator of Compliance
1	Facilities in the construction camps, especially sleeping arrangements, toilet facilities, provision of drinking water and fuel for cooking <b>(Both - N24P/02A/2017-18 – Haroa &amp; N24P/02B/2017-18-Bhangar II)</b>	Immediate improvement of housekeeping and basic facilities for workers	Contractor	10 <sup>th</sup> June 2019	DSISC, PIU	PIU, PMU- PMC	Site observation and checking
2	Installation of proper work display board and repairing/replacement of old board <b>(Bhangar II – Zone 10, 13 package N24P/02B/2017-18-Bhangar II)</b>	Immediate arrangement is required	Contractor	10 <sup>th</sup> June 2019	DSISC, PIU	PIU, PMU- PMC	Site observation
3	Improvement of housekeeping, access to working area (Haroa – Zone1 of package WBDWSIP/DWW/NCB/ N24P/02A/2017-18 , Bhangar II – Zone 10, 13 package N24P/02B/2017-18)	Immediate improvement of housekeeping and access	Contractor	5 <sup>th</sup> June 2019	DSISC, PIU	PIU, PMU- PMC	Site observation
4	Complete use of PPE, particularly use of working safety shoes, hand gloves and ear plug <b>(Both – (N24P/02A/2017-18 – Haroa &amp; N24P/02B/2017-18-Bhangar II package)</b>	Complete supply and use of PPEs – Immediately	Contractor	31 <sup>st</sup> May 2019	DSISC, PIU	PIU, PMU- PMC	Site observation
5	Management of wastewater at camp sites (Haroa – Zone1 package N24P/02A/2017-18, Bhangar II – Zone 10, 13 of package N24P/02B/2017-18)	Immediate discharge of waste water	Contractor	5 <sup>th</sup> June 2019	DSISC, PIU	PIU, PMU- PMC	Site observation
6	Unsatisfactory storage of materials at Zone 13 for Bhangar II package N24P/02B/2017-18	Proper storage of construction materials	Contractor	31 <sup>st</sup> May 2019	DSISC, PIU	PIU, PMU- PMC	Site observation

## APPENDIX 1: PHOTO ILLUSTRATION

### Package – Design and Construction of Overhead Reservoir including Water Supply Distribution Network and Metering works in Haroa Block (Pack- N24P/02A/2017-18)



Boundary wall construction on going at Amta (Zone 1) reservoir site



Project display board noted at Amta(Zone 1) Reservoir site. Contact numbers are missing. Urgently required demolition of old reservoir



Caution tape noted to demarcate work site at Amta



Drinking water facility at Amta work site. Bore well noted



Ponds are located nearby the project site. Protection of water body during construction is necessary



Staying arrangement for workers at Amta work site





**Partial satisfactory condition of toilet facility observed at zone-1**



**Improper storage of excavated soil from construction site seen during visit at zone-1**



**Use of PPEs by worker is noted**



**Electrical safety norms need to be maintained. Use of rubber mat below switch board is necessary**



**Project display board noted at Salipur(Zone 17) Reservoir site. Contact numbers are missing. Safety caution tape observed**



**Trees are noted along the boundary of the site. Trees need to be save**





**Safety signage noted at work site**



**Boundary wall construction - going on**



**Partial use of PPEs by workers – noted. No use of hand gloves during bar bending work**



**First aid box available at site**



**Use of PPEs noted after suggestion at zone-17**



**Safety signage noted at work site ,zone -17**





**Sleeping arrangement on the floor in camp area at zone-17**



**Tool box talk observed during visit at zone-17**



**Maintained appropriate Storage of construction material after suggestion ,zone -17**



**Caution tape used at work site of zone-17**

**Package – Design and Construction of Overhead Reservoir including Water Supply Distribution Network and Metering works in Bhangar Block (Pack- N24P/02B/2017-18)**



**Swastyangachi Zone 4 water reservoir site- development of access road undergoing**



**Caution tape noted at construction site**





**Partial use of PPEs by workers. No use of hand gloves during bar bending work**



**First aid box available at site. Insufficient First aid material noted**



**Caution tape placed at excavated area of reservoir at Swastyangachi**



**Toilet under construction at work site**



**Incomplete display board. No start – end date, contact no. etc.**



**Boundary wall construction going on at Swastyangachi**



**Boundary wall construction going on at reservoir site. Presently work stopped**



**Toilet facility used by workers at site**





Bankachuya zone 12 water reservoir site. No work continued presently



No guard in rotating armor of mixture machine reported at zone -12



Improper Use of PPEs reported at zone-12



Baniyara - Zone 13 water reservoir site. Incomplete display board. No start – end date, contact no. etc. Partial use of PPEs by workers



Safety instruction are displayed at zone -13



Environmental/social safeguard training program zone -13



**Improper storage of construction material. Wastage of material need to be stopped**



**First aid box noted at site. Tablets need to be removed from First aid box**

**Package: Design, Construction and Operation-Maintenance of Raw Water Intake Well, Water Treatment Plant, Reservoir, Transmission Main for Indpur and Taldangra block in Bankura (WBDWSIP/DWW/NCB/BKP/01/2017-18)**



**Geotechnical Survey going on at Canal crossing area**



**Resistivity survey going on at WTP site Mukutmanipur**



**Arrangement of cabin for office at WTP site**



**Resistivity survey at Indpur**



## APPENDIX 2: APPLICATION TREE FELLING NOC

8

THE KOLKATA GAZETTE, EXTRAORDINARY, FEBRUARY 9, 2007

[Part I]

## Form I (B)

\*Application For Felling of Trees in Non-Forest Areas / Certificate of Clearance  
in respect of a Developer

[See rule 4 (a) (2) and 7 (2)]

- (1) Name of the Person / Agency / Department: *Public Health Engineering (PHE)*  
(2) Full Postal Address: *2nd Floor, Utility Building, (Govt. of West Bengal)*  
*Tank No. 3, Action Area - I, New Town, Pin 700056*  
(3) Nature of proposed developmental work: *Construction of Overhead Reservoir Tank*  
(4) Land Details:  
(a) Block / Panchayat / Municipality / Corporation / Others:  
(b) Mouza / Ward: *Gopalpur*  
(c) J.L. No. / Part No. / Plot No.: *127*  
(d) Area of Land: *25 Satala*  
(e) Plan of land / Map of the Land:  
(d) Total no of trees present in the land (Species and Number): *Mango, Coconut, Krishnachura, Phacocarp (Tul), Shikharakhejur, 35 Nos.*  
(5) Details of Trees to be felled / disposed off:-

Number of Trees	Plot No.	Species	DBH (cm)	Approx Hight (Metre)	Natural or Planted	Approx Age	Physical condition
08	Govt. Land	Coconut	0.35	20	Planted	15	
02	Govt. Land	Mango	0.90-1.70	20	Planted	30	
01	Govt. Land	Tul/Fruit	0.70	20	Planted	25	

- (6) Purpose of Felling: (To be authenticated with detailed project report including total financial outlay)  
(7) Plantation Plan (On 1 : 100 scale showing location, species, timeframe, financial outlay, maintenance etc. to be submitted in quadruplicate)  
(8) Particulars of previous felling of trees: (On the same plot of land, if any)

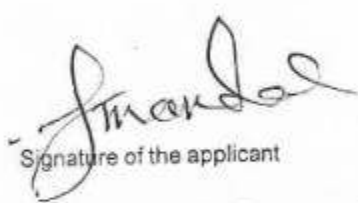
Plot No.	Date	Species	Number of Trees	References of permission from Competent Authority

- (9) A copy of the conversion certificate obtained from the Collector under section 4 C of the West Bengal Land Reforms Act, 1955, is attached.  
(10) [Only in case of Tea Gardens]  
I, hereby declare that the sale proceeds from the felling of trees in question will be utilized strictly for the purpose of welfare of the labourers of the tea garden on the basis of the specific scheme framed under the provision of the Plantation Labour Act, 1951 (A copy enclosed);

THE KOLKATA GAZETTE, EXTRAORDINARY, FEBRUARY 9, 2007 9

I, do hereby undertake, to plant trees over.....ha (20%) of the total area to be developed subject to a minimum of 5 trees against each tree to be felled). at the same plot / at.....Gopdhar.....Police Station.....Harra.....  
District.....24 Parganas (North).....and maintain the same for a period of five years. Plantation Plan (in quadruplicate) is enclosed.

I, am enclosing an amount of Rs.....as application fee by Cash / Draft No.....at Bank .....dated.....

  
Signature of the applicant

Name.....SUDIP KUMAR MANDAL.....

Official Seal : *Executive Engineer*  
N-24 Pgs. WBS Dm-II  
P.H.E. Dsa. Govt. of W.B.

.....of which is not applicable.

### APPENDIX 3 – NOC FROM SUNDARBAN BIOSPHERE RESERVE

DIRECTORATE OF FORESTS  
OFFICE OF THE ADDL. PRINCIPAL CHIEF CONSERVATOR OF FORESTS & DIRECTOR  
SUNDARBAN BIOSPHERE RESERVE, WEST BENGAL  
BIKASH BHAWAN, 3RD FLOOR, NORTH BLOCK  
SALT LAKE CITY, KOLKATA – 700 091  
TELEFAX 2321-1750/1529, E –MAIL :sbrdir@gmail.com

=====

No. 1095 /SBR/C-21/17 Dated : 05-03-2019

From : The APCCF & Director, Sundarban Biosphere Reserve  
West Bengal.

✓ To : The Project Director, PMU  
West Bengal Drinking Water Sector Improvement Project  
PHE Dte., Govt. of West Bengal

Sub : Construction of ground level storage reservoir and small pipelines in  
Haroa and Bhangar –II blocks of North and South 24 Parganas requirement of  
regulatory permission, if any.

Ref : Your Memo No. PMU/WBDWSIP/PHED/06/79 dt. 25.01.2019

\*\*\*\*\*

With reference to the above noted communication this is to inform you that Haroa and Bhangar –II blocks of North and South 24 Parganas does not have Forest land & does not required any permission from this end.

APCCF & Director 5/8/19  
Sundarban Biosphere Reserve  
West Bengal  
Murmu  
05/03/19

Murmu/HC/SBR/05.03.19

## APPENDIX 4 – LABOUR LICENSE

Package: WBDWSIP/DWW/NCB/N24P/02A/2017-18: Haroa Block



**GOVERNMENT OF WEST BENGAL**  
OFFICE OF THE ASSISTANT LABOUR COMMISSIONER, BASIRHAT  
MOILAKHOLA MORE TAKI ROAD BASIRHAT 24 PARGANAS (NORTH) PIN - 743412

**FORM VI**  
[ See Rule 25(1) ]

Licence No. : **BST09/CLL/000029** Date : **05th Dec, 2018**

Lic Fees	1000
S. Deposit	30000

**LICENCE**

Licence is hereby granted to **NCC LIMITED** at **NCC Limited, Vill. Peara, P.O. + PS. Haroa, Pin.- 743425, Haroa, Block- Haroa, Basirhat, PS - Haroa, District - North 24 Parganas, Pin Code - 743425** under Section 12(1) of the Contract Labour (Regulation and Abolition) Act, 1970 subject to the conditions specified in Annexure.

The Licence shall remain in force till: **04th Dec, 2019.**

**Supriya Bandyopadhyay**  
Digitally signed by  
Supriya Bandyopadhyay  
Date: 2018.12.05  
10:54:45 +05'30'

Licensing Officer  
Under the Contract Labour(R&A) Act, 1970  
&  
Assistant Labour Commissioner  
Basirhat, North 24 Parganas

**Establishment Information:**  
Office of the Executive Engineer, North-24 Parganas Water Supply Division-II, P.H.E. Dte. [BST09/CLL/0000088]  
W Site - Utility Building, Tank No.-3, 2nd Floor, Action Area-IA, New Town, Kolkata.  
Haroa, Block - Haroa, Basirhat - 743425, PS - Haroa, North 24 Parganas

**Work site exact location:**  
NCC LIMITED, VILL: PEARA, PO+PS: HAROA, PIN: 743425  
Haroa, Block- Haroa, Basirhat  
PS - Haroa, District - North 24 Parganas, Pin Code - 743425

1 of 2




## ANNEXURE

The licence is subject to the following conditions:

- (1). The licence shall be non-transferable.
- (2). The number of workmen employed as contract labour in the establishment shall not on any day, exceed **300 (Three Hundred )**.
- (3). Except as provided in the rules the fees paid for the grant, or as the case may be, for renewal of the licence shall be non-refundable.
- (4). The rates of wages payable to the workmen by the contractor shall not be less than the rates prescribed for the Schedule of employment under the Minimum Wages Act, 1948, where applicable, and where the rates have been fixed by agreement, settlement or award, not less than the rates fixed.
- (5). In cases where the workmen employed by the contractor perform the same or similar kind of work: as the workmen directly employed by the principal employer of the establishment, the wage rates, holidays, hours of work and other conditions of service of the workmen of the contractor shall be the same as applicable to the workmen directly employed by the principal employer of the establishment on the same or similar kind of work provided that in the case of any disagreement with regard to the type of work the same shall be decided by the Labour Commissioner, West Bengal, whose decision shall be final.
- (6). In other cases the wage rates, holidays, hours of work and conditions of service of the workmen of the contractor shall be such as may be specified in this behalf by the Labour Commissioner, West Bengal.
- (7). In every establishment where 50 or more, women having children are ordinarily employed as contract labour there shall be provided 2 rooms of reasonable dimensions for the use of their children under the age of six years. One of such rooms would be used as a play room for the children and the other as bed room for the children. For this purpose the contractor shall supply adequate number of toys and games in the play room and sufficient number of cots and beddings in the sleeping room. The standard of construction and maintenance of the creches may be such as may be specified in this behalf by the Labour Commissioner, West Bengal.
- (8). The Licensee shall notify any change in the number of workmen or the conditions of work to the Licensing Officer.

**Package: WBDWSIP/DWW/NCB/N24P/02B/2017-18: Bhangar - II Block**

*Labour Licence  
DWS Bhangar II  
26/12/19*

  
सत्यमेव जयते



**GOVERNMENT OF WEST BENGAL**  
OFFICE OF THE DEPUTY LABOUR COMMISSIONER, BARUIPUR  
South 24 Parganas, Nandarani Complex (1st & 2nd Floor) (Opp. 218 Bus Stand) Holding No - 474, Kulpi Road,  
Ward No - 5, Shibanipith, Baruiপুর, Kolkata-700144

**FORM VI**  
[ See Rule 25(1) ]

Licence No. : **BRP04/CLL/000191** Date : **27th Dec, 2018**

Lic Fees	1000
S. Deposit	30000

**LICENCE**

Licence is hereby granted to **NCC LIMITED** at **Eco Space Business Park, Block 4A, 5th Floor, Action Area- II, Newtown -700156, Patharghata, Block- Rajarhat, Barasat, PS - New Town, District - North 24 Parganas, Pin Code - 700156** under Section 12(1) of the Contract Labour (Regulation and Abolition) Act, 1970 subject to the conditions specified in Annexure.

The Licence shall remain in force till: **26th Dec, 2019.**

**Tapas Kumar Sinha Roy**  
Digitally signed by Tapas Kumar Sinha Roy  
Date: 2018.12.27 15:32:23 +05'30'  
Licensing Officer  
Under the Contract Labour(R&A) Act, 1970  
&  
Assistant Labour Commissioner  
Baruiপুর, South 24 Parganas

**Establishment Information:**  
Office of the Executive Engineer North 24 Parganas Water Supply Division II PHE Dte. (BRP04/CLR/000092)  
W.Site - Utility Building, Tank No.-3, 2nd Floor, Action Area-IA, New Town, Kolkata,  
Bhogali-II, Block - Bhangar - II, Baruiপুর - 700135, PS - Kashipur, South 24 Parganas

**Work site exact location:**  
Vill. Kantadanga, P.O. Shonepur  
Bhogali-II, Block - Bhangar - II, Baruiপুর  
PS - Bhangar, District - South 24 Parganas, Pin Code - 700135


1 of 2

## ANNEXURE

The licence is subject to the following conditions:

- (1). The licence shall be non-transferable.
- (2). The number of workmen employed as contract labour in the establishment shall not on any day, exceed **300 (Three Hundred)**.
- (3). Except as provided in the rules the fees paid for the grant, or as the case may be, for renewal of the licence shall be non-refundable.
- (4). The rates of wages payable to the workmen by the contractor shall not be less than the rates prescribed for the Schedule of employment under the Minimum Wages Act, 1948, where applicable, and where the rates have been fixed by agreement, settlement or award, not less than the rates fixed.
- (5). In cases where the workmen employed by the contractor perform the same or similar kind of work as the workmen directly employed by the principal employer of the establishment, the wage rates, holidays, hours of work and other conditions of service of the workmen of the contractor shall be the same as applicable to the workmen directly employed by the principal employer of the establishment on the same or similar kind of work provided that in the case of any disagreement with regard to the type of work the same shall be decided by the Labour Commissioner, West Bengal, whose decision shall be final.
- (6). In other cases the wage rates, holidays, hours of work and conditions of service of the workmen of the contractor shall be such as may be specified in this behalf by the Labour Commissioner, West Bengal.
- (7). In every establishment where 50 or more, women having children are ordinarily employed as contract labour there shall be provided 2 rooms of reasonable dimensions for the use of their children under the age of six years. One of such rooms would be used as a play room for the children and the other as bed room for the children. For this purpose the contractor shall supply adequate number of toys and games in the play room and sufficient number of cots and beddings in the sleeping room. The standard of construction and maintenance of the creches may be such as may be specified in this behalf by the Labour Commissioner, West Bengal.
- (8). The Licensee shall notify any change in the number of workmen or the conditions of work to the Licensing Officer.

