



L&T Construction
Water & Effluent Treatment

Design and construction of overhead reservoir including water supply distribution network and metering works in Mejhia and Gangajalghati blocks including rehabilitation of Existing schemes.
(Contract Package No:
WBDWSIP/DWW/NCB/BK/04/2018-19)

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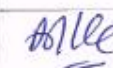

Site Specific Environmental Management Plan

SITE SPECIFIC ENVIRONMENTAL MANAGEMENT PLAN


WBDWSIP BANKURA PKG-04

GANGAJALGHATI BLOCK


LOCATION- MACHAPURULIA OHSR SITE (ZONE - 11)

REV	DATE	PREPARED BY SO/PM	CHECKED BY	APPROVED BY DSISC	ARRPROVED BY PIU
	06.01.20	 	 	 TEAM LEADER DSISC- Bankura WBDWSIP	 Assistant Engineer-I PIU Bankura WBDWSIP, PHE Div. Govt. of West Bengal

Project Manager
Mejhia Distribution

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Package No.	WBDWSIP/DWW/NCB/BK/04/2018-19, Zone - 11, OHSR (Machapurulia village) , under PIU Bankura
Package title	Design, Construction and Operation-Maintenance of Overhead Reservoirs Including Water Supply Distribution Network and Metering Works in Mejia and Gangajalghati blocks in Bankura including Rehabilitation of Existing Schemes SEMP is as per requirement of the Draft IEE covering package no. DWW/NCB/BK/04/2018-19
Contractor	Larsen & Toubro Ltd.
Date of Contract Award	27/05/2019
Date of works commencement for particular site	13/01/2020
Contract period	Construction: 3 Years; O&M: 2 Years
SEMP Component	Construction of Overhead Reservoir – 300 KL
Demolition work	No demolition activity involved
Project Area	Machaparulia village, Gobindadham GP of Gangajalghati Block
Project Description	Individual household water supply schemes for the project Gram Panchayets
Indicative Budget for EMP Implementation for the entire package	INR 67,25,000/-
Project Components	As per project detailed design
Gram Panchayet:	Gobindadham GP of Gangajalghati Block
Land Status	Private and Transferred
OHSR Capacity	300 KL
Location	

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Details of contractors on-site-personnel and workers	Zone 11- OHSR (Machpurulia village)
Project Manager	Mr. Jayaganthan A; 9575177767
Site Engineer	Mr. ElangovanPerumal; 8310062545
Site Supervisor	Mr. RahulNandy;7501750728
EHS Supervisor	Mr. Tarak Das; Mob: 9143696713
Archeological supervisor	NA
Skilled / semi-skilled workers	5 skilled and 5 semi-skilled
Unskilled workers	5
Women workers	Nil
Workers – local / migrant	Local-15
Details of facilities	
Construction camps, (no's and locations)	Not yet established


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

Field (1)	Anticipated Impact (2)	Mitigation Measures (3)	Actions Taken/ Status (4)	Responsibility of Implementation (5)	Monitoring of mitigation (6)	Cost and source of fund (7)
Utilities	Telephone lines, electric poles and wires, water lines within proposed project area	<ul style="list-style-type: none"> Identify and include locations and operators of these utilities in the detailed design documents to prevent unnecessary disruption of services during construction phase; and Require construction contractors to prepare a contingency plan to include actions to be taken in case of unintentional interruption of services. Require contractors to prepare spoils (waste) management plan and traffic management plan. 	<ul style="list-style-type: none"> There are no utilities in mention OHSR site. Details Spoil management plan, SMP (Attachment-O-7) has been attached 	<ul style="list-style-type: none"> Contractor, PIU 	<ul style="list-style-type: none"> PIU and DSISC observation at site and document checking 	<ul style="list-style-type: none"> Project cost
Construction work camps, stockpile areas, storage areas, and disposal areas.	Conflicts with local community; disruption to traffic flow and sensitive receptors.	<ul style="list-style-type: none"> Prioritize areas within or nearest possible vacant space in the project location; If it is deemed necessary to locate elsewhere, consider sites that will not promote instability and result in destruction of property, vegetation, irrigation, and drinking water supply systems; Do not consider residential areas; 	<ul style="list-style-type: none"> No construction camp established. Storage area has been established away from water body. Spoil generated from construction activity has been 	<ul style="list-style-type: none"> Contractor, PIU 	<ul style="list-style-type: none"> PIU and DSISC observation at site and document checking 	<ul style="list-style-type: none"> Project cost



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		<ul style="list-style-type: none">Take extreme care in selecting sites to avoid direct disposal to water body which will inconvenience the community.For excess spoil disposal, ensure (a) site shall be selected preferably from barren, infertile lands. In case agricultural land needs to be selected, written consent from landowners (not lessees) will be obtained; (b) debris disposal site shall be at least 200 m away from surface water bodies; (c) no residential areas shall be located within 50 m downwind side of the site; and (d) site is minimum 250 m away from sensitive locations like settlements, ponds/lakes or other water bodies.	<p>used for labelling/ backfilling.</p> <ul style="list-style-type: none">Disposal area has been selected at barren, infertile land nearest to the project zone.Employees are trained for storage and handling of materials which can potentially cause soil contamination and water contamination;Solid waste managed according to the following preferential hierarchy: reuse,			



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			and disposal to designated areas; Kitchen wastes collected in a dustbin then it is disposed outside from area to designated disposal location.			
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,	<ul style="list-style-type: none"> Obtain construction materials only from government approved quarries with prior approval of PIU; PIU to review, and ensure that proposed quarry sources have all necessary clearances/ permissions in place prior to approval Contractor to submit to PIU on a monthly basis documentation on material obtained from each source (quarry/ borrow pit) Avoid creation of new borrow areas, quarries etc., for the project; if unavoidable, contractor to obtain all clearances and permissions as 	<ul style="list-style-type: none"> No involvement of any new borrow area or quarry is anticipated. Materials collected from- Cement- Ambuja, Nuvoco and Ultratech Reinforcement- Tata Steel, SAIL, RINL Coarse Aggregates- 	<ul style="list-style-type: none"> Contractor, PIU 	<ul style="list-style-type: none"> PIU and DSISC observation at site and document checking 	<ul style="list-style-type: none"> Project cost



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	and water pollution.	required under law, including Environmental Clearance prior to approval by PIU	Pachami/ Rampurhat quarry. Fine Aggregates- River Damodar/ Kangsabati. Mentioned source are government approved.			
Consents, permits, clearances, No Objection Certificates (NOCs), etc.	Failure to obtain necessary consents, permits, NOCs, etc. can result to design revisions and/or stoppage of works	<ul style="list-style-type: none"> Obtain all necessary consents, permits, clearance, NOCs, etc. prior to award of civil works. Ensure that all necessary approvals for construction to be obtained by contractor are in place before start of construction Acknowledge in writing and provide report on compliance all obtained consents, permits, clearance, NOCs, etc. Include in detailed design drawings and documents all conditions and 	<ul style="list-style-type: none"> Already done land requisition, electric connection, water source (bore well) etc. Tree felling requirement for this site is not anticipated. Green DG sets only being used at site 	<ul style="list-style-type: none"> Contractor, PIU 	<ul style="list-style-type: none"> PIU and DSISC observation at site and document checking 	<ul style="list-style-type: none"> Project cost



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		provisions if necessary	(Appendix- O.F). <ul style="list-style-type: none">Please refer Attachment O-3 for list of relevant permits and clearances.			
Asbestos Cement Pipes	Health risk due to exposure to asbestos materials	<ul style="list-style-type: none">Obtain details on location of underground Asbestos Cement pipesLocate the new piper carefully to avoid encountering AC pipesLeave the Asbestos Cement pipes undisturbed in the ground.	<ul style="list-style-type: none">Mention OHSR site free from any underground asbestos cement pipes.	<ul style="list-style-type: none">Contractor, PIU	<ul style="list-style-type: none">PIU and DSISC observation at site and document checking	<ul style="list-style-type: none">Project cost



