

Semi Annual Environmental Monitoring Report

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Period: December 2018–May 2019

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IND: Kolkata Environmental Improvement Investment Program – Tranche 3

Prepared by Project Management Unit, Kolkata Environmental Improvement Investment Program, Kolkata Municipal Corporation, Government of West Bengal for Asian Development Bank.

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**KOLKATA ENVIRONMENTAL
IMPROVEMENT INVESTMENT PROGRAM
(KEIP) – PROJECT 3**

PROJECT MANAGEMENT UNIT

1st

**SEMI ANNUAL ENVIRONMENTAL MONITORING REPORT
TRANCHE 3
ADB Loan 3689-IND
(Period December 2018 to May 2019)**

June 2019



KOLKATA MUNICIPAL CORPORATION

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ABBREVIATIONS

AAI	-	Airport Authority of India
ADB	-	Asian Development Bank
ASI	-	Archaeological Survey of India
BIS	-	Bureau of Indian Standards
BOD	-	Biochemical Oxygen Demand
CBO	-	Community Based Organization
COD	-	Chemical Oxygen Demand
CPCB	-	Central Pollution Control Board
CPHEEO	-	Central Public Health and Environmental Engineering Organisation
CTE	-	Consent to Establish
CTO	-	Consent to Operate
CW	-	Canal Water
DG	-	Diesel Generator
DO	-	Dissolved Oxygen
DPR	-	Detailed Project Report
DSC	-	Design and Supervision Consultants
DWF		Dry Weather Flow
KMC	-	Kolkata Municipal Corporation
EA	-	Executing Agency
EARF	-	Environmental Assessment and Review Framework
EIA	-	Environmental Impact Assessment
EMP	-	Environmental Management Plan
GRC	-	Grievance Redressal Committee
GRM	-	Grievance Redress Mechanism
GW	-	Groundwater
HC	-	Hydrocarbons
IEE	-	Initial Environmental Examination
INR	-	Indian National Rupee
KEIP	-	Kolkata Environmental Improvement Project
KEIIP		Kolkata Environmental Improvement Investment Program
KMC	-	Kolkata Municipal Corporation
KMDA	-	Kolkata Metropolitan Development Authority
LPG	-	Liquefied Petroleum Gas
MoEFCC	-	Ministry of Environment and Forest & Climate Change, Government of India
MTBM	-	Micro Tunnel Boring Machine
NIOSH	-	National Institute of Occupational Health
NGO	-	Non Government Organization
O and M	-	Operation and Maintenance

PMC	-	Project Management Consultant
PMU	-	Project Management Unit
PS	-	Pumping Station
REA	-	Rapid Environmental Assessment
ROW	-	Right of Way
RP	-	Resettlement Plan
S & D	-	Sewage & Drainage
SEIAA	-	State Level Environmental Impact Assessment Authority
SPM	-	Suspended Particulate Matter
SPS	-	Safeguard Policy Statement
STP	-	Sewage Treatment Plant
SWF	-	Storm Water Flow
SW	-	Surface Water
TDS	-	Total Dissolved Solids
TMP	-	Traffic Management Plan
TSS	-	Total Suspended Solids
UFW	-	Unaccounted For Water
USD	-	US Dollar
WBPCB	-	West Bengal Pollution Control Board
WTP	-	Water Treatment Plant

I INTRODUCTION

A. Background

1. Kolkata Environmental Improvement Project (KEIP) was a key urban infrastructure initiative of the Kolkata Municipal Corporation (KMC) funded by Asian Development Bank (ADB) since 2000 which succeeded in improvement of the urban environment and quality of life in parts (mainly added areas) of KMC area. On completion of the project, both KMC & ADB agreed to continue their combined effort to improve further basic urban municipal infrastructures of Kolkata through a multi - tranche financing program (MFF) of US \$400 million - 'Kolkata Environmental Improvement Investment Program' (KEIIP). Figure in **Appendix 1** shows the areas of Kolkata considered to be taken up under KEIIP Tranche 1, 2 & 3. ADB has released the necessary fund for implementation. The total investment duration for Tranche 1, 2 & 3 is from 2014 to 2022. Tranche 3 sub projects commenced during first quarter of 2019 and will be completed in 30 months, i.e. by second quarter of 2023. Following subprojects have been included in Tranche 3 –

SD-27: Improvement of S&D network and construction of a pumping station in Alipore body guard line premises in ward 74

SD-28: Construction of Sewage Treatment Plan (45 MLD) near WBSETCL, Joka

SD-29: Construction of Sewage Treatment Plant (40 MLD) at Bank Plot, MG road, Joka

SD-30: Construction of Sewage Treatment Plant (30 MLD) at Rajpur-Sonarpur

SD-31: Lot-1 -Development of S&D network in Churial extension PS catchment and Diamond Park catchment and construction of Churial extension pumping station (annex) in Borough XVI (part of ward 124, 143 and 144). **Lot-2** -Laying of RCC sewer line along Bakrahat Road and DH Road by microtunnelling and cut & cover method

SD – 32: Improvement of S&D system in Mukundapur area (part of ward 109) including construction of pumping station

SD – 34: Construction of two new pumping stations near Lalababu Nikashi and Bagjola Canal and within Behala node C premises, Shakuntala Park

2. The main objective of the Program is to improve service quality and operational sustainability of increased water supply and sewerage in 20% of the KMC area. The Investment Program also aims towards increase in operational efficiency and scale of water supply, sewerage and drainage services in 5% of KMC area.

3. The Program output comprises of:

- ✓ rehabilitation of inefficient and outdated water supply assets;
- ✓ continued extension of sewerage to newly developed areas and
- ✓ further development of financial and project management capacity.

4. The Program is being carried out by the Govt. of West Bengal (GoWB) acting through KMC as the Executing Agency (EA). Sub project location map for **Tranche 3 (Project 3)** is shown in **Figure 1**.

B. Project & Report Purpose

5. The environmental impacts of the sub projects under **Tranche 3** were assessed through Initial Environmental Examination (IEE), prepared according to ADB Safeguard Policy (SPS 2009) and have been classified as environmental assessment **category B¹** by ADB.

6. This report is the **1st** Semi Annual Environment Monitoring Report (SEMR) covering period from **December 2018 to May 2019** and describes the implementation of the environmental management plan (EMP) in respect of each subproject of Tranche 3 as laid down in the approved IEE.

¹ some negative impacts but less significant than category A as per SPS 2009

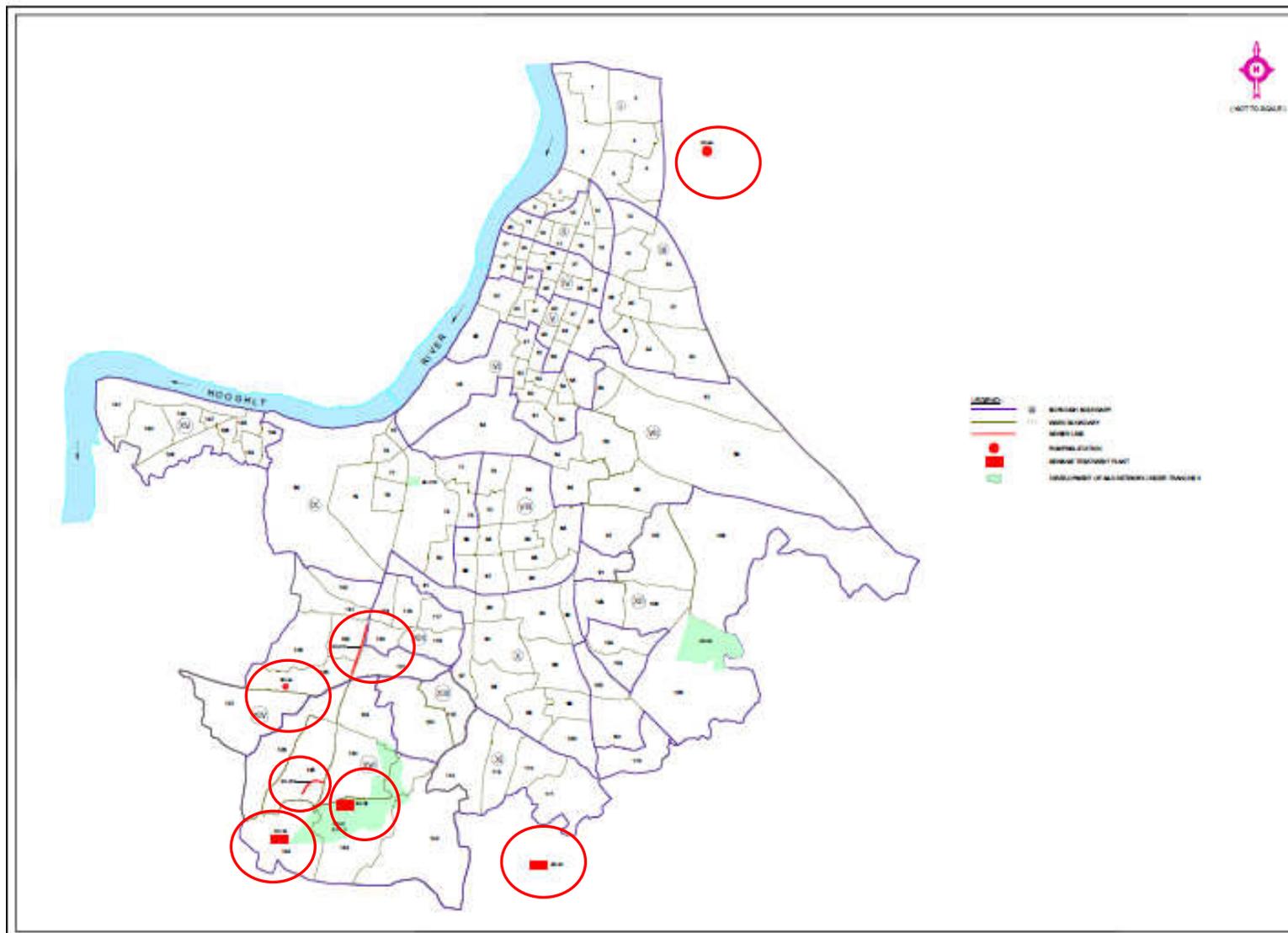


Figure 1: Sub Project location map- Project 3 (Tranche 3)

II IMPLEMENTATION PROGRESS

A. Status of Subprojects under Tranche 3

7. On date 8 packages of Sewerage and Drainage have been considered under Tranche 3. Out of which 3 are STP projects², 3 are construction of Pumping stations, 1 project includes S&D network with pumping station³ and 1 package includes laying of RCC sewer line⁴. Table 1 shows the summary of subprojects (packages) under Tranche 3 including their work components, starting date and schedule date of completion, physical progress and progress of implementation of work components as on 31st May 2019. Status of different components (package wise) up to 31st May 2019 is presented in figure 2.

8. Till date Contract has been awarded and Notice to Proceed (NTP) has been issued only for two packages (SD-28 & SD-29). Letter of acceptance (LOA) have been issued for 3 packages (SD-30, SD-31 lot-1 & SD34) two packages are in rebidding stage (SD-27 & SD-31 lot-2) and for one package (SD-32) design is under progress.

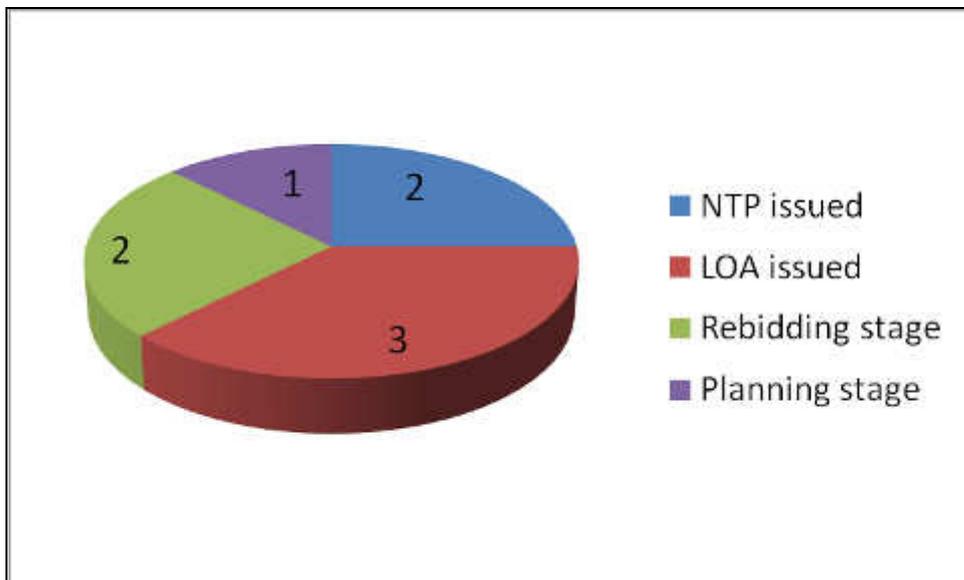


Figure 2: Status of Subprojects under Tranche 3

² SD-28, SD-29 & SD-30

³ SD-32

⁴ SD-31 (Lot-2)

Table 1: Summary of Subprojects under KEIIP Tranche 3 (on 31st May, 2019)

Package Name and No.	Work components	Start date & Target date of completion	% Physical Progress as on 31 st May, 2019	Status off progress of work up to 31 st May, 2019
SD-27: Improvement of S&D network and construction of a pumping station in Alipore body guard line premises in ward 74	<ul style="list-style-type: none"> Improvement of S&D network Construction of a pumping station in Alipore body guard line premises 	--	Nil	Project is under technical bid evaluation stage. TBER sent to ADB for approval on 03.06.19
SD-28: Construction of Sewage Treatment Plan (45 MLD) near WBSETCL, Joka	<ul style="list-style-type: none"> Construction of Sewage Treatment Plan (45 MLD) Construction of Sewer line up to outfall 	Start date- 08.03.19 Target date of completion – 06.09.21	Preliminary activity initiated	Contract awarded NTP issued Date of commencement : 08.03.2019
SD-29: Construction of Sewage Treatment Plant (40 MLD) at Bank Plot , MG road , Joka	<ul style="list-style-type: none"> Construction of Sewage Treatment Plan (40 MLD) Construction of Sewer line up to outfall 	Start date- 08.03.19 Target date of completion – 06.09.21	Preliminary activity initiated	Contract awarded NTP issued Date of commencement : 08.03.2019
SD-30: Construction of Rajpur-Sonarpur Sewage Treatment Plant (30 MLD)	<ul style="list-style-type: none"> Construction of Sewage Treatment Plan (30 MLD) Construction of Sewer line up to outfall 	--	Nil	LoA issued to Ramky Infrastructure Ltd. on 30.05.19
SD-31: Lot-1 -Development of S&D network in Churial extension PS catchment and Diamond Park catchment and construction of Churial	<ul style="list-style-type: none"> Construction of S&D network in Churial extension PS catchment and Diamond Park catchment Construction of Churial extension pumping station 	--	Nil	LoA issued to Simplex Infrastructure Ltd. on 30.05.19

Package Name and No.	Work components	Start date & Target date of completion	% Physical Progress as on 31 st May, 2019	Status off progress of work up to 31 st May, 2019
extension pumping station (annex) in Borough XVI (part of ward 124, 143 and 144)				
SD-31:Lot-2 - Laying of RCC sewer line along Bakrahat Road and DH Road by microtunnelling and cut & cover method	<ul style="list-style-type: none"> RCC sewer line along Bakrahat Road and DH Road by microtunnelling and cut & cover method 	--	Nil	Project is under technical bid evaluation stage. TBER sent to ADB for approval on 03.06.19
SD – 32: Improvement of S&D system in Mukundapur area (part of ward 109) including construction of pumping station	<ul style="list-style-type: none"> Construction of pumping station and improvement of drainage system in Rajdanga area (part of ward 107) Improvement of S&D system in Mukundapur area 	--	Nil	Design is under progress
SD – 34: Construction of pumping station at Lalababu Nikashi and Shakuntala Park	<ul style="list-style-type: none"> Construction of pumping station at Lalababu Nikashi Upgrading of existing pumping station at Shakuntala Park 	--	Nil	LoA issued to Ramky Infrastructure Ltd on 30.05.19

B. Compliance of Safeguard Loan Covenants

9. The loan agreement for KEIIP Project 3 was signed on 3rd October 2018 and details are available in ADB website (<http://www.adb.org/projects/documents/loan-3689-ind-keiip>). **Table 2** provides a summary of compliance to the loan covenants related to environmental safeguards.