*Certificate Dars Bm U*



**GOVERNMENT OF WEST BENGAL**  
OFFICE OF THE DEPUTY LABOUR COMMISSIONER, BARUIPUR  
South 24 Parganas, Nandaram Complex (1st & 2 nd Floor) (Opp. 218 Bus Stand) Holding No - 474, Kulpi Road,  
Ward No - 5, Shibaniptith, Baruiapur, Kolkata-700144

**FORM II**  
[ See Rule 24(1) ]

**CERTIFICATE OF REGISTRATION**

Registration No. : BRP04/BCR/000048

Date : 17th Jan, 2019

A Certificate of Registration is hereby granted under Sub-section(3) of Section 7 of the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 and the rules made thereunder to **M/s NCC LIMITED**, having the following particulars subject to conditions laid down in the Annexure:

1	Postal Address / location where building or other construction work to be carried on by the Employer	NCC LTD, Bhogali-II, Block - Bhanger - II, Baruiapur - 700135, PS - Bhanger, South 24 Parganas  NCC LIMITED VILL. KANTADANGA, Bhogali-II, Block - Bhanger - II, Baruiapur - 700135, PS - Bhanger, South 24 Parganas
2	Name and Addresses of Employer including location of the building and other construction work	MRINAL BANERJEE 23, BIDHANPALLI, JADAVPUR, Ward 96, PS - Jadavpur, Kolkata- 700032

Tapas Kumar Sinha Roy  
Digitally signed by Tapas Kumar Sinha Roy  
Date: 2019.01.17 13:53:34 +05'30'

(Signature & Seal of Registering Officer)  
Assistant Labour Commissioner  
Baruiapur, South 24 Parganas

1 of 3



	Name and permanent address of the Establishment	NCC LIMITED VILL. KANTADANGA, Bhogail-II, Block - Bhanger - II, Baruipur - 700135, PS - Bhanger, South 24 Parganas
4	Nature of work in which building workers are employed or are to be employed	CONSTRUCTION
5	Maximum number of building workers to be employed on any day by the employer	300
6	Probable date of commencement and completion of work	19th Sep, 2018 to 18th Aug, 2023
7	Other particulars relevant to the employment of building workers	IFSC Code :- SBIN0000001, Bank Transaction Id :- 90013676 Total Amount :- ₹ 2000, Transaction Date :- 14/01/2019 00:00:00

Tapas  
Kumar  
Sinha Roy

Digitally signed  
by Tapas Kumar  
Sinha Roy  
Date: 2019.01.17  
13:56:22 +05'30'

[Signature & Seal of Registering Officer]

Assistant Labour Commissioner

Baruipur, South 24 Parganas

## ANNEXURE

The registration granted hereinabove is subject to the following conditions, namely:-

- (1). The certificate of registration shall be non-transferable.
- (2). The number of workmen employed or building workers in the establishment shall not, on any day, exceed the maximum number specified in the certificate of registration.
- (3). Save or otherwise provided in these rules, the fees paid for the grant of registration certificate shall be non-refundable.
- (4). The rates of wages payable to building workers by the employer shall not be less than the rates prescribed under the Minimum Wages Act, 1948 (II of 1948) for such employment where applicable, and where the rates have been fixed by agreement, settlement or award, not less than the rates so fixed, and
- (5). The employer shall comply with the provisions of the Act and the rules made thereunder.

Tapas  
Kumar  
Sinha Roy  
Digitally signed  
by Tapas Kumar  
Sinha Roy  
Date: 2019.01.17  
13:56:46 +05'30'  
[Signature & Seal of Registering Officer]  
Assistant Labour Commissioner  
Barulpur, South 24 Parganas

**APPENDIX 5: SCANNED COPY OF CONTRACTOR'S INSURANCE FOR WORKERS****Package: WBDWSIP/DWW/NCB/N24P/02A/2017-18: Haroa Block**

Workmen's Compensation Policy- Policy Schedule			
Policy Servicing Office	Off Code-15, Future Generali India Insurance Co Ltd, 1st Floor D.No.7-1-21A, APDL Estate Opp Country Club, Begunur, Hyderabad, Telangana, Pincode-500016, Tel No : 048-66018600		
Policy No	2019-LI029168-I WC	Period of Insurance	From 09:00 04/02/2019 To Midnight of 03/02/2020
Insured	NCC Limited	Intermediary Name/Code	INDIA INSURE RISK MANAGEMENT AND INSURANCE BROKING SERVICES 60001321
Address	WORKS IN HAROA BLOCK, North Twenty Four Parganas, West Bengal, 743425	Telephone(Mob,Off,Home)	4027825990/09892590738/4027822990
		Fax No & Email Id	02256791416 / PADMAJA.SURYARAJAN@INDIAINSURE.COM
GSTIN Number	19AAACN7335C1ZM	FGI GSTIN Number	36AA8CFD191R1ZA
In consideration of the Policyholder named herein paying to the Future Generali India Insurance Company Limited (herein after called the Insurer) the premium as stated in the Schedule and in reliance upon the statements made by the Policy holder in the proposal including its attachments or otherwise, and the material incorporated therein, the Insurer agrees to provide insurance against loss/damage liability or expense to the extent and in the manner herein provided subject to all terms, conditions, exceptions and warranties hereinafter set forth.			
Co-Insurance Details		Schedule Of Premium (₹)	
Insurer	Share (In %)	Gross Premium	134,308.36
FUTURE GENERALI INDIA INSURANCE COMPANY LIMITED	100%	Gross and Service Tax	24,174.79
		Total Premium	158,479.08
Risk Details			
Nature of Business	Design and Construction of overhead reservoir including water supply distribution and metering works in Haroa Block K		
Location	Design and Construction of overhead reservoir including water supply distribution and metering works in Haroa Block K		
Contractor/Sub-Contractor Name	NCC LTD		
No of Employees	Description of work done by Employees	Declared Wages during the Period of Insurance (₹)	
50	Highly Skilled workers	6,642,000.00	
50	Skilled workers	6,048,000.00	
50	Semi Skilled Workers	5,490,000.00	
50	Unskilled Workers	4,985,000.00	
Total		23,166,000.00	
Coverage Details			
The Policy covers Liability of the Insured under the following Law(s) shown as covered, subject to claim being otherwise admissible as per terms, conditions and exclusions of the Policy and subject to Limit of Indemnity as stipulated against each Law:			
Law	Limit of Indemnity	Coverage	
Employee's Compensation Act, 1923 and subsequent amendments thereof prior to the date of issue of this Policy	Subject otherwise, to the terms, conditions &amp; Exclusions of the Policy, the amount of liability incurred by the Insured	Yes	
Common Law/ Fatal Accidents		Yes	
Law(s)			
WC Act 1923 and subsequent amendments of the said Act prior to the date of issue of the policy provided that the insurance granted hereunder is not extended to include: i. Any interest and/or penalty imposed on the insured on account of his/their failure to comply with the requirements laid down under WC Act 1923. ii. Occupational disease of any kind.			
Additional Clauses, Conditions, Warranties & Exclusions			
Terrorism is excluded from coverage. No cover for Medical Expenses, Unless specifically allowed in the policy. No Cover for Medical Expenses. No Cover for Occupational Diseases Jurisdiction/ Territory : India Excluding War Risk, Blasting, Tunneling and Handling of Exp. Involves Excluding loss arising out of installation and erection of live wiring. Warranted that safety practices are followed by the workers and safety gadgets are used by the workers while working at heights Contractors and sub-contractors employees are covered.			
Important:- 1. All other Terms, Conditions and Exclusions as per attached Policy Writings. 2. In case of payment by cheque, in the event of dishonour of cheque for any reason whatsoever, insurance provided under this document automatically stands cancelled from the inception irrespective of whether a separate communication is sent or not.			
For Future Generali India Insurance Co. Ltd.			
Receipt No :	29065578		
Date of Issue :	07/02/2019		
Place of Insurance :	Mumbai*		
*Address as mentioned below.		(Authorized Signatory)	
Note: This document is digitally signed by Sharada Ramakrishnan, Authorised Signatory of Future Generali India Insurance Company Limited on 07/02/2019			

The stamp duty of Rs 67.15 paid by Letter Of Authorisation No. CSD/118/2018/37978, dated 16/08/2018, Mumbai - 2017/C.R.97/M-1, dated 09/01/2018.

Product UIN : IRDANI32P0012V01200708



Future Generali India Insurance Company Limited, Corporate &amp; Registered Office: 6th Floor, Tower - 3, Indira Park Finance Center, Senapati Bagan

## Package: WBDWSIP/DWW/NCB/N24P/02B/2017-18: Bhangar - II Block



Workmen's Compensation Policy: Policy Schedule			
Policy Issuing Office	Off Code-15, Future Generali India Insurance Co Ltd, 1st Floor D.No.7-1-41A, APOL Bypass Opp. Country Club, Begumpet, Hyderabad, Telangana, Pincode-500016, Tel No: 040-66098009		
Policy No	2019-1-0129169-FWC	Period of Insurance	From 00:00 04/02/2019 To Midnight of 03/02/2020
Insured	NCC Limited	Intermediary Name/Code	INDIA INSURE RISK MANAGEMENT AND INSURANCE BROKING SERVICES/0001521
Address	BHANGAR II BLOCK, South Twenty Four Parganas, West Bengal, 743502	Telephone(Mob,Off,Home)	4027822990/09092590738/4027822990
		Fax No & Email Id	02254791414 / PADMAJIA.SURIYAKAJAN@INDIAINSURE.COM
GSTIN Number	19AAACN733C1ZM	FCI GSTIN Number	36AABCT0191E1ZA
In consideration of the Policy holder agreed herein paying to the Future Generali India Insurance Company Limited (herein after called the Insurer) the premium as stated in the Schedule and in reliance upon the statements made by the Policy holder in the proposal including its attachments or otherwise, and the material interpenetration thereto, the Insurer agrees to provide insurance against loss/damage liability or expense in the extent and in the manner herein provided subject to all terms, conditions, exceptions and warranties hereinafter set forth.			
Co-insurance Details		Schedule Of Premium (₹)	
Insurer	Future Generali India Insurance Company Limited	Share (in %)	100%
		Gross Premium	134,304.30
		Goods and Service Tax	24,174.78
		Total Premium	158,479.08
Risk Details			
Nature of Business	Design and Construction of overhead reservoir including water supply distribution and reticulating works in Bhangar II Block		
Location	Design and Construction of overhead reservoir including water supply distribution and reticulating works in Bhangar II Block		
Contractor/Job Contractor Name	NCC LTD.		
No of Employees	Description of work done by Employees	Declared Wages during the Period of Insurance (₹)	
30	Highly Skilled workers	6,641,000.00	
30	Skilled workers	6,048,000.00	
30	Semi Skilled Workers	5,495,000.00	
30	Unskilled Workers	4,989,000.00	
Total		23,173,000.00	
Coverage Details			
The Policy covers Liability of the Insured under the following Law(s) shown as covered, subject to claim being otherwise admissible as per terms, conditions and exclusions of the Policy and subject to Limit of Indemnity as stipulated against each Law:			
Law	Limit of Indemnity	Coverage	
Employee's Compensation Act, 1923 and subsequent amendments thereto prior to the date of issue of this Policy	Subject otherwise, to the terms, conditions & scope; Exclusions of the Policy, the amount of liability incurred by the Insured	Yes	
Common Law and Fatal Accident		Yes	
Law(s)			
WC Act 1923 and subsequent amendments of the said Act prior to the date of issue of the policy provided that the insurance granted hereunder is not extended to include:			
1. Any interest and/or penalty imposed on the insured on account of his/her failure to comply with the requirements laid down under WC Act 1923			
2. Occupational disease of any kind.			
Additional Clauses, Conditions, Warranties & Exclusions			
Termination is excluded from coverage.			
No cover for Medical Expenses, unless specifically allowed in the policy.			
No Cover for Medical Expenses.			
No Cover for occupational Diseases.			
Jurisdiction/ Territory: India			
Excluding War Risk, Rioting, Terrorism and Handling of Explosives			
Excluding loss arising out of installation and erection of live wiring.			
Warranted that safety practices are followed by the workers/heights			
Contractors and sub-contractors employees are covered.			
Important:- I. All other Terms, Conditions and Exclusions as per attached Policy Writings. 2. In case of payment by cheque, in the event of dishonour of cheque for any reason whatsoever, Insurance provided under this document automatically stands cancelled from the inception irrespective of whether a separate communication is sent or not.			
For Future Generali India Insurance Co. Ltd.			
Receipt No :	23065378	Signature	
Date of Issue :	07/02/2019		
Place of Issuance :	Mumbai*	(Authorized Signatory)	
*Address mentioned below.			
Note: This document is digitally signed by Sharada Ramakrishnan, Authorized Signatory of Future Generali India Insurance Company Limited on 07/02/2019			

The stamp duty of Rs 67.15 paid by Letter Of Authorization No. CSD/18/2018/117018, dated 16/08/2018, is feedback - 2017/C.R.9356-1, dated 09/01/2018.