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

Field/Issues (1)	Anticipated Impact (2)	Recommended Mitigation Measures (3)	Actions Taken/ Status (4)	Responsibility of Implementation (5)	Monitoring of mitigation (6)	Cost and source of fund (7)
Environmental Management Plan (EMP) Implementation Training	Irreversible impact to the environment, workers, and community	<ul style="list-style-type: none"> Project manager and all key workers will be required to undergo training on EMP implementation including spoils/waste management, Standard operating procedures (SOP) for construction works; occupational health and safety (OHS), core labor laws, applicable environmental laws, etc. 	<ul style="list-style-type: none"> EMP implementation training session has been planned for all workers and community. 	<ul style="list-style-type: none"> Contractor 	<ul style="list-style-type: none"> PIU and DSISC observation at site and document checking 	<ul style="list-style-type: none"> Project cost
Air Quality	Emissions from construction vehicles, equipment, machinery and DG set used for excavation and construction resulting in dust and increase in concentration of vehicle-related pollutants such as carbon monoxide,	<ul style="list-style-type: none"> Following air pollution/dust control measures for construction activities stipulated by the "Direction of West Bengal Department of Environment under the Air Act, 1981 Direction No. EN/3170/T-IV-7/001/2009 dated: 10 December 2009": <ul style="list-style-type: none"> Only vehicles having valid Pollution Under Control Certificates should be engaged in the project. Vehicles transporting (cement, sands etc) should be covered and 	<ul style="list-style-type: none"> Only vehicles having valid PUC certificate have been engaged in the project (Appendix-O.F). Mixer machine, winch machine and DG set used for concreting and pilling are not left for idling, after completion of work. Sprinkling and dust 	<ul style="list-style-type: none"> Contractor 	<ul style="list-style-type: none"> PIU and DSISC observation at site and document checking. 	<ul style="list-style-type: none"> Project cost



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	sulphur dioxides, particulate matter, nitrogen oxides, and hydrocarbons	<p>cleaned prior to release at site, sprinkling of water and stabilization of soil for dust hazards to be carried out on site.</p> <ul style="list-style-type: none">• Damp down soil, sand/ earth stockpiled at site should be maintained as per site condition.• Control unnecessary movement of vehicle, public trespassing into work areas for control of dust generation.• If required, then provide a dust screen/high compound wall around the construction sites (OHSR).	<p>screen arrangement have been made, and will be used when required.</p> <ul style="list-style-type: none">• Site has been access controlled to prevent trespassing.• Stock piles will be maintained in such a way to minimise dust rising.• Air quality monitoring for base line data completed. Monitoring has been conducted for 10 locations (Durlabhpur-Benagari, ChotoNabagram, Mohona, Basudevpur, BarasalShrirampur, Ranipur, Mochrakend, Deuli, Bankdaha, Gangajalghati) to fulfilment the criteria.			



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Surface water quality	Mobilization of settled silt materials, run-off from stockpiled materials, and chemical contamination from fuels and lubricants during construction works can contaminate nearby surface water quality.	<ul style="list-style-type: none"> Avoid stockpiling of earth fill; especially in monsoon season, cover it with tarpaulins or plastic sheets. Prioritize and implement reuse of excess spoil and materials in the construction work; if necessary, dispose in designated disposal area. Storage locations should have impervious floors Fuels and lubricants should be stored away from drainage and spillage protection should be provided Provision for temporary silt traps or sedimentation basins along the drainage leading to the water bodies should be provided, according to situation. Temporary drainage channel around the work area should be made to accumulate the entry of 	<ul style="list-style-type: none"> No stockpiles have been planned near drainage locations/ nearby water bodies. Storage areas are compacted and made impervious. Locations for fuels and lubricants store is away from drainage path and spill kits have been obtained. All excavated materials expected to be utilized on-site only. No excess spoil anticipated. Surface water (pond) quality monitoring for baseline data has been conducted in 10 locations (Durlabhpur-Benagari, ChotoNabagram, 	<ul style="list-style-type: none"> Contractor 	<ul style="list-style-type: none"> PIU and DSISC observation at site and document checking 	<ul style="list-style-type: none"> Project cost



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		<p>runoff from upper areas into the work area.</p> <ul style="list-style-type: none"> Provision of pumping out of the water from the pits/excavations to a temporary sedimentation pond or disposal after sedimentation should be taken into consideration. 	<p>Mohona, Basudevpur, BarasalShrirampur, Ranipur, Mochrakend, Deuli, Bankdaha, Gangajalghati) as per environmental monitoring plan recommended in the IEE.</p>			
Noise Levels	Increase in noise level due to earth-moving and excavation equipment, and the transportation of equipment, materials by labours	<ul style="list-style-type: none"> Minimize noise from construction equipment by using vehicle silencers, fitting jackhammers with noise-reducing mufflers minimising the sound impact to surrounding sensitive receptor; Horns not to be used unless it is necessary to warn other road users; Ensure maximum work place noise level exposure not exceeding 85 decibels (dbA); Ensure noise level at site boundary comply with standard prescribed for local landuse; and Baseline and construction phase 	<ul style="list-style-type: none"> Consultation made with local communities in advance of the work to identify and avoid working at sensitive times, such as religious and cultural festivals. Planned activities in consultation with DSISC so that activities with the greatest potential to generate noise are conducted during periods of the day which will result in least 	<ul style="list-style-type: none"> Contractor 	<ul style="list-style-type: none"> PIU and DSISC observation at site and document checking 	<ul style="list-style-type: none"> Project cost



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		Noise Monitoring (Day & Night-time) should be conducted.	<p>disturbance.</p> <ul style="list-style-type: none">• Mixer machine, winch machine and DG sets used for concreting and piling are properly maintained and stopped immediately after completion of work.• Baseline monitoring has been conducted.• Noise quality monitoring for baseline data partially completed and has been conducted in 20 locations (Durlabhpur, ChotoNabagram, Mohona, Chusalk, BarasalShrirampur, Ranipur, Mochrakend, Deuli, Bankdaha, GangajalghatiLakhyara, Subaira, Lachmanpur, Mejhia, Benabad,			



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			Purbator, Banashuriya, Sarangapur, Kenduadihi, Rangnathpur) as per environmental monitoring plan recommended in the IEE.			
Landscape and aesthetics – waste generation	Impacts due to excess excavated earth, excess construction materials, and solid waste such as removed concrete, wood, packaging materials, empty containers, spoils, oils, lubricants, and other similar items.	<ul style="list-style-type: none"> • Prepare and implement a Construction Waste Management Plan • As far as possible utilize the debris and excess soil in construction purpose, for example for raising the ground level or construction of access roads etc., • Stockpiles, lubricants, fuels, and other materials should be located away from steep slopes and water bodies; • Avoid stockpiling any excess spoils at the site for long time. Excess excavated soils should be disposed of to approved 	<ul style="list-style-type: none"> • Excavated earth is utilized for backfilling purpose. • Spoil management plan has been developed. (Attachment-O-7) 	Contractor	PIU and DSISC observation at site and document checking	Project cost



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		<p>designated areas immediately;</p> <ul style="list-style-type: none">• If disposal is required, the site shall be selected preferably from barren, infertile lands; site should be located away from residential areas, forests, water bodies and any other sensitive land uses• Domestic solid wastes should be properly segregated in biodegradable and non-biodegradable for collection and disposal to designated solid waste disposal site; create a compost pit at workers' camp sites for disposal of biodegradable waste; non-biodegradable / recyclable material shall be collected separately and sold in the local recycling material market• Residual and hazardous wastes such as oils, fuels, and lubricants shall be disposed of in disposal sites approved by local				



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		<p>authorities/West Bengal Pollution Control Board (WBPCB);</p> <ul style="list-style-type: none"> Prohibit burning of construction and/or domestic waste; Ensure that wastes are not haphazardly dumped thrown within and around the project site and adjacent areas; provide proper collection bins, and create awareness to use the dust bins. Conduct site clearance and restoration to original condition after the completion of construction work; PIU to ensure that site is properly restored prior to issuing of construction completion certificate 				
Occupational Health and Safety	Occupational hazards which can arise during work	<p>Develop and implement a site-specific occupational health and safety (OHS) plan which will include measures such as:</p> <p>(a) excluding public from the site;</p> <p>(b) ensuring all workers are provided with and use personal protective</p>	<ul style="list-style-type: none"> Based on L & T's OHS Plan, a site specific OHS plan has been developed. Site OHS plan is attached at Attachment – O-4. 	<ul style="list-style-type: none"> Contractor 	<ul style="list-style-type: none"> PIU and DSISC observation at site and document checking 	<ul style="list-style-type: none"> Project cost



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		<p>equipment like Helmet, Gumboot, Safety Belt, Gloves, Nose mask etc.</p> <p>(c) Documentation of work-related accidents.</p> <p>(d) Providing qualified first aider at all times.</p> <p>(e) Providing to all workers reflective jacket,</p> <p>(f) Marking and providing sign boards for most of hazardous areas such as high voltage equipment,</p> <p>(g) Workers allowed exposure to noise level up to 85 dB (A) only.</p>	<ul style="list-style-type: none">• All workers have been provided with and made to use Personal Protective Equipment like helmet, gumboot, safety belt, gloves, nose mask and ear plugs;• H&S Training for all site personnel has been arranged and it will be continued;• H&S orientation training 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 injuries to fellow workers;• Documented procedures are followed for all site activities;• Work-related accidents			



