

Site-Specific Environmental Management Plan

Project number: 49107-006
July 2019

IND: West Bengal Drinking Water Sector Improvement Project – Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block (Zone 5: Pipeline - Tegharia)

Package No: N24P/02A

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

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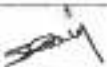



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SITE SPECIFIC ENVIRONMENTAL MANAGEMENT PLAN

WBDWSIP HAROA BLOCK

LOCATION: ZONE- 5 TEGHORIA (PIPELINE WORK)

Environmental Specialist, DSISC
North 24 Parganas
WBDWSI Project

0	20.07.2019				
REV	DATE	PREPARED BY	CHECKED BY	APPROVED BY DSISC	APPROVED BY PIU

West Bengal Drinking Water Sector Improvement Project

Environmental Specialist, DSISC
North 24 Parganas
WBDWSI Project

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Package No.	Package No : N24P/02A Zone 5: Pipeline (Tegharia) under PIU North 24 Parganas
Package title	Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block , SEMP is as per requirement of the Draft IEE covering package no. N24P/02A
Contractor	NCC Pvt. Ltd.
Date of Contract Award	19/09/2018
Date of particular works commencement	23/07/2019
Contract period	Construction: 3 Years ; O&M: 2 Years
SEMP Component	Laying of 52041m of pipeline as detailed below.
Demolition work	No demolition activity involved
Project Area	Kulti Gram Panchayat of Haroa Block
Project Description	Individual household water supply schemes for the project Gram Panchayats
Household Connection	1665 (Estimated HH Connection)
Non-Household Connection	All Commercial, Educational, Religious and Health institutions will get potable water from this project. Numbers are not yet identified
Indicative Budget for EMP Implementation for the entire package	INR 21,42,500/-
Project Components	As per project detailed design

Gram Panchayat (GP): Kulti

Water Distribution Pipe Length (m) Summary											Total Length
Zone ID	Pipe Diameters(mm) <i>*External dia</i>										
	63*	75*	90*	110*	140*	200*	250	300	350	400	
Zone – H5	23266	3550	15627	3665	2958	2949	26				52041

Map of Distribution Network

Refer Appendix – P.1

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Details of contractors on-site-personnel and workers	Zone 5: (Pipeline) Tegharia villahge ,Kulti Gram Panchayat of Haroa Block
Project Manager	Mr. Ramesh Singh; 8170011450
Site Engineer	Mr. Krishnapada Singh; 9735949496
Site Supervisor	Mr. Krishnapada Singh; 9735949496
EHS Supervisor	Mr. Saradindu Gain; 9775459487
Archeological supervisor	NA
Skilled / semi-skilled workers	2 skilled and 0 Semi-skilled
Unskilled workers	10
Women workers	Nil
Workers – local / migrant	Local-Nil / Migrant-12 (from other districts of West Bengal)
Details of facilities	
Construction camps, (no's and locations)	One Labor accommodation at Rented house near Makhla Bazar (As referred in Attachment P2)

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

Field/ Issues	Anticipated Impact	Recommended Mitigation Measures	Actions Taken/ Status	Responsibility of Implementation	Monitoring of mitigation	Cost and source of fund
Infrastructure and Services	Electric poles and wires, water lines within proposed project area of Pipe laying.	<ul style="list-style-type: none"> Locations and operators of these utilities to be identified as per detailed design documents to prevent unnecessary disruption of services during construction phase. Prepare spoils (Waste) management plan. 	<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 pipe laying work to continue without disturbing the existing water pipelines and electric poles and overhead HT line. Flagman deployed on-site with Red and Green flags to control traffic and activity side by side. <p>Please refer Attachment P7 and P8 of this SEMP for site specific spoil management plan and traffic management plans.</p>	Contractor, PIU	DSISC observation at site and document checking	Project cost
Climate	The nature and intensity of rainfall events in an area, has implications for surface water management.	<ul style="list-style-type: none"> Seasonal climatic variations should be taken into account during scheduling of construction in the area. 	<ul style="list-style-type: none"> Excavation works schedule during dry season have been approved by PMU. If excavation work is to be conducted during rainy season then preventive measures will be taken like dewatering from the trench During pipelaying use of Gumboot is a must. To avoid slip, trip and fall, no outsider is allowed within the barricading area. 	Contractor, PIU	DSISC observation at site	Project cost
Sources of Materials	Extraction of materials can disrupt natural land contours and	<ul style="list-style-type: none"> Obtain construction materials only from government approved quarries with prior approval of PIU. On a monthly basis 	No involvement of any new borrow area or quarry is anticipated. Excavated soil will be used for backfilling of trenches.	Contractor, PIU	DSISC document checking	Project cost

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Field/ Issues	Anticipated Impact	Recommended Mitigation Measures	Actions Taken/ Status	Responsibility of Implementation	Monitoring of mitigation	Cost and source of fund
	vegetation resulting in accelerated erosion, disturbance in natural drainage patterns, ponding and water logging, and water pollution.	documentation on material obtained from each source (quarry/borrow pit) should be submitted. • In case of involvement of new quarries/ borrow areas, prior steps will follow for all clearances and permissions as required under law.				
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"> • All necessary consents, permits, clearance, NOCs, etc prior to award of civil works should be obtained. • All necessary approvals for construction to be obtained before start of construction. • Acknowledge in writing and report on compliance consents, permits, clearance, NOCs etc. obtained. 	<ul style="list-style-type: none"> • We have already received pipe laying permission from local authorities, electric connection, water source etc. • NOC taken from Gram Pradhans for carrying out the activity. • DG sets of capacity less than 5 kVA only being used. • Refer Attachment P3 for relevant clearances. 	Contractor and PIU	DSISC observation at site and document checking	Project cost
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 pipes • Locate the new pipe carefully to avoid encountering AC pipes • Leave the Asbestos Cement pipes undisturbed in the ground. 	<p>Pipelaying work will be continued without disturbing existing pipelines as recommended in the IEE</p> <p>No asbestos pipes encountered till now. In any circumstances the Asbestos Cement pipes will not be disturbed and left in situ.</p> <p>Subproject does not includes rehabilitation of existing infrastructure like replacement of AC pipes, tube wells, pumping stations and OHSRs</p>	Contractor and PIU	DSISC observation at site and document checking	Project cost

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

Field/ Issues	Anticipated Impact	Recommended Mitigation Measures	Actions Taken/ Status	Responsibility of Implementation	Monitoring of mitigation	Cost and source of fund
Material handling	HDPE pipes gets heated during strong sun and at fusion weld joints.	Hand gloves, nose masks and related PPE's should be used by the workmen.	Continuous supervision regarding the use of safety gadgets is being ensured [Refer Attachment P4 for availability of PPEs at Site].	Contractor	PIU through DSISC observation at site and document checking	Project cost
Air Quality	Emissions from construction vehicles, equipment, machinery and DG set used for excavation and pipe laying resulting in dust and increase in concentration of vehicle-related noxious compounds that causes pollution.	<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 cleaned prior to release at site, sprinkling of water and stabilization of soil for dust hazards to be carried out on site. 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. 	<ul style="list-style-type: none"> Only vehicles having valid PUC certificate have been engaged in the project. Sprinkling and dust screen arrangement have been made, and will be used when required. Workers has been instructed to always use dust mask while working in the trench. Site has been access controlled to prevent trespassing. Excavated earth piles will be maintained in such a way to minimise dust rising. Air quality monitoring has been conducted at following five places (Zone-2 Nebutala Abad, Zone-5 Tegharia, Zone-13 Chauhata, Zone-17 Shalipur and Zone-21 Haroa) in the Haroa Package. 	Contractor	PIU through DSISC observation at site	Project cost
Drainage and	Due to the nature and locality of the	<ul style="list-style-type: none"> The site surface should be engineered and shaped in such a way 	<ul style="list-style-type: none"> We have ensured run-off through the site to a local drain does not 	Contractor	PIU through DSISC	Project cost

