



Environmental Monitoring Report

PUBLIC

Semestral Report: November 2023 – April 2024
July 2024

India: West Bengal Drinking Water Sector Improvement Project

Part 2 of 3: Main Report continued (Pages 267 -327) and Appendices 1 - 5

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

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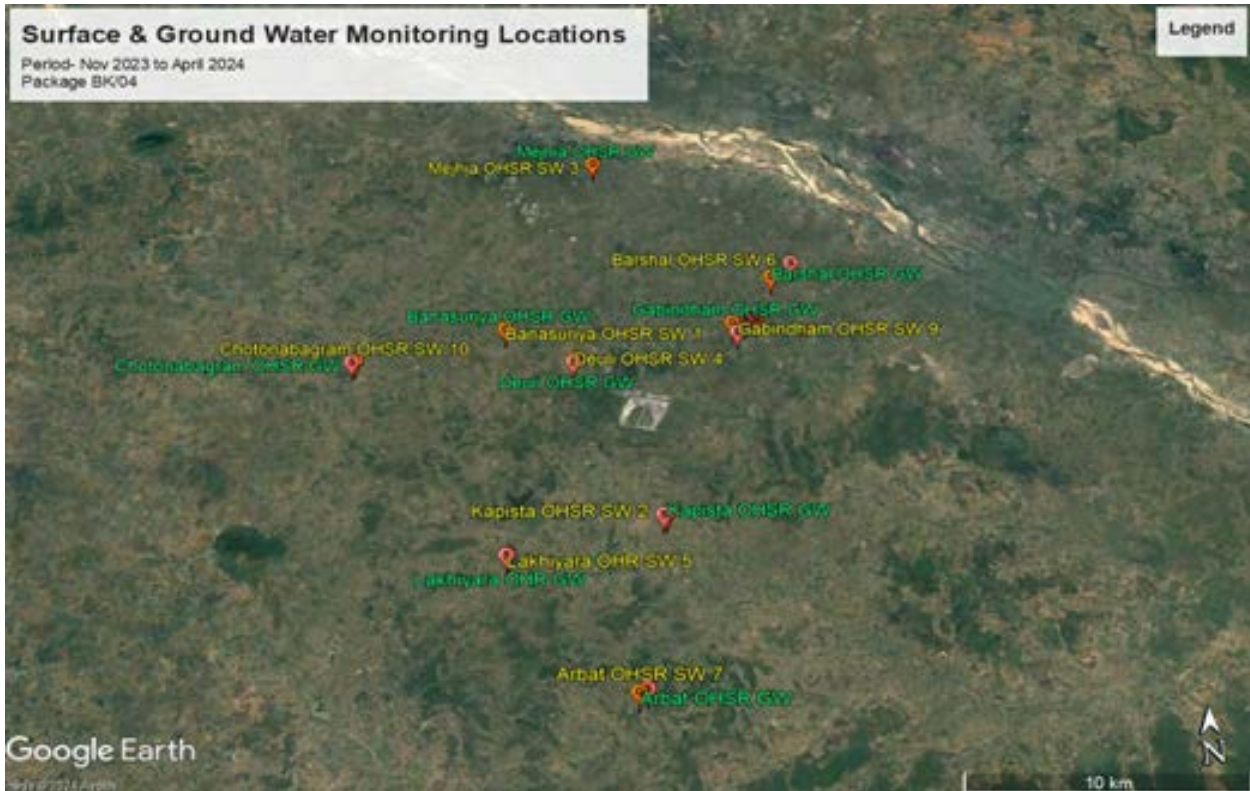
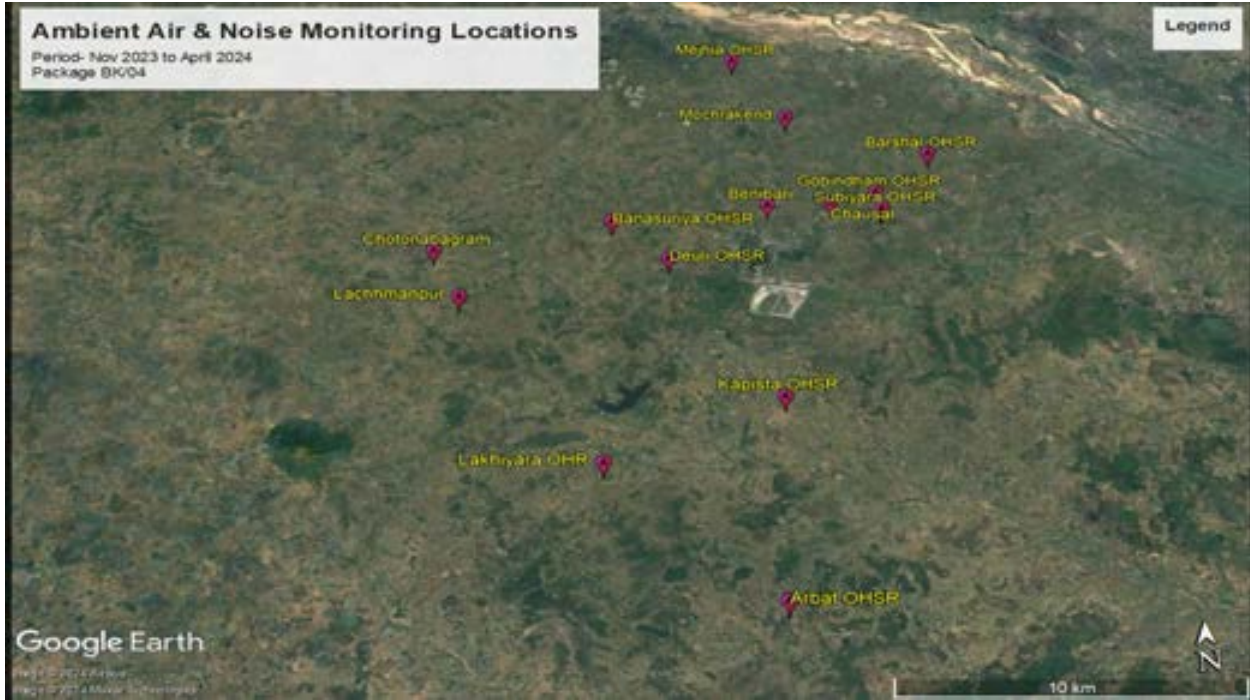




Figure 10 E: Monitoring stations for Package BK/04- Bankura

109. **Monitoring locations of Purba Medinipur District packages:** For two packages of Purba Medinipur, i.e. EM/01 and EM/02, during construction monitoring work has been conducted.

Package: EM/01

Table 23A: Ambient Air Monitoring Station Locations- During construction monitoring- Purba Medinipur – November 2023 to April 2024

During Construction Location			
Sl. No	Monitoring Location	Co-ordinates	Monitoring period *
Package EM/01			
1	WTP	22°9'15"N, 87°54'5"E	March 2024
2	Intake	22°14'44"N, 87°57'25" E	March 2024

* Monitoring has been conducted during November 2023 to April 2024 period, however no of samples as per approved monitoring plan exhausted. Monitoring has been conducted and less samples were collected. Approval of variation still under process.