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			will be recorded; • Drinking water provided after proper testing. • First Aid box provided at working sites; • Clean eating areas provided to workers; • Moving equipment maintained with audible back-up alarms			
Socio Economic Employment	Generation of temporary employment and increase in local revenue	• Employ local labour force as far as possible • Comply with labour laws	• Local labours are employed, on priority, whenever available. • Refer Attachment O3 for documents relating to statutory compliances.	• Contractor	• PIU and DSISC observation at site and document checking	• Project cost
Community Health and Safety.	Traffic accidents and vehicle collision with pedestrians during material and waste transportation	• Restrict construction vehicle movements to defined access roads and demarcated working areas (unless in the event of an emergency) • Enforce strict speed limit (20-30 kph) for playing on unpaved	• Safety signage and demarcation of work area will be maintained. • Night time haulage will be avoided. • Construction of OHSR is site-specific, no	Contractor	PIU and DSISC observation at site and document checking	Cost for implementation of mitigation measures responsibility of



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Field/Issues (1)	Anticipated Impact (2)	Recommended Mitigation Measures (3)	Actions Taken/ Status (4)	Responsibility of Implementation (5)	Monitoring of mitigation (6)	Cost and source of fund (7)
		<ul style="list-style-type: none">roads, construction tracksNight-time haulage will be by exception only, as approved by the PIU to minimize driving risk and disturbance to communitiesTemporary traffic control (e.g. flagmen) and signs will be provided where necessary to improve safety and provide directionsAll drivers will undergo safety and trainingPublic access to all areas where construction works are on-going will be restricted through the use of barricading and security personnelWarning signs, blinkers will be attached to the barricading to caution the public about the hazards associated with the works, and presence of deep excavationThe period of time when the	<ul style="list-style-type: none">disruption of traffic due to construction activity.Water sprinkler will be used regularly to control dust during dry season.Access road will be maintained with proper safety measures.Vehicles and equipments will be checked regularly for better performance.			contractor .



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		<p>pipeline trench is left open will be minimized through careful planning</p> <ul style="list-style-type: none">• Control dust pollution – implement dust control measures as suggested under air quality section• Maintain regularly the vehicles and use of manufacturer-approved parts to minimize potentially serious accidents caused by equipment malfunction or premature failure.• Provide road signs and flag persons to warn of on-going trenching activities.				
Work camp areas (Labour hutment)	Conflicts with local community; temporary air, water and noise pollution, unsanitary and poor living conditions for workers	<ul style="list-style-type: none">• Provide proper temporary accommodation with proper materials, adequate lighting and ventilation, appropriate facilities for winters and summers; ensure conditions of livability at work camps are maintained at the highest standards possible at all	<ul style="list-style-type: none">• Labour camp not yet established, we will provide all the basic facilities like kitchen, drinking water, toilet, first aid box, light, fan etc. When required.• LPG will be provided for	<ul style="list-style-type: none">• Contractor, PIU	<ul style="list-style-type: none">• PIU and DSISC observation at site and document checking	<ul style="list-style-type: none">• Project cost



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		<p>times;</p> <ul style="list-style-type: none">Minimize removal of vegetation and disallow cutting of treesEnsure conditions of livability at work camps are maintained at the highest standards possible at all times; living quarters and construction camps shall be provided with standard materials (as far as possible to use portable ready to fit-in reusable cabins with proper ventilation); thatched huts, and facilities constructed with materials like GI sheets, tarpaulins, etc., shall not be allowed as accommodation for workersCamp shall be provided with proper drainage, there shall not be any water accumulationProvide drinking water, water for other uses, and sanitation facilities for employeesProhibit employees from cutting of	<p>cooking. Use of firewood prohibited at camp.</p> <ul style="list-style-type: none">Kitchen wastes will be collected in a dustbin and are disposed outside from area to designated disposal location.Housekeeping will be maintained regularly to keep the area clean and hygienic.			



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		<p>trees for firewood; contractor should be providing proper facilities including cooking fuel (oil or gas; fire wood not allowed)</p> <ul style="list-style-type: none"> Manage solid waste according to the following preference hierarchy: reuse, recycling and disposal to designated areas; provide a compost pit for biodegradable waste, and non-biodegradable / recyclable waste shall be collected and sold in local market 				
Ecological Resources Terrestrial –	<ul style="list-style-type: none"> Loss of vegetation and tree cover 	<ul style="list-style-type: none"> Minimize removal of vegetation and disallow cutting of trees, by adopting best site layout and pipeline alignments If tree-removal will be required, obtain tree-cutting permit and Plant 5 native trees for every one that is removed. 	<ul style="list-style-type: none"> Tree removal is not required for OHSR site. Demarcation of ROW is pending that's why design of pipeline laying is under process. 	<ul style="list-style-type: none"> Contractor 	<ul style="list-style-type: none"> DSISC observation at site and document checking 	<ul style="list-style-type: none"> Project cost
Accessibility	<ul style="list-style-type: none"> Traffic problems and conflicts near 	<ul style="list-style-type: none"> Plan transportation routes so that heavy vehicles do not use narrow 	<ul style="list-style-type: none"> Transportation and hauling activities have 	<ul style="list-style-type: none"> Contractor 	<ul style="list-style-type: none"> DSISC observation 	<ul style="list-style-type: none"> Project cost



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	project locations and haul road	local roads, except in the immediate vicinity of delivery sites <ul style="list-style-type: none"> Schedule transport and hauling activities during non-peak hours; Locate entry and exit points in areas where there is low potential for traffic congestion; Drive vehicles in a considerate manner Notify affected public by public information notices, providing sign boards informing nature and duration of construction works and contact numbers for concerns/complaints. 	been planned during non-peak hours. <ul style="list-style-type: none"> Project details has been displayed on project site. Demarcation/ collection of detail of ROW is under process. 		at site and document checking	
Chance Finds	There are no protected properties in the subproject sites. However, in case of chance finds, contractors will be required to follow a protocol as defined in the	<ul style="list-style-type: none"> Consult Archaeological Survey of India (ASI) or West Bengal State Archaeology Department to obtain an expert assessment of the archaeological potential of the site Include state and local archaeological, cultural and historical authorities, and interest 	<ul style="list-style-type: none"> Protocol will be maintained if such incident occurs. 	Contractor	PIU and DSISC observation at site and document checking	Contractor cost



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	mitigation measures.	groups in consultation forums as project stakeholders so that their expertise can be made available. <ul style="list-style-type: none">In case of chance finds, works must be stopped immediately until such time chance finds are cleared by experts				
Submission of EMP implementation report	Unsatisfactory compliance to EMP	<ul style="list-style-type: none">Appointment of (I) Environment, Health and Safety (EHS) Supervisor to ensure EMP implementationTimely submission of monitoring reports including pictures.	<ul style="list-style-type: none">EHS supervisor has been appointed.For timely submission of monitoring report has been instructed to contractor.	Contractor	PIU and DSISC observation at site and document checking	Project cost



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Table 3: Construction Phase Environmental Monitoring Plan for Entire Package

