

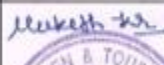



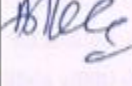

Site Specific Environmental Management Plan

SITE SPECIFIC ENVIRONMENTAL MANAGEMENT PLAN


WBDWSIP BANKURA PKG-03

Raw Water Intake Well, Water Treatment Plant, Raw and Clear Water
Transmission Main

LOCATION- MEJIA AND GANGAJALGHATI BLOCKS

REV	DATE	PREPARED BY	CHECKED BY	APPROVED BY DSISC	ARRPROVED BY PIU
1	20.12.19	 	 	 TEAM LEADER DSISC- Bankura WBDWSIP	 Assiatant Engineer-I PIU Bankura WBDWSP, PHE Dis Govt. of West Bengal

Project Manager
Mejhla Intake n WTP Project

 L&T Construction <i>Water & Effluent Treatment</i>	Design, Construction and Operation-Maintenance of Raw Water Intake Well, Water Treatment Plant, Raw and Clear Water Transmission Main for Mejia and Gangajalghati Blocks (Package No: WBDWSIP/DWW/NCB/BK/03/2018-19)	Doc. No. L&T/ SEMP /01 Last Revision No. 00 Last Revision Date: 00 Page 2 of 96 Original Issue Date:
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LIST OF ABBREVIATIONS

ADB	Asian Development Bank
BS	Boosting Station
DQWAP	Drinking Water Quality Action Plan
EHS	Environment, Health and Safety
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
MGD	Million Gallon per Day
MLD	Million Liter per Day
OHS	Occupational Health and Safety
OHT	Over Head Tank
PHED	Public Health Engineering Department
PIU	Project Implementation Unit
PMC	Project Management Consultant
PMU	Project Management Unit
WHO	World Health Organization
WTP	Water Treatment Plant
WBDWSIP	West Bengal Drinking Water Sector Improvement Project

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INTRODUCTION

Background

The proposed West Bengal Drinking Water Improvement Project (WBDWIP) aims to provide safe, reliable and continuous drinking water as per Government of India's (GOI) standard to about 2.6 million people in the arsenic, fluoride, and salinity affected selected areas of North 24 Parganas, South 24 Parganas, East Medinipur and Bankura districts of West Bengal.


The subprojects proposed under this project make a district-wide comprehensive water quality and sustainability planning and completion of the Drinking Water Quality Action Plan (DQWAP) for the concerned district. The DQWAP for the Project districts supported by the Project were prepared by the executing agency, the Public Health and Engineering Department (PHED) of Government of West Bengal (GoWB), with support of project preparatory consultants from the Asian Development Bank (ADB), and has been adopted by PHED to guide present and future drinking water improvement in the districts.

The Project will ensure drinking water security through 24/7 piped water supply schemes in the areas covered, and strengthen institutional structures and build capacities of stakeholders at all levels of service delivery for sustainable operation and maintenance and public health improvement.

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Project Summary

Package No.	WBDWSIP/DWW/NCB/BK/03/2018-19 WTP- BASUDEBPUR, INTAKE- NATUNGRAM and TRANSMISSION MAIN under PIU Bankura
Package title	Design, Construction and Operation-Maintenance of Raw Water Intake Well, Water Treatment Plant, Raw and Clear Water Transmission Main for Mejia and Gangajalghati Blocks SEMP is as per requirement of the Draft IEE covering package no. WBDWSIP/DWW/NCB/BK/03/2018-19
Contractor	Larsen & Toubro Ltd.
Date of Contract Award	27/05/2019
Date of particular works commencement	WTP- 03.02.20
	Intake Well- 23.12.19
	Raw and Clear Water Transmission Main- 27.12.19
Contract period	Construction: 3 Years; O&M: 2 Years
SEMP Component	WTP- 36 MLD Intake Well- 15.55 MGD Raw water transmission main- 16.4 K.M Clear water transmission main- 146.5 K.M
Demolition Work	No demolition activity involved
Project Area	Borjora, Mejia and Gangajalghati Blocks
Gram Panchayats	WTP- Barshal GP of Gangajalghati Block
	Intake Well- Ghutgoria GP of Borjora Block
Project Description	Individual household water supply schemes for the project Gram Panchayats
Household Connection	NA
Non-Household Connection	All Commercial, Educational, Religious and Health institutions will get potable water from this project. Numbers are not identified.
Indicative Budget for EMP Implementation for the entire package	INR 45,85,000/-
Project Components	As per project detailed design

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Project Description

The raw water for the proposed water supply project for Mejia and Gangajalghati blocks will be abstracted from surface water of resource of river Damodar from Durgapur Barrage, which has abundant quantity of water throughout the year, even during the lean period. Durgapur Barrage is located across the Damodar River at Durgapur in Paschim Bardhaman district of West Bengal (Coordinates:23.4754°N and 87.3023°E).

After abstraction, the raw water will be pumped to the proposed 36 Mld WTP. The Quality of raw water is good and is suitable for drinking water supply after conventional treatment and disinfection. Treated water for the subproject will be provided for distribution of water supply for Mejia and Gangajalghati blocks through clear water transmission main to the proposed 34 over head reservoir (OHR) that are being developed under a parallel sub project in those two blocks.

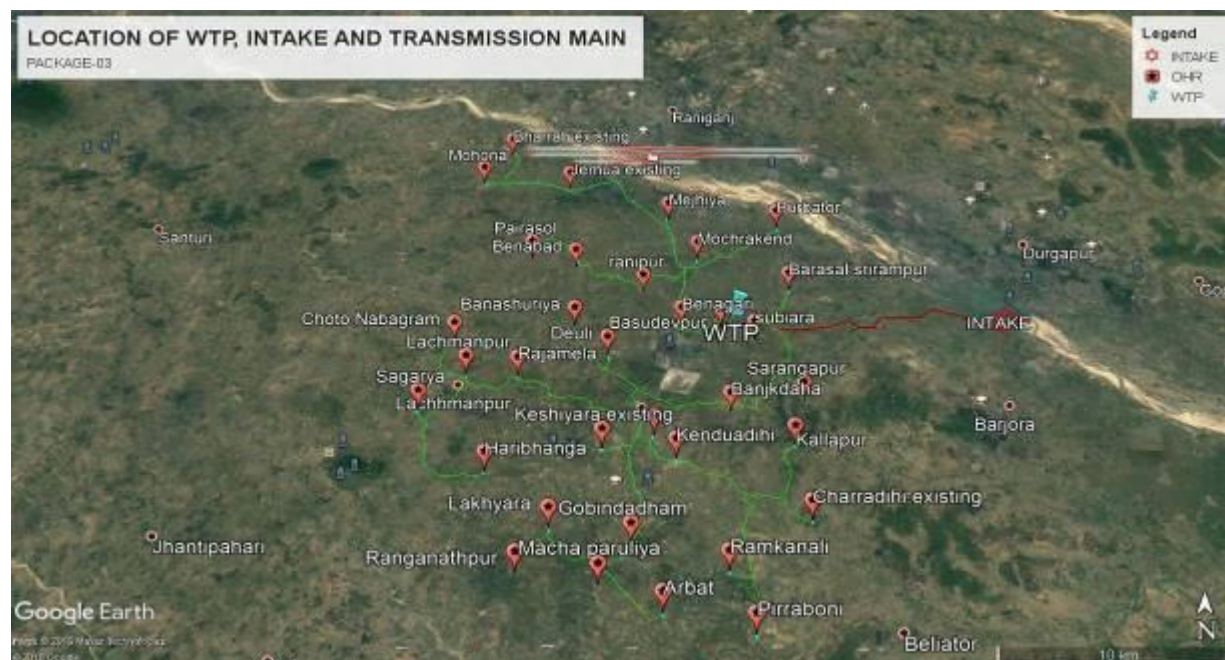
Scope of Work


The subproject includes the following work components: (i) Raw water intake of 36 MLD capacity will be constructed at Nutangram mouza of Barjora Block with arrangement for housing pumping machineries (ii) Raw water transmission Main of 16.4 Km will be laid from Intake to Proposed WTP at Basudebpur mouza of Gangajalghati Block. (iii) Water Treatment Plant (WTP) of 36 Mld capacity with booster pumping facilities upto design period 2050 would construct at Basudebpur mouza of Gangajalghati Block (iv) Clear Water Main will be laid from WTP to 34 nos OHT at Mejhia & Gangajalghati Blocks.

Project Location

The subproject components are located in Mejia and Gangajalghati Community Development (CD) blocks Bankura district. It is located in the north of the Durgapur Barrage and the north-western part of Bankura district. The area is having a gradual descent from the Chota Nagpur Plateau. The project area is bounded by Raniganj and Andal CD Blocks, in Bardhaman district, across the Damodar on the north, Barjora CD Block on the east, Bankura II CD Block on the south and Chhatna and Saltora CD Blocks on the west. It is located 25 km away from Bankura town, the district headquarter. The following Google Earth image (Figure 1) showing location of intake point, network of raw water transmission main, location of WTP, network of clear water transmission main and also 34 numbers of OHR.

Figure 1: Locations of subprojects components on Google Earth Image



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Project Objective

The district of Bankura has high concentration of fluoride and iron in groundwater, including the blocks of Majia and Gangajalghati. The blocks reported to have recurrence of fluoride contamination in groundwater. Creation of surface water based bulk water supply system will meet the water demand for the blocks of Majia and Gangajalghati in Bankura district under the WBDWSIP. The sub-project will also help in reducing the incidence of ground water depletion and intrusion of fluoride in ground water.

It will ensure drinking water security through 24/7 piped water supply schemes in the areas covered, and strengthen institutional structures and build capacities of stakeholders at all levels of service delivery for sustainable operation and maintenance and public health improvement.

DETAIL OF COMPONENTS

Raw Water Intake Point

The raw water intake of 36 MLD capacity will be constructed at Nutangram *mouza* of Barjora Block. Raw water will be drawn from Durgapur Barrage which is under Damodar Valley River Regulation Committee (DVRRC). An additional 25 decimal land in RS Plot No 367 of Natungram Mouza, JL No. 14, Barjora Block will be required for construction of electrical substation building and other structures under proposed subproject. The proposed plot is free of any encumbrances, vacant and not in use, hence, does not have any environmental or social issues. Permission of water abstraction from DVRRC for drinking water purpose under the WBDWSIP has been received. Permission letter is appended in **Appendix-01**. Purchase of land for sub-station near intake point is under process (**Appendix-02**).


Raw Water Transmission Mains

Raw water transmission mains of 16.4 km is proposed to be laid from intake location to the Water Treatment Plant (WTP); it will traverse through Zilla Parishad Road (*Pradhan Mantri Gram Sadak Yojana* - PMGSY Scheme) approximately 7.890 km and further 8.546 km road which is owned by Public Works Department (PWD). The diameter of the pipe will be 800 & 900 mm. The pipeline is proposed to be laid using open cut method. Walk-through along the raw water transmission mains and field visit indicated that beyond the black top, the shoulder of the road is quite wide and there are no shops beyond the shoulder of the road, there are some road side trees along the road where the raw water transmission mains would be laid most of them are beyond the ROW. However, after finalization of design and alignment of the pipeline corridor, and detail tree measurement survey, requirement of tree felling will be reconfirmed. PHED needs to obtain no objection certificate (NOC) from respective Zila Parishad Office for the PMGSY road and from PWD for undertaking the construction work on PWD roads. No objection certificates for road cutting is under process (**Appendix-03**). Details of the raw water pipeline laying is given in Table 1.

Table 1: Details of Raw Water Transmission Main

Name of the road	Name of the gram panchayat	Total length of the pipeline (km)	Width of the road (m) BT	Dia of pipe to be laid (mm)	Trench width for laying of pipeline (mm)	Ownership (NOC required from)
Durgapur-Metali village-Maliara-road	Maliara	7.89	3	900	1500	PMGSY
Barjora-Durlavpur road	Barshal	8.546	10.5	900 & 800	1500 & 1400	PWD

Source: DSISC, Bankura

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Water Treatment Plant

The WTP will be constructed on a 10-acre land parcel which is a govt. vested land in Basudebpur *Mouza* under Barshal Gram Panchayat. The land parcel has no encroachments, it is free of any encumbrance, vacant and not in use. Impact related to land acquisition and involuntary resettlement is not anticipated for construction of WTP. The land is a vested and is transferred to PHED for construction of the WTP. Possession certificate for WTP land has been received (**Appendix-04**). CTE for WTP has been applied to West Bengal Pollution Control Board and challan has produced (**Appendix-05**). Table 2 provides details of land parcel identified for WTP for the subproject.

Table 2: Land Details of Water Treatment Plant

Component	Name of Mouja	Name of G P	Ownership (Pvt./Govt.)	Availability of Land Records / Dag No, Khatian No, Plot No. etc	Present Landuse of the Plot	Status of NOC (for pvt. land) NOC / Handover letter for Govt. Land	Total Area of the Plot
WTP	Basudebpur	Barshal GP	Vested (Govt.)	Plot No-851, Khatian no-1	Baide	Possession letter has been received.	10Acres

Source: PHED, Bankura

Clear Water Transmission Main

A total length of 146.56 km clear water transmission mains will be laid for conveying clear water from WTP to the proposed 34 Over Head Reservoirs in two blocks. The construction of OHRs have been proposed in a separate package (BK/04). The clear water transmission mains pipelines will be laid within the ROW of government roads (WBHDCL, Zilla Parishad, PMGSY roads and PWD roads). The pipelines will be laid using open cut method. The diameter of the transmission mains pipe ranges between 150 - 900 mm depending on the road width that vary between 3.75 - 10 m (Black Top). Walk-through along the transmission mains and field visit indicated that beyond the black top, the shoulder of the road is quite wide and the shops are beyond the shoulder of the road (in the market places). There are no road side vendors or kiosks along the road where the transmission mains would be laid. Tree cutting impacts due to pipe laying activity will be assessed and reconfirmed after finalization of detailed design and finalization of alignment of the transmission mains pipelines through detailed measurement surveys. PHED needs to obtain no objection certificate (NOC) from respective PWD Division, WBHDCL, Zilla Parishad for undertaking the pipeline laying work. No objection certificates for road cutting is under process (**Appendix-03**). Table 3 shows detail of clear water transmission mains.