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Field/ Issues	Anticipated Impact	Recommended Mitigation Measures	Actions Taken/ Status	Responsibility of Implementation	Monitoring of mitigation	Cost and source of fund
hydrology	projects there is unlikely to be any significant impacts on water resources within the immediate area.	that rapid and efficient evacuation of runoff is achieved.	contaminate existing drain and pond around the project site. <ul style="list-style-type: none"> Dewatering, if any and hydrotest water, will be also discharged to local drains after ensuring no contamination. 		observation at site and document checking	
River/Surface water quality	Mobilization of settled silt materials, run-off from stockpiled materials, and chemical contamination from fuels and lubricants during construction works can contaminate nearby surface water quality.	<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. 	<ul style="list-style-type: none"> Excavated earth from dug trenches will be stacked along the pipeline and away from drainage locations/ nearby water bodies. Locations for fuels and lubricants store is away from drainage path and spill kits have been obtained. All excavated soils are expected to be utilized on-site only. No excess spoil anticipated. Surface water monitoring has been conducted already following two places (Zone-2 Nebutala Abad and Zone-13 Chauhata) in the Haroa project as per Environmental Monitoring Plan recommended in the IEE. 	Contractor	PIU through DSISC observation at site and document checking	Project cost
Biodiversity Fauna and Flora	Due to the nature and locality of the project there is unlikely to be any significant impacts on bio-diversity within the area.	<ul style="list-style-type: none"> For flora protection, tree cutting is strictly prohibited; if necessary then obtain permission through proper channel. For faunal activity, instruction should be given to everyone to inform site EHS Coordinator who should take appropriate action for their protection and safe rescue. 	<ul style="list-style-type: none"> Few trees are present along the existing alignment; cutting of tree strictly banned without regulatory clearance, if necessary, trimming allowed. So far no faunal movement has been observed in this site. 	Contractor	PIU through DSISC observation at site and document checking	Project cost

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Field/ Issues	Anticipated Impact	Recommended Mitigation Measures	Actions Taken/ Status	Responsibility of Implementation	Monitoring of mitigation	Cost and source of fund
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; Maintain maximum sound levels not exceeding 75 decibels (dB(A)). When measured at a distance of 1m from the vehicle/s. Baseline and construction phase Noise Monitoring (Day & Night time) should be conducted. 	<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. Noise quality Monitoring has been conducted at following five places (Zone-2 Nebutala Abad, Zone-5 Tegharia, Zone-13 Chauhata, Zone-17 Shalipur and Zone-21 of Haroa) in the Haroa Package as per monitoring recommendation included in the IEE. DG set (less than 5 kVA) are used for connecting the HDPE lines. This is properly maintained and stopped immediately after completion of work. 	Contractor	PIU through DSISC observation at site and document checking	Project cost
Landscape and Aesthetics character, and sense of place	Construction wastes as well as excess construction materials may show some impact.	<ul style="list-style-type: none"> Prepare a construction waste management plan for site. Hazardous wastes e.g. waste oil, empty paint cans, etc. should be stored on site and then shifted to a central location from where these will be disposed in accordance with Hazardous Wastes Management Rule, 2016. As far as possible utilize the debris and excess soil in construction purpose such as for site filling and labelling purpose. Avoid stockpiling excavated earth at the site for long time, if required, dispose at the site selected, in 	<ul style="list-style-type: none"> Spoil management plan has been developed [Refer Attachment P7] Excavated earth is utilized for backfilling purpose. Excavated earth will be backfilled on the same day. 	Contractor	PIU through DSISC observation at site and document checking	Project cost

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Field/ Issues	Anticipated Impact	Recommended Mitigation Measures	Actions Taken/ Status	Responsibility of Implementation	Monitoring of mitigation	Cost and source of fund
		consultation with local GP preferably from barren, infertile land, which is located away from any sensitive area.				
Occupational Health and Safety	Occupational hazards which can arise during work	Develop and implement a site specific occupational health and safety(OHS) plan which will include measures such as: (a) excluding public from the site; (b) ensuring all workers are provided with and use personal protective equipment like Helmet, Gumboot, Safety Belt, Gloves, Nose mask etc. (c) documentation of work related accidents. (d) Providing qualified first aider at all times. (e) Providing to all workers reflective jacket, (f) Marking and providing sign boards for most of hazardous areas such as high voltage equipment, (g) Workers allowed exposure to noise level up to 85 dB (A) only.	<ul style="list-style-type: none"> Based on NCC's OHS Plan, a site specific OHS plan has been developed. Site OHS plan is attached at Attachment - P4. All workers have been provided with and made to use Personal Protective Equipment like helmet, gumboot, reflective jacket, 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 will be recorded; Bottled water provided at site. First Aid box provided at working sites; Clean eating areas provided to workers; Moving equipment maintained with 	Contractor	PIU through DSISC observation at site and document checking	Project cost

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Field/ Issues	Anticipated Impact	Recommended Mitigation Measures	Actions Taken/ Status	Responsibility of Implementation	Monitoring of mitigation	Cost and source of fund
			audible back-up alarms			
Socio Economic Employment	Generation of temporary employment and increase in local revenue	<ul style="list-style-type: none"> Employ local labour force as far as possible Comply with labour laws 	<ul style="list-style-type: none"> Local labours are employed, on priority, whenever available. Refer Attachment P3 for documents relating to statutory compliances 	Contractor	PIU through DSISC observation at site and document checking	Project cost
Environmental Management Plan (EMP) Implementation Training	Irreversible impact to the environment, workers, and community	Project Manager and all key workers will be required to undergo training on EMP implementation including spoils/waste management, Standard operating procedures (SOP) for construction works; occupational health and safety (OHS), core labour laws, applicable environmental laws etc.	Training session for all employees has been arranged.	Contractor	PIU through DSISC observation at site and document checking	Project cost
Construction Camps	Temporary air, noise, land and water pollution from machine operation and after establishment of habitation	<ul style="list-style-type: none"> Camp sites shall be away from residential areas (100 m), sensitive areas (schools, hospitals, etc. 250 m), water bodies (500 m) and forests (more than 1 km) Use unused, vacant lands; no trees shall be cut Provide a proper fencing/compound wall Prepare a site layout plan & display at the site; uniformly label (name boards) all the places in the facility Entire site/facility area shall be provided with hard levelled surface as appropriate; no loose soil, slush, water logging etc., 	<ul style="list-style-type: none"> Before locating project offices, sheds, and construction plants we discussed with DSISC and within or nearest place has been selected, Till date no trees have been cut and no any destruction of property, irrigation and drinking water supply systems observed, 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, and disposal to designated areas; Kitchen wastes collected in a 	Contractor	PIU through DSISC observation at site and document checking	Project cost