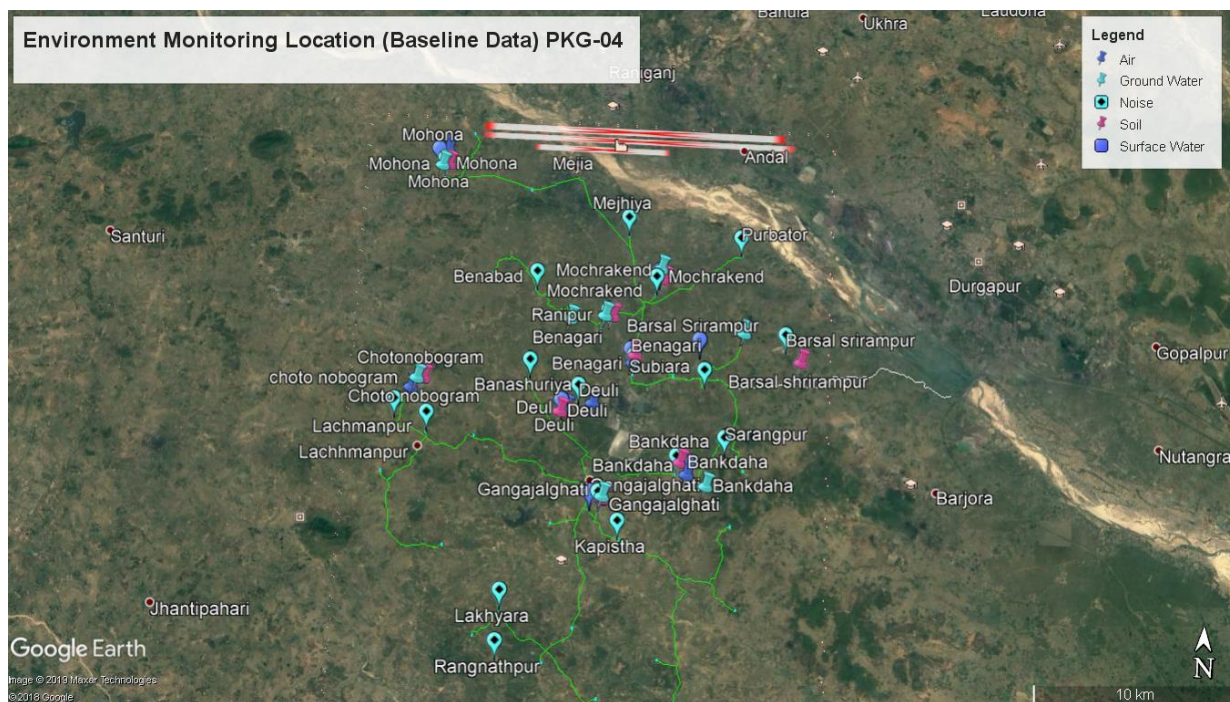
Monitoring Field	Monitoring Location	Monitoring Parameters	Frequency	Locations*	Cost as per budget (in Rs.)
Ambient air quality	10 locations (to be selected during implementation to represent the overall project area)	PM ₁₀ , PM _{2.5} , NO ₂ , SO ₂ , CO	Once before start of construction. Yearly 3- times except monsoon period during construction (3- year period considered)	Durlabhpur-Benagari, ChotoNabagram, Mohona, Basudevpur, BarasalShrirampur, Ranipur, Mochrakend, Deuli, Bankdaha, Gangajalghati	Rs. 500000/-
Ambient noise	20 locations (same as air quality monitoring)	Day time and night time noise levels(24 hours)	Once before start of construction. Yearly 3- times except monsoon period during construction (3- year period considered)	Durlabhpur, ChotoNabagram, Mohona, Chusalk, BarasalShrirampur, Ranipur, Mochrakend, Deuli, Bankdaha, GangajalghatiLakhyara, Subaira, Lachmanpur, Mejhia, Benabad, Purbator, Banashuriya, Sarangapur, Kenduadihi, Rangnathpur	Rs.- 300000/-
Surface water quality	10 locations (to be selected during implementation)	pH, Oil and grease, Cl, F, NO ₃ , TC, FC, Hardness, Turbidity BOD, COD, DO, TotalAlkalinity	Once before start of construction. Yearly 3- times except monsoon period during construction (3- year period considered)	Durlabhpur-Benagari, ChotoNabagram, Mohona, Basudevpur, BarasalShrirampur, Ranipur, Mochrakend, Deuli, Bankdaha, Gangajalghat	Rs.- 500000/-
Soil quality	10 locations (including, construction camps, workers camps)	pH, Elect. Conductivity (at 250C), Moisture (at 1050C), Texture (silt, clay, sand), Calcium (as CaO), Magnesium (as Mg), Permeability, Nitrogen (as N), Sodium (as Na), Phosphate (as PO ₄), Potassium (as K), Organic	Once before start of construction. Yearly 3- times except monsoon period during construction (3- year period considered)	Durlabhpur-Benagari, ChotoNabagram, Mohona, Basudevpur, BarasalShrirampur, Ranipur, Mochrakend, Deuli, Bankdaha, Gangajalghati	Rs.- 500000/-


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Monitoring Field	Monitoring Location	Monitoring Parameters	Frequency	Locations*	Cost as per budget (in Rs.)
		Matter, oil and grease			
Ground Water Quality	10 locations (including workers camp site & Construction camp/storage yards)	As per IS10,500: 2012	Once before start of construction. Yearly 3- times except monsoon period during construction (3- year period considered)	Durlabhpur-Benagari, ChotoNabagram, Mohona, Basudevpur, BarasalShrirampur, Ranipur, Mochrakend, Deuli, Bankdaha, Gangajalghat	RS.- 600000/-

Note- Mention locations had been selected for Baseline data. Sampling were done, report pending. During construction locations are changeable with progress of work. Present locations as mentioned in mitigation tables are base line monitoring conducted as per EMP provision. The exact locations of these monitoring are reported in SEMR over google earth image. For all the packages conduct of these monitoring is responsibility of concerned Contractor and cost for such already budgeted in the IEE

Monitoring Locations on Google Earth



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List of Attachments

Attachment O1: Details of construction Work sites and site layout plan

Attachment O2: Details of construction camp sites

Attachment O3: List of clearances & statutory requirements

Attachment O4: Contractor's OHS Policy & Organization

Attachment O5: Utility shifting/relocation

Attachment O6: Details of Construction Materials

Attachment O7: Spoil Management Plan

Attachment O8: Procedure for on-site Grievance Redressal Mechanism

Attachment O9: Procedure for information disclosure prior to start of works



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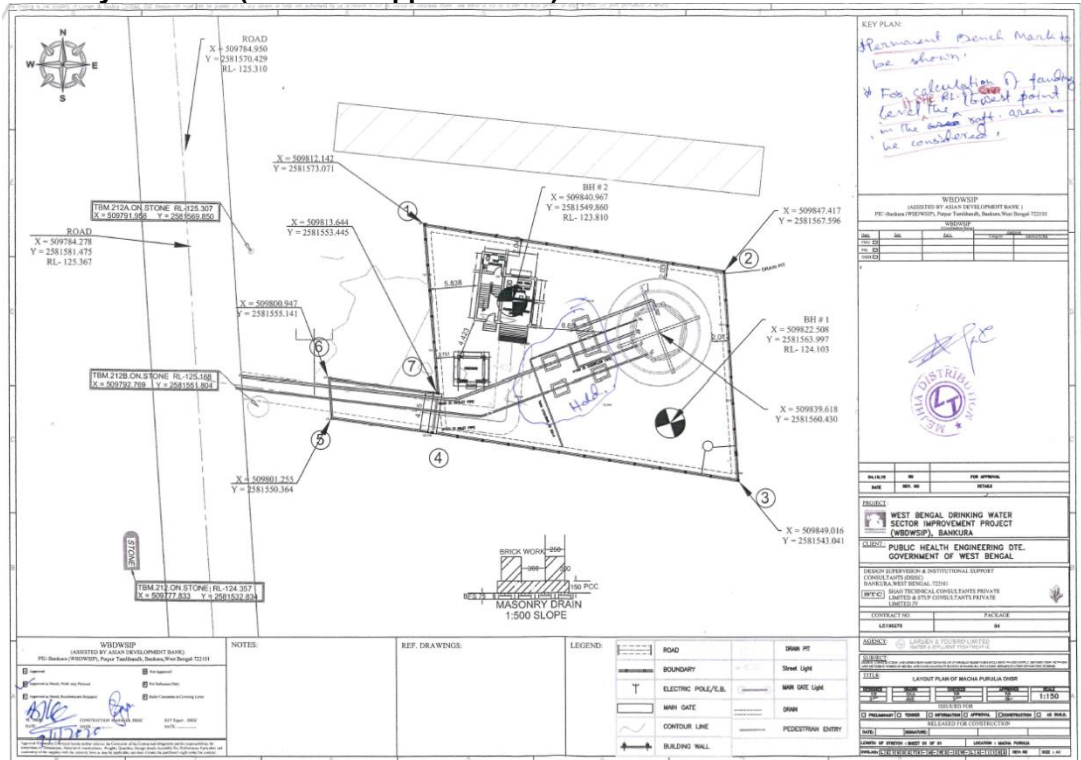
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Attachment O1: Details of construction Work sites and Site Layout Plan

1. Zone 19: OHSR construction Site

Location- Machaparulia

A	Material storage <ul style="list-style-type: none">• Cement• Steel• Fine Aggregate• Coarse Aggregate• Shuttering Material• Shuttering Oil
B	Plant & Machinery <ul style="list-style-type: none">• Concrete Mixer – 1 Nos• Needle Vibrator – 1 Nos• Steel Cutter – 1Nos
C	Site office – Yes
D	Laboratory – at Rangamati, Gangajalghati
E	Security cabin – No
F	Labor welfare facilities at Site <ul style="list-style-type: none">• Labor rest area• Drinking water (Bore well)• First Aid Box.
G	Site Layout Plan (Details in Appendix-O.A) 

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H	Site photographs	
Original site photographs		
	OHSR before Construction	Site office construction
Project facilities at Site		
	First Aid Box at site	Fire Extinguisher used at site

