

Site-Specific Environmental Management Plan

Project number: 49107-006
August 2019

IND: West Bengal Drinking Water Sector Improvement Project – Design, Construction and Operation of Water Treatment Plant, Reservoirs, Transmission Mains and Pumping Stations work in Haroa, Rajarhat and Bhangar II

Package No: WBDWSIP/DWW/N24P/01

Prepared by Public Health Engineering Department, Government of West Bengal for the Asian Development Bank.

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SITE ENVIRONMENTAL MANAGEMENT PLAN (SEMP)

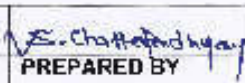


PROJECT: DESIGN, CONSTRUCTION AND OPERATION OF WATER TREATMENT PLANT, RESERVOIRS, TRANSMISSION MAINS AND PUMPING STATIONS WORK IN HAROA, RAJARHAT AND BHANGAR II

Location : New Town ; Rajarhat

CONTRACT PMU/WBDWSIP/DWW/N24P/NCB/01/2017-18 PACKAGE NO.:

EMPLOYER: PUBLIC HEALTH ENGINEERING DEPARTMENT (PHED)

CONTRACTOR: FFIL-RIL JV

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REV	DATE	PREPARED BY	CHECKED BY	APPROVED BY DSISC	APPROVED BY PIU

West Bengal Drinking Water Sector Improvement Project

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ADB	Asian Development Bank
BS	Boosting Station
EHS	Environment, Health and Safety
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
EMS	Environmental Management Specialist
GLSR	Ground Level Service Reservoir
MGD	Million Gallon per Day
MLD	Million Liter per Day
OHS	Occupational Health and Safety
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

1. Introduction

Background

A large part of India's population is dependent on groundwater as the major source of potable water. Contamination of groundwater, especially by naturally elevated inorganic contaminants like arsenic and fluoride, is a major issue in parts of the country, potentially leading to serious health hazards for the affected populations. Prolonged exposure to excess arsenic in drinking water may lead to keratosis, melanosis and cancer, while exposure to excess fluoride may lead to dental, skeletal and non-skeletal fluorosis. The total population at risk with respect to arsenic and fluoride Contamination is estimated at around 21.45 million as of August 2016.

The arsenic affected habitations are primarily concentrated in the older alluvial deposits of Ganges and Brahmaputra. An assessed 92% of the arsenic affected population are concentrated in the States of West Bengal, Assam and Bihar, of which 69% of the population are from West Bengal.

The proposed West Bengal Drinking Water Sector Improvement Project (WBDWSIP or the Project) is being prepared by the PHED, supported by its design consultants and grant funded consultants from ADB, part of which will be implemented under the Sub-Mission. Government of West Bengal is implementing the Project initially in the priority areas of the following districts: North 24 Parganas, South 24 Parganas, East Medinipur and Bankura.

The proposed Project aims to provide safe, reliable and continuous drinking water in line with government of India's guidelines and standards and with the Vision 2020 of Govt. of W.B. to about 6 million people in selected Arsenic, Fluoride, and salinity affected areas of North 24 Parganas, South 24 Parganas, East Medinipur and Bankura 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.

PHED has established a dedicated Project Management Unit (PMU) at the PHED and three dedicated Project Implementation Units (PIUs) for the priority districts: North 24 Parganas(N24P).

Project Description

The Subproject - Creation of surface water based bulk water supply system to meet the water demand of arsenic (groundwater) affected blocks of Rajarhat and Haroa in North 24 Parganas and Bhargar II in South 24 Parganas district is taken up in this subproject under the WBDWSIP. These blocks are located in the eastern side of Kolkata city.

Surface Water Source

Raw surface water is presently abstracted from River Hooghly at Rani Debendra Bala Ghat near Bagbazar and delivered through a 11.5 km, 1829 mm diameter transmission main to the existing WTP at Rajarhat. The raw water is received in five pre-settlement ponds located adjacent to the WTP site at Rajarhat. Proposed raw water intake sump will get supply from the inlet ponds and raw water will be conveyed by the proposed transmission main to the proposed WTP under this contract.

The WTP site is located near Reservoir No 1, in New Town Area, Rajarhat. The planned ultimate capacity of the WTP to be constructed in phases, preferably in 5 modules distributed among WBHIDCO and WBPHEd contracts. A 20MGD (91MLD) phase of the WTP has been already constructed by WBHIDCO and has been functional since February, 2016. Construction work for another 20MGD (91MLD) phase of the WTP is in progress. Under this Contract WBDWSIP/DWW/N24P/01, a 22 MGD (100 Mld) WTP will be constructed. Some facilities for the proposed 22MGD (100 MLD) plant is common with the existing plants.

Scope of Work

The scope of work includes the following civil works components:

- i) 22 MGD (100 MLD) Water Treatment Plant (WTP) including raw water intake facility to abstract water from the raw water ponds located within WTP campus
- ii) Clear water pumping main from WTP to Booster Pumping Station (4.3km – 1200dia, MS pipe)
- iii) 4600 kl Clear Water Reservoir and a Booster Pumping Station
- iv) 2 nos. Ground Level Service Reservoirs (GLSRs) of 3200 kl and 5000 kl, respectively at Haroa and Bhangar II.

The subject contract or **WBDWSIP/DWW/N24P/01 for Bulk Water Supply**, which includes the design, construction, supply and installation of equipment, commissioning and operation for two years of Intake, 100 Mld WTP, Clear Water Reservoir cum Booster Pumping Station (BS- I), transmission main from WTP to CWR-BS-I, GLRs cum booster stations at Haroa and Bhangar-II , completion of parts of the transmission mains between BS-I and the other GLRs cum booster stations, and completion of parts of the transmission mains between the GLRs cum booster stations and the OHRs, including all necessary surge suppression and system control (SCADA) equipment.

The Scope of Work under this contract Package is presented below.

Component A: Design, build, supply, install and commission raw water intake sump with pump house and raw water transmission main to WTP, Water Treatment Plant of 100 Mld capacity with mechanical sludge dewatering system and clear water reservoir and pumping station, sub-station within the existing WTP Complex with all ancillary Civil, Mechanical, Electrical and Instrumentation works all complete. The SCADA equipment shall cover the whole of the bulk water supply system, including Components B and C below.

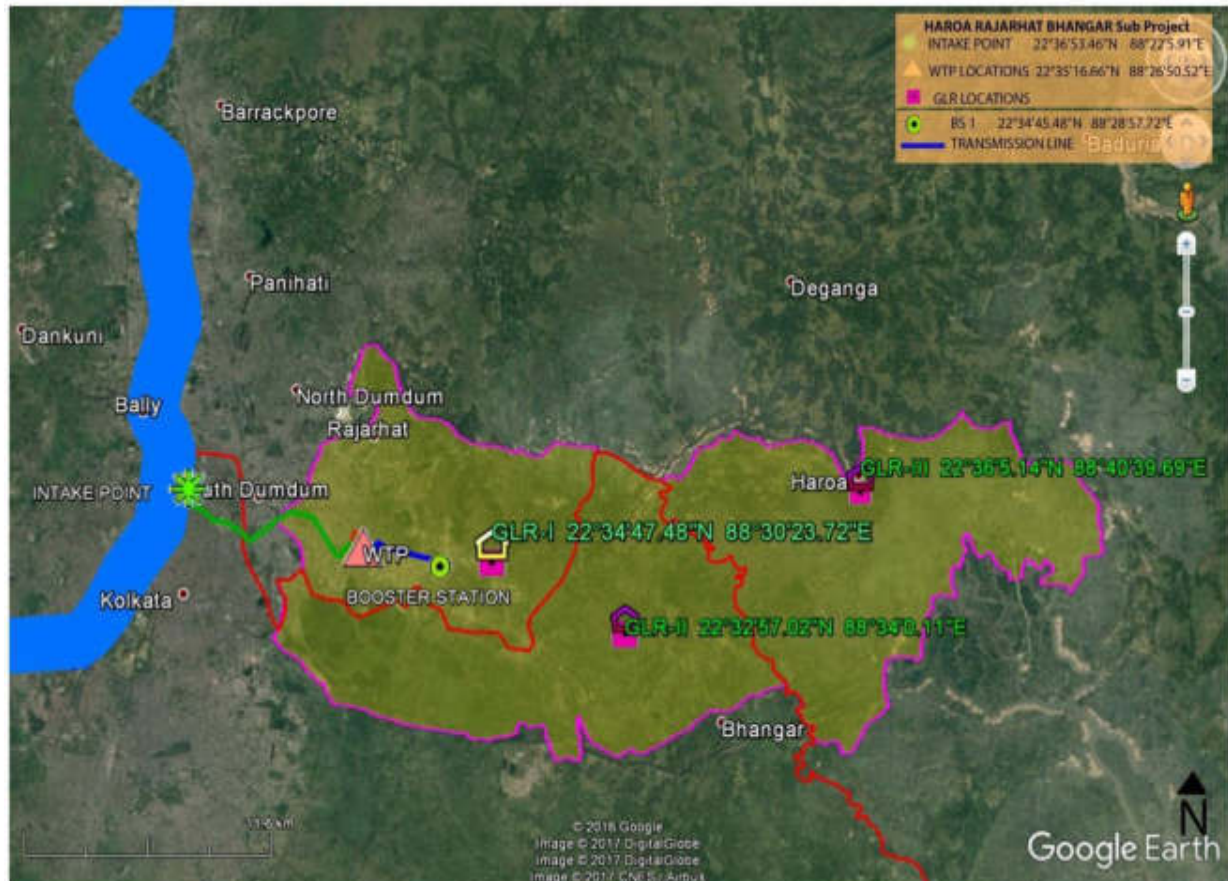
Component B: Design, build, supply, install and commission Intermediate Clear Water Reservoir cum Booster Pumping Station (BS-I), chlorination and substation and two ground level reservoirs (GLR) cum booster pumping stations at Bhangar II and Haroa with all ancillary works including booster chlorination and substation.

Component C: Design, supply, lay and commission transmission main from 100 Mld Water Treatment Plant to the Intermediate Clear Water Reservoir cum Booster Pumping Station (BS-1) including laying of substantial stretches by suitable trenchless methods; design, supply, laying of pipe line by suitable trenchless methods or over pipe carrying structure and commission transmission main in various stretches to complete the transmission mains

being laid in part by others under PHED management in primary and secondary mains as per drawing and specifications.

Component D: Operation Service (OS) for a period of 2 years after successful commissioning of the WTP and the entire Bulk Water Supply system (from the raw water intake at the pre-settlement ponds to the OHRs serving the distribution networks as per the scope under this contract in Haroa, Rajarhat, and Bhangar II.