Product UIN : IB DAN137P0012V01200708



Future Generali India Insurance Company Limited, Corporate & Registered Office: 4th Floor, Tower - 3, Indira Park Plaza, Begumpet, Hyderabad, Telangana, India - 500016, Maharashtra Circle Line: 1800-226-233, 1800-333-022-6787788, Email: fgi@futuregenerali.in, Website: www.futuregenerali.in/INDIA Regn No: 132, CIN - U66030IL13000491.C165281



## Package: Bulk water supply - Bankura - WBDWSIP/DWW/NCB/BKP/01/2017-18

THE NEW INDIA ASSURANCE CO. LTD.  
(Government of India Undertaking)

## POLICY SCHEDULE FOR EMPLOYEES COMPENSATION INSURANCE

Insured's Name	TECHNOFAB ENGINEERING LTD.		
Insured's Details		Issuing Office Details	
Customer ID	PO09011511	Office Code	BO-II (UNDER DO-IV), SECTOR 22-B (350102)
Address	G-15, S. SARANI, BIDHANNAGAR, DURGAPUR P.O. BARDHAMAN, WEST BENGAL, BIDHANNAGAR BDN, WEST BENGAL, 713212	Address	SCO 1070-1071, SECTOR 22-B, CHANDIGARH, 160022
Phone No	1146710009	Phone No	2790863
E-mail/Fax	Raman@kmdastur.com, /	E-mail/Fax	nla.350102@newindia.co.in /
PAN No	AAACT3829R	S.Tax Regn. No	AAACN4165CST178
GSTIN/UTIN	19AAACT3829R1ZM / NA	GSTIN	04AAACN4165C1ZZ
		SAC	997139 (Other non-life insurance services, excl RI)

Policy Details			
Policy Number	35010236190100000003	Business Source Code	
Period of Insurance	From: 30/04/2019 02:56:18 PM To: 29/04/2020 11:59:59 PM	Dev.Off level./Broker/Corp. Agent	K.M. DASTUR REINSURANCE BROKERS PVT. LTD. - (DM2615660) BO-350102 (S100145990)
Date of Proposal	30-Apr-19	Agent/Bancassurance	
Prev. Policy no.		Phone No	2324592, (022)22855855, / NA
Client Type	Non-Corporate	E-mail/Fax	ronak.gadhia@kmdastur.com, / / /

Premium(₹)	GST(₹)	Total (₹)	Total (₹ in words)	Receipt No. & Date
72730	13091	85821	RUPEES EIGHTY-FIVE THOUSAND EIGHT HUNDRED TWENTY-ONE ONLY	3501028119000000059 9 - 30/04/19

## Details of Employees with monthly wages upto ₹ 8000:

Categories	Sub Categories	No of Employee	Cash Total Wages
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## Details of Employees with monthly wages above ₹ 8000:

Categories	Sub Categories	No of Employee	Cash Total Wages
Builders All employees engaged in shop or yard or in construction/ demolition of buildings and other civil construction like dams, bridges etc. incl. excavation	SKILLED	4	534720
Builders All employees engaged in shop or yard or in construction/ demolition of buildings and other civil construction like dams, bridges etc. incl. excavation	SEMI SKILLED	6	729072
Builders All employees engaged in shop or yard or in construction/ demolition of buildings and other civil construction like dams, bridges etc. incl. excavation	UNSKILLED	40	4418400

Trade Description	Particular of Works	Location Details	Included All Sub - Contractors
WATER WORKS, 4 SKILLED, 6 SEMISKILLED & 40 UNSKILLED.	DESIGN, CONSTRUCTION AND OPERATION-MAINTENANCE OF RAW WATER INTAKE WELL, WATER TREATMENT PLANT, RESERVOIR, TRANSMISSION MAIN FOR INDUPUR AND TALDANGRA BLOCK IN BANKURA.	BANKURA WEST BENGAL	Yes

## Contractor/Sub-Contractor Details:

Serial No	Name of Contractor	Description	Categorie	No. of Workers	Amount Wages
				Skilled   Unskilled   Others	

Signature Not  
Verified  
Digitally signed  
by Srinivasan  
Vidyanathan  
Date: 2019.04.30  
15:51:13 +05'30'

Policy No. : 35010236190100000003 Document generated by 16923 at 30/04/2019 15:51:13 Hours.

Regd. &amp; Head Office: New India Assurance Bldg., 87 M.G. Road, Fort, Mumbai - 400 001. TOLL FREE No. 1 800 209 1415.

THE NEW INDIA ASSURANCE CO. LTD.  
(Government of India Undertaking)

## Extensions under the Policy Cover

Name of the Extension	Sub Limit of the Extension	Deductibles of the Extension
Medical Extension	₹100000	NA
Special Conditions	INCLUDING SUB CONTRACTOR, PRINCIPAL-PUBLIC HEALTH ENGINEERING DEPARTMENT(PHED)GOVT. OF WEST BENGAL.	
	NA	

## Special Exclusions

NA

## Special Excess/Deductible

NA

The Policy shall be subject to EMPLOYEES COMPENSATION INSURANCE Policy clauses attached herewith.

Clauses	Description
Conditions	Due observance and fulfilment of terms, conditions and endorsements of policy
Conditions	The Company may cancel Policy by sending seven days notice by registered letter
Conditions	Name of every employee with amount of wages, earnings shall be properly recorded
Conditions	No payment shall be made by or on behalf of Insured without consent of Company
Conditions	Remedy available to the insured if the company disclaims liability
Conditions	The insured shall take reasonable precaution to prevent accidents and diseases
Conditions	Notice or communication under this policy shall delivered in writing to Company
Conditions	The Policy and the Schedule shall be read together as one contract
Conditions	liability being otherwise admitted
Conditions	In the event claim, Insured shall give notice to Company with full particulars
Exclusions	Any accident, loss or legal liability arising from nuclear weapons material
Exclusions	Death, injury caused directly or indirectly by ionising radiation or contamination by radioactivity
Exclusions	Any legal liability of whatsoever nature
Exclusions	Any sum which the insured would have been entitled to recover from any party but for an agreement between insured and such party
Exclusions	Liability of the insured which arises by virtue of an agreement
Exclusions	Any employee who is not a workman within the meaning of the Law(s)
Exclusions	Insureds liability to employees of their contractors
Exclusions	Any injury or disease directly attributable to war or war-like situations
Exclusions	Damage to any property or any Consequential losses

## Premium and GST Details

	Rate of Tax	Amount in INR
Premium		₹ 72730.00
SGST	0	0
CGST	0	0
IGST	18	13091

In witness whereof the undersigned being duly authorised by the Insurers and on behalf of the Insurers has (have) hereunder set his (their) hand(s) on this 30th day of April, 2019.

For and on behalf of

The New India Assurance Company Limited

Date of Issue: 30/04/2019

Duly Constituted Attorney(s)

Stamp Duty under the Policy is ₹1

Mudrank \_\_\_\_\_ Dt. \_\_\_\_\_ consolidated Stamp Fees Paid by Pay Order Number \_\_\_\_\_ vide receipt

number \_\_\_\_\_ dt. \_\_\_\_\_.

## **APPENDIX 6: SAMPLE SITE SPECIFIC ENVIRONMENTAL MANAGEMENT PLAN**

### **SITE SPECIFIC ENVIRONMENTAL MANAGEMENT PLAN**

**PROJECT:** Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block

**ZONE NO & NAME:** 17 & Shalipur

**CONTRACT NO:** WBDWSIP/DWW/NCB/N24P/02A/2017-18

**EMPLOYER:** Public Health Engineering Department, Govt. of West Bengal

**CONTRACTOR:** NCC Limited

**Table 1: Anticipated Impacts and Mitigation Measures – Pre-construction Environmental Mitigation Plan**

Field/Issues	Anticipated Impact	Mitigation Measures	Remarks
Infrastructure and Services	Electric poles and wires, water lines within proposed project area of OHR site.	<ol style="list-style-type: none"> <li>Locations and operators of these utilities identified in the detailed design document have been informed to prevent unnecessary disruption of services during construction phase.</li> <li>Contingency plan has been developed by informing to emergency services like WBSEDCL, Telecommunication, local administration and Police etc.</li> <li>Water lines have been found till date. First we are digging the trial pit Manually, if any obstruction arise the same is removed as per direction of end user</li> <li>Preparing spoils (Waste) management plan and traffic management plan, which are mention in Appendix 1 and 2 attached with this SEMP.</li> </ol>	The construction work is continuing without disturbing the existing pipeline and electric poles.
Climate	The nature and intensity of rainfall events in an area, has implications for surface water management.	<p>Seasonal climatic variations will be taken into account during scheduling of construction in the area.</p> <p>Excavation works during dry season and surface water have been controlled as per method approved by PMU.</p>	If excavation work is to be conducted during rainy season then preventive measures will be taken as per PMU approved method.
Sources of Materials	Extraction of materials can disrupt natural land contours and vegetation resulting in accelerated erosion, disturbance in natural drainage patterns, ponding, water logging and water pollution.	<ol style="list-style-type: none"> <li>No major extraction is expected till now.</li> <li>Obtaining construction materials only from government approved quarries with prior approval of PIU.</li> <li>A monthly basis documentation on material obtained from each source (quarry/borrow pit) submitted.</li> <li>In case new quarry/borrow area is required prior steps will follow for all clearances and permissions as required under law from PIU.</li> </ol>	No involvement of any new borrows area or quarry is anticipated.
Consents, permits, clearances, no objection certificates(NOCs), etc.	Failure to obtain necessary consents, permits, NOCs, etc. can result to design revisions and/or stoppage of works.	<ol style="list-style-type: none"> <li>For avoiding failure all necessary consents, permits, clearance, NOCs, etc. prior to award of civil works obtained.</li> <li>All necessary approvals for construction to be obtained before start of construction.</li> <li>Acknowledge in writing and report on compliance consents, permits, clearance, NOCs etc. obtained.</li> <li>Made provision for detailed design drawing and documents, all conditions and provision if necessary</li> </ol>	We have already done land requisition, electric connection, water source etc. Application has been submitted for tree felling permission and NOC for installing

Field/Issues	Anticipated Impact	Mitigation Measures	Remarks
			new bore wells.

DSISC = Design, Supervision and Institutional Support Consultant, EIA = Environmental Impact Assessment, O&M = Operation and Maintenance

**Table 2: Anticipated Impacts and Mitigation Measures – Construction Environmental Mitigation Plan**

Field/Issues	Anticipated Impact	Mitigation Measures	Remarks
Material procurement	Extraction of rocks and material may cause ground instability	No major extraction is anticipated.	Arrangements will be made to prevent water logging as well as land pollution. Care will be taken for proper disposal of generated waste material during excavation.
Air Quality	Emissions from construction vehicles, equipment, machinery and DG set used for excavation and construction resulting in dust and increase in concentration of vehicle-related pollutants such as carbon monoxide, sulphur dioxides, particulate matter, nitrogen oxides, and hydrocarbons.	<ol style="list-style-type: none"> <li>1. We are following air pollution/dust control measures for construction activities stipulated by the "Direction of West Bengal Department of Environment under the Air Act, 1981 Direction No. EN/3170/T-IV-7/001/2009 dated: 10 December 2009"</li> <li>2. Only vehicles having valid Pollution Under Control Certificates are engaged in project activity</li> <li>3. Vehicles transporting(cement, sands etc) are covered and are cleaned prior to release from site, sprinkling of water and stabilization of soil for dust hazards are carried out on site.</li> <li>4. Damp down of soil, sand/ earth stockpiled at site maintained as per site condition.</li> <li>5. Controlling unnecessary movement of vehicle, public trespassing into work areas for control of dust generation.</li> <li>6. If required then a dust screen/high compound wall around the construction site (OHR), will be provided.</li> </ol>	<p>Air quality Monitoring has been conducted at following five places (<b>Zone-2 Nebutala Abad, Zone-5 Tegharia, Zone-13 Chauhata, Zone-17 Shalipur and Zone-21 Haroa</b>) in the Haroa package.</p> <p>Mixer machine, winch machine and DG set used for concreting and pilling are not left for idling after completion of work. Sprinkling and dust screen arrangement is made, when required.</p>
Drainage and hydrology	Due to the nature and locality of the projects there is unlikely to be any	<ol style="list-style-type: none"> <li>1. The site surface has been engineered and shaped in such a way that rapid and efficient evacuation of runoff is achieved.</li> <li>2. The effluent is discharged into local drains after passing through a sediment basin.</li> </ol>	We ensure effluent released from the site to a local drain does not



Field/Issues	Anticipated Impact	Mitigation Measures	Remarks
	significant impacts on water resources within the immediate area.	Where no local drains are available, a soak pit will be created on-site, away from water bodies.	contaminate existing drain and pond around the project site.
River/Surface water quality	Mobilization of settled silt materials, run-off from stockpiled materials, and chemical contamination from fuels and lubricants during construction works can contaminate nearby surface water quality.	<ol style="list-style-type: none"> <li>1. Avoiding stockpiling of earth fill. During monsoon season stockpiles will be covered with tarpaulins or plastic sheets.</li> <li>2. Prioritization implemented of reuse of excess spoil and materials in the construction work if necessary dispose in designated dispose area.</li> <li>3. Storage having impervious floor is used for fuels and lubricants. It is selected away from drainage; spillage protection also carried out.</li> <li>4. Provision for temporary silt traps or sedimentation basins along the drainage leading to the water bodies carried out according to situation.</li> <li>5. Temporary drainage channel around the work area made to prevent the entry of runoff from upper areas into the work area.</li> <li>6. Provision for pump out of the water from the pits/excavations to a temporary sedimentation pond or disposal after sedimentation is taken into consideration.</li> </ol>	Surface water monitoring has been already conducted at two places (Zone-2 <b>Nebutala Abad</b> and <b>Zone-13 Chauhata</b> ) in the Haroa project for Environmental Monitoring Report. No harmful material or chemical is used at site which affected the surface water quality of nearest pond. Ecological study for pond may be done if negative observation found during any stage of construction.
Biodiversity Fauna and Flora	Due to the nature and locality of the project there is unlikely to be any significant impacts on bio-diversity within the area.	<ol style="list-style-type: none"> <li>1. No faunal activity within the impact zone till date.</li> <li>2. A series of tree present in the existing boundary wall of the site, cutting of tree strictly banned without regulatory clearance, if necessary trimming allowed.</li> </ol>	<p>For flora protection tree cutting strictly prohibited,</p> <p>If necessary then moving according to proper channel for permission.</p> <p>For fauna activity instruction given to everyone to inform higher level for their protection and safe rescue.</p>
Noise Levels	Increase in noise level due to earth-moving and excavation equipment, and the	<ol style="list-style-type: none"> <li>1. Baseline monitoring has been conducted.</li> <li>2. Planed activities in consultation with DSISC so that activities with the greatest potential to generate noise are conducted during periods of the day which will result in</li> </ol>	Noise quality Monitoring has been conducted at following five places: <b>Zone-2</b>

Field/Issues	Anticipated Impact	Mitigation Measures	Remarks
	transportation of equipment, materials by labours.	<p>least disturbance;</p> <p>3. Practicing horns not be used unless it is necessary to warn other road users.</p> <p>4. Consultation made with local communities prior to the work to identify and avoid working at sensitive times, such as religious and cultural festivals,</p> <p>5. Minimize noise from construction equipment by using vehicle silencers, fitting jackhammers with noise-reducing mufflers for minimising the sound impact to surrounding sensitive receptor.</p> <p>6. Maintain maximum sound levels not exceeding 75 dB (A) during day time and 70 dB (A) during night when measured at a outside the project boundary.</p>	<p><b>Nebutala Abad, Zone-5 Tegharia, Zone-13 Chauhata, Zone-17 Shalipur and Zone-21 of Haroa.</b></p> <p>Idling of equipment and vehicles are restricted. Mixer machine, winch machine and DG set used for concreting and pilling stopped after completion of the work.</p>
Landscape and Aesthetics character, and sense of place	Construction wastes as well as excess construction materials may show some impact.	<p>1. Prepared a construction waste management plan for site. Hazardous wastes e.g. waste oil, empty paint cans, etc. are stored on site and then shifted to a central location from where these are disposed in accordance with Hazardous Wastes Management and Disposal Rule, 2016.</p> <p>2. As far as possible utilizing the debris and excess soil in construction purpose and minimising it by using in excavated area and site filling and labelling purpose.</p> <p>3. Avoiding stockpiling of any excess spoils at the site for long time, if disposal required, the site selected preferably from barren, infertile land, which is located away from any sensitive area in consultation with local GP.</p> <p>4. Solid waste/construction waste has been managed according to the following preferential hierarchy: reuse and dispose.</p>	Waste material utilized for reuse and filling purpose. Empty cement bags, waste oil, empty paint cans, etc. are collected in a room/place and then shifted to our godown. From there these are disposed as per Rule.
Occupational Health and Safety	Occupational hazards which can arise during work	<p>Having OSHA in our organisation and following points mentioned in the bid documents</p> <p>1. Developing and implementing site specific occupational health and safety(OHS) plan which will include measures such as: (a) excluding public from the site; (b) ensuring all workers are provided with and use personal protective equipment like Helmet, Gumboot, Safety Belt, Gloves, Nose mask etc. (c) documentation of work related accidents.</p> <p>2. Providing qualified first aid at all times.</p> <p>3. Providing to all workers reflective jacket.</p> <p>4. Marking and providing sign boards</p>	Company's health and safety guidelines are followed.