Table 23B: Surface Water Sampling location- During construction monitoring- Purba Medinipur – November 2023 to April 2024

During Construction Location			
Sl. No	Monitoring Location	Co-ordinates	Monitoring Date*
Package EM/01			
1	Intake & Substation	22°14'44"N, 87°57'25" E	March, 2024

* Monitoring has been conducted during November 2023 to April 2024 period, however no of samples as per approved monitoring plan exhausted. Monitoring has been conducted and less samples were collected. Approval of variation still under process

Table 23C: Noise level Monitoring Locations- During construction monitoring- Purba Medinipur – November 2023 to April 2024

During Construction Location			
Sl. No	Monitoring Location	Co-ordinates	Monitoring Period *
Package EM/01			
1	WTP	22°9'15"N, 87°54'4"E	March 2024
2	Intake	22°14'43"N, 87°57'23"E	March 2024

* Monitoring has been conducted during November 2023 to April 2024 period, however no of samples as per approved monitoring plan exhausted. Monitoring has been conducted and less samples were collected. Approval of variation still under process

110. The monitoring locations for the package were marked on google earth map and presented below.



Figure 11A: Air, Noise, Surface Water quality Monitoring sites for Package EM-01 at Purba Medinipur

Package: EM/02

Table 24A: Ambient Air Quality and Noise Level Monitoring Station Locations (EM02) - During construction– Purba Medinipur- November 2023 to April 2024

During Construction Location			
Sl. No	Monitoring Location	Co-ordinates	Monitoring period*
Package EM/02			

Sl. No	Monitoring Location	During Construction Location	
		Co-ordinates	Monitoring period*
	Package EM/02		
1	Manoharpur	22°3'1"N, 87°54'49"E	April 2024
2	Jambari	21°57'31"N, 87°56'13"E	April 2024
3	Garchakraberia	21°58'59"N, 87°59'39"E	April 2024
4	Samsabad	21°59'7"N, 87°58'54"E	April 2024

Monitoring has been conducted on April 2024 for November 2023 to April 2024 period, however no of samples as per approved monitoring plan exhausted. Monitoring has been conducted and less samples were collected. Approval of variation still awaited.

Table 24B: Ground Water, Surface Water and Soil Sampling locations- During construction– Purba Medinipur- November 2023 to April 2024

Sl. No	Monitoring Location	During Construction Location	
		Co-ordinates	Monitoring period*
	Package EM/02		
1	Manoharpur	22°3'1"N, 87°54'49"E	April 2024
2	Jambari	21°57'31"N, 87°56'13"E	April 2024
3	Garchakraberia	21°58'59"N, 87°59'39"E	April 2024
4	Samsabad	21°59'7"N, 87°58'54"E	April 2024

Monitoring has been conducted on April 2024 for November 2023 to April 2024 period, however no of samples as per approved monitoring plan exhausted. Monitoring has been conducted and less samples were collected. Approval of variation still awaited.



Figure 11B: Monitoring locations of Ambient Air Quality, Ambient Noise Level, Soil, Surface & Ground water sampling- pack EM/02

C Method of Monitoring and Equipment used

111. **Ambient Air Quality Monitoring Equipment and Methodology.** Respirable Dust Samplers and Fine Dust Samplers (Model no.-APM-860/APM-154) have been used to collect

samples for PM (10) and PM (2.5) in ambient air at a flow rate of 1.2 m³/min. The ambient air was sucked through the cyclone and filter paper by a blower. Samples of gases were drawn at a flow rate of 0.5 liters per minute and were analysed in the laboratory. Ambient air quality monitoring methodology is given in table below.

Table 25: Methodology for the ambient air monitoring

Sl. No	Parameters	Measurement Method	As per
1.	PM ₁₀	Gravimetric	IS:5182 Part-23, RA-2017
2.	PM _{2.5}	Gravimetric	USEPA CFR-40, Part-50
3.	SO ₂	Colorimetric (EPA modified West & Gaeke Method)	IS:5182 Part-2, 2001, RA-2017
4.	NO _x	Colorimetric (Arsenite modified Jacobs & Hochheiser Method)	IS:5182 Part-6, 2006, RA-2017
5.	CO	Non-Dispersive Infra-Red (NDIR) Spectroscopy Technique	IS:5182 Part-10, 1999, RA-2014

112. **Methodology of Surface and Ground Water Monitoring.** In order to establish baseline/ during construction conditions, grab samples were collected from water source and were analysed for various parameters as per the procedures laid down in the BIS. Samples were collected as per IS- 2488 (Part I-V). Surface water samples were analysed as per surface water quality criteria by Central Pollution Control Board (CPCB) for class B and C. Ground water samples were also analysed as per method provided by CPCB. Wet chemical, Atomic Absorption Spectrophotometer and UV/VIS Spectrophotometer were used for analysis of water samples according to the necessity.

113. **Methodology of Noise Level Monitoring.** Lutron Data logger Noise Meter (Model SL – 4023 SD) was used to monitor the noise levels. Noise level was monitored continuously for 24 hours with one-hour interval. Noise level was measured in the form of Leq dB(A), - Day and Night

D. Monitoring results and analysis of results

114. Monitoring results and analysis of results are presented below for sub projects at North 24 Pgs, Bankura and Purba Medinipur.

I. Environmental Monitoring Results of North 24 Pgs and observations

Table 26A: Ambient Air Quality Monitoring Results- North 24 pgs- Pre- Construction (Baseline) & During Construction – November 2023 to April 2024

Site no.	Date of Testing	Site Location	Parameters				
			PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	CO (µg/m ³)	SO ₂ (µg/m ³)	NO ₂ (µg/m ³)
Contract Package WBDWSIP/DWW/NCB/N24P/02A/2017-18							
Monitoring Phase: Pre -Construction-Mar 24							
Zone-16	16-17.03.24	Kakuriya Canal -1	69	34	675	5.7	28.7
Zone-16	16-17.03.24	Talberia Canal- 2	60	28	755	5.0	27.9
Monitoring Phase: During –Construction-Mar 24							
Zone 09	16-17.03.24	Kulgachi(-Canal	74	37	583	6.1	27.4
Zone-04	17-18.03.24	Laugachhi-OHR	86	42	698	7.0	30.7
Zorte-04	17-18.03.24	Racihanagar-Canal	70	39	572	6.5	29.1
Contract Package WBDWSIP/DWW/NCB/N24P/02B/2017-18							
Monitoring Phase: Pre- construction-Mar-24							
Zone- 08	14-15.03.24	Uttar Kashipur -OHR	71	44	721	6.6	29.8
Monitoring Phase: During -construction-Mar-24							

Site no.	Date of Testing	Site Location	Parameters				
			PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	CO (µg/m ³)	SO ₂ (µg/m ³)	NO ₂ (µg/m ³)
Zone-08	14-15.03.24	Chandihaat- Canal crossing	78	40	561	7.0	28.7
Zone-03	14-15.03.24	Paikan- OHR	85	47	972	6.4	30.2
Zone-09	15-16.03.24	Nangla Palpur -OHR	68	30	480	7.3	29.4
Zone 05	15-16.03.24	Tona -OHR	62	33	526	6.2	27.3
Contract Package: WBDWSIP/DWW/NCB/N24P/01/2017-18							
Monitoring Phase: During construction -Mar-Apr-24							
	12-13.03.24	Intake-WTP	147	88	904	8.2	30.9
	12-13.03.24	CWR-WTP	158	73	938	8.7	32.2
	12-13.03.24	Booster Pumping Station - 1	167	79	972	9.1	33.5
	23-24.04.24	Bhangar-II GLSR	146	80	1236	10.2	36.5
	23-24.04.24	Pipeline	113	66	1041	9.1	33.8
National Ambient Air Quality Standard (NAAQS)			100	60	2000	80	80
WHO standard			100	50	-	50*	40*