Table 2: Compliance of Loan Covenants – Environment part

Serial no. Schedule 5 of loan agreement	Program Specific Covenants	Status / Issues
Environment		
7	<p>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 (i) all applicable laws and regulations of the Borrower and the State relating to environment, health, and safety; (ii) the Environmental Safeguards; (iii) the EARF; and (iv) 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>	<p>Under compliance Documents have been prepared/ by complying all relevant State and National Laws, Safeguard Policy Statement (SPS 2009) of ADB, Environment Assessment Review Framework (EARF) for Tranche-3 program.</p> <p>For Tranche 3 project Initial Environmental Examination (IEE), Environment Management Plan (EMP) report prepared and approved by ADB.</p> <p>IEE for Sewage and Drainage for Tranche 3 has been updated due to change in scope of work and disclosed in ADB website in February 2019</p> <p>Statutory clearances (Consent to establish, NOC) from State Pollution control board have been obtained for proposed STPs (SD-28, SD-29)⁵</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 and EMP are being considered during implementation.</p> <p>Corrective or preventive action plans will be reflected in Environment Monitoring Report and project implementation authority will take care of such actions when required.</p>

⁵ Refer appendix 2&3

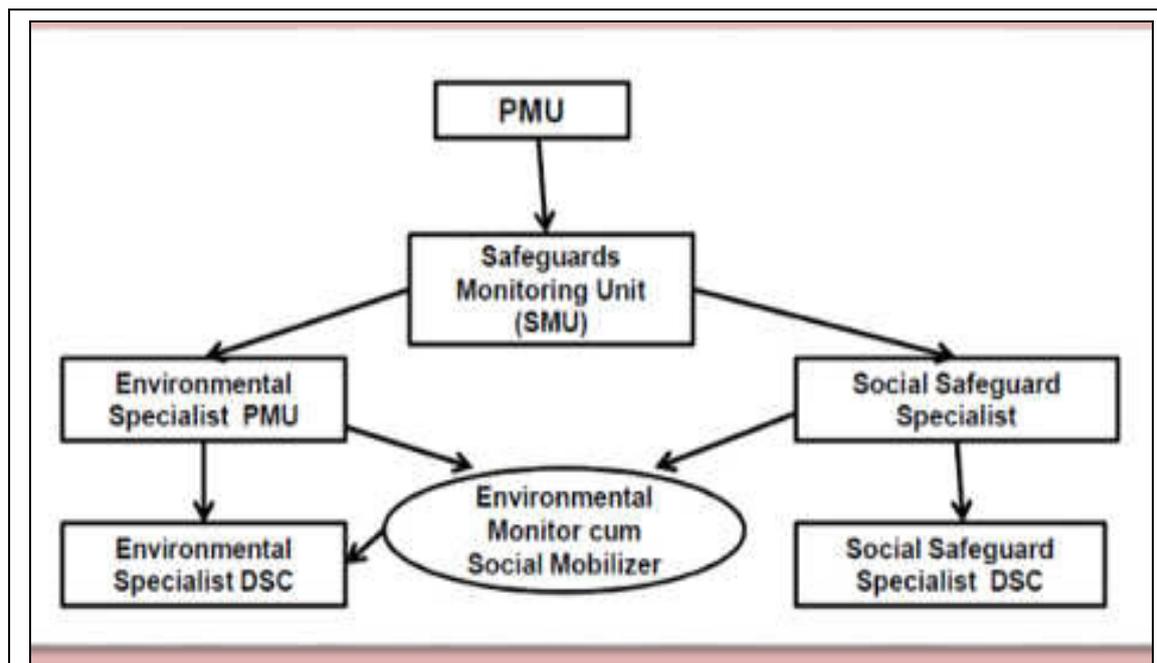
Serial no. Schedule 5 of loan agreement	Program Specific Covenants	Status / Issues
Human and Financial Resources to Implement Safeguards Requirements		
11	The Borrower shall ensure or cause the EA to ensure that all necessary budgetary and human resources to fully implement the EMP and RP, as required, are made available.	<p>Complied Budgetary provisions have been included in EMP of Tranche 3 projects.</p> <p>An Environment Specialist appointed in Project Management Unit who is responsible for monitoring EMP compliances.</p> <p>Environmental Specialist and Environment Engineer of DSC for implementation of EMPs are in place for regular monitoring to ensure EMP compliance in the projects.</p>
Safeguards – Related Provisions in Bidding Documents and Works Contracts		
12.	<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 considered in the IEE, the EMP, the RP</p>	<p>Under compliance</p> <p>(a) IEE and EMP are part of contract document. Approved IEE, EMP for Tranche 3 project is attached in Bidding documents. This process will be followed for all the sub projects within the present Tranche.</p> <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 and same will be reflected in the “Environment Monitoring Report”.</p> <p>IEE for Sewage and Drainage for Tranche 3 has been updated due to change in scope of work and disclosed in ADB website in February 2019</p> <p>(b) IEE indicates budgetary provisions for implementation of EMP.</p> <p>(c) During implementation of any sub project if additional impacts/risks arise due to change in scope/area, those will be reflected in the revised IEEs, EMPs and Environment Monitoring Report and accordingly project</p>

Serial no. Schedule 5 of loan agreement	Program Specific Covenants	Status / Issues
	<p>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>Executing Agency will inform the Construction Agency for taking relevant corrective measures.</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 agency before acceptance of the work. Restoration status will be reflected in post construction monitoring report.</p>
Safeguards Monitoring and Reporting		
13	<p>The Borrower shall cause the EA to do the following:</p> <p>(a) submit semi-annual Safeguards Monitoring Reports to 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>Under compliance</p> <p>(a) This is 1st Semi-annual safeguard monitoring report on Environment for Project 3 (Tranche 3) for the period December, 2018 to May 2019. The next report will be due by end of November, 2019.</p> <p>(b) During implementation of any sub project, if additional impacts/risks arise due to change in scope/area, those will be reflected in revised IEEs with EMPs and accordingly PMU, KEIIP 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>
Prohibited List of Investments		

Serial no. Schedule 5 of loan agreement	Program Specific Covenants	Status / Issues
14	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.	Complied Under Tranche -3, there is no violation of prohibited investment activities as per ADB SPS (2009) Appendix 5.
Other Social Measures		
15	The EA shall ensure that civil works contracts under the Project follow all applicable labor laws of the Borrower and the State, and that these further include provisions to the effect that contractors: (i) carry out HIV/AIDS awareness programs for labor 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 (ii) follow and implement all statutory provisions on labor (including not employing or using children as labor, equal pay for equal work), health, safety, welfare, sanitation, and working conditions. Such contracts will also include clauses for termination in case of any breach of the stated provisions by the contractors.	Complied in Bid documents and being complied during implementation Provision is included (as per EMP & 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. In case of any breach of provision, necessary corrective measures as per contract clauses shall be taken. All activities including awareness program will be reflected in "Monitoring Report".

C. Implementation Arrangement

10. The institutional arrangement follows KEIIP's organizational structure and functions (**Figure 3**). The subproject is being implemented and monitored by the Project Management Unit (PMU). The KEIIP's PMU Environment Specialist is the overall in-charge on Environmental safeguard of the program. The responsibilities of the Environmental Specialist ensures that (i) environmental safeguard issues are addressed; (ii) EMP/approved Site Environment Management Plan (SEMP) is implemented; (iii) physical and non-physical activities under the subproject are monitored; and (iv) monitoring reports are prepared on time and submitted to ADB. Safeguard Monitoring Unit (SMU) of PMU is ensuring field level monitoring and safeguard documentation.



Notes: PMU = Project Management Unit; DSC = Design and Supervision Consultants

Figure 3: Institutional Arrangement – Safeguard

11. PMU is supported by the Design and Supervision Consultants (DSC). An Environment Specialist and an Environment Engineer are in place to ensure: (i) EMP/ approved SEMP is implemented; (ii) surveys and measurements are undertaken; (iii) inspections and observations throughout the construction period are recorded to ensure that safeguards and mitigation measures are provided as intended; and (iv) statutory clearances and permits from government agencies/other entities are obtained prior to start of civil works.

12. The Safeguards Monitoring Unit will:

- (i) prepare the REA checklist, draft the EIA/IEE and arrange for disclosure of the approved EIA/IEE in the website
- (ii) Ensure that Environmental Clearance (EC), Consent to Establishment and Consent to Operate and other certificates, as required, are obtained in time from appropriate authorities and ensure compliances with conditions imposed.
- (iii) ensure incorporation of the EMP, environmental mitigation and monitoring measures into the contract documents
- (iv) monitor disclosure and public consultation arranged by DSC during IEE process and ensure that comments are reflected in the IEE report
- (v) ensure disclosure of information throughout the duration of the subproject through suitable visual means and publications
- (vi) provide necessary input for grievance redress
- (vii) approve contractor's proposed locations for construction work camps, storage areas, hauling roads, lay-down areas, and disposal areas for solid and hazardous wastes on recommendations of DSC
- (viii) guide the contractor for drawing up of Site Environmental Management Plan and to approve the same

- (ix) induct the contractor for taking up the construction following environmental and social safeguards
- (x) Facilitate scheduled monitoring during implementation of the project.
- (xi) carry out regular onsite monitoring and guide the contractor to adopt the required site management standard.
- (xii) ensure the required health and safety measures at work sites
- (xiii) obtain in time and to review the monthly monitoring report of the contractors
- (xiv) prepare 6-monthly monitoring and EMP implementation report, including the status of project compliance, statutory clearances and relevant loan covenants, and submit the approved 6-monthly report to ADB and seek permission to disclose the same in the investment program website
- (xv) prepare monitoring report on post-construction activities by the contractors as specified in the EMP

13. The contractor's responsibilities included:

- (i). Submission of Site environmental plan (SEP) covering proposed sites / locations for construction work camps, storage areas, haul roads, lay down areas, disposal areas for solid and hazardous wastes
- (ii). Compliance with all applicable legislation and be conversant with the requirements of the EMP/ approved SEMP;
- (iii). Briefing of his staff, employees, and Labours about the requirements of the EMP/ approved SEMP;
- (iv). Ensuring that all sub-contractors/suppliers engaged within the context of the contract comply with the environmental requirements of the EMP/ approved SEP. The contractor will be held responsible for non-compliance on their behalf;
- (v). Providing methodology/information for all activities requiring special attention as specified and/or requested by the DSC Environment Specialist during the duration of the Contract;
- (vi). Providing environmental awareness training to staff, employees, and Labours;
- (vii). Bearing the costs of any damages/compensation resulting from non-adherence to the EMP/ approved SEMP or written site instructions;
- (viii). Conducting all activities in a manner that minimizes disturbance to directly affected residents and the public in general, and foreseeable impacts on the environment.
- (ix). Ensuring that the PMU and DSC Environment Specialists are timely informed of any foreseeable activities that will require their expert input

14. Environment Specialist and Environment Engineer of DSC visited all construction sites every month and arranged orientation training program for contractors (SD-28 & SD-29) and supervisory staff and instructed contractors for application of corrective action measures to mitigate impacts. **Table 3** shows detail of environment safeguard team for KEIIP.

Table 3: Details of KEIIP Environmental Safeguard Team

Designation	Name and Contact Details
PMU, Environment Specialist Safeguard Monitors in SMU	Name: Dr. Chinmoy Chakrabarti Office Address: Unnayan Bhawan, 206 A. J. C Bose Road, Kolkata 700017 Phone:033 2283 0169 Email: pdkeiip@gmail.com , chin_moy@yahoo.com
DSC, Environment Specialist	Name: Dr. Samar Kumar Banerjee Office Address: Unnayan Bhawan, 206 A. J. C Bose Road, Kolkata 700 017 Phone:033 2283 0044, 9830415953 Email: dsckeip@gmail.com , samarbanerjee1@gmail.com ,
DSC, Environmental Engineer	Name: Dr. Bidisha Mukherjee Office Address: Unnayan Bhawan, 206 A. J. C Bose Road, Kolkata 700 017 Phone:033 2283 0044, 9830592875 Email: dsckeip@gmail.com , bidisha1809@gmail.com

III ENVIRONMENTAL PROCEDURE REVIEW

A. Environmental Legal Requirement

15. For implementation of the project both national and state rules & regulations need to be followed. **Table 4** in next section indicates environment legal requirement for the projects under KEIIP.

B. Compliance with Environmental Legal Requirements

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

17. Under **Tranche 3** present status of Environment, forest and other clearances are mentioned below.

Table 4: Status of Compliance with National and State Legal Requirements (up to 31st May, 2019)

Package	Main package work	National and State Legal Requirement Applicable to the sub-project	Status	Conditions of the Clearance/NOCs
SD-27	Improvement of S&D network and construction of a pumping station in Alipore body guard line premises in ward 74	Water (Prevention and Control of Pollution) Act. 1974 The Air (Prevention and Control of Pollution) Act, 1981, as amended by Amendment Act, 1987 In case of setting up diesel generator Consent to Establish (CTE) and Consent to Operate (CTO) from SPCB	Project is under technical bid evaluation stage	NA
SD-28	Construction of Sewage Treatment Plan (45 MLD) near WBSETCL, Joka	Water (Prevention and Control of Pollution) Act. 1974 The Air (Prevention and Control of Pollution) Act, 1981, as amended by Amendment Act, 1987 Consent to Establish (CTE) and Consent to Operate (CTO) to be obtained from SPCB Also for setting up diesel generator Consent to Establish (CTE) and Consent to Operate (CTO)	Contract awarded & NTP issued.	CTE (NOC) from West Bengal Pollution Control Board obtained. (refer appendix-2)
SD-29	Construction of Sewage Treatment Plant (40 MLD) at Bank Plot , MG road , Joka	Water (Prevention and Control of Pollution) Act. 1974 The Air (Prevention	Contract awarded & NTP issued.	CTE (NOC) from West Bengal Pollution Control Board obtained.

Package	Main package work	National and State Legal Requirement Applicable to the sub-project	Status	Conditions of the Clearance/NOCs
		<p>and Control of Pollution) Act, 1981, as amended by Amendment Act, 1987</p> <p>Consent to Establish (CTE) and Consent to Operate (CTO) to be obtained from SPCB</p> <p>Also for setting up diesel generator Consent to Establish (CTE) and Consent to Operate (CTO) from SPCB</p>		(Refer appendix-3)
SD-30	Construction of Rajpur-Sonarpur Sewage Treatment Plant (30 MLD)	<p>West Bengal Trees (Protection and Conservation in Non-Forest Areas) Act, 2006- Tree felling permission</p> <p>Water (Prevention and Control of Pollution) Act. 1974</p> <p>The Air (Prevention and Control of Pollution) Act, 1981, as amended by Amendment Act, 1987</p> <p>Consent to Establish (CTE) and Consent to Operate (CTO) to be obtained from SPCB</p> <p>Also for setting up diesel generator Consent to Establish (CTE) and Consent to Operate (CTO)</p>	Contractor not mobilized. LOA issued.	CTE (NOC) from West Bengal Pollution Control Board will be applied shortly
SD-31 Lot-1 -	Development of S&D network in Churial extension PS catchment and Diamond Park catchment and construction of Churial extension pumping station (annex) in Borough XVI (part of ward 124, 143 and 144).	<p>Water (Prevention and Control of Pollution) Act. 1974</p> <p>The Air (Prevention and Control of Pollution) Act, 1981, as amended by Amendment Act, 1987</p> <p>Also for setting up diesel generator Consent to Establish (CTE) and Consent to Operate (CTO)</p>	Contractor not mobilized. LOA issued.	NA

Package	Main package work	National and State Legal Requirement Applicable to the sub-project	Status	Conditions of the Clearance/NOCs
SD-31:Lot-2	Laying of RCC sewer line along Bakrahat Road and DH Road by microtunnelling and cut & cover method	Water (Prevention and Control of Pollution) Act. 1974 The Air (Prevention and Control of Pollution) Act, 1981, as amended by Amendment Act, 1987 Also for setting up diesel generator Consent to Establish (CTE) and Consent to Operate (CTO)	Project is under technical bid evaluation stage	NA
SD – 32	Improvement of S&D system in Mukundapur area (part of ward 109) including construction of pumping station	Water (Prevention and Control of Pollution) Act. 1974 The Air (Prevention and Control of Pollution) Act, 1981, as amended by Amendment Act, 1987 Also for setting up diesel generator Consent to Establish (CTE) and Consent to Operate (CTO)	Project is in design stage	NA
SD – 34	Construction of pumping station at Lalababu Nikashi and upgrading of existing pumping station at Shakuntala Park	Water (Prevention and Control of Pollution) Act. 1974 The Air (Prevention and Control of Pollution) Act, 1981, as amended by Amendment Act, 1987 Also for setting up diesel generator Consent to Establish (CTE) and Consent to Operate (CTO)	Contractor not mobilized. LOA issued.	NA

IV **COMPLIANCE STATUS WITH THE ENVIRONMENTAL MANAGEMENT AND MONITORING PLAN**

18. There are 8 packages of Sewerage and Drainage have been considered under Tranche 3. Out of which 2 contracts has been awarded and NTP has been issued for the two packages (SD-28 & SD-29).

19. Only preliminary activity⁶ was observed in both (SD 28 and SD 29) of the running packages.

20. Statutory clearances⁷ for SD-28 and SD-29 have been issued by West Bengal Pollution Control Board.

21. Orientation and training of Project managers and EHS in-charge of SD-28 & SD-29 was done by DSC environment team and contractors were explained about contractual obligations of EMP implementation. Contractors were also explained about the documents to be submitted during pre-construction phase of the contract.

22. Contractors have been asked to submit site specific EMP before starting of each construction packages. These EMPs will be revised semi-annually as per progress of construction work. Sample Site Specific EMP was handed over to the contractors as reference documents.

23. Baseline environmental monitoring have been conducted in May 2019 in both the packages as per suggestions of the Environment Specialist of DSC and PMU.

24. Environment Specialist from DSC and PMU are in touch with contractors and regularly monitoring EMP implementation through desk review of contractor's records and site inspections. Package wise findings for the period December 2018 to May 2019 are presented in **Tables 5** of this report.

25. Over all, most of the sites are environmentally well managed. However, scopes for further improvement in site management measures have been explained to the contractors.

26. Necessary action to how to minimize deficiencies in EMP implementation has been communicated verbally and also in writing to the concerned contractors.

⁶ like fencing, fixation of signboards, construction of approach road etc.