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Field/ Issues	Anticipated Impact	Recommended Mitigation Measures	Actions Taken/ Status	Responsibility of Implementation	Monitoring of mitigation	Cost and source of fund
		<ul style="list-style-type: none"> Living quarters and construction camps shall be provided with standard materials; no shacks or huts Adequate lighting and ventilation Provide drinking water, water for other uses, and sanitation facilities; drinking water should be regularly tested Provide clear pathways for safe movement Provide cooking fuel (cooking gas); and a separate safe place to cook; fire wood not allowed Construct septic tanks and soak pit arrangement for wastewater disposal Solid waste shall be properly managed – provide separate bins, compost biodegradable waste; sell recyclable waste. According to rule and regulation camp will be vacated and restored to pre-project conditions before acceptance of work. 	dustbin then it is disposed outside from area to designated disposal location, <ul style="list-style-type: none"> Daily generated effluent disposed by arrangements already present in camp/ household. The details of labour accommodation is presented in Attachment P2. 			
Archaeological and Cultural characteristics	Risk of archaeological chance finds	<ul style="list-style-type: none"> Strictly follow the protocol for chance finds in any excavation work; Construction staff members should be made aware of the likelihood of heritage resources being unearthed and of the scientific importance of such discoveries. 	<ul style="list-style-type: none"> No archaeological chance finds are reported at project sites till date. If there is any such finding, action will be taken up as per requirement. 	Contractor	PIU through 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	5 locations (to be selected during implementation to represent the overall project area)	<ul style="list-style-type: none"> PM₁₀, PM_{2.5}, NO₂, SO₂, CO 	Once before start of construction Quarterly (yearly 4- times) during construction (2-year period considered)	Near Zone 02 Nebutala Abda, Zone 05, Kulti Uposasthya Kendra, Zone 13, Paschim Bhaida Primary School ,Zone 17,Near Majanpur High School, Zone 21, Haroa Market	225,000
Ambient noise	5 locations (same as air quality monitoring)	<ul style="list-style-type: none"> Day time and night time noise levels (24 hours) 	Once before start of construction Quarterly (yearly 4- times) during construction (2-year period considered)	Near zone 02, Nebutala Abda, Zone 05, Kulti Uposasthya Kendra, Zone 13, Paschim Bhaida Primary School Zone 17,Near Majanpur High School, Zone 21, Haroa Market	67,500
Surface water quality	2 locations (to be selected during implementation)	<ul style="list-style-type: none"> pH, Oil and grease, Cl, F, NO₃, TC, FC, Hardness, Turbidity BOD, COD, DO, Total Alkalinity 	Once before start of construction Half yearly during construction (2- year construction period considered)	Pond Water near Nebutola Abada, Zone-3, Pond Water in Paschim in Zone 13	40,000
Chance Finds	Areas protected by ASI or West Bengal State Archaeology Department	<ul style="list-style-type: none"> Chance finds protocol 	Before finalization of detailed design, consult with ASI or West Bengal State Archaeology Department	-	-

Note: * It should be noted that every quarter only 5 locations in the entire package is monitored for air and noise while two locations are monitored for surface water every half-yearly. 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

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Monitoring Locations on Google Earth



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List of Attachments

Attachment P1: Details of construction Work sites
Attachment P2: Details of construction camp sites
Attachment P3: List of clearances & statutory requirements
Attachment P4: Contractor's OHS Policy & Organization
Attachment P5: Utility shifting/relocation
Attachment P6: Details of Construction Materials
Attachment P7: Spoil Management Plan
Attachment P8: Traffic Management Plan
Attachment P9: Procedure for on-site Grievance Redressal Mechanism
Attachment P10: Procedure for information disclosure prior to start of works

Appendix P1: Map of Distribution Network
Appendix P.A: Gram Panchayat and other Authorities Permission
Appendix P.B: Labour License
Appendix P.C: Workman Compensation
Appendix P.D: PUC Certificates
Appendix P.2: Contractor's OHS Policy Statement
Appendix P.3: Sample Grievance Registration Form

Enclosure 1 : Health_Safety_Management_Plan of Pkg.N24PGS/02A_Harua block,
Attachment P1: Details of construction Work sites




1. Zone 5: Pipeline construction Site							
Location- Tegharia							
A	Material storage <ul style="list-style-type: none"> • Pipe • Fittings 						
B	Plant & Machinery <ul style="list-style-type: none"> ▪ Jointing Machin-1 No ▪ DG (less than 5 kVA) – 1 No 						
C	Site office – No						
D	Laboratory – No						
E	Security cabin – No						
F	Labor welfare facilities at Site <ul style="list-style-type: none"> • Drinking water • First Aid Box. 						
G	Road, agriculture land involvement and infrastructure facility No agricultural land involved No as such underground infrastructure available. No record for village road Details of pipeline, roads and construction methodology are presented below						
	Pipe Diameter (mm)	Length (m)	Width of trench (m)	Depth of Trench (m)	Width of roads (m)	Type of roads (earthen / BT / CC)	Excavation method (manual/

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							mechanical)
DI Pipes (26 m)							
400 mm	---	0.4- 0.8	1.250	2.0-6.0	CC/BT/Earthen	Manual/Mech	
350 mm	---	0.4- 0.8	1.140	2.0-6.0	CC/BT/Earthen	Manual/Mech	
300 mm	---	0.4- 0.8	1.30	2.0-6.0	CC/BT/Earthen	Manual/Mech	
250 mm	26	0.4- 0.8	1.25	2.0-6.0	CC/BT/Earthen	Manual/Mech	
Distribution Network— HDPE Pipes (52,015 m)							
200 mm	2949	0.4- 0.8	1.20	2.0-6.0	CC/BT/Earthen	Manual/Mech	
140 mm	2958	0.4- 0.8	1.14	2.0-6.0	CC/BT/Earthen	Manual/Mech	
110 mm	3665	0.4- 0.8	1.11	2.0-6.0	CC/BT/Earthen	Manual/Mech	
90 mm	15627	0.4- 0.8	1.09	2.0-6.0	CC/BT/Earthen	Manual/Mech	
75 mm	3550	0.4- 0.8	1.08	2.0-6.0	CC/BT/Earthen	Manual/Mech	
63 mm	23266	0.4- 0.8	1.06	2.0-6.0	CC/BT/Earthen	Manual/Mech	

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Attachment P2: Details of construction camp sites

1.	Labour Accommodation, Pipeline site – Zone 5	
Location- Near Makhla Bazar at Tegharia, Kulti, (Latitude: 22°32'21'' Longitude: 88°41'12'')		
A	Accommodation – For 12 construction workers. No women / families in the camp Facilities provided at camp site <ul style="list-style-type: none">• Type of living accommodation – Rented apartment• Accommodation provided for 12 workers• Separate cooking area• Cooking gas• Drinking water• Bath rooms• Toilets• Drainage system• First aid box	
B	Camp photographs	
Original site Photographs	Not applicable as rented house is being used as labour accommodation.	
		