Field/Issues	Anticipated Impact	Mitigation Measures	Remarks
		<p>for most of hazardous areas such as high voltage equipment,</p> <p>5. All workers provided with and use Personal Protective Equipment like helmet, gumboot, safety belt, gloves, nose mask and ear plugs.</p> <p>6. H and S Training for all site personnel arranged and it will be continued.</p> <p>7. Documented procedures to be followed for all site activities;</p> <p>8. Work-related accidents will be recorded.</p> <p>9. Drinking water provided after proper testing.</p> <p>10. First Aid box arranged at working sites.</p> <p>11. Clean eating areas provided to workers.</p> <p>12. H and S orientation training provided to all new workers to ensure that they are apprised of the basic site rules of work at the site for personal protective protection, and preventing injuries.</p> <p>13. Moving equipment maintained with audible back-up alarms;</p> <p>14. Workers are exposed to noise level up to 75 dB (A) only.</p>	
Socio Economic Employment	Generation of temporary employment and increase in local revenue.	<p>1. Employ local labour force as far as possible</p> <p>2. Comply with labour laws</p>	Employed local labours at our work site in temporary basis, when required maximum labour strength.
Environmental Management Plan (EMP) Implementation Training	Irreversible impact to the environment, workers, and community.	1. Project Manager and all key workers will be required to undergo training on EMP implementation including spoils/waste management, Standard operating procedures (SOP) for construction works, occupational health and safety (OHS), core labour laws, applicable environmental laws etc.	Arranging a training session for all employees.
Construction Camps	Temporary air, noise, land and water pollution from machine operation and after establishment of habitation	<p>1. Before locating project offices, sheds, and construction plants we discussed with DSISC and within or nearest place are selected.</p> <p>2. Till date no trees have been cut and no any destruction of property, irrigation and drinking water supply systems observed.</p> <p>3. Employees were trained for storage and handling of materials which can potentially cause soil contamination and water contamination.</p> <p>4. Solid waste managed according to the following preferential hierarchy: reuse, and disposal to designated areas.</p>	Kitchen solid waste collected in a dustbin then it disposed outside from area, Also construction solid waste reuse in the site for labelling and filling purpose. Daily generated effluent disposed by arrangements

Field/Issues	Anticipated Impact	Mitigation Measures	Remarks
		5. According to rule and regulation it will be ensured that “camp has been vacated and restored to pre-project conditions before acceptance of work”.	already present in camp/household.
Archaeological and Cultural characteristics	Risk of archaeological chance finds	<p>1. Strictly follow the protocol for chance finds in any excavation work;</p> <p>2. No archaeological chance finds are reported at project sites till date.</p> <p>3. Construction staff members would be aware of the likelihood of heritage resources being unearthed and of the scientific importance of such discoveries.</p>	If there is any such finding, action will be taken up as per requirement.

DSISC = Design, Supervision and Institutional Support Consultant, H&S = Health and Safety, RPM = Respirable Particulate Matter,

## APPENDIX 7: SAMPLE SITE INSPECTION REPORT

ENVIRONMENTAL SITE INSPECTION REPORT		
Project Name: WBDWSIP Contract Number: WBDWSIP/DWW/NCB/N24P/02A/2017-18		
Block : Haroa	DATE: 16/04/19	
Zone: - 17 (Shatipur)		
WEATHER: Clear-Sunny		
	Project Activity Stage	Survey Design Implementation Pre-Commissioning Guarantee Period
		✓
Sr. No.	Monitoring Items	
	Compliance marked as Yes/No/Not Applicable/Partially Implemented (PI)	
1	Environment, Health and Safety supervisor appointed by Contractor and available on site	Yes
2	Construction site management plan (spoils safety, schedule, equipment etc.) prepared	PI
3	Traffic Management Plan Prepared	NO
4	Dust is under control	Yes
5	Excavated soil properly placed within minimum space	Yes
6	Construction area is confined, no traffic/pedestrian entry observed	NO
7	Surplus soil/debris/waste is disposed without delay	NO
8	Construction material (sand/gravel/aggregate) brought to site as and when required only	NO
9	Tarpaulins used to cover sand and other loose material when transported by vehicles	NO
10	After unloading, wheels and undercarriage of vehicles cleaned prior to leaving the site	NO
11	No AC pipes disturbed/removed during excavation	NO
12	No chance finds encountered during excavation	NO
13	Work is planned in consultation with traffic police	NA
14	Work is not being conducted during heavy traffic	NA
15	Work at a stretch is completed within a day (excavation, pipe laying and backfilling)	NA
16	Pipe trenches are not kept open unduly	NA
17	Road is not completely closed, work is conducted on edge, at least one line is kept open	NA
18	Road is closed, alternative route provided and public informed, information board provided	NA
19	Pedestrian access to houses is not blocked due to pipe laying	NA
20	Spaces left in between trenches for access	Yes
21	Wooden planks/metal sheets provided across trench for pedestrian	PI
22	No public/unauthorized entry observed in work site	PI
23	Children safety measures (barricades, security) in place at works in residential areas	PI
24	Prior public information provided about the work, schedule and disturbances	NA
25	Caution/warning board provided on site	Yes
26	Guards with red flag provided during work at busy roads	NA
27	Workers using appropriate PPE (boots, gloves, helmets, ear muffs etc.)	PI
28	Workers conducting or near heavy noise work is provided with ear muffs	PI
29	Contractor is following standard and safe construction practices	Yes
30	Deep excavation is conducted with land slip/protection measures	NA
31	First aid facilities are available on site and workers informed	Yes
32	Drinking water provided at the site	PI
33	Toilet facility provided at the site	PI
34	Separate toilet facility is provided for women workers	NO

35	Workers camps are are maintain cleanly	PI
36	Adequate toilet and bath facilities provided	PI
37	Contractor employed local workers as far as possible	PI
38	Workers camp set up with the permission of PIU	Yes
39	Adequate housing provided	PI
40	Sufficient water provided for drinking/washing/bath	PI
41	No noisy work is conducted in the nights	NA
42	Local people informed of noisy work	NA
43	No blasting activity conducted	NA
44	Pneumatic drills or other equipment creating vibration is not used near old/risly building	NA
45	Funeral activity till date on site	NO
46	Waste water discharge from site	NO
48	Tree cutting/Trimming	NO
49	Soild waste disposal from site under norms	NO
50		

Signature <u>S Gain</u>	
Sign off	
Name <u>SARADINDU GAIN</u> Position <u>JE-Safety (NCC)</u>	Name <u>Rohan Kumar</u> / 16/04/19 Position <u>Environmental Safeguard (DS/SC)</u>

## APPENDIX 8: SAMPLE SPOIL MANAGEMENT PLAN

### SPOIL MANAGEMENT PLAN (SMP)

**PROJECT** : DESIGN AND CONSTRUCTION OF OVERHEAD RESERVIOR  
**INCLUDING**

**WORK IN** WATER SUPPLY DISTRIBUTION NETWORK AND METERING  
HAROA BLOCK

**ZONE NO & NAME** : 17 and SHALIPUR

**CONTRACT PACKAGE NO** : WBDWSIP/DWW/NCB/N24P/02A/2017-18

**EMPLOYER** : PUBLIC HEALTH ENGINEERING DEPARTMENT (PHED)

**CONTRACTOR** : NCC LIMITED

1. INTRODUCTION OF SMP:

SMP is to describe how the project will manage the spoil generated and reuse related to design and construction works. This is an integral part of EMP. The objective of SMP is to reuse of spoil from works.

2. SCOPE:

This Spoil Management Plan developed for both OHR site and as well as Pipeline network laying in Zone (17). For the OHR site we do not anticipated any excess Spoil for disposal as all excavated material will be reuse at site only.

3. LEGAL AND OTHER REQUIREMENTS:

In this project, there is no legal litigation at site for land and working area or site. Disposal of spoil will confirming the Environmental Protection Rules and Regulations of Govt. of India and the State Govt.

4. ROLES AND RESPONSIBILITY:

In this project, major roles and responsibilities are mentioned below:

- Excavated earth should be utilized like refilling at site only.
- Traffic movement should not be obstructed by dumping soil during the work.
- No low land, pond, ditch etc. Will be filled up by extra soil outside the work place.
- Ensuring no accident occurs during rainy season by excavated earth during or finished the work.
- All the drains, outlet should be free from excavated earth.

5. IDENTIFICATION AND ASSESSMENT OF SPOIL ASPECTS AND IMPACTS:

In this project, there are some places which will be assessed and identified jointly along with design engineer. Main places where the excavated earth can be utilized are the trench of pipes and backfilling location.

1. SPOIL VOLUMES AND CHARACTERISTICS:

In this project, approx. Generation of excavated earth will be approx. 7000 cum. There is no excess earth in this project as the same earth is to be used to fill the low land area.

As per report from soil expert, excavated earth is cohesive in nature.

SPOIL REUSES OPPORTUNITIES, IDENTIFICATION AND ASSESMENT:

In this project, there is no excess quality of excavated earth; total excavated earth should be reuse as per plan.

2. ON SITE SPOIL MANAGMENT APPROACH:

In this project, no need of the approach as there is any extra soils for disposal.

3. SPOIL TRANSPORTATION METHODOLOGY:

Extra excavated earth will be shifted by truck from working site within the premises (for backfilling of structure) or any other designated place as instructed by PHED. Trucks to be covered by polythene sheet after loading and before moving one location to another.



The transportation will be done preferably at night time when the volume of traffic will be less so that no disruptions to the traffic flow.

4. MONITORING, REPORTING, REVIEW AND IMPROVEMENTS:

Monitoring, Reporting and all necessary improvements will be done as per requirements.

<b>NCC LIMITED</b>	Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block	Doc. No. NCC/ SMP /01 Revision No. 00 Revision Date : 00 Effective Date :
	<b>Spoil Management Plan</b>	

Expected Spoil generated at Shalipur (Zone 17) for Pipelaying

Sl. No.	Dia	Length(m)	Width(m)	Depth(m)	Total(cum)
1	63	9150	0.25	1.063	2431.61
2	75	2538	0.25	1.075	682.08
3	90	6271	0.25	1.09	1708.84
4	110	3137	0.25	1.11	870.51
5	140	739	0.25	1.14	210.61
6	200	145	0.25	1.2	43.5
7	200	1092	0.3	1.2	393.12
8	250	76	0.3	1.25	28.5
9	300	54	0.6	1.3	42.12
10	Extra for bend, joints etc				529.11
11	Approx. total Spoil at Shalipur				<b>7000.00</b>

## APPENDIX 9: SAMPLE TRAFFIC MANAGEMENT PLAN

NCC LIMITED	Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block	<b>Doc. No. NCC/ TMP /01</b> <b>Revision No. 00</b> <b>Revision Date : 00</b> <b>Page 118 of 148</b> <b>Effective Date :</b>
	Traffic Management Plan	

Project Title:	Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block
Contract:	WBDWSIP/DWW/NCB/N24P/02A/2017-18
Project Location:	Haroa, 24 Parganas (N), West Bengal, India.

## **PURPOSE**

Main purpose is to prevent accident between vehicles, pedestrians and employees and also minimise inconvenience to the vehicle. To stop property damage and prevent injury to persons arising from site traffic and site transport.

## **SCOPE**

The procedure is applicable for HDPE/DI pipe laying area.

## **RESPONSIBILITY**

It is the responsibility of the Engineers and all department head to implement this procedure and ensure that delegated staff under their supervision carries it out.

## **LEGAL REQUIREMENT**

The Building and Other Construction Workers (Regulations of Employment and Conditions of Service) Act 1996 and Central Rule 1998 Rule 48, 88 and 95, Motor Vehicle Act 1988

## **REQUIREMENTS**

### **General**

All road works create inconvenience and are a potential hazard to the safety of all road users and those employed in carrying out the work.

All the effects should be reduced to the minimum, and to ensure that the works are properly guarded, lighted and signed.

A clear and early warning of any obstruction to all road users should be provided.

All areas where work is going on should be clearly demarcated by proper barricading and entry into these areas should be restricted to only authorize personnel.

site access for local people.

### **Planning Stage**

Particular attention should be given to:

- Traffic signs
- Cones
- Barriers
- Road hazard warning lights
- Information boards and
- Site lighting
- Site access for local people

Consider necessity to traffic control systems such as temporary traffic lights or Stop/Go boards.

Access should be planned to eliminate dangerous movements of site traffic (e.g. reversing of vehicles) and personnel (e.g. crossing dual carriageways).

Provision of adequate lighting while working at night.

All persons working on the road shall wear high visibility jackets.

### **On Site**

The working space shall be defined and “A PLACE FOR EVERYTHING AND EVERYTHING IN ITS PLACE” to be follow.

### **Operators/Drivers**

Only Experienced operators and drivers with valid licensed has been appointed.

One copy of license has been collected.

Refreshment training conducted for all operators and drivers.

Operators/Drivers authentication and validation to operate the particular machinery displayed in the machine/vehicles.

### **Equipment**

Drivers undertake a daily visual inspection of their vehicles include steering, brakes, mirrors, lights, horn, tyres and windshield wipers.

Safety Department along with Plant and machinery department shall check the vehicles as a monthly basis.

All vehicles have reverse horns and it is in working properly.

All vehicles, preventive maintenance schedule has to be followed strictly.

### **Roads**

For safe operation we are following the below safety measure:

Safe width of road has been provided.

Flag man deployed at every traffic point to control the vehicles and pedestrians.

Speed limits 10km/hr within the working area.

Caution board has been placed in every location within the site.

Workers are working with reflective jacket as well as required PPE's.

Road for use of pedestrian has been identified.

Reverse horn used in vehicles.

While reverse vehicles ensuring Banks man

Do's and Don'ts displayed at site office.

### **Loading and Unloading**

Only authorized persons were engage loading/unloading.

Materials loaded within the permitted safe weight limit (as per RTO) for the truck.

Ensuring Soil and Sand loaded trucks are covered with tarpaulin while transporting

During Toolbox talk's intimation has been delivered to all drivers/operators that when the drivers leave the driving seat, the engine of the truck shall be switched off, the gear engaged and parking brakes applied. On slopes, wheel blocks shall be applied.

Helper has been provided with all vehicles.

After unloading, the banks man ensuring that the tipper is lowered before moving.

Turn buckle and side stoppers used while transporting as required.

#### **Working Area**

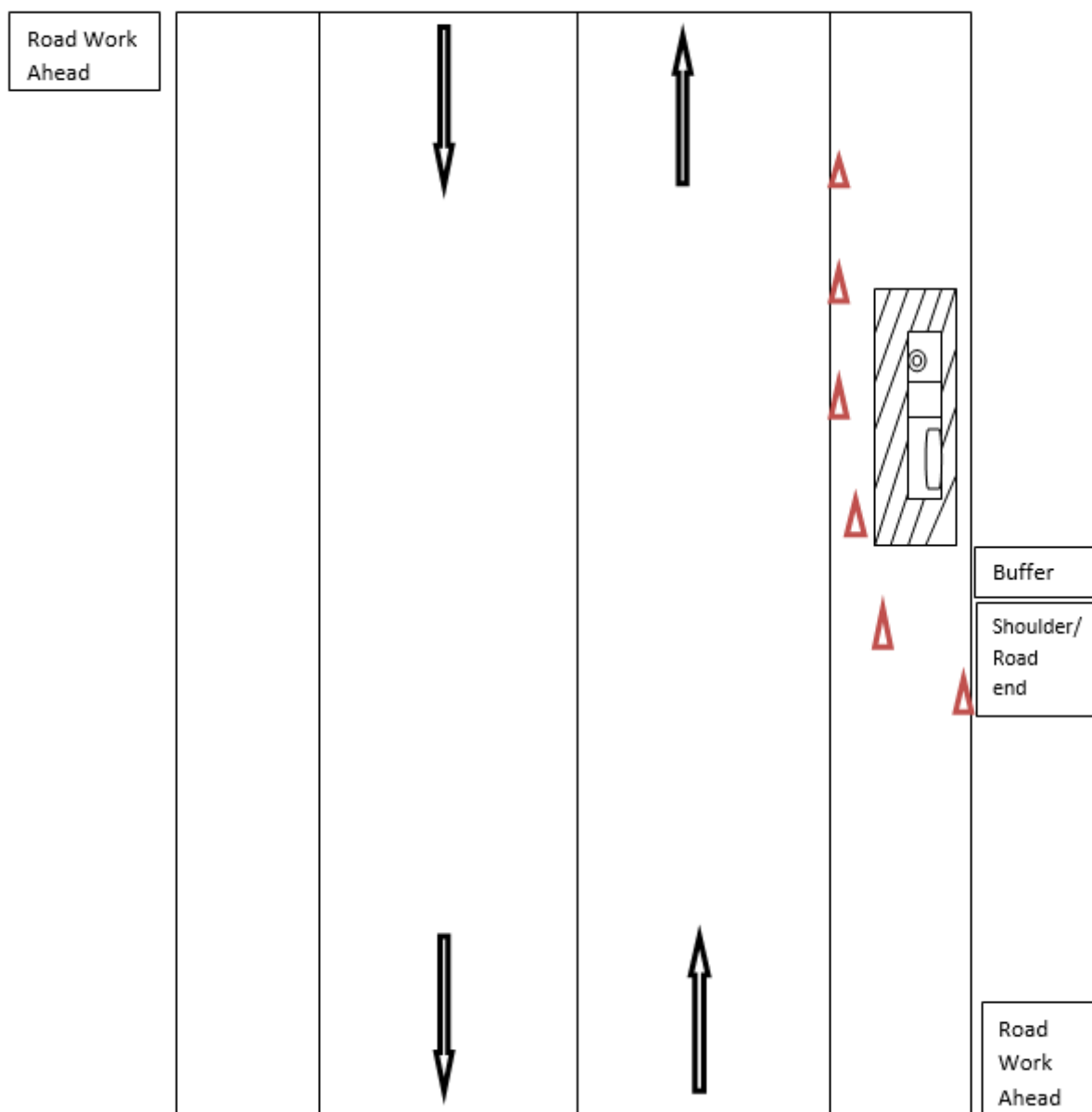
The working area has been restricted from unauthorized entry.