⁷ Consent to Establish (NOC)

Table 5: Summarized Compliance to EMP Implementation for Tranche -3 Packages (Package No. SD 27, SD 28, SD 29 SD 30, SD 31 lot-1, SD 31 lot-2, SD 32 & SD 34)

	Environmental Issues	Mitigation Activities and Method	Parameters monitored & Monitoring method adopted	Responsible for Mitigation & Monitoring	Location & Date of Monitoring	Compliance Status/ Explanation SD 27	Compliance Status/ Explanation SD 28	Compliance Status/ Explanation SD 29	Compliance Status/ Explanation SD 30	Compliance Status/ Explanation SD 31 lot-1	Compliance Status/ Explanation SD 31 lot-2	Compliance Status/ Explanation SD 32	Compliance Status/ Explanation SD 34
Pre Construction - Design phase													
1	Site clearance	Site preparation work including necessary clearance and permission.	<ul style="list-style-type: none"> Tree felling requirement – site environment plan. NOC – paper documents from line agency. Method - Site observation and document checking. 	Environment Specialist of DSC and PMU	All Project locations, before commencement of physical work.	Tree felling not required.	Tree felling not required. NOC issued by West Bengal Pollution Control Board for Consent to Establish	Tree felling not required. NOC issued by West Bengal Pollution Control Board for Consent to Establish	Tree felling not required.				
2	Access to Site	<ul style="list-style-type: none"> maintained via existing roads Involvement of local Traffic Department in the planning stages for road closure traffic diversion. 	<ul style="list-style-type: none"> Involvement of traffic dept. Road closure planning Method – Site observation 	Environment Specialist of DSC and PMU	Specific project location	Site is accessible.	Site is accessible.	Working site is accessible.	Site is accessible.	Working site is accessible,	Site is accessible.	Site is accessible.	Site is accessible.
3	Affected utilities	Shifting of affected utilities like electric and telephone lines, cable lines, pipe lines etc.	<ul style="list-style-type: none"> List of affected utilities if any, contact operators. Bid document to include requirement for a contingency plan for service interruptions. Method - Site observation and document checking. 	Environment Specialist of DSC and PMU	Specific project location	Contractor not yet mobilized	Done as per requirement with the help of concerned authority.	Done as per requirement with the help of concerned authority.	Contractor not yet mobilized				
4	Water supply	Health risk due to damage in water supply line	<ul style="list-style-type: none"> Schedule of closure. Delivery of KMC potable water to affected people. Method - Site observation 	Environment Specialist of DSC and PMU	Specific project location	Not required as per present nature of work	Not required as per present nature of work	Not required as per present nature of work	Not required as per present nature of work	Not required as per present nature of work	Not required as per present nature of work	Not required as per present nature of work	Not required as per present nature of work
5	Traffic Management	Planning for Traffic Management	Ensure traffic management plan is part of contract documents and being implemented. Method - Site observation and document checking.	Environment Specialist of DSC and PMU	-	Not required as per present nature of work	Not required as per present nature of work	Not required as per present nature of work	Not required as per present nature of work	Not required as per present nature of work	Not required as per present nature of work	Not required as per present nature of work	Not required as per present nature of work
6	Setting of construction camps, hot mix plants, stockpile areas, storage	<ul style="list-style-type: none"> Planning for setting up construction camp, hot mix plants, stockpile 	List of selected location for construction work camps, hot mix plants, stockpile	Environment Specialist of DSC and PMU	Camp and other sites, before start of physical work & Continuous	Contractor not yet mobilized	Setting of hot mix plant not required. Camp location yet to be finalized	Setting of hot mix plant not required. Camp location yet to be finalized	Contractor not yet mobilized				

	Environmental Issues	Mitigation Activities and Method	Parameters monitored & Monitoring method adopted	Responsible for Mitigation & Monitoring	Location & Date of Monitoring	Compliance Status/ Explanation SD 27	Compliance Status/ Explanation SD 28	Compliance Status/ Explanation SD 29	Compliance Status/ Explanation SD 30	Compliance Status/ Explanation SD 31 lot-1	Compliance Status/ Explanation SD 31 lot-2	Compliance Status/ Explanation SD 32	Compliance Status/ Explanation SD 34
	areas, and disposal areas.	<p>areas, storage and disposal areas – to be submitted to DSC for prior approval.</p> <ul style="list-style-type: none"> • Prioritize areas within or nearest possible vacant space in the sub-project location • No use of residential areas • No disposal of waste in water 	<p>areas, storage areas, and disposal areas. Method - Site observation and document checking.</p>										
7	Establishing Equipment Lay-down and Storage Area ⁸	<ul style="list-style-type: none"> • Choice of location for equipment lay-down and storage areas must take into account prevailing winds, distances to adjacent land uses, general on-site topography and water erosion potential of the soil. • Storage areas shall be secure so as to minimize the risk of crime. • Away from school and direct residential areas • Fire prevention facilities must be present at all storage facilities • Proper storage facilities for the storage of oils, paints, grease, fuels, chemicals and any hazardous materials • These storage facilities (including any 	<p>List of selected location and facility. Method - Site observation and document checking.</p>	<p>Environment Specialist of DSC and PMU</p>	<p>Proposed locations considered in the package. Before start of physical work & Continuous</p>	<p>Contractor not yet mobilized</p>	<p>Equipment lay down and storage area yet to be finalized.</p>	<p>Equipment lay down and storage area yet to be finalized.</p>	<p>Contractor not yet mobilized</p>	<p>Contractor not yet mobilized</p>	<p>Contractor not yet mobilized</p>	<p>Contractor not yet mobilized</p>	<p>Contractor not yet mobilized</p>

⁸ Storage areas can be hazardous, unsightly and can cause environmental pollution if not designed and managed carefully

	Environmental Issues	Mitigation Activities and Method	Parameters monitored & Monitoring method adopted	Responsible for Mitigation & Monitoring	Location & Date of Monitoring	Compliance Status/ Explanation SD 27	Compliance Status/ Explanation SD 28	Compliance Status/ Explanation SD 29	Compliance Status/ Explanation SD 30	Compliance Status/ Explanation SD 31 lot-1	Compliance Status/ Explanation SD 31 lot-2	Compliance Status/ Explanation SD 32	Compliance Status/ Explanation SD 34
		tanks) must be on an impermeable surface <ul style="list-style-type: none"> Staff must be aware of their potential impacts and follow the appropriate safety measures 											
8	Education of site staff on general and Environmental Conduct ⁹	<ul style="list-style-type: none"> Ensure that all site personnel have a basic level of environmental awareness training All employees must undergo safety training and wear the necessary protective clothing 	Documentation – Training and awareness. Method - Materials and records on awareness training program	Environment Specialist of DSC and PMU	-	Contractor not yet mobilized	Training has been provided to safety officer by DSC.	Training has been provided to safety officer by DSC.	Contractor not yet mobilized	Contractor not yet mobilized	Contractor not yet mobilized	Contractor not yet mobilized	Contractor not yet mobilized
Construction													
9	Materials Management – Sourcing ¹⁰	<ul style="list-style-type: none"> Contractors shall prepare a source statement indicating the sources of all materials (including topsoil, sands, natural gravels, crushed stone, asphalt, clay liners etc), and submit these to the DSC for approval prior to commencement of any work. Use of Govt. approved quarry sites for procurement of materials Verify suitability of all material sources and obtain approval of Investment from PMU/DSC 	<ul style="list-style-type: none"> List of approved quarry sites and sources of materials Bid document to include requirement for verification of suitability of sources and permit for additional quarry sites if necessary. Construction Contractor documentation Method - Site observation and document checking. 	For mitigation - contractor, for monitoring - Environment Specialist of DSC and PMU.	Quarries and material source areas. Daily visit by construction supervisor of DSC. Weekly visit by Construction Manager. Fortnight visit by Environment Specialist / Environmental Engineer.	Contractor not yet mobilized	Yet to be finalized	Yet to be finalized	Contractor not yet mobilized	Contractor not yet mobilized	Contractor not yet mobilized	Contractor not yet mobilized	Contractor not yet mobilized

⁹ These points need to be made clear to all staff on site before the subproject begin.

¹⁰ Materials must be sourced in a legal and sustainable way to prevent offsite environmental degradation.

	Environmental Issues	Mitigation Activities and Method	Parameters monitored & Monitoring method adopted	Responsible for Mitigation & Monitoring	Location & Date of Monitoring	Compliance Status/ Explanation SD 27	Compliance Status/ Explanation SD 28	Compliance Status/ Explanation SD 29	Compliance Status/ Explanation SD 30	Compliance Status/ Explanation SD 31 lot-1	Compliance Status/ Explanation SD 31 lot-2	Compliance Status/ Explanation SD 32	Compliance Status/ Explanation SD 34
10	Maintenance of Construction Camp	<ul style="list-style-type: none"> Establishment of temporary camps with drinking water, sanitary and solid waste management arrangement Train employees in the storage and handling of materials Remove all wreckage, rubbish, or temporary structures 	<ul style="list-style-type: none"> Complaints from sensitive Receptors Water and sanitation facilities for employees Housekeeping – regular disposal of solid waste. Method – site observation 	For mitigation - contractor, for monitoring - Environment Specialist of DSC and PMU.	Camp site. Same as above.	Contractor not yet mobilized	Not yet established.	Not yet established.	Contractor not yet mobilized	Contractor not yet mobilized	Contractor not yet mobilized	Contractor not yet mobilized	Contractor not yet mobilized
11	Landscape and Aesthetics	<ul style="list-style-type: none"> Removal of overburden and excavated material from working site and use / preservation of the same – as per mitigation measures Fencing of storage areas Disposal of construction debris if any as per mitigation measures Prepare and implement Waste Management List Avoid stockpiling of excess excavated soils Coordinate with KMC for beneficial uses of excess excavated soils 	<ul style="list-style-type: none"> Waste Management List Complaints from sensitive receptors PMU/PIU/DSC to report in writing that the necessary environmental restoration work has been done. Method – checking of records, visual observation 	For mitigation - contractor, for monitoring - Environment Specialist of DSC and PMU.	Project Locations. Same as above.	Contractor not yet mobilized	Maintained as per EMP	Maintained as per EMP	Contractor not yet mobilized	Contractor not yet mobilized	Contractor not yet mobilized	Contractor not yet mobilized	Contractor not yet mobilized
12	Dust and Air Pollution ¹¹	<ul style="list-style-type: none"> Selection of materials storage area Water sprinkling at construction site for arresting dust (if any) 	<ul style="list-style-type: none"> Location of stockpiles Complaints from sensitive receptors Monitoring data 	For mitigation - contractor, for monitoring - Environment Specialist of	Project Locations, same as above.	Contractor not yet mobilized	Not applicable as per present nature of work.	Not applicable as per present nature of work.	Contractor not yet mobilized	Contractor not yet mobilized	Contractor not yet mobilized	Contractor not yet mobilized	Contractor not yet mobilized

¹¹ Main causes of air pollution during construction are dust from vehicle movements and stockpiles, vehicle emissions and fires.

	Environmental Issues	Mitigation Activities and Method	Parameters monitored & Monitoring method adopted	Responsible for Mitigation & Monitoring	Location & Date of Monitoring	Compliance Status/ Explanation SD 27	Compliance Status/ Explanation SD 28	Compliance Status/ Explanation SD 29	Compliance Status/ Explanation SD 30	Compliance Status/ Explanation SD 31 lot-1	Compliance Status/ Explanation SD 31 lot-2	Compliance Status/ Explanation SD 32	Compliance Status/ Explanation SD 34
		during dry period) • Use tarpaulins to cover sand and other loose material- Reducing dust hazard • All vehicles and equipments mobilized to construction site and producing emission, have Pollution Under Control certification • No fire wood burning is allowed on site • Carry out air quality monitoring	• Heavy equipment and machinery with air pollution control • Water sprinkling arrangement • Cover materials. • Method – checking of records, visual observation	DSC and PMU.									
13	Noise level	• Noise producing work needs to be conducted at day time • Regular maintenance of noise producing equipment • Horns not be used unless it is necessary to warn other road users • Maintain maximum sound levels not exceeding 80 decibels (dbA) when measured at a distance of 10 m or more from the vehicle/s • At sensitive locations, enclosures provided around generator set or other noise producing machinery.	• Complaints from sensitive receptors • Use of silencers in noise-producing equipment and sound barriers • Monitoring data. • Method – checking of records, visual observation	For mitigation - contractor, for monitoring - Environment Specialist of DSC and PMU.	Project Locations, same as above.	Contractor not yet mobilized	Not applicable as per present nature of work.	Not applicable as per present nature of work.	Contractor not yet mobilized	Contractor not yet mobilized	Contractor not yet mobilized	Contractor not yet mobilized	Contractor not yet mobilized

	Environmental Issues	Mitigation Activities and Method	Parameters monitored & Monitoring method adopted	Responsible for Mitigation & Monitoring	Location & Date of Monitoring	Compliance Status/ Explanation SD 27	Compliance Status/ Explanation SD 28	Compliance Status/ Explanation SD 29	Compliance Status/ Explanation SD 30	Compliance Status/ Explanation SD 31 lot-1	Compliance Status/ Explanation SD 31 lot-2	Compliance Status/ Explanation SD 32	Compliance Status/ Explanation SD 34
14	Storm water management	Arrangement of drainage of waste water and arresting of solid waste/silt from waste water generated at construction site	<ul style="list-style-type: none"> Areas for stockpiles, storage of fuels and lubricants and waste materials Number of silt traps installed along drainages (in slope) leading to water bodies. Method – checking of records, visual observation. 	For mitigation - contractor, for monitoring - Environment Specialist of DSC and PMU.	Project Locations, same as above.	Contractor not yet mobilized	Not applicable as per present nature of work.	Not applicable as per present nature of work.	Contractor not yet mobilized				
15	Water Quality ¹²	<ul style="list-style-type: none"> Contractor to ensure run-off from vehicle or plant washing does not enter Hooghly river Contractor to ensure every effort is made that any chemicals or hazardous substances do not contaminate the soil, Hooghly river, or groundwater on site. 	Non entry of pollutant in water body. Method – site observation.	For mitigation - contractor, for monitoring - Environment Specialist of DSC and PMU.	Project Locations	Contractor not yet mobilized	Not applicable as per present nature of work.	Not applicable as per present nature of work.	Contractor not yet mobilized				
16	Conservation of Natural Environment	<ul style="list-style-type: none"> Contractor to ensure removal of only trees that have been marked beforehand Contractor to immediately re-vegetate stripped areas Contractor to prohibit site staff from gathering firewood, fruits, plants, crops or any other natural material on-site or in areas adjacent to the sites. 	Tree felling requirement and afforestation after final design. Method – checking of records, visual observation.	For mitigation - contractor, for monitoring - Environment Specialist of DSC and PMU.	Project Locations	No tree cutting as per present working condition	No tree cutting is required as per present nature of work.	No tree cutting is required as per present nature of work.	No tree cutting as per present working condition	No tree cutting as per present working condition	No tree cutting as per present working condition	No tree cutting as per present working condition	No tree cutting as per present working condition

¹² Water quality is affected by the incorrect handling of substances and materials. Soil erosion and sediment is also detrimental to water quality. Mismanagement of polluted run-off from vehicle and plant washing and wind dispersal of dry materials into rivers and watercourses are detrimental to water quality.

	Environmental Issues	Mitigation Activities and Method	Parameters monitored & Monitoring method adopted	Responsible for Mitigation & Monitoring	Location & Date of Monitoring	Compliance Status/ Explanation SD 27	Compliance Status/ Explanation SD 28	Compliance Status/ Explanation SD 29	Compliance Status/ Explanation SD 30	Compliance Status/ Explanation SD 31 lot-1	Compliance Status/ Explanation SD 31 lot-2	Compliance Status/ Explanation SD 32	Compliance Status/ Explanation SD 34
17	Materials Management	<ul style="list-style-type: none"> Contractor to ensure stockpiles do not obstruct natural water pathways. Contractor to cover stockpiles exposed to windy conditions or heavy rain with vegetation, cloth, or tarps. Contractor to ensure all concrete mixing take place on a designated, impermeable surface. 	Stockpile management. Method – checking of records, visual observation.	For mitigation - contractor, for monitoring - Environment Specialist of DSC and PMU.	Stockpile / storage area	Contractor not yet mobilized	Stockpiling of materials will be done as per approved site plan.	Stockpiling of materials will be done as per approved site plan.	Contractor not yet mobilized	Contractor not yet mobilized	Contractor not yet mobilized	Contractor not yet mobilized	Contractor not yet mobilized
18	Occupational Health & safety	<ul style="list-style-type: none"> Develop and implement site-specific Health and Safety (H&S) Plan Use Personal Protective Equipment like helmet, gumboot, gloves, nose mask and earplugs H&S Training for all site personnel Documentation of work-related accidents; Designate a safeguard focal person and undertake safeguards orientation by PMU/PIU Provide specific guidance for suitable PPE for every on-site work assignment Ensure availability of First aid box at all working sites and labour camp 	<ul style="list-style-type: none"> Site-specific Health and Safety (H&S) Plan Equipped first-aid stations; Medical insurance coverage for workers Number of accidents Supplies of potable drinking water; Record of H&S orientation trainings Personal protective equipments Sign boards for hazardous areas such as energized electrical devices and lines, service rooms. Method – checking of records, visual observation. 	For mitigation - contractor, for monitoring - Environment Specialist of DSC and PMU.	Project Locations	Contractor not yet mobilized	Site-specific Health and Safety (H&S) Plan will be followed during construction.	Site-specific Health and Safety (H&S) Plan will be followed during construction.	Contractor not yet mobilized	Contractor not yet mobilized	Contractor not yet mobilized	Contractor not yet mobilized	Contractor not yet mobilized

	Environmental Issues	Mitigation Activities and Method	Parameters monitored & Monitoring method adopted	Responsible for Mitigation & Monitoring	Location & Date of Monitoring	Compliance Status/ Explanation SD 27	Compliance Status/ Explanation SD 28	Compliance Status/ Explanation SD 29	Compliance Status/ Explanation SD 30	Compliance Status/ Explanation SD 31 lot-1	Compliance Status/ Explanation SD 31 lot-2	Compliance Status/ Explanation SD 32	Compliance Status/ Explanation SD 34
		<ul style="list-style-type: none"> Provide medical insurance coverage for workers; Provide supplies of potable drinking water at working sites; Provide H&S orientation training to all new workers Mark and provide sign boards for hazardous areas such as energized electrical devices and lines Disallow worker exposure to noise level greater than 85 dBA for a duration of more than 8 hours per day without hearing protection. 											
19	Social Impacts ¹³ - Community Health & safety, accessibility	<ul style="list-style-type: none"> Plan truck routes (for carrying construction materials including pipes) to avoid narrow or congested roads and tourist sites Contractor to ensure disruption of access for local residents is minimized Contractor to restrict activities and movement of staff to designated construction areas Contractor to provide 	<ul style="list-style-type: none"> Traffic Management Strategy Complaints from sensitive receptors Number of signages placed at subproject location. Method – checking of records, visual observation. 	For mitigation - contractor, for monitoring - Environment Specialist of DSC and PMU.	Project Locations	Contractor not yet mobilized	Sight fencing done, project information board implemented at site, sufficient access maintained at site.	Sight fencing done, project information board implemented at site, sufficient access maintained at site.	Contractor not yet mobilized	Contractor not yet mobilized	Contractor not yet mobilized	Contractor not yet mobilized	Contractor not yet mobilized

¹³ Regular communication between the Contractor and the interested and affected parties is important for the duration of the contract.