Attachment O2: Details of construction camp sites

1.	Labour accommodation, Not yet established
Location- Machapurulia	

Attachment O3: List of clearances & statutory requirements


Sl. No.	Project related	Status
A	Construction/work related	
1	Possession of land	Available
2	Notice to Proceed from PIU	Available

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B	Labour Safety / Welfare Related	
1	Labour license	Obtained [Refer Appendix – O.B]
2	Workmen Compensation	Obtained [Refer Appendix – O.C]
3	Risk Policy	Obtained [Refer Appendix – O.D]
C	Safety / liability safety related	
1	Medical Insurance	Tie-up with local hospital made [Refer Appendix – O.E]
D	Others	
1	Fitness certificate for vehicles, equipment used in construction	Obtained
2	Pollution under control (PUC) certificates for vehicles and equipment	Available [Refer Appendix – O.F]
3	Driving licenses for drivers	Obtained
4	Insurance for vehicles / equipment, as required	Obtained

Attachment O4: 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:	Yes [Refer Appendix-O.G] Yes
B	List safety risks anticipated in the project Work area - OHSR • Trips and falls • Head injury from falling objects • Confined work space • Slope failure / trench collapse • Accidents from open excavations	-
C	List of personal protection equipment provided to workers • Boots- 20Nos. • Safety shoes- 15 Nos. • Gloves- 35nos. • Helmet-35 nos. • Safety jacket- 35nos. • Goggles- 20 nos.	Yes
D	Preventive Measures	
	• Orientation of all workers on OHS	Tool Box Talk conducted.
	• Work permit system	Yes – for work at height

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	<ul style="list-style-type: none"> Toolbox/safety meetings (how often will this be conducted, what are the minimum topics) 	Twice Weekly on work at height, firefighting, first-aid, housekeeping, etc.
	<ul style="list-style-type: none"> Safety signage 	Displayed on site
	<ul style="list-style-type: none"> Barricades (more than 1 m deep requires hard barricading) 	Yes
2	Contractor emergency procedure	
A	<ul style="list-style-type: none"> In case of accident, first aid treatment to injured labour/person shall be provided. In case hospitalization is required, concerned site in-charge will immediately take necessary action for hospitalization and he will inform to our Project Manager. Details of accident shall be reported in accident register and the same shall be informed to client also. 	
B	Contact information, staff and responsibilities for emergency situations	
Designation	Staff name & contact	Emergency responsibility
Site Engineer	Mr.Elangovan Perumal Mob: 8310062545	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. Tarak Das; Mob: 9143696713	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	Mr. Jayaganthan A Mob: 9575177767	Project Manager Representative shall be responsible for taking all necessary action and decisions.
C	Reporting procedure in case of work accidents <ul style="list-style-type: none"> Details of accidents shall be recorded in accident register. Copy of accident register shall be submitted to client at the end of every month. In case of any major accident's client shall be informed immediately. 	Yes
D	Mandatory Reporting to Authorities	Yes
E	Prohibited Acts and Penalties for Violations	Yes

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Attachment O5: Utility shifting/relocation

Sl. No.	List work sites that require utility shifting, relocation, temporary shut off	Remarks
1	Area work sites (OHSR)	Not Required

Attachment O6: Details of Construction Materials

Sl. No	Material	Approximate quantity (MT) required for project	Source	Indicate if source has all necessary government clearances
1	Steel	25.067	Approved supplier	-
2	Cement	78.71	Approved supplier	-
3	Sand	123.5 (Cum)	From approved quarries at Damodar River.	Yes
4	Aggregate	168.38 (Cum)	From approved quarries at Panchami.	Yes



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Attachment O7: Spoil Management Plan

SPOIL MANAGEMENT PLAN(SMP)


WBDWSIP BANKURA PKG-04

GANGAJALGHATI BLOCKS

LOCATION- MACHAPURULIA OHSR SITE (ZONE-11)

REV	DATE	PREPARED BY SO/PM	CHECKED BY	APPROVED BY DSISC	ARRPROVED BY PIU
0	06-01-20	 SAFETY OFFICER	 DSISC Bankura WBDWSIP	 TEAM LEADER DSISC- Bankura WBDWSIP	 Assistant Engineer-I PIU Bankura WBDWSIP, PHE Dist. Govt. of West Bengal

Project Manager
Mejhia Distribution

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1. INTRODUCTION OF SMP:

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

2. SCOPE:

This Spoil Management Plan developed for **OHSR site in Zone-11**. For the OHSR site. We do not anticipate any excess Spoil for disposal as all excavated material will be reuse at site only.

3. LEGAL AND OTHER REQUIREMENTS:

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

4. ROLES AND RESPONSIBILITY:

SITE ENGINEER:

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

SAFETY PERSONNEL:


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

WORKER:

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

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

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

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

5. IDENTIFICATION AND ASSESSMENT OF SPOIL ASPECTS AND IMPACTS:

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

6. SPOIL VOLUMES AND CHARACTERISTICS:

In this project, approx. Generation of excavated earth will be **approx. 906 cum**. There is no excess earth in this project as the same earth is to be used to fill the low land area.

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

7. SPOIL REUSES OPPORTUNITIES, IDENTIFICATION AND ASSESMENT:

In this project, there is **approx. 230 cum** excess quality of excavated earth; total excavated earth should be reuse as per plan.

8. ON SITE SPOIL MANAGMENT APPROACH:

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

9. SPOIL TRANSPORTATION METHODOLOGY:


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

10. MONITORING, REPORTING, REVIEW AND IMPROVEMENTS:

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

SPOIL DETAILS

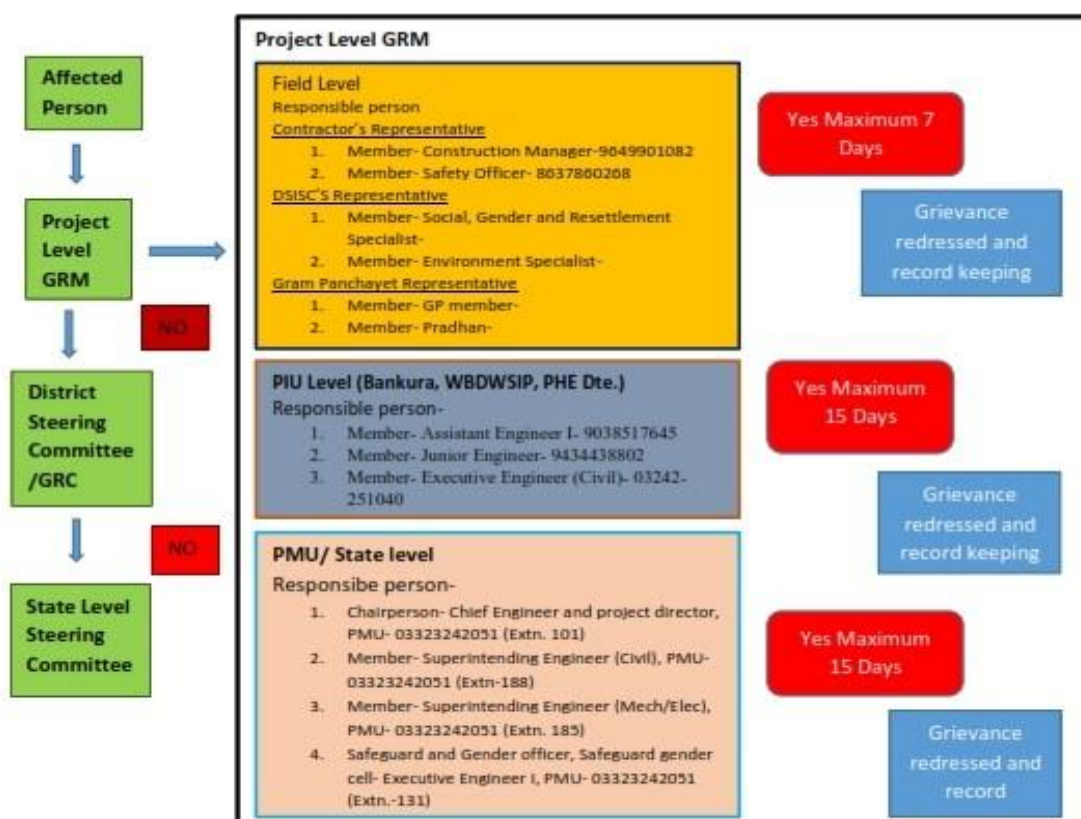
Sl. No.	Zone	Name of Structure	Excavation Total Qty (C.U.M)	Back Filling Total Qty (C.U.M)	Reuse Excess Qty (C.U.M)
1.	11	Boundary wall	450	320	130
2.	11	OHSR	456	356	100
Total			906	676	230

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Attachment O8: 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 procedure sand entitlements per project entitlement matrix, and PMU and PIU will ensure that their grievances are addressed in time.