The working space has been defined.

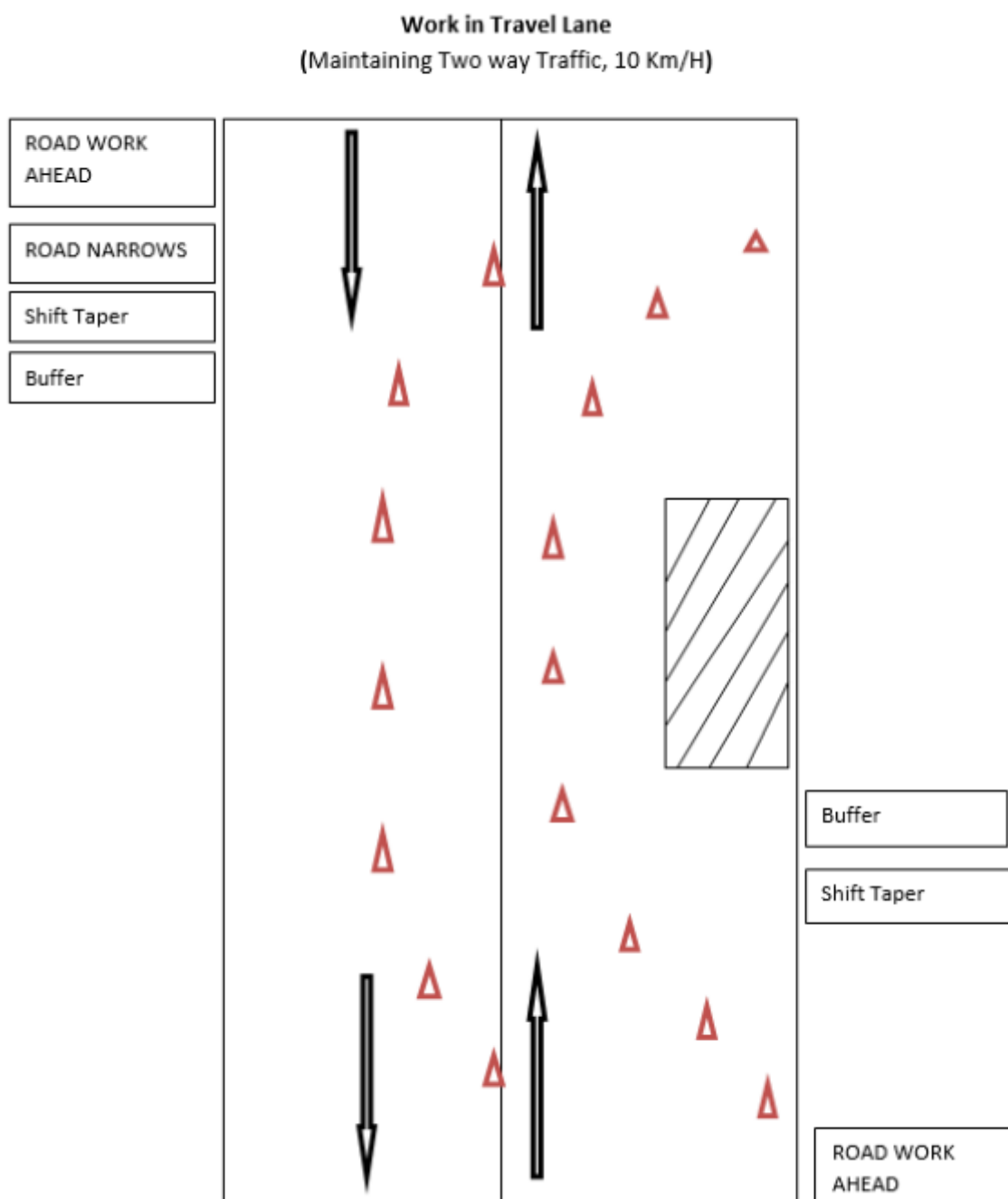
Particular attention has been taken in working area:

- Traffic signs
- Cones
- Barriers
- Information boards, and
- Site lighting
- Adequate lighting has been provided at working area at night.
- All persons wear high visibility jackets.

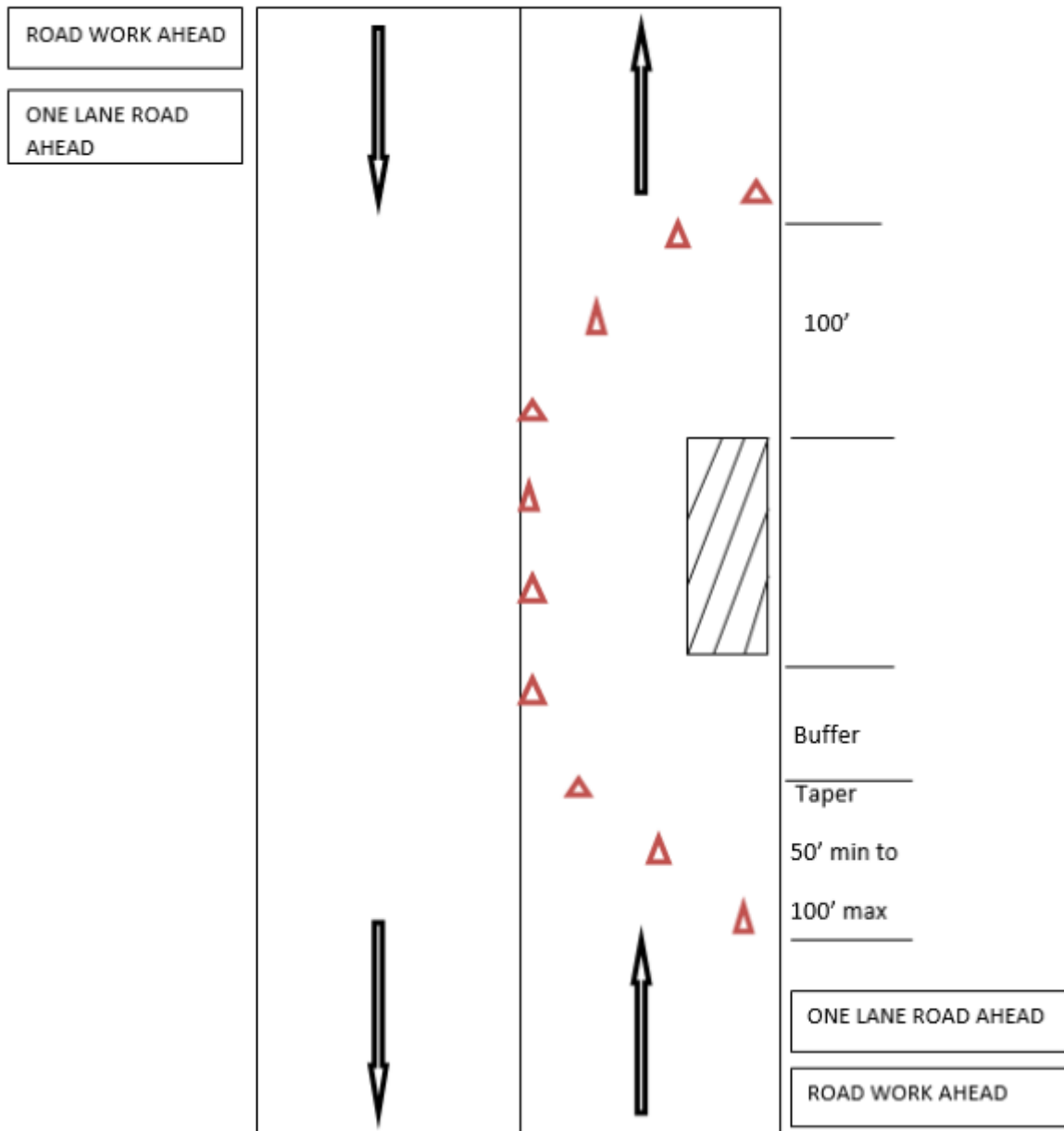
Work on Shoulder or Road end of Village Road







**Lane Closure on Road with Low Volume**  
(No Flagger, Traffic Self Regulating. 10 K/H)



## APPENDIX 10: FIELD LEVEL TRAININGS CONDUCTED DURING REPORTING PERIOD

Package: Construction program for Design and Construction of Over Head Reservoir Including Water Supply Distribution Network and Metering work in Haroa Block (Contract Package-WBDWSIP/DWW/NCB/N24P/02A/2017)

NCC LIMITED

DWS HAROA

SUBJECT: TBAI BOP TALK

PLACE: Zone-01 Amta

DATE & TIME: 20-03-19

NAME OF FACULTY: SARADINXU GAIN

Sl No	Name of Participants	Age	Design	Sign
1	Bikayh mahato	22	Helper	
2	Monirul Sk	20	Mistini	MONIRUL-SK
3	Sudipta Bhowmik	31	Carpenfer	Bhowmik
4	Pankaj Mandal	23	Carpenfer	
5	Asi Ajit pusad mahato	36	Laben-fines	A Mahato
6	Ekbali Hossan	25	Mistini	E K B A I Hossan
7	Safik Sk	18	Laben	SAFIK-SK
8	Gona S mahato	43	Laben	Gona S
9	Kamu Sk	19	Laben	
10	Mozun Rahman	50	Laben	M. Rahman
11	USEN Sk	19	Laben	
12	Banshwar Mapanu	42	Supervisor	Banshwar
13				
14				
15				
16				
17				
18				
19				
20				

  
Sign of faculty

  
Sign of Site Engineer

  
Sign of Safety Engineer

Date: APR 27<sup>th</sup> 2019

## DWS HAROA

Sl. No	Name	Designation	Sign
1	Mr. Ramesh Kumar Singh	PM	
2	Mr. Ashok Kumar	DPM	
3	Mr. Sharan Kumar Bose	Safety Manager	
4	Mr. Sanjay Bharti	SE(QS)	
5	Mr. Sanjeev Kumar Singh	SE	
6	Mr. Sanjoy Kumar Meur	Dpty. Manager(Account)	
7	Mr. Kalyan Nag	Asst. Manager(Admin)	
8	Mr. Arvind Kumar	Asst. Manager(Store)	
9	Mr. Mukesh Pandey	Asst. Manager(EDP)	
10	Mr. Malay Sain	Survey-IV	
11	Mr. Souvik Sarkar	JE	
12	Mr. Saradindu Gain	JE-Safety	
13	Mr. Ankush Ghosh	JE-QC	
14	Mr. Satyam Singh	JE	
15	Mr. Soham Roy	JE	
16	Mr. Sourav Sarder	Office Store	
17	Mr. Suman Paul	GET	
18	Mr. Gulam Murtuja Mandal	Supervisor	
19	Mr. Krisna Pada Shingha	Forman	
20	Mr. Mosatafa Kumar Mandal	Feild Supervisor	
21	Mr. Tapendu Pramanik	Supervisor	
22	Mr. Pratap Kumar Sahoo	Mechanic	
23	Mr. Markhendey Giri	Supervisor	
24	Mr. Ramesh Kumar	Hydra Operator	
25	Mr. Sanjit Kumar Kundu	Driver	
26	Mr. Md Hanif	Driver Helper	

Safety Induction Training  
Completed by  
Date  
(Signature)

**Package: Construction program for Design and Construction of Over Head Reservoir Including Water Supply Distribution Network and Metering work in Bhangar Block- II (Contract Package- WBDWSIP/DWW/NCB/N24P/02B/2017)**

**NCC LIMITED**

**DWSIP BHANGAR II BLOCK**

**SUBJECT: TOOL BOX TALK TRAINING**

**PLACE:** Swasthya Gachhi, Bhangar-II, Zone-4

**DATE & TIME:** 29/04/19, 12:00PM

**NAME OF FACULTY:** Chinmaya Kar

Sl No	Name of Participants	Age	Design	Sign
1	Sunder P. Maxipuz	22	G.E.T	Sunder P.
2	M. Razi	24	ICB driver X	M. Razi
3	Rajiv Kumar	38	ICB driver X	Rajiv Kumar
4	Atim - Head labor	25	Head labor	Atim
5	M. Razi	20	Helper	M. Razi
6	Shamsher	26	Helper	Shamsher
7				
8				
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19				
20				

**Sign of faculty** *[Signature]* 29/04/19

**Sign of Site Engineer** *[Signature]* 29/04/19

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## **APPENDIX 11: TRAININGS CONDUCTED DURING REPORTING PERIOD**

### **TRAININGS CONDUCTED DURING REPORTING PERIOD**

#### **ENVIRONMENTAL SAFEGUARD – REVIEW MEETING AND ENVIRONMENT, HEALTH & SAFETY TRAINING PROGRAM FOR CONTRACTORS**

##### **ZONE-1(AMTA), HAROA BLOCK**

Safeguard review meeting cum safeguard orientation training program has been conducted on safeguard compliance issues and application of Environmental Management Plan (EMP) during Implementation of the project.

Meeting cum Safeguard orientation program has been arranged in the premises of operated site zone-1 (Amta) of Haroa block on 2<sup>nd</sup> of April 2019. Meeting has been conducted jointly by Environment Specialist of DSISC with Social, Gender and Resettlement Specialist of DSISC. In that review meeting cum safeguard orientation training program Social, Gender and Resettlement Specialist of PMC, Assistant Manager (Admin) NCCL, Sr. and Jr. Engineers, Environment- safety officer and labours of contractor were present.

Issues discussed for compliance as below.

##### **Health & Safety requirement**

1. Currently valid Labour license certificate
2. Currently valid Workmen compensation insurance paper
3. Currently valid PUC Certificate for all vehicles and equipment's engaged in the project
4. Grievance/complaint register at all work sites/camp office as per standard format. We know that grievance register available at site office but now supervisor engineer of concerned contractor to carry that register for recording of local complaint
5. Billboard showing name and address of Contractor and Emergency Contacts at all work sites
6. Accident register at camp office
7. Medical examination report of workmen every six month.
8. Document showing tie up with local doctor/nursing home/hospital. This is pending for a long time
9. Display of Safety Officers' name and telephone number at work sites
10. First aid boxes with prescribed items only at all work sites/camp site offices. Standardization of first aid box is required.
11. Toilet & Drinking water facilities at major work sites/camps
12. Firefighting facilities at vulnerable work sites/camp office site/combustible material storage site
13. Rubber mat at high voltage electrical switch board area
14. Drawing showing locations of first aid boxes, firefighting facilities, etc. updated every Month

##### **Instructions for Contractor/ Supervisor- Environmental Safeguard**

- Nomination of environment-safety officer in contractor team
- Setting up camp office with proper sanitation condition, solid waste management facility and sufficient drinking water supply.