Project Location





Project Objectives

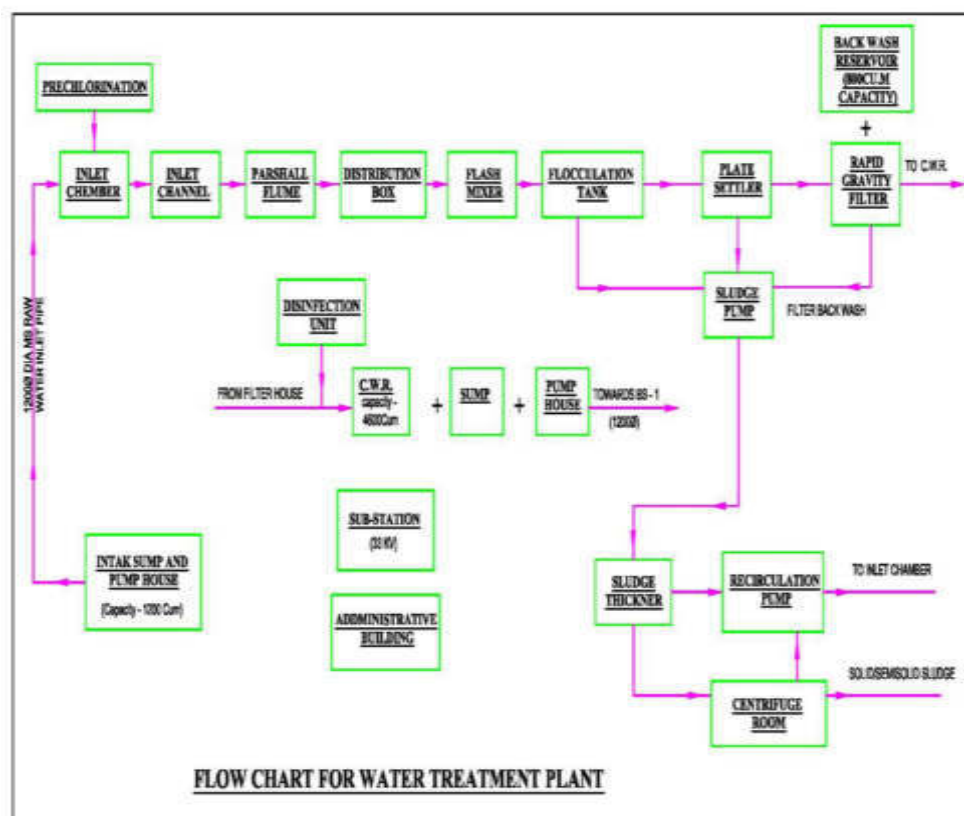
The proposed project aims to provide safe, reliable and continuous drinking water as per Government of India's standard to the people in the Arsenic, Fluoride, and salinity affected selected areas of North 24 Parganas, South 24 Parganas, districts of West Bengal.

2. Details of Project Components and Status of Progress

Infrastructure	Location and Environmental Features	Site Photograph	Status
Water Treatment Plant (WTP) – 22 MGD Capacity	<p>New WTP will be constructed within the existing WTP compound in New Town area of Rajarhat in the eastern outskirts of Kolkata. This large land parcel part of New Town developed by New Town Development Authority is earmarked for water supply facility. Currently a WTP of 20 MGD is in operation, and another 20 MGD plant is under construction. The facility also includes 5 large raw water storage ponds. There is adequate vacant space for construction of proposed plants. There is no notable tree cover at the site. However, part of the vacant land is covered with landscaped garden/lawns, part of which will be removed for construction of new plant.</p> <p>Site is surrounded by well developed areas; WTP facility is well confined by a boundary wall. New WTP will be located inside the boundary, as far as possible away from the surrounding houses.</p>		Physical Site handed Over on 22-Aug-2019
Clear Water Transmission Main (Approx. 4.3 Km)	<p>Pipeline will be laid along the roads. Pipeline will be buried along the roads connecting WTP and the booster pumping station site, both of which are located in New Town area. For most of the stretch there is adequate land in the road shoulder beside the tarmac, and pipeline will be buried under this. Alignment crosses some busy roads / highways, at these sections, trenchless technology will be adopted to cross the roads. This project area is located in the newly developing new town area; developments are still not dense.</p>		Transmission Route yet to be finalized
Booster Pumping Station and Ground Level Service Reservoir(4600 Kl capacity)	<p>Clear water reservoir and booster pumping station will be constructed within an existing booster pumping station compound in New Town area in Rajarhat. Site is situated in an area which is witnessing large scale development all around the site. Immediate surroundings of the site are currently vacant, there is no much activity. Khestopur Khal (canal or drain), which mostly carries wastewater from the city flows near the site. There are no notable sensitive environmental features in and around the site.</p>		Physical site Yet to be Handed Over

Infrastructure	Location and Environmental Features	Site Photograph	Status
Ground Level Service Reservoir(5000 KI capacity) and Pump House	Bhangar II GLSR site is located adjacent to Khestopur Khal (canal or drain) near Saduli in Bhangar. This is a privately agricultural land, and currently occupied by amango orchard		Physical site Yet to be Handed Over
Ground Level Service Reservoir(3200 KI capacity) and Pump House	Haroa GLSR is located near the bank of Vidyadhari River in Haroa. This is a privately owned vacant land.		Physical site Yet to be Handed Over

3. Typical Flow Chart for Water Treatment Plant



4. Details of Manpower

Details of contractors on-site-personnel and workers	22 MLD WTP, NEW TOWN , RAJARHAT	Remarks
Project Manager Representative	Mr. Bidyut Kumar Debnath 6292128086	
Site Engineer	Mr. Dibyendu Samanta 6292128046	
Site Supervisor	Mr. Sudipta Dey 9046970333	
Archeological supervisor	NA	
Skilled / semi-skilled workers	22	
Unskilled workers	10	
Women workers	NIL	
Workers – local / migrant	10/22	Migrant labours are from other districts of West Bengal
Details of facilities		
Construction camps, (no's and locations)	One labor camp (Rajarhat) 1. WTP site, New Town, Rajarhat	Refer Attachment 2 for details

5. Management Framework

Roles & Responsibilities

Project Organization Chart

1.	Position: Project Manager
	Name: Mr. Sujay Das
2.	Position: Dy. Project Manager
	Name: Mr. Bidyut Kr. Debnath
3.	Position: Sr. Design Engineer (Civil)
	Name: Mr. Arun Kr. Guha
4.	Position: Sr. Design Engineer (Civil)
	Name: Mr. Mrinal Mukherjee
5.	Position: Sr. Design Engineer (Mechanical)
	Name: Mr. Pronab Kr. Mukherjee
6.	Position: Sr. Design Engineer (Electrical)
	Name: Mr. Dipankar Banerjee
7.	Position: Sr. Design Engineer (Inst. & SCADA)
	Name: Mr. Subodh Kr. Datta
8.	Position: Resident Engineer (Civil)
	Name: Mr. Kaustav Sain
9.	Position: Resident Engineer (Mechanical / Electrical)
	Name: Mr. Sohan Banerjee
10.	Position: HSE Officer
	Name: Mr. Shubhankar Chattopadhyay

Induction, Training, Awareness & Competency

Objective

The objective of the environmental inductions and training is to ensure that all personnel working on the project understand and are committed to:

- Preventing environmental harm.
- Complying with the incident management procedures.

- Achieving the required environmental outcomes.
- The implementation of the OEMP.
- Awareness and compliance with legislative requirements.

Induction Content

Significant on-site and off-site environmental issues and impacts (actual or potential) of their work activities, and the environmental benefits of improved personal performance.

- Individual responsibilities.
- Environmental management techniques for relevant elements such as waste, noise, and chemical storage.
- Incident Management. Specifically,

This will include:

- Locations of the incident management plan and spill kits;
- Actions to be taken in the event of different types of emergencies;
- Responsibilities and authorities during an incident.

Emergency Response Planning**OBJECTIVE**

The Occupational Health and Safety Act requires that the contractors shall establish Emergency Response Procedures for every project. This document provides a plan to assist contractors in developing these procedures.

Emergency preparedness helps to minimize the human suffering and economic losses that can result from emergencies.

It should be understood that the size and complexity of projects, as well as their access and location, have a bearing on the degree of planning necessary for emergencies. It is therefore strongly recommended that the constructor ensure that a member of staff on site assist in developing the emergency response plan.

HOW TO DEVELOP A PLAN

Planning shall begin before any work commences on the project. Although there may be little time between the award of the contract and the start of the project, a good emergency response plan can be generic and, with some minor changes, can be easily adapted to specific sites and readily implemented. This is especially the case where a constructor specializes in similar types of projects.

Development should include the following considerations:

1. Hazard identification/assessment
2. Emergency resources
3. Communication systems
4. Administration of the plan
5. Emergency response procedure
6. Communication of the procedure

Each of these components are explained in the following sections.

Hazard Identification/Assessment

The process of hazard identification and assessment involves a thorough review that should include, but not be limited to, the following points:

- Transportation, materials handling, hoisting, equipment or product installation, temporary structures, material storage, start-up, and commissioning activities
- Environmental concerns
- Consultation with the client regarding potential hazards when working in or adjacent to operating facilities.

- Resources such as material safety data sheets (MSDSs) to determine potential hazards from on-site materials
- Proximity to traffic and public ways.

Because construction sites are frequently fast-changing, the process of hazard assessment must be ongoing to accommodate the dynamic environment. Once hazards are identified, the next task is to assess the potential or risk involved in each. For each hazard identified, ask:

- What can go wrong?
- What are the consequences?

For each potential hazard it is important to identify resources necessary for an appropriate emergency response.

For most events in construction, a simple analysis based on the experience of the people involved on the project is likely sufficient.

Emergency Resources

It is important to identify which resources are available and have contingency plans in place to make up for any deficiencies.

On-site resources such as fire extinguishers, spills containment equipment, and first aid kits must be maintained and clearly identified. Construction equipment may be included among potential emergency resources. Personnel, especially on-site medical staff or workers trained in first aid, should be included in the plan.

There may be situations where outside resources are so far away that an adequate response is not possible. In these situations, resources may have to be obtained and kept on site. Examples would include fire protection or ambulance/medical resources in remote areas.

Whatever the situation may be, people, equipment, facilities, and materials are needed for emergency response. Where they will come from must be determined in advance. Moreover, the people supplying these resources must be made aware of their role in the plan.

Communication System

An important key to effective emergency response is a communications system that can relay accurate information quickly. To do this, reliable communications equipment must be used, procedures developed, and personnel trained. It is a good idea to have a backup system in place, in case the system is rendered useless by the emergency. For example, telephone lines may be cut.

The type and location of emergency communication systems must be posted on the project. This will include location of telephones, a list of site personnel with cellular phones or two-way radios, and any other equipment available. Emergency phone numbers and the site address/location should be posted beside all site phones. On large sites, the location of emergency phones must be clearly marked. The poster Emergency Response available from site office and all working area, can be used to record this and other information.

A communication system must be made up of strategically placed equipment and properly defined responsibilities. The emergency response plan posted in a conspicuous place on the project must identify the designated equipment and the people to operate it.

Emergency Response Procedure

An emergency can be reported from any source—a worker on site, an outside agency, or the public. Remember that circumstances may change during the course of an emergency. Any procedures you develop must be able to respond to the ongoing situation.

The following list covers basic actions to take in an emergency. These steps apply to almost any emergency and should be followed in sequence.

- Stay calm.
- Assess the situation.
- Take command.
- Provide protection.
- Aid and manage.
- Maintain contacts.
- Guide emergency services.