	Rented labour accommodation	
		
	Kitchen with gas connection	Community toilet

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Attachment P3: List of clearances & statutory requirements

Sl. No.	Project related	Status
A	Construction/work related	
1	Gram Panchayat and Other Authorities Permission	Obtained [Refer Appendix – P.A]
B	Labour Safety / Welfare Related	
1	Labour license	Obtained [Refer Appendix – P.B]
2	Workmen Compensation	Obtained [Refer Appendix – P.C]
C	Safety / liability safety related	
1	Medical insurance	Tie-up with local hospital done
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 – P.D]
3	Driving licenses for drivers	Obtained
4	Insurance for vehicles / equipment, as required	Obtained

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Attachment P4: Contractor's OHS Plan & Organization

1	Contractor agency has a OHS plan	Yes/No
A	If yes, provide policy details: 1. Policy statement 2. OHS organization & responsibilities:	Yes [Refer Appendix P2 Yes
B	List safety risks anticipated in the project Area works (Pipeline Work) • Trips and falls • Slope failure / trench collapse • Road accidents Linear works (pipelines) • Accidents from open trenches	-
C	List personal protection equipment provided to workers • Boots- 13 nos. • Gloves-1 no. • Helmet-15 nos. • Safety jacket- 15 nos. • Goggles- 1nos.	Yes
D	Preventive Measures	
	• Orientation of all workers on OSH	Done
	• Work permit system	No
	• Toolbox/safety meetings (how often will this be conducted, what are the minimum topics)	Twice Weekly on work inside trench, firefighting, first-aid, housekeeping, etc.
	• Safety signages	Displayed on site
	• Barricades (more than 1 m deep requires hard barricading)	Wherever road width permits
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.	Yes
B	Contact information, staff and responsibilities for emergency situations	
	Designation	Staff name & contact
	Site Engineer	Mr. Krishnapada Singh Mob: 9735949496
	EHS Supervisor	Saradindu Gain Mob: 9775459487
	Project Manager Representative	Mr. Ramesh Singh Mob: 8170011450
C	Reporting procedure in case of work accidents • 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.	Yes
D	Mandatory Reporting to Authorities	Yes
E	Prohibited Acts and Penalties for Violations	Yes

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Attachment P5: Utility shifting/relocation

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

Attachment P6: Details of Construction Materials

Sl. No	Material	Approximate quantity required (m3) for project	Source	Indicate if source has all necessary government clearances
1	Earth	14806.87	From trench cutting	Not required

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Attachment P7: Spoil Management Plan

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

SPOIL MANAGEMENT PLAN

WBDWSIP HAROA BLOCK

LOCATION: ZONE- 5 TEGHORIA (PIPELINE WORK)

0	20.07.2019				
REV	DATE	PREPARED BY	CHECKED BY	APPROVED BY DSISC	APPROVED BY PIU

Environmental Specialist, DSISC
North 24 Parganas
WBDWSI Project

West Bengal Drinking Water Sector Improvement Project

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1. INTRODUCTION OF SMP:

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

2. SCOPE:

This Spoil Management Plan developed for Pipeline network lying in Zone (5). For the Pipeline site we do not anticipated any excess Spoil for disposal as all excavated material will be reuse at site only.

3. LEGAL AND OTHER REQUIREMENTS:

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

4. ROLES AND RESPONSIBILITY:

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.
- 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.

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5. IDENTIFICATION AND ASSESSMENT OF SPOIL ASPECTS AND IMPACTS:

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

6. SPOIL VOLUMES AND CHARACTERISTICS:

In this project, approx. Generation of excavated earth will be approx. 14806.87 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 no excess quality of excavated earth; total excavated earth should be reuse as per plan.

8. ON SITE SPOIL MANAGMENT APPROACH:

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

9. SPOIL TRANSPORTATION METHODOLOGY:

In this project, no need of transport as there is no extra soil for disposal.

10. MONITORING, REPORTING, REVIEW AND IMPROVEMENTS:

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

Expected Spoil generated at Teghoria (Zone 5) for Pipe laying

Sl. No.	Dia(mm)	Length(m)	Width(m)	Depth(m)	Total(cum)
1	63	23267	0.25	1.063	6183.21
2	75	3548	0.25	1.075	953.53
3	90	15628	0.25	1.09	4258.63
4	110	4852	0.25	1.11	1346.43
5	140	2958	0.25	1.14	843.03
6	200	2501	0.25	1.2	750.30
7	200	450	0.3	1.2	162.00
8	250	26	0.3	1.25	9.75
9	Extra for bend, joints etc				300
10	Approx. generated total Spoil (Soil) at Teghoria				14806.87

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Attachment P8: Traffic Management Plan

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	Traffic Management Plan	Revision No. 00 Revision Date : 00 Page 1 of 7 Effective Date :

TRAFFIC MANAGEMENT PLAN

WBDWSIP HAROA BLOCK

LOCATION: ZONE- 5 TEGHORIA (PIPELINE WORK)

0	20.07.2019				
REV	DATE	PREPARED BY	CHECKED BY	APPROVED BY DSISC	APPROVED BY PIU

Environmental Specialist, DSISC
North 24 Parganas
WBDWSI Project

West Bengal Drinking Water Sector Improvement Project

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1. **PURPOSE**

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

2. **SCOPE**

The procedure is applicable for HDPE/DI pipe laying area for Zone - 5 TEGHORIA.

Pipelaying works not required full road closure but partial closure is required on all these roads and hence, traffic management plans have been developed accordingly.

3. **RESPONSIBILITY**

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

4. **LEGAL REQUIREMENT**

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

5. **REQUIREMENTS**

5.1 **General**

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

5.2 **Planning Stage**

Particular attention should be given to:

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

5.3 **On Site**

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

5.4 **Operators/Drivers**

- Only Experienced operators and drivers with valid licensed has been appointed.
- One copy of license has been collected.
- Refreshment training conducted for all operators and drivers.