Grievance Redressal Mechanism (GRM)



All grievances are recorded in site grievance register and resolved at the earliest. The sample grievance registration form is included in [Refer **Appendix – O.H**]

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Appendix O.A: Site Layout Plan

Appendix O.B: Labour License

Appendix O.C: Workman Compensation

Appendix-O. D- Risk Policy

Appendix- O.E- Medical Tie up Letter

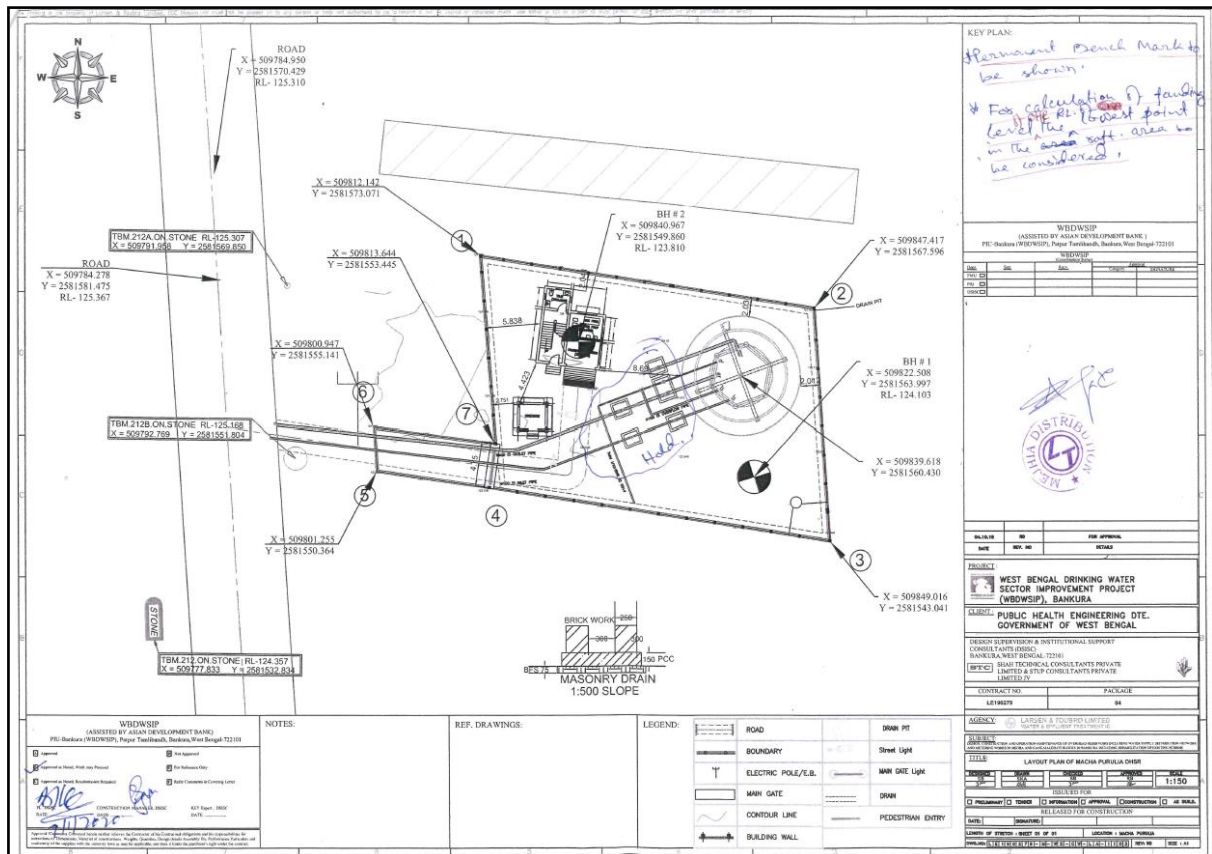
Appendix- O.F: PUC Certificates

Appendix O.G: Contractor's OHS Policy Statement

Appendix O.H: Sample Grievance Registration Form

Site Specific Environmental Management Plan

Appendix O.A: Site Layout Plan





L&T Construction
Water & Effluent Treatment

Design and construction of overhead reservoir including water supply distribution network and metering works in Mejhia and Gangajalghati blocks including rehabilitation of Existing schemes.
(Contract Package No: WBDWSIP/DWW/NCB/BK/04/2018-19)

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Appendix O.B: Labour License

04




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

FORM VI
[See Rule 25(1)]

Licence No. : **BAN04/CLL/000187** Date : **13th Aug, 2019**

Lic Fees	250
S. Deposit	10000

LICENCE

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

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

ASHIS KUMAR GARAI

Digitally signed by ASHIS KUMAR GARAI
Date: 2019.08.13 17:30:37 +05'30'

Establishment Information:
Project Implementation Unit, Public Health Engineering Directorate [BAN08/CLR/000038]
W.Site - Ailakundi, PHE Complex,
Anchuri, Block - Bankura -I, Bankura Sadar - 722102, PS - Bankura, Bankura

Work site exact location:
Mejhia Distribution Project
Gangajalghati, Block- Gangajal Ghati, Bankura Sadar
PS - Gangajalghati, District - Bankura, Pin Code - 722133

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

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Site Specific Environmental Management Plan

ANNEXURE

The licence is subject to the following conditions:

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

**ASHIS KUMAR
GARAI**

Digitally signed by ASHIS
KUMAR GARAI
Date: 2019.08.13 17:31:17
+05'30'




L&T Construction
Water & Effluent Treatment

Design and construction of overhead reservoir including water supply distribution network and metering works in Mejhia and Gangajalghati blocks including rehabilitation of Existing schemes.
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PACKAGE - 04


— GENERAL INSURANCE —

Certificate No: 696 Date: 02-Dec-2019

To whomsoever it may concern

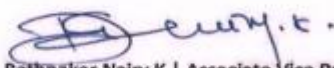
This is to certify that we have issued Group Personal Accident Policy No. 4005/102843874/04/000 to M/S. Larsen & Toubro Limited valid for the period 31-03-2019 to 30-03-2020.

This Policy covers all Permanent Workers, Temporary Workers, Sub-contractor's Workers, Piece-rate workers, Trainee Workers working at Project/Office of L&T Ltd and their Subsidiary & Associate Companies, Factories & Consortiums, SPVs, JVs, L&T Infrastructure Development Projects Ltd, L&T Hydrocarbon Engineering Ltd located anywhere in India.

This Policy covers the above workers in the following project site.

LE190279 - Design and Construction of Overhead Reservoir including Water Supply Distribution Network and Metering Works in Mejhia and Gangajalghati Blocks including Rehabilitation of Existing Schemes

For ICICI Lombard General Insurance Co Ltd


Rathnakar Nairy K | Associate Vice President – Specialized Industries

ICICI Lombard General Insurance Company Limited AA

Mailing Address: 401 & 402, 4th Floor, Interface 11, New Linking Road, Malad (West), Mumbai - 400 064.	Registered Office: ICICI Lombard House, 414, Veer Savarkar Marg, Near Siddhi Vinayak Temple, Prabhadevi, Mumbai - 400 025.	Toll free No. : 1800 2666 Alternate No.: 0 92236 22666 (chargeable) Email : customersupport@icicilombard.com Website : www.icicilombard.com
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L&T Construction
Water & Effluent Treatment

Design and construction of overhead reservoir including water supply distribution network and metering works in Mejhia and Gangajalghati blocks including rehabilitation of Existing schemes.
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Date: 13-08-2019

Customer ID : 101770109
Customer Name : LARSEN AND TOUBRO LIMITED
Address : 11th, tower-II, Godrej Water Side Building Salt Lake city, North 24 Paraganas,
West Bengal ,700091

Dear Sir,

Subject: Interim Held Cover Letter

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

Line of Business	Engineering
Type of Policy	Erection All Risk Policy
Insured	Principal Public Health Engineering Directorate, Project Management Unit, West Bengal Drinking Water Sector Improvement Project, Utility Building, 1st Floor, (Premises No-09/1-0024) AA-1A, (Tank No.3), New Town Kolkata -700156
	Contractor M/s Larsen & Toubro Limited, 11th, Tower –II, Godrej Water Side Building, Salt Lake City, North 24 Paraganas, West Bengal-700091
Perils Covered	As per quote submitted
Sum Insured / Limit of liability	EAR Section 1 : INR 214,10,00,000 EAR Section 2 (Third Party Liability) : INR 25,00,00,000
Period of Insurance	From 12-Aug-2019 00:00 Hrs To Midnight of 26-May-2022 + 12 Extended Maintenance Period as per Proposal form
Project Period	From 27-May-2019 00:00 Hrs To Midnight of 26-May-2022
Deductible/ Retention	As per quote submitted
Exclusions	As per quote submitted
Premium Payable[Including Taxes]	EAR Total Premium : INR 30,31,656
	EAR 1 st Instalment Premium : INR 6,31,595

Additional terms:-

Job No : LE190279

Description: Design and Construction of Overhead Reservoir including Water Supply Distribution Network and Metering Works in Mejhia and Gangajalghati Blocks including Rehabilitation of Existing Schemes.