Stay calm – Your example can influence others and thereby aid the emergency response.

Assess the situation – Determine what happened and what the emergency is. Look at the big picture. What has happened to whom and what will continue to happen if no action is taken? Try to identify the cause that must be controlled to eliminate immediate, ongoing, or further danger.

Take command – The most senior person on the scene should take charge and call, or delegate someone to call, emergency services generally and explain the situation. Assign tasks for controlling the emergency. This action also helps to maintain order and prevent panic.

Provide protection – Eliminate further losses and safeguard the area. Control the energy source.

Causing the emergency. Protect victims, equipment, materials, environment, and accident scene from continuing damage or further hazards. Divert traffic, suppress fire, prevent objects from falling, shut down equipment or utilities, and take other necessary measures. Preserve the accident scene; only disturb what is essential to maintain life or relieve human suffering and prevent immediate or further losses.

Aid and manage – Provide first aid or help those already doing so. Manage personnel at the scene. Organize the workforce for both a headcount and emergency assignments. Direct all workers to a safe location or command post. This makes it easier to identify the missing, control panic, and assign people to emergency duties. Dispatch personnel to guide emergency services on arrival.

Maintain contact – Keep emergency services informed of situation. Contact utilities such as gas and hydro where required. Alert management and keep them informed. Exercise increasing control over the emergency until immediate hazards are controlled or eliminated and causes can be identified.

Guide emergency services – Meet services on site. Lead them to emergency scene. Explain ongoing and potential hazards and cause(s), if known.

Communication of the Procedure

To be effective, an Emergency Response Procedure must be clearly communicated to all site personnel. The following activities should be considered:

- Review the procedure with new site subcontractors and new workers to ensure that it covers their activities adequately.
- Review the procedure with suppliers to ensure that it covers any hazards that the storage or delivery of their materials might create.

Review new work areas in operating plants with owner/client to ensure that new hazards are identified and covered in the procedure.

6. Anticipated Environmental Impacts and Mitigation Measures

Pre-construction Environmental Mitigation Plan

Field/Issues	Anticipated Impact	Mitigation Measures	Responsible for Mitigation	Monitoring of Mitigation	Cost and source of fund
Utilities	Telephone lines, electric poles and wires, water lines within proposed project area may get affected	<ul style="list-style-type: none"> Contingency Plan has been developed by informing to emergency services like WBSEDCL, Telecommunication, local administration and police etc. First we are digging the trial pit manually, if any obstruction arise the same is removed as per direction of end user The construction work to continue without disturbing the existing pipeline and electric poles. Spoil Management Plan is included in Attachment 7 as part of this SEMP 	PIU & DSISC	(i) List of affected utilities and operators; (ii) Bid document to include requirement for a contingency plan for service interruptions	Project cost
Water Supply	Health risk due to closure of water supply during pipe jointing and replacement of pipes	As the new transmission main line has to be constructed, therefore we may not come across this type of hazards. If required in future closure will be done in coordination with PHED, provide alternative potable water to affected households and businesses for the duration of the shut-down for a very short period	PIU & DSISC	(i) Schedule of closure; (ii) delivery of potable water to affected people by PHED	Project cost
Social and Cultural Resources	Ground disturbance can uncover and damage archaeological and historical remains	Work is not started yet. If such type of chance finds happen, we definitely will follow up as per EMP mentioned below: (i) Consulting Archaeological Survey of India (ASI) or concerned dept. of Govt. of West Bengal to obtain an expert assessment of the archaeological potential of the site; (ii) Consideration of alternatives if the site is found to be of medium or high risk; (iii) Development a protocol for use by us in	PIU & DSISC	Chance Finds Protocol	Project cost

Field/Issues	Anticipated Impact	Mitigation Measures	Responsible for Mitigation	Monitoring of Mitigation	Cost and source of fund
		conducting any excavation work, to ensure that any chance finds are recognised and measures are taken to ensure they are protected and conserved.			
Construction work camps, spot mix plants, stockpile areas, storage areas, and disposal areas.	Disruption to traffic flow and sensitive receptors	We have selected three vacant spaces near the project location at Rajarhat, Bhangar-II & Haroa by taking extreme care in selecting sites to avoid residential areas & direct disposal to water body. Hence, we do not anticipate causing any adverse impact to the community directly or indirectly.	FFIL – RIL JV will conduct a detail survey before selection of spot	List of selected sites for construction work camps, spot mix plants, stockpile areas, storage areas, and disposal areas.	Project cost
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.	Sources of materials will be from the approved quarry against all valid documents.	FFIL – RIL JV to prepare list of approved quarry sites and sources of materials	(i) List of approved quarry sites and sources of materials; and (ii) Bid document to include requirement for verification of suitability of sources and permit for additional quarry sites if necessary	Project cost

Construction Environmental Mitigation Plan

Field/ Issues	Anticipated Impact	Mitigation Measures	Responsible for Mitigation	Monitoring of Mitigation	Cost and source of fund
Sources of Materials	Extraction of rocks and material may cause ground instability	We are following the mitigation measures as per IEE. Materials are procured from sources approved by government against all valid documents.	FFIL-RIL JV	FFIL-RIL JV Document	Project cost
Air Quality	Emissions from construction vehicles, equipment, and machinery used for excavation of pipe line trenches and construction resulting to dusts and increase in concentration of vehicle-related pollutants such as carbon monoxide, sulphur oxides, particulate matter, nitrous oxides, and hydrocarbons)	Air quality monitoring to be done during construction. (i) Consultation will be carried out with PHED/DSISC on the designated areas (ii) Exposed soil and any stockpiled will be damp down on site by spraying with water when necessary during dry weather; (iii) Tarpaulins will be used to cover sand and other loose material when transported by trucks (iv) Fit all heavy equipment and machinery with air pollution control devices which will be operated during main work	FFIL-RIL JV	(i) Location of stockpiles; (ii) Complaints from sensitive receptors; (iii) Heavy equipment and machinery with air pollution control devices; (iv) Ambient air for reparable particulate matter (RPM) and suspended particulate matter (SPM); (v) Vehicular emissions such as sulphur dioxide (SO ₂), nitrous oxides (NOx), carbon monoxide (CO), and hydrocarbons (HC).	Project cost
Surface water quality	Mobilization of settled silt materials, run-off from stockpiled materials, and chemical contamination from fuels and lubricants during construction works can contaminate	Surface water quality monitoring is required and to be done before and during construction. The following measures will be considered during implementation of the project (i) Avoiding stockpiling of earth fill especially during the monsoon season unless covered	FFIL-RIL JV	(i) Areas for stockpiles, storage of fuels and lubricants and waste materials; (ii) Number of silt traps installed along drainages leading to	Project cost

Field/ Issues	Anticipated Impact	Mitigation Measures	Responsible for Mitigation	Monitoring of Mitigation	Cost and source of fund
	nearby surface water quality.	by tarpaulins or plastic sheets; (ii) Prioritization of re-use of excess spoils and materials in the construction works. If spoils will be disposed, consult with PHED/DSISC on designated disposal areas; (iii) Storage areas for fuels and lubricants will be selected away from any drainage leading to water bodies; (iv) Any wastes generated by construction activities will be disposed in designated sites; and (vi) Conduct surface quality inspection according to the Environmental Management Plan (EMP).		water bodies; (iii) Records of surface water quality inspection; (iv) Effectiveness of water management measures; (v) For inland water: suspended solids, oil and grease, biological oxygen demand (BOD), and coliforms.	
Noise Levels	Increase in noise level due to earth-moving and excavation equipment, and the transportation of equipment, materials, and people	As per our nature of work we will be using concrete mixtures, vibrators, bar cutting, grinding machine which may produce medium level of harmful noise. Noise monitoring will be carried out before and during construction. We also follow the mitigation measures as mentioned below, (i) Plan activities in consultation with PHED/DSISC so that activities with the greatest potential to generate noise are conducted during periods of the day which will result in least disturbance; (ii) Require horns not be used unless it is necessary to warn other road users; (iii) Maintain maximum sound levels not exceeding 80 decibels (dbA) when measured at a distance of 10 m or more from the vehicle/s	FFIL-RIL JV	(i) Complaints from sensitive receptors; (ii) Use of silencers in noise-producing equipment and sound barriers; (iii) Log Equivalent day and night time noise levels	Project cost
Landscape and	Solid wastes as well as excess construction	We have planned to utilize all the excavated soil back to the trench and foundation back	FFIL-RIL JV	(i) Waste Management Plan;	Project cost

Field/ Issues	Anticipated Impact	Mitigation Measures	Responsible for Mitigation	Monitoring of Mitigation	Cost and source of fund
Aesthetics	materials	filling at site and designated locations as instructed by PHED. We will maintain our company's policy for Waste Management & also follow up the requirements of bid documents. <ul style="list-style-type: none"> • Solid waste will be managed according to the following preference hierarchy: reuse, recycling and disposal to designated areas; • Removal of all wreckage, rubbish from the sites at earliest. 		(ii) Complaints from sensitive receptors; (iii) PHED/DSISC to report in writing that the necessary environmental restoration work has been adequately performed before acceptance of work.	
Accessibility	Traffic problems and conflicts near project locations and haul road	Some of the Project sites are located in the main traffic road, hence we will be following the mitigation wherever applicable according to our site need, once land is made available for work in those areas. (i) Transportation routes will be planned so that heavy vehicles do not use narrow local roads, except in the immediate vicinity of delivery sites; (ii) Schedule transport and hauling activities will be planned during non-peak hours; (iii) Site will be free from all unnecessary obstructions; (iv) Notify affected sensitive receptors by providing sign boards informing nature and duration of construction works and contact numbers for concerns/complaints.	FFIL-RIL JV	(i) Traffic Management Plan; (ii) Complaints from sensitive receptors; (iii) Number of signage placed at subproject location.	Project cost
Socio-Economic – Income.	Impede the access of residents and customers to nearby shops	Once land is made available for work outside the WTP area, we will inform nearby community & commercial establishment before executing the excavation work in that specific location before one day in advance of execution to	FFIL-RIL JV	(i) Complaints from sensitive receptors; (ii) Number of walkways, signage, and metal sheets	Project cost

Field/ Issues	Anticipated Impact	Mitigation Measures	Responsible for Mitigation	Monitoring of Mitigation	Cost and source of fund
		avoid unwanted obstruction (if any) at working site.		placed at subproject location.	
Socio-Economic - Employment	Generation of contractual employment and increase in local revenue	Local labours are employed as per availability and competence.	FFIL-RIL JV	(i) Employment records; (ii) records of sources of materials	Project cost
Occupational Health and Safety	Occupational hazards which can arise during work	<p>We are following the Safety Policy of the Company. Also follow the points mentioned in the bid documents</p> <ul style="list-style-type: none"> • All workers are provided with and use Personal Protective Equipment like helmet, gumboot, safety belt, gloves, nose mask and ear plugs; • H and S Training for all site personnel has been arranged • Documented procedures to be followed for all site activities; • Work-related accidents will be recorded; • First Aid box is provided at all of the working sites; • Medical insurance coverage for workers is being arranged; • Potable drinking water is provided at site; • Clean eating areas are provided to workers; • H and S orientation training is being provided to all new workers to ensure that they are apprised of the basic site rules of work at the site, personal protective protection, and preventing injuring to fellow workers; • Moving equipment are outfitted with audible back-up alarms; • Worker will be disallowed of exposure to 	FFIL-RIL JV	(i) Site-specific Health and Safety (H and S) Plan; (ii) Equipped first-aid stations; (iii) Medical insurance coverage for workers; (iv) Number of accidents; (v) Supplies of potable drinking water; (vi) Clean eating areas where workers are not exposed to hazardous or noxious substances; (vii) record of H and S orientation trainings (viii) personal protective equipment; (ix) Percentage of moving equipment outfitted with audible back-up alarms; (x) sign boards for	Project cost