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

5.5 Equipment

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

5.6 Roads

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

5.7 Loading and Unloading

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

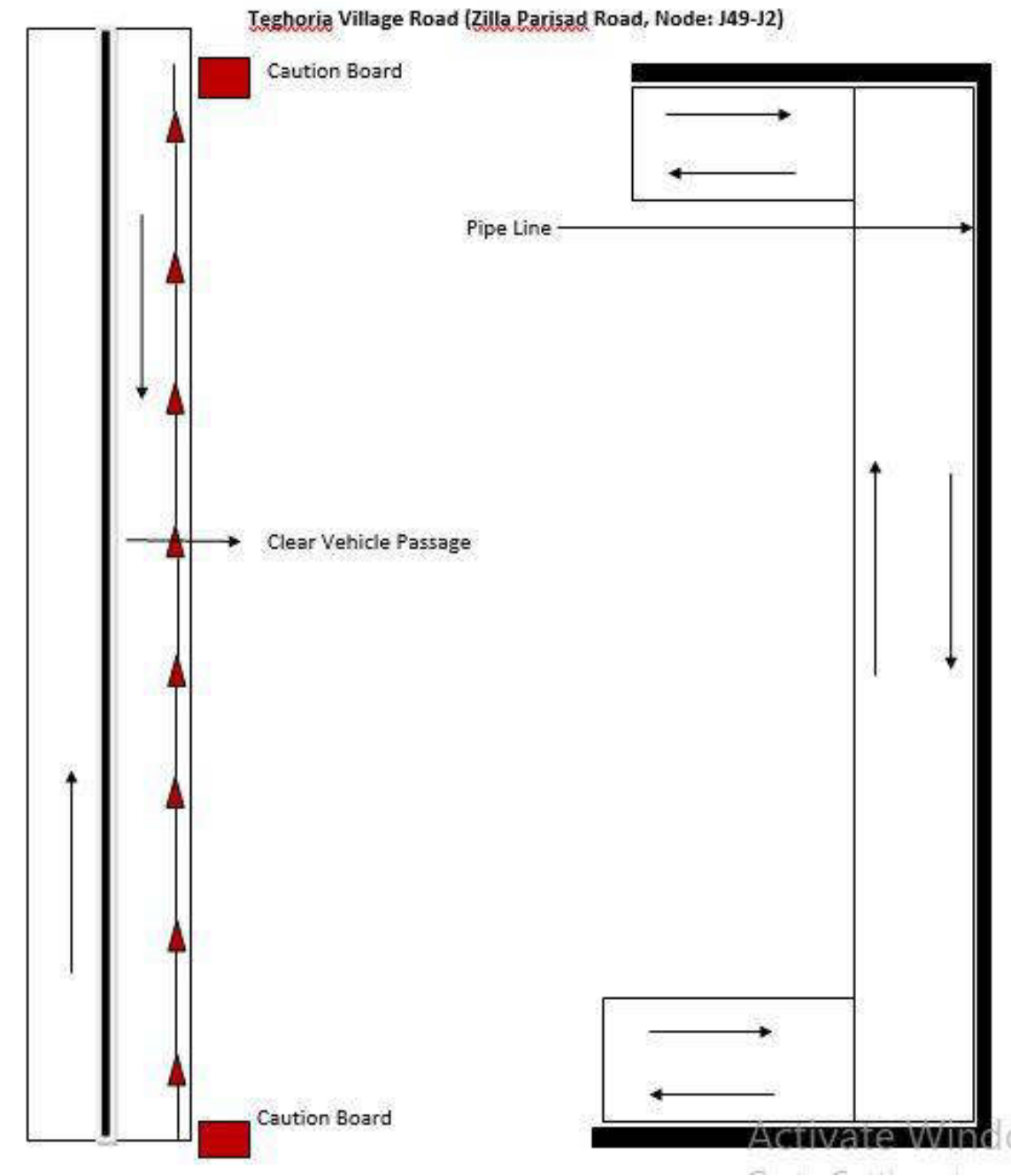
5.8 Working Area

- The working area has been restricted from unauthorized entry.
- The working space has been defined.

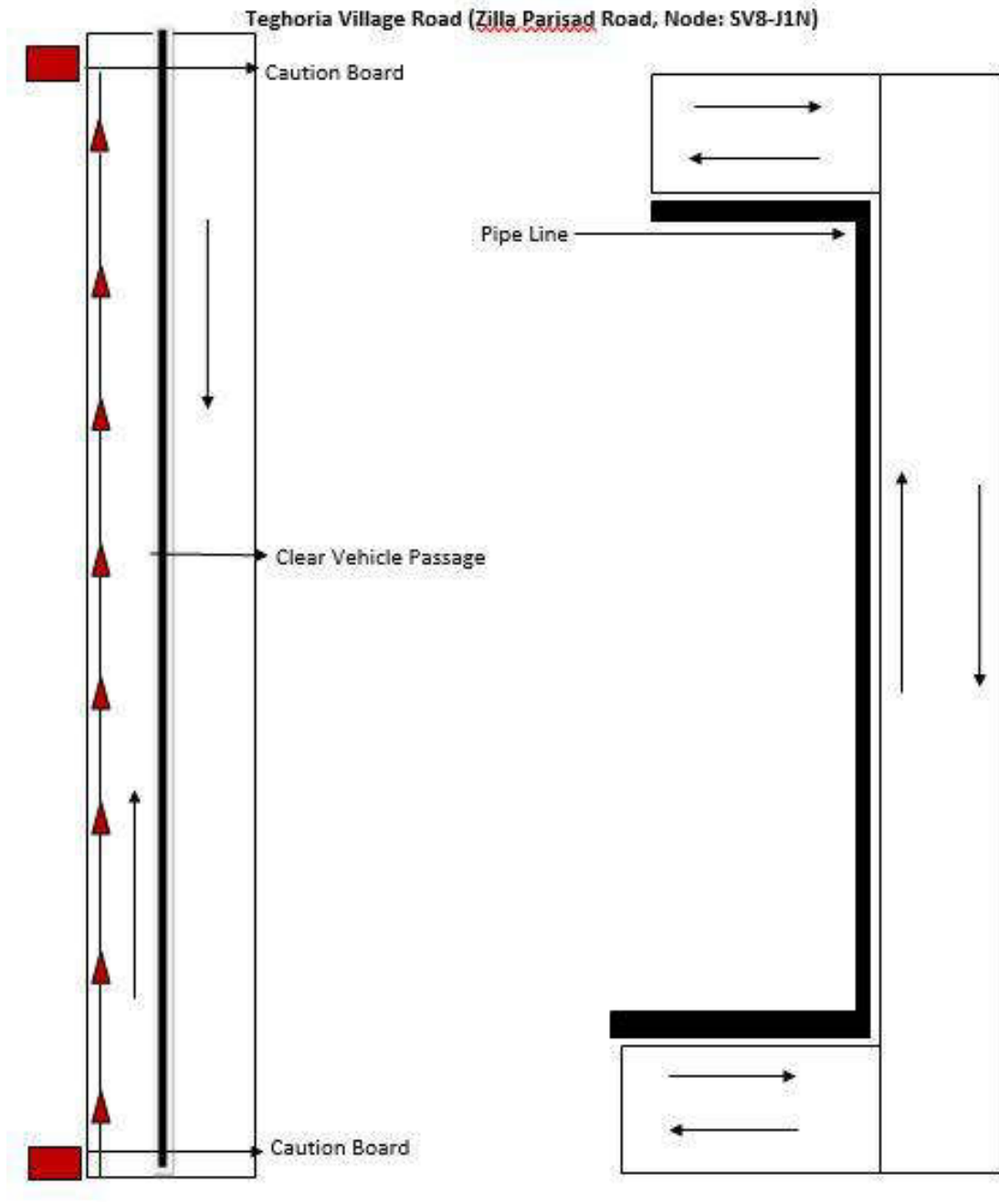
Particular attention has been taken in working area:

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

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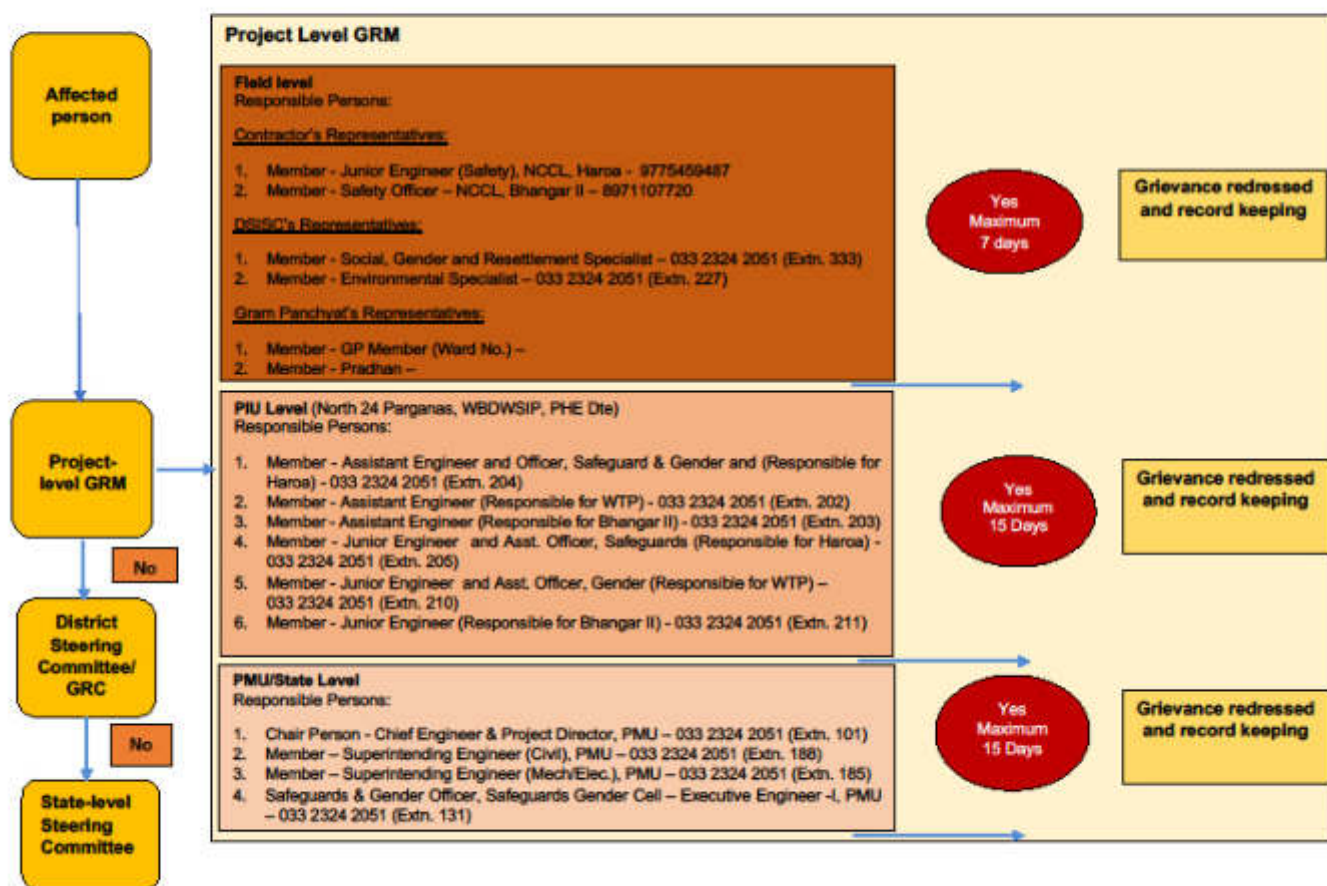