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Table 3: Details of Clear Water Transmission Mains

Name of the road	Gram Panchayat	Width of road (m) BT	Dia of pipe to be laid (mm)	Trench width for laying of pipeline (mm)	Ownership (whether NOC required for laying of pipeline)
Barjora Durlavpur road	Barshal	10.5	600, 800	1200, 1400	PWD
Bankura-Mejia Raniganj road	Ramchandrapur, Mejia	10.5	600, 500, 400, 300, 150	1200, 1100, 700, 600, 450	NHAI
Nandanpur Maliara road	Ramchandrapur, Banjora	3.75	300, 200	600, 500	PWD
Ranipur-Benabaid-pariasol road	Ramchandrapur	3.5	300, 200, 250	600, 500, 550	PMGSY
Mejia Saltora road	Mejia, Ardhamgram	5.5	300, 200	600, 500	PWD
Kalidaspur more to bharah	Ardhamgram	3.5	200, 150	500, 450	PWD
Chayanpur more to arbat	Gobindadham	3.5	150	450	PMGSY
Chayanpur more to lakhyara-ranganathpur	Lakhyara	3.5	250, 200, 150	550, 500, 450	PMGSY
Gangajalghati college more to keshiara	Gangajalghati	3.5	200	500	PUP
Desuria-Fulberia road	Kapistha	3.75	300, 250, 200, 150	600, 550, 500, 450	PWD
Ramkanali-pirraboni road	Gangajalghati, Pirraboni	3.75	150, 200	450, 500	PWD
Suaara-kallapur road	Kapistha	3.5	200	500	PMGSY
Deuli more to Banasuria more	Banasuria	5.5	250, 200	550, 500	PWD
Gangajalghati-Rajamela-Lachmanpur road	Gangajalghati, Lachmanpur	3.5	400, 300	700, 600	PMGSY
Lachmanpur to Garjuria road	Lachmanpur	3.5	200	500	PMGSY
Lachmanpur to Choto Nabagram	Lachmanpur, Banasuria	3.5 & 5.5	250	550	PMGSY & PWD
Deuli more to Bankadaha road	Nityanandapur	3.5	700	1300	PMGSY
Kalgora to	Nityanandapur	3.5	800 & 150	1400 & 450	PMGSY

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Name of the road	Gram Panchayat	Width of road (m) BT	Dia of pipe to be laid (mm)	Trench width for laying of pipeline (mm)	Ownership (whether NOC required for laying of pipeline)
Bankadaha & Sarangpur road					
Kalgora to Barshal Srirampur	Barshal	3.5	200	500	PMGSY
Kalgora more to subiara	Nityanandapur	3.5	150	450	PMGSY

Source: PHED, Bankura




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Table-4- ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES


Design Stage Environmental Impacts and Mitigation Measures						
Field (1)	Anticipated Impacts (2)	Mitigation Measures (3)	Action Taken/Status (4)	Responsibility of Implementation (5)	Monitoring of Mitigation (6)	Cost and Source found (7)
Design of water supply system	Source sustainability and efficiency	(i) Discontinuation of current unsafe & unsustainable groundwater sources and creating a new comprehensive surface water (Damodar River) based water supply system. (ii) Recovering wash water from treatment process to optimise the water use (iii) Treatment and reuse of sludge from treatment process (iv) Designing the entire system to maintain optimal flow and terminal pressure, and optimising the overall energy usage (v) Reducing the incidence of water borne diseases by providing 100% population including urban poor with potable water supplies (vi) Preparation and implementation of a water quality surveillance program including development of a laboratory as part of the project by DBO contractor to ensure	<ul style="list-style-type: none"> The water treatment process work will be continuing without disturbing the ground water source & optimizing the overall energy. Before supplying of treated drinking water, we will ensure the water test as per IS standard by testing of water parameter at Lab. In addition, we will ensure the noise level under permissible limit. For all workers & engaged staff 	Contractor, PIU	DSISC observation at site and document checking	Project cost

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Field (1)	Anticipated Impacts (2)	Mitigation Measures (3)	Action Taken/Status (4)	Responsibility of Implementation (5)	Monitoring of Mitigation (6)	Cost and Source found (7)
		<p>that supplied water meets the drinking water standards</p> <p>(vii) Development of laboratory with all necessary environment, health and safety measures and adopting international standard procedures for water quality testing</p> <p>(viii) Using low-noise and energy efficient pumping systems</p> <p>(ix) Installing the noise-producing pumps and motors etc., in enclosed buildings with noise reducing walls, and also maintaining adequate buffer to the nearby inhabited areas</p> <p>(x) Provision of appropriate personal protection equipment to the workers and staff</p>	<p>provided the mandatory PPEs & job specific PPEs.</p>			
Chlorine usage as disinfectant at WTP	Chlorine handling & application risk – health & safety risk to workers and general public	<p>Provide the following measure at the chlorine application unit:</p> <p>(i) Chlorine neutralization pit with a lime slurry feeder</p> <p>(ii) Chlorine absorption and neutralization facility</p> <p>(iii) Proper ventilation, lighting, entry and exit facilities</p> <p>(iv) Visible and audible alarm</p>	<ul style="list-style-type: none"> At the chlorination room chlorine neutralization pit & leakage detector provide for identification purpose. The adequate lighting, 	Contractor, PIU	DSISC observation at site and document checking	Project cost

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Field (1)	Anticipated Impacts (2)	Mitigation Measures (3)	Action Taken/Status (4)	Responsibility of Implementation (5)	Monitoring of Mitigation (6)	Cost and Source found (7)
		facilities to alert chlorine gas leak (v) Facility for isolation in the event of major chlorine leakage (vi) Eye wash & shower facility (vii) Personal protection and safety equipment for the operators in the chlorine plant (masks, oxygen cylinders, gloves, etc.,) (viii) Provide training to the staff in safe handling and application of chlorine; this shall be included in the contract of Chlorinator supplier (ix) Supplier of Chlorinator equipment shall provide standard operating manual for safe operation and as well as maintenance and repairs; preferably these shall be provided both in English and Bengali Languages.	ventilation, proper access & egress provide at chlorination room. • The Eye wash, Shower, PPEs, SCABA & handling manual in local language will be provide.			
Layout plan of WTP	Tree cutting	(i) Minimize removal of trees by adopting to site condition and with appropriate layout design of WTP (ii) Obtain prior permission for tree cutting (iii) Plant and maintain 5 trees for each tree that is removed	The minimum tree removal area has been selected for construction of WTP. The all-legal compliance initiated for tree cutting & we will maintain the 5	Contractor, PIU	DSISC observation at site and document checking	Project cost

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Field (1)	Anticipated Impacts (2)	Mitigation Measures (3)	Action Taken/Status (4)	Responsibility of Implementation (5)	Monitoring of Mitigation (6)	Cost and Source found (7)
			trees for each tree removal. Copy of application letter is attached as Appendix- 06.			
Pre-Construction Stage Environmental Impacts & Mitigation Measures						
Utilities	Telephone lines, electric poles and wires, water lines within proposed project area	(i) Identify and include locations and operators of these utilities in the detailed design documents to prevent unnecessary disruption of services during construction phase; and (ii) Require construction contractors to prepare a contingency plan to include actions to be taken in case of unintentional interruption of services. (iii) Require contractors to prepare spoils (waste) management plan and traffic management plan.	<ul style="list-style-type: none"> The overhead HT and LT power supply line pass over WTP area. Communication made for shifting of LT line. Procedure has been initiated (Appendix-07). Contingency Plan has been developed by informing to emergency services like WBSEDCL, local administration and police etc. Spoil and Traffic 	Contractor, PIU	DSISC observation at site and document checking	Project cost

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Field (1)	Anticipated Impacts (2)	Mitigation Measures (3)	Action Taken/Status (4)	Responsibility of Implementation (5)	Monitoring of Mitigation (6)	Cost and Source found (7)
			management plan are given in attachment-09 and 10 respectively.			
Construction work camps, stockpile areas, storage areas, and disposal areas.	Conflicts with local community; disruption to traffic flow and sensitive receptors	(i) Prioritize areas within or nearest possible vacant space in the project location; (ii) If it is deemed necessary to locate elsewhere, consider sites that will not promote instability and result in destruction of property, vegetation, irrigation, and drinking water supply systems; (iii) Do not consider residential areas; (iv) Take extreme care in selecting sites to avoid direct disposal to water body which will inconvenience the community. (v) For excess spoil disposal, ensure (a) site shall be selected preferably from barren, infertile lands. In case agricultural land needs to be selected, written consent from landowners (not lessees) will be obtained; (b) debris disposal site shall be at least 200 m	<ul style="list-style-type: none"> The area selected for construction work camp is vacant government land and free from any conflict. Sites for construction work camps, hot mix plants, stockpile areas, storage areas, and disposal areas. There is no residential area or nearby water body for the site selected for construction camp. The excess earth 	Contractor, PIU	DSISC observation at site and document checking	Project cost

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Field (1)	Anticipated Impacts (2)	Mitigation Measures (3)	Action Taken/Status (4)	Responsibility of Implementation (5)	Monitoring of Mitigation (6)	Cost and Source found (7)
		away from surface water bodies; (c) no residential areas shall be located within 50 m downwind side of the site; and (d) site is minimum 250 m away from sensitive locations like settlements, ponds/lakes or other water bodies.	will be utilized for backfilling.			
Sources of Materials	Extraction of materials can disrupt natural land contours and vegetation resulting in accelerated erosion, disturbance in natural drainage patterns, ponding and water logging, and water pollution.	(i) Obtain construction materials only from government approved quarries with prior approval of PIU; (ii) PIU to review, and ensure that proposed quarry sources have all necessary clearances/ permissions in place prior to approval (iii) Contractor to submit to PIU on a monthly basis documentation on material obtained from each source (quarry/ borrow pit) (iv) Avoid creation of new borrow areas, quarries etc., for the project; if unavoidable, contractor to obtain all clearances and permissions as required under law prior to approval by PIU	<ul style="list-style-type: none"> All construction materials will be procured from government approved quarry sites. 	Contractor, PIU	DSISC observation at site and document checking	Project cost
Consents, permits, clearances,	Failure to obtain necessary	(i) Obtain all necessary consents, permits, clearance, NOCs, etc. prior to award of civil works.	<ul style="list-style-type: none"> All necessary approval, NOC, Clearance & 	Contractor, PIU	DSISC observation at site and	Project cost

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NOCs, etc.	consents, permits, NOCs, etc. can result to design revisions and/or stoppage of works	(ii) Ensure that all necessary approvals for construction to be obtained by contractor are in place before start of construction (iii) Acknowledge in writing and provide report on compliance all obtained consents, permits, clearance, NOCs, etc. (iv) Include in detailed design drawings and documents all conditions and provisions if necessary	permits has been initiated for safely execution of work at site and given under attachment- 04.		document checking	
Asbestos Cement Pipes	Health risk due to exposure to asbestos materials	(i) Obtain details on location of underground AC pipes (ii) Locate the new piper carefully to avoid encountering AC pipes (ii) Leave the AC pipes undisturbed in the ground.	<ul style="list-style-type: none"> Detailed construction drawings showing alignment of AC pipes Company's Health and safety guideline followed (Appendix-09). 	Contractor, PIU	DSISC observation at site and document checking	Project cost
Construction Stage Environmental Impacts & Mitigation Measures						
EMP Implementation	Irreversible impact to the	(i) Project manager and all key workers will be required to undergo training	<ul style="list-style-type: none"> Training on EMP implementation, 	Contractor	PIU and DSISC	Project cost

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Training	environment, workers, and community	on EMP implementation including spoils/waste management, Standard operating procedures (SOP) for construction works; occupational health and safety (OH&S), core labor laws, applicable environmental laws, etc.	SOP, OH&S for all engaged workmen & staff has already been done and will be continued at a regular manner.		observation at site and document checking	
Air Quality	Emissions from construction vehicles, equipment, and machinery used for installation of pipelines resulting to dusts and increase in concentration of vehicle-related pollutants such as carbon monoxide, sulfur oxides,	For all construction works (i) Comply with the Direction of West Bengal Department of Environment under the Air Act, 1981 in controlling air pollution from construction activities (ii) Comply with the air pollution / dust control measures for construction activities stipulated by the "Direction of West Bengal Department of Environment under the Air Act, 1981 Direction No. EN/3170/T-IV-7 /001/2009 dated: 10 December 2009" (iii) Damp down the soil and any stockpiled material on site by water sprinkling; (iv) Use tarpaulins to cover the loose	<ul style="list-style-type: none"> Air Quality monitoring has been conducted at WTP area and intake point during pre-construction phase and as per plan will be continued during construction phase. Water sprinkler is being used on a regular manner at stockpile area, construction work site etc. to control dust 	Contractor	PIU and DSISC observation at site and document checking	Project cost

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	particulate matter, nitrous oxides, and hydrocarbons.	material (soil, sand, aggregate etc..) when transported by trucks; (v) Provide a dust screen around the construction sites at GLSR and WTP work sites (vi) Clean wheels and undercarriage of haul trucks prior to leaving construction site/quarry (vii) Control dust generation while unloading the loose material (particularly aggregate, soil) at the site by sprinkling water and unloading inside the barricaded area (viii) Stabilize surface soils where loaders, support equipment and vehicles will operate by using water and maintain surface soils in a stabilized condition (ix) Use tarpaulins to cover the loose material (soil, sand, aggregate etc..) when transported by trucks; (x) Apply water and maintain soils in a visible damp or crusted condition for temporary stabilization (xi) Apply water prior to leveling or any other earth moving activity to keep	<ul style="list-style-type: none"> Tarpaulin sheet is being used for covering of material during transportation and for stock piling. Access to work area has been restricted by application of signage, safety tape and safety net. All the construction equipment and machinery have valid PUC certificate (Appendix-10). Soil stabilization done with care at work site. Pipeline works <ul style="list-style-type: none"> Safety signage, safety tape/ hard 			

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		<p>the soil moist throughout the process</p> <p>(xii) Cover the soil stocked at the sites with tarpaulins</p> <p>(xiii) Control access to work area, prevent unnecessary movement of vehicle, public trespassing into work areas; limiting soil disturbance will minimize dust generation</p> <p>(xiv) Ensure that all the construction equipment, machinery are fitted with pollution control devises, which are operating correctly, and have a valid pollution under control (PUC) certificate</p> <p><u>Pipeline works</u></p> <p>(i) Barricade the construction area using hard barricades (of 2 m height) on both sides and provide dust/wind screen (such geo textile fabric) up to 3 m height (1m above the hard barricading)</p> <p>(ii) Initiate site clearance and excavation work only after barricading of the site is done</p> <p>(iii) Confine all the material, excavated soil, debris, equipment, machinery</p>	<p>barricade will be used around the construction/ excavated area.</p> <ul style="list-style-type: none"> Excavated earth will be used for backfilling. Road restoration shall be undertaken immediately. 			

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		<p>(excavators, cranes etc.), to the barricaded area</p> <p>(iv) Limit the stocking of excavated material at the site; remove the excess soil from the site immediately to the designated disposal area</p> <p>(v) Undertake the work section wise: 100 – 200 m section should be demarcated and barricaded</p> <p>(vi) Conduct work sequentially - excavation, pipe laying, backfilling; conduct pipe testing section-wise (for a minimum length as possible) so that backfilling, stabilization of soil can be done.</p> <p>(vii) Remove the excavated soil of first section to the disposal site; as the work progresses sequentially, by the time second section is excavated, the first section will be ready for back filling, use the freshly excavated soil for back filling, this will avoid stocking of material, and minimize the dust.</p> <p>(viii) Backfilled trench at any completed section after removal of barricading will be the main source of dust</p>				

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		pollution. The traffic, pedestrian movement and wind will generate dust from backfilled section. Road restoration shall be undertaken immediately.				
Surface water quality	Mobilization of settled silt materials, and chemical contamination from fuels and lubricants during construction can contaminate nearby surface water quality. Ponding of water in the pits / foundation excavations	(i) All earthworks be conducted during the dry season to prevent the problem of soil run-off during monsoon season; (ii) Avoid stockpiling of earth fill especially during the monsoon season unless covered by tarpaulins or plastic sheets; (iii) Prioritize re-use of excess spoils and materials in the construction works. If spoils will be disposed, only designated disposal areas shall be used; (iv) Install temporary silt traps or sedimentation basins along the drainage leading to the water bodies; (v) Place storage areas for fuels and lubricants away from any drainage leading to water bodies; (vi) Store fuel, construction chemicals	<ul style="list-style-type: none"> The surface water (Barrage Water) monitoring has been conducted at intake point area & remaining will conduct as per plan during construction phase. Detail monitoring plan is given in Table-05 Earthwork, stockpiling, filling will be plan during dry season only. storage areas for fuels and lubricants will be away from any drainage/ water 	Contractor, PIU	DSISC observation at site and document checking	Project cost

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		etc., on an impervious floor, also avoid spillage by careful handling (vii) Dispose any wastes generated by construction activities in designated sites; and (viii) Conduct surface quality inspection according to the Environmental Management Plan (EMP). (ix) Create a temporary drainage channel around the work area to arrest the entry of runoff from upper areas into the work area (x) Pump out the water collected in the pits / excavations to a temporary sedimentation pond; dispose off only clarified water into drainage channels/streams after sedimentation in the temporary ponds (xi) Consider safety aspects related to pit collapse due to accumulation of water	body and the area will be constructed with impervious floor.			
Noise Levels	Increase in noise level due to earth-moving and excavation	(i) Plan activities in consultation with PIU so that activities with the greatest potential to generate noise are conducted during periods of the	<ul style="list-style-type: none"> Noise monitoring has been conducted at WTP, intake point, 	Contractor	PIU and DSISC observation at site and	Project cost

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	equipment, and the transportation of equipment, materials, and people	day which will result in least disturbance; (ii) Horns should not be used unless it is necessary to warn other road users or animals of the vehicle's approach; (iii) Minimize noise from construction equipment by using vehicle silencers, fitting jackhammers with noise-reducing mufflers, and use portable street barriers to minimise sound impact to surrounding sensitive receptor; and (iv) Maintain maximum sound levels not exceeding 80 decibels (dBA) when measured at a distance of 10 m or more from the vehicle/s. (v) Identify any buildings at risk from vibration damage and avoiding any use of pneumatic drills or heavy vehicles in the vicinity (vi)Horns should not be used unless it is necessary to warn other road users or animals of the vehicle's approach; (vii)Consult local communities in advance of the work to identify and address key issues, and avoid	School and Hospital. Remaining will be conduct as per plan during construction phase (Table- 05) . <ul style="list-style-type: none"> Construction equipment, machinery and vehicles will be maintained in good condition to minimize the noise generation. Local community will be priory informed before commencement of work to avoid sensitive time/ inconvenience. 		document checking	