Field/ Issues	Anticipated Impact	Mitigation Measures	Responsible for Mitigation	Monitoring of Mitigation	Cost and source of fund
		noise level greater than 80 dBA for duration of more than 8 hours per day without hearing protection. The use of hearing protection shall be enforced actively.		hazardous areas such as energized electrical devices and lines, service rooms housing high voltage equipment, and areas for storage and disposal.	
Community Health and Safety.	Traffic accidents and vehicle collision with pedestrians during material and waste material/ earth transportation	We are following the Safety Policy of the Company. Also follow the points mentioned in the bid documents (i) Plan routes to avoid times of peak-pedestrian activities. (ii) Liaise with PHED/DSISC in identifying high-risk areas on route cards/maps. (iii) Maintain regularly the vehicles and use of manufacturer-approved parts to minimize potentially serious accidents caused by equipment malfunction or premature failure. Refer Appendix 1 for Project Specific OHS Plan.	FFIL-RIL JV	(i) Traffic Management Plan; (ii) Complaints from sensitive receptors	Project cost
Work Camps	Temporary air and noise pollution from machine operation, water pollution from storage and use of fuels, oils, solvents, and lubricants	Work camps will be constructed beside the location of project sites and also follow the points mentioned below: (i) Before locating project offices, sheds, and construction plants we will discuss with PHED/DSISC; (ii) Till date no trees have been cut; (iii) Employees will be trained for storage and handling of materials which can potentially cause soil contamination; (iv) Solid waste will be managed according to the following preference hierarchy: reuse, recycling and disposal to designated areas; (v) All wreckage, rubbish, or temporary	FFIL-RIL JV	(i) Complaints from sensitive receptors; (ii) Water and sanitation facilities for employees; and (iii) PHED/DSISC report in writing that the camp has been vacated and restored to pre-project conditions	Project cost

Field/ Issues	Anticipated Impact	Mitigation Measures	Responsible for Mitigation	Monitoring of Mitigation	Cost and source of fund
		structures will be disposed; and (vi) Report will be submitted to PHED/DSISC with the information that “camp has been vacated and restored to pre-project conditions before acceptance of work”			
Social and Cultural Resources	Risk of archaeological chance finds	No archaeological chances found are reported at project sites. Strictly follow the protocol for chance finds in any excavation work;	FFIL-RIL JV	Records of chance finds	Project cost

7. CONSTRUCTION STAGE ENVIRONMENT MONITORING PLAN

Work Locations:

1. **WTP** - This area inside the boundary of existing Water Treatment Plant near Tank No. – 1, Action Area – 1, New Town, Rajarhat
2. **BS-I** - This area is near the New Town DPS school beside the existing Boosting Station – 1, New Town, Rajarhat
3. **GLSR** - 1- This area is at same location as above
4. **GLSR** - 2- At Haroa location
5. **GLSR** - 3- At Bhangar – II location

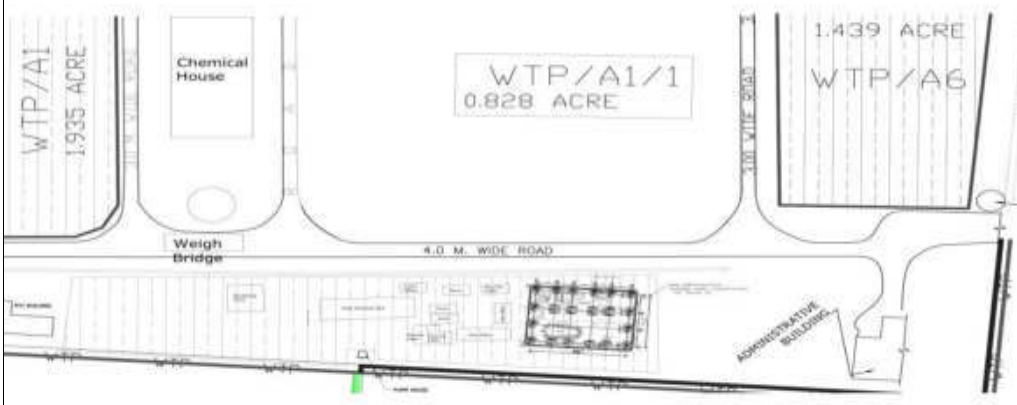
Sl. No.	Monitoring field	Monitoring Location	Monitoring parameters	Frequency	Total Quantity	Cost of Monitoring (in INR)
1	Ambient air quality – 24 hours	All 5 location mentioned above	PM10, PM2.5 NO2, SO2, CO	Once before start of construction; Quarterly (Yearly 4 times) during construction period of 2 years	45 samples	225,000
2	Ambient noise	All 5 location mentioned above	Day time and Night time noise levels	Once before start of construction; Quarterly (Yearly 4 times) during construction period of 2 years	45 samples	67,500
3	Surface water quality	2 locations (Bidyadhari River and Kestopur Canal)	pH, Oil and grease, Cl, F, NO3, TC, FC, Hardness, Turbidity BOD, COD, DO, Total Alkalinity	Once before start of construction; Half yearly during construction period of 2 years	10 samples	40,000

Presently work has been initiated only at WTP area.

List of Attachments



- Attachment 1: Details of construction Work sites
- Attachment 2: Details of construction camp sites
- Attachment 3: List of clearances & statutory requirements
- Attachment 4: Contractor's OHS Policy & Organization
- Attachment 5: Utility shifting/relocation
- Attachment 6: Details of Construction Materials
- Attachment 7: Spoil Management Plan

Attachment 1: Details of construction Work sites

1.	Admin building construction Site
	Location- New Town ; Rajarhat
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
3	Site office – 1 No
4	Laboratory – 1 No
5	Security cabin – 1 No
6	Labor welfare facilities <ul style="list-style-type: none"> • Toilets • Drinking water • First Aid Box. • Fire system
7	Site layout Plan 

8	Site photographs
Original site Photographs	
	Admin Building Site Before Construction
Site photos with facilities/ Work area	
	Fire extinguisher provide at Labour camp
	Safety Signage
	
	First Aid Training at Site

Attachment 2: Details of construction camp site

1.	Labour camp, WTP site
	Location- – New Town, Rajarhat
1	Accommodation – For construction workers No women / families in the camp Facilities provided at camp site <ul style="list-style-type: none"> • Type of living accommodation – Workers container • Separate cooking area • Cooking gas • Drinking water • Bath rooms • Toilets • Drainage system • First aid box
2	Site layout plan showing Camp Location 
3	Camp Site photograph
Original Camp site photographs	 <p style="text-align: center;">WTP Site Rajarhat</p>

Photograph:
Camp and its
facilities



Sleeping area with beds and fan



Toilet for labours

Attachment 3: List of clearances & statutory requirements

Sl. No.	Project related	Status
A	Construction/work related	
1	Possession of land	Available (WTP area)
2	Notice to Proceed from PIU	In Process
B	Labour Safety / Welfare Related	
1	Labour license	Available
2	Workmen Compensation	Available
C	Safety / liability safety related	
1	Medical Insurance	Tie-up with local hospital is under process
D	Others	
1	Fitness certificate for vehicles, equipment used in construction	Available
2	Pollution under control (PUC) certificates for vehicles and equipment	Available
3	Driving licenses for drivers	Available
4	Insurance for vehicles / equipment, as required	Available

Attachment 4: Contractor's OHS Policy & Organization

1	Contractor agency has a OHS policy	Yes / No
A	If yes, provide policy details 1. Policy statement: 2. EHS organization & responsibilities:	No Yes [Refer Appendix 1]
B	List safety risks anticipated in the project Area works (WTP) • Trips and falls • Rotating equipment • Head injury from falling objects • Confined work space • Slope failure / trench collapse • Road accidents Linear works (pipelines) • Accidents from open trenches	-
C	List personal protection equipment provided to workers • Safety Shoes – 32 pair • Safety Gum Boots – 18 pair • Hand Gloves – 12 pair • Safety Helmet – 32 nos • Reflective Vest – 32 nos • Full Body Harness – 4 nos	Yes
D	Preventive Measures	
	• Orientation of all workers on OHS	Done
	• Work permit system	Yes – for work at height
	• 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 on site
	• Barricades (more than 1 m deep requires hard barricading)	Yes
2	Contractor Emergency Procedure	
A	Detail what steps/procedure to be adopted in emergency situation (eg. accidents) • In case of emergency 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	Yes
Designation	Staff name & contact	Emergency responsibility

Site Engineer	Mr. Sudipta Dey Mob: 9046970333	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	Mr. Shubhankar Chattopadhyay Mob: -6292128071	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	Bidyut Kumar Debnath Mob: 6292128086	Project Manager Representative shall be responsible for taking all necessary action and decisions.
C	Reporting procedure in case of work accidents	Yes
	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 accidents client shall be informed immediately. 	
D	Mandatory Reporting to Authorities	Yes
E	Prohibited Acts and Penalties for Violations	Yes

Attachment 5: Utility shifting/relocation

Sl. No.	List work sites that require utility shifting, relocation, temporary shut off	Remarks
1	Area work sites (WTP; New Town, Rajarhat) <ul style="list-style-type: none"> • Administrative Building • Chemical House Extension • Inlet Chamber 	Not Required

Attachment 6: Details of Construction Materials and Wastes

Sl. No	Material	Approximate quantity required (m3) for project	Source	Indicate if source has all necessary government clearances
1	Concrete of various grade	22,000 cum	RMC vendor	Yes
2	Reinforcement Steel	2000 MT	SRMB, Adhunik	Yes

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
2	Surplus soil	Excavated earth	30000 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 HIDCO. Top soil will be preserved and re-laid on top of fill area.	HIDCO 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

Attachment 7: Spoil Management Plan**Frj FFIL – RIL JV** **Public Health Engineering Department**
Government of West Bengal

Document Reference Number: K201810003/HSE/02

Spoil Management Plan (SMP)**PROJECT: DESIGN, CONSTRUCTION AND OPERATION OF WATER TREATMENT PLANT, RESERVOIRS, TRANSMISSION MAINS AND PUMPING STATIONS WORK IN HAROA, RAJARHAT AND BHANGAR II****Location :** New Town ; Rajarhat**CONTRACT** PMU/WBOWSIP/DWW/N24P/NCB/01/2017-18 PACKAGE NO.:**EMPLOYER:** PUBLIC HEALTH ENGINEERING DEPARTMENT (PHED)**CONTRACTOR:** FFIL-RIL JV

D	21/08/2019				
REV	DATE	PREPARED BY	CHECKED BY	APPROVED BY DSISC	APPROVED BY PU

West Bengal Drinking Water Sector Improvement Project.