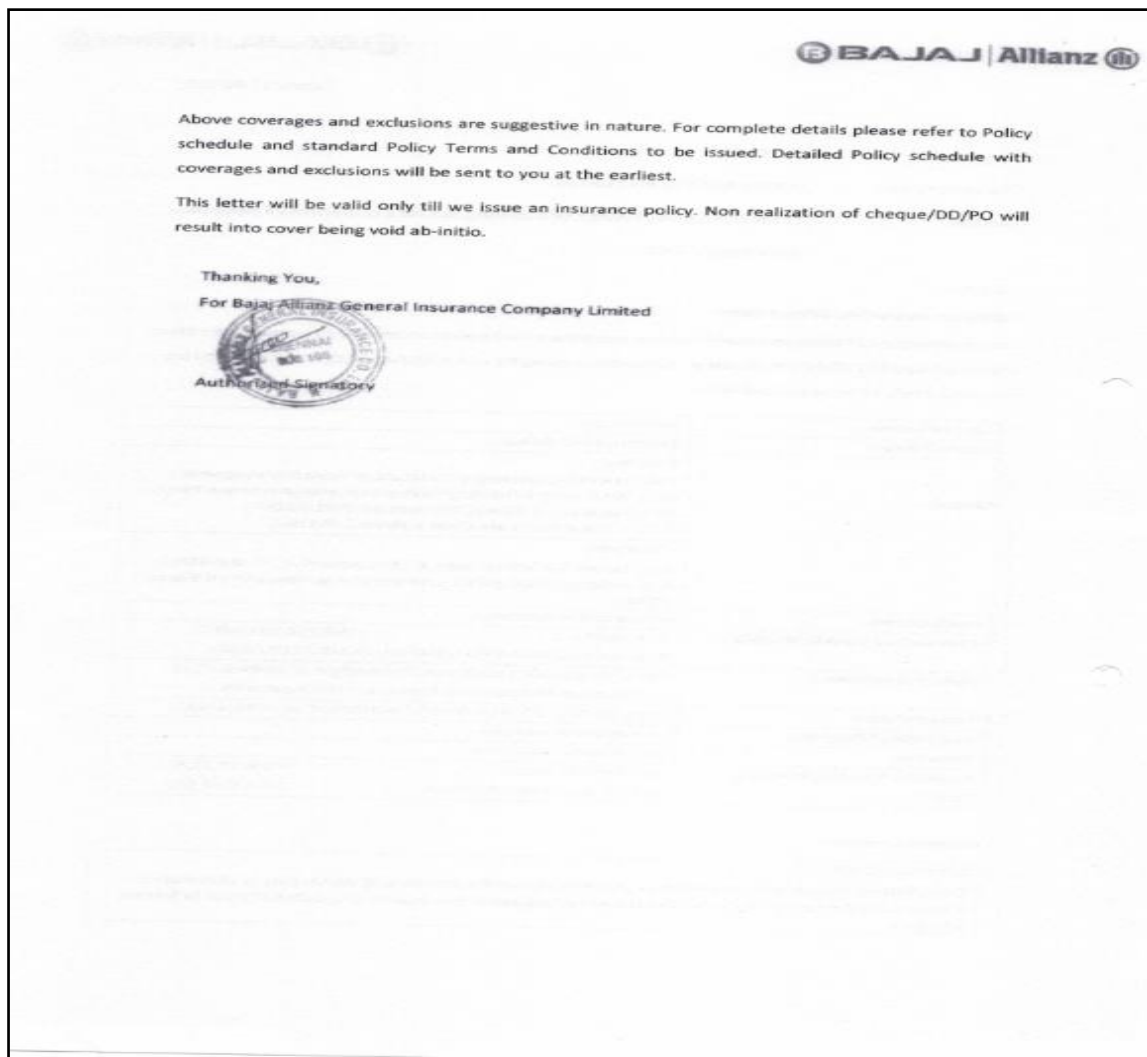


L&T Construction
Water & Effluent Treatment

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Appendix- O.E- Medical Tie up Letter



LARSEN & TOUBRO

Project Office :
L&T Construction
Water & Effluent Treatment
Barjora, Netaji Colony
PO+PS- Bankura-722202
West Bengal -India

Ref: PMU/WBDWSIP/PHED/84/186. Dated: 28/02/2019&
PMU/WBDWSIP/PHED/84/410. Dated: 27/05/2019

Date:22-10-2019

To,
KCP Memorial Hospital
Barjora – Gangajhal Ghati,
District- Bankura,
West Bengal -722202

Sub: "MoU for Staff & Workers Medical Health Checkup"-Reg.

Dear Sir,

With reference to the above subject we are pleased to sign this MoU for staff's and worker's Medical Health Checkup as per the following:

Purpose & Scope: Medical Health Checkup for Staff and Workers whenever necessary.

Condition & Arrangements: Medical Health Checkups needs to be performed whenever required. You are also required to attend our staffs or workers in case of any emergency. The location/ premises will be as the convenience of both the parties.

Timings: 24 x 7

Payment Terms:

Bill is to be submitted on Monthly basis & payment is to be made within fifteen days of Bill submission.

Tax as applicable will be recovered.

Payment will be made by NEFT/RTGS only.

The present MoU elucidates the general conditions and arrangements for future cooperation between concerned parties.

Kolkata Cluster Office :- Godrej Waterside Building, 11 Th. Floor, Salt Lake, Sector-V Block-Dp-5, Kolkata-700091, West Bengal, India.
Headquarters: Mount Poonamallee Road, Manapakkam, P.B. No. 979, Chennai - 600 089, INDIA.
Registered Office: L&T House, N. M. Marg, Ballard Estate, Mumbai - 400 001, INDIA.
Licence No.: CIN - L99999MH1946PLG004758 Website: www.Lntec.com

L&T Construction - Water & Effluent Treatment is a brand of Larsen & Toubro Limited



L&T Construction
Water & Effluent Treatment

Design and construction of overhead reservoir including water supply distribution network and metering works in Mejhia and Gangajalghati blocks including rehabilitation of Existing schemes.
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Signature

For and on behalf of: Larsen & Toubro Limited

Date: 22/10/19.

Thanking you in anticipation.

For L&T Construction,

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

Bankura- Mejia Intake & WTP Project
Bankura- Mejia Distribution

Project Office :
L&T Construction
Water & Effluent Treatment
Barjora, Netaji Colony
PO+PS- Bankura-722202
West Bengal - India

Signature



For and on behalf of: KCP Memorial Hospital

Date: 22/10/19.

Kolkata Cluster Office - Godrej Waterside Building, 11 Th Floor, Salt Lake, Sector-V Block-Dp-5, Kolkata-700091, West Bengal, India
Headquarters: Mount Poonamallee Road, Manapakkam, P.B. No. 976, Chennai - 600 089, INDIA
Registered Office: L&T House, N. M. Marg, Ballard Estate, Mumbai - 400 001, INDIA
Licence No.: C/N - L99999MH1946PLC004768 VWebsite: www.Lntec.com
L&T Construction - Water & Effluent Treatment is a brand of Larsen & Toubro Limited



L&T Construction
Water & Effluent Treatment

Design and construction of overhead reservoir including water supply distribution network and metering works in Mejhia and Gangajalghati blocks including rehabilitation of Existing schemes.
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Appendix- O.F: PUC Certificates

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

Vehicle Registrn. No. : WB67B 7218 WB-01-**D** 3723953

Date of issue: 22-11-2019 Valid upto: 21-11-2020

Pollution Level:

CO (%)	
HC (ppm)	0.25
SD (HSU)	

PUC Certificate issued by: [Signature] License No. and Seal: 23/2010

Signature: [Signature]

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

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

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

Pollution Level:

CO (%)	4.12
HC (ppm)	
SD (HSU)	

PUC Certificate issued by: P.C POLLUTION CHECKING CENTRE License No. and Seal: BANK/40/2016

Signature: [Signature]

Stamp: P.C. POLLUTION CHECKING CENTRE



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POLLUTION UNDER CONTROL CERTIFICATE

Authorised By: Bankura RTO
Transport Commissionerate, West Bengal



TEST RESULT : PASS
VALID TILL: 29/Jun/2020

DIESEL DRIVEN VEHICLES

Certified that the vehicle conforms to the standards prescribed under rule 115(2) of CMV Rules 1959