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		working at sensitive times, such as religious and cultural festivals.				
Landscape aesthetics and waste generation	Impacts due to excess excavated earth, excess construction materials, and solid waste such as removed concrete, wood, packaging materials, empty containers, spoils, oils, lubricants, and other similar items.	(i) Prepare and implement a Construction Waste Management Plan (ii) As far as possible utilize the debris and excess soil in construction purpose, for example for raising the ground level or construction of access roads etc., (ii) Stockpiles, lubricants, fuels, and other materials should be located away from steep slopes and water bodies; (iii) Avoid stockpiling any excess spoils at the site for long time. Excess excavated soils should be disposed of to approved designated areas immediately; (iv) If disposal is required, the site shall be selected preferably from barren, infertile lands; site should located away from residential areas, forests, water bodies and any other sensitive land uses (iv) Domestic solid wastes should	<ul style="list-style-type: none"> Waste material like concrete is utilized for reuse and filling purpose. Also, other solid waste like cement bags collect and in room/place and then shift to our go down. For material storage care has been taken as per EMP. Burning of waste has been strictly prohibited in site. Construction camp, labor hutment will be provided with sufficient number of dustbins. 	Contractor	PIU and DSISC observation at site	Project cost

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		<p>be properly segregated in biodegradable and non-biodegradable for collection and disposal to designated solid waste disposal site; create a compost pit at workers camp sites for disposal of biodegradable waste; non-biodegradable / recyclable material shall be collected separately and sold in the local recycling material market</p> <p>(v) Residual and hazardous wastes such as oils, fuels, and lubricants shall be disposed off in disposal sites approved by local authorities/WBPCB;</p> <p>(vi) Prohibit burning of construction and/or domestic waste;</p> <p>(vii) Ensure that wastes are not haphazardly dumped thrown within and around the project site and adjacent areas; provide proper collection bins, and create awareness to use the dust bins.</p> <p>(ix) Conduct site clearance and restoration to original condition after</p>				

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		the completion of construction work; PIU to ensure that site is properly restored prior to issuing of construction completion certificate				
Existing Infrastructure and Facilities	Disruption of service and damage to existing infrastructure at specified project location	(i) Prepare a list of affected utilities and operators if any; (ii) Prepare a contingency plan to include actions to be done in case of unintentional interruption of service	• At present, there is no any disruption of service and damage the existing infrastructure.	Contractor	PIU and DSISC observation at site	Project cost
Accessibility	Traffic problems and conflicts near project locations and haul road	Hauling (material, waste/debris and equipment) activities (i) Plan transportation routes so that heavy vehicles do not use narrow local roads, except in the immediate vicinity of delivery sites (ii) Schedule transport and hauling activities during non-peak hours; (iii) Locate entry and exit points in areas where there is low potential for traffic congestion; (iv) Drive vehicles in a considerate manner (v) Notify affected public by public information notices, providing sign	• Haul road prepared for transportation of material for WTP site. For intake point, there is only one road which is used for transportation of material and for communication of villagers and traffic. Adequate signage, safety steward will be	Contractor	PIU and DSISC observation at site and document checking	Project cost

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		<p>boards informing nature and duration of construction works and contact numbers for concerns/complaints.</p> <p>Pipeline works</p> <p>(i) Confine work areas along the roads to the minimum possible extent; all the activities, including material & waste/surplus soil stocking should be confined to this area. Proper barricading should be provided; avoid material/surplus soil stocking in congested areas – immediately removed from site/ or brought to the as and when required</p> <p>(ii) Leave spaces for access between mounds of soil to maintain access to the houses / properties</p> <p>(iii) Provide pedestrian access in all the locations; provide wooden/metal planks over the open trenches at each house to maintain the access.</p> <p>(iv) Inform the affected local population 1-week in advance about the work schedule</p> <p>(v) Plan and execute the work in such a</p>	<p>implemented during construction. Local villagers will be informed in advance to avoid the inconvenience.</p> <p>Pipeline work</p> <ul style="list-style-type: none"> Traffic plan has been attached in attachment- 10. Local people will be informed in advance in every case. Construction work will be limited by considering the convenience of local people. 			

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		way that the period of disturbance/ loss of access is minimum. (vi)Keep the site free from all unnecessary obstructions; (vii)Coordinate with Traffic Police for temporary road diversions, where necessary, and for provision of traffic aids if transportation activities cannot be avoided during peak hours				
Socio-Economic - Employment	Generation of temporary employment and increase in local revenue	(i) Employ local labour force as far as possible (ii) Comply with labor laws	<ul style="list-style-type: none"> We will ensure the same. 	Contractor, PIU	PIU and DSISC observation at site and document checking	Project cost
Occupational Health and Safety	Occupational hazards which can arise during work	(i) Comply with all national, state and local core labor laws (ii) Develop and implement site-specific occupational health and safety (OH&S) Plan which will include measures such as: (a) excluding public from the site; (b) ensuring all workers are provided with and use personal protective equipment like helmet, gumboot, safety belt, gloves, nose musk and ear plugs;	<ul style="list-style-type: none"> Company's Health and safety guideline is followed (Appendix-09). HSE induction and training has made mandatory for all new workers. Workers are 	Contractor	PIU and DSISC observation at site and document checking	Project cost

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		<p>(c) OH&S Training for all site personnel; (d) documented procedures to be followed for all site activities; and (e) documentation of work-related accidents;</p> <p>(ii) Ensure that qualified first-aid can be provided at all times. Equipped first-aid stations shall be easily accessible throughout the site;</p> <p>(iii) Provide medical insurance coverage for workers;</p> <p>(iv) Secure all installations from unauthorized intrusion and accident risks;</p> <p>(v) Provide supplies of potable drinking water;</p> <p>(vi) Provide clean eating areas where workers are not exposed to hazardous or noxious substances;</p> <p>(vii) Provide H&S orientation training to all new workers to ensure that they are apprised of the basic site rules of work at the site, personal protective protection, and preventing injuring to fellow</p>	<p>covered under accidental insurance. Copy of the same is provided in Appendix- 11.</p> <ul style="list-style-type: none"> • Separate first aid register is maintained at each site. • Workers are provided sufficient number of safety equipment, high visibility vests etc. they are provided safe drinking water, in-site toilet facility, clean eating area. 			

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		<p>workers;</p> <p>(viii) Provide visitor orientation if visitors to the site can gain access to areas where hazardous conditions or substances may be present. Ensure also that visitor/s do not enter hazard areas unescorted;</p> <p>(ix) Ensure the visibility of workers through their use of high visibility vests when working in or walking through heavy equipment operating areas;</p> <p>(x) Ensure moving equipment is outfitted with audible back-up alarms;</p> <p>(xi) Mark and provide sign boards for hazardous areas such as energized electrical devices and lines, service rooms housing high voltage equipment, and areas for storage and disposal. Signage shall be in accordance with international standards and be well known to, and easily understood by workers, visitors, and the general public as appropriate; and</p>				

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		(xii) Disallow worker exposure to noise level greater than 85 dBA for a duration of more than 8 hours per day without hearing protection. The use of hearing protection shall be enforced actively.				
Community Health and Safety.	Traffic accidents and vehicle collision with pedestrians during material and waste transportation	(i) Restrict construction vehicle movements to defined access roads and demarcated working areas (unless in the event of an emergency) (ii) Enforce strict speed limit (20-30 kmph) for playing on unpaved roads, construction tracks (iii) Night-time haulage will be by exception only, as approved by the PIU to minimise driving risk and disturbance to communities (iv) Adopt standard and safe practices for micro tunneling (vi) Temporary traffic control (e.g. flagmen) and signs will be provided where necessary to improve safety and provide directions (vii) All drivers will undergo safety and training	<ul style="list-style-type: none"> Work area will be demarcated. Adequate safety signage will be implemented at work site. Speed limit will be maintained at site. Adequate measures will be taken care of for night time haulage. Public access to work area will be restricted at work site. Public consultation will be done at regular manner. Local 	Contractor	PIU and DSISC observation at site and document checking	Project cost

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		(viii) Public access to all areas where construction works are on-going will be restricted through the use of barricading and security personnel (ix) Warning signs, blinkers will be attached to the barricading to caution the public about the hazards associated with the works, and presence of deep excavation (x) The period of time when the pipeline trench are left open will be minimized through careful planning (xi) Control dust pollution – implement dust control measures as suggested under air quality section (xii) Maintain regularly the vehicles and use of manufacturer-approved parts to minimize potentially serious accidents caused by equipment malfunction or premature failure. (xiii) Provide road signs and flag persons to warn of on-going trenching activities.	people will be intimated in advance before start of work.			
Work Camps and worksites	Temporary air and noise	(i) As far as possible located the camp site within the work sites (at GLSR	<ul style="list-style-type: none"> We have maintained the 	Contractor	PIU and DSISC	Project cost

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Field (1)	Anticipated Impacts (2)	Mitigation Measures (3)	Action Taken/Status (4)	Responsibility of Implementation (5)	Monitoring of Mitigation (6)	Cost and Source found (7)
	<p>pollution from machine operation, water pollution from storage and use of fuels, oils, solvents, and lubricants</p> <p>Unsanitary and poor living conditions for workers</p>	<p>and WTP sites); if any camp to be established outside these, then select a camp site away from residential areas (at least 50 m buffer shall be maintained)</p> <p>(ii) Avoid tree cutting for setting up camp facilities</p> <p>(iii) Ensure that a proper compound wall is provided, and erect a wind/dust screen around</p> <p>(iv) Camp site shall not be located near (100 m) water bodies, flood plains flood prone/low lying areas, or any ecologically, socially, archeologically sensitive areas</p> <p>(v) Separate the workers living areas and material storage areas clearly with a fencing and separate entry and exit</p> <p>(vi) Provide proper temporary accommodation with proper materials, adequate lighting and ventilation, appropriate facilities for winters and summers; ensure conditions of livability at work camps are maintained at the</p>	<p>safe distance for camp as per guideline. All conditions will be fulfilled as per management plan.</p>		<p>observation at site and document checking</p>	

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Field (1)	Anticipated Impacts (2)	Mitigation Measures (3)	Action Taken/Status (4)	Responsibility of Implementation (5)	Monitoring of Mitigation (6)	Cost and Source found (7)
		<p>highest standards possible at all times;</p> <p>(vii) Consult PIU before locating project offices, sheds, and construction plants;</p> <p>(viii) Minimize removal of vegetation and disallow cutting of trees</p> <p>(ix) Ensure good living conditions at work camps are maintained at the highest standards possible at all times; living quarters and construction camps shall be provided with standard materials (as far as possible to use portable ready to fit-in reusable cabins with proper ventilation); thatched huts, and facilities constructed with materials like GI sheets, tarpaulins, etc., shall not be allowed as accommodation for workers</p> <p>(x) Camp shall be provided with proper drainage, there shall not be any water accumulation</p> <p>(xi) Provide drinking water, water for other uses, and sanitation facilities for employees</p>				

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Field (1)	Anticipated Impacts (2)	Mitigation Measures (3)	Action Taken/Status (4)	Responsibility of Implementation (5)	Monitoring of Mitigation (6)	Cost and Source found (7)
		(xii) Prohibit employees from cutting of trees for firewood; contractor should be provide proper facilities including cooking fuel (oil or gas; fire wood not allowed) (xiii) Train employees in the storage and handling of materials which can potentially cause soil contamination (xiv) Recover used oil and lubricants and reuse or remove from the site (xv) Manage solid waste according to the following preference hierarchy: reuse, recycling and disposal to designated areas; provide a compost pit for biodegradable waste, and non-biodegradable / recyclable waste shall be collected and sold in local market (xvi) Remove all wreckage, rubbish, or temporary structures which are no longer required (xvii) At the completion of work, camp area shall be cleaned and restored to pre-project conditions, and submit report to PIU; PIU to review				

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Field (1)	Anticipated Impacts (2)	Mitigation Measures (3)	Action Taken/Status (4)	Responsibility of Implementation (5)	Monitoring of Mitigation (6)	Cost and Source found (7)
		and approve camp clearance and closure of work site				
Submission of EMP implementation report	Unsatisfactory compliance to EMP	(i) Appointment of (I) EHS Supervisor to ensure EMP implementation (ii) Timely submission of monitoring reports including pictures	• We will ensure the same.	Contractor	PIU and DSISC observation at site and document checking	Project cost
Post-construction clean-up	Damage due to debris, spoils, excess construction materials	(i) Remove all spoils wreckage, rubbish, or temporary structures (such as buildings, shelters, and latrines) which are no longer required; and (ii) All excavated roads shall be reinstated to original condition. (iii) All disrupted utilities restored (iv) All affected structures rehabilitated/compensated (v) The area that previously housed the construction camp is to be checked for spills of substances such as oil, paint, etc. and these shall be cleaned up. (vi) All hardened surfaces within the construction camp area shall be ripped, all imported materials removed, and the area shall be top	• During the construction period any type of damage due to debris, spoils, excess construction materials occurs we will properly dispose, reuse or recycle & proper housekeeping maintain at project site.	Contractor	PIU and DSISC observation at site	Project cost

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Field (1)	Anticipated Impacts (2)	Mitigation Measures (3)	Action Taken/Status (4)	Responsibility of Implementation (5)	Monitoring of Mitigation (6)	Cost and Source found (7)
		soiled and regrassed using the guidelines set out in the revegetation specification that forms part of this document. (vii) The contractor must arrange the cancellation of all temporary services. (viii) Request PIU to report in writing that worksites and camps have been vacated and restored to pre-project conditions before acceptance of work.				

Table- 5- CONSTRUCTION STAGE ENVIRONMENT MONITORING PLAN

Monitoring Field	Monitoring Location	Monitoring Parameters	Frequency	Locations*	Cost as per budget (in Rs.)
Ambient air quality	2 locations (WTP and Intake Site)	PM ₁₀ , PM _{2.5} , NO ₂ , SO ₂ , CO	Once before start of construction. Yearly 3- times except monsoon period during construction (3-year period considered)	WTP area at Basudevpur and Intake point at Natungram. Monitoring to be conducted at pipeline site during construction period after finalization of the	2,60,000/-

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				design.	
Ambient noise	4 locations (Intake, WTP and 2 sensitive locations)	Day time and night time noise levels (24 hours)	Once before start of construction. Yearly 3-times except monsoon period during construction (3-year period considered)	WTP area at Basudevpur, Intake point at Natungram, school and Hospital. Monitoring to be conducted at pipeline site during construction period after finalization of the design.	1,04,000/-
Barrage water quality	1 location (Reservoir Intake Point)	pH, Oil and grease, Cl, F, NO3, TC, FC, Hardness, Turbidity, BOD, COD, DO, Total Alkalinity	Once before start of construction. Then Monthly basis, except monsoon period during construction (3-year period considered)	Intake point (Damodar River Barrage) Monitoring to be conducted at pipeline site during construction period after finalization of the design.	2,96,000/-



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Figure- 02: Locations of Environmental Monitoring Point



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LIST OF ATTACHMENTS

- Attachment 1: - Details of Manpower**
- Attachment 2: Details of construction Work sites**
- Attachment 3: Details of construction camp site**
- Attachment 4- List of Clearances & Statutory Requirements**
- Attachment 5- Contractor's EHS Policy & Organization**
- Attachment 6- Utility shifting/relocation**
- Attachment 7- Details of Construction Materials**
- Attachment 8- Details of construction waste / debris / surplus soil**
- Attachment 9- Spoil Management Plan (SMP)**
- Attachment 10- Traffic Management Plan (TMP)**
- Attachment 11- Consultation and Information Disclosure**
- Attachment 12- Grievance Redress Mechanism (GRM)**

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Attachment 1: - Details of Manpower

Details of contractors on-site-personnel and workers	
Project Manager	Mr. J. N. Saha; 8902008158
Site Engineer	WTP site--Mr.Lakshmanan C Chinnadur ; 9789127525
	Intake area- Mr.Deben Chandra Das; 7727800261
	Pipe laying site- Mr.Pyla Venkata Peddi Raju ;8985444405
Site Supervisor	WTP site-Mr.Surojit Mukherjee;9903402600
	Intake Area-Mr.Arnav Mallick; 9093463696
	Pipelaying area- Mr.Kuntal Mukherjee;9064683048
EHS Supervisor	Mr. Mukesh Kumar; Mob: 8637860268
Archeological supervisor	NA
Skilled / semi-skilled workers	WTP- 10 skilled and 15 semi-skilled
	Intake Point- 10 skilled and 15 semi-skilled
	Pipe laying site- 10 skilled and 15 semi-skilled
Unskilled workers	WTP-15
	Intake Point- 5
	Pipe laying site- 5
Women workers	Nil
Workers – local / migrant	WTP-Local-10 / Migrant-30 (From other districts of West Bengal)
	Intake Point- Local-25 / Migrant-5 (From other districts of West Bengal)
	Pipe laying site- Local-30 / Migrant-0