SPOIL MANAGEMENT PLAN

PROJECT: - DESIGN, CONSTRUCTION AND OPERATION OF WATER TREATMENT PLANT, RESERVOIRS, TRANSMISSION MAINS AND PUMPING STATIONS WORK IN HAROA, RAJARHAT AND BHANGAR II

CONTRACT PACKAGE NO: - PMU/WBDWSIP/DWW/N24P/NCB/01/2017-18

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.

LEGAL AND OTHER REQUIRMENTS

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.

2. ROLES AND RESPONSIBILITY

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

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

3. IDENTIFICATION AND ASSESSMENT OF SPOIL ASPECTS AND IMPACTS

In this project, there are some places which will be assessed and identified jointly along with design engineer. Main places where the excavated earth can be utilized are the trench of pipes and backfilling location. There are three backfilling lands in this project and need to be developed by earth filling.

4. SPOIL VOLUMES AND CHARACTERISTICS

In this project, approx. generation of excavated earth will be 51000 cum. There is no excess earth in this project as the same earth is to be used to fill the low land area of ESRs.

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

5. SPOIL REUSES OPPORTUNITIES.IDENTIFICATION AND ASSESMENT

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

6. ON SITE SPOIL MANAGEMENT APPROACH

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

7. SPOIL TRANSPORTATION METHODOLOGY

In this project, no need of transport as there is no extra soils for off-site disposal.

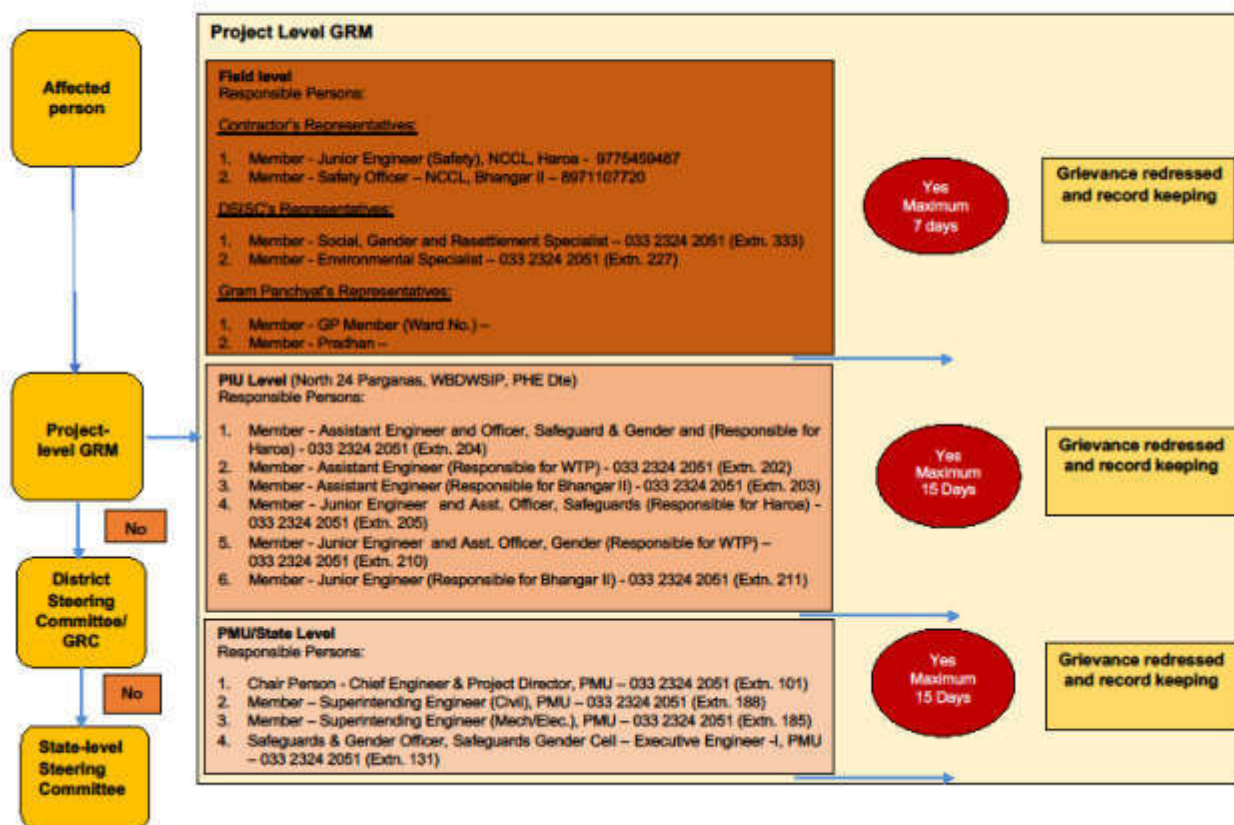
8. MONITORING, REPORTING, REVIEW AND IMPROVEMENTS

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

Attachment 8: Procedure for on-site Grievance Redressal Mechanism

A common Grievance Redressal Mechanism (GRM) is in place to redress social, environmental or any other project and/or subproject related grievances. 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.

Grievance Redress Mechanism



All grievances are recorded in site grievance register and resolved at the earliest. The sample grievance registration form is included in Appendix 2.

Appendix 1: Contractor's OHS Plan and Workmen Compensation Policies

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Government of West Bengal

Health and Safety Management Plan

June 2019

PROJECT: DESIGN, CONSTRUCTION AND OPERATION OF WATER TREATMENT PLANT, RESERVOIRS, TRANSMISSION MAINS AND PUMPING STATIONS WORK IN HAROA, RAJARHAT AND BHANGAR - II

CONTRACT PACKAGE NO: PMU/WBDWSIP/DWW/N24P/NCB/01/2017-18

EMPLOYER: PUBLIC HEALTH ENGINEERING DEPARTMENT (PHED)

CONTRACTOR: FFIL-RIL JV

PREPARED & SUBMITTED BY

FFIL – RIL JV

1582, RAJDANGA MAIN ROAD,
KASBA NEW MARKET – 7TH FLOOR,
KOLKATA – 700107



Frj FFIL – RIL JV**RESPONSIBILITY:**

The overall responsibility for the safe works will be of the Project Manager and the HSE Officer who is the authorized representative of the site to advice, inspect and monitor compliance to this plan. Implementation and responsibility of ensuring safety on the project is that of the site personnel.

TRAINING, AWARENESS AND COMPETENCE

The site HSE Officer regularly carries out safety training related to works and scheduled activities. In addition, Supervisors are to carry out tool box talks on a scheduled basis covering at least 80% of all employees on the site.

All new employees are required to report to the HSE Dept. prior to being delegated any duties thereby ensuring 100% new employees are inducted into the Company HSE systems and are made aware of the basic HSE requirements and standards of the Company.

Subcontractors and suppliers carrying out works on the project are inducted to the Company's HSE systems and made aware of the minimum HSE requirements. All contracts with these parties bind the subcontractor / supplier to the need to abide and maintain FFIL-RIL JV's HSE systems and standards.

Schedule of safety training / tool box talks:

Tool Box talks will be conducted at site on regular basis at least once in a week either by the concerned supervisory staff or by the Safety Officer. Before starting any new activity, it will be conducted at site by the concerned supervisory staff. The topics covered and the attendance of the persons attend will be recorded on the specified training format.

The specific safety training will be conducted periodically to the specified group of persons based on the need. These will be more detailed as per the specific trade based safety requirements for effective operational control. Either the Safety Officer or any identified person based on his expertise will conduct these programs and the records will be maintained on the specific training format with all details.

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Visitors are expected to sign in a visitor's register prior to being allowed entry into the Project area and are thereby made aware of the minimum Safety rules and Emergency Procedures by the Security Personnel.

HSE MANAGEMENT SYSTEM IMPLEMENTATION PLAN.

HAZARD IDENTIFICATION & RISK ASSESSMENT.

Before any activity is carried out, the site engineer submits a method statement and the HSE Officer initiates the risk assessment. Risk Assessment is carried out jointly by the respective foreman, engineer and the HSE Officer. The Risk assessment drafted is then reviewed by the Site safety committee and approved by the Project Manager. Control measures are defined ensuring that where possible risk is eliminated or reduced to the maximum limit. The **ERICPD** (Eliminate, Reduce, Isolate, Control, Personal Protective Equipment and Discipline) system is followed as a policy of the Company.

HSE Officer on a daily basis ensures inspections of activities being carried out. Prior to the onset of any activity, inspections are carried out to ensure that all controls including operations controls are set in place.

HSE - INSPECTION AND AUDIT PLAN:

- Health and safety inspection are undertaken by the HSE Officer(s) of all work areas including site offices and worker accommodation camps.
- As a minimum, health and safety inspections are to be undertaken weekly and a full and detailed inspection report identifying non compliances is to be prepared. Using safety inspection checklists HSE Officer will carry out the safety inspection, all site activities and have the responsibility and authority to raise HSE violation report to the Engineers and Project Management. The same has to be corrected / closed out and sent back the compliance reports.
- The documents / procedures corresponding to the corrective / preventive actions will be revised whenever required and will be recorded as per the requirement of Integrated Management System (IMS) procedure.

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- Corrective and preventive actions will be reviewed at the proposal stage through the risk assessment process prior to implementation. Evaluation of OH & S risk assessment and prioritization of significant risk to be utilized for taking corrective and preventive action.
- The Engineers are required to take corrective / preventive action prior to the onset of works or before proceeding with the works.
- At the end of every Week and Month site has to send Monthly safety reports in the appropriate format to the corporate safety department on the safety performance. At the end of each month Site has to send the monthly safety performance to the concerned Consultant also such that the same can be used as a measuring tool on our continual safety performance improvement.

Safety Audit Plan:

A programme of planned and documented Safety Audits/Review will be carried out in order to provide objective evidence of the compliance to Safety requirements and procedures. These will be carried out once in 3 months.

Safety Audits will be carried out in order to:

- Provide objective evidence of conformance with agreed systems, methods and procedure.
- Determines the effectiveness of the existing Safety procedures and plans.
- Identify any shortcoming in the Safety system and plans and to establish where improvements can be made.
- The Audit team will consist of Corporate HSE Personnel, Site HSE Officer and site execution representative(s).
- All Audit/Review reports(s) will be submitted to Project Manager for approval and copied to the corporate HSE Department.

PROJECT LOGISTICS PLAN.**PUBLIC PROTECTION**

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The public shall be protected from all the dangers/ hazards associated with construction sites and for which the following has to be followed:

- Perimeter fencing and hoarding.
- Restrictive or no access signs.
- Safety signs & Posters.