- Non cutting of trees during setting up of camp. Removal / disposal of overburden/surplus earth/ stone, sludge materials at earliest without any accumulation at working sites - Use of overburden materials at site (preferred option)
- Proper disposal of other construction waste –Reuse in other projects
- Site should be selected in consultation with PIU and concerned Supervisor Engineer of DSISC
- Proper storage of construction materials - wastage of materials to be checked. Slope should be avoided
- Felling of trees, if unavoidable should be done only after proper approval from authority; should be compensated by plantation (1:5 ratio)
- Scheduling of work without any social impact – movement of pedestrian (particularly during festive seasons) or other disturbances etc.
- Regular water sprinkling (at least 2-3 times in a day during dry period) at construction site for arresting of dust – record should be maintain at site
- Covering of materials carrying vehicles in case of transportation of wind- blown material like sand
- Personnel safety of workforce – use of ear plugs (noise producing area), nose mask (dust producing area), helmet, gloves, gumboots, safety belt etc. at working sites (as per site condition).
- Instruction to material supplier/ contractor to arrange pollution under control (PUC) certificate for material carrying vehicles, equipment and machinery – Timely Renewal of PUC
- In case of purchase of stone aggregates consent to establish and operate of stone crusher should be collected from supplier
- If DG set is installed at site having capacity more than 5 KVA then no objection certificate from West Bengal Pollution Control Board should be obtained
- Regular maintenance of noise producing machinery
- Arrangement of enclosure for noise producing equipment like generator, concrete mixture
- Use of safety tape/ barricade/ caution board at working sites with proper signages
- Proper drainage of waste water/ rain water from working sites
- Arrangement of First Aid box at camp site, site office and working area
- At all working sites there should be a display board which shows location and contact phone number of Contractor and Emergency Contacts.
- Awareness program on HIV/AIDS
- Maintain chance find protocol for archeological objects
- Nonuse of child Labour below 18 yrs. age
- Carry out monitoring work base line & during construction (air, water, noise) as per schedule in EMP
- Regular public consultation at all sensitive receptor within project influence area

**West Bengal Drinking Water Sector Improvement Project**

## Environmental and Social Safeguard Training &amp; Awareness – Participant List

Venue: ZONE-1(AMTA), HAROA BLOCK

Date: 02 April 2019

Sl. No.	Name	Designation	Contact No.
1.	Mr. Kalyan Nag	Asst. Manager (Admn) NCCL	9051813858
2.	Mr. Sanjay Bharti	Sr. Engineer, NCCL	8170011650
3.	Mr. Sanjib Singh	Sr. Engineer, NCCL	9454648492
4.	Mr. Sauvik Sarkar	Jr. Engineer, NCCL	8961348356
5.	Mr. Saradindu Gain	Safety Officer, NCCL	9775459487
6.	Mr. Samar Paul	Site In-charge (GET), NCCL	7076274664
7.	Dr. Aniruddha Dey	Social, Gender and Resettlement Specialist, DSISC	9748107612
8.	Mr. Swarnabha Bandyopadhyay	Environmental Specialist, DSISC	8017668861
9.	Mr. Jayanta Chakraborty	Social, Gender and Resettlement Specialist, PMC	8761805667
10.	Mr. Dilip Kumar Roy	Support Staff, Social Safeguard, DSISC	9933996977
11.	Mr. Rohan Kumar	Support Staff, Environmental Safeguard, DSISC	8617520242
12.	Monirul Sk	Mechanic	
13.	Sudipto Bhowmik	Carpenter	
14.	Ajit Prasad Mahato	Fitter	
15.	Ekbol Hossain	Mechanic	
16.	Safik Sk	Labour	
17.	Ganesh Mahato	Labour	
18.	Kamu Sk	Labour	
19.	Motiur Rahman	Labour	



## **ENVIRONMENTAL SAFEGUARD – REVIEW MEETING AND ENVIRONMENT,**

### **HEALTH & SAFETY TRAINING PROGRAM FOR CONTRACTORS**

#### **ZONE-13(BANIARA), BHANGAR BLOCK-II**

Safeguard review meeting cum safeguard orientation training program has been conducted on safeguard compliance issues and application of Environmental Management Plan (EMP) during Implementation of the project.

Meeting cum Safeguard orientation program has been arranged in the premises of operated site zone-13 (Baniara) of Bhangar block on 30th of April 2019. Meeting has been conducted jointly by Environment Specialist of DSISC with Social, Gender and Resettlement Specialist of DSISC. In that review meeting cum safeguard orientation training program Environment- safety officer and labours of contractor were present. Issues discussed for compliance as below.

#### **Health & Safety requirement**

1. Currently valid Labour license certificate
2. Currently valid Workmen compensation insurance paper
3. Currently valid PUC Certificate for all vehicles and equipment's engaged in the project
4. Grievance/complaint register at all work sites/camp office as per standard format. We know that grievance register available at site office but now supervisor engineer of concerned contractor to carry that register for recording of local complaint
5. Billboard showing name and address of Contractor and Emergency Contacts at all work sites
6. Accident register at camp office
7. Medical examination report of workmen every six month.
8. Document showing tie up with local doctor/nursing home/hospital. This is pending for a long time
9. Display of Safety Officers' name and telephone number at work sites
10. First aid boxes with prescribed items only at all work sites/camp site offices. Standardization of first aid box is required.
11. Toilet & Drinking water facilities at major work sites/camps
12. Firefighting facilities at vulnerable work sites/camp office site/combustible material storage site
13. Rubber mat at high voltage electrical switch board area
14. Drawing showing locations of first aid boxes, firefighting facilities, etc. updated every Month

#### **Instructions for Contractor/ Supervisor- Environmental Safeguard**

- Nomination of environment-safety officer in contractor team
- Setting up camp office with proper sanitation condition, solid waste management facility and sufficient drinking water supply.
- Non cutting of trees during setting up of camp. Removal / disposal of overburden/surplus earth/ stone, sludge materials at earliest without any accumulation at working sites - Use of overburden materials at site (preferred option)
- Proper disposal of other construction waste –Reuse in other projects
- Site should be selected in consultation with PIU and concerned Supervisor Engineer of DSISC

- Proper storage of construction materials - wastage of materials to be checked. Slope should be avoided
- Felling of trees, if unavoidable should be done only after proper approval from authority; should be compensated by plantation (1:5 ratio)
- Scheduling of work without any social impact – movement of pedestrian (particularly during festive seasons) or other disturbances etc.
- Regular water sprinkling (at least 2-3 times in a day during dry period) at construction site for arresting of dust – record should be maintain at site
- Covering of materials carrying vehicles in case of transportation of wind- blown material like sand
- Personnel safety of workforce – use of ear plugs (noise producing area), nose mask (dust producing area), helmet, gloves, gumboots, safety belt etc. at working sites (as per site condition).
- Instruction to material supplier/ contractor to arrange pollution under control (PUC) certificate for material carrying vehicles, equipment and machinery – Timely Renewal of PUC
- In case of purchase of stone aggregates consent to establish and operate of stone crusher should be collected from supplier
- If DG set is installed at site having capacity more than 5 KVA then no objection certificate from West Bengal Pollution Control Board should be obtained
- Regular maintenance of noise producing machinery
- Arrangement of enclosure for noise producing equipment like generator, concrete mixture
- Use of safety tape/ barricade/ caution board at working sites with proper signages
- Proper drainage of waste water/ rain water from working sites
- Arrangement of First Aid box at camp site, site office and working area
- At all working sites there should be a display board which shows location and contact phone number of Contractor and Emergency Contacts.
- Awareness program on HIV/AIDS
- Maintain chance find protocol for archeological objects
- Nonuse of child Labour below 18 yrs. age
- Carry out monitoring work base line & during construction (air, water, noise) as per schedule in EMP
- Regular public consultation at all sensitive receptor within project influence area



### **West Bengal Drinking Water Sector Improvement Project**

#### Environmental and Social Safeguard Training & Awareness – Participant List

Venue: ZONE-13 (BANIARA), BHANGAR II BLOCK

Date: 30 April 2019

Sl. No.	Name	Designation	Contact No.
1.	Mr. Chinmay Kar	Safety Officer, NCCL	9777781016
2.	Sahin Alam	Field Assistant	9327815543
3.	Md. Sukar Ali	Asst. Engineer	8327043932
4.	Dr Aniruddha Dey	Social, Gender & Resettlement Specialist, DSISC	9748107612
5.	Mr Swarnabha Bandyopadhyay	Environment Specialist, DSISC	8017668861
6.	Mr Dilip Roy	Support Staff for Social Safeguard, DSISC	9933996977



## **APPENDIX 12: DETAIL OF THE ENVIRONMENT SAFEGUARD WORKSHOP CONDUCTED BY PMC**

### **Workshop: “West Bengal Drinking Water Sector Improvement Project” funded by ADB**

#### **Orientation on Environment Safeguard Requirements and Application of Environment Management Plan (EMP)**

**AND**

#### **Environment, Health & Safety (EHS) Management: HSE Information for Work Front**

Workshop on above mentioned subject has been organized at **PMU, PHED office New Town on 22<sup>nd</sup> April 2019.**

Workshop has been organized by Project Management Consultant (PMC) of the project. Workshop attended by Project Director WBDWSIP, SE of PMU, EE of PMU, Assistant Engineer & Junior Engineer of PIU; Environment Consultant of ADB; Team Leader, Dy. TL, concerned Specialist, Environment Specialist and Occupational Health and Public safety Manager of PMC; Team Leader, Environment Specialist and Construction Manager of DSISC, Project Manager and Safety person of contractors.

There are two presentations, one on “Orientation on Environment Safeguard Requirements and Application of Environment Management Plan (EMP)” and other on “Environment, Health & Safety (EHS) Management: HSE Information for Work Front”.

Followed by Interactive – Question and Answer session and finally Work out Session on Understanding of Environment Safeguard AND Health & Safety.

Attendance sheet attached as **Annex 1**

Under Presentation 1, summary of Issues discussed and question answer topics mentioned below

- ADB’s Safeguard Policy Statement 2009 and its principal
- Environmental Safeguards Policy Principles and Requirements
- Project categorization
- Relevant Major Rules & Regulations associated in the project for their compliance
- CTE & CTO for WTP at North 24 pgs – application to be submitted with final design of WTP. Process should be initiated by DSISC/PIU
- Environmental Management Plan (EMP) and its importance explained
  - Generic EMP available with IEE
  - Site Specific EMP needs to be submitted by contractor with specific information on camp site establishment, traffic management, disposal of waste, tree felling requirement

- Environment Safeguard Requirement / Documentation to be done before start of physical work.
- For Haroa and Bhangar- Contractor confirmed the appointment of two different Environment and Safety personals for 2 separate packages
- For NCC Ltd - Site Specific EMP has been submitted very recently after work started.
  - Discussion on following issues
- Activity during pre- construction phase
- Environment Safeguard Requirement/ Documentation before start of physical work
- Environment Safeguard Requirement/ Documentation after start of physical work
- Project Implementation Phase – Site Environment Compliance requirement
- Project Implementation Phase – site Environment Compliance like,
  - Availability of safeguard officer of contractor and Environment Expert of DSISC
  - Overall application of EMP and compliance of safety requirement
  - Submission of safeguard documents
  - Labour license
  - Workman Compensation Policy
  - Air, Noise, Water quality monitoring at project sites as base line and during construction
  - PUC certificate for vehicle and equipment engaged in the project
  - Safety officer should have experience in environment, health & safety
  - Placement of Standard Display Board at project site
  - Public consultation report
  - Emergency Phone no. display
  - Occupational safety and public safety
  - Electrical safety
  - Waste management
  - Traffic movement plan
  - Workers' medical check up periodically
  - Royalty receipt of procured materials
  - Water sprinkling at the working site
  - No child labour engagement
  - Equal pay for man and woman
  - Housekeeping at project site, camp
  - Back alarm and light for equipment
  - Material safety data sheet- placement at fuel storage area
  - HIV/AIDS awareness programme
- For NCC – there is a common scrap yard. Disposal of scrap materials is required on regular basis
- Environment Safeguard– schedule and time frame of activity including submission of reports clarified by Environment Specialist of PMC.
- ❖ Monthly report and daily- weekly report on EMP application and regulatory compliance by construction contractor and submission to PIU and DSISC. After finalization at PIU level send to PMC for review and record.

*Monthly Report part- Monthly report filled format, Weekly report filled format, public consultation format, tool box talk / induction training copy, grievance register copy, accident/ first aid register copy, PUC certificate and other supporting documents within 5<sup>th</sup> date of the month*

- ❖ Quarterly report – Preparation of data/ document by DSISC and send to PMC/ PMU. PMC will finalize quarterly report after receiving all data/report from 3 DSISC/ PIU. Report will send to ADB from PMU for their review and approval.

*Four nos. of reports in a year – Due on 31<sup>st</sup> December, 31<sup>st</sup> March, 30<sup>th</sup> June and 30<sup>th</sup> September*

- ❖ Bi annual Environment Monitoring report - Preparation by DSISC and send to PMC/ PMU. PMC will finalize bi annual environment monitoring report after receiving all reports from 3 DSISC/ PIU. Report will send to ADB from PMU for their review and approval.

*Two nos. of reports in a year – Due on 30<sup>th</sup> April (submission on next month, May) and 31<sup>st</sup> October (submission on next month, November)*

- Followed by presentation of few photos showing good and bad practice for EMP application

Under presentation 2, Environment, Health & Safety Management issues has been discussed.

Goal of application of Environment, health and safety management “No work is so important that it needs be done without due consideration for safety”.

Issues pointed out,

- Requirement of workplace safety
- Explanation on safety signage – shape and colour
- Consideration of safety related to,
  - Housekeeping
  - Snake bite
  - Electric safety
  - First aiding for Electric Shock
- Protection – Use of PPEs for different works
- Basic requirement – Fire fighting Equipment and First Aid Box/ Station
- Minimum requirement of first aid materials within First Aid box
- Environment-Health-safety management plan and implementation explained to participant

Finally Work out session has been arranged for participant through answering of set question relevant to workshop topic. Positive feedback has been received from all participants on the workshop subject.

## Workshop photo





## Annex 1: Attendance Sheet

## West Bengal Drinking Water Sector Improvement Project

## WORKSHOP

Orientation on Environment Safeguard Requirements and Application of Environment Management Plan (EMP) AND Environment, Health &amp; Safety (EHS) Management: HSE Information for Work Front

Venue: PMU office, WBDWSIP, PHED, Kolkata

Date: 22.04.2019

Sr.No.	Name	Organization / Designation	Contact No./E mail	Signature
1	Ajoy Kr. Kundu	C.E. & P.O. WBDWSIP, PHED, Ph.	9435021254	AK.
2	Aditi Banerjee	SE, PMU, WBDWSIP PHED, Ph.	9830796815	Aditi
3	Nityananda Klu	SE(CA/E), PHED, Ph.	9435646083	Nityananda
4	SUBIR GHOSH	EE & HSEO, PMU WBDWSIP, PHED, Ph.	7908875637	Subir
5	Tanay Banerjee	EE(CA/E), PHED, Ph.	6290573790	Tanay
6	Rajan Kumar	Env. Safeguard (Deputy)	7364804796	Rajan
7	Debasish Kumar	Construction Manager PHED	7094066283	Debasish
8	Susmita Banerjee	Environment Specialist PHED	807668861	Susmita



Sr.No.	Name	Organization / Designation	Contact No. / E mail	Signature
9	Satyajit Dey	WTL - PMO	9711005285	
10	Ushish Goswami	Support Engg - PMC	998088742	
11	Ranjit Bose	TL, PMC	9831074177	
12	Anuj Dutta	W/S. specialist, PMC	9925070335	
13	D.K. Ganguli	Procurement Supt, PMO	9903031011	
14	Ashim Chatterjee	TL / ADB / W2AP	9831013551	
15	Pragnatikha Bhattacharya	ADB. Consultants - Environment	9831342237	
16	SOURAV BOSE	APUNDA, PMO	9434468695	
17	Saurav San	EE-2 / PMO / WBDWSIP	9830788253	
18	RIT SENGUPTA	JE, PMO W2AP, PMO	7872732332	
19	Kaustav SAINI	Manager, Future Fabrics India Ltd.	6292128008	

Sr.No.	Name	Organization / Designation	Contact No. / E mail	Signature
20	SHUBANKAR CHATTOPADHYAY	FEIL Safety Engineer	9290016411 Shubankar.Chattopadhyay@FEILmail.com	VS. Chattopadhyay
21	SANJIVAN GAIN	NCCL Safety Engg.	9775453487 gan.sanjivan@gmail.com	Sanjiv
22	Chinnaya Rom	NCCL Safety Asst	97997981016	Chinnaya Rom
23	Sr. Porosa Machi	PMC - PHED	Chinnaya.Rom-880@gmail.com 9808852808 / sr.porosa-machi@adcom.com	Sr. Porosa Machi
24	Pravey Kr. Mudhoyee	PMC - Public Safety Dept	8729817298 pravey8380@gmail.com	Pravey
25	Aradhendu Mitra	PMC - Environment SPL	9830415553 / ardhendu.mitra@gmail.com	Aradhendu
26	RASHMI RUDRA	PMC-PHED-Support Engr.	9933029443 / rashmi.rudra@adcom.com	Rashmi
27				
28				
29				
30				

**Package: N-24P/NCB/02A/2017-18 - Haroa**


SL NO	Date of Incident	Name of Injured Person	Incident Description	Precaution	Sign of Injured Person	Remarks
1	29/04/19	Iqbal Sahib	When victim came to site, but unfortunately slipped due to wet ground and he fell down on the ground. Thanks for being injured.	Immediately give him first aid at site and he be back to his work.		