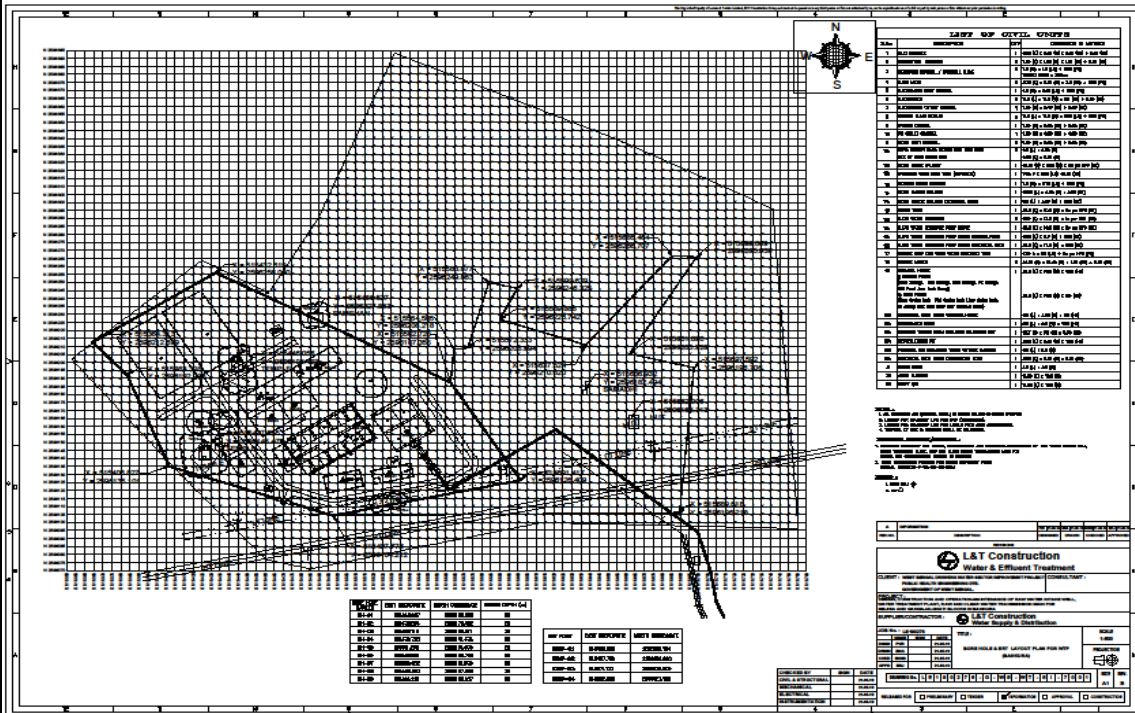
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Attachment 2: Details of construction Work sites

	WTP area site	Intake Well site	Pipe laying work
	Location- Basudevpur, Barshal GP	Natungram, Barjora Block	Location- Barjora, Gangajalghati and Mejia Block
1	Material storage <ul style="list-style-type: none"> • Cement • Steel • Fine Aggregate • Shuttering Material 		
2	Plant & Machinery <ul style="list-style-type: none"> • Concrete Mixer – 1 Nos • Needle Vibrator – 3 Nos • Steel Cutter – 2Nos • Concrete Mixer – 1 Nos 		
3	Site office – Yes		
4	Laboratory – Yes		
5	Security cabin – Yes		
6	Labor welfare facilities <ul style="list-style-type: none"> • Toilets • Drinking water • First Aid Box • Fire Extinguisher 		

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7 Site layout Plan (WTP)



8 Site photographs

Original site Photographs



WTP Site Before Construction



Intake Point

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Site photos with facilities/ Work area



Panel Room at WTP



First Aid Box



Drinking Water Facility at site



Survey work at site



Project information display board, WTP site



Project information display board, Intake site

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Attachment 3: Details of construction camp site

	Labour camp at WTP site	Camp for Intake point Site
	Location- – Basudevpur, Barshal GP	Location- Natungram, Barjora Block
1	Accommodation for 100 nos. construction workers No women / families in the camp Facilities provided at camp site <ul style="list-style-type: none"> • Separate cooking area • Cooking gas • Drinking water • Bath rooms • Toilets • Drainage system • First aid box 	Accommodation for 20 nos. construction workers No women / families in the camp Facilities provided at camp site <ul style="list-style-type: none"> • Separate cooking area • Cooking gas • Drinking water • Bath rooms • Toilets • Drainage system • First aid box
2	Camp Site photograph	



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Original Camp site photographs



(After)



(After)



(Before)



(Before)

Labour Hutment at WTP Area, Basudevpur

Labour Hutment at Intake Area,
Natungram



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Toilet for labours	Toilet facility
	
Site Inspection	Water facility

Attachment 4- List of Clearances & Statutory Requirements

Sl. No.	Project related	Status
A	Construction/work related	
1	Possession of land	Obtained (Appendix- 04)
2	Notice to Proceed from PIU	Available
B	Labour Safety / Welfare Related	
1	Labour license	Obtained (Appendix-12)
2	Workmen Compensation	Obtained (Appendix-11)
3	Risk Policy	Obtained (Appendix-13)
C	Safety / liability safety related	
1	Medical Insurance	Tie-up with local hospital made (Appendix- 14)
D	Others	
1	Fitness certificate for vehicles, equipment used in construction	Available
2	Pollution under control (PUC) certificates for vehicles and equipment	Obtained (Appendix-10)
3	Driving licenses for drivers	Available
4	Insurance for vehicles / equipment, as required	Available

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Attachment 5- Contractor's EHS Policy & Organization

1	Contractor agency has a OHS policy	Yes/ No
A	<p>If yes, provide policy details</p> <p>1. Policy statement: 2. EHS organization & responsibilities:</p>	<p>Yes (Appendix-09)</p> <p>Yes</p>
A	List safety risks anticipated in the project	
	<p>Area works (WTP)</p> <ul style="list-style-type: none"> • Trips and falls • Head injury from falling objects • Height Work • Excavation side wall collapse Accidents from open excavations 	<p>Area Works (Pipelaying works)</p> <ul style="list-style-type: none"> • Excavation Hazard • Slip & Trip during pipe shifting. • Collapse of side wall of trench. • Trap during pipe jointing
		<p>Area Works (Intake site)</p> <ul style="list-style-type: none"> • Confined Space • Height Work- Fall from height • Excavation Hazard • Electric hazard • Materials Handling slip/trip • Hot work Fire hazard.
C	List personal protection equipment provided to workers	
	<ul style="list-style-type: none"> • Boots- 40No. • Gloves-40 Pair's. • Helmet-40no's • Safety jacket- 40no's. • Goggles- 20no's. • Gum-boots-20 Pair's 	<ul style="list-style-type: none"> • Boots- 30No. • Gloves-30 Pair's. • Helmet-30no's • Safety jacket- 30no's. • Goggles- 10no's. • Gum-boots-0 Pair's
		<ul style="list-style-type: none"> • Boots- 30No. • Gloves-30 Pair's. • Helmet-30no's • Safety jacket- 30no's. • Goggles- 10no's. • Gum-boots- 15 Pair's
D	Preventive Measures	
	<ul style="list-style-type: none"> • Orientation of all workers on OSH 	Tool box talk has been conducted.
	<ul style="list-style-type: none"> • Work permit system 	Yes – for work at height
	<ul style="list-style-type: none"> • Toolbox/safety meetings (how often will this be conducted, what are the minimum topics) 	Twice Weekly on work at height, firefighting, first-aid, housekeeping, etc.
	Safety signages	Displayed at site
	Barricade	Provided
2	Contractor emergency procedure	




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A	<ul style="list-style-type: none">In case of accident, first aid treatment to injured labour/person shall be provided.In case hospitalization is required, concerned site in-charge will immediately take necessary action for hospitalization and he will inform to our Project Manager.Details of accident shall be reported in accident register and the same shall be informed to client also.	
B	Contact information, staff and responsibilities for emergency situations	
	Designation	Staff name & contact
	Site Engineer	WTP Site-Mr. Lakshmanan C Mob:9789127525 Intake Area- Mr. Deben Chandra Das; 7727800261 Pipe laying area- Mr.Pyla Venkata Peddi Raju ;8985444405
	EHS Supervisor	Mr. Mukesh Kumar Mob: 8637860268
	Project Manager Representative	Mr.J.N.Saha; Mob:8902008158
		Emergency responsibility
		Site Engineer shall be responsible for arranging of first aid treatment and other necessary action required in case of emergency. He will also be responsible for informing to EHS Supervisor.
		EHS Supervisor should assess the emergency situation and accordingly instruct the Site Engineer of appropriate actions. Depending on the gravity of the situation, he should also inform Project Manager Representative.
		Project Manager Representative shall be responsible for taking all necessary action and decisions.
C	Reporting procedure in case of work accidents <ul style="list-style-type: none">Details of accidents shall be recorded in accident register.Copy of accident register shall be submitted to client at the end of every month.In case of any major accident client shall be informed immediately.	Yes
D	Mandatory Reporting to Authorities	Yes
E	Prohibited Acts and Penalties for Violations	Yes

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Attachment 6- Utility shifting/relocation

Sl. No.	List work sites that require utility shifting, relocation, temporary shut off	Remarks
1	Area work sites (WTP; Basudevpur, Bankura) <ul style="list-style-type: none"> • Administrative Building • Chemical House Extension • Inlet Chamber 	LT shifting is required at WTP area. Permission is under process (Appendix-07).

Attachment 7- Details of Construction Materials

Sl. No	Material	Approximate quantity required for project	Source	Indicate if source has all necessary government Clearances
1	Steel	1162 MT	Tata Steel, SAIL, RINL	Yes
2	Cement	126331 Bags	Ambuja, Nuvoco and Ultratech	Yes
3	Sand	12178 MT	River Damodar.	Yes
4	Aggregate	22967 MT	Pachami quarry	Yes

Attachment 8- Details of construction waste / debris / surplus soil

Sl. No.	Waste likely be generated	Type of debris / waste	Approximate quantity	Indicate whether it will be reused /disposed off	In case of disposal, indicate disposal site name & location
1	Construction waste / debris	Steel, Shuttering Plates, Bamboos, Ply etc	N/A	Scrap steel shall be sold, shuttering plate, bamboo, ply etc. shall be reuse	N/A



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2	Surplus soil	Excavated earth	Approx. 198892 cum	Good earth Shall be used to fill up the low land area inside the premises and balance shall be disposed at designated area shown by PHED. Top soil will be preserved and re-laid on top of fill area.	PHED land
3	Hazardous waste, if any	(oils, lubricants, chemicals), if any	N/A as only preparatory construction activities are in progress	N/A	N/A



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Attachment 9- Spoil Management Plan (SMP)

REV	DATE	PREPARED BY	CHECKED BY	APPROVED BY DSISC	APPROVED BY PIU
1	20.12.19	 	 	 TEAM LEADER DSISC- Bankura WBDWSIP	 Assistant Engineer-I Bankura WBDWSIP, PHE Dist Govt. of West Bengal

Project Manager
Mejha Intake n WTP Project

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1. INTRODUCTION OF SMP:

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

2. SCOPE:

This Spoil Management Plan developed for **WTP Intake and Pipeline laying works**. We do not anticipate any excess Spoil for disposal as all excavated material will be reuse at site only.

3. LEGAL AND OTHER REQUIREMENTS:

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

4. ROLES AND RESPONSIBILITY:

SITE ENGINEER:

- Will strictly work as per drawing.
- Will stay at site during activity is going on.
- Will see excess earth is kept at a particular place after completion of backfilling.
- Will ensure quality of the work by discussing daily about the type of activity on that day with the workmen.
- Will check site drain outlets are not blocked due to excavated earth on the drain.

SAFETY PERSONNEL:

- Will constant Job specific Tool Box Talk with Supervisor and Workmen.
- Will check excavated earth kept away from top.
- Will check if any underground pipeline is there or live electric cable there water should be sprayed to avoid dust hazard from excavation.
- Necessary Safety signage, Cones & FRP Barricading Board to be used.
- Vehicles reverse horn etc. to be checked will ensure zero tolerance in safety.

WORKER:

- They will start activity only after Tool Box Talk done.
- They will wear job specific safety items before start of work.
- During working inside the excavated trench, they should use ladder for easy access.
- They should barricade the area of activity with Safety barricading tape.
- Worker should be skilled to carry out the work.

It is the responsibility of the Engineers and all department head to implement this procedure and ensure that delegated staff and worker under their supervision carry it out in this project. Major roles and responsibilities are mentioned below:

- Excavated earth should be utilized like refilling at site only.
- Traffic movement should not be obstructed by dumping soil during the work.
- No low land, pond, ditch etc. will be filled up by extra soil outside the work place.

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- Ensuring no accident occurs during rainy season by excavated earth during or finished the work.
- All the drains, outlet should be free from excavated earth.

5. IDENTIFICATION AND ASSESSMENT OF SPOIL ASPECTS AND IMPACTS:

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

6. SPOIL VOLUMES AND CHARACTERISTICS:

In this zone, Generation of excavated earth will be **approx. 198892 cum**. There is no excess earth in this project as the same earth is to be used to fill the low land area.

7. SPOIL REUSES OPPORTUNITIES, IDENTIFICATION AND ASSESMENT:

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

8. ON SITE SPOIL MANAGMENT APPROACH:

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

9. SPOIL TRANSPORTATION METHODOLOGY:

In this project, no need for spoil transport as there is no extra soils for disposal.

10. MONITORING, REPORTING, REVIEW AND IMPROVEMENTS:

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

Spoil Details-

FOR WTP			
Sl. No.	WTP	Name of Structure	Excavation Total Quantity (C.U.M)
1.	PKG-3	Boundary wall	865
2	PKG-3	Inlet System	601
3	PKG-3	Flocculator and Inclined Plate Settler	2660
4	PKG-3	Chlorinator room, Chlorine Toner Room	1076
5	PKG-3	Chemical House	1210
6	PKG-3	Rapid Gravity Sand Filter	4340
7	PKG-3	Filter Annex Building	1058
8	PKG-3	Sludge and Wash Water Collection Sump Cum Pump house	3647



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9	PKG-3	Clear Water Reservoir and Pump House	6385
10	PKG-3	Backwash Tank	687
11	PKG-3	Sludge Lagoon	3600
12	PKG-3	Electrical Substation Building	476
13	PKG-3	Admin Building	67
14	PKG-3	Staff Quarter	225
Approx. generated total Spoil			26897

FOR PIPELINE LAYING					
Sl.	Dia	Length(m)	Width(m)	Depth(m)	Total (cum)
1	900	12992	1.5	1.9	37027.2
2	800	13751	1.4	1.8	34652.52
3	700	4971	1.3	1.7	10985.91
4	600	8038	1	1.6	12860.8
5	500	1494	0.9	1.5	2016.9
6	450	400	0.85	1.45	493
7	400	9664	0.8	1.4	10823.68
8	350	100	0.65	1.35	87.75
9	300	29133	0.6	1.3	22723.74
10	250	15257	0.55	1.25	10489.19
11	200	46271	0.4	1.2	22210.08
12	150	18943	0.35	1.15	7624.558
Approx. generated total Spoil =					171995.3

Attachment 10- Traffic Management Plan (TMP)



L&T Construction
Water & Effluent Treatment

**Design, Construction and Operation-
Maintenance of Raw Water Intake Well, Water
Treatment Plant, Raw and Clear Water
Transmission Main for Mejia and Gangajalghati
Blocks**

(Package No: WBDWSIP/DWW/NCB/BK/03/2018-19)

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TRAFFIC MANAGEMENT PLAN (TMP)


WBDWSIP BANKURA PKG-03

PIPE LAYING WORKS

LOCATION -BARJORA, MEJHIA AND GANGAJALGHATI BLOCK

REV	DATE	PREPARED BY	CHECKED BY	APPROVED BY DSISC	ARRPROVED BY PIU
1	20.12.19	Mukesh K		 TEAM LEADER DSISC- Bankura WBDWSIP	 Assistant Engineer-1 PIU Bankura WBDWSIP, PHE Dist Govt. of West Bengal

Project Manager
Mejha Intake n VTP Project

 L&T Construction <i>Water & Effluent Treatment</i>	Design, Construction and Operation- Maintenance of Raw Water Intake Well, Water Treatment Plant, Raw and Clear Water Transmission Main for Mejia and Gangajalghati Blocks (Package No: WBDWSIP/DWW/NCB/BK/03/2018-19)	Doc. No. L&T/ SEMP /01 Last Revision No. 00 Last Revision Date : 00 Page 59 of 96 Original Issue Date :
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1. **PURPOSE**

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

2. **SCOPE**

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

3. **RESPONSIBILITY**

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

4. **LEGAL REQUIREMENT**

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

5. **REQUIREMENTS**

5.1 **General**

- All road works create inconvenience and are a potential hazard to the safety of all road users and those employed in carrying out the work.
- All the effects should be reduced to the minimum, and to ensure that the works are properly guarded, lighted and signed.
- A clear and early warning of any obstruction to all road users should be provided.
- All areas where work is going on should be clearly demarcated by proper barricading and entry into these areas should be restricted to only authorize personnel.
- Site access for local people.