	Environmental Issues	Mitigation Activities and Method	Parameters monitored & Monitoring method adopted	Responsible for Mitigation & Monitoring	Location & Date of Monitoring	Compliance Status/ Explanation SD 27	Compliance Status/ Explanation SD 28	Compliance Status/ Explanation SD 29	Compliance Status/ Explanation SD 30	Compliance Status/ Explanation SD 31 lot-1	Compliance Status/ Explanation SD 31 lot-2	Compliance Status/ Explanation SD 32	Compliance Status/ Explanation SD 34
		<p>walkways and metal sheets where required to maintain access across for people and vehicles</p> <ul style="list-style-type: none"> • Consideration of public safety - as per prescribed mitigation measures • Contractors to ensure lighting on the construction site • Provide protective fencing around open trenches • Provide road signs and flag persons to warn • Schedule transport and hauling activities during non-peak hours 											
20	Socio cultural resources	<ul style="list-style-type: none"> • Strictly follow the protocol for chance archaeological finds in any excavation work • Stop work immediately to allow further investigation if any finds are suspected 	Chance find protocol. Method - Checking of records	For mitigation - contractor, for monitoring - Environment Specialist of DSC and PMU.	Project Locations	Not required till date. Instruction has been given	Not required till date. Instruction has been given	Not required till date. Instruction has been given	Not required till date. Instruction has been given	Not required till date. Instruction has been given	Not required till date	Not required till date	Not required till date
21	Employment generation	<ul style="list-style-type: none"> • The use of labor intensive construction measures will be used where appropriate • Employ local (unskilled) labor if possible • Training of labor to benefit individuals beyond completion of the subproject 	Employment record. Method - Checking of records	For mitigation - contractor, for monitoring - Environment Specialist of DSC and PMU.	Project Locations	Contractor not yet mobilized	Local labours will be mostly engaged.	Local labours will be mostly engaged.	Contractor not yet mobilized	Contractor not yet mobilized	Contractor not yet mobilized	Contractor not yet mobilized	Contractor not yet mobilized

V ENVIRONMENTAL MONITORING AND EVALUATION

27. 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 **Tranche 3** subprojects, the parameters to be monitored are ambient air quality, noise levels and nearby surface water quality.

28. During report period baseline air quality, nearby surface water quality and noise level monitoring have been conducted for two active packages i.e. SD 28 and SD 29.

29. Air quality monitoring results are shown in **Table 7** and comparison with standards has been presented in **Figures 4 to 6**.

30. Salient findings from baseline air quality monitoring are as follows,

- In both the project site concentration of SO₂, NO_x, PM_{2.5} and PM₁₀ are well within prescribed limit of residential areas by Government of India ¹⁴.
- In all the cases concentration of Hydrocarbon is below the detection limit.
- Contractors have been advised to take necessary action on dust suppression (during dry periods) by sprinkling of water whenever required so that ambient air quality can be maintained during the construction

Table 7: Baseline Ambient Air Quality Status at Working Sites SD-28 & SD-29

Construction Package	Monitoring location	Monitoring stage	Date of monitoring	Parameters , µg/m3				
				SO ₂	NO ₂	PM _{2.5}	PM ₁₀	HC
SD -28 Construction of Sewage Treatment Plan (45 MLD) near WBSETCL, Joka	Project site STP location	Base line	22.05.19	14.2	36.0	32.0	68.5	ND
	Project site STP location	Base line	23.05.19.	12.40	39.0	28.0	58.0	ND
SD- 29 Construction of Sewage Treatment Plant (40 MLD) at Bank Plot , MG road , Joka	Project site STP location	Base line	18.05.19	22.0	49.0	38.0	72.0	ND
	Project site STP location	Base line	19.05.19	26.50	52.0	42,0	76.0	ND

¹⁴ National Ambient Air Quality Standard, NAAQS, 2009, MOEFCC, Govt. of India

31. Base line ambient noise level data are presented in **Table 8**. In the project site SD 28 day time and night time **Leq db (A)** are well within prescribed limit of residential areas by Government of India¹⁵. Where as in SD- 29 day time noise was found slightly higher than the national standard. This may be due to vehicular movement in nearby areas. Night time noise in SD – 29 was found well with in the national standard limit of the residential areas. **(Refer Figure -7)**

32. Baseline water quality of the pond near the STP 29 was also generated and the data indicate that the water quality is fit for outdoor bathing (Organised), i.e. CPCB classification of the inland surface water (class- B)¹⁶

33. “During construction” air quality, noise level and water quality monitoring will be continued for the packages as per Environment Management and Monitoring Plan. All monitoring expenses will be borne by contractors from their project Health safety monitoring budget.

34. A performance monitoring fact sheet has been prepared to facilitate tracking and quick reference on environmental monitoring of Tranche 3 subproject packages **(Tables 10)**

Table 8: Baseline Noise monitoring Status at Working Sites of SD-28 & SD-29

Package No.	Sampling Locations- Area	Implementation Stage	Date of Monitoring	Day Time Leq dB(A)	Night Time Leq dB(A)
SD -28 Construction of Sewage Treatment Plant (45 MLD) near WBSETCL, Joka	Project site STP location	Base line	22.05.19	46.0	43.30
	Project site STP location	Base line	23.05.19.	49.0	42.0
SD- 29 Construction of Sewage Treatment Plant (40 MLD) at Bank Plot , MG road , Joka	Project site STP location	Base line	18.05.19	67.0	45.0
	Project site STP location	Base line	19.05.19	69.0	43.0

¹⁵ The Noise Pollution (regulation and control) rules, 2000 and its amendment in 2010 and 2012

¹⁶ Inland surface water categories (CPCB,1978)

Table 9: Baseline Surface water quality Monitoring Data at SD -29

Package No.	Sampling Locations- Area	Stage	Date of Monitoring	Water quality parameters				
				PH	DO Mg/l	BOD Mg/l	Total coliform (MPN/100) ml	Faecal coliform (MPN/100) ml
SD- 29 Constructio n of Sewage Treatment Plant (40 MLD) at Bank Plot , MG road , Joka	Pond near STP Project site	Base line	19.05.19					
				7.2	5.7	6.0	436.0	418.0

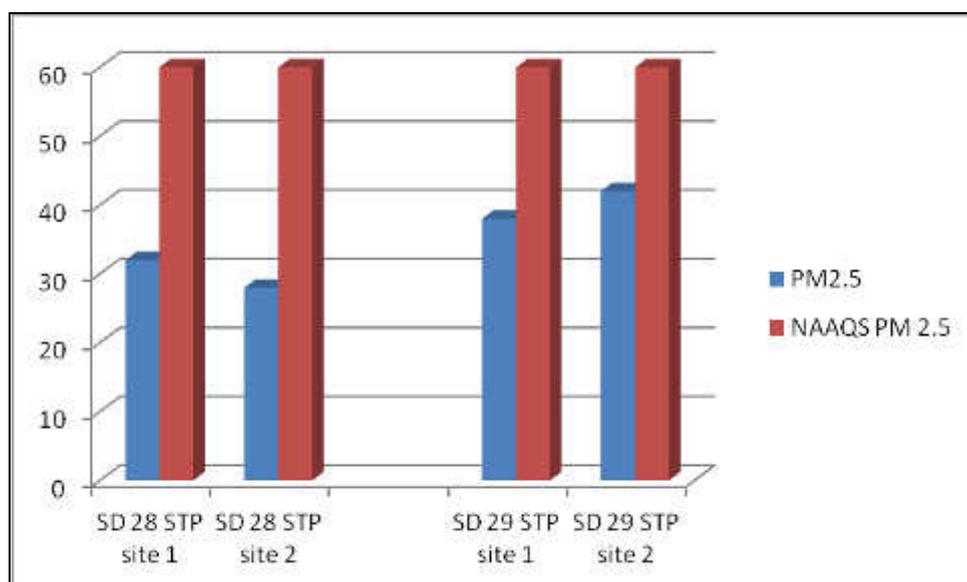


Figure 4: Status of PM2.5 in SD-28 & SD-29

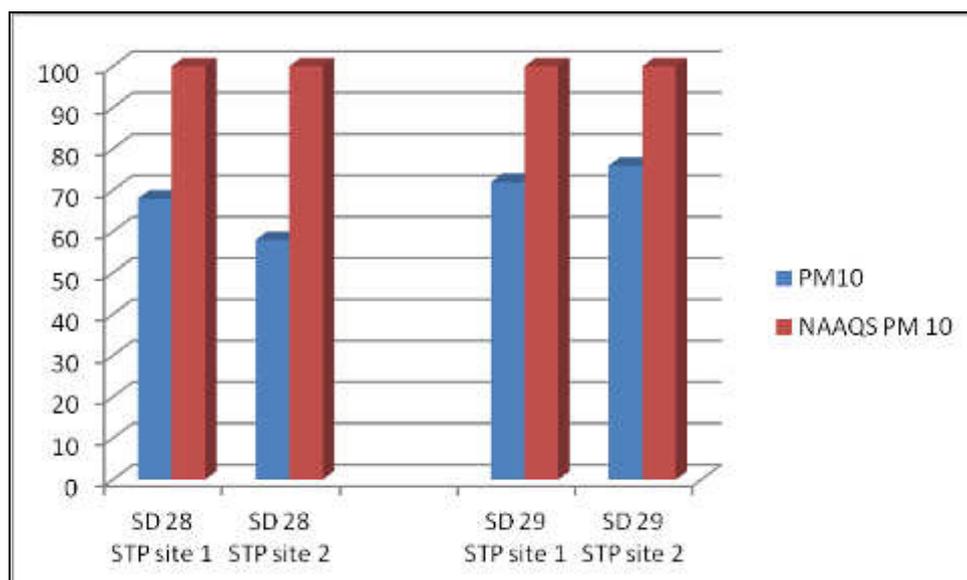


Figure 5: Status of PM2.5 in SD-28 & SD-29

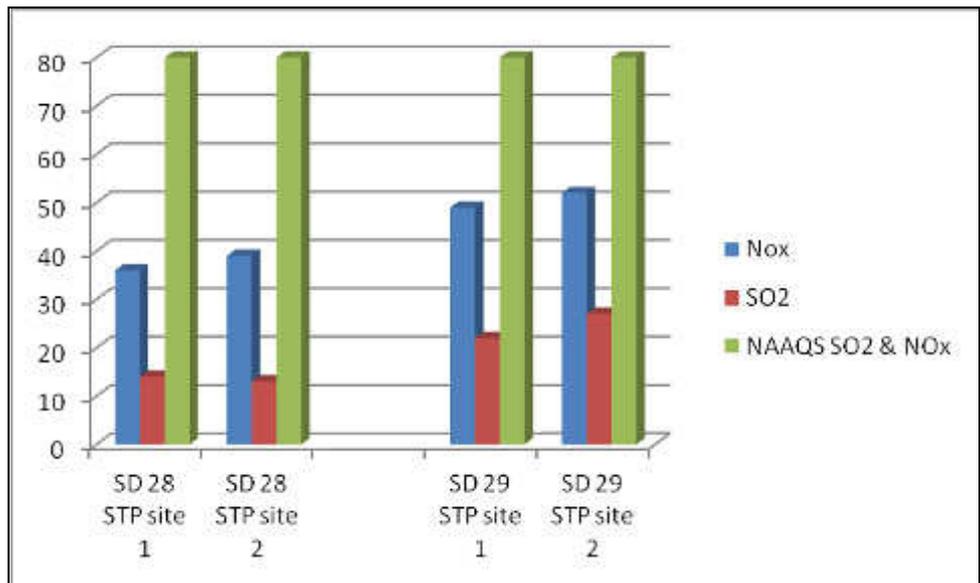


Figure 6 : Status of SO₂ & NO_x in SD - 28 & 29

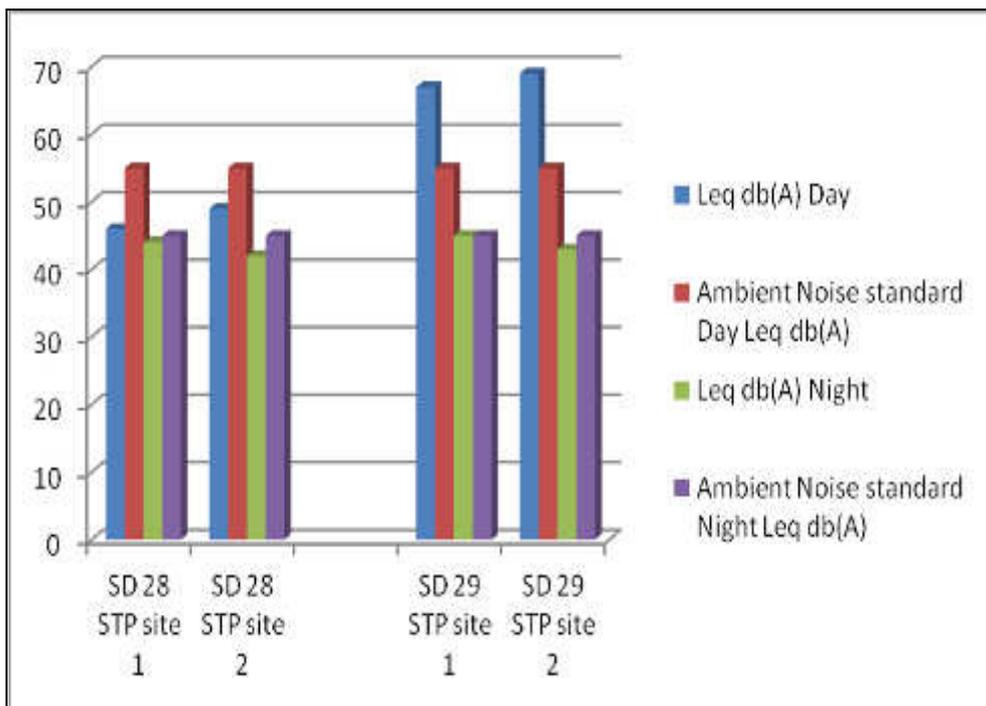


Figure 7: Status of Noise level in SD -28 & SD-29

Table 9: Performance Fact Sheet for Required Environmental Consents/Clearances of KEIIP Tranche 3 (Package-wise)

Sl. No.	Package No.	Name of Contractor	EMP Part of contract Document(Yes/No)	Environmental Consents / Clearances Required			
				Tree Cutting	i. Crusher ii. Batching Plant iii. Hot mix plant	Diesel Generator Set	Pollution Under Control Certificates (PUC) for Contractor's Vehicles
1	SD -27	Bidding stage. Technical Evaluation in process	Yes	Not required	Not Required (NR) as per present work program	Contractor not yet mobilized	Contractor not yet mobilized
2	SD -28	SNET-SSG JV	Yes	Not required	NR as per present work program	NR as per present work	Contractor has been asked to submit PUC for vehicles and machinery
3	SD -29	SNET-Eagle JV	Yes	Not required	NR as per present work program	NR as per present work	Contractor has been asked to submit PUC for vehicles and machinery
4	SD -30	Ramky Infrastructure Ltd. LOA to be issued	Yes	Not required	NR as per present work program	Contractor not yet mobilized	Contractor not yet mobilized
5	SD -31 Lot-1	Simplex Infrastructure ltd LOA to be issued	Yes	Not required	NR as per present work program	Contractor not yet mobilized	Contractor not yet mobilized
6	SD -31 Lot-2	Bidding stage. Technical Evaluation in process	Yes	Not required	NR as per present work program	Contractor not yet mobilized	Contractor not yet mobilized
7	SD -32		Planning stage. Technical Evaluation in process	Not required	-	-	-

Sl. No.	Package No.	Name of Contractor	EMP Part of contract Document(Yes/ No)	Environmental Consents / Clearances Required			
				Tree Cutting	i. Crusher ii. Batching Plant iii. Hot mix plant	Diesel Generator Set	Pollution Under Control Certificates (PUC) for Contractor's Vehicles
8	SD – 34	Ramky infrastructures Ltd. LOA to be issued	Yes	Not required	Not required	Contractor not yet mobilized	Contractor not yet mobilized

VI CONSULTATIONS AND DISCLOSURES CONDUCTED

35. As per approved IEE, consultations and disclosure will be a continuous process throughout Tranche 3 project implementation involving public consultations and focus group discussions. Informal consultations were carried out with local people, pedestrian, etc.