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Attachment P9: Procedure for on-site Grievance Redressal Mechanism

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

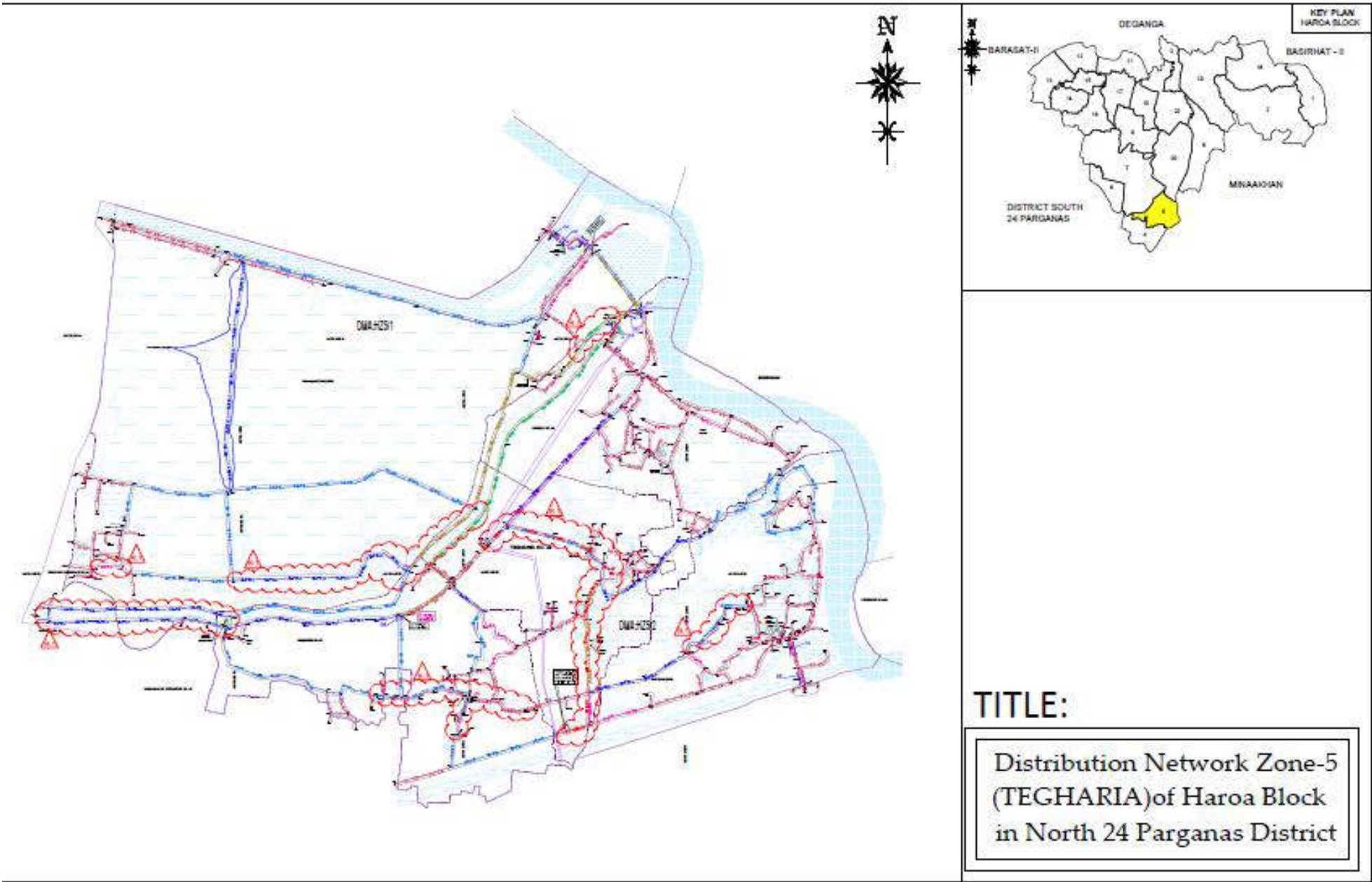


All grievances are recorded in site grievance register and resolved at the earliest. The sample grievance registration form is included in Appendix P3.

Attachment P10: Procedure for information disclosure prior to start of works


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

Appendix P.1: Map of Distribution Network



NCC LIMITED	Design and Construction of Overhead Reservoir Including Water Supply Distribution Network and Metering Work in Haroa Block	Doc. No. NCC/ SEMP /01 Last Revision No. 00 Last Revision Date : 00 Page 30 of 39 Original Issue Date :
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Appendix P.A: Gram Panchayat and other Authorities Permission


Government of West Bengal
Office of the Executive Engineer
PIU, North 24 Parganas, WBDWSIP, PHE Dte.
Utility Building, Tank No.3, 2nd Floor, Block-AI,
Action Area-IA, New Town, Kolkata-700156
Phone No. : (033) 2324-2051, E-mail : ee.piun24p.adb@wbphed.gov.in

Memo No. _____/EE(C)PIUN24P, Dated, New Town, the, _____

To
The Head Project Implementation Unit,
WBSRDA,
North 24 Parganas.

Sub. : Design and construction of overhead reservoir including water supply distribution network & metering works in Haroa Block (Zone-05) Tegharia.

Dear Sir,

This is to inform you that, PHE Dte. has undertaken a water supply project in the month of October'2018 in Haroa block under the financial assistance of ADB and laying of foundation stone of the same was done by Hon'ble Chief Minister of West Bengal on 26th October'2018. Now the entrusted agency will start the laying of distribution network from 22.07.2019 in **Kulti Gram Panchayet** along the road under your jurisdiction within the ROW and a copy of distribution network drawing is herewith enclosed for ready reference.

Your kind co-operation in this regard is requested.

Encls. : As stated.

Yours faithfully,

sd/-
Executive Engineer,
PIU, N-24 Pgs., WBDWSIP, PHE Dte.