CONTROL OF ACCESS AT THE MAIN ENTRANCE TO THE SITE:

- Access to the site will be restricted to authorize personnel.
- At all times, a safe and protected means of access will be provided for site personnel.
- An access for emergency evacuation will be provided.
- All the vehicles entering the site should follow strict traffic rules including for entry and exits. Access to the site is restricted through the approved entry points. If any vehicle or person entering the site from any other access will be treated as offender and liable for disciplinary action as per the company rules including imposing the penalties.
- Subsequent entry of the vehicles should show the identity of gate/ access pass or sticker issued at the time of first entry. The same is applicable to the drivers also.
- Speed limit of 40 KMPH shall be followed strictly whether it is a light vehicle or heavy vehicle.
- Any vehicle entering first time to the site should register its particulars at the main security gate "The registration number of the vehicle, Permit Number, Its Validity, Driver's Name, Driving license number & validity, and vehicle owner's name, purpose of the entry and emergency contact person & telephone number.

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- All new drivers and operators of heavy equipment should report to the site HSE department for induction when they enter first time the premises and shall be aware of site safety rules, entry & exit points and other particulars of the site. No new person will be allowed straight to site during night operations as the new person induction training programme will be conducted only during day office hours at main site office Safety Department. After induction every person will get induction card/sticker signed by the site HSE Officer.
- Strict competent supervision has to be ensured till completion of the activities by the vehicle owner if the vehicle is hired or not belongs to FFIL-RIL JV.
- All lifting equipment like cranes, Hydra's should have a valid 3rd party inspection certificate for Safe working load of the equipment and shall be operated by the licensed person who is certified for his competency by the approved 3rd party. During lifting operations one trained signal man shall be deployed for rigging and banks man for reversing the vehicles.
- Both the persons should wear high visibility reflective jackets and night time electronic batten lights. No one shall be allowed in the load lifting and shifting areas beneath the load and in its travelling path.
- No unauthorized person should enter into the loading and unloading points.
- At loading and unloading points the approved safe practices relating to tying down the loads, lifting accessories and material handling (including manual and mechanical handling) procedures are to be followed.
- Any violations of the above shall be taken very seriously and the violators are liable for disciplinary action and penalties.
- The hired vehicle owners and agencies are solely responsible for any accidents / damages taking place due to their activities inside the premises. If any company property damaged due to their role including the poor maintenance of their vehicles, their person's inefficiency and irresponsibility,

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the company will deduct all the cost of damages from their bills without any further notice.

- In case of any damage to third party taking place by the hired or other vehicles / equipment belongs to sub-contractors, transporters or their agents will be based by them only. The concerned agencies are primarily responsible to settle all disputes & legal formalities by themselves. In case of any further dispute in this regard, and FFIL-RIL JV being the main contractor will take decisions as per the requirement and situation and its decision is final and all agencies have to bind to this.

ACCESS CONTROLL:**Main Hazards**

- Unaware of site rules and Hazardous locations
- The movement of plant and traffic
- Overhead cables
- Excavations
- One way and restricted access areas
- Dust/fume / fog

Precautions

- Carrying out the works with special attention, where restrictions are imposed by physical obstructions, i.e. Overhead power lines, slip roads, etc.
- The guidelines given by IRC SP55:2001 for Traffic Management and Safety at work zones shall be followed.
- A safety zone has to be provided between live traffic lanes and the working area (this includes equipment, plant, tools, excavated materials, etc.).

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- Adequate barriers are provided to protect the workforce; portable vertical barriers should be considered for this.
- Where half constructed or constructed but not opened to traffic shall be covered with Jersey barriers on both the ends of the road. These barriers shall in two parallel lines one third length opened on the opposite ends.
- Access / egress locations for site transport are kept to a minimum, preferably one at every work area.
- Adequate measures are to be implemented to prevent traffic coming into contact with temporary / permanent structures, i.e. by using temporary barriers.
- Adequate temporary lighting is to be provided wherever it is required.
- Speed limits are to be set, marked and enforced specific to the work activity.
- All access routes are to be clearly signed and maintained.
- Arrangements are to be made to reduce the need to reverse vehicles. Where this is not possible, a trained banks man must be provided.
- All appropriate personnel should wear high visibility clothing.
- Precautions like goal post are to be in place for overhead cables.
- Underground cables and pipes shall be protected with adequate covering and markings.
- Define the working area in the live road/footway using cautionary boards and flag men.
- Define the working space – this include the areas for storage of tools and equipment and space to move around the job.
- Provide a safety zone – this is an area to separate the work from the traffic – it must be kept clear of all work, materials storage and people and must be clear of the working radius of all plant.

COMMUNICATION:

Communication between the staff, workmen, clients & consultants is to be established through the following:

- Safety Committee meeting – Minutes will be circulated

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- Daily Tool box talks
- Safety Walk around
- Notice boards & Display of Posters and slogans.
- HSE Trainings.

Information to be given to new persons (Including Visitors)

Project Manager	Mr. Sujay Das	6292128002
Project Engineer	Mr. Kaustav Sain	6292128008
HSE Officer	Mr. Shubhankar Chatterjee	7604062851

List of Emergency service telephone numbers

POLICE	100
AMBULANCE	108
FIRE	101
Nearest HOSPITAL	033-23961687
Project HR Deptt.	6292128085

HEALTH –WELFARE & HYGIENE PLAN

THE OBJECTIVE IS TO PROVIDE AND MAINTAIN A CONSISTENTLY HIGH STANDARD OF OCCUPATIONAL HEALTH AND WELFARE FACILITIES ON THIS PROJECT SITE CONFORMING TO BRDC & IRC: 67:2001 REGULATIONS. WELFARE FACILITIES WILL BE PROPERLY PROVIDED AT ALL STAGES OF CONSTRUCTION, FROM COMMENCEMENT TO COMPLETION. THIS MAY REQUIRE TEMPORARY FACILITIES TO BE PROVIDED PARTICULARLY AT COMMENCEMENT AND COMPLETION IN ADEQUATE STANDARD AND SUITABLE FOR THE NUMBERS OF PERSONNEL ON SITE.

Basic considerations of the arrangements are as follows:

- Adequate Sanitary Conveniences, including temporary toilets with septic tanks which can be cleaned and cleared as per the requirement. At no point of time allow any overflow or leakage or accumulation of stagnated water in the surrounding area.

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- Time to time cleaning of toilets, at least twice in a day with disinfectants. All septic tanks will be cleared timely; to take out the sludge from the septic tanks before they are full. All BRDC/IRC regulations in this regard will be complied.
- Housekeeping will be the top priority to maintain best hygiene to prevent any spread of infectious diseases. For this we deploy dedicated team of workers who will clean all the rest rooms and lunch rooms immediately after the designated hours at least twice in a day and collect all food waste in the designated dust bins with proper lids and dispose as per the BRDC/IRC norms.
- We will maintain adequate skips at designated areas and make arrangements with BRDC/IRC for timely clearing of the same at least once every alternative day and if required every day such that there will not be any overflow of the same.
- Adequate drinking water through portable water coolers like thermal insulated cans kept at all work locations as per the man power working at that particular locations. Through a dedicated vehicle ensure the supply of cool water in these throughout the working hours at all locations.
- In general, all work locations are Non-Smoking areas; to facilitate good administrative control over this we will identify and designate smoking zones after considering the required factors relating to the particular location. All the demarcated smoking areas will be provided with minimum infrastructure of shaded area, sitting arrangement, ash tray and dust bins.

FIRST AID ARRANGEMENT PLAN**First Aid Room**

Company provides a suitably equipped and staffed First - Aid room. The First aid room shall meet the following.

- The first-aid room shall be located in such a way that it allows easy access and egress for the emergency services.
- The room shall be large enough accommodate a wheel chair and stretcher.

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- The room shall be clearly identified as the first-aid room by use of signage on site and on drawing.
- The male nurse shall have adequate facilities available to call an ambulance or contact any other agency or transport the injured person from the workplace.
- The first-aid room shall also contain the following suitable equipment and facilities; First-aid box or cupboard, Sink, Hot and cold water, drinking water and disposable cups, soaps, smooth top work surfaces, Suitable first-aid equipment and materials, Disposable plastic bags for refuse, Chair, Record keeping arrangements etc.

ACCIDENT AND INCIDENT ANALYSIS PLAN:

- The Project HSE Officer will carry out investigation to identify the root causes of accidents, incidents, dangerous occurrence and non-conformances. The detailed investigation report should reach the Corporate HSE department within 48 hours with Project Manager's remarks on the incident/ occurrence. Project HSE Officer's Role and responsibility is to work as facilitator between site and Corporate HSE Department. He will facilitate to take preventive measures required (the non-conformances and corrective actions) immediately. Project HSE Officer will intimate Corporate HSE Department in details about corrective, preventive measures complied at site to mitigate accidents in future.
- Corporate HSE Department will advise to Project HSE Officer on the analysis and findings of the accident, incident data for taking corrective and preventive measures to prevent reoccurrences.

Classification of Accident and Incident

Accident: Any injury or illness-related to work activities that results in:

- Death
- Amputations involving the loss of bone tissue
- Loss of consciousness due to electrical shock, lack of oxygen or chemical exposure
- Possible permanent functional impairment of a body part (excluding those resulting from a back strain)

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- Admission to a hospital (other than 24-hour observation, hernia repair or back strain)
- Accidents or incidents that results in three (3) or more days admitted to a hospital or medical treatment facility.

Recordable Incident - Any accident/incident that results in:

- Medical treatment other than first-aid, (Examples: treatment of an infection, sutures, second or third degree burns, etc.)
- Restriction of normal work activities (reduced work activities, or reduced work days);
- In days away from work (lost-time)
- Or any occupational illness.

SAFETY PLAN FOR WORKMEN AT SITE:

- Safety of the project workers at site during duty hours is the responsibility of FFIL-RIL JV.
- It shall be ensured by him that safety measures appropriate for the job a workman Performs shall be provided.
- Role of FFIL-RIL JV is to regulate the working hours for the workers engaged by the sub-contractors.
- Safety measures against accidents of the workers by the traffic using the highway and / or diversions shall be taken. The FFIL-RIL JV shall provide helmets and protective retro Reflective jackets to their workmen at site and make it compulsory for them to wear the same.
- The FFIL-RIL JV shall insure for the employees working under him against accident.
- Labor laws in force shall be followed.
- Duration of shift for the workers will be scheduled as per the labor rules. (BOCW ACT 1996).
- FFIL-RIL JV will arrange a temporary shed in the working area, it can serve as a rest area to take interim rest breaks for the workers.

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- In respect of all labor directly or indirectly employed in the work for the Performance of the FFIL-RIL JV part of this agreement, the FFIL-RIL JV shall at his expense arrange for the safety provisions as per Indian standards safety codes and shall at his own expense provides for all facilities in connection there with.