36. Types of consultations and disclosure conducted in active packages of Tranche 3 during December 2018 to May 2019 are presented in **Table 10** of this report.

37. Table 13 indicate different types of consultations, issues raised and resolved in different packages of Tranche 3 during December 2018 to May 2019.

Table 10: Types of consultations and disclosure conducted in different packages of Tranche – 3

Type of Consultation/ Disclosure	Location	Target Participants	Responsible Person and Source of Funds
Local level consultation / FGD	At construction locations/ nearby location to STPs	General public, pedestrian	Construction supervisor, contractor Project budget – continuous process
Local level consultation / FGD with Councillor	Office of the councillor	Local people and councillor office staff	Construction Manager, Environment social team of DSC and PMU, contractor

38. Orientation training has been conducted for SD-28 & SD-29 (currently ongoing packages) on pre-construction obligations of the contractor.

39. There are series of informal discussions by the DSC with Chief Engineers of KMC and Director General (Projects), PMU mainly on understanding current situation and optimum design to be adopted in order to attain the objectives of taking up the work items.

40. Photographic evidences of training and awareness programme at different project sites of Tranche 3 and consultations at sites have been provided in **Appendix-6** of this report.

Table 11: Issues raised during public consultation in different packages of Tranche - 3 during December 2018 to May 2019

Package Number	Place and Date of Consultation	Issues Raised
SD 28	Near STP site on 04.06.2019	Local people were appraised of the details of the packages; no environmental sensitive issues were raised by them.
SD 29	Near STP site on 05.06.2019	Local people were appraised of the details of the packages; no environmental sensitive issues were raised by them.
SD 28	Councilor office	Local people of the Ward were appraised of the details of the packages; no environmental sensitive issue raised
SD 29	Councilor office	Local people of the Ward were appraised of the details of the packages; no environmental sensitive issue raised

41. A Workshop cum Training programme on Safeguard Issues and Implementation of the safeguards in the project (Kolkata Environmental Improvement Investment Program (KEIIP) – Tranche 2) was organised by the Safeguard Unit (environment & social Safeguard) of Design & Supervision Consultants (DSC) Tranche 2, KEIIP on 22nd May 2019 at Conference Room of KEIIP. The workshop cum training programme was attended by Contractor's Project Managers, Environment Safety Officers, DSC's Construction Managers & Experts, DSC's Safeguard Team Members and PMU's Safeguard Team. This training programme was also attended by SD-28 and SD-29 project managers.

42. In the workshop topics were discussed in detail are - ADB Safeguard Policy, IEE & EMP Implementation, Some Good and Bad EHS practices in Urban Infrastructure Projects, Document preparation on EMP Implementation, Social issues of the project and implementation. In addition to the above mentioned issued during interaction EMP implementation mechanisms, contractual obligation of the contractor related to safeguard was also discussed in detail. Constraints of EMP implementation were also discussed by the contractor.

43. A workshop on ADB Safeguard Policy Statement 2009 (E-Learning Course) was organized by the DSC Environmental Safeguard Team (Tranche 2), KEIIP on 22.04.19. The program was attended by Team Leader (DSC), Dy. Team Leader (DSC), Environmental Expert (PMU), Team Leader (PMC) contractor's Project Managers, contractor's environment & Safety officers from the all the packages (Tranche 2 & 3) and safeguard team members from DSC, PMC, and PMU. Summary sheet of the workshop has been given in appendix- 7 of this report.

50 A workshop on ADB Safeguard Policy Statement 2009 was organized by the DSC Environmental Safeguard Team (Tranche 2), KEIIP for Project Management Unit (PMU) & Contract Management Unit (CMU) Engineers and safeguard team (Environmental & Social) of KEIIP on 08.05.19. Summary sheet of the workshop has been given in appendix- 7 of this report.

VII GRIEVANCE REDRESSAL

44. **Common Grievance Redress Mechanism.** A common grievance redress mechanism (GRM) has been established for social, environmental or any other subproject related grievances.

45. **Grievance Redress Process.** PMU is maintaining a Complaint Cell at KEIIP office located in 206 A J C Bose Road Kolkata 700017 headed by a designated Grievance Officer (currently the Administrative Officer) under Project Director. The Complaint Cell will also serving as Public Information Centre, where, apart from grievance registration, information on the Project, subprojects, social and environmental safeguards, etc can be provided.

46. At every Borough of KMC under which works are in progress, a Public Relations & Grievance Redressal Unit has been established for information disclosure on request from public and for receipt of complaints.

47. At contractors' site offices, complaint and suggestion books available for lodging any complaint. The concerned Executive Engineers of KEIIP will monitor these books and if possible take necessary actions for redressal of minor complaints with intimation to the complainant.

48. The Grievance Registration/Suggestion Form will be available at the Complaints Cell and in Borough Offices and will also be downloadable from the KEIIP/KMC websites. Grievances/ suggestions of affected persons can be dropped in suggestion boxes or conveyed through phone or mail. Affected Persons will also be able to register grievances - social, environmental or other, personally at the Complaint Cell and at Borough offices of KMC. The Grievance Officer and designated official at the Boroughs will be able to correctly interpret/record verbal grievances of non-literate persons and those received over telephone.

49. All complaints (unresolved at local site/Borough level) relating to KEIIP will be sent to the Project Director, KEIIP including those received in the KMC/KEIIP website for redressal. The Grievance Officer will resolve simple unresolved issues and in case of complicated issues, consult/seek the assistance of the Environment/Social Specialist of the DSC/PMU. Grievances not redressed through this process within one month of registration will be brought to the notice of the Project Director, KEIIP. Action taken in respect of all complains will be communicated to the complainant by letter, over phone or e-mail or WhatsApp as the case may be.

50. Periodic community meetings with affected communities to understand their concerns and help them through the process of grievance redress (including translation from local dialect/language, recording and registering grievances of non-literate affected persons and explaining the process of grievance redress) will be conducted if required. The above Grievance Redress Process will be discussed with the stakeholders at the proposed disclosure workshop.

51. **Grievance Redressal Committee (GRC).** A PMU level GRC has already been constituted by the Project Director to address grievances. Grievances not resolved at borough level are referred to PMU level. However grievances that cannot be resolved at PMU level will be referred to an apex grievance redress committee (GRC).¹⁷ Still unresolved issues will be referred to an appropriate court of law. Despite the project GRM, 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.

52. The time limit for grievance redressal will be as follows,

- ✓ Site level – 7 days
- ✓ Borough level – 7 days
- ✓ GRC – PMU level – 15 days
- ✓ Apex GRC- 15 days

53. **Consultation Arrangements for GR** - This will include group meetings and discussions with affected persons, to be announced in advance and conducted at the time of day agreed on with affected persons and conducted to address general/common grievances; and if required with the Environment/Social Specialist of PMU/DSC for one-to-one consultations. Non-literate affected persons/ vulnerable affected persons will be assisted to understand the grievance redress process, to register complaints and with follow-up actions at different stages in the process.

54. **Record-keeping.** Records will be kept by PMU/Borough Office/contractors' site office 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 in effect, and final outcome.

¹⁷ The apex GRC will have the following members: KMC Commissioner as Chairperson, KEIIP Project Director, Director General (P), KEIIP, Environment/Social Safeguard Officer, Administrative Officer as the convener, representatives of APs, Community Based Organizations (CBOs), and eminent citizens. The GRC must have at least two women members.

55. **Information Dissemination Methods of the GRM.** Grievances received and responses provided will be documented and reported back to the affected persons (**Appendix 8** -Sample Grievance Registration Format). The number of grievances recorded and resolved and the outcomes will be displayed/disclosed in the offices of the different Boroughs of KMC and web. The phone number where grievances are to be recorded will be prominently displayed at the construction sites.

56. **Periodic Review and Documentation of Lessons Learned.** PMU will periodically review the functioning of the GRM and effectiveness of the mechanism, especially on the Project’s ability to prevent and address grievances.

57. **Costs.** All costs involved in resolving the complaints (meetings, consultations, communication and reporting / information dissemination) will be borne by PMU.

58. A GRM flow chart has been provided in **Figure 8** of this report.

59. No major physical activity started in Tranche 3 only in SD-28 and SD-29 some preliminary activity like fencing, fixation of signboards and construction of approach road to the site have been initiated by contractors in May 2019. Over all, SD-28 & SD-29 sites are environmentally well managed. **Up to May 2019 no environment related grievances have been registered for Tranche -3 packages.**

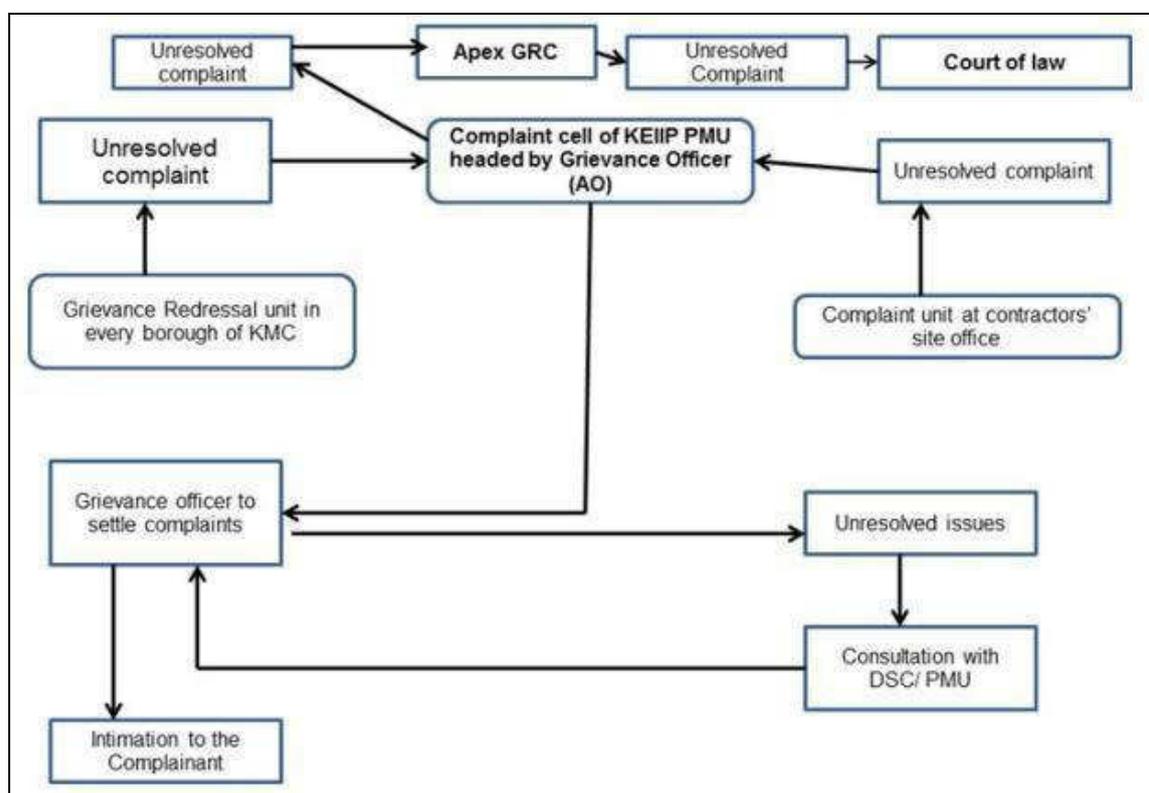


Figure 8: Grievance Redress Mechanism

VIII FINDINGS AND RECOMMENDATIONS

60. Up to May 2019, no major physical activity started in Tranche 3; only in SD-28 and SD-29 some preliminary activity like fencing, fixation of signboards and construction of approach road to the site have been initiated by the contractors. Over all, SD-28 & SD-29 sites are environmentally well managed. However, scopes for further improvement in site

management measures have been explained to the contractors. It is expected that during next report period EMP compliance may be reported as per contractors EMP implementation status.

61. Statutory clearances – consent to establish (NOC) from West Bengal Pollution Control Board (WBPCB) has been obtained for STPs of SD-28 & SD- 29.

62. Contractors of SD-28 and SD-29 have conducted baseline environmental monitoring (Air, water and Noise) in May 2019 as per suggestions of the Environment Specialist of DSC and PMU.

63. Up to May 2019 no environment related grievances have been registered for Trance -3 packages.

64. Based on the above, it may be concluded that KEIIP Tranche 3 sub projects are being implemented with almost full compliance of the required environmental safeguards during December 2018 to May 2019. Initial EMP compliance is thus satisfactory.

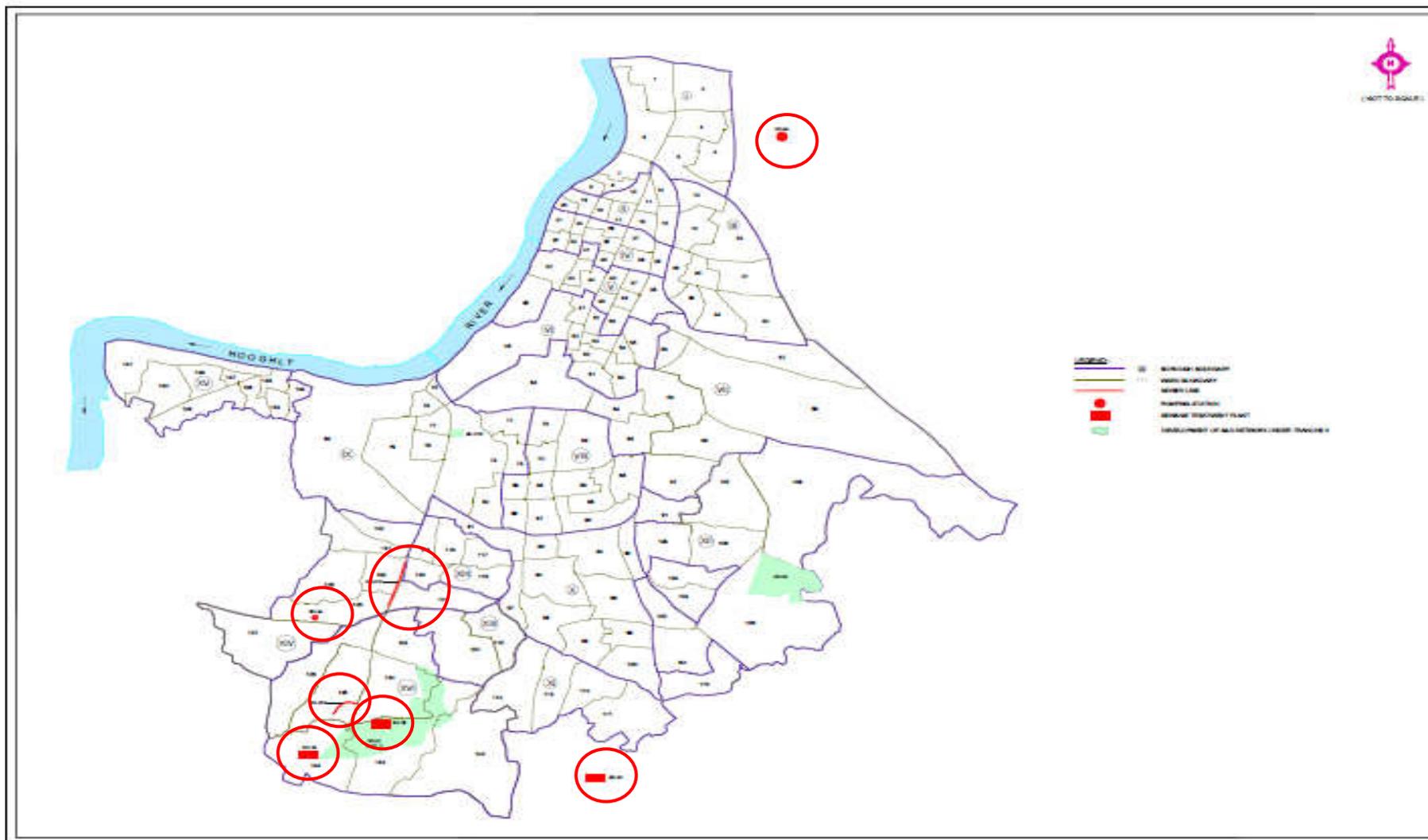
65. In order to further improve and maintain satisfactory EMP compliances the following corrective and improvement action plan (Table 12) is recommended with target dates of compliance. The concerned contractors have been suitably advised. Contractors have also been advised to provide written commitment for implementation of corrective action plan.