5.2 **Planning Stage**

Particular attention should be given to:

- Traffic signs
- Cones
- Barriers
- FRP Barricading Board
- Road hazard warning lights
- Information boards and
- Site lighting
- Site access for local people
- Consider necessity to traffic control systems such as temporary traffic lights or Stop/Go boards.
- Access should be planned to eliminate dangerous movements of site traffic (e.g. reversing of vehicles) and personnel (e.g. crossing dual carriageways).
- Provision of adequate lighting while working at night.
- All persons working on the road shall wear high visibility jackets.

5.3 **On Site**

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

 L&T Construction <i>Water & Effluent Treatment</i>	Design, Construction and Operation- Maintenance of Raw Water Intake Well, Water Treatment Plant, Raw and Clear Water Transmission Main for Mejia and Gangajalghati Blocks (Package No: WBDWSIP/DWW/NCB/BK/03/2018-19)	Doc. No. L&T/ SEMP /01 Last Revision No. 00 Last Revision Date : 00 Page 60 of 96 Original Issue Date :
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5.4 Operators/Drivers

- Only Experienced operators and drivers with valid licensed has been appointed.
- One copy of license has been collected.
- Refreshment training conducted for all operators and drivers.
- Operators/Drivers authentication and validation to operate the particular machinery displayed in the machine/vehicles.

5.5 Equipment

- Drivers undertake a daily visual inspection of their vehicles include steering, brakes, mirrors, lights, horn, tyres and windshield wipers.
- Safety Department along with Plant and machinery department shall check the vehicles as a monthly basis.
- All vehicles have reverse horns and it is in working properly.
- All vehicles, preventive maintenance schedule has to be followed strictly.

5.6 Roads

For safe operation we are following the below safety measure:


- Safe width of road has been provided.
- Flag man deployed at every traffic point to control the vehicles and pedestrians.
- Speed limits 10km/hr within the working area.
- Caution board has been placed in every location within the site.
- Workers are working with reflective jacket as well as required PPE's.
- Road for use of pedestrian has been identified.
- Reverse horn used in vehicles.
- While reverse vehicles ensuring Banks man.
- Do's and Don'ts displayed at site office.

5.7 Loading and Unloading

- Only authorized persons were engage loading/unloading.
- Materials loaded within the permitted safe weight limit (as per RTO) for the truck.
- Ensuring Soil and Sand loaded trucks are covered with tarpaulin while transporting
- During Toolbox talk's intimation has been delivered to all drivers/operators that when the drivers leave the driving seat, the engine of the truck shall be switched off, the gear engaged and parking brakes applied. On slopes, wheel blocks shall be applied.
- Helper has been provided with all vehicles.
- After unloading, the banks man ensuring that the tipper is lowered before moving.
- Turn buckle and side stoppers used while transporting as required.

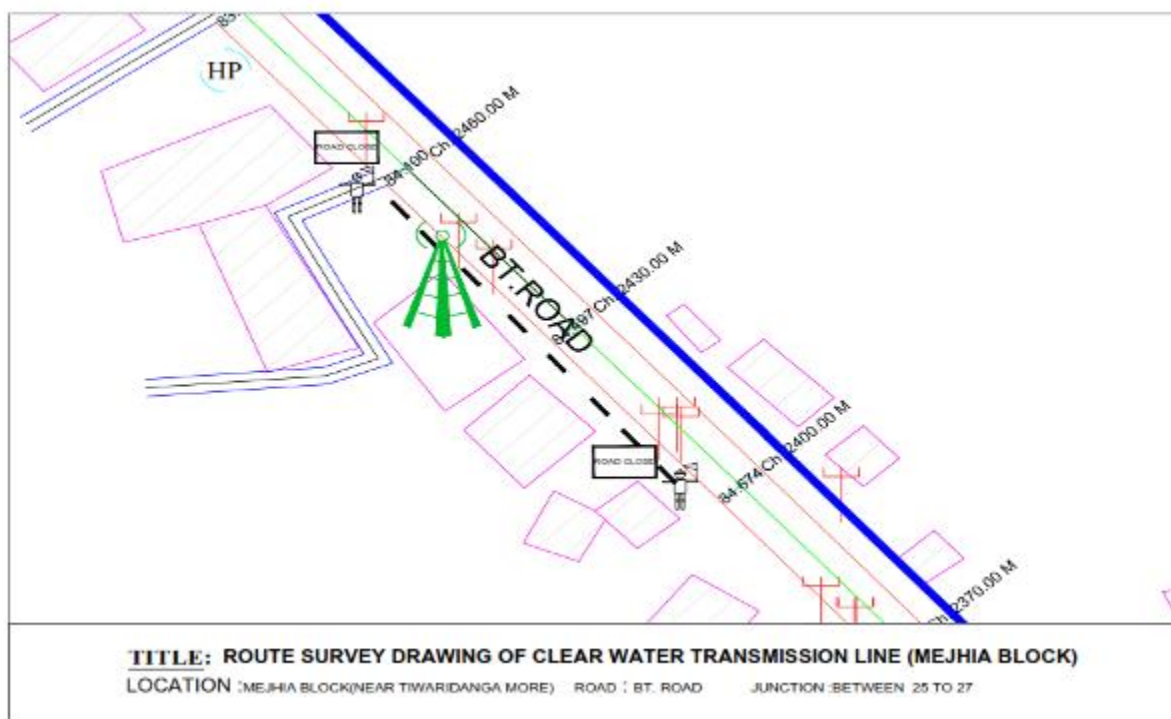
5.8 Working Area

- The working area has been restricted from unauthorized entry.
 - The working space has been defined.
- Particular attention has been taken in working area:
- Traffic signs
 - Cones
 - Barriers
 - Information boards, and
 - Site lighting
 - Adequate lighting has been provided at working area at night.

 L&T Construction Water & Effluent Treatment	Design, Construction and Operation-Maintenance of Raw Water Intake Well, Water Treatment Plant, Raw and Clear Water Transmission Main for Mejia and Gangajalghati Blocks (Package No: WBDWSIP/DWW/NCB/BK/03/2018-19)	Doc. No. L&T/ SEMP /01 Last Revision No. 00 Last Revision Date : 00 Page 61 of 96 Original Issue Date :
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- All persons wear high visibility jackets.

Traffic Plan (Drawing)



Attachment 11- Consultation and Information Disclosure

- Local population is informed through community leaders as well as by visiting individual households of the locality.
- Information board is placed at construction site
- Stakeholder consultation carried out at Gram Panchyat level and work details including time period is informed. **(Appendix-15)**

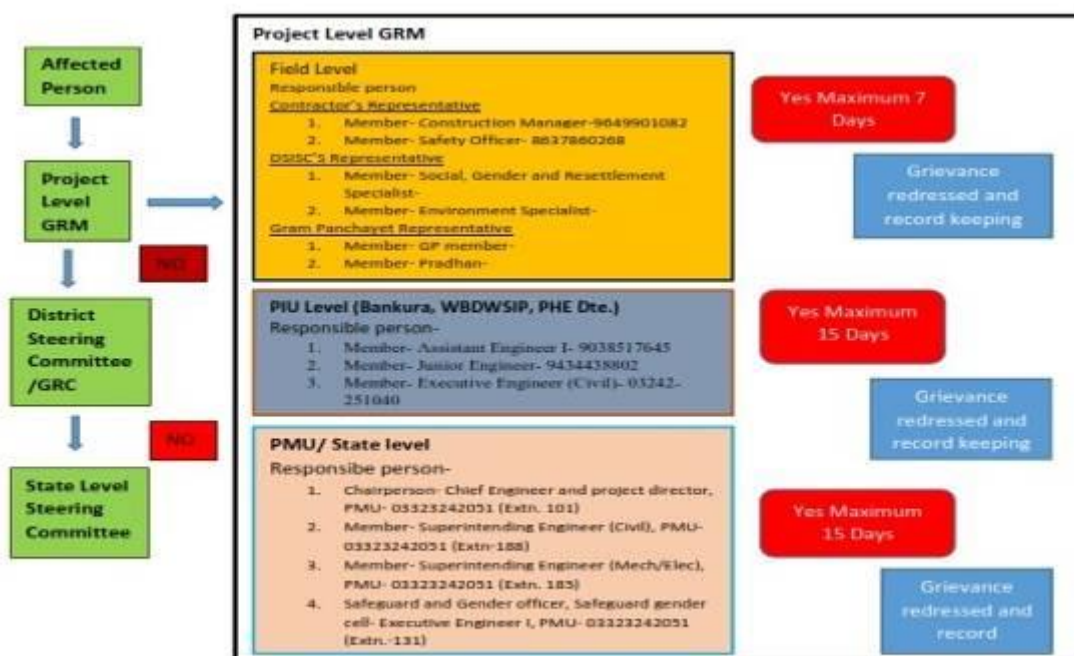
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Attachment 12- Grievance Redress Mechanism Procedure for on-site Grievance Redressal Mechanism

A common Grievance Redress Mechanism (GRM) is in place to redress social, environmental or any other project and/or subproject related grievances. The GRM will provide an accessible and trusted platform for receiving and facilitating resolution of affected persons' grievances related to the project. The three-tier GRM for the project is outlined below, each tier having time-bound schedules and with responsible persons identified to address grievances and seek appropriate persons' advice at each stage, as required.


Grievance Redressal Mechanism

The GRM presented below has been developed in consultation with stakeholders. Public



awareness campaign has been conducted to ensure that awareness on the project and its grievance redress procedures is generated. The campaign has ensured that the poor, vulnerable and others are made aware of grievance redress procedures and entitlements per project entitlement matrix, and PMU and PIU will ensure that their grievances are addressed in time.

All grievances are recorded in site grievance register and resolved at the earliest. The sample grievance registration form is included in **Appendix 16**.

 L&T Construction <i>Water & Effluent Treatment</i>	Design, Construction and Operation- Maintenance of Raw Water Intake Well, Water Treatment Plant, Raw and Clear Water Transmission Main for Mejia and Gangajalghati Blocks (Package No: WBDWSIP/DWW/NCB/BK/03/2018-19)	Doc. No. L&T/ SEMP /01 Last Revision No. 00 Last Revision Date : 00 Page 63 of 96 Original Issue Date :
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LIST OF APPENDICES

- Appendix- 01- Permission letter of water abstraction from DVRRC**
- Appendix- 02-Land acquisition for sub-station near intake point (Under process)**
- Appendix-03- Road cutting permission (Under process)**
- Appendix-04- Possession certificates for WTP land**
- Appendix-5- Challan for CTE, WTP**
- Appendix- 06- Application for tree felling permission**
- Appendix-07- Application for LT line shifting**
- Appendix-08- Layout Map of WTP area**
- Appendix- 09- Company's Health and safety guideline**
- Appendix- 10- PUC certificates**
- Appendix-11- WC policy**
- Appendix- 12- Labour License**
- Appendix- 13- Risk Policy**
- Appendix- 14- Tie up letter with local Hospital**
- Appendix-15- Public consultation report**
- Appendix- 16- GRM registration form (Local and English Language)**



Design, Construction and Operation-Maintenance of Raw Water Intake Well, Water Treatment Plant, Raw and Clear Water Transmission Main for Mejia and Gangajalghati Blocks
(Package No: WBDWSIP/DWW/NCB/BK/03/2018-19)

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Appendix- 01- Permission letter of water abstraction from DVRRC

No.MD/DVRR/WA-6(PART - VIII)/Bankura WSP(Phase-II)/2019/ 881-86

**GOVERNMENT OF INDIA
CENTRAL WATER COMMISSION
DVRR UNIT**

06540-252812/274214
FaxNo:- 06540-276525

Dated 01/07/2019
MAITHON DAM
Distt-Dhanbad, Jharkhand
PIN - 828 207

To
The OSD & Engineer-in-Chief,
Public Health Engineering Department,
N.S. Building, 7th Floor,
1, K.S. Roy Road, Kolkata
West Bengal- 700001.

Sub:- Concurrence for drawl of 15.55 MGD of water for Bankura Water Supply Project (Phase-II), under WBDWSIP.

Ref: i. Your Memo No. PHE/EIC/221/2017-18 dated 28.07.2017.
ii. WBIDC letter No. WBIDC/DVRR/08-09/417 dated 11.06.2019.

Sir,

With reference to your letter mentioned above vide which a quantity of drawl of 70.75MGD i.e. 15.55 MGD water was requested for allocation to your Department from Durgapur barrage, discussions were held in 141st meeting of DVRR Committee held at Maithon on 13th June 2019. Concurrence of the DVRR for drawl of 15.55 MGD of raw water from Durgapur barrage is hereby conveyed to your department. The allocation is subject to following:-

(A) Exact location for drawl of water may be decided in consultation with DVC authority. The water shall be drawn from the reservoir/river as and when available and intake structure/conveyance system should be designed accordingly. As water in the reservoir/river may not be available during certain days in the year particularly during summer months, your department may have to make arrangement for captive storage to meet water requirement of your department in such situations.

(B) Adequate care should be taken in design and construction of the intake structure to ensure availability of water even during summer months. The intake structure should be able to withstand the high flows of the river.

(C) The sourcing point and concurrence for million gallon/day(MGD) of water is project specific. The water drawn shall, in no way be utilize by your department for any other purpose.


(D) Your department will have to ensure that the effluent water discharging out of your plant conform to the latest regulations/ prescribed water quality parameter. On this aspect DVC will also conduct checks regularly.

(E) You shall have to execute an agreement with DVC and pay charges to DVC for the water drawn as per the terms and conditions in force. The allocation will come into effect from the day of execution of the agreement with DVC. The allocation of water will be treated as cancelled if your office does not

Site Specific Environmental Management Plan

Appendix- 02- Land purchase for sub-station near intake point (Under process)

244


 OFFICE OF THE EXECUTIVE ENGINEER
 DAMODAR HEADWORKS DIVISION
 IRRIGATION & WATERWAYS DEPARTMENT
 GOVT. OF WEST BENGAL
 D.V.C. NEW COLONY, DURGAPUR - 713006, DIST - PASCHIM BARDHAMAN

email: damodarchadheadworksdivision@gmail.com
WF 0343 2552640

Memo. No. 3182 Date: 06/11/2019

To:
The Superintending Engineer,
Damodar Irrigation Circle,
Kanaatsthal, Purba Bardhaman

Sub: *Relinquishment of Departmental land measuring more or less 0.40acre comprising R.S. Dag No. 432/2373 in Mouza-Natungram, I.L. No. 14 Block - Barjara, Dist. Bankura in favour of Land and Land Reforms & Refugee Relief and Rehabilitation Department for its resumption by the district Magistrate and Collector, Bankura and subsequent transfer to Public Health Engineering Department required for Construction of Intake well and Access Bridge.*

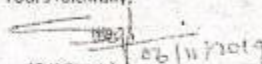
Ref: Your Memo. NO. 1579 Dtd. 15.07.2019, this office memo. no. 1368 Dtd. 03.07.2019 and memo. no. 110-1(LAM)/1(LAM)4M(18) Dtd. 31.05.2019 of Assistant Secretary to the Govt. of West Bengal.

Sir,

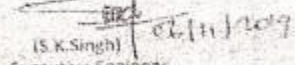
I am to submit herewith the above stated land relinquishment proposal in favour of P.H.E Department with following documents:

- Land Plan (One copy in tracing cloth and six copies of the same in ammonia print).
- Copy of ROR of plot in question

It is certified here that the plot of land is surplus and spareable and no longer required by this Deptt.
This is for favour of your kind disposal please.

Yours faithfully,

 (S.K. Singh)
 Executive Engineer,
 Damodar Head Works Division,
 Durgapur - 02

Memo. No. 3182/1 Date: 06/11/2019
 Copy for information to the Sub-Divisional Officer, Damodar Headworks Sub-Division, Durgapur - 02.