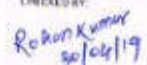
Package: N-24P/NCB/02B/2017-18 - Bhargar

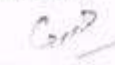
Package: WBDWSIP/DWW/NCB/N-24P/02B/2017-18  
Company: NCC LTD Site: Zone-04

ANALYSIS OF ACCIDENT  
Month: April-2019

Sl. No.	Date	Name of Person	Sex	Age	Time	Design	Company/ Sub contractor	Agency	Type of Accident	Nature of injury Location of injury	Root Cause	Action Taken
1	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
2	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
3	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
4	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
5	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
6	01-04-2019	Pratik Kumar	Male	20	11:25 AM	Labour	MCC LTD	Sub agency	Minor injury	Right hand finger	Casual approach during handling bricks	First aid
7	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
8	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
9	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
10	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
11	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
12	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
13	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
14	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
15	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
16	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
17	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
18	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
19	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
20	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
21	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
22	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
23	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
24	24-04-2019	Atanada wani	Male	24	5:50 PM	Worker	BCC LTD	Sub agency	Minor injury	Left hand finger	Casual approach during handling bricks	First aid
25	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
26	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
27	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
28	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
29	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
30	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
31	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil

PREPARED BY:   
(Safety Officer)

CHECKED BY:   
Rishon Kumar  
50/04/19  
(JSC Engineer)

APPROVED BY:   
(Project In-Charge)

**APPENDIX 14: Sample Grievance Registration Form**

(To be available in Hindi and English or local language - Bengalee)

The **West Bengal Drinking Water Sector Improvement Project (WBDWSIP)**, Govt. of West Bengal welcomes complaints, suggestions, queries and comments regarding project implementation. We encourage persons with grievance to provide their name and contact information to enable us to get in touch with you for clarification and feedback.

Should you choose to include your personal details but want that information to remain confidential, please inform us by writing/typing **\*(CONFIDENTIAL)\*** above your name. Thank you.

<b>Date</b>		<b>Place of registration</b>			
<b>Contact Information/Personal Details</b>					
<b>Name</b>		<b>Gender</b>	<b>Male</b> <b>Female</b>	<b>Age</b>	
<b>Home Address</b>					
<b>Village / Town</b>					
<b>District</b>					
<b>Phone no.</b>					
<b>E-mail</b>					
<b>Complaint/Suggestion/Comment/Question Please provide the details (who, what, where and how) of your grievance below:</b>					
<b>If included as attachment/note/letter, please tick here:</b>					
<b>How do you want us to reach you for feedback or update on your comment/grievance?</b>					

**FOR OFFICIAL USE ONLY**

<b>Registered by: (Name of official registering grievance)</b>	
<b>If – then mode:</b>	
<ul style="list-style-type: none"> <li>• Note/Letter</li> <li>• E-mail</li> <li>• Verbal/Telephonic</li> </ul>	
<b>Reviewed by: (Names/Positions of Official(s) reviewing grievance)</b>	
<b>Action Taken:</b>	
<b>Whether Action Taken Disclosed:</b>	<ul style="list-style-type: none"> <li>• Yes</li> <li>• No</li> </ul>
<b>Means of Disclosure:</b>	

**GRIVENCE REDRESS REGISTAR**  
**GRIVENCES RECORD AND ACTION TAKEN**

Sr. No.	Date	Name and Contact No. of Complainer	Type of Complain	Place	Status of Redress	Remarks



## APPENDIX 15: FILLED GRIEVANCE REDRESSAL FORMAT- SAMPLE COPY

Package: N-24P/NCB/02A/2017-18 - Haroa

Grievance Redressal Register								
Name of Project: WBDWSIP								
Package No: WBDWSIP/02A/NCB/02A/2017-18 (Line-17, Shalpur)								
Month: March 2018								
Date:								
Sl. No.	COMPLAINT NUMBER	DATE	COMPLAINT THROUGH (PERSON/UNIT/STAKEHOLDER)	NAME OF COMPLAINT	COMPLAINT DETAILS	ACTION TAKEN BY CONTRACTOR/UPPER E/DC	DATE CASE RESOLVED (DATE REQUIRED)	REMARKS/FURTHER ACTION IF ANY
	NI	NI	NI	NI	NI	NI	NI	NI

Prepared By: SARADINBU GALLI

in charge SARADINBU 22/04/19

Checked By: *Ash*

Project Manager



**Package: N-24P/NCB/02B/2017-18 - Bhargar**

Grievance Redressal Register								
Name of Project: WBDWSIP								
Package No: WBDWSIP/DWW/NCB/N-24P/02B/2017-18								
Month: April-2019								
Date: 30-004-2019								
Sl. No.	COMPLAINT NUMBER	DATE	COMPLAINT THROUGH (PHONE/LETTER/SITE)	NAME OF COMPLAINER	COMPLAINT DETAILS	ACTION TAKEN BY CONTRACTOR/PIL/P MD/CSC	DATE CASE RESOLVED(DAYS REQUIRED)	REMARKS FURTHER ACTION IF ANY
1	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL

Prepare By:

*Ch*  
20/04/19  
HSE Incharge

Checked By:

*AS*  
30/04/19  
Project Manager

## SAUW Semi-Environmental Monitoring Report Review – Information Log

**Instructions:** Provide information based on SEMR submitted by Project Management Unit (PMU). This log sheet will serve as record of the review findings, comments, and/or further actions. A copy of the SEMR log sheet should be (i) provided to PMU for their record; (ii) attached to the SEMR to be disclosed on ADB website; (iii) used as reference for review of next SEMRs; and (iv) inputted in the SARD Safeguards Compliance Tracking System.

Project title:	India: West Bengal Drinking Water Sector Improvement Project			
Loan Number:	3696	Project Number:	49107-006	
Overall Project and Objectives	WBDWSIP will provide safe and sustainable drinking water as per the standards set by the Government of India to about 1.65 million people in the arsenic, fluoride, and salinity- affected selected areas of Bankura, North 24 Parganas and Purba Medinipur districts of West Bengal (project districts). It will introduce an innovative and sustainable institutional framework and advanced technology for smart water management to enable efficient service delivery in project districts.			
Approved Categorization		Category A		Category C
	X	Category B		FI
Loan Effectivity Date:	04 Oct 2018		Frequency of Reporting	Semi-Annual
Project Officer		Neeta Pokhrel	Project Analyst	Pamela Puspus
Reporting Year	2019		Coverage Period	01 Nov 2018 – 30 Apr 2019
				1st SEMR of the year
				2nd SEMR of the year
Date of PMU submission to ADB		13 June 2019	Date of ADB's feedback/comment to PMU	

Item	Findings in the SEMR	Comments	Action/s Required	Response by PMU
<b>A. Project Safeguards Team</b> ( <i>check loan agreement and PAM requirements</i> )				
PMU <sup>1</sup>	PMU appointed Head Safeguards Gender Officer.	Not clear if appointed person is also responsible for compliance with environmental requirements of ADB SPS and government.	Confirm responsibilities include environmental safeguards.  In next SEMR, use the SEMR template per PAM, EARF and IEEs.	PMU's Head Safeguards Gender Officer is responsible for compliance with environmental requirements of ADB SPS and government. Detail activity provided under safeguard implementation arrangement
PIU <sup>2</sup>	3 PIUs established. At each PIU, an Assistant Engineer is given additional responsibilities of safeguard tasks and designated as Assistant Safeguards Officer.	Complied.	In next SEMR, use the SEMR template per PAM, EARF and IEEs.	Noted

<sup>1</sup> PMU – project management unit

<sup>2</sup> PIU – project implementation unit (For DWSNIP – project coordination units are PIUs)

Item	Findings in the SEMR	Comments	Action/s Required	Response by PMU
Consultants	PMU being supported by PMC environment consultant. PIUs are being assisted by DSISC (total of 3 environment specialist and 3 environment support staff)	Complied.	In next SEMR, use the SEMR template per PAM, EARF and IEEs.	Noted
Others (e.g. auditor, external monitoring team, etc)	Not Applicable.		None.	-
<b>B. Overall Project and Subproject Description</b> (summarize number and type of packages) <sup>3</sup>				
Number of Packages with civil works (check if consistent with latest procurement plan)	10	Procurement plan per PAM shows 12 packages.	Please provide updated procurement plan. Confirm if 10 or 12 packages.	<b>There are 10 nos. civil work packages under ADB loan.</b> Other than that, there are 2 small packages of \$2 million as <b>grant from the Japan Fund for Poverty Reduction.</b> Package - SAN/01, Pilot Fecal Sludge and Septage Management Plant - Small works packages under the JFPR grant STWM (Smart Water Management) / 01, Gram Panchayat level smart water management equipment - Multiple packages under the Japan Fund for Poverty Reduction Plant have been considered. These 2 packages are under Smart Water Management for "Institutions and capacity of stakeholders for drinking water service delivery strengthened". <u>This is clarified in updated SEMR</u>
Number of DB/DBO packages and status (see footnote 3)	4	3 under implementation	None.	Noted
Number of civil works packages and status (see footnote 3)	6 item rate contracts	5 under implementation	None.	Noted
IEEs cleared for awarded packages?	Information in SEMR is not clear as the table is not showing package-wise status.	Total of 8 packages under implementation	Clarify if the 4 draft IEEs also cover the 5 item rate contracts that are under implementation.  Note that no contract should be awarded until	Till report period (April 2019) 4 packages has been awarded. Out of 4 packages 2 are item rate contracts and other 2 DBO contracts For 4 other packages (3 item rate and 1 DBO) Letter of Acceptance (LOA) issued but not awarded (Notice to proceed not issued). 4 draft IEE covers item rate contracts which are under implementation.

<sup>3</sup> DB/DBO – design-build or design, build, and operate or where contractor will finalize the detailed engineering design; civil works contract – enough details of the package is known and used as basis for bid/contract's Technical Specification

Item	Findings in the SEMR	Comments	Action/s Required	Response by PMU
			IEE has been reviewed and cleared by ADB.	<b>All draft IEEs – 10 nos. approved by ADB</b> (mentioned in Table 6 of SEMR) Noted
Safeguard documents disclosed on project website?	Information in SEMR is not clear as the table is not showing package-wise status. SEMR is showing 4 draft IEEs disclosed on ADB website.	Links to disclosed IEEs on project website not provided.	Clarify if the 4 draft IEEs also cover the 5 item rate contracts that are under implementation. Provide links to disclosed IEEs on project website.	<p>Status of IEEs explained above Links of IEEs for awarded packages already provided in <b>Table 6 of SEMR</b></p> <p><b>Further details mentioned below and added further in Table 6 of SEMR</b></p> <p>East Mednipore ADB <a href="https://www.adb.org/projects/documents/ind-49107-006-iee-7">https://www.adb.org/projects/documents/ind-49107-006-iee-7</a> <a href="https://www.adb.org/projects/documents/ind-49107-006-iee-5">https://www.adb.org/projects/documents/ind-49107-006-iee-5</a></p> <p>Bankura ADB <a href="https://www.adb.org/projects/documents/ind-49107-006-iee-6">https://www.adb.org/projects/documents/ind-49107-006-iee-6</a> <a href="https://www.adb.org/projects/documents/ind-49107-006-iee-4">https://www.adb.org/projects/documents/ind-49107-006-iee-4</a> <a href="https://www.adb.org/projects/documents/ind-49107-006-iee-2">https://www.adb.org/projects/documents/ind-49107-006-iee-2</a> <a href="https://www.adb.org/projects/documents/ind-49107-006-iee-3">https://www.adb.org/projects/documents/ind-49107-006-iee-3</a> <a href="https://www.adb.org/projects/documents/ind-49107-006-iee-1">https://www.adb.org/projects/documents/ind-49107-006-iee-1</a></p> <p>North 24 pgs ADB <a href="https://www.adb.org/projects/documents/ind-49107-006-iee">https://www.adb.org/projects/documents/ind-49107-006-iee</a> <a href="https://www.adb.org/projects/documents/ind-49107-006-iee-0">https://www.adb.org/projects/documents/ind-49107-006-iee-0</a></p> <p>WBDWSIP website link for Environment safeguard report <a href="https://wbdwsip.org/safeguard-documents">https://wbdwsip.org/safeguard-documents</a></p>
SEMR information on package-wise implementation phase (bidding, on-going, construction,	Out of 10 packages, information provided only for 4 packages.		Provide information for other 6 packages.	Out of 10 packages, 4 packages awarded and rest to be awarded. Details are already provided in <b>Table 1 and 2. EMP</b>

Item	Findings in the SEMR	Comments	Action/s Required	Response by PMU
completed, under operation, others)				implementation only started for 2 packages (detail provided in SEMR)
<b>C. Status of compliance with statutory clearances</b> (check IEE for the complete list, summarize the findings for each package – obtained/under application and if obtained, specify validity period)				
Environmental Clearance (EC)	Out of 10 packages, information provided only for 4 packages.	For the 4 packages, environmental clearance is not required.	Provide information for other 6 packages.	As per State and National rules Environment Clearance not required for other 6 packages also
Forest Clearance	Out of 10 packages, information provided only for 4 packages.	For the 4 packages, forest clearance is not required.	Provide information for other 6 packages.	At draft stage it is noted that no Forest clearance is required for other 6 packages also. During detailed design requirement will be assessed further
No Objection Certificate/Letter	No information provided.		Clarify if NOC/NOL is required and provide status for each package.	For North 24 pgs/ 02A package NOC received from Director Sundarban Biosphere Reserve on 5 <sup>th</sup> March 2019 indicating non requirement of any clearance from SBR authority since no forest area involved under the package. All mentioned in <b>Table 4</b> of SEMR
Site location clearance	No information provided.		Clarify if site clearance is required and provide status for each package.	Other than the purchase of <u>land clearance status district wise added in updated SEMR</u>
Permit/Consent to Construct (or equivalent)	No information provided.	Consent to Establish (CTE) is required for water treatment plants.	Provide status of obtaining CTE for packages with WTPs.	Status of CTE already mentioned in <b>Table 4</b> of SEMR. CTE will be applied after finalization of design
Permit/Consent to Operate (or equivalent)	CTO is not yet due. CTO will be obtained after WTP construction.	Not yet due.		
Road-cutting permit	No information provided.		Clarify if road-cutting permit is required and provide status for each package.	Till report period no as such permit required.
Utilities shifting permit	No information provided.		Clarify if utilities shifting permit is required and provide status for each package.	Till report period no as such permit required.
Tree-cutting permit	Out of 10 packages, information provided only for 4 packages. Tree-cutting permit required for 3 packages.	Appendix 2 provides the application form for felling trees	Confirm if the application form covers all 3 packages. Provide information for other 6 packages.	Till report period application only send for one package and one location. For other 3 packages till not required. Requirement can be finalized after completion of design. For rest 6 packages requirement can be finalized after award of contract and finalization of location and design. Further status will be reflected in next SEMR
Others (specify)				