Table 12: Corrective and Improvement Action Plan

Sr. No.	Issues to be complied	Action Required	Responsible	Target Date	Indicator of Compliance
1	Application of EMP	Continue on regular basis	Contractor in association with PIU and DSC	Continuous process	Site observation and checking
2	Use of PPEs (particularly working shoes/ gumboots, hand gloves) by contractors' at different work locations	Complete use of PPEs, particularly use of working shoes, gumboots	Contractor	Immediate	Availability and use of PPE
3	Caution tape/ barricade at all required locations of packages	Complete use of caution tape/ barricade at all working sites	Contractor	Immediate	Site observation and checking
4	Availability of emergency contact no. at display/ caution board	Complete arrangement of display / caution board with all emergency contact no.	Contractor	Immediate	Site observation
5	No air pollution and increase in dust at work sites of the running packages.	Immediate action to be taken like, water sprinkling, maintaining of stack height in DG set, use of CPCB approved green DG set etc.	Contractor	Immediate	Monitoring result
6	No Problem of public access	Sufficient access need to be provided at all working sites.	Contractor	Immediate	Site observation and checking
7	Satisfactory Housekeeping at work site	Immediate improvement of housekeeping	Contractor	Immediate	Site observation

Sr. No.	Issues to be complied	Action Required	Responsible	Target Date	Indicator of Compliance
8	Arrangement of labour camp/ rented house for contractor	Arrangement as per requirement	Contractor	Continuous process	Site observation and checking
9	Training to workers	Regular tool box training for labour. Safeguard orientation training for contractor	Contractor, PIU, DSC	Continue process	Record keeping and safeguard implementation
10	Renewal of Labour License	Continue on regular basis	Contractor, PIU, DSC	Continue process	Record keeping

Appendix 1: Tranche -3 projects location map



Appendix-2: Project Location and Activity initiated by Contractors



Project Location and Activity initiated by Contractors in SD-29



Project Location and Activity initiated by Contractors in SD-28

Appendix 3 A: NOC from WBPCB for SD – 28

D.P.C. (1) - 11.5.19

NOC NO-169177
WEST BENGAL POLLUTION CONTROL BOARD
 Paribesh Bhawan
 10A, Block - LA, Sector III, Bidhannagar
 Kolkata - 700 105



Memo No. 016 - dt-wc-r-19-0098 Dated 10-05-2019

From:
 Member Secretary,
 West Bengal Pollution Control Board
 M/S. KEIIP (STP near WBSFDCL, TOKA)
 206, ATC Bore Road, P. O. - CHACUS ABENUE,
 Kolkata - 700 017



To:

Sub: Consent to Establish (NOC) from Environmental Point of View
 Ref: Your letter No. _____ Received on 05-04-19

WEST BENGAL

Dear Sirs,

In response to the application for Consent to Establish (NOC) for proposed Unit of M/s. KEIIP
STP NEAR WBSFDCL, TOKA
 for manufacturing/operation of water treatment plant (capacity 5 MLD) consisting
of coarse screen, fine screen, chlorination tank, (as proposed) unit
at Chamber, Sector III, Bidhannagar, at Dist. - CH. D. W. Road, P.O. - Behala,
MOHUR - TOKA, Kolkata - 700 034
 this is to inform you that the Board hereby grants the Consent to Establish (NOC) from the environmental point
 of the above subject to the following conditions and technical conditions annexed.

1. The quality of sewage and trade effluent to be discharged from your factory shall satisfy the permissible limits as prescribed in IS: 2490 (Pt. I) of 1974, and/or its subsequent amendment and Environment (Protection) Rules 1986.
2. Suitable measures to treat your effluent shall be adopted by you in order to reduce the pollutional load so that the quality of the effluent satisfies the standards mentioned above.
3. You shall have to apply to this Board for its consent to operate and discharge of sewage and trade effluent according to the provisions of the water (Prevention & Control of Pollution) Act, 1974. No sewage or trade effluent shall be discharged by you without prior consent of this Board.
4. All emission from your factory shall conform to the standards as laid down by this Board.
5. No emission shall be permitted without prior approval of this Board and you shall apply to this Board for its consent to operate and atmospheric emission as per provision of the Air (Prevention & Control Pollution) act, 1981.
6. No industrial plant, furnace, flues, chimneys, control equipment, etc. shall be constructed/reconstructed/erected/re-erected without prior consent of this Board.

No 159177

- A. You shall comply with
- (i) Water (Prevention and Control of Pollution) Cess Act, 1977, if applicable.
 - (ii) Water (Prevention and Control of Pollution) Cess Act, 1978, if applicable.
 - (iii) Environment (Protection) Act, 1986
 - (iv) Environment (Protection) Rules, 1986
 - (v) Hazardous Wastes (Management and Handling) Rules, 1989 and Amended Rules, 2000
 - (vi) Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 and Amended Rules, 2000
 - (vii) Manufacture, Use, Import and Storage and Hazardous Micro-Organisms, Genetically Engineered Organisms or Cell Rules, 1989
 - (viii) The Public Liability Insurance Act, 1991 and Amended Act, 1992
 - (ix) The Public Liability Insurance Rules, 1991 and Amended Rules 1993
 - (x) Biomedical Wastes (Management & Handling) Rules, 1998 and Amended Rules 2000 if applicable.
 - (xi) Recycled Plastics Manufacture and Usage Rules 1999, if applicable and
 - (xii) Ozone Depleting Substances (Regulation & Control) Rules, 2000, if applicable
- B. You will have to abide by any other stipulations as may be prescribed by any authority/local bodies/Government Departments etc.

SPECIAL CONDITION: *Please refer to annexure*

Any violation of the aforesaid conditions shall entail cancellation of this Consent to Establish (NOC)
Gross capital Investment - Rs. 701800000/-



Yours faithfully,
[Signature]
 Member Secretary,
 West Bengal Pollution Control Board.
 Date: *16/05/19*
 Senior Environmental Engineer
 W.B. Pollution Control Board.

Memo No.
 Copy forwarded for information to :

1. Chief Inspector of Factories, Government of West Bengal, N. S. Building, Kolkata-700 001
2. Director of Industries/Director of Cottage & Small Scale Industries, Government of West Bengal, N. S. Building, Kolkata-700 001
3. Guard file, West Bengal Pollution Control Board.
4. Environmental Engineer, VIII/Alipur R.O./Howrah R.O./Hooghly R.O./B.R.O./D.F.O./Haldia R.O./S.R.O./Asansol Sub-R.O./WBPC Board

Himalaya Bhawan Delhi Road, Dankuni Dist. Hooghly	VIII, Panpur Kalyani Expressway P.O. Narayapur Dist. 24 Pgs. (N)	Sahid Khudiram Sarani City Centre, Durgapur-16 Dist. Burdwan	10, Camac Street 2nd Floor Kolkata-700 017
Paribesh Bhawan 10A, LA-Block, Sector-III Salt Lake City, Kolkata - 700 098	Block-05 at 40 Flats Complex Adjacent to Priyambada Housing Estate P.O. : Khanjanchak, P.S. Durgachak Haldia-721602 Dist. : Purba Medinipur	Paribahan Nagar Matigara, Siliguri Dist. -Darjeeling	
Satyra Chowdhury Indoor Stadium Baluchar Bandh Road Malda-732101	Asansol Sub-Regional Office ADDA Commercial Market (2nd Floor) Opposite Asansol Fire Station G.T. Road, Asansol-713 301		Member Secretary, West Bengal Pollution Control Board

10-159176

You shall comply with

- (i) Water (Prevention and Control of Pollution) Cess Act, 1977, if applicable.
- (ii) Water (Prevention and Control of Pollution) Cess Act, 1978, if applicable.
- (iii) Environment (Protection) Act, 1986
- (iv) Environment (Protection) Rules, 1986
- (v) Hazardous Wastes (Management and Handling) Rules, 1989 and Amended Rules, 2000
- (vi) Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 and Amended Rules, 2000
- (vii) Manufacture, Use, Import and Storage and Hazardous Micro-Organisms, Genetically Engineered Organisms or Cell Rules, 1989
- (viii) The Public Liability Insurance Act, 1991 and Amended Act, 1992
- (ix) The Public Liability Insurance Rules, 1991 and Amended Rules 1993
- (x) Biomedical Wastes (Management & Handling) Rules, 1996 and Amended Rules 2000 if applicable.
- (xi) Recycled Plastics Manufacture and Usage Rules 1999, if applicable and
- (xii) Ozone Depleting Substances (Regulation & Control) Rules, 2000, if applicable

B. You will have to abide by any other stipulations as may be prescribed by any authority/local bodies/Government Departments etc.

SPECIAL CONDITION: *please refer to annexure*

Any violation of the aforesaid conditions shall entail cancellation of this Consent to Establish (NOC)
Gross Capital Investment - RS. 648000000/-



Yours faithfully,
[Signature]
 Member Secretary,
 West Bengal Pollution Control Board
 Senior Environmental Engineer
 W.B. Pollution Control Board

Memo No. _____
 Copy forwarded for information to :

1. Chief Inspector of Factories, Government of West Bengal, N. S. Building, Kolkata-700 001
2. Director of Industries/Director of Cottage & Small Scale Industries, Government of West Bengal, N. S. Building, Kolkata-700 001
3. Guard file, West Bengal Pollution Control Board.
4. Environmental Engineer, *W/Alipur R.O./Howrah R.O./Hooghly R.O./B.R.O./D.R.O./Haldia R.O./S.R.O./Asansol/ Sub-R.O./WBPC Board*

Himalaya Bhawan Delhi Road, Dankuni Dist. Hooghly	Vill, Panpur Kalyani Expressway P.O. Narayanpur Dist. 24 Pgs. (N)	Sahid Khudiram Sarani City Centre, Durgapur-16 Dist. Burdwan	10, Camac Street 2nd Floor Kolkata-700 017
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Paribesh Bhawan 10A, LA-Block, Sector-III Salt Lake City, Kolkata - 700 098	Block-05 at 40 Flats Complex Adjacent to Priyambada Housing Estate P.O. : Kharjanachak, P.S. Durgachak Haldia-721602 Dist. : Purba Medinipur	Paribahan Nagar Matigara, Siliguri Dist.-Darjeeling
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Satya Chowdhury Indoor Stadium Balurchar Bandh Road Malda-732101	Asansol Sub-Regional Office ADDA Commercial Market (2nd Floor) Opposite Asansol Fire Station G.T. Road, Asansol-713 301	Member Secretary, West Bengal Pollution Control Board
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APPENDIX 4: ENVIRONMENTAL MONITORING AT DIFFERENT PROJECT LOCATION



Baseline Ambient Air & Noise quality monitoring at SD-29 project site



Baseline Ambient Air & Noise quality monitoring at SD-28 project site

Appendix – 5 :Environmental Standards

National Ambient Air quality Standards, 2009

[भाग III—खण्ड 4]					
भारत का राजपत्र : असाधारण					
2					
NATIONAL AMBIENT AIR QUALITY STANDARDS					
CENTRAL POLLUTION CONTROL BOARD					
NOTIFICATION					
New Delhi, the 18th November, 2009					
<p>No. B-29016/20/90/PCI-L—In exercise of the powers conferred by Sub-section (2) (b) of section 16 of the Air (Prevention and Control of Pollution) Act, 1981 (Act No.14 of 1981), and in supersession of the Notification No(s). S.O. 384(E), dated 11th April, 1994 and S.O. 935(E), dated 14th October, 1998, the Central Pollution Control Board hereby notify the National Ambient Air Quality Standards with immediate effect, namely:-</p>					
NATIONAL AMBIENT AIR QUALITY STANDARDS					
S. No.	Pollutant	Time Weighted Average	Concentration in Ambient Air		
			Industrial, Residential, Rural and Other Area	Ecologically Sensitive Area (notified by Central Government)	Methods of Measurement
(1)	(2)	(3)	(4)	(5)	(6)
1	Sulphur Dioxide (SO ₂), µg/m ³	Annual* 24 hours**	50 80	20 80	- Improved West and Gaeke -Ultraviolet fluorescence
2	Nitrogen Dioxide (NO ₂), µg/m ³	Annual* 24 hours**	40 80	30 80	- Modified Jacob & Hochheiser (Na-Arsenite) - Chemiluminescence
3	Particulate Matter (size less than 10µm) or PM ₁₀ µg/m ³	Annual* 24 hours**	60 100	60 100	- Gravimetric - TOEM - Beta attenuation
4	Particulate Matter (size less than 2.5µm) or PM _{2.5} µg/m ³	Annual* 24 hours**	40 60	40 60	- Gravimetric - TOEM - Beta attenuation
5	Ozone (O ₃) µg/m ³	8 hours** 1 hour**	100 180	100 180	- UV photometric - Chemiluminescence - Chemical Method
6	Lead (Pb) µg/m ³	Annual* 24 hours**	0.50 1.0	0.50 1.0	- AAS /ICP method after sampling on EPM 2000 or equivalent filter paper - ED-XRF using Teflon filter
7	Carbon Monoxide (CO) mg/m ³	8 hours** 1 hour**	02 04	02 04	- Non Dispersive Infra Red (NDIR) spectroscopy
8	Ammonia (NH ₃) µg/m ³	Annual* 24 hours**	100 400	100 400	-Chemiluminescence -Indophenol blue method

4

THE GAZETTE OF INDIA : EXTRAORDINARY

[PART III—Sec. 4]

(1)	(2)	(3)	(4)	(5)	(6)
9	Benzene (C ₆ H ₆) µg/m ³	Annual*	05	05	- Gas chromatography based continuous analyzer - Adsorption and Desorption followed by GC analysis
10	Benzo(a)Pyrene (BaP) - particulate phase only, ng/m ³	Annual*	01	01	- Solvent extraction followed by HPLC/GC analysis
11	Arsenic (As), ng/m ³	Annual*	06	06	- AAS /ICP method after sampling on EPM 2000 or equivalent filter paper
12	Nickel (Ni), ng/m ³	Annual*	20	20	- AAS /ICP method after sampling on EPM 2000 or equivalent filter paper

* Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.

** 24 hourly or 08 hourly or 01 hourly monitored values, as applicable, shall be complied with 98% of the time in a year. 2% of the time, they may exceed the limits but not on two consecutive days of monitoring.

Note. — Whenever and wherever monitoring results on two consecutive days of monitoring exceed the limits specified above for the respective category, it shall be considered adequate reason to institute regular or continuous monitoring and further investigation.

SANT PRASAD GAUTAM, Chairman
[ADVT-III/4/184/09/Exty.]

Note: The notifications on National Ambient Air Quality Standards were published by the Central Pollution Control Board in the Gazette of India, Extraordinary vide notification No(s). S.O. 384(E), dated 11th April, 1994 and S.O. 935(E), dated 14th October, 1998.

Inland surface water categories (CPCB,1978)

The Central Pollution Control Board has classified the inland Surface water into five categories A to E. On the basis of there designated best use and the desired class. The principal concern has been the end use to which man may put to water. The classification has been made in such a manner that with the degradation in quality, the water quality requirement becomes progressively lower from A to E. The CPCB classification of the inland surface water is give as under: -

Designated Best Use	Class of Water	Criteria
Drinking water Source without Conventional treatment but after disinfections.	A	<ol style="list-style-type: none"> 1. Total coli form organisms MPN/100 ml shall be 50(max.) 2. pH between 6.5 to 8.5 3. Dissolved Oxygen (Min) 6 mg/l 4. BOD (max) 5 days < 2.00 mg/l
Outdoor bathing(Organised)	B	<ol style="list-style-type: none"> 1. Total coli form organisms MPN/100 ml shall be 500 (max.) 2. Fecal Coli form MPN/100 mg. to be 2500 (max.) for Ganga Action Plan. 3. pH between 6.8 to 8.5. 4. Dissolved Oxygen (min) 4 mg/l 5. BOD (Max.) 5 days @ 3 mg/l
Drinking water with conventional treatment Followed by disinfections	C	<ol style="list-style-type: none"> 1. Total coli form organisms MPN/100 ml shall be 5000 (max.) 2. pH between 6.8 to 3. Dissolved Oxygen (min) 4 mg/l 4. BOD (max.) 5 days @ 3 mg/l
Propagation of wild life Fisheries.	D	<ol style="list-style-type: none"> 1. pH between 6.5 to 8.5 2. Dissolved Oxygen (min) 4 mg/l. 3. Free Ammonia (as N) (max)1.2mg/l.
Irrigation, industrial cooling, and Controlled disposal	E	<ol style="list-style-type: none"> 1. pH between 6.0 and 8.5 2. Electrical conductivity less than 2250 micro mhos/cm, 3. Sodium Aborption Ratio less than 26, and Boron less than 2 mg/l

SCHEDULE

(see rule 3(1) and 4(1))

Ambient Air Quality Standards in respect of Noise

Area Code	Category of Area / Zone	Limits in dB(A) Leq*	
		Day Time	Night Time
(A)	Industrial area	75	70
(B)	Commercial area	65	55
(C)	Residential area	55	45
(D)	Silence Zone	50	40

- Note:-
1. Day time shall mean from 6.00 a.m. to 10.00 p.m.
 2. Night time shall mean from 10.00 p.m. to 6.00 a.m.
 3. Silence zone is an area comprising not less than 100 metres around hospitals, educational institutions, courts, religious places or any other area which is declared as such by the competent authority
 4. Mixed categories of areas may be declared as one of the four above mentioned categories by the competent authority.

* dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.

A "decibel" is a unit in which noise is measured.

"A", in dB(A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to frequency response characteristics of the human ear.

Leq: It is an energy mean of the noise level over a specified period.