Certificate No.: WB06700030000039
Registration No: WB67B5394
Chassis No.: TEP740B2CHB012356
Engine No.: 4H3202/1720489
Class of Vehicle: Excavator
(Commercial)
Make: MANITOU EQUIPMENT
Model: INDIA PVT LTD
Model: BSSTWD
Vehicle Category: MEDIUM GOODS
VEHICLE
Date of Registration: 02/Apr/2018
Emission Norms: BHARAT STAGE III
Fuel: DIESEL
Date of Testing: 31/Dec/2019

FUEL	Light Absorption Coefficient (Permissible Limit)	Measured Value
DIESEL	2.45	0.02

Time of Testing: 17:51:32
Fee Charged: Rs.100.0
In case of any complaint Please write to Transport Commissioner, West Bengal / email to: transportdept.wb@gmail.com / Call us: 033 2262 5404

Auto Emission Testing Centre Code: WB0670003
Testing Centre Name: SINHA MOTORS
Centre Address: GANGAJAL GHATI
Test Conducted By: UMA SANKAR SINHA



TEST RESULT FOR DIESEL VEHICLE

	IDLE RPM	MAX RPM	K VALUE	OIL TEMP
TEST 1	1198.0	1198.0	0.02	197.0
TEST 2	3065.0	1198.0	0.02	202.0
TEST 3	1197.0	1197.0	0.02	176.0
AVG	1820.0	1197.66667	0.02	191.66667

This is a computer generated certificate and does not require signature

Scanned by CamScanner



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GOVERNMENT OF WEST BENGAL			
State Transport Department Bankura RTO			
FORM 23			
CERTIFICATE OF REGISTRATION			
Registration No	: WB67B7218	Registration Date	: 20-Mar-2019
Description of Vehicle	: EXCAVATOR (COMMERCIAL)	Purpose For Printing RC	: NEW
Dealer's Name & Address	: JAYASHREE AUTOMOBILES(I) P LTD, ANDAL MORE, BURDWAN, . . .		
Owner Name	: BIBHAS MISHRA	Son/wife/daughter of	: MANIK MISHRA
Full Address: (Permanent)	: PATDOHA, SHYAMPUR, SALTORA, BANKURA, WEST BENGAL-722158		
Full Address: (Temporary)	: PATDOHA, SHYAMPUR, SALTORA, BANKURA -WEST BENGAL-722158		
Fitness UpTo	: 19-Mar-2021	Tax UpTo	: 19-Mar-2020
Owner Serial No	: 1		
<u>Detailed Description</u>			
Class of Vehicle	: EXCAVATOR (COMMERCIAL)	Link Vehicle No	:
Ownership	: INDIVIDUAL	Norms	: Bharat Stage III (CEV)
Maker's Name	: JCB INDIA LIMITED		
Front HSRP No	: AA121054168	Rear HSRP No	: AA121054169
Type of Body	: SIDE SHIFT BACKHOE LOA DER	Month/Year of Manuf.	: 02/2019
No of Cylinders	: 4	Chassis No	: HAR3DXXTT02718703
Engine No	: H00215832	Fuel	: DIESEL
Horse Power(BHP)	: 75.04	Cubic Capacity	: 4765.00
Maker's Classification	: JCB 3DX XTRA	Wheel base	: 2200
Seating Cap(in all)	: 1	Standing Cap	: 0
Sleeper Cap	: 0	Unladen Wt (kgs)	: 7600
Colour	: YELLOW	Laden/GV Wt (kgs)	: 7660
Other Criteria	:	AC Fitted	: NO
Vehicle Purchase As	: Fully Built		
<u>Additional Particulars of all transport vehicles other than motor cabs (Gross Vehicle Weight)</u>			
By Manuf.		As Regd.	
	Description	Weight(in kgs)	
a) Front:	1	1	
b) Rear:	1	1	
c) Other:	1	0	
d) Tandem:	1	0	
The motor vehicle above described is subject to Hypothecation in favour of SUNDARAM FINANCE LTD, DURGAPUR, . . Paschim Burdwan, West Bengal-713216 w.e.f. 08-Mar-2019.			
Purchase dt	: 08-Mar-2019	Sale Amt	: 2620000/-
OTT Date	: 20-Mar-2019	Amount/Rcpt No	: 6528 / WB67R19030003101
TaxUpTo	: 19-Mar-2020	Vehicle is Govt./ Pvt.	: PRIVATE
Tax Exempted or Not	: NOT EXEMPTED	Date of Approval	: 20-Mar-2019
<u>Other State/Transfer/Conversion Details</u>			
Previous Owner	:	Previous RegNo	:
Old State	:	Entry Date	:
Transfer Date	:	Conversion Date	:
Date : 20-Mar-2019 18:28:55		Registering Authority Bankura	
Taxation Particulars / Advance Registration Mark Fee Details		Signature of Registering Authority Date : 20-Mar-2019	



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Water & Effluent Treatment

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Enriching Lives

KIRLOSKAR OIL ENGINES LIMITED

KOEL CHHOTA CHILLI GENSET TEST CERTIFICATE

This is to certify that KOEL CHHOTA CHILLI Genset Model KG1-10AS5 bearing Serial No. D8.5326... / 1800281

with Engine Serial No. D8.9303/1800921 and Alternator

Serial No. LAS3C218E6209-H complies with the provisions of Ministry of Environment & Forests, Government of India notification GSR No.371(E) dated 17.05.2002.

The full load at N.T.P. condition is 10 KVA with 0.8 Power Factor at 50 Hz.

Date: 09-JUN-2018


Quality Assurance

Genset rating conforms to ISO-8528 or equivalent.



Regd. Office : Laxmanrao Kirloskar Road, Khadki, Pune - 411003 INDIA. Tel. : +91 (20) 2581 0341, 6608 4000. Fax : +91 (20) 2581 3208, 2581 0209.
email : koel.helpdesk@kirloskar.com Website : www.koel.co.in

QA/F/607/00

D3.340.17.0.PR



L&T Construction
Water & Effluent Treatment

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Enriching Lives


KIRLOSKAR OIL ENGINES LIMITED

ENGINE TEST CERTIFICATE

This is to certify that Kirloskar Engine Model EA16 G1.
bearing Serial No. D8.9303 / 1800921 complies with Central
Pollution Control Board (CPCB) norms as per the Environment (Protection)
Rules 1986, in the Schedule I, in serial number 95 relating to Emission Limits for
new diesel engine up to 800 KW for generator set(Genset) application- G.S.R.
771(E) dated 11 DEC 2013 & G.S.R. 232 (E) dated. 31st MARCH, 2014
notified by Ministry of Environment & Forests, Government of India.

The full load power at N.T.P. condition is 16 B.H.P. at
1500 RPM

Date: JUN-2018


Quality Assurance

Power rating is gross and conforms to ICXN/IFN/HD/LD/ISO3046/BS5514/IS10001/DIN6271
or equivalent.

Regd. Office : Laxmanrao Kirloskar Road, Khadki, Pune - 411003 INDIA. Tel. : +91 (20) 2581 0341, 6608 4000. Fax : +91 (20) 2581 3208, 2581 0209,
email : koel.helpdesk@kirloskar.com Website : www.koel.co.in

QA/F/122/00

02.549.02.0.00



L&T Construction
Water & Effluent Treatment

Design and construction of overhead reservoir including water supply distribution network and metering works in Mejhia and Gangajalghati blocks including rehabilitation of Existing schemes.
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Appendix O.G: Contractor's OHS Policy Statement

Corporate Environment, Health & Safety (EHS) Policy

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

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

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

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

Date: 1st July, 2019

S N SUBRAHMANYAN
Chief Executive Officer
& Managing Director



LARSEN & TOUBRO
It's all about Imagineering



Site Specific Environmental Management Plan

ENVIRONMENT HEALTH & SAFETY POLICY

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

EHS Philosophy

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

The objectives of this EHS Policy shall be achieved by

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

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


S. Rajavel

SR. VP & Head
Water & Effluent Treatment IC & SWC BU

Date: 18th September, 2018



L&T Construction
Water & Effluent Treatment IC



L&T Construction
Water & Effluent Treatment

Design and construction of overhead reservoir including water supply distribution network and metering works in Mejhia and Gangajalghati blocks including rehabilitation of Existing schemes.
(Contract Package No: WBDWSIP/DWW/NCB/BK/04/2018-19)

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Appendix O.H: Sample Grievance Registration Form

অভিযোগ নিবন্ধন ফর্মের নমুনা

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

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

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

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

Office ব্যবহারের জন্যঃ

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



Site Specific Environmental Management Plan

(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 into 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:	