ROAD WORK SAFETY PLAN:**General requirements**

- Any contractor who undertakes road work shall conform to the Construction Safety.
- Road works are considered among dangerous and hazardous works; therefore, the Contractor shall carry out adequate Risk Assessment and determine the safe work procedure to protect his employees, users of the road, and the public against these hazards.
- All works implemented on roads shall be supervised by a competent person who has been adequately trained, and this person must be permanently available on site.
- All workers working at road works shall be provided by necessary and adequate personal protective equipment.
- All construction workers engaged in highway works shall take all precautions.
- The provision of a complete system of advanced warning signs on high way works shall be maintained by the contractor and this system shall be approved by the Independent consultants.
- All areas within site where the work will be performed during night shall be adequately illuminated and all workers shall wear retro reflected jackets.
- All workers handling bituminous material or concrete and all other workers on roadwork sites shall at all times wear protective clothing, safety boots, gloves, safety helmets and eye protection.
- All holes, excavations, open manholes, wet concrete, and soil heaps on road work sites shall be provided with suitable barriers (with suitable light flashers) to protect pedestrians, workers, plant or vehicles from falling over or into such places.

Road maintenance

While performing maintenance of road we must ensure the safety of

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- ♦ General public
- ♦ Workmen
- ♦ Motorists
- ♦ Construction equipment

- Depending upon the traffic movement, maintenance of the work to be decided either day or night to reduce the hazard.
- Engage only trained workmen and check the condition of the equipment.
- The type of work area protection required is also to be determined by the nature and vicinity of the traffic.

Safety in excavation

- a) Excavations are the most hazardous activities in construction workplaces. Most construction work involves some forms of excavation for foundations, drains, sewers, etc.
- b) Workers involved in excavation activities are exposed to various potential hazards.
- c) The contractor shall be responsible for providing all necessary precautions and applying all necessary protective procedures to protect employees public and road users against potential hazards to which they might be exposed during excavations, such as cave-ins.

General Requirements:

- a) All adequate and appropriate personal protective equipment shall be provided to protect head, eyes, respiratory, hands, feet and other body parts.
- b) Excavated materials/spoils shall be placed at least 1 meter away from the edge of an excavation and shall not be accumulated.
- c) Protective barricades and flashing lights, warning signs shall be placed in all excavations near sidewalks, pavements and streets. Warning signs shall be illuminated from dusk to dawn and when weather conditions reduce visibility.
- d) All wells, holes, pits and shafts shall be covered or barricaded and backfilled upon completion of the work.
- e) Where employees or equipment are required or permitted to cross over excavations, walkways or bridges with standard guard-rails shall be

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provided.

- f) Dimensions of the members of shoring, shielding and bracing systems shall be appropriately and adequately determined.
- g) When a soil is adversely affected by weather, coverage and adequate support systems shall be installed to prevent cave-ins. The worksite shall be adequately and properly illuminated especially in access and egress points.
- h) Excavations greater than 1.2 m. in depth shall be provided access / egress, ladders or ramps. Ladders used as access ways shall extend from the bottom of the excavation to not less than 90 cm (3 feet) above the surface.

PILING WORK SAFETY PLAN:

Hazards in piling: Fall of tripod, electrocution, slip hazard and hit by objects.

Safety precautions:

- a) Do competent inspection before deploying tools & tackles like chain pulley, block, winch, wire rope, D-shackles, tripod, hooks etc.
- b) Guard all the rotating parts like flywheel, belt transmission, chain, couplers, Flywheel, radiator fan etc.
- c) Never shift the arrangement without disconnecting the electrical power supply.
- d) The approach must be tide and clean & free from hindrance, water logging etc.
- e) Use proper PPE like safety helmet, gum boot, leather hand gloves, goggles etc.
- f) All power cables must have rated capacity and should be routed overhead only.
- g) Before leaving the workplace at night ensure the hammer is brought down.
- h) Adequate lighting arrangement.
- i) Covering of the pile hole to prevent fall of person or animals.
- j) Disconnecting of power supply.
- k) Use crane for shifting the rig frame from one place to other.

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- l) Cordon the work area.
- m) Practice good housekeeping.
- n) Provide adequate dewatering arrangement during monsoon.
- o) Inspect all electrical accessories.
- p) Provide drainage point to prevent water logging at workplace
- q) Always position the tripod legs in the leveled and compacted area etc.



Royal Sundaram
General Insurance

Royal Sundaram General Insurance Co. Limited

(Formerly: Fidelity Indemnity Co. Ltd. (Public Insurance Company Limited))
"Millennium City", Information Technology Park, Unit No.: T-2-2A,
Tower-II, Plot No.: DN-62, Sector-V, Salt Lake, Kolkata - 700 091.
Tel. No.: 033-4222 7373 | Fax No.: 033-2367 5521
Toll No.: 1860 425 0000 | E-mail: customer.services@royalsundaram.in
Website: www.royalsundaram.in
Registered Office: 21, Pandit Dasgupta Road, Chennai - 600 002
IRDM Registration Number - 102 | CIN: 363200IN2000010045611

WORKMEN'S COMPENSATION INSURANCE POLICY SCHEDULE

Intermediary Code : OA504383
Intermediary Name : Saibal Sengupta
Contact : 9831176521

Policy No. LW00010835000100

Insured Name and Address : Furnace Fabrica India Ltd
: 1582, Rajdanga Main Road
: Kasba New Market, 7th Floor

Business : Civil Construction works as per Specification attached

Law(s)

The Policy will provide coverage under the following Law(s)

- WC Act 1923 and subsequent amendment of the said Act
- The Fatal Accident Act 1855
- Or Common Law

Period of Insurance: 12 Months

From 00.00 Hrs. of 01/04/2019 to 23.59.59 on 31/03/2020

Premium : Rs. 3,62,260/- (Including Rs. 55,260/- GST)

Subject to adjustment in the terms of Condition 6 the estimated amount of wages salaries and other earnings on which Premium is based.

Estimated Number of Employees (A)	Occupation of Employees (B)	Estimated Total Salaries Wages and other money earnings per employee (C)	Estimated Total Earnings (D=A*C)	Place or Places of Employment. (E)
As per the Specification attached				

Date of signature of Proposal and Declaration 01/04/2018



Royal Sundaram
 General Insurance

Memoranda

The Policy is subject to following clauses, conditions & warranties:

- Proper register recording the attendance and wage disbursement must be maintained at all times and to be produced as and when required by the Company.
- Classification Number 46
- Endorsement Number –
- Liability of the Company under this policy is applicable only in respect of claims occurred during the policy period and reported within 60 days from the date of expiry of the policy.
- The maximum liability of the Company under Common Law is 100 times the monthly salary/wages/earnings of the worker/employee covered under this policy. The Onus of proof that the worker/employee is covered under this policy is upon the Insured.
- If the amount of Wages declared for this insurance for all the Employees is less than the actual Wages paid until date of accident, the Company shall be liable to indemnify on any claim only in proportion that the Wages declared bears to the Wages paid. For the purpose of this clause, the Wages declared shall be calculated proportionately for the period from commencement of Policy until date of accident for comparison with the actual Wages paid during such period to determine applicability of this clause.
- The insurance granted hereunder excludes :
 - Any interest and/or penalty imposed on the Insured on account of his/their failure to comply with the requirements laid down under WC Act 1923,
 - Occupational diseases
 - Compressed Air Diseases listed in Part A of the Schedule III of the Act unless specifically covered by an endorsement to the policy,
- Exclusions as per annexure I



Royal Sundaram
General Insurance

- ☐ Loss or Liability due to Terrorism Excluded as per the attached wording
- ☐ Onus of Proof as per the attached wording
- ☐ Applicability of Policy cover as per the attached wording
- ☐ Warranted that work at heights is restricted to 50 metres and all recommended safety precautions for work at height are implemented at all times during the policy.
- ☐ Designation Basis Cover as per the attached wording
- ☐ Company's liability in respect of any one event shall be restricted to maximum of INR 5 Crores
- ☐ Endorsement No.179 as per the attached wording
- ☐ Medical expenses as per the attached endorsement wording.
- ☐ Co Insurance Clause

Consolidated Stamp Duty paid to Government of Tamil Nadu.
issued at: Chennai

IN WITNESS WHEREOF, this Policy of Insurance has been signed on 29-03-2019

GSTIN No. : 19AABCR7106G1ZG

PAN No.AABCR7106G

Cheque No: 100188 (Axis bank Ltd) Dt 27-03-2019

Policy Servicing Address: Kolkata, Salt Lake

For Royal Sundaram General Insurance Co. Limited





Royal Sundaram
General Insurance

Annexure I : Exclusions :

This policy excludes work involving

- I. Risk locations manufacturing and or supplying, producing, storing, filling, breaking down or transporting
 - a) Fireworks,ammunition,fuses,cartridges,powder,nitro-glycerine,celluloid,pyroxylin or any explosions
 - b) Gases and/or air under pressure in containers
 - c) Butane, methane,propane, and other liquefied gases
 - d) Petrochemicals and also chemicals of a "toxic", noxious, explosive and/or highly inflammable nature
- II. Demolition of towers/steepless, bridges, dams and chimney shafts
- III. Excavation and tunnelling work in connection with mining.
- IV. Quarrying involving the use of explosives
- V. Drilling for, producing, refining and/or distributing oil and gas.
- VI. Operation of Railways
- VII. Mines/under water/ wet works/bridges/dams construction
- VIII. Tunnelling and Blasting and use of explosives

For Royal Sundaram General Insurance Co., Limited



Royal Sundaram
General Insurance

Specification attached to and forming part of Policy No. LW00010835000100

Place or Places of Employment	Occupation of Employees	Estimated Number of Employees	Estimated Total Salaries Wages and other money earnings per employee	Estimated Total Earnings
SK Mines (Rajasthan),	Skilled	67	188,975	12,661,325
	Un-Skilled	105	126,464	13,278,720
RA Mines (Rajasthan),	Skilled	50	188,975	9,448,750
	Semi-Skilled	0	157,900	0
	Un-Skilled	50	126,464	6,323,200
WS 16 (West Bengal),	Skilled	9	188,975	1,700,775
	Semi-Skilled	0	157,900	0
	Un-Skilled	19	126,464	2,402,816
WS 18 (West Bengal),	Skilled	11	188,975	2,078,725
	Semi-Skilled	0	157,900	0
	Un-Skilled	28	126,464	3,540,992
Santragachi Flyover (West Bengal),	Skilled	0	188,975	0
	Semi-Skilled	0	157,900	0
	Un-Skilled	23	126,464	2,908,672
RFCL (Telengana),	Skilled	0	188,975	0
	Semi-Skilled	30	157,900	4,737,000
	Un-Skilled	65	126,464	8,220,160
PHED WTP Site at Rajarhat, Haroa and Bhangar, 24 Parganas (N), West Bengal	Un-Skilled	50	126,464	6,323,200
	Semi-Skilled	30	157,900	4,737,000
	Skilled	20	188,975	3,779,500

For Royal Sundaram General Insurance Co. Ltd.,




Royal Sundaram

General Insurance

Memoranda attached to and forming part of Policy No. LW00010835000100

3. Endorsement wording for Medical Expenses:

In consideration of the payment of an additional premium it is hereby understood and agreed that this Policy subject to its terms provisions and conditions is extended to indemnify the Insured in respect of the reasonable, medical, surgical and hospital expenses (including cost of conveyance to hospital) incurred by the Insured within six months from the date of accident in connection with any case of injury to which the indemnity granted under this policy applies or would have applied had disablement exceeded three days.