(Source: The Noise Pollution (regulation and control) rules, 2000 and its amendment in 2010 and 2012)

APPENDIX 6: PUBLIC CONSULTATION AT DIFFERENT PROJECT SITES OF TRANCHE -3



List of Participants in FGD near SD-29 project site on 04 .06.19 & 05 .06.19

Community Consultation Report from Project Sites		Date: 04/06/2019
Package number: KEIIP/NCB/TR-3/SD29/2017-18		
Ward:143 Borough: XVI		
Contractor's name: SNET – EAGLE INFRA JV		
Event Location: Bank Plot, M G Road, Joka		Time: 2:35 pm
		Duration: 30 minutes
Total Participants: 16		Total female participants: 10
Sl. No.	Topic for discussion	Name & Signature
9.		শ্রী শ্রী কলি
10.		সুশীল সিন্দার
11.		কোমল রায়
12.		ফেরুজা ডাঃ
13.		Sushil Sindar
14.		২০২০৪ সিন্দার
15.		সুশীল সিন্দার
16.		কোমল রায়

Community Consultation Report from Project Sites		Date: 04/06/2019
Package number: KEIIP/NCB/TR-3/SD29/2017-18		
Ward:143 Borough: XVI		
Contractor's name: SNET – EAGLE INFRA JV		
Event Location: Bank Plot, M G Road, Joka		Time: 2:15 pm
		Duration: 30 minutes
Total Participants: 16		Total female participants: 10
Sl. No.	Topic for discussion	Name & Signature
1.	Project appraisal	শ্রী শ্রী কলি
2.		Soma Majumdar
3.	Conservation of Environment	কোমল রায়
4.		Nahida Kabir
5.	Pollution	কোমল রায়
6.		শ্রী শ্রী কলি
7.		কোমল রায়
8.		শ্রী শ্রী কলি

List of Participants in FGD near SD-28 project site on 05 .06.19

Community Consultation Report from Project Sites		Date: 06-06-2019
Package number / Ward / Borough: KEHP/NCB/TR-3/SD28/2017-18/144/XVI		
Contractor's name: SNET – SSG JV		
Event Location: Construction site of Sewage Treatment Plant near WBSETCL, Joka		Time: 3.00 P.M.
Duration: 1 Hour		
Total Participants: Ten nos.		Total female participants: Nil
Sl. No.	Topic for discussion	Name & Signature
01.	It was discussed in the group meeting the importance of health, safety and environment protection.	Balaji Barani. Balaji Barani
02.	Preservation of greens namely tree/plants are most important since they give us	Akash Mallik Akash Mallik
03.	better environment as towards oxygen level maintenance through	Sanjay Majhi Sanjay Majhi
04.	Photosynthesis and control of air pollution.	Sanjay Majhi Sanjay Majhi
05.		Akram Barai
06.	It was further stressed that all erection tools and tackles should be certified so	
07.	that chance of accident is minimal. Safety wear and PPE's are to be readily available	Arun Halder Arun Halder
08.	at site.	Rajat Halder Rajat Halder
09.	Water to be safe for drinking and to be sourced from accredited agency.	Rajiv Nath Rajiv Nath
10.		S.H. Nath
Please attach (i) Report, (ii) Photograph and (iii) Signed Attendance Sheet		

Appendix 7: Workshop training organized by DSC

Summary Sheet

Workshop on ADB E-Learning Course & Implementation of Gender Action Plan

Date: 22.04.19

Venue: Conference Room of KEIIP

A workshop on ADB Safeguard Policy Statement 2009 (E-Learning Course) was organized by the DSC Environmental Safeguard Team (Tranche 2), KEIIP on 22.04.19. The program was attended by Team Leader (DSC), Dy. Team Leader (DSC), Environmental Expert (PMU), Team Leader (PMC) Contractor's Project Managers, Contractor's environment & Safety officers from the all the packages (Tranche-2 & 3) and safeguard team members from DSC, PMC, and PMU.

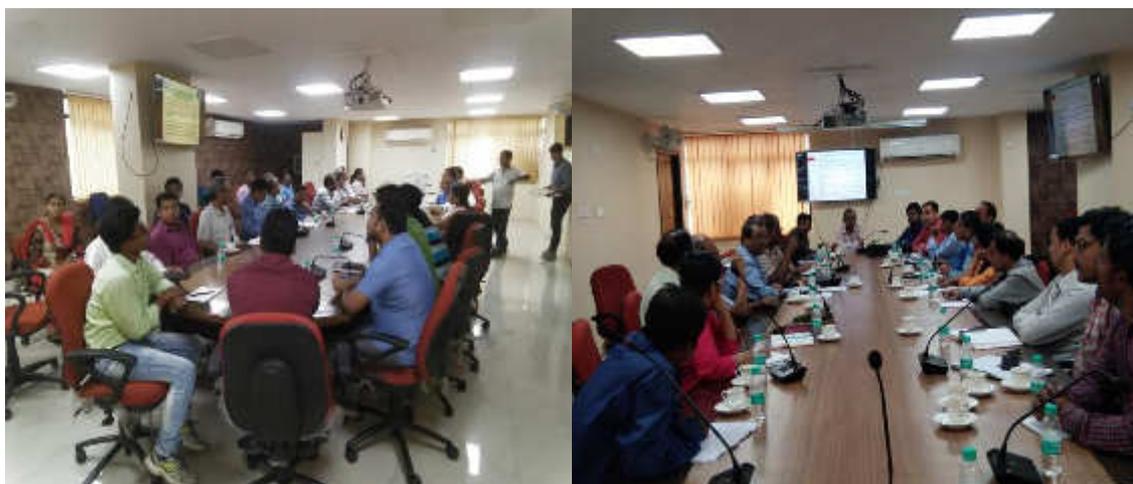
In the workshop following topic was discussed in detail:

- ADB Environmental Safeguard Policy Statement
- ADB Social Safeguard Policy Statement
- Summary of different learning module from the course
- On line practical demonstration of the Safeguard Policy Statement 2009 (E-Learning Course)
- Implementation of Gender Action Plan in project

All the participants were provided with the link for safeguard e-learning course and were guided to learn the modules in the course. All the modules were also discussed and explained to the participants.

The workshop was interactive, successful and ended with vote of thanks.

Photographic evidences and list of participants are attached herewith for record.



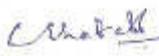
Photographs - Workshop on ADB Safeguard Policy Statement 2009 (E-Learning Course) on 22.04.19

List of Participants

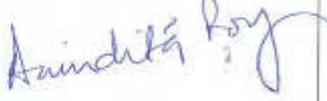
Workshop on ADB E-Learning Course & Implementation of Gender Action Plan on
22.04.19

Date: 22/04/2019

Venue : KEIIP Conference room

Sl No.	Name and Designation	Contact No.	Signature
1			
2.			
3.	Dr. Chinmay Chakrabarti	9830284 360	
4	MILAN DHOLE (safety officer)	7595864 794	
5	LENA SAMANTA (Quality Control or EIS monitoring)	9477955 766	
6	ABHIJIT BERA (Sr Safety officer Simplex)	8195005 253	
7	Vicky Kumar (Safety Sup. SI)	90624412 15	
8.	Tahsinul Haq (Asst. Manger)	9073674 290.	
9	Anubam Koley (Safety Engineer)	9073683985	
10.	Bigoy Krishna DC (Project Engineer Safety)	9825988598	

Venue : KEIIP Conference room		Date: 22/04/2019	
Sl No.	Name and Designation	Contact No.	Signature
11.	Sumanta Kumar Behera Sr. Executive safety officer	8274007434	
12.	DIPTARUP KAHALI Team leader, HSE, KEIIP	905702223	
13.	PARTHA DUTTA SSE, KEIIP (Project Asst)	9830192170	
14.	MADHUMITA SUR SSC, KEIIP (P. Asst.)	9433477 118	
15.	BIMAN MOITRA SSE, KEIIP (P/Asst.)	98317 34396	
16.	Anercolosca Nayak. HSE OFFICER - (G.D.C.L)	75958 37426	
17.	Shubhankar Chattopadhyay. Safety Engineer (FPIL-RIL JV)	62921280 71	
18.	Subhajit Patra. Safety Supervisor (FPIL-RIL JV)	62921280 78	
19.	Sulhakar Haldar (Installation in-charge)	801793689	
20.	Debasis Ghosh (Implementation In-charge)	8420058751	

Venue : KEIIP Conference room		Date: 22/04/2019	
Sl No.	Name and Designation	Contact No.	Signature
24	Asghariz Saha. Asst. Manager - ITD Com India JV	858486 4132	
25	Shilajit Koley Sr. Engineer - ITD Com India JV	8584012 802	
26	Moutan Mitra Engineer, PMC, KEIIP	76880 4184	
27	Rajib Dulli Engineer, PMC, KEIIP	98307182	
28	Rupasmata Kahali Engineer, PMC, KEIIP	83360 56709	
29	Subhajit Chakraborty. Project Assistant (Engg), PMC, KEIIP.	8420245 704	
30	NAGAMITA MUKHERJEE PUBLIC COMM. AND MEDIA EXPERT PMC	9831537314	
31	ANINDITA ROY SOCIAL DEVELOPMENT & GENDER- EXPERT - PMC - KEIIP	9903392826	
32	Manas Choudhury Dy. TL, DSO, KEIIP.	9831753108	
33	Mr. Samar Kr. Banerjee.	9831291734	

Summary Sheet

Workshop on ADB Safeguard Policy Statement 2009 for Project Management Unit (PMU), & Contract Management Unit (CMU), Engineers of KEIIP

Date: 08.05.19

Venue: Conference Room of KEIIP

A workshop on ADB Safeguard Policy Statement 2009 was organized by the DSC Environmental Safeguard Team (Tranche 2), KEIIP for Project Management Unit (PMU) & Contract Management Unit (CMU) Engineers and safeguard team (Environmental & Social) of KEIIP on 08.05.19.

The program was chaired by Team Leader (DSC), and attended by the Engineers of Project Management Unit (PMU), Contract Management Unit (KEIIP), Environmental Expert (PMU), Construction Managers (DSC) of all the packages and safeguard team members from DSC, and PMU.

In the workshop following topic was discussed in detail:

- SPS (2009) & ADB Environmental Safeguard Policy Statement
- Implementation of Environmental Safeguard
- Environment Safeguard provisions in the contract packages
- Contractual obligations of KEIIP in safeguard implementation
- Contractual obligations of contractors in safeguard implementation

All the participants were provided with the link for **ADB safeguard e-learning course** on SPS 2009 and were guided to learn the modules in the course. An interactive session on issues related to implementation of EHS & EMP in the project was also organised during the work shop.

The workshop was interactive, successful and ended with vote of thanks.

Photographic evidences and list of participants are attached herewith for record.



Photographs - Workshop on ADB Safeguard Policy Statement 2009 for PMU & CMU Engineers on 08.05.2019

List of Participants

Workshop on ADB Safeguard Policy Statement 2009 for PMU & CMU Engineers on
08.05.2019

ATTENDANCE SHEET			
Date: 8 th May 2019			
Venue: Conference Room of KEIIP			
Subject: Workshop cum Training Programme on Safeguard Issues and Implementation of Safeguard in the Project			
Name	Designation	Contact Number	Signature
Chinmay Chakrabarti	Env. Spl., PMU	9830284360	CC
AMIT SEN GUPTA	Dy. Ch. Engr. (c)	9830499130	AG
ASHUTOSH GHOSH	S.O. (Engg.)	9830710756	ASG
SAMIR VARAN DAS.	Ex. Engr.	914375423.	SVD
Penka Sarathi Senker	S.O (Civil)	9433178714	PS
Kamalakisha Nandy.	EE (C)	9433146504	KN
ASOKE ROY	E.E.W.	7278318783	AR
Subhasishu Datta	S.O.	9830505831.	SD
Rajan Mondal	AE (C)	9051168605	RM
Suprobnat Malin	AE (M)	8013520162	SM
Nabanita Nath	AE (C)	9874611431	N. Nath.
Sarfanay Mallick	AE (C)	9614222738	SM
Kanayat Ali	AE (C)	9681375970	KA
SABIR ALI ANSARI	AE (E)	7980421225	SA
Tanajit Mondal	AE (C)	8620998270	TM
Dr. Samare K. Banerjee.	Env. Specialist DSC, Tr-2	9831291734	SKB
Subhasish Bhattacharyya	CM	9742129720	SB
Hoy Kumar Mondal	Construction Manager DEC	9874345945	HM

Appendix 8 : Sample Grievance Redress Form

The **Kolkata Environmental Improvement Investment Program (KEIIP)** 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.

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

FOR OFFICIAL USE ONLY

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

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

Summary of the findings and actions:

- provide all permits and clearance (in one table) and the status of application
- confirm that contractors will submit SEMP to PMU prior start of works; the SEMP will identify the environmental monitoring program (location, frequency, parameters, standards to be used)
- provide EHS officers contact details, specifically for the awarded contracts (SD 28 and 29)
- provide minutes of consultations (photos and attendance sheets not acceptable). Include issues and concerns raised by participants

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:	IND: KOLKATA ENVIRONMENTAL IMPROVEMENT INVESTMENT PROGRAM (KEIIP) – Tranche 3		
Loan Number:	3689-IND	Project Number:	42266-026
Overall Project and Objectives	<p>Overall objective of the project is to improve service quality and operational sustainability of increased water supply and sewerage in 20% of the KMC area. The Investment Program also aims towards increase in operational efficiency and scale of water supply, sewerage and drainage services in 5% of KMC area.</p> <p>The Program output comprises of:</p> <ul style="list-style-type: none"> ✓ rehabilitation of inefficient and outdated water supply assets; ✓ continued extension of sewerage to newly developed areas and; ✓ further development of financial and project management capacity. <p>The Program is being carried out by the Govt. of West Bengal (GoWB) acting through KMC as the Executing Agency (EA).</p>		
Approved Categorization		Category A	Category C
	X	Category B	FI
Loan Effectively Date:	3 October 2018	Frequency of Reporting	Semiannual
Project Officer	Neeta Pokhrel	Project Analyst	Pamela Puspus
Reporting Year	2019	Coverage Period	December 2018 to May 2019
			1 st SEMR of the year
			2 nd SEMR of the year
Date of PMU submission to ADB	02 July 2019	Date of ADB's feedback/comment to PMU	16 July 2019

Item	Findings in the SEMR	Comments	Action/s Required	Response by PMU
A. Project Safeguards Team (<i>check loan agreement and PAM requirements</i>)				
PMU ¹	Dr.Chinmoy Chakrabarty, PMU Environment Specialist (Ref Table 3 of SEMR)	None		

¹ PMU – project management unit

Item	Findings in the SEMR	Comments	Action/s Required	Response by PMU
PIU ²	No PIU safeguards staff mentioned in the SEMR	No PIU in KEIIP.	None	
Consultants	DSC, Environment Specialist =Dr. Samar Kr. Banerjee DSC, Environmental Engineer = Dr. Bidisha Mukherjee (Ref Table 3 of SEMR)		None	
Others (e.g. auditor, external monitoring team, etc)	Not applicable.			
B. Overall Project and Subproject Description (summarize number and type of packages)³				
Number of Packages with civil works (check if consistent with latest procurement plan)	8 packages - 3 STP projects - 3 pumping station construction - 1 S&D network with pumping station - 1 laying of RCC sewer line		None	
Number of DB/DBO packages and status (see footnote 3)	3 Packages (STPs - SD-28, SD -29 & SD-30)	Contracts awarded for SD-28 & SD -29 packages LOA issued for SD- 30	Specify in the SEMR that IEE will be updated if there are any change in scope, location/alignment	
Number of civil works packages and status (see footnote 3)	5 Packages LOA issued for 3 packages Rebidding stage 2 packages Design stage 1 package (Status up to 31st May 2019)	Not yet awarded.	None	

² PIU – project implementation unit

³ 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
IEEs cleared for awarded packages?	Yes [SD-28 &SD -29 packages]	IEEs for SD 28 and SD 29 have been reviewed, cleared and disclosed on ADB website during loan processing stage. PD KEIIP in June 2019 confirmed that all IEEs are based on detailed engineering design and can be considered Final IEEs.	Contractors to submit SEMP's to PMU prior to start of works.	
Safeguard documents disclosed on project website?	All documents disclosed on the ADB and KEIIP websites	All 7 IEEs have been reviewed, cleared and disclosed on ADB website during loan processing stage. One new IEE (SD 27R) was prepared and submitted to ADB for review, clearance and disclosure in February 2019.	None	
SEMR information on package-wise implementation phase (bidding, on-going, construction, completed, under operation, others)	SD-28 & SD -29 – Contract awarded SD- 30 – LOA issued SD 31 Lot-1 – LOA issued SD 34 - LOA issued SD 27 – Rebidding stage SD 31 Lot -2 - Rebidding stage SD 32 – Design in progress. [Ref. Table 1 of SEMR]	Complied.	None.	
C. Status of compliance with statutory clearances (check IEE for the complete list, summarize the findings for each package – obtained/under application and if obtained, specify validity period)				
Environmental Clearance (EC)	Not required for all packages [Ref. Table 4: Status of Compliance with National and State Legal Requirements (up to 31 st May, 2019) in SEMR]	Noted.	None	
Forest Clearance	Not required for the all packages.	Noted.	None	

Item	Findings in the SEMR	Comments	Action/s Required	Response by PMU
	[Ref. Table 4 of SEMR]			
No Objection Certificate/Letter	Not required for all packages [Ref. Table 4 of SEMR]	Noted.	None	
Site location clearance	Obtained for all packages. All packages will be constructed in KMC own land.	Noted.	None.	
Permit/Consent to Construct (or equivalent)	Consent to Establish (CTE) required from State Pollution control board for SD-28 & SD 29 have been obtained. [Ref. Table 4 & 9]	Conditions of the CTE should be considered in the detailed design, SEMP and monitoring program.	- Specify/clarify if Consent to Establish is required for other 6 packages and provide status of application. - In the next SEMR, confirm that conditions of the CTE have been included/considered.	
Permit/Consent to Operate (or equivalent)	Not required for the packages at this stage. Will be obtained once construction is completed.	None.	None.	
Road-cutting permit	Not required for the packages at this stage.	Linear works may require road-cutting permit.	Confirm if applicable to linear works. Provide status of application.	
Utilities shifting permit	Not required for the packages at this stage	Linear works may require utility shifting and would NOCs from owners/operators of utilities.	- In the next SEMR, Update Table 4 & 9. - Review status of utility shifting for all packages - Obtain utility shifting permit per requirement	
Tree-cutting permit	Not required for the packages	Noted.	None.	
Others (specify)	Contractor has been asked to submit Pollution Under Control	Noted.	- In the next SEMR, confirm contractors' submission. If not	

Item	Findings in the SEMR	Comments	Action/s Required	Response by PMU
	Certificates (PUC) for Contractor's Vehicles and machinery for the awarded packages.		yet submitted provide timeline for compliance.	
D. Status of Compliance with loan covenants <i>(verify items in SEMR with the project's loan agreement)</i>				
Safeguards environment (Schedule 5, Item 5)	Being complied All IEEs for KEIIP have been prepared and reviewed by ADB. [Ref. Table 2 of SEMR]	PD KEIIP in June 2019 confirmed that all IEEs are based on detailed engineering design and can be considered Final IEEs.	All cleared IEEs will be updated if there is any change in design and location during implementation of the package. Submit SEMP to ADB for prior to start of works	
Human and financial resources to implement safeguards requirements (Schedule 5, Item 11)	Being complied. EMP implementation budget included for Tranche 3 packages Environment Specialist in PMU appointed to monitor EMP compliances, together with Environment Engineer and Environment Specialist in DSC [Ref. Table 2 of SEMR]	Noted.	None.	
Safeguards-related provisions in bidding documents and works contracts (Schedule 5, Item 12)	Being complied. IEEs and EMPs are part of contract documents. Required budget for EMP implementation is included in the IEEs.	Contractor to provide in the SEMP the budget for EMP implementation and environmental monitoring program.	In the next SEMR, provide contract-specific information based on SEMP.	
Safeguards monitoring and reporting (Schedule 5, Item 13)	Being complied. This is 1 st Semi-annual safeguard monitoring report on Environment for Project 3	Noted.	None.	