 (S.K. Singh)
 Executive Engineer,
 Damodar Head Works Division,
 Durgapur - 02

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

Design, Construction and Operation-Maintenance of Raw Water Intake Well, Water Treatment Plant, Raw and Clear Water Transmission Main for Mejia and Gangajalghati Blocks

(Package No: WBDWSIP/DWW/NCB/BK/03/2018-19)

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Appendix-03- Road cutting permission (Under process)

	
GOVERNMENT OF WEST BENGAL OFFICE OF THE EXECUTIVE ENGINEER PROJECT IMPLEMENT UNIT, WBDWSIP, P.H.E.DTE. PHE COMPLEX [BESIDES PHE MECHANICAL] : AAILAKANDI : P.O- KATIURIDANGA BANKURA : PIN - 722102, Phone No. 03242-259370/71, email : ee_bank_wb@wbphed.gov.in	
Memo No :- / EE / PIU / Bankura	Bankura the Dated : / / 2019
To The Executive Engineer Bankura Highway Division P.W. Roads Dte. Govt. of WB	
Sub: Request for providing of Right Of Way (ROW) Drawing of relevant roads. Ref: This office memo no 104/EE/PIU/Bankura Dated : 03.07.2019	
You are aware that Public Health Engineering Department has taken up Bankura District Pipe Water Supply Scheme (Phase-II) assisted by Asian Development Bank (ADB) and in this context, Raw and Clear water pumping Mains need to be laid along different roads as required. Therefore, Right Of Way drawing of different roads is necessary to decide the alignment for the proposed Water Supply Line.	
In this regard, this is to request you to provide the Right Of Way (ROW) drawings for different roads as mentioned in attached sheet at an early date. Your kind co-operation in this regard is highly solicited.	
Thanking You  Executive Engineer PIU, Bankura WBDWSIP PHE Dte. Govt. of West Bengal	
Memo No :- 189/3/ EE / PIU / Bankura	Bankura the Dated : 04 / 09 / 2019
<u>Copy forwarded for information to:-</u> 1) The Superintending Engineer, PIU, Bankura, WBDWSIP, PHE Dte. 2) The Assistant Engineer (HQ), PIU, Bankura, WBDWSIP, PHE Dte. 3) The Assistant Engineer - I, PIU, Bankura, WBDWSIP, PHE Dte.	
 Executive Engineer PIU, Bankura WBDWSIP PHE Dte. Govt. of West Bengal	



L&T Construction
Water & Effluent Treatment

**Design, Construction and Operation-
Maintenance of Raw Water Intake Well, Water
Treatment Plant, Raw and Clear Water
Transmission Main for Mejhia and Gangajalghati
Blocks**

(Package No: WBDWSIP/DWW/NCB/BK/03/2018-19)

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As Per Pipeline Route Network Survey ROW Required for The Following Roads for Pkg 3

Raw Water and Clear Water Transmission Main

Mejhia and Gangajalghati Block

SL No.	Road Name	Maintain By	Chainage No.	
			From	To
Clear Water Transmission Main (Mejhia Block)				
1	Nandanpur-Maliara Road (Nandanpur to Purbatore)	PWD	0	5
2	Saltora-Mejhia Road (Mejhia Chourasta to Mohana)	PWD	19	9
3	Kalidaspur More To Bharra OHR	PWD		
Clear Water Transmission Main (Gangajalghati Block)				
4	Borjora-Maliara-Durlavpur Road	PWD	16	12
5	Desuria-Nabagram-Nischintapur-Salbedia-Suara-Ramharipur Ramkrishna Mission Road	PWD	0	12
6	Saltora-Kustholia-Deuli-Mejhia Road	PWD	0	6


As Per Pipeline Route Network Survey ROW Required for The Following Roads for Pkg BK2A and BK2B

Clear Water Transmission Main

Indpur and Taldangra Block

Sl. No.	Road Name	Maintain By	Chainage No.	
			From	To
Clear Water Transmission Main (Indpur Block)				
1	Gobindapur-Uparkechanda-Jugibaid-Bibarda-Shibdanga More Road (Gobindapur to Chenchuria)	PWD	20	0
2	Bankura-Indpur-Bangla-Khatra Road (Gonidapur to Siromonipur)	PWD	30	20
Clear Water Transmission Main (Taldangra Block)				
3	Bankura-Simlapal Road (Bendalaxmanpur to Fulmoti)	PWD	22	29
4	Bishnupur- Nakajuri-Taldangra Road (Shibdanaga More to Manikmara	PWD	0	7
5	Taldangra-Panchmura-Chowbeta Road (Taldangra More to Chakmanjuriprasadpur)	PWD	0	18


Assistant Engineer-I
PIU Bankura WBDWSIP, PHE Dis
Govt. of West Bengal


Executive Engineer (Civil)
PIU Bankura WBDWSIP, PHE Dis.
Govt. of West Bengal



L&T Construction
Water & Effluent Treatment

**Design, Construction and Operation-
Maintenance of Raw Water Intake Well, Water
Treatment Plant, Raw and Clear Water
Transmission Main for Mejia and Gangajalghati
Blocks**

(Package No: WBDWSIP/DWW/NCB/BK/03/2018-19)

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GOVERNMENT OF WEST BENGAL
OFFICE OF THE EXECUTIVE ENGINEER
PROJECT IMPLEMENTATION UNIT, BANKURA, WBDWSIP, P.H.E.DTE.
AAILAKUNDI: DISTRICT-BANKURA
PIN - 722102, email : ee.piubankura.adb@wbphed.gov.in

Memo No :- / EE / PIU / Bankura

Bankura the Dated : / / 2019

To
The Executive Engineer
Bankura Division
WBSRDA, Govt. of WB

Sub: Request for providing of Right Of Way (ROW) Drawing of relevant roads.
Ref: This office memo no 103/EE/PIU/Bankura Dated : 03.07.2019

This is to state that Public Health Engineering Department has taken up Bankura District Pipe Water Supply project (Phase-II) assisted by Asian Development Bank (ADB) and in this context, Raw and Clear water pumping Mains need to be laid along different roads as required. Therefore, Right Of Way (ROW) drawing of different roads is necessary to decide the alignment for the proposed Water Supply Line.

In this regard, this is to request you to provide the Right Of Way (ROW) drawings for different roads as mentioned in attached sheet at an early date. Your kind co-operation in this regard is highly solicited.

Enclo :- :- As Stated above.

Thanking You

Sd/-
Executive Engineer (Civil)
PIU Bankura WBDWSIP, PHE Dte.
Govt. of West Bengal

Memo No :- 103/EE/PIU/Bankura

Bankura the Dated : 04/09/2019

Copy forwarded for information to:-

- 1) The Superintending Engineer, PIU, Bankura, WBDWSIP, PHE Dte.
- 2) The Assistant Engineer (HQ), PIU, Bankura, WBDWSIP, PHE Dte.
- 3) The Assistant Engineer - I, PIU, Bankura, WBDWSIP, PHE Dte.

Sd/-
Executive Engineer (Civil)
PIU Bankura WBDWSIP, PHE Dte.
Govt. of West Bengal



L&T Construction
Water & Effluent Treatment

**Design, Construction and Operation-
Maintenance of Raw Water Intake Well, Water
Treatment Plant, Raw and Clear Water
Transmission Main for Mejia and Gangajalghati
Blocks**

(Package No: WBDWSIP/DWW/NCB/BK/03/2018-19)

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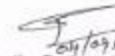
Site Specific Environmental Management Plan

As Per Pipeline Route Network Survey ROW Required for The
Following Roads for Pkg 3

**Raw Water and Clear Water Transmission Main
Mejia and Gangajalghati Block**

Sl. No.	Road Name	Maintain By	Chainage No.	
			From	To
Raw Water Transmission Main				
1	Borjora-Maliara-Durlavpur Road	WBHDC	7	16
Clear Water Transmission Main (Mejhia Block)				
2	Borjora-Maliara-Durlavpur Road	WBHDC	16	19


09/09/19
Assistant Engineer-I
PIU Bankura WBDWSIP, PHE Dte.
Govt. of West Bengal


04/09/19
Executive Engineer (Civil)
PIU, Bankura, WBDWSIP, PHE Dte.
Govt. of W. B.




L&T Construction
Water & Effluent Treatment

**Design, Construction and Operation-
Maintenance of Raw Water Intake Well, Water
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(Package No: WBDWSIP/DWW/NCB/BK/03/2018-19)

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GOVERNMENT OF WEST BENGAL
OFFICE OF THE EXECUTIVE ENGINEER (CIVIL)
Project Implementation Units : BANKURA, P.H.E.DTE.
PHE COMPLEX [BESIDES PHE MECHANICAL] : AAILAKANDI : P.O- KATJURIDANGA
BANKURA : PIN - 722102, Phone No. 03242-259370/71, email : ee_bank_ws@wbphed.gov.in

Memo No- -Bankura Dated - Bankura The

To
The Executive Engineer
Bankura Division , WBSRDA
Govt. of W.B.


Sub: Request for providing ROW (Right Of Way) drawing and joint site visit.

You are aware that Public Health Engineering Department has taken up Bankura District Pipe Water Supply Project (Phase-II) assisted by Asian Develop Bank (ADB) and in this context Raw and Clear water pipeline will be laid along different roads. Likewise, a Raw Water Pumping Main will be laid along Maliara-Durgapur Road as shown in the attached sketch map.

Therefore, this is to request you to provide the ROW (Right Of Way) drawing for selection of alignment of the said pipeline and a joint site visit may be arranged for the above purpose.

Your early action in this regard is highly solicited.


Encl: Sketch of route of the pipeline.

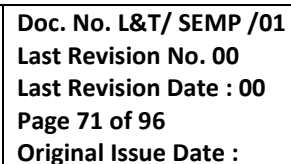

Executive Engineer
Project Implementation Unit, Bankura
WBDWSIP, Public Health Engineering Dte

Memo No- 221/2/EE/PIU -Bankura Dated - Bankura The 23.03.2019

Copy forwarded for information to :-

- 1) The Superintending Engineer, PIU Bankura, WBDWSIP PHE Dte.
- 2) The Assistant Engineer-I, PIU- Bankura, WBDWSIP, PHE Dte


Executive Engineer
Project Implementation Unit, Bankura
WBDWSIP, Public Health Engineering Dte





L&T Construction
Water & Effluent Treatment

**Design, Construction and Operation-
Maintenance of Raw Water Intake Well, Water
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Appendix-04- Possession certificate for WTP land

Government of west Bengal
Office of the Block Land & Land Reforms Officer.
Gangajalghati, Bankura

Memo no: 234 /LR /G.Ghati./19 Dated: 29 / 05 /2019.

Possession Certificate

Delivery and taking over the possession of Govt. Vested Land on I.T.D.L in favour of Department of public Health Engineering, Govt. of West Bengal for setting up of West Bengal Drinking Water Sector Improvement Project (WBDWSIP) in the District of Bankura under P.S. Gangajalghati in Plot.No.851 of Mouza Basudebpur JI.No.13 measuring an area of 10.00 acres of land in response to the Memo.No.LM/2004/19 dt.10/04/2019 of the A.D.M & D.L.& L.R.O, Bankura and sanctioned vide Memo.No.762-GE(M)/2L-289/18 dt.08/03/2019 of the Land & Land Reforms & Relief and Rehabilitation Deptmt; Govt. of West Bengal.

The delivery of possession of the above land is made to Sri Dhiraj Mondal Assistant Engineer, PIU Bankura WBDWSIP PHE Dte on this day i.e, **29th Day of May 2019** in reference to the memo no 30/EE/PIU Bankura dt 26/04/19 of Executive Engineer PIU Bankura WBDWSIP, PHE Dte of Govt of West Bengal.

Land Schedule:
Dist. Bankura
P.S. Gangajalghati
Mouza. Basudebpur
JI.No. 13
Plot.No. 851
Area. 10.00 acres.

Possession taken over.

Assistant Engineer-I
PIU Bankura WBDWSIP, PHE Dte.
Govt. of West Bengal

Possession handed over



Block Land & Land Reforms Officer,
Gangajalghati, Bankura.

B.L.&L.R.O
Gangajalghati. Bankura

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Site Specific Environmental Management Plan

Appendix-05- Challan for CTE, WTP

PCB0029588				PCB0029588			
CHALLAN				CHALLAN			
 WEST BENGAL POLLUTION CONTROL BOARD "Paribesh Bhavan", 10A, LA Block Sector-III, Salt Lake, Kolkata-98 (1st Copy) (To be retained at the Receiving Branch) PAY-IN-SLIP				 WEST BENGAL POLLUTION CONTROL BOARD "Paribesh Bhavan", 10A, LA Block Sector-III, Salt Lake, Kolkata-98 (2nd Copy) (To be sent by the bank to the W.B.P.C.B. through link) PAY-IN-SLIP			
UNITED BANK OF INDIA Project Code : PC01 Branch : _____ Date : _____				UNITED BANK OF INDIA Project Code : PC01 Branch : _____ Date : _____			
Application No : nc0001000053002 Name & Address of the Company / Unit: Water Treatment Plant for Majhia and Gangajalghati Block water supply Scheme Under WBDWSIP				Application No : nc0001000053002 Name & Address of the Company / Unit: Water Treatment Plant for Majhia and Gangajalghati Block water supply Scheme Under WBDWSIP			
<u>Durlavpur-borjora road, Basudevpur, P.O.-Gangajalghati, P.S.-Gangajal Ghati, Dist.-Bankura, Pin-722133</u>				<u>Durlavpur-borjora road, Basudevpur, P.O.-Gangajalghati, P.S.-Gangajal Ghati, Dist.-Bankura, Pin-722133</u>			
Pollution Category : Orange Please Credit: A/C NO. 1096050101684 of WEST BENGAL POLLUTION CONTROL BOARD				Pollution Category : Orange Please Credit: A/C NO. 1096050101684 of WEST BENGAL POLLUTION CONTROL BOARD			
Code	Particulars	Remarks	Amount	Code	Particulars	Remarks	Amount
R4D	Consent to		100.00	R4D	Consent to		100.00
R4C	Consent to		0.00	R4C	Consent to		0.00
R4M	Analysis Charges		0.00	R4M	Analysis Charges		0.00
R4N	HW Authorisation		0.00	R4N	HW Authorisation		0.00
R4O	BMW Authorisation		0.00	R4O	BMW Authorisation		0.00
R4P	Import Clearance		0.00	R4P	Import Clearance		0.00
R4q	Lab Charges*		0.00	R4q	Lab Charges*		0.00
R4H	Other		0.00	R4H	Other		0.00
R4Z	Fine		0.00	R4Z	Fine		0.00
R4AR	Arrear fees		0.00	R4AR	Arrear fees		0.00
R4AD	Advance fees		0.00	R4AD	Advance fees		0.00
	Bank Service Charge		--		Bank Service Charge		--
Total			100.00	Total			100.00
* Laboratory Recognition/Registration/renewal				* Laboratory Recognition/Registration/renewal			
Depositor's Name & Signature _____				Depositor's Name & Signature _____			
Particulars of Cash/Cheque/Draft _____				Particulars of Cash/Cheque/Draft _____			
Rupees (in words) : One Hundred and Only				Rupees (in words) : One Hundred and Only			
Signature of Receiving Cashier _____				Signature of Receiving Cashier _____			



L&T Construction
Water & Effluent Treatment

**Design, Construction and Operation-
Maintenance of Raw Water Intake Well, Water
Treatment Plant, Raw and Clear Water
Transmission Main for Mejia and Gangajalghati
Blocks**

(Package No: WBDWSIP/DWW/NCB/BK/03/2018-19)

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Appendix- 06- Application for tree felling permission at WTP site

Form I (B)

* Application For Felling of Trees in Non-Forest Areas / Certificate of Clearance in respect of a Developer
[See rule 4 (a) (2) and 7 (2)]

(1) Name of the Person / Agency / Department : *Public Health Engineering Dto.*
(2) Full Postal Address : *Ailakundi, Bankura, pin-720102*
(3) Nature of proposed developmental work : *Water Treatment Plant*
(4) Land Details :
(a) Block / Panchayat / Municipality / Corporation / Others : *Gangajalghati, Radhamandya*
(b) Mouza / Ward : *Basudebpur*
(c) J. L. No. / Part No. / Plot No. : *J.L. no-13, plot no-851 (18)*
(d) Area of Land : *10 Acres*
(e) Plan of land / Map of the Land : *Hand copy attached*
(f) Total no of trees present in the land (Species and Number) : *232*
(5) Details of Trees to be felled / disposed off :- *List attached*

Number of Trees	Plot No.	Species	DBH (cm)	Approx Height (Metre)	Natural or Planted	Approx Age	Physical condition

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

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

(9) A copy of the conversion certificate obtained from the Collector under section 1C of the West Bengal Land Reforms Act, 1955, is attached.

(10) A copy of the map of the land is attached.