Provided always that the liability of the Company under this endorsement shall be limited to Rs 1,00,000/- in respect of any one insured person during the Period of Insurance.

The medical expenses, so incurred, should be substantiated by medical / diagnostic tests, doctor's report and certificate.

All medical treatments for the purpose of this insurance will have to be taken in India only

4. Designation Basis Cover:

The Policy being issued on Designation Basis, the cover under this Policy shall apply to an estimated 557 Number of Employees as mentioned in Policy Schedule on the rolls of the Insured during the Period of Insurance.

Should the number of such employees during the Period of Insurance under any designation exceed the number specified in the Schedule, such employees who have enrolled/joined employment with the Insured after the specified number of employees under the respective designation as noted in the Schedule are deemed to be outside the scope of this Insurance.

Warranty

Limitation on cover: Warranted that at the time of claim the total number of employees in each cadre as per Insured's rolls, should not exceed the numbers declared to the Insured till that date for which Premium has been accounted for. In case the numbers declared are less than the numbers as per rolls on the date of loss, the Company reserves the right to repudiate all claims pertaining to persons who have joined after the date of the last declaration made by the Insured to the Insurance Company for which Premium has been accounted for.

For Royal Sundaram General Insurance Co. Ltd.



Authorized Signatory

Page 6 of 11

URC Code : RSA0000K0LB0100652481819
 IRDA Registration No. 102



Royal Sundaram
General Insurance

Memoranda attached to and forming part of Policy No. LW00010835000100

5. Onus of Proof:

Warranted that in the event of claim the onus of proving that the affected person was on rolls at the time of claim will lie on the Insured. The full details including date on which the employee joined is to be given

6. Applicability of Policy Cover:

This Policy being issued on Unnamed Basis, the cover under this Policy shall apply to an estimated 557 Number of Employees as mentioned in Policy Schedule on the rolls of the Insured during the Policy Period. Should the number of such Employees during the Period of Insurance under any designation exceed the number specified in the Specification, such Employees who have enrolled/joined employment with the Insured after the specified number of employees under the respective designation as noted in the specification are deemed to be outside the scope of this insurance. (Eg- 125 Number of Employees as mentioned in Policy Schedule are covered under the Policy - If it is found that there are 126th Number of Employees, the 126th number employee who has joined will be outside the scope of this insurance).

7. Endorsement No. 179:

It is hereby understood and agreed that the indemnity herein granted is extended to cover the legal liability of the Insured to workmen in the employment of Contractors performing work for the Insured while engaged in the business and occupations in respect of which the within Policy is granted, but only so far as regard claims under the Workmen's Compensation Act, 1923, and subsequent amendments of said Act prior to the date of the issue of this Policy, the premium in respect of such extended insurance to be calculated at the rate agreed of the total sums paid to such Contractors by the Insured in respect of work executed during each period of insurance.

For Royal Sundaram General Insurance Co. Ltd.


 Authorized Signatory



Royal Sundaram
 General Insurance

Memoranda attached to and forming part of Policy No. LW00010835000100

9. Terrorism Damage Exclusion Clause:

- a) Injury or Damage directly or indirectly caused by resulting from or in connection with any Act of Terrorism regardless of any other cause or event contributing concurrently or in any other sequence to such Injury or Damage.
- b) Injury or Damage directly or indirectly caused by resulting from or in connection with any action taken in controlling preventing suppressing or in any way relating to any Act of Terrorism.

For the purposes of this Exception Act of Terrorism shall mean an act including but not limited to the use of force or violence and/or the threat thereof of any person or group(s) of persons whether acting alone or on behalf of or in connection with any organisation(s) or government(s) which from its nature or context is done for or in connection with political religious ideological ethnic or similar purposes or reasons including the intention to influence any government and/or to put the public or any section of the public in fear

10. Classification No: 46

Special Condition: Warranted that Workmen Covered Under this Policy is engaged in Civil Construction only for the specified location mentioned in the policy

Subject to otherwise to the terms, provisions and conditions of the within Policy,

For Royal Sundaram General Insurance Co. Ltd.





Royal Sundaram
General Insurance

Memoranda attached to and forming part of Policy No. LW00010835000100

COINSURANCE CLAUSE

It is hereby declared and agreed that insurers named hereunder severally agree and accept the following for the proportion set against its name

1.1. In event of any claim being admissible by the insurer towards the liability, to pay or make good to the insured the value of the property at the time of the happening of its loss or destruction or the amount of such damage thereto as provided for under the policy and or

1.2. To indemnify the insured against liability at law or damage to any property or injuries to persons as provided for under the policy

2 Co-insurance Schedule:

Sl. No.	Name of the Insurer	Share (%)
1	Royal Sundaram General Insurance Co. Limited	51
2	Shiram General Insurance Co Ltd.	49

3 Conditions forming part of this clause

It is hereby agreed and understood that:

3.1 The Insured in exercise of his option has after having understood the implications, selected the above named lead Insurer and the named Co-insurers vide sr. Nos. of the co-Insurance schedule as in point no. 2 under the policy.

3.2 The duties of insured would devolve upon the authorized intermediary licensed by IRDA (referred to as authorised representative here after) where the insured appoints such authorized intermediary to transact on his behalf with the insurer/s.

3.3 It shall be the responsibility of the insured or his authorised representative licensed by IRDA to decide on the panel of co-insurers and their respective shares of the risk herein as set out in co-insurance share under paragraph 2 above and communicate the same to all such participating co-insurers, prior to assumption of risk.



Royal Sundaram

General Insurance

3.4 The lead Insurer shall finalise the terms and conditions applicable to the risk in the form of an underwriting slip with a unique code to be handed over to the Insured/ Authorised intermediary.

3.5 It shall be the responsibility of the insured or his authorized representative to ensure that all insurers listed in the co-insurance schedule under paragraph 2 above, are fully aware of the terms and conditions of this policy and shall secure their unqualified acceptance of such terms and conditions prior to issuance of cover and inclusion of names of insurers in this co-insurance arrangement.

3.6 During the currency of the policy, if there are any material changes in risk or as changes in original terms and conditions such as variation in Sum Insured, changes in premium charged, extension of policy period, etc., the same shall be communicated by the insured or his authorised representative giving sufficient advance notice of 7 days to the leader as well as all other participating co-insurers listed in the co-insurance schedule under paragraph 2 above and procure confirmation thereon. The endorsement to this effect shall be executed by the lead insurer under advice to all other participating co-insurers.

3.7 The liability of the insurers shall in no case exceed in respect of each item of the sum expressed in the set schedule to be insured thereon or in the all, the total sum insured hereby or sums as may be substituted thereof by endorsement.

3.8 In the event of any of the insurers, chosen by the Insured as per paragraph 3.1 above and listed in the co-insurance schedule, withdrawing from participation in this Policy at any time during its currency after giving due notice of 14 days, the insured shall arrange for an alternative insurer to take up the full share of risk vacated by the existing insurer. In the event of insured failing to do so, the insured shall be considered as his own insurer for such share of risk or part thereof which is not taken up by such alternative co-insurer.

3.9 In the event of a claim under this policy, the insured shall give notice of its occurrence to the Lead Insurer with a copy to all the insurers as listed in clause 2 above.

3.10 Upon receipt of such notification of claim, all claim related activities including appointment of surveyors, etc shall be done by the lead insurer who shall decide the admissibility as well as quantum of the claim and the co-insurers shall abide by the same.

3.12 In all other cases, where the Lead Insurer pays 100% of the assessed loss, the following co-insurer/s shall remit their share of the loss to the Lead Insurers within a maximum period of 21 days from the date on which the Lead Insurer makes the demand.



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General Insurance

Lead Insurer's declaration that the Claim and the amount there of was in accordance with terms and conditions of the Policy issued shall be considered sufficient by the co-insurers for the purpose of remitting their share of the loss to the Lead Insurer.

3.13 The co-insurers forming part of this agreement shall be entitled to demand and obtain from the Lead Insurer/Intermediaries copies of all policies, endorsements or other claim related documents relevant to this co-insurance clause.

In witness, whereof, this policy has been signed by Royal Sundaram Alliance Insurance Co. Ltd, (Lead Insurer) for itself and as authorized agents for other participating insurers named herein Subject otherwise to the terms, exceptions, conditions and limitations of this policy.

For Royal Sundaram General Insurance Co. Ltd,



Appendix O.3: Sample Grievance Registration Form

(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:	

অভিযোগ/ পরামর্শ/ মন্তব্য/ প্রশ্নাদি লিপিবদ্ধ করার নমুনা পত্র

এই প্রকল্পটি সৃষ্ট ও সুন্দরভাবে রূপায়নের উদ্দেশ্যে সকলের অভিযোগ, পরামর্শ, প্রশ্ন এবং মন্তব্য প্রত্যাশা করে। আপনার কোনও অভিযোগ থাকলে আপনার নাম ও যোগাযোগের ঠিকানা দিয়ে আমাদের সহযোগিতা করবেন। আপনার অভিযোগ / প্রশ্নের যথার্থ সদুত্তর ও আপনাকে পরিস্থিতি সম্পর্কে আমরা অবগত করবো।

যদি আপনি আপনার ব্যক্তি পরিচয় গোপন রাখতে চান তাহলে আপনার নামের উপরে " গোপনীয় " কথাটি লিখবেন।

ধন্যবাদান্তে

তারিখ	পঞ্জীকরণের বা Registration এর স্থানঃ		
	ব্লক- গ্রাম পঞ্চায়েত- গ্রাম সংসদ-		
যোগাযোগের ঠিকানা / ব্যক্তিগত তথ্য			
নাম		লিঙ্গ	বয়স
বাড়ির ঠিকানাঃ গ্রাম- ফোন নং-	পাড়া- ই-মেইল-	পুরুষ - মহিলা-	
অভিযোগ/ পরামর্শ/ মন্তব্য/ প্রশ্নাদি- দয়া করে কে, কি, কোথায় এবং কিভাবে - অভিযোগের এই বিশদ বিবরণ নিচে লিখুন-			
যদি কোন অতিরিক্ত কাগজ জুড়তে হয় / বা নোট থাকে বা চিঠি থাকে তাহলে এই ঘরে (৭) টিক দিন।			
আপনি কিভাবে আপনার অভিযোগ/ মন্তব্য বিষয়ে অবগত হতে চান ?			

শুধুমাত্র অফিসের ব্যবহারের জন্যঃ

যে আধিকারিক অভিযোগ জমা নিলেন তার নামঃ
কিভাবে জানানো হল (৭) টিক দিনঃ নোট বা চিঠির মাধ্যমে – ই-মেইল- মুখে মুখে বা টেলিফোনে-
যিনি অভিযোগ পাবার পর খতিয়ে দেখেছেনঃ (নাম/ পদ)
কি ব্যবস্থা গ্রহণ করা হয়েছেঃ
ব্যবস্থা যা গৃহীত হয়েছে তা জানানো হয়েছে কি না - হ্যাঁ / না
কিভাবে জানানো হলঃ

মন্তব্য-

প্রস্তুতকারক -

আনুমোদনকারী -

তারিখ-