Memo No. _____/EE(C)PIUN24P, Dated, New Town, the, _____

Copy forwarded for information to :-

- 1) The Sabhadhipati, North 24 Parganas Zilla Parishad.
- 2) The District Magistrate, North 24 Parganas.
- 3) The Additional Executive Officer, North 24 Parganas Zilla Parishad.
- 4) The District Engineer, North 24 Parganas Zilla Parishad.

sd/-
Executive Engineer,
PIU, N-24 Pgs., WBDWSIP, PHE Dte.

Memo No. 176/(2-3)/EE(C)PIUN24P, Dated, New Town, the, 18-07-19

Copy forwarded for information to :-

- 1) The Superintending Engineer, PIU, North 24 Parganas, WBDWSIP, P.H.E. Dte.
- 2) The Assistant Engineer, PIU-I, North 24 Parganas, WBDWSIP, P.H.E. Dte.
- 3) The Team Leader, DSISC-North 24 Parganas, WBDWSIP.

sd/-
Executive Engineer,
PIU, N-24 Pgs., WBDWSIP, PHE Dte.

File
Regd. 18/07
DSISC / WBDWSIP
Inward No. 1311
RECEIVED
Date 18/07
Signature
Time - 4:19 PM

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Appendix P.B: Labour License



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

FORM VI [See Rule 25(1)]

License No. : BST09/CLL/000029

Date : 05th Dec, 2018

Lic Fees	1000
S. Deposit	30000

LICENSE

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

The License shall remain till:-04th Dec, 2019

sd/-
Signature & Seal
Licensing Officer

RENEWAL

[Rule 29]

Renewal vide AIN No.	RENEWAL-LIC-009311-008372-17200-2019
1.Date of Renewal	02nd Dec, 2019
2.Fees paid for Renewal	₹ 1250 (One Thousand Two Hundred Fifty rupees only)
3.Date of Expiry	04th Dec, 2020

**SUPRIYA
BANDYOP
ADHYAY**

Digitally signed by
SUPRIYA
BANDYOPADHYAY
Date: 2019.12.02
12:41:53 +05'30'

P.E. Details:-

Office of the Executive Engineer, North-24 Parganas Water Supply Division-II, P.H.E. Dte.(BST09/CLR/000088)

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

FORM VI
[See Rule 25(1)]

Licence No. : **BST09/CLL/000029**

Date : **031h Dec, 2018**

Lic Fees	1000
S. Deposit	30000

LICENCE

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

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

**Supriya
Bandyopadhyay**

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

Licensing Officer
Under the Contract Labour(R&A) Act, 1970

&
Assistant Labour Commissioner
Basirhat, North 24 Parganas

Establishment Information:

Office of the Executive Engineer, North-24 Parganas Water Supply Division-II, P.H.E. Dto. [BST09/CLL/000029]

W.Site - Utility Building, Tank No.-3, 2nd Floor, Action Area-1A, New Town, Kolkata.

Haroa, Block - Haroa, Basirhat - 743425, PS - Haroa, North 24 Parganas

Work site exact location:

NCC LIMITED, VILL. PEARA, PO+PS: HAROA, PIN. 743425

Haroa, Block- Haroa, Basirhat

PS - Haroa, District - North 24 Parganas, Pin Code - 743425

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Appendix P.C: Workman Compensation



Workmen's Compensation Policy- Policy Schedule			
Policy Servicing Office : Off Code-15, Future Generali India Insurance Co. Ltd., 1st Floor, D.No.7-1-21A, APDL Estate Opp Country Club, Begumpet, Hyderabad, Telangana, Pincode-500016, Tel No: 040-66038600			
Policy No	2019-L0129168-FWC	Period of Insurance	From 00:00 04/02/2019 To Midnight of 03/02/2020
Insured	NCC Limited	Intermediary Name/Code	INDIA INSURE RISK MANAGEMENT AND INSURANCE BROKING SERVICES-60001521
Address	WORKS IN HAROA BLOCK, North Twenty Four Parganas, West Bengal, 743425	Telephone (Mob, Off, Home)	4027822990/09892590738/4027822990
		Fax No & Email Id	02256791416 / PADMAJA.SURYARAJAN@INDIAINSURE.COM
GSTIN Number	19AAACN733SC1ZM	FGI GSTIN Number	36AABCF0191R1ZA
In consideration of the Policy holder named herein paying to the Future Generali India Insurance Company Limited (herein after called the Insurer) the premium as stated in the Schedule and in reliance upon the statements made by the Policy holder in the proposal including its attachments or otherwise, and the material incorporated therein, the Insurer agrees to provide insurance against loss damage liability or expense to the extent and in the manner herein provided subject to all terms, conditions, exceptions and warranties hereinafter set forth.			
Co-Insurance Details		Schedule Of Premium (₹)	
Insurer	Share (In %)	Gross Premium	134,304.36
FUTURE GENERALI INDIA INSURANCE COMPANY LIMITED	100%	Goods and Service Tax	24,174.78
		Total Premium	158,479.00
Risk Details			
Nature of Business	Design and Construction of overhead reservoir including water supply distribution and metering works in Haroa Block		
Location	Design and Construction of overhead reservoir including water supply distribution and metering works in Haroa Block		
Contractor/Sub-Contractor Name	NCC LTD		
No of Employees	Description of work done by Employees	Declared Wages during the Period of Insurance (₹)	
50	Highly Skilled workers	6,642,000.00	
50	Skilled workers	6,048,000.00	
50	Semi Skilled Workers	5,490,000.00	
50	Unskilled Workers	4,986,000.00	
Total		23,166,000.00	
Coverage Details			
The Policy covers Liability of the Insured under the following Law(s) shown as covered, subject to claim being otherwise admissible as per terms, conditions and exclusions of the Policy and subject to Limit of Indemnity as stipulated against each Law:			
Law	Limit of Indemnity	Coverage	
Employee's Compensation Act, 1933 and subsequent amendments thereon prior to the date of issue of this Policy	Subject otherwise, to the terms, conditions & Exclusions of the Policy, the amount of liability incurred by the Insured	Yes	
Common Law/ Fatal Accident		Yes	
Law(s)			
WC Act 1923 and subsequent amendment of the said Act prior to the date of issue of the policy provided that the insurance granted hereunder is not extended to include			
i. Any interest and/or penalty imposed on the insured on account of his/their failure to comply with the requirements laid down under WC Act 1923			
ii. Occupational disease of any kind.			
Additional Clauses, Conditions, Warranties & Exclusions			
Terrorism is excluded from coverage.			
No cover for Medical Expenses, Unless specifically allowed in the policy.			
No Cover for Medical Expenses.			
No Cover for occupational Diseases.			
Jurisdiction/ Territory : India			
Excluding Wet Risk, Blasting, Tunneling and Handling of Explosives			
Excluding loss arising out of installation and erection of live wiring.			
Warranted that safety practices are followed by the workers and safety gadgets are used by the workers while working in heights.			
Contractors and sub-contractors employees are covered.			
Important - 1. All other Terms, Conditions and Exclusions as per attached Policy Wordings. 2. In case of payment by cheque, in the event of dishonour of cheque for any reason whatsoever insurance provided under this document automatically stands cancelled from the inception irrespective of whether a separate communication is sent or not.			
For Future Generali India Insurance Co. Ltd.			
Receipt No :	Z9065378	 (Authorised Signatory)	
Date of Issue :	07/02/2019		
Place of Issuance :	Mumbai*		
*Address as mentioned below.			
Note: This document is digitally signed by Sharada Ramakrishnan, Authorised Signatory of Future Generali India Insurance Company Limited on 07/02/2019			

The stamp duty of Rs 67.15 paid by Letter Of Authorisation No. CSD/118/2018/2179/18, dated 16/08/2018 Madhuk - 2017/C.R.97/M-1, dated 09/01/2018.