Item	Findings in the SEMR	Comments	Action/s Required	Response by PMU
	(Tranche 3) for the period December, 2018 to May 2019. The next report will be due by end of November, 2019. [Ref. Table 2 of SEMR]			
Prohibited list of investments (Schedule 5, Item 14)	Being complied. Packages do not included any activity in the list of prohibited investment activities In Appendix 5 of ADB SPS [Ref. Table 2 & Appendix 5 of SEMR]	Noted.	None.	
Labor standards, health and safety (Schedule 5, Item 15)	Provision included in the bid documents. Contractors will be be strictly monitored by PMU. [Ref. Table 2 of SEMR]	Provide orientation to contractors regarding safeguards, OSH and core labor standards requirements.	In the next SEMR, provide records of orientation activities on safeguards, OSH and core labor standards.	
E. Contractors Compliance with Environmental Safeguards Requirements				
Appointment of Environment, Health and Safety (HSE) and/or nodal person	Environment Health & Safety officers appointed for SD-28. For SD-29. Contractor's Project manager is EHS nodal person (Para 21 of SEMR)	One EHS officer per project site/subproject package needs to be mobilized so there is someone to supervise compliance with the SEMP. No works should start until an EHS/safety officer is engaged by the contractors on a per subproject basis	Provide names and contact details of EHS officers, especially for all awarded packages in the next SEMR	-
Submission of site-specific EMPs	Not yet submitted	SEMPs should be submitted to and cleared by PMU prior to start of works. The SEMPs must include the environmental monitoring program (locations,	For the 2 awarded contracts, ensure SEMPs are submitted to PMU prior to start of works.	-

Item	Findings in the SEMR	Comments	Action/s Required	Response by PMU
		parameters, frequency, standards).		
Submission of SEMP implementation report (specify in comments frequency – daily, weekly, monthly or quarterly basis)	No specific information provided	Not clear on reporting and responsibilities.	Provide information on frequency of reporting: 1. contractor 2. DSC 3. PMC 4. PMU will submit SEMR to ADB every June and December.	-
Site verification by PMU, PIU, or consultants (verification report should be attached to the SEMR)	No site verification report attached to the SEMR	Pre-works condition recording and documentation should be conducted by contractor and verified by DSC/PMC and PMU. Pre-works report should be included in the SEMP.	Confirm pre-works report has been submitted. If not, indicate in the SEMR the target date of submission. Ensure all sites are visited and reports submitted by contractors are verified on a regular basis.	-
SEMR compliance matrix on mitigation measures implementation (matrixes are based on approved SEMP)	EMP compliance matrix reported under Table 5 & 12 of the SEMR SEMPs for the two awarded packages are yet to be submitted.	Noted.	In next SEMR attach compliance matrix based on approved SEMP for all awarded running packages	
Other information	No works yet.		In the next SEMR, include participation of contractors in information disclosure and consultations. Ensure contractors understand their roles and responsibilities in the GRM. Maintain on-site logbook for receiving and recording complaints/feedback.	-
F. Environmental Monitoring based on EMP				

Item	Findings in the SEMR	Comments	Action/s Required	Response by PMU
Rationale	For Tranche 3 subprojects, the parameters monitored are ambient air quality, noise levels and nearby surface water quality as per EMP	Environmental monitoring was conducted for the 2 awarded packages. This is to establish baseline and pre-works condition. Ensure SEMP include environmental monitoring program: specific locations (GPS coordinates), parameters, frequency, sampling maps, and applicable standards.	In the next SEMR, provide SEMP showing the environmental monitoring program.	
Parameters to be monitored are commensurate to the impacts, mitigation measures, and project/subproject/package	During report period baseline air quality, surface water quality and noise level monitoring were conducted for two active packages i.e. SD 28 and SD 29.	For the remaining other packages, environmental monitoring program must be included in the SEMP	In the next SEMR, provide SEMP showing the environmental monitoring program.	
Sampling locations identified and appropriate	Sampling locations are close to Project sites	Not clear.	Provide GPS coordinates and sampling locations.	
Sampling frequency identified and appropriate	Two sampling dates have been recorded in the SEMR. No specific dates.	Not clear.	Provide specific dates (<i>dd mm yyyy</i>) and frequency of sampling.	
Sampling collection and analysis are in accordance with internationally-accepted practices	No mention about any Standard in the SEMR	Not clear. Environmental monitoring program should specify sampling methods and analysis of parameters. These should be in line with internationally-accepted practices as required by ADB SPS.		
Standards and performance indicators are compliant with ADB	MOEF&CC, Government of India standards have been compared with monitoring results	ADB SPS requires KEIIP to apply pollution prevention and control technologies and practices consistent with	Include another column showing applicable standards comparing Government of	

Item	Findings in the SEMR	Comments	Action/s Required	Response by PMU
SPS requirements⁴ (provide justification if less stringent standards are used)	[Ref. Figures 4 to 7 of SEMR].	international good practice, as reflected in internationally recognized standards such as the World Bank Group's Environment, Health and Safety Guidelines. When Government of India regulations differ from these levels and measures, KEIIP will achieve whichever is more stringent. If less stringent levels or measures are appropriate in view of specific project circumstances, PMU will provide full and detailed justification for any proposed alternatives that are consistent with the requirements ADB SPS.	India and World Bank EHS Guidelines. If less stringent levels or measures are appropriate in view of specific project circumstances, PMU will provide full and detailed justification for any proposed alternatives that are consistent with the requirements ADB SPS.	
G. Environmental monitoring results (narrative based on presented results)				
Visual inspection (refer to EMP tables in the IEE where visual inspections are required to determine if there are environmental impacts)	No activity at sites. Baseline data generated. for two awarded packages i.e. SD 28 and SD 29 where only preliminary works started.	SEMP must specify mitigation measures which will be monitored thru visual inspection.	In the next SEMR, provide SEMP's showing the mitigation measures that will be monitored thru visual inspection.	
Air quality results	Air quality data generated. for two awarded packages i.e. SD 28 and SD 29 are within National Ambient Air Quality Standard (NAAQS) 2009, MOEF&CC, Govt. of India for Residential areas (Refer Table 7 and Figs 4-6, Appendix 5 of SEMR)	ADB SPS requires KEIIP to apply pollution prevention and control technologies and practices consistent with international good practice, as reflected in internationally recognized standards such as the World Bank Group's Environment, Health and Safety Guidelines. When Government of India	Include another column showing applicable standards comparing Government of India and World Bank EHS Guidelines. If less stringent levels or measures are appropriate in view of specific project circumstances, PMU will provide full and detailed	

⁴ 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
		regulations differ from these levels and measures, KEIIP will achieve whichever is more stringent. If less stringent levels or measures are appropriate in view of specific project circumstances, PMU will provide full and detailed justification for any proposed alternatives that are consistent with the requirements ADB SPS.	justification for any proposed alternatives that are consistent with the requirements ADB SPS.	
Water quality results	Baseline surface water quality of a pond near the STP 29 was generated and Water quality results were compared against CPCB's limits for outdoor bathing – prevalent use of the water body. Based on the results obtained it can be concluded that surface water quality is fit for outdoor bathing [(class- B). Inland surface water categories (CPCB,1978)] [Refer Table -9 and Appendix 5 of the SEMR]	ADB SPS requires KEIIP to apply pollution prevention and control technologies and practices consistent with international good practice, as reflected in internationally recognized standards such as the World Bank Group's Environment, Health and Safety Guidelines. When Government of India regulations differ from these levels and measures, KEIIP will achieve whichever is more stringent. If less stringent levels or measures are appropriate in view of specific project circumstances, PMU will provide full and detailed justification for any proposed alternatives that are consistent with the requirements ADB SPS.	Include another column showing applicable standards comparing Government of India and World Bank EHS Guidelines. If less stringent levels or measures are appropriate in view of specific project circumstances, PMU will provide full and detailed justification for any proposed alternatives that are consistent with the requirements ADB SPS.	
Noise level results	Base line ambient noise level data near project site SD 28 shows day time and night time Leq db (A) are well within prescribed limit of residential	ADB SPS requires KEIIP to apply pollution prevention and control technologies and practices consistent with international good practice, as reflected in internationally	Include another column showing applicable standards comparing Government of India and World Bank EHS Guidelines.	

Item	Findings in the SEMR	Comments	Action/s Required	Response by PMU
	<p>areas by Government of India⁵. Where as in SD- 29 site day time noise was found slightly higher than the national standard. Night time noise in SD – 29 was found well with in the national standard limit of the residential areas</p> <p>[Refer Table – 8 and Fig. 7; Appendix 5 of the SEMR]</p>	<p>recognized standards such as the World Bank Group's Environment, Health and Safety Guidelines. When Government of India regulations differ from these levels and measures, KEIIP will achieve whichever is more stringent. If less stringent levels or measures are appropriate in view of specific project circumstances, PMU will provide full and detailed justification for any proposed alternatives that are consistent with the requirements ADB SPS.</p>	<p>If less stringent levels or measures are appropriate in view of specific project circumstances, PMU will provide full and detailed justification for any proposed alternatives that are consistent with the requirements ADB SPS.</p>	
Others				
H. Consultations and/or FGDs during the reporting period				
Number	<p>6 nos consultations and disclosures conducted during December 2018 to May 2019 for SD-28 & SD-29</p> <p>(Ref. Table 10 & 11)</p>	<p>Only photos and attendance sheets were attached in the SEMR. No minutes capturing the issues/concerns raised by the attendees.</p>	<p>provide minutes of consultations (photos and attendance sheets not acceptable). Include issues and concerns raised by participants</p>	
Reason/s for consultations/FGDs	<p>Local people to be appraised of the details of the awarded packages, SD-28 & SD-29 (currently ongoing packages)</p>	<p>Only photos and attendance sheets were attached in the SEMR. No minutes capturing the issues/concerns raised by the attendees.</p>	<p>provide minutes of consultations (photos and attendance sheets not acceptable). Include issues and concerns raised by participants</p>	
Number of participants	<p>34 (thirty four)</p> <p>[Ref. Appendix- 6 of SEMR]</p>		<p>Ensure that participants are project-affected people and not just the consultants and project team.</p> <p>Provide the number of affected people that</p>	

⁵ The Noise Pollution (regulation and control) rules, 2000 and its amendment in 2010 and 2012

Item	Findings in the SEMR	Comments	Action/s Required	Response by PMU
			participated in the consultations.	
Number of female participants	Not clear.	No sex aggregated information	Provide number of female participants	
I. Trainings, Workshops, Seminars during the reporting period				
Number	Two Workshop cum Training programme were conducted during the reporting period as mentioned in SEMR [Ref. Appendix- 7 of SEMR]	Should be continued throughout the project period	Arrange more training workshops after mobilization of contractors in other packages. Properly document and include in succeeding SEMRs	
Topics	1. ADB E-Learning Course & Implementation of Gender Action Plan on 22.04.19 2. ADB Safeguard Policy Statement 2009 for Project Management Unit (PMU), & Contract Management Unit (CMU), Engineers of KEIIP on 8.5.2019 [Ref. Appendix- 7 of SEMR]	Include (minimum): <ul style="list-style-type: none"> • ADB SPS • Environmental assessment • Risk assessment • Developing SEMP's • OHS • Core Labor Standards • Conducting Meaningful Consultations • Grievance redressal • Monitoring • Reporting • Corrective Actions 	Training program to be conducted for project managers and Safeguards expert of contractors for other packages once contract is awarded. Properly document and include in succeeding SEMRs. See suggested topics. Require DSC and PMC to submit training program and include in the next SEMR.	
Number of participants	33 & 34 nos participants respectively on 22.4.2019 and 8.5.2019 workshop [Ref. Appendix- 7 of SEMR]	Ensure proceedings, attendance sheets, and Q&A are recorded	In the next SEMRs, included training proceedings.	
Number of female participants	10 & 8 nos participants respectively on 22.4.2019 and 8.5.2019 workshop	Not clear.	Provide number of female participants	
J. Grievance Redress Mechanism				

Item	Findings in the SEMR	Comments	Action/s Required	Response by PMU
GRM per PAM or IEE/EARF established	Yes	No change.	None.	
GRM notified via publication or notice boards	PMU is maintaining a Complaint Cell at KEIIP office headed by a designated Grievance Officer under Project Director At every Borough of KMC under which works are in progress, a Public Relations & Grievance Redressal Unit has been established. At contractors' site offices, complaint and suggestion books available for lodging any complaint.	Noted.	None.	
GRM members identified	GRM members identified. As mentioned in SEMR the apex GRC will have the following members: KMC Commissioner as Chairperson, KEIIP Project Director, Director General (P), KEIIP, Environment/Social Safeguard Officer, Administrative Officer as the convener, representatives of APs, Community Based Organizations (CBOs), and eminent citizens.	The GRC must have at least two women members	Confirm in SEMR the member of the GRC.	
GRM members have capacity to address project-related complaints (detailed information on capacity development of GRM members such as trainings, workshops, briefings, etc should be attached in the SEMR)	No information provided on the capacity of the GRC members.	Not clear.	Provide detailed information on capacity development of GRM members such as trainings, workshops, briefings, etc in next SEMR.	
Number of meetings conducted (attach minutes of the meeting)	No grievances recorded during reporting period	Confirm if meetings are only held if there are complaints/grievances	Include information on GRC meeting schedule. If meetings are not regularly held, clarify	

Item	Findings in the SEMR	Comments	Action/s Required	Response by PMU
			in the SEMR what triggers GRC meetings.	
K. Complaints Received <i>(detailed information on nature of complaints, summary and status of resolution)</i>				
Number of complaints	No complaints received during reporting period	Noted.	None.	
Nature <i>(provide summary of issues/concerns)</i>	Not applicable	Noted.	None.	
Status of resolution	Not applicable	Noted.	None.	
L. Summary of Issues and Corrective Actions				
Major issues/concerns (specify)	Up to May 2019, no major physical activities started in Tranche 3; only in SD-28 and SD-29 some preliminary activity like fencing, fixation of signboards and construction of approach road to the site have been initiated by the contractors.	SEMPs are required before any physical works.	<ul style="list-style-type: none"> - Indicate in the SEMR the target date for SEMP submission. - PMU to provide site inspection report and confirmation that works already conducted by the contractors considered the mitigation measures as specified in the IEEs - Ensure no other works will be conducted without the SEMP and verified by PMU. 	
Corrective Action to be implemented, timeline, responsible person/s, and budget are clearly specified	Works have been started without SEMP.	- Ensure no other works will be conducted without the SEMP and verified by PMU.	Corrective actions: <ul style="list-style-type: none"> - Indicate in the SEMR the target date for SEMP submission. - PMU to provide site inspection report and confirmation that works already conducted by the contractors considered the mitigation measures as specified in the IEEs - Ensure no other works will be conducted without the SEMP and verified by PMU. 	
M. Status of Corrective Action Plan from Previous Reporting Period (list all and provide status)				

Item	Findings in the SEMR	Comments	Action/s Required	Response by PMU
Not applicable , 1 st SEMR for Tranche -3 of KEIIP , Loan No – 3689 IND				
N. Appendixes				
Photos included?	Yes (Ref. Appendixes 1, 2 & 5 of SEMR]		Provide subproject locations in Google earth image with co-ordinates and site photographs. Attach photographs of Work progress, consultations and Good practices adopted during constructions in next SEMR	
Summary of consultations included?	Yes (Ref. Appendixes 6 & 7 of SEMR]			
Copies of environmental clearances and permits included?	Yes (Ref. Appendixes 3A & 3B in SEMR]			
Site EMPs (attach sample?)	No (Not yet submitted by contractors)	No major physical activities started during reporting period. SD-28 and SD-29 has undergone preliminary activities such as fencing, fixation of signboards and construction of approach road to the site have been initiated by the contractors.	Contractor to submit site specific EMP to PMU and ADB before start of any works and the same should be attach in next SEMR	
Checklists?	No			
Others				
O. Review and clearance for disclosure				
Reference				
	Name		Date	
Reviewed by	Prabhatish Bhattacharya/Zarah Pilapil		15 July 2019	
Noted by			16 July 2019	
Response to ADB comments by:				
Status/Remarks	1. Recorded as submitted			

Item	Findings in the SEMR	Comments	Action/s Required	Response by PMU
		2. Send comments to PMU for response to comments		