L&T Construction
Water & Effluent Treatment


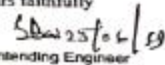
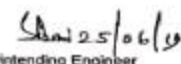

**Design, Construction and Operation-
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Appendix-07- Application for LT line shifting

 GOVERNMENT OF WEST BENGAL OFFICE OF THE SUPERINTENDING ENGINEER Project Implementation Unit, Bankura, WBDWSIP, P.H.E.DTE. RABINDRA SARANI: NEAR JAIL MORE: BANKURA: PIN - 722101 Ph No - 03242-241007, 241008 :: email: se.bank.wss@wbphed.gov.in , se.piubankura.adb@wbphed.in & piubankura.adb@wbphed.gov.in	
Memo No. 536 /SE/PIU-Bankura	Dated Bankura the 25 / 06 /2019
To The Chief Engineer (Transmission) Damodar Valley Corporation, Maithon	
Sub: - Shifting of overhead Electric supply Line from the proposed WTP site on Plot No - 851 (LR), Mouza: Basudebpur, JL No - 13, Block: Gangajalghati, District: Bankura, Under West Bengal Drinking Water Sector Improvement Project.	
Sir, In reference to the subject cited above, this is to state that, Public Health Engineering Department, Govt. of West Bengal has taken up a Water Supply Project for Majhia and Gangajalghati block, district: Bankura under West Bengal Drinking Water Sector Improvement Project assisted by Asian Development Bank (ADB). One water treatment plant of 36 MLD capacity will be constructed over Plot No - 851 (LR), Mouza: Basudebpur, JL No - 13 of Gangajalghati block, Bankura. It has been noticed that an overhead electric supply line of 33 KVA passes over the stated plot. This electric supply line is required to be shifted for construction of various units of water treatment plant. In this connection you are hereby requested for taking necessary action from your good end for shifting of the said overhead electric supply line out of the proposed WTP site.	
Your Co-operation in this regard is highly solicited.	
Yours faithfully  Superintending Engineer PIU-Bankura, WBDWSIP, PHE Dte. Govt. of West Bengal	
Memo No. 536/1-5 /SE/PIU-Bankura	Dated Bankura the 25 / 06 /2019
Copy forwarded for information and necessary action:- 1) The Chief Engineer & Project Director, PMU, WBDWSIP, PHE Dte. 2) The Chief Engineer, System and Planning, DVC, DVC Headquarters, DVC Tower, VIP Road, Kol : 54 3) The Chief Engineer, I & Head of Project, DVC, Mejia Thermal Power Station, Bankura- 722183. 4) The Executive Engineer, PIU, Bankura, WBDWSIP, PHE Dte. 5) The Team Leader, DSISC, PIU-Bankura, WBDWSIP.	
 Superintending Engineer PIU-Bankura, WBDWSIP, PHE Dte. Govt. of West Bengal	
	
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L&T Construction
Water & Effluent Treatment

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Appendix- 09- Company's Health and safety guideline

Corporate Environment, Health & Safety (EHS) Policy

We remain committed to safeguarding the health and safety of our employees and other stakeholders and preserving the environment.

To fulfil the above commitment, we will ensure the following:

- Incorporate applicable EHS requirements across all processes, right from tendering, planning, design, recruitment and procurement, production, execution, operation and maintenance to align with their respective business objectives
- Meet or exceed all applicable legal and other compliance obligations, irrespective of the stipulations of the enforcement authorities in the country of operation
- Pay serious attention to workmen welfare, especially to their habitat, to improve morale, retention and thereby productivity
- Impart structured training and augment resources for effective EHS performance
- Prevent adverse environmental impact and occupational health and safety risks
- Conserve natural resources, minimize waste generation and environmental emissions
- Encourage communication, consultation and collaboration with all stakeholders
- Establish SMART EHS objectives to permanently reduce EHS risks by eliminating hazards or substituting with less harmful equipment, material, methods and review implementation to achieve continual improvement.

This policy to be communicated to all our stakeholders and reviewed every year to ensure that it remains relevant to our business and effective to improve performance.

Date: 1st July, 2019

S N SUBRAHMANYAN

Chief Executive Officer
& Managing Director



LARSEN & TOUBRO

It's all about Imagineering



L&T Construction
Water & Effluent Treatment

**Design, Construction and Operation-
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ENVIRONMENT HEALTH & SAFETY POLICY

The **Water and Effluent Treatment IC** of L&T Construction is committed to conserve the Environment and to provide a Healthy, Safe and Cordial Workplace to Employees and Stakeholders.

EHS Philosophy

- Minimize the Environmental Aspect & Impacts
- All incidents are preventable
- "Zero Harm" across the work places and offices
- Preserve natural resources for future generations and
- No task is so important that risk of Injury to people or damage to the environment is justified

The objectives of this EHS Policy shall be achieved by

- Integrating the EHS Plan and Procedures into every operations of the Independent Company.
- Achieving an incident free work places and offices through proactive capturing and correcting of maximum number of UA/UC/UB, Near Miss and First-Aid cases and subsequent reduction of Severity Rate, Frequency & Fatality Rates
- Compliance to applicable Legal and Other Requirements.
- Elimination & Reduction of OH&S Hazards and Risks.
- Encouraging the preparation of HIRA & EAISR across the sites and offices to have better proactive EHS hazard control measures and minimize the environmental aspect and impact
- Inculcating a positive EHS culture among employees through continuous training and awareness programs
- Encouraging Communication, Consultation and Coordination among Employees, Stakeholders and External Agencies
- Achieving continual improvement by integrating EHS procedures into every process and through periodic internal/external auditing of IMS Management System
- Continuous monitoring of EHS Implementation across the IC through various software modules
- Assessing and employing the Sub-Contractors complying with L&T/WET-IC IMS Standard.
- Engages, Motivates and Develops Employees to promote Sustainability Initiatives that result in Innovative Ideas, Operational efficiencies, Cost savings and a reduced Environmental footprint.
- Preserving water through Reduce, Reuse and Recycle principles.

The Top management is committed to provide Manpower, Infrastructure and Financial assistance for achieving the above EHS objectives. Employees are accountable and responsible for implementing and maintaining the EHS Management System across the WET-IC, Business Units, Tendering & Contracts, EDRC, P&M, HR, HR (W), IR & Admin, Supply Chain & Sub-Contractor Management and other Functional departments and Sites shall support and implement the above Management directives to achieve "Zero Harm" across the WET-IC as per employment conditions.



S. Rajavel
SR. VP & Head

Water & Effluent Treatment IC & SWC BU

Date: 18th September, 2018



L&T Construction
Water & Effluent Treatment IC



L&T Construction
Water & Effluent Treatment

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Appendix- 10- PUC certificates

POLLUTION UNDER CONTROL CERTIFICATE
Computerized Emission Test Certificate
M/S KOMAL MOTOR & CRANE SERVICE
OPPOSITE INDIAN BANK, H.B. ROAD, KOKAR, RANCHI-834009 | Mob. : 9955075923
Transport Department of Jharkhand

भारत सरकार

License No. 49/18

Pucco No. 49/2018001215
Reg. No. JH08B5114
Make ACE
Model 14XW

Reg Year 2011
Fuel DIESEL
EngNo 20008
ChassisNo 93712

Test Date 31-Oct-2019
Test Time 6:06:15 PM
Owner Name HARIOM ENG.WORKS
Test Fee 300

Flush and Cycle	Avg. RPM Min.	RPM Max.	Temp.
308	2672	27	

S.No.	RPM Min.	RPM Max.	Km/h	HSU %	Temp.
1	733	2536	0.11	4.7	27
2	1008	2932	0.11	4.7	27
3	2221	2849	0.11	4.7	27
Mean		Pass	0.11	4.7	

Date on 31-Oct-2019
Centre Code H.B. Road
5114
Time on 6:06:15 PM
KOMAL MOTOR AND CRANE SERVICE

Result Pass
Valid Till 29-Apr-2020

This vehicle meets the standard prescribed by Rule 115(2) of Central Motor Vehicle Rule 1989.
This Certificate is valid for Six Months only.

ALL INDIA VALID

Seal of Testing Centre

Shankar Kumar
Authorized Signatory



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POLLUTION UNDER CONTROL CERTIFICATE
(Under the West Bengal Motor Vehicles Rules, 1989)

Vehicle Registr. No.: **WB-01 C 7041931**
Date of Issue: **12 Dec 2019** Valid upto: **11 Jun 2020**

Pollution Level
CO (%) **1.31**
HC (ppm) **43.07**
SD (HSU) **89**

PUC Certificate issued by:
VEHICLE PASSED

License No. and Seal:
Baba Lokenath AETC Barjora, Bankura
BANK 1/98-99

TRANSPORT DEPARTMENT SEAL

POLLUTION UNDER CONTROL CERTIFICATE
(Under WB Motor Vehicle Rules, 1989)

BABA LOKENATH A.E.
BARJORA, BANKURA

SL No: 459
Licence No.: **BANK 1/98-99**
PUCC No.: **WB0012019459**
Vehicle No.: **WB19H 3760**
Year Of Reg: **2016**
Odomtr Reading: **11225**
Fuel: **Diesel**
Date: **12 Dec 2019**
Time: **10:25:48 AM**

Test Station Code: **WB-01 C 7041931**
Type Of Vehicle: **3DX SUPER 4WD**
Type Of Engine: **4 Stroke**
Make: **JCB**
Model: **3DX SUPER 4WD**
Engine No.: **13275**
Chassis No.: **94761**
Customer Name: **SUMAN TEWARI**
Address: **-**

Testing Fees: **100 Rs**
Grade: **A**
Valid Upto: **11 Jun 2020**

Flash	Flash	Flash	Flash	Flash	Flash
Mean	Idle Rpm	Max Rpm	Mean	Idle Rpm	Max Rpm
	0800	2700		0800	2700
Trial	Idle Rpm	Max Rpm	KVal	Hsu	Oil Temp
1	838	2809	1.31	43.07	89
2	824	2751	1.21	40.57	88
3	821	2726	1.53	48.21	88
4	819	2708	1.60	49.74	89
5	820	2735	1.05	36.33	88
6	826	2885	1.22	40.82	90
7	834	2708	0.87	31.21	93
8	845	2850	0.94	33.25	89
9	843	2841	0.92	32.67	90
10	821	2865	0.85	30.62	90
RESULT= PASSED			0.90	31.94	

This vehicle meets Emission Standards Prescribed under Rule 115(2) of Central Motor Vehicle Rules 1989.

Seal Of Testing Station
Baba Lokenath Auto Emission Testing Station
Lic. No. **BANK 1/98-99**
Barjora
Bankura

Authorized Signatory



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POLLUTION UNDER CONTROL, CERTIFICATE
(Under the West Bengal Motor Vehicles Rules, 1989)

Vehicle Registr. No. **WB-39A-7459** Date of Issue: **28-08-19** Valid upto: **27-02-20**

CO (%) ☐ HC (ppm) ☐ SO_x (HSU) ☐

PUC Certificate issued by: **D.A.E.T. CENTRE**
Signature: _____ License No. and Seal: **9/BANK/06-18**

DURLOVPUR A.E.T.C
AMDANGA
PERTOL ★ DIESEL

POLLUTION UNDER CONTROL, CERTIFICATE
(Under the West Bengal Motor Vehicles Rules, 1989)

Transport Department Govt of West Bengal
Lic. No. **9/BANK/06-18**
DURLAVPUR A.E.T. CENTRE
AMDANGA, MTPS, DURLOVPUR, BANKURA, W.B.
PH-8145339369, Aji-7872485168- 9153293862

Fuel Code: WB License No: 9/BANK/2006-07 Test Station Code: 1

PUC No: WB 10049 Reg. No: WB-39A-7459
Name: SURAJIT SAHA Category: D VAN
Address: DURGAPUR Make: MAHINDRA
BWN Model: SCORPIO
M- Date of Reg: 2012
Date: 28-08-19 Speedo mtr Rdg: 00
Time: 09:15 AM Engine No: 4485
Fuel: Diesel Chassis No: 0071

Flushing Cycle Mean: RPM Min: 00380 RPM Max: 02560

S No.	RPM min	RPM max	Km-1	Hsu %	OTP C
1	00950	01781	00.58	22.2	078.58
2	01050	01790	00.59	22.3	079.51
3	01070	02272	00.59	22.5	080.51
4	01071	02841	00.58	22.5	082.51
Mean	00326	01804	00.09	11.5	078.52

Valid Up To **27-02-20**
Grade: A
Test Fee: 100

This vehicle meets emission Standards Prescribed under rule 115 (2) of central Motor Vehicle Rule's 1989

Seal of Testing Centre: _____ Authorized Signature: _____

DURLOVPUR A.E.T.C
AMDANGA
PERTOL ★ DIESEL
Lic. No.-9/Bank/06-07



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POLLUTION UNDER CONTROL CERTIFICATE
(Under the West Bengal Motor Vehicles Rules, 1989)

Vehicle Registr. No: **WB67B-4292** WB-01-D **4961694**

Date of issue: **01/Jul/2019** Valid upto: **31/Dec/2019**

Pollution Level
CO (%) **4.12**
HC (ppm) **1.13**
SD (HSU) **1.13**

PUC Certificate issued by: **P.C POLLUTION CHECKING CENTRE**
Signature: **INDIA VALID**

POLLUTION UNDER CONTROL CERTIFICATE
(Under The Bengal Motor Vehicles Rules, 1989)

P.C POLLUTION CHECKING CENTRE

Table Code: **WWB**

PUC Number: **PWB000000065** Vehicle Type: **4W**
Name: **S PATRA** Reg No: **WB67B-4292**
Address: **SELF** Reg Date: **Jan-17**
O Manufacture: **MAHINDRA**
WB Model: **BOLERO**
Test Date/Time: **01/07/2019 10:38** Odometer Rdnng: **21021**
Tuning: **NO** Engine Numb: **50176**
Fuel: **Diesel** Chassis Numb: **13703**


Free Acceleration Test Result:

#	Min.RPM	Max.RPM	OTL(°C)	HU(%)	K(m ⁻¹)
1	1235	2700	96	4.20	0.93
2	1050	2450	97	4.10	0.097
3	1040	2380	97	4.00	0.095
4	1050	2500	98	4.20	0.100
Avg	1093.75	2495	97	4.125	0.306

Test Result: **PASS**
Grade: **A**
Valid Upto: **31/Dec/2019**
Test Fee: **RS-100**

Certified that this vehicle's emission levels are within the limits under 155(2) of CMV Rule

Authorized Sign: **S. Patra**

 L&T Construction <i>Water & Effluent Treatment</i>	Design, Construction and Operation- Maintenance of Raw Water Intake Well, Water Treatment Plant, Raw and Clear Water Transmission Main for Mejia and Gangajalghati Blocks (Package No: WBDWSIP/DWW/NCB/BK/03/2018-19)	Doc. No. L&T/ SEMP /01 Last Revision No. 00 Last Revision Date : 00 Page 83 of 96 Original Issue Date :
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Appendix-11- WC policy

	
Certificate No: 694	Date: 02-Dec-2019
<u>To whomsoever it may concern</u>	
<p>This is to certify that we have issued Group Personal Accident Policy No. 4005/102843874/04/000 to M/S. Larsen & Toubro Limited valid for the period 31-03-2019 to 30-03-2020.</p> <p>This Policy covers all Permanent Workers, Temporary Workers, Sub-contractor's Workers, Piece-rate workers, Trainee Workers working at Project/Office of L&T Ltd and their Subsidiary & Associate Companies, Factories & Consortiums, SPVs, JVs, L&T Infrastructure Development Projects Ltd, L&T Hydrocarbon Engineering Ltd located anywhere in India.</p> <p>This Policy covers the above workers in the following project site.</p> <p>LE190276 - Design, Construction & Operation -Maintenance of Raw Water Intake Well, Water Treatment Plant, Raw & Clear Water Transmission Main for Mejhia and Gangajalghati Blocks in Bankura.</p>	
<p>For ICICI Lombard General Insurance Co Ltd</p> <div style="text-align: center;">  Rathnakar Nairy K Associate Vice President – Specialized Industries </div>	
<div style="display: flex; justify-content: space-between;"> <div> <p>ICICI Lombard General Insurance Company Limited AA</p> <p><small>Mailing Address:</small> 401 & 402, 4th Floor, Interface 11, New Linking Road, Malad (West), Mumbai - 400 064.</p> </div> <div> <p><small>Registered Office:</small> ICICI Lombard House, 414, Veer Savarkar Marg, Near Siddhi Vinayak Temple, Prabhadevi, Mumbai - 400 025.</p> </div> <div> <p><small>Toll free No. :</small> 1800 2666 <small>Alternate No.:</small> 0 92236 22666 [chargeable] <small>Email :</small> customersupport@icicilombard.com <small>Website :</small> www.icicilombard.com</p> </div> </div>	



L&T Construction
Water & Effluent Treatment

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Appendix- 12- Labour License



GOVERNMENT OF WEST BENGAL
OFFICE OF THE DEPUTY LABOUR COMMISSIONER , BANKURA SADAR
OFFICE OF THE DEPUTY LABOUR COMMISSIONER, BANKURA, 1/2/B, CHANDMARIDANGA, BANKURA -
722101.