Product UIN : IRDAN132P0012V01200708



Future Generali India Insurance Company Limited, Corporate & Registered Office: 6th Floor, Tower - 3, Indiabulls Finance Center, Sagarika Bazar,

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Appendix P.D: PUC Certificates

VEHICLE EMISSION TEST CERTIFICATE
(Under the Motor Vehicle Act, 1988)

Vehicle Registr. No. **WB26T5753** WB-01-**D 6148795**

Date of Issue: **04/06/2019** Valid upto **03/12/2019**

Pollution Level

CO (%)	
HC (ppm)	
SD (HSU)	1.45

PUC Certificate issued by: **MIRA SERVICE STATION**
Signature: **2, Block-AH**
New Town, Rajarhat
Kolkata-700 156

License No. and Seal: **0004/AETC/BST/I**

COMPUTERISED EMISSION TEST CERTIFICATE
WB-01-**D 6148795**
Authorised Transport Dept. of West Bengal
MIRA SERVICE STATION
PLOT-2,BLOCK-AH,NEW TOWN,KOLKATA-156

License Number :- **0004/AETC/BST/I**
LD. Number :- **001406**
Year Of Registration :- **2015**
Vehicle Registration Number :- **WB26T5753**
Speedometer :- **0**
Engine Number :- **E14894**
Chassis Number :- **E37419**
Vehicle Color :- **OTH**
Vehicle Make :- **MAHINDRA**
Vehicle Model :- **SCORPIO**
Type Of Engine :- **4S**
Type of Vehicle :- **4W**
Owner :- **M.S NCC LTD**
Driver :-

Contact :- **9564932617**
Oil Temperature :- **34**
Fuel :- **Diesel**
Result :- **Pass**
Valid Upto :- **03/12/2019**

	Ideal RPM	Max RPM	K Value	HSU Value	Oil Temp
1	800	2330	0.03	1.41	34
2	800	2580	0.03	1.41	34
3	790	2490	0.04	1.54	34
Avg	786.00	2486.00	0.03	1.45	

Name of Authorise Signatory
with Seal of Testing Center

MIRA SERVICE STATION
Plot No - 2, Block-AH
New Town, Rajarhat
Kolkata-700 156

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

Vehicle Registr. No. **JH-10Z-9621** WB-01-D **5877301**

Date of issue: **24-Aug-2019** Valid upto **23-Feb-2020**

Pollution Level

CO (%)	0.161
HC (ppm)	119
SD (HSU)	

PUC Certificate issued by: **M/S ZAMAN ENTERPRISE**

License No. and Seal: **94/AETC/2016/PETROL**

Signature: *[Signature]* **24/08/19**

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

M/S ZAMAN ENTERPRISE
DHANPOTABAZAR, KHALISADY, HAROA, 24PGS(N)

Label Code: 00 License Number: 94/AETC/2016/PETROL Emission Code: 00

PUC Number: P000000001694 Vehicle Type: 2 Wheeler

Name: M/S N.C.C. LIMITED Reg. No.: JH-10Z-9621

Address: Reg. Date: Apr-2011

Manufacturer: Hero MotoCorp

Model: CD-Dawn

Test Date/Time: 24-Aug-2019 10:55 Engine Type: 4 Stroke

Catalyst: No Odometer Rdn: 0

Engine Number: 21561

Chassis Number: 01148

Fuel →	Petrol			
	Regulation	Measured	Regulation	Measured
CO (%)	3.5	0.161		
HC* (ppm)	4500	119		
CO2 (%)		1.49		
O2 (%)		18.72		
NOx (ppm)		0		
RPM:		0		
OT (°C):		0		
AFR:		—		
Lambda:		—		
PEF:		0.501		
CO-Aet (%)		1.452		

* Read as PNC for LPG and NMHC for CNG.

Certified that this vehicle's emission levels are within the limits under 115(2) of CMV Rules, 1989.

Test Result: **PASS**

Grade: **A**

Valid Upto: **23-Feb-2020**

Test Fee: **Rs. 80**

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HC (ppm)		SD (HSU)		B9104
PUC Certificate issued by:				License No. and Seal:
M/S-NATURAL WORLD				Natural World
Signature				N.H.-34, K.N. Road Back Side
				Berhampore
				Licence

Vehicle Pass



POLLUTION UNDER CONTROL CERTIFICATE
(under the West Bengal Motor Vehicle rule's 1989)

M/S:-NATURAL WORLD
N.H. 34, K.N ROAD BACK SIDE, BERHAMPORE,MSD

Label Code:WB

License No. : 1B/2008-2009

Test Station Code : 002

PUC No. : WB4685

Name : MD CHAND MAHAMMAD SEKH

Address : RANITALA

MSD

WB

Date:17/04/2019

Fuel: Diesel

Time : 1:29:14 P.M

Vehicle Reg No:WB 57B-9104

Category : EARTH MOVING

Make: TEREX EQUIPMENT

Model: EARTH MOVING

Date of Reg. 2014

Speedo Mtr Rdg: x

Engine No : 1420359

Chassis No: 409159

Slr	RPM min	RPM max	Km-1	HSU%	OTPC
1	01263	06000	00.02	46.2	065.01
2	01242	06000	00.02	46.9	062.83
3	01221	06000	00.02	46.5	061.14
4	00541	06000	00.02	47.2	065.11

Valid upto:16/10/2019

Grade: A

Test Fees: 100

let	01066	06000	00.02	47.2	064.13
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SAFE DRIVE, SAVE LIFE
NO ROUGH DRIVE

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Appendix P.2: Contractor's OHS Policy Statement

<p>NCC LIMITED</p> <p><i>Health, Safety & Environment Policy</i> For Construction/Erection and Commissioning, the General Strategic Objectives Listed Below are Followed:</p> <ul style="list-style-type: none"> • A proactive, role model HSE at Site. • All Sites related activities and Office Work will result in no one getting injured or made unwell. • Early identification of hazards and risk and the decision or adequate measures. • Reduction of negative impact on the neighborhood are the the environment in particular on fauna and flora to a minimum. • Provide training in HSE knowledge and encourage continuous improvement and development of this. • Continuous monitoring of the HSE performance. • Promote the benefits of a healthy life-style amongst our employees. • Report and investigate accidents and incidents to take lessons and prevents similar events occurring again. • Preserve ecological balance and heritage. 				
Prepared by:	Copy No.	Date of Issue:	Approved by:	Issued by:

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Appendix P.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:	

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অভিযোগ/ পরামর্শ/ মন্তব্য/ প্রশ্নাদি লিপিবদ্ধ করার নমুনা পত্র

এই _____ প্রকল্পটি সৃষ্টি 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 (✓) টীক দিন।			
আপনি কিভাবে আপনার অভিযোগ / মন্তব্য বিষয়ে অবগত হতে চান ?			

গুণমাত্রা অফিসের ব্যবহারের জন্যঃ

যে আধিকারিক অভিযোগ জমা নিলেন তার নামঃ
কিভাবে জানানো হল (✓) টীক 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 - হ্যা / না
কিভাবে জানানো হলঃ

মন্তব্য-

প্রস্তুতকারক -

আনুমোদনকারী -

তারিখ-