*Interim target 2

Note: National level Central Pollution Control Board's (Govt. of India) guideline/ protocol used for sampling, for analysis. INDIAN STANDARD IS 5182 and USEPA CFR 40 (International protocol) used for analysis

Table 26B: Noise Level Monitoring data- North 24 Pgs- Pre-construction (Baseline) & during Construction - November 2023 to April 2024

Site No	Date of Testing	Site Location/ Land use	Leq dB(A)	
			Day Time	Night Time
Contract Package WBDWSIP/DWW/NCB/N24P/02A/2017-18				
Monitoring Phase: Pre- construction-Mar-24				
Zone-16	16-17.03.24	Kakuriya Canal -1	51.9	42.7
Zone-16	16-17.03.24	Talberia Canal- 2	52.8	41.9
Monitoring Phase: During construction-Mar-Apr-24				
Zone 09	16-17.03.24	Kulgachi(-Canal	53.4	42.9
Zone-04	17-18.03.24	Laugachhi-OHR	52.0	41.8
Zorte-04	17-18.03.24	Racihanagar-Canal	53.1	43.8
Contract Package WBDWSIP/DWW/NCB/N24P/02B/2017-18				
Monitoring Phase: Pre- construction-Mar-24				
Zone-08	14-15.03.24	Uttar Kashipur -OHR	53.6	43.4
Monitoring Phase: During- construction-Mar-24				
Zone-08	14-15.03.24	Chandihaat- Canal crossing	54.3	43.8
Zone-03	14-15.03.24	Paikan- OHR	54.0	43.1
Zone-09	15-16.03.24	Nangla Palpur -OHR	51.8	42.6
Zone 05	15-16.03.24	Tona -OHR	52.4	42.3
Contract Package: WBDWSIP/DWW/NCB/N24P/01/2017-18				
Monitoring Phase: During construction-Mar-Apr-24				
	12-13.03.24	Intake-WTP	55.8	46.7
	12-13.03.24	CWR-WTP	54.9	44.6
	12-13.03.24	Booster Pumping Station - 1	53.6	42.1
	23-24.04.24	Bhangar-II GLSR	60.1	49.8
	23-24.04.24	Pipeline	63.8	52.7
Code/Category	Leq Day Time dB(A) – Standard		Leq Night Time dB(A) – Standard	
A/ Industrial	75		70	
B/ Commercial	65		55	
C/ Residential	55		45	
D/Ecological- Sensitive	50		40	

115. For ease of comparison, land use of various monitoring locations is highlighted in the same colour as that of regulatory limits prescribed for such land use.

Table 26C: Surface Water quality monitoring Result – North 24 Pgs- During construction

Site no.	Date of sampling*	Site Location	Parameters													
			pH	Turbidity (NTU)	Cl- (mg/l)	F (mg/l)	No3- (mg/l)	COD (mg/l)	BOD (mg/l)	DO (mg/l)	Total alkalinity (mg/l)	Hardness (mg/l)	Oil & Grease (mg/l)	Ammonical-Nitrogen (mg/l)	Total coliform (MPN/100 ml)	Faecal coliform (MPN/100ml)
Contract Package WBDWSIP/DWW/NCB/N24P/02A/2017-18																
Zone 4	16.03.2024	Canal water in Zone 4	7.44	7.2	82.2	0.12	0.52	40	12	5.2	217.8	159.6	<1.4	2.4	48	17
Zone 9	16.03.2024	Canal water in Zone 9	7.65	5.6	86.1	0.26	0.65	60	16	5.7	229.7	197.6	<1.4	2.7	84	33
Contract Package WBDWSIP/DWW/NCB/N24P/02B/2017-18																
Zone-08	15.03.2024	Canal water in Zone 08	7.07	2.2	88.7	0.59	1.56	22	5.4	4.6	233.6	665.5	<1.3	2.1	63	32
Zone-03	15.03.2024	Pond water in Zone 03	7.86	10.3	146.5	0.37	0.86	31	7.6	4.0	225.7	259.4	2.9	-	46	21
Contract Package WBDWSIP/DWW/NCB/N24P/01/2017-18																
Pipeline-Canal	23.04.2024	Water near canal bridge	6.84	5.3	125.4	0.62	4.1	68	16	4.5	228.9	210.6	2.1	3.6	84	43
Bhangar GLSR-Canal	23.04.2024	Canal water near Bhangar - GLSR	7.01	4.8	138.7	0.49	1.52	44	12	3.1	306.5	300.8	3.2	4.1	120	70
Surface water quality criteria By CPCB (class B outdoor bathing)			6.5-8.5	---	---	1.5	---	---	3	5 (Minimum)	---	---	---		500	---

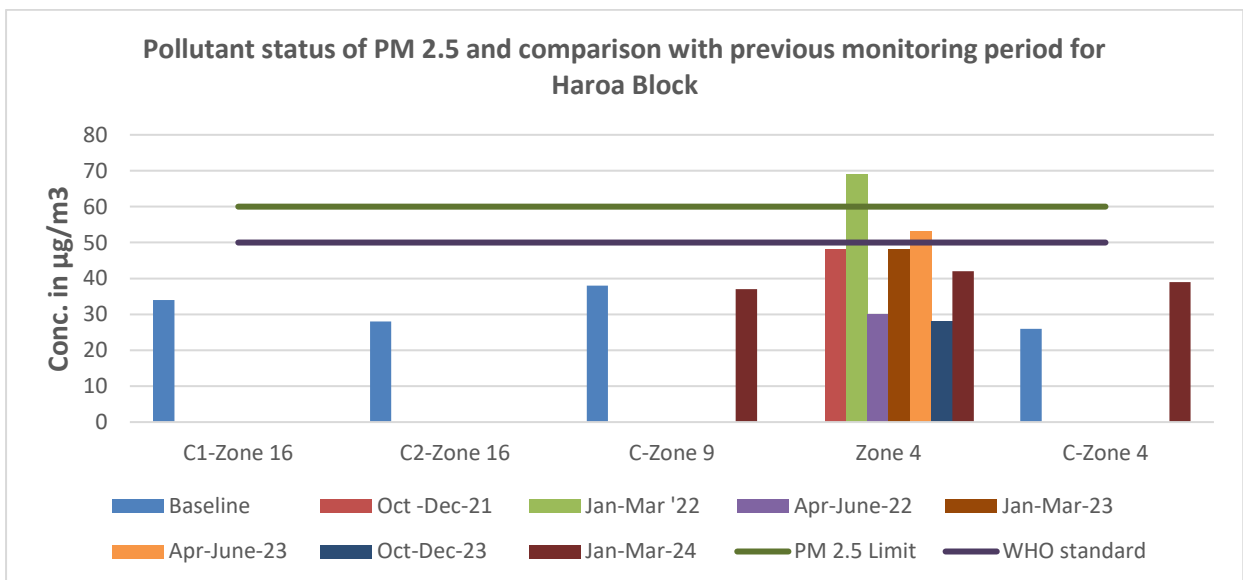
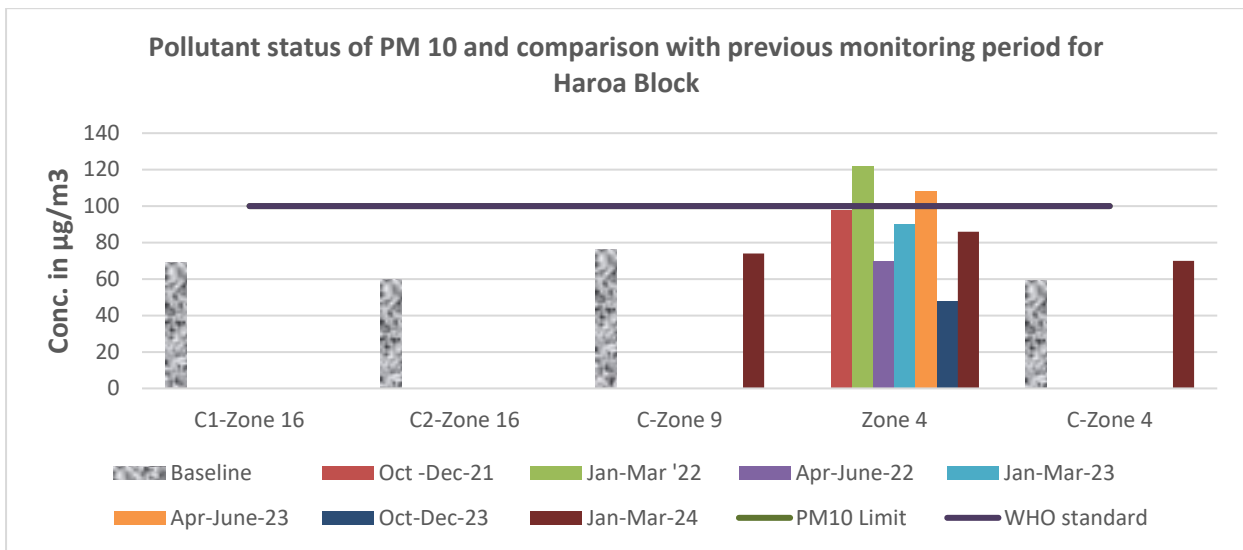
Analysis of Results for the Period: November 2023 to April 2024.

116. The results obtained for the various environmental media at the project packages are presented graphically below and analysed therein.

A. Contract Package WBDWSIP/DWW/NCB/N24P/02A/2017-18

a. Air Quality

117. Based on data collection and analysis over time at the various zones, it is evident that the air quality at a particular location is more influenced by the season; however, impact from project activities also plays its part depending on the wind direction and distance from the project activity. Accordingly, the comparison of air quality data is presented by season in the graphs below.



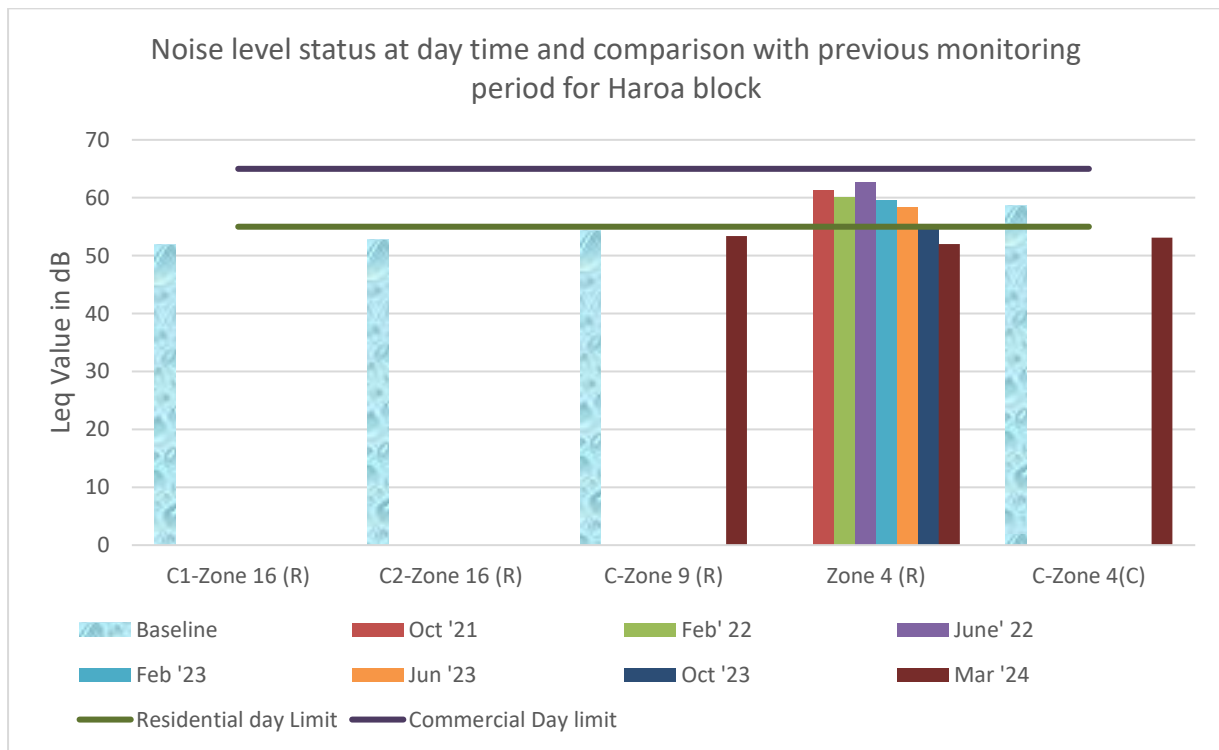
118. From the above graph, it is obvious that PM₁₀ and PM_{2.5} concentration in ambient air are exhibiting similar pattern for all locations. At Zone 4 (OHR), Zone 9 (canal) and at Zone 4 (canal) during the Jan-Mar 2024 period, the PM₁₀ and PM_{2.5} concentration were found below the stipulated limits set by WHO and CPCB standard.

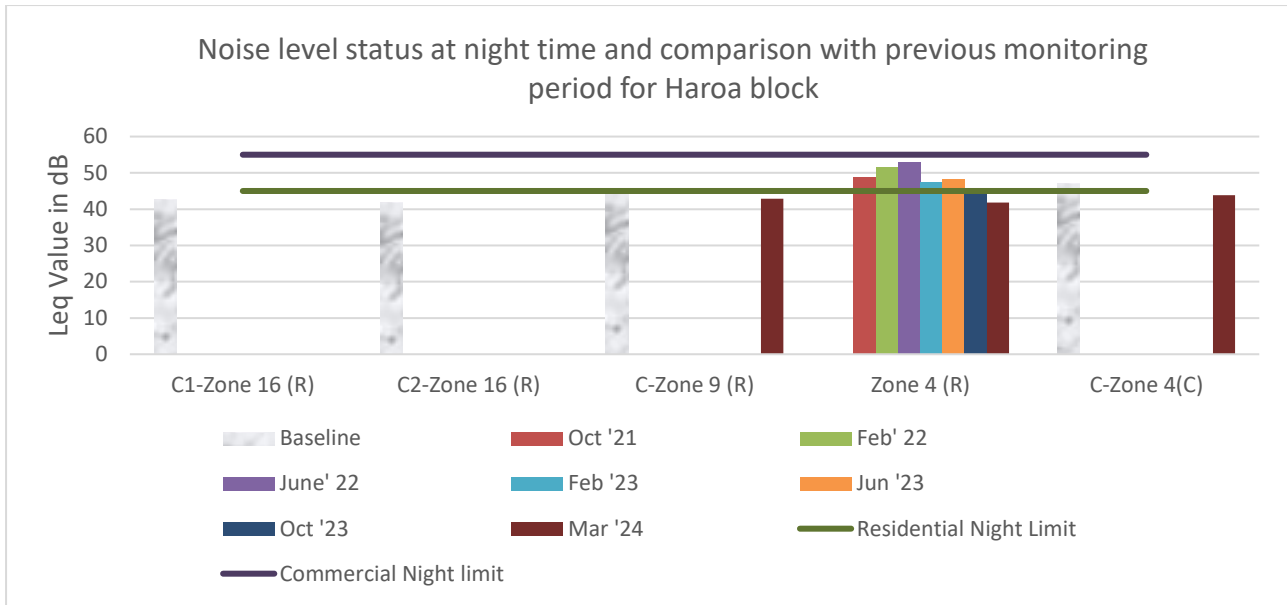
119. Latest monitoring held on March 2024 at zone 4 (OHR), 4 (Canal) and 9 (canal) for PM₁₀ and PM_{2.5} show concentration has increased from previous monitoring period (Oct – Dec 2023) except at zone 9 (canal) and are also found within stipulated limits as per WHO and CPCB.

120. An increasing trend is further observed during winter season in all monitoring sites when compared to pre-monsoon and winter results. However, some aberrations to this trend are observed in zone 9 (canal) due to the lesser activity and relative decrease in moisture content in ambient air with seasons as monitoring is conducted in March 2024. Extent of dust generating construction activities at various zones also influence the observed ambient concentration in terms of particulates in rest of the zones such as at Zone 4(OHR) and at Zone4(canal).

b. Noise Level

121. Noise level data collected over time at the various zones and analysis based on graphs below shows that the noise quality at different location varies by the level of noise generating activities.



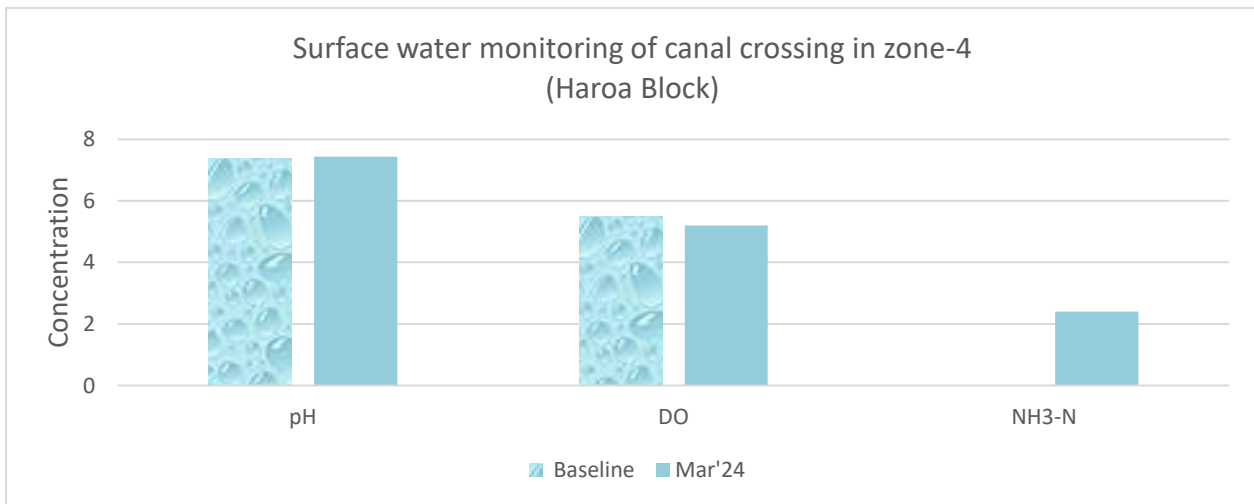


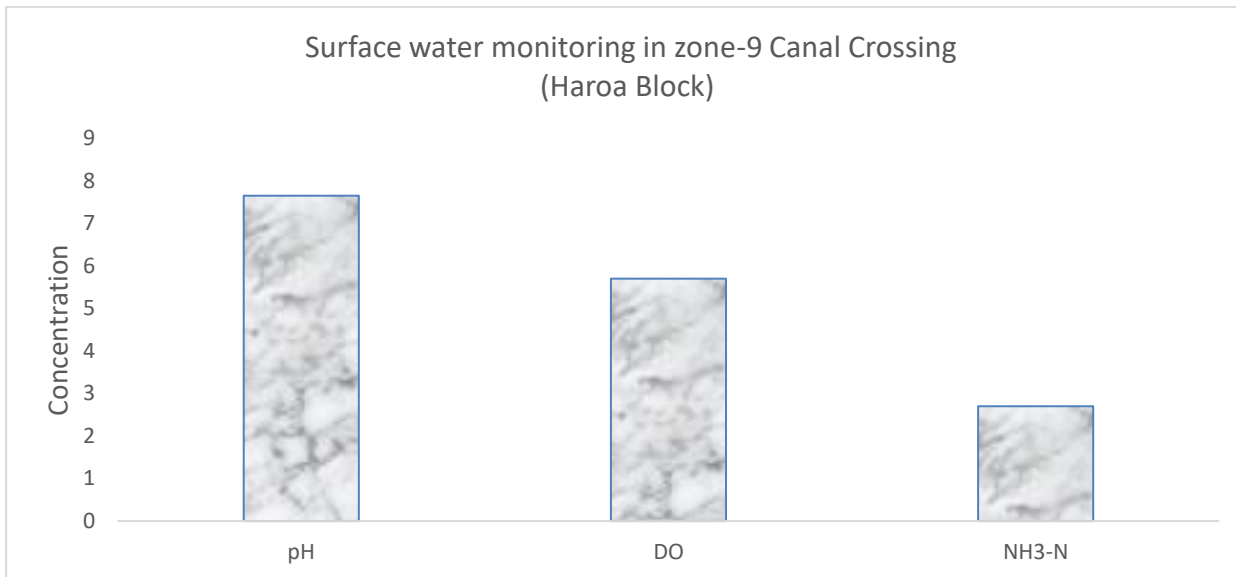
122. The plotted graph shows that the noise level at all the monitored locations such as Zone 16 – Location 1 & 2 (Canal -Residential), Zone 4 (OHR – Residential), Zone 4 (canal – Commercial) and in Zone 9 (canal – Residential) in Haroa block has been within/almost meeting the prescribed day and night time limits for respective land uses.

123. The noise level is further showing a decreasing trend over time at the residential and commercial area (i.e. zone 9-canal, zone 4–OHR and zone 4 -canal) during day time. This can be attributed to lesser noisy construction activities as the work is almost finished at these locations and only finishing work such as painting and restoration work are in progress.

124. Further the noise level at all these locations were found to be significantly lesser than day time and almost constant over time, as no construction activity is performed at any of these monitoring locations during night time.

c. Water Quality





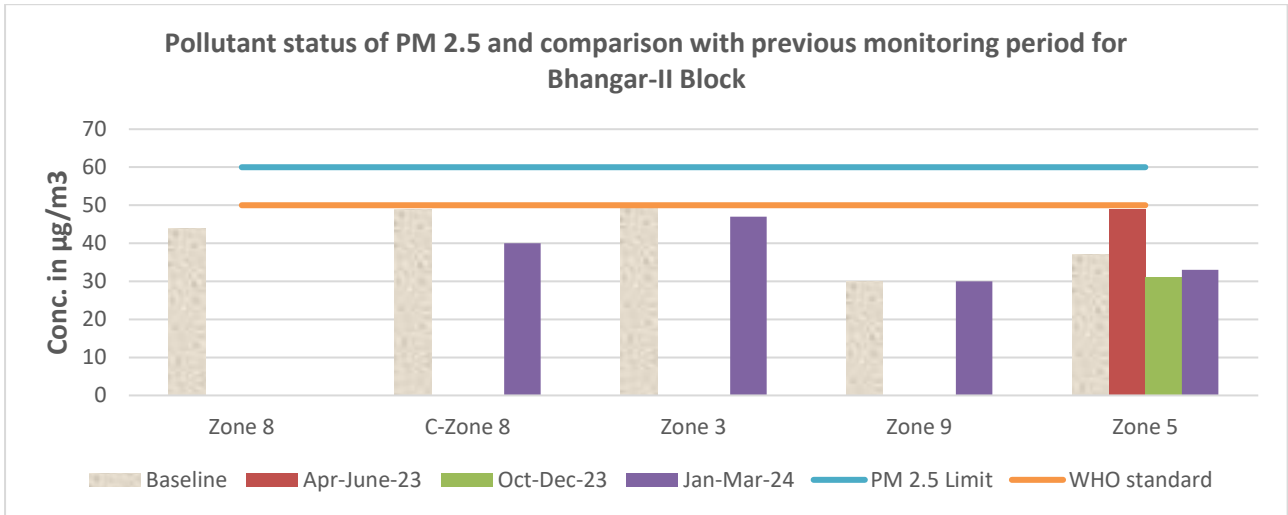
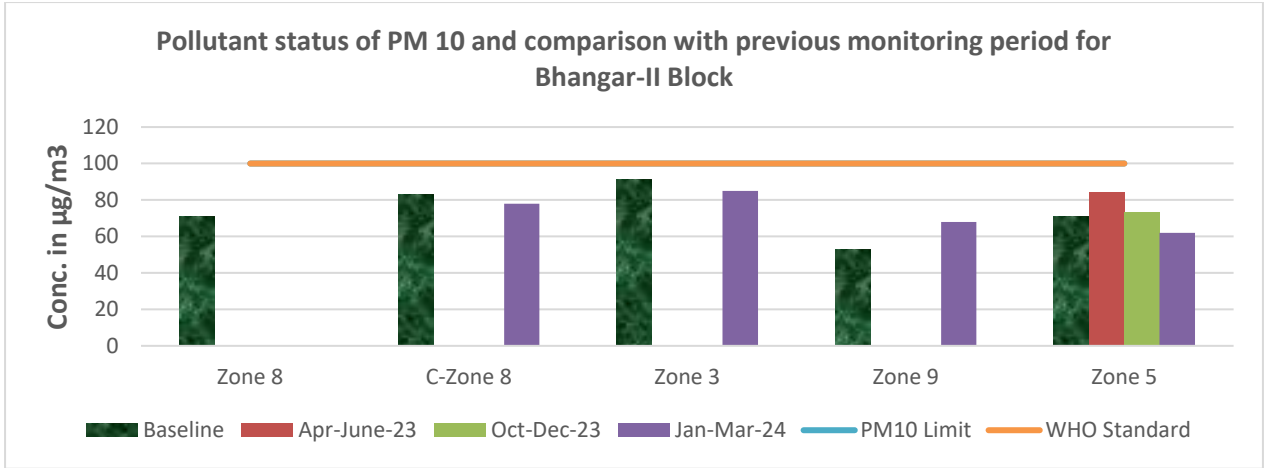
125. The parameters, pH and DO at zone 4 canal crossing are within prescribe limit during both the sampling campaign (Oct-23 and Mar-24) with respect to prescribed limit set by CPCB for Class D water bodies designated for propagation of wild life and fisheries. DO level slightly decreased for the sample collected from zone 4 canal in comparison to last monitoring (October-23). The free ammonia is however above the prescribed limit in latest monitoring phase which can be attributed for the depletion in DO level (Mar-24) and mainly by contribution of industrial and domestic waste water discharge in to the canal.

126. Further baseline data for the zone 9 canal crossing exhibits pH and DO level within limit for the class D water bodies set by CPCB, however free ammonia concentration is above the prescribed limit most likely due to domestic discharge.

Contract Package WBDWSIP/DWW/NCB/N24P/02B/2017-18

a. Air Quality

127. The plotted graphs below are evident that the air quality at various locations is more influenced by the season in which data was collected than impact from project activities. Accordingly, the comparison of air quality data is presented by season in the graphs shown below:



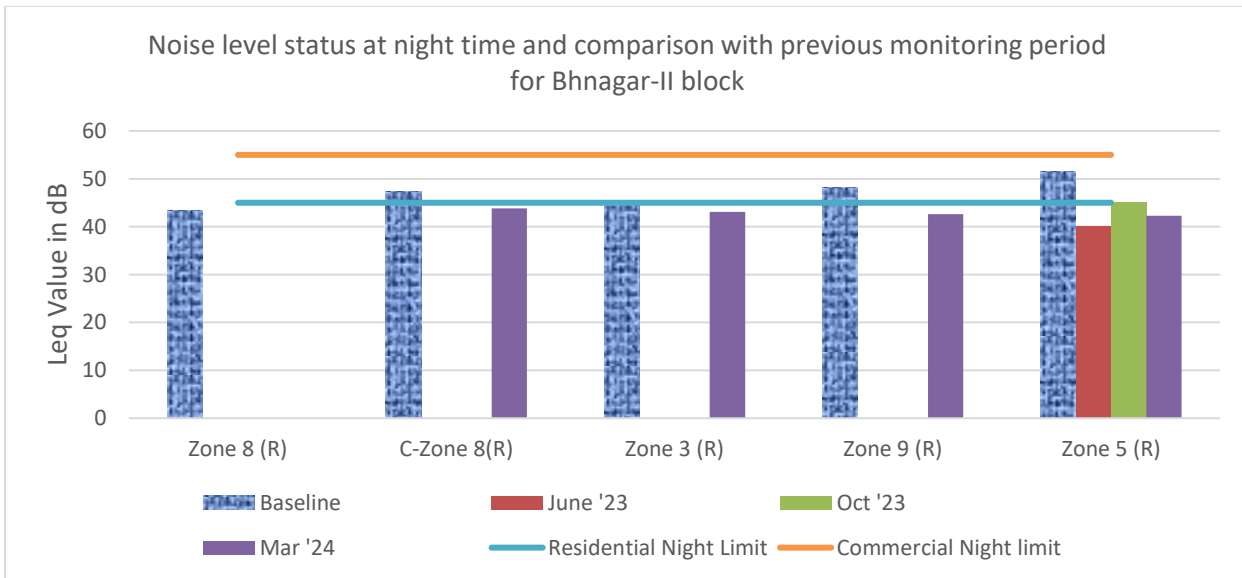
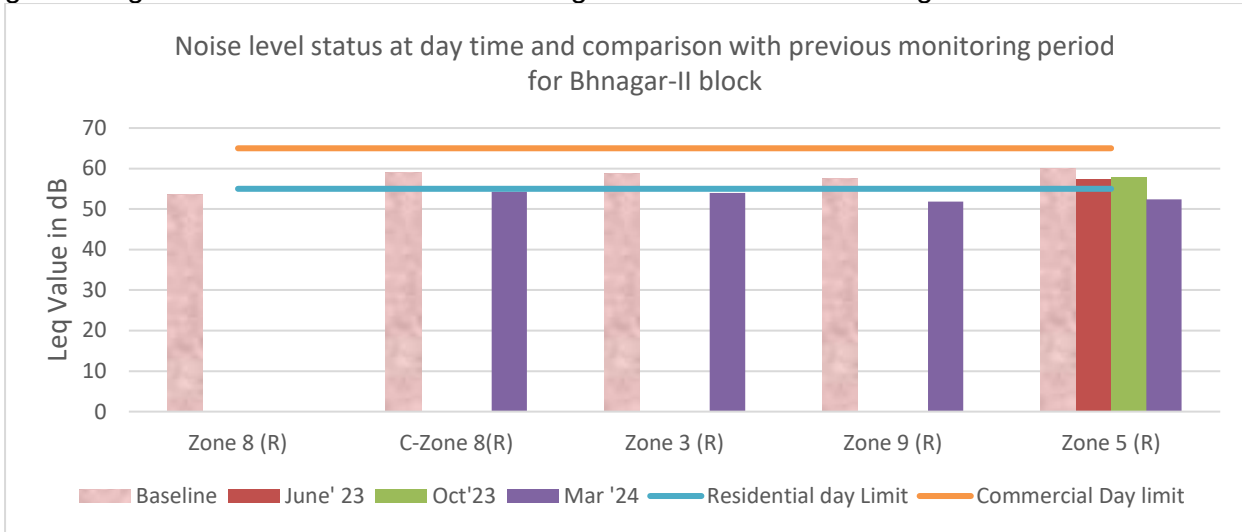
128. It is obvious from the above graph that both PM₁₀ concentration in ambient air represents similar pattern at zone 8 (canal), zone 3 (OHR) and in zone 5 (OHR) where Pollutant PM₁₀ level is decreasing in latest phase of monitoring (Mar-24) except at zone 9(OHR) where PM10 is slightly increasing in comparison to last season (Oct-23).

129. At Zone 3(OHR), and zone 8 (canal) PM_{2.5} level is slightly decreased whereas it is slightly increasing at zone 5 (OHR) in comparison to previous monitoring campaign. There is negligible changes seen on PM_{2.5} level at zone 9 (OHR).

130. The PM₁₀ and PM_{2.5} concentrations were found below the stipulated limits set by WHO as well as CPCB. As noted for package 02A, here also the influence of seasonal variation is evident due to lesser moisture content in current monitoring campaign. Further, construction activities also contributed to the overall ambient concentration of particulates and that is obvious from the results observed at zone 8(canal) and zone 3(OHR) where concentration has decreased from previous monitoring period due lesser construction activities during monitoring period.

d. Noise Level

131. Similar to Package 02A, analysis of noise level data collected over time at this package also shows that the noise quality at a particular location is more influenced by the level of noise generating activities at the time of monitoring than season of monitoring.

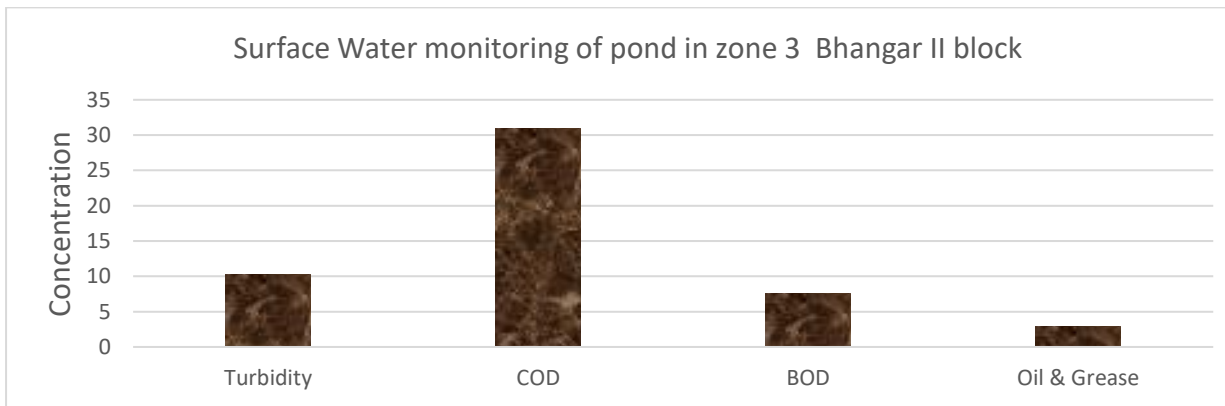
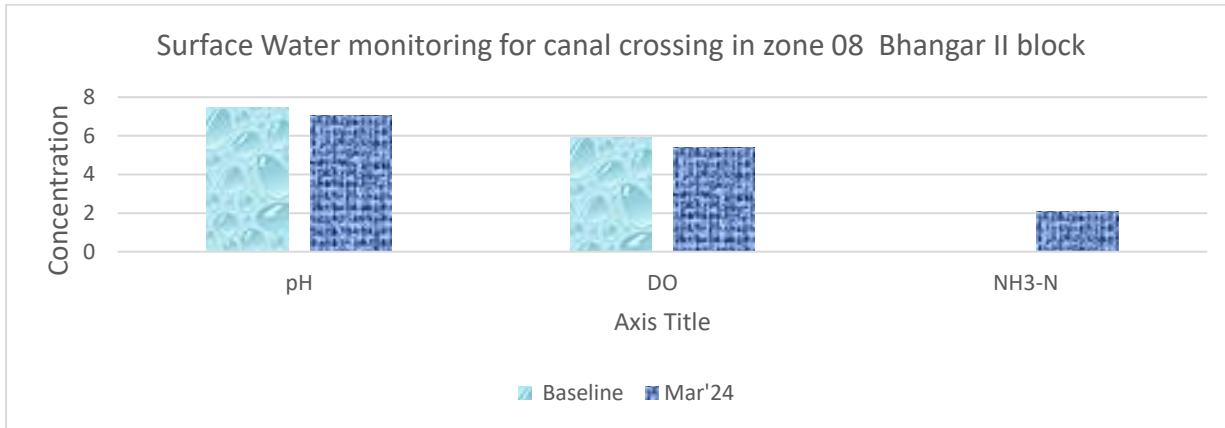


132. From the above graphs it is evident that the day time noise level at all the monitored locations at Zone 3, 5, 8 and 9 OHR in Bhangar II block has been below the stipulated limits for residential areas. The ambient noise level in these working zones is below previous monitoring level due to lesser noise generating construction activity such as boundary wall construction and only concreting activity in zone 3 and at zone 5,9 OHR respectively. Beside of that noise level dipped at zone 8(canal) as all cage erection activity has been finished and only finishing activity are under process.

133. As no construction activity is performed at any of these monitoring locations during night time, the noise level at all these locations were found to be significantly lesser than day time and

less than the baseline condition. Further, as expected, the noise levels at these locations are almost constant over time.

c. Water Quality



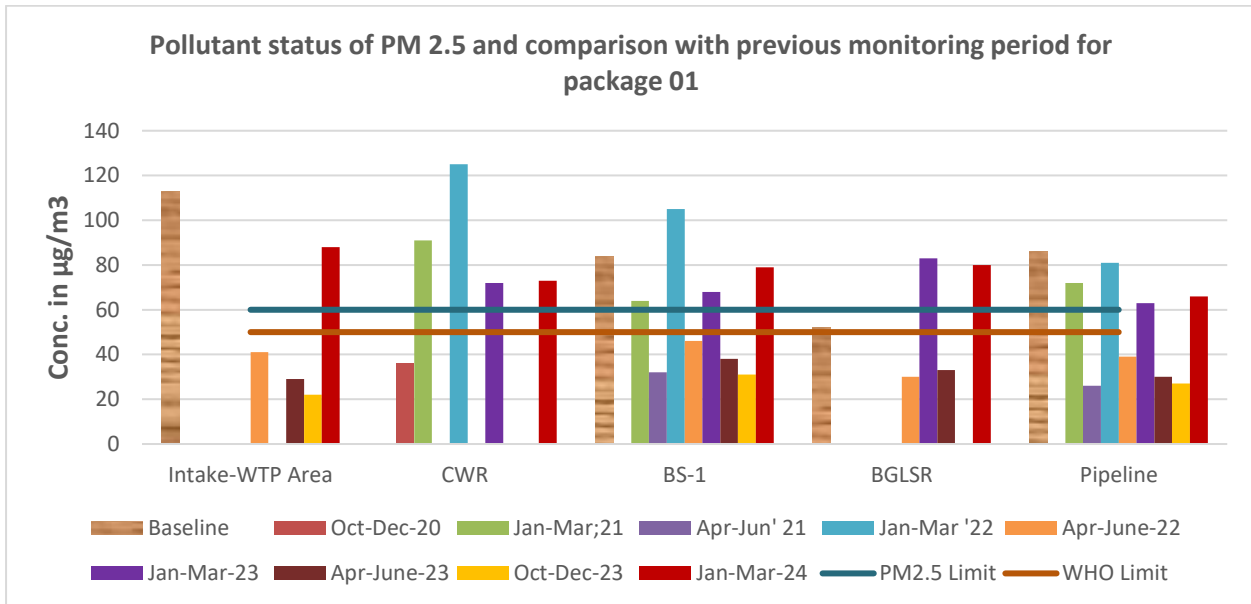
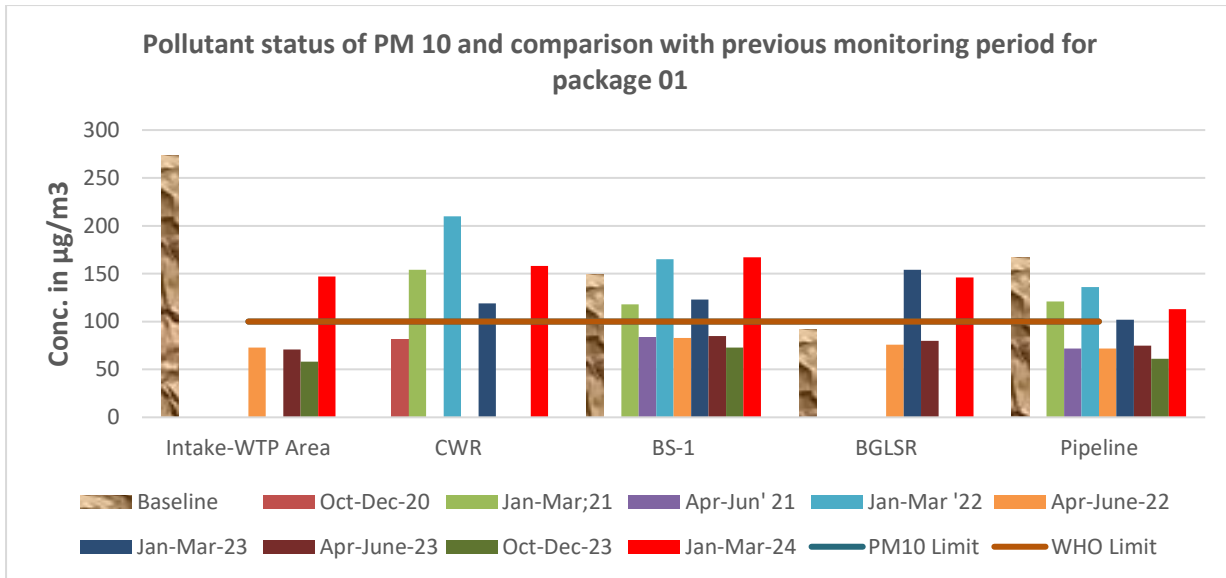
134. The canal water at zone 8 is intended for Propagation of Wildlife and Fisheries – i.e. Class D as per CPCB. The pH and DO were found within the prescribed limit as given for Class D waterbodies. However Free Ammonia is found slightly higher than the prescribed limit due to discharge of domestic waste water in to the canal which also affects the level of DO which is slightly decreased from the baseline (Oct-23) in compare to latest monitoring campaign (Mar-24).

135. The baseline pond water sample at zone 3 OHR is related with Class B category as per CPCB norms and here BOD level is slightly higher than prescribed limit.

Contract Package: WBDWSIP/DWW/NCB/N24P/01/2017-18

a. Air Quality

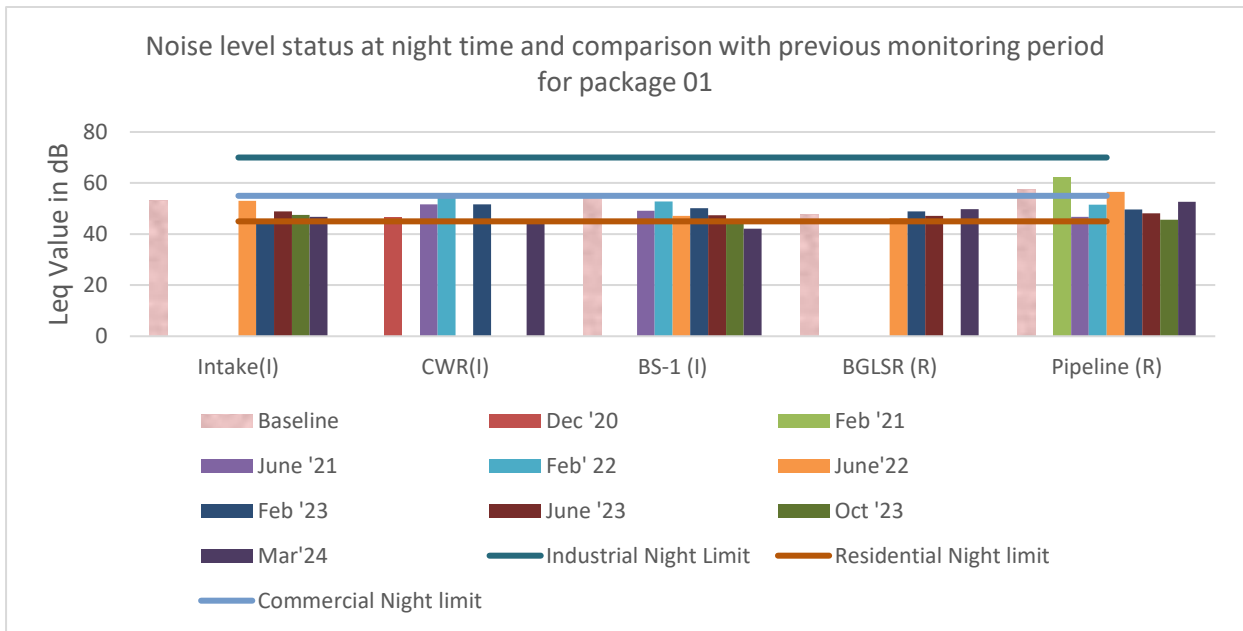