FORM VI [See Rule 25(1)]

Licence No. : **BAN04/CLL/000188**

Date : **13th Aug, 2019**

Lic Fees	250
S. Deposit	10000

LICENCE

Licence is hereby granted to **Larsen & Toubro Limited at Banashree Pally, Barjora, Block- Barjora , Bankura Sadar , PS - Barjora , District - Bankura, Pin Code - 722202** under Section 12(1) of the Contract Labour (Regulation and Abolition) Act, 1970 subject to the conditions specified in Annexure.

The Licence shall remain in force till: **11th Aug, 2020.**

ASHIS KUMAR GARAI

Digitally signed by ASHIS KUMAR
GARAI
Date: 2019.08.13 17:34:14 +05'30'

Licensing Officer
Under the Contract Labour(R&A) Act, 1970
&
Assistant Labour Commissioner
Bankura Sadar , Bankura

Establishment Information:

Project Implimentation Unit, Public Heath Engineering Directorate [BAN08/CLR/000038]
W.Site - Ailakundi, PHE Complex ,
Anchuri, Block - Bankura -I , Bankura Sadar - 722102, PS - Bankura , Bankura

Work site exact location:

Mejhia Inteke & WTP Project , Vill-Radhamadhabpur
Gangajalghati, Block- Gangajal Ghati , Bankura Sadar
PS - Gangajalghati , District - Bankura, Pin Code - 722133



L&T Construction
Water & Effluent Treatment

**Design, Construction and Operation-
Maintenance of Raw Water Intake Well, Water
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ANNEXURE

The licence is subject to the following conditions:

- (1). The licence shall be non-transferable.
- (2). The number of workmen employed as contract labour in the establishment shall not on any day, exceed **100 (One Hundred)**.
- (3). Except as provided in the rules the fees paid for the grant, or as the case may be, for renewal of the licence shall be non-refundable.
- (4). The rates of wages payable to the workmen by the contractor shall not be less than the rates prescribed for the Schedule of employment under the Minimum Wages Act, 1948, where applicable, and where the rates have been fixed by agreement, settlement or award, not less than the rates fixed.
- (5). In cases where the workmen employed by the contractor perform the same or similar kind of work: as the workmen directly employed by the principal employer of the establishment, the wage rates, holidays, hours of work and other conditions of service of the workmen of the contractor shall be the same as applicable to the workmen directly employed by the principal employer of the establishment on the same or similar kind of work provided that in the case of any disagreement with regard to the type of work the same shall be decided by the Labour Commissioner, West Bengal, whose decision shall be final.
- (6). In other cases the wage rates, holidays, hours of work and conditions of service of the workmen of the contractor shall be such as may be specified in this behalf by the Labour Commissioner, West Bengal.
- (7). In every establishment where 50 or more, women having children are ordinarily employed as contract labour there shall be provided 2 rooms of reasonable dimensions for the use of their children under the age of six years. One of such rooms would be used as a play room for the children and the other as bed room for the children. For this purpose the contractor shall supply adequate number of toys and games in the play room and sufficient number of cots and beddings in the sleeping room. The standard of construction and maintenance of the creches may be such as may be specified in this behalf by the Labour Commissioner, West Bengal.
- (8). The Licensee shall notify any change in the number of workmen or the conditions of work to the Licensing Officer.

**ASHIS KUMAR
GARAI**

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KUMAR GARAI
Date: 2019.08.13 17:35:02
+05'30'



**Design, Construction and Operation-
Maintenance of Raw Water Intake Well, Water
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Appendix- 13- Risk Policy

03

BAJAJ | Allianz

Date: 13-08-2019

Customer ID : 101770109

Customer Name : LARSEN AND TOUBRO LIMITED

Address : 11th, tower-II, Godrej Water Side Building Salt Lake city, North 24 Paraganas,
West Bengal ,700091

Dear Sir,

Subject: Interim Held Cover Letter

In consideration of having received the below premium – we hereby confirm our coverage with effect from 12-Aug-2019 00:00 Hrs strictly as per terms quoted by us on 07-Aug-2019 and subject to our standard Policy Terms and Conditions.

Line of Business	Engineering
Type of Policy	Erection All Risk Policy
Insured	Principal Public Health Engineering Directorate, Project Management Unit, West Bengal Drinking Water Sector Improvement Project, Utility Building, 1st Floor, (Premises No-09/1-0024) AA-1A, (Tank No.3), New Town Kolkata -700156
	Contractor M/s Larsen & Toubro Limited, 11th, Tower –II, Godrej Water Side Building, Salt Lake City, North 24 Paraganas, West Bengal-700091
Perils Covered	As per quote submitted
Sum Insured / Limit of liability	EAR Section 1 : INR 187,38,00,000 EAR Section 2 (Third Party Liability) : INR 200,000,000
Period of Insurance	From 12-Aug-2019 00:00 Hrs To Midnight of 26-May-2022 + 12 Extended Maintenance Period as per Proposal form
Project Period	From 27-May-2019 00:00 Hrs To Midnight of 26-May-2022
Deductible/ Retention	As per quote submitted
Exclusions	As per quote submitted
Premium Payable(Including Taxes)	EAR Total Premium : INR 26,53,301
	EAR 1 st Instalment Premium : INR 5,52,771

Additional terms:-

Job No : LE190276

Description: Design , Construction and Operation – Maintenance of Raw Water Intake well , Water treatment Plant, Raw and Clear Water Transmission Main for Mejia and Gangajalghati blocks in Bankura.



L&T Construction
Water & Effluent Treatment

**Design, Construction and Operation-
Maintenance of Raw Water Intake Well, Water
Treatment Plant, Raw and Clear Water
Transmission Main for Mejia and Gangajalghati
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BAJAJ | Allianz


Above coverages and exclusions are suggestive in nature. For complete details please refer to Policy schedule and standard Policy Terms and Conditions to be issued. Detailed Policy schedule with coverages and exclusions will be sent to you at the earliest.

This letter will be valid only till we issue an insurance policy. Non realization of cheque/DD/PO will result into cover being void ab-initio.


Thanking You,

For Bajaj Allianz General Insurance Company Limited



 L&T Construction <i>Water & Effluent Treatment</i>	Design, Construction and Operation- Maintenance of Raw Water Intake Well, Water Treatment Plant, Raw and Clear Water Transmission Main for Mejia and Gangajalghati Blocks (Package No: WBDWSIP/DWW/NCB/BK/03/2018-19)	Doc. No. L&T/ SEMP /01 Last Revision No. 00 Last Revision Date : 00 Page 88 of 96 Original Issue Date :
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Appendix- 14- Tie up letter with local Hospital

 LARSEN & TOUBRO	<small>Project Office : L&T Construction Water & Effluent Treatment Barjora, Ritali Colony PO-PS- Bankura-722202 West Bengal -India</small>
Ref: PMU/WBDWSIP/PHED/84/186. Dated: 28/02/2019& PMU/WBDWSIP/PHED/84/410. Dated: 27/05/2019	Date:22-10-2019
To, KCP Memorial Hospital Barjora – Gangajhal Ghati, District- Bankura, West Bengal -722202	
Sub: "MoU for Staff & Workers Medical Health Checkup"-Reg.	
Dear Sir,	
With reference to the above subject we are pleased to sign this MoU for staff's and worker's Medical Health Checkup as per the following:	
Purpose & Scope: Medical Health Checkup for Staff and Workers whenever necessary.	
Condition & Arrangements: Medical Health Checkups needs to be performed whenever required. You are also required to attend our staffs or workers in case of any emergency. The location/ premises will be as the convenience of both the parties.	
Timings: 24 x 7	
Payment Terms:	
Bill is to be submitted on Monthly basis & payment is to be made within fifteen days of Bill submission.	
Tax as applicable will be recovered.	
Payment will be made by NEFT/RTGS only.	
The present MoU elucidates the general conditions and arrangements for future cooperation between concerned parties.	
<small> Kolkata Cluster Office :- Godrej Waterside Building, 11 Th. Floor, Salt Lake, Sector-V/Block-Dp-3, Kolkata-700097, West Bengal, India Headquarters: Mount Poonamallee Road, Manapakkam, P.B. No. 979, Chennai - 600 089, INDIA Registered Office: L&T House, N. M. Marig, Balaro Estate, Mumbai - 400 031, INDIA Licence No. - CRN - L39999MH11945PLG094799 Website: www.LTnec.com L&T Construction - Water & Effluent Treatment is a brand of Larsen & Toubro Limited </small>	



L&T Construction
Water & Effluent Treatment

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LARSEN & TOUBRO

Signature

For and on behalf of: Larsen & Toubro Limited

Date: 22/10/19.

Thanking you in anticipation.

For L&T Construction,

ADMIN & IR
Bankura Packages (3&4).
West Bengal

Bankura- Mejia Intake & WTP Project
Bankura- Mejia Distribution

Signature



For and on behalf of: KCP Memorial Hospital

Date: 22/10/19.



Project Office :
L&T Construction
Water & Effluent Treatment
Barjua, Netaji Colony
PO+PS- Bankura-722002
West Bengal -India

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Appendix-15- Public consultation report

Summary of Public Consultations

(Package- 03)

BLOCK	MOUZA	GP	OHR/GLSR ZONE CODE	Number of Participants	Concerned/ Issues discussed	Photographs
Gangajalghati Block	Basudebpur Mouza	Bheduasole Gram Panchayat	Venue- Radhamadhabpur Village (WTP Site) Date- 12 th October, 2019	Community people (81) Male- 36 Female-45	<ul style="list-style-type: none"> Given brief description of the project to the consumers. Local people were found aware about the upcoming water supply project in their area. Collected information of total number of tube wells including working and non-working condition of the tube well present in this village. Role of ADB and PHED were discussed with them. Women of the villages said that door to door water connection will save their time. Availability of local labour during construction time was discussed. Sufficient amount of labours available in the villages. Discussed to villagers about willingness to pay 	 



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					<p>for safe water. They have no problem to pay for water.</p> <ul style="list-style-type: none">• Villagers also said that due to scarcity of water sanitation is not maintained properly.• Collect information about drainage and sewerage problems of the villages.• Collect information about the forest area.• Discussed about dust pollution, noise pollution, disturbance, road diversion (Traffic control) during construction time.• They are very much concern about plantation program. A play ground situates near WTP area, they want plantation around the ground due to cutting of tree for project implementation.• They want a road beside the ground for passing of vehicles which is used for construction activities.	
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PHOTOGRAPHS: -



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WEST BENGAL DRINKING WATER SECTOR IMPROVEMENT PROJECT (WBDWSIP)

ATTENDANCE SHEET FOR PUBLIC CONSULTATION

District- BANGKURA Block- Gangajalghati
Venue- Radhamadhabpur Primary School Duration of discussion- 1 hour 30 minutes
Date- 12/10/2019 (WTR area) Time- 10:30 a.m.
11:30 a.m.
No. of participants- 81 (Male- 36 Female- 45)

Sl. No.	Name	Sex	Address	Contact Number
1.	Sulekha Majhi	F	Radhamadhab pu.51	7908714080
2.	Lolika Akhali	F	"	7598013761
3.	Dhaneguarzi Mondal	F	"	9547217470
4.	Anari Kali Mondal	F	"	9732379050
5.	Tripti Sen	F	Radhamadhab pup	7
6.	Manja kumbhakar	F	Radhamadhab abpup	7584058086
7.	Movmital Goswami	F	"	8116560285
8.	স্নান কুম্ভকার	F	"	
9.	গোবিন্দী সেন	F	"	960208909
10.	Bani Mondal	F	"	9434036479
11.	Aparna Mondal	F	Radhamadhab puz	9475736295
12.	Jhilik kumbhakar	F	"	9547275541
13.	Bandana Mondal	F	"	9002745389
14.	স্নান সেন	F	"	
15.	স্নান সেন	F	"	



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WEST BENGAL DRINKING WATER SECTOR IMPROVEMENT PROJECT (WBDWSIP)


ATTENDANCE SHEET FOR PUBLIC CONSULTATION

District-
Venue-
Date-

Block-
Duration of discussion-
Time-

No. of participants- (Male- Female-)

Sl. No.	Name	Sex	Address	Contact Number
67	শ্রী ১৫৮৩৫ ১৭১৭৩	M		
68	→ Kanchan Dey	M		৯৭১৮৮৩০৭১২ ৭৭৩২২৪৭১৩৭
69	→ Deep Shankar Roy	M	Banyas	৯৮৩১০৩০০৬৭
৭০	→ J. N. SAHA	M	হাজলি	
৭১	→ Sanjib Ghosh	M	R.M.P	৮১১৬৬০৭১৬১
৭২	→ শ্রী ১৫৮৩৫ ১৭১৭৩	M		
৭৩	→ শ্রী ১৫৮৩৫ ১৭১৭৩	M	R.m.p	৭৭৮৮৮৭২৭১৩৫
৭৪	→ শ্রী ১৫৮৩৫ ১৭১৭৩	M	R.m.p	
৭৫	→ শ্রী ১৫৮৩৫ ১৭১৭৩	M	R.m.p	৬২৭৫৭৮২৭১৩
৭৬	→ শ্রী ১৫৮৩৫ ১৭১৭৩	M		৮৩৭২৬৮৮৫৬১
৭৭	→ Pradip Das	M	DSISC office Bankura	৯৭৩৭২৫৩২২৩
৭৮	→ Chandra K. Majumdar	M	DSISC Bankura	৮১১৮৬১১৬২৭
৭৯	→ শ্রী ১৫৮৩৫ ১৭১৭৩	F		
৮০	→ শ্রী ১৫৮৩৫ ১৭১৭৩	F		
৮১	→ শ্রী ১৫৮৩৫ ১৭১৭৩	F		

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Appendix- 16- GRM registration form (Local and English Language)

(Available in Bengali and English)

The _____ Project 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	Project Town			
		Project:			
Contact information/personal details					
Name		Gender	* Male * Female	Age	
Home address					
Place					
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)	
Mode of communication: Note/letter E-mail Verbal/telephonic	
Reviewed by: (Names/positions of officials reviewing grievance)	
Action taken:	
Whether action taken disclosed:	Yes No
Means of disclosure:	



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অভিযোগ নিবন্ধন ফর্মের নমুনা

..... প্রকল্পকে বাস্তবায়িত করার লক্ষ্যে অভিযোগ, পরামর্শ, অনুসন্ধান এবং মন্তব্যের জন্য স্বাগত।

আমরা অভিযোগকারীকে অভিযোগ সহ নাম জানাতে উৎসাহিত করি এবং আপনার সাহচর্যে এসে এর শোধন ও প্রতিক্রিয়া জানাতে সক্ষম হই।

অবশ্যই আপনি আপনার ব্যক্তিগত বিষয় বিস্তারিত ভাবে যুক্ত করতে ইচ্ছাপ্রকাশ করবেন। যে তথ্য আপনি দেবেন, তা অবশ্যই গোপন থাকবে। তাই অনুগ্রহ করে আপনার নাম লিখে / টাইপ করে জানান।

তারিখ	নিবন্ধনের জায়গা	প্রকল্পের শহর প্রকল্পঃ			
যোগাযোগের তথ্য / বিস্তারিত ব্যক্তিগত তথ্য					
নাম		লিঙ্গ	পুরুষ মহিলা	বয়স	
বাড়ীর ঠিকানা					
জায়গা / স্থান					
ফোন নং					
ই-মেল					
যেকোন অভিযোগ / পরামর্শ / মন্তব্য / প্রশ্ন অনুগ্রহ করে নিচে বিস্তারিতভাবে (কে, কি, কোথায় এবং কেমন করে) আপনার অভিযোগ জানান					
যদি কোন সংযুক্তি / চিরকুট / চিঠি অন্তর্ভুক্ত করতে চান, অনুগ্রহ করে সেখানে টিক দিন।					
আপনার অভিযোগ / মন্তব্যের হালনাগাদ (আপডেট) বা প্রতিক্রিয়া কিভাবে পেতে চান?					

Office ব্যবহারের জন্যঃ

অভিযোগ নিবন্ধনকারী আধিকারিকের নামঃ	
যোগাযোগ ব্যবস্থাঃ	
চিরকুট / চিঠি-	
ই-মেল-	
মৌখিক / টেলিফোন-	
নিবন্ধকৃত অভিযোগ পর্যালোচনাকারী আধিকারিকের নাম ও পদঃ	
অভিযোগের বিরুদ্ধে গৃহীত ব্যবস্থা-	
গৃহীত ব্যবস্থা প্রকাশ্যে আনা হয়েছে কি না	হ্যা না
প্রকাশের উপায়	