Item	Findings in the SEMR	Comments	Action/s Required	Response by PMU
1. CTE for diesel generators and hot mix plants, wet mix plants, stone crushers, batching plants	No information provided.	SEMR should clarify when CTE is required, who is responsible for application and which regulatory agency.	Provide package-wise status. Provide information for other 6 packages.	Till date no CTE is required. Diesel generators and hot mix plants, wet mix plants, stone crushers, batching plants not required till date For rest 6 packages requirement can be finalized after award of contract
2. CTO for diesel generators and hot mix plants, wet mix plants, stone crushers, batching plants	No information provided.	SEMR should clarify when CTO is required, who is responsible for application and which regulatory agency.	Provide package-wise status. Specify if not yet due.	Does not arise. No CTO required till date
3. Pollution control certificate (PUC) for all vehicles and equipment	No information provided.	Required for all packages.	Provide package-wise status. Provide information for other 6 packages.	Till report period 4 packages awarded and work just started for 2 packages. For those 2 packages PUC collected. On report date collection of PUCs under process for rest 2 awarded packages. These are mentioned in <b>Table 4</b> of SEMR
4. Labor license	Out of 10 packages, information provided only for 4 packages.	Required for all packages.	Provide package-wise status. Provide information for other 6 packages.	Already obtained for 2 packages, where work just started. For other 2 awarded packages (where work not started) – collection under process Status for rest of 6 packages will be obtained after award and progress of those packages
5. ASI clearance	Out of 10 packages, information provided only for 4 packages.	Not required for 4 packages.	Provide information for other 6 packages.	Status for rest of 6 packages will be obtained after award of contract and progress of those packages/ designing.
<b>D. Status of Compliance with loan covenants</b> (verify items in SEMR with the project's loan agreement)				
Environment	Under compliance	Confirmed.	In the next SEMR, provide specific information on how the covenant is being complied.	Noted
Human and financial resources to implement safeguards requirements	Under compliance	Confirmed.	In the next SEMR, provide specific information on how the covenant is being complied.	Noted
Safeguards-related provisions in bidding documents and works contracts	Information provided is generic and does not fully specify how the loan covenant is being complied.	Need to provide specific information on contracts – EMP included? BOQ line item included? Contractor submitted information on budget to implement EMP? Contractors confirmed	Confirm: Included in contracts: EMP, BOQ line items, reinstatement to pre-project conditions  Provide package-wise information: confirm contractors' budget to implement EMP and	EMP, BOQ line items, reinstatement to pre-project conditions included in the contract agreement. Contractors done base line pre construction monitoring and survey of pre- works condition. Budget has been allocated for EMP application and monitoring. Pre construction documents submitted by contractors for those packages (N 24



Item	Findings in the SEMR	Comments	Action/s Required	Response by PMU
		they have recorded pre-works conditions? Contracts include BOQ and budget for reinstatement to pre-project conditions?	submission to PIUs of pre-works documentation	pgs/02A and 02B) where actual physical construction started  Statement includes in updated SEMR
Safeguards monitoring and reporting	Under compliance	Confirmed.	None.	
Prohibited list of investments	Under compliance	Confirmed.	None.	
Labor standards, health and safety (Schedule 5, Item 14)	Need information on compliance of 6 packages (not reported in the SEMR). Information on compliance (Status/Issues) is generic. Cannot assess compliance status for this covenant.	HIV/AIDS awareness programs not yet conducted.  Need specific information on how the project and packages' contractors are complying the covenant.	Provide specific (point-by-point) compliance. Avoid general statements. The SEMR should provide readers of clear information how the project complies with covenant.  Provide training schedules for HIV/AIDs, health and safety, labor laws, etc.	Labour license available for 2 packages, where construction started. HIV/ AIDS awareness program to be conducted shortly by contractors Induction training just started for the awarded packages For rest 2 awarded packages (DBO contract) design undergoing. Field activity will be started shortly Points included in updated SEMR
<b>E. Contractors Compliance with Environmental Safeguards Requirements</b>				
Appointment of Environment, Health and Safety (HSE) and/or nodal person	Cannot find in SEMR.	Contractor required to appoint HSE nodal person.	Provide names and contact details for all packages under implementation.	HSE officer details already provided for 3 awarded packages in the <b>Table 3</b> . Rest will be possible after progress and awarding of packages
Submission of site-specific EMPs	No information.	SEMP is required to be submitted prior to start of works.	Provide details for all packages under implementation. If not yet submitted and works already started, corrective action plan is required – specify the date for submission and provide the written notice to contractor for such non-compliance.	Mentioned in SEMR that SEMP submitted by contractors of 2 packages – North 24 pgs/ 02A and 02B. Sample SEMP available in Appendix of the report. Physical work just started for those packages (progress less than 1%). For rest 2 awarded packages contractors will submit SEMP before start of actual physical work. For other 6 packages activity will be started after award of the contract.
Submission of SEMP implementation report ( <i>specify in comments frequency – daily, weekly, monthly or quarterly basis</i> )	No information.	SGC instructions for SEMP submission listed but no actual submissions are mentioned.	Provide details for all packages under implementation. If not yet submitted and works already started, corrective action plan is required – specify the date for submission and provide	Work just started for only 2 packages, progress less than 1%. SEMP submission status (within April 2019) mentioned above and in SEMR. Implementation of SEMP started for those packages and status point/ issue wise corrective mitigation measures mentioned in <b>Tables 7 and 8</b> . Since the work just started,

Item	Findings in the SEMR	Comments	Action/s Required	Response by PMU
			the written notice to contractor for such non-compliance.	there is no as such major issues. Corrective action plan provided in <b>Table 15</b> of SEMR. Instruction given to contractors for corrective action during field visit in the Month of April 2019 and in review meeting.
Site verification by PMU, PIU, or consultants ( <i>verification report should be attached to the SEMR</i> )	Yes for 6 packages listed on Table 15.	Not clear if contractors submit reports regularly and being verified by PIUs. Non-compliances to environmental safeguards should be notified to contractors and timebound corrective actions should be agreed.	Provide detailed corrective action plan (package-wise). Table 15 is not complete as it is not showing who is responsible for actions (implementation, monitoring and reporting). PIUs should also be involved in making sure corrective actions are implemented by the contractors and supervising the works to avoid recurrence of non-compliances.	Actual physical work just started for 2 packages of North 24 pgs. There is no major application of corrective measures is required. Responsibility of implementation of corrective action is already mentioned in <b>Table 15</b> . <u>Additional information includes in Table 15 of updated SEMR</u>  As per institutional structure PIU will also be involved for supervision and implementation of corrective measures through contractors
SEMR compliance matrix on mitigation measures implementation (matrixes are based on approved SEMP)	No information provided.	SEMPs are not yet submitted.	Require all contractors with on-going works to submit SEMP by 31 August 2019.	SEMP submitted by the contractors (Before April 2019) of package N 24pgs/02A and N 24pgs/ 02B and which mentioned in SEMR.  Sample SEMP already enclosed in SEMR. No work started for other 2 awarded packages. Contractors will submit SEMP for rest of the packages after award of contract and before start of actual physical work
Other information				
<b>F. Environmental Monitoring based on EMP</b>				
Rationale	Environment Specialist from DSISC and PMC carried out periodic monitoring of EMP implementation through desk review of contractor's records and site inspections. Sample site inspection report as prepared by DSISC is shown in		Confirm.	Contractors start submission of monthly environment monitoring report from May 2019. Details will be provided from next SEMR

Item	Findings in the SEMR	Comments	Action/s Required	Response by PMU
	Appendix 7. Package wise findings are presented in Table 7 (package: N-24P/NCB/02A/2017-18) and Note: Table 8 (package: N-24P/NCB/02B/2017-18). Contractor will start submitting of monthly Environment Monitoring Reports.			
Parameters to be monitored are commensurate to the impacts, mitigation measures, and project/subproject/package	Para 34 – not clear how the parameters and locations are selected.	Para 34 mentioned “critical locations”	Provide justifications on selected sampling points. Clarify “critical locations”.	Critical sampling locations indicate- nearby religious places, educational institutions, health institutes and any protected areas. Site selection matrix already available in SEMR
Sampling locations identified and appropriate	SEMR information is to establish baseline for 2 packages. No information on remaining packages.	Not clear information as to why these sampling locations are selected.	Provide GPS coordinates and provide description of the sampling location sites. Provide information on other packages under implementation.  In next SEMR, provide GPS coordinates and general description of the sampling sites.	GPS Coordinate of sampling locations already available in SEMR (ref Figure 7 and 8) More detail information of sampling stations to be provided in next SEMR
Sampling frequency identified and appropriate	SEMR information is to establish baseline for 2 packages. No information on remaining packages.	SEMR should include specific schedule and frequency of sampling.	Provide next schedule for environmental monitoring.	Base line monitoring conducted for 2 packages where work started. After that by June 2019 base line monitoring done for rest 2 awarded packages. For 4 other LOA stage packages monitoring done after award of contract. In next SEMR schedule of monitoring will be included.
Sampling collection and analysis are in accordance with internationally-accepted practices	No information provided.		Provide protocol or reference to sampling collection and analysis. Confirm protocol follows internationally-accepted practices, if not provide justification.	National level Central Pollution Control Board's (Govt. of India) guideline/ protocol used for sampling For analysis. INDIAN STANDARD IS 5182 and USEPA CFR 40 (International protocol) used for analysis (These are included in updated SEMR)

Item	Findings in the SEMR	Comments	Action/s Required	Response by PMU
				All mentioned in Test result certificate, which keep as back up document with DSISC and PIU
Standards and performance indicators are compliant with ADB SPS requirements <sup>4</sup> (provide justification if less stringent standards are used)	No information provided.	Standards not provided.	Provide standards and compare with internationally-accepted guidance values.	Standard – CPCB (Govt. of India National standard) given in the SEMR's <b>Table 10-13</b> . From next SEMR International WHO standard will be included and comparison of results will be done with that standard
<b>G. Environmental monitoring results (narrative based on presented results)</b>				
Visual inspection ( <i>refer to EMP tables in the IEE where visual inspections are required to determine if there are environmental impacts</i> )	Conducted for 2 packages. No information on remaining packages under implementation. Appendix 7 shows 1 sample site inspection report.	Appendix 7 to be revised to be consistent with SEMP	Provide explanation/reason for not conducting inspections for remaining packages under implementation.	On Report date work just started for only 2 packages. Accordingly, visual inspection as per EMP carried out. Monitoring will be started for rest of the awarded / to be awarded packages after start of actual physical work. Appendix 7 shows sample site observation checklist. Detail monitoring checklist (sample copy) will be included in next SEMR after submission by contractors and approval by DSISC and PIU
Air quality results	Conducted for 2 packages. No information on remaining packages under implementation.  For both Haroa and Bhangar-II blocks, PM10 and PM2.5 result are found to be exceeding the limits prescribed in National Ambient Air Quality Standard. However, CO, SO2 and NO2 concentration levels were all found within the prescribed limits for both the packages.	Contractors are being advised regularly to take necessary action on dust suppression by sprinkling of water whenever required.	Provide explanation/reason for not conducting air quality monitoring for remaining packages under implementation.  In next SEMRs, include contractors' dust suppression reports.	On Report date work started for only 2 packages. Base line monitoring conducted for 2 packages where work started. After April 2019, monitoring conducted for rest of the awarded packages. All results will be reflected in next SEMR.  Noted

<sup>4</sup> ADB SPS (Appendix 1 para 33) requires projects to apply pollution prevention and control technologies and practices consistent with international good practices as reflected in internationally recognized standards such as the World Bank Group's Environmental, Health and Safety Guidelines (<https://www.ifc.org/ehsguidelines>). These standards contain performance levels and measures that are normally acceptable and applicable to projects. When host country regulations differ from these levels and measures, the borrower/client will achieve whichever is more stringent. If less stringent levels or measures are appropriate in view of specific project circumstances, the borrower/client will provide full and detailed justification for any proposed alternatives that are consistent with the requirements presented ADB SPS.

Item	Findings in the SEMR	Comments	Action/s Required	Response by PMU
Water quality results	Not conducted for all packages under implementation. Conducted for 2 packages. No information on remaining packages under implementation.	Need to conduct water quality testing of all sources and water bodies which will be impacted (or potential to be impacted) by the packages.	Provide explanation/reason for not conducting water quality testing for remaining packages under implementation.	On Report date work started for only 2 packages. Base line monitoring conducted for 2 packages where work started. After April 2019, monitoring conducted for rest of the awarded packages. All results will be reflected in next SEMR.
Noise level results	Conducted only for 2 sampling stations	Need to conduct noise level monitoring for day time and night time (if applicable). Priority locations are sites where there are noise-producing activities or near areas with sensitive receptors	Provide explanation for not conducting noise level measurements in all project sites.  Ensure sensitive receptors are informed of any noise-producing activities before start of works.	On Report date work started for only 2 packages. Base line monitoring conducted for 2 packages where work started. After April 2019, monitoring conducted for rest of the awarded packages. All results will be reflected in next SEMR. It ensured that sensitive receptors will be informed of any noise-producing activities before start of works.
Others				
<b>H. Consultations and/or FGDs during the reporting period</b>				
Number	None reported.		Justify why no consultations, FGDs or stakeholders consultations conducted during reporting period.	SEMR mentioned that by end of April 2019 pipeline work just started. Moreover, due to General Election of country any project related discussion banned till June 2019 After June 2019, stakeholder and focus group consultation started
Reason/s for consultations/FGDs				
Number of participants				
Number of <b>female</b> participants				
<b>I. Trainings, Workshops, Seminars during the reporting period</b>				
Number	10			
Topics	<ul style="list-style-type: none"> <li>- Technical Safeguards and GRM</li> <li>- Safety awareness training</li> <li>- Safety introduction training program</li> <li>- Tool box training talk (2)</li> <li>- safeguard orientation training (2)</li> <li>- Environmental and Social Safeguard</li> </ul>			

Item	Findings in the SEMR	Comments	Action/s Required	Response by PMU
	Training & Awareness (2) - Orientation on Environment Safeguard Requirements and Application of Environment Management Plan			
Number of participants	82			
Number of <b>female</b> participants	Not specified.		Provide information.	3 females participate in Workshop
<b>J. Grievance Redress Mechanism</b>				
GRM per PAM or IEE/EARF established	Not clear if GRM is to be established at different project sites (town-wise)		Provide clarification.	SEMR mentioned "Till 30 <sup>th</sup> April, the GRC has not yet been constituted, which is under process." But on reply date GRM has been notified and GRC formed. That will be reflected in next SEMR
GRM notified via publication or notice boards	No information.		Confirm GRM(s) have been notified.  In next SEMR, confirm contractors are provided with information/instructions on grievance redressal and a logbook is maintained on site to record complaints. Notice boards showing contact details should also be put on site.	Noted
GRM members identified	No information.		Provide specific information.	Since GRM notified after report date, details will be provided in next SEMR
GRM members have capacity to address project-related complaints ( <i>detailed information on capacity development of GRM members such as trainings, workshops, briefings, etc should be attached in the SEMR</i> )	No information.		Provide specific information.	Since GRM notified after report date, details will be provided in next SEMR
Number of meetings conducted ( <i>attach minutes of the meeting</i> )	No information.		Provide specific information.	Since GRM notified after report date, details will be provided in next SEMR
<b>K. Complaints Received</b> ( <i>detailed information on nature of complaints, summary and status of resolution</i> )				
Number of complaints	None listed.			



Item	Findings in the SEMR	Comments	Action/s Required	Response by PMU
Nature (provide summary of issues/concerns)				
Status of resolution				
<b>L. Summary of Issues and Corrective Actions</b>				
Major issues/concerns (specify)	Corrective actions provided only for limited packages. No information on remaining packages under implementation. Issues identified: 1. Facilities in construction camps 2. Notice/display boards 3. housekeeping 4. access to sites 5. workers health and safety 6. wastes (wastewater, solid wastes, etc) 7. materials storage	Not sufficient as SEMP's are not yet submitted.	Closely monitor implementation of corrective actions. Strictly implement health and safety requirements (project consultants should verify on-site and do random checks)	Actual physical work has been started for 2 packages and <b>SEMR mentioned</b> that SEMP already submitted for those 2 contracts. Site monitoring just started during end of April 2019 (progress less than 1%). Presently (reply date) monitoring continued for those packages and status of implementation of EMP as per SEMP and application of corrective action plan will be reflected in next SEMR
Corrective Action to be implemented, timeline, responsible person/s, and budget are clearly specified	Provided.		In next SEMR, provide detailed information on corrective actions. If not fully complied, provide written notification and deadlines to contractors.	Noted
<b>M. Status of Corrective Action Plan from Previous Reporting Period (list all and provide status)</b>				
N/A				
<b>N. Appendixes</b>				
Photos included?	Yes.			
Summary of consultations included?	Not applicable.			
Copies of environmental clearances and permits included?	2 included.		Attach all clearances and permits in next SEMR.	Noted
Site EMPs (attach sample?)	Included.		Submit site specific EMPs in next SEMR.	Noted
Checklists?	Included.			
Others				

Item	Findings in the SEMR	Comments	Action/s Required	Response by PMU
<b>O. Review and clearance for disclosure</b>				
Reference	First SEMR submitted by WBDWSIP			
		<b>Name</b>	<b>Date</b>	
Reviewed by	Ninette Pajarillaga, Environment Specialist (ADB)		14 Aug 2019	
Response to ADB comments by:				
<b>Status/Remarks</b>	1. Recorded as submitted		13 July 2019	
	2. Send comments to PMU		14 Aug 2019	
Cleared for Disclosure	3. Revised SEMR and response to log sheet submitted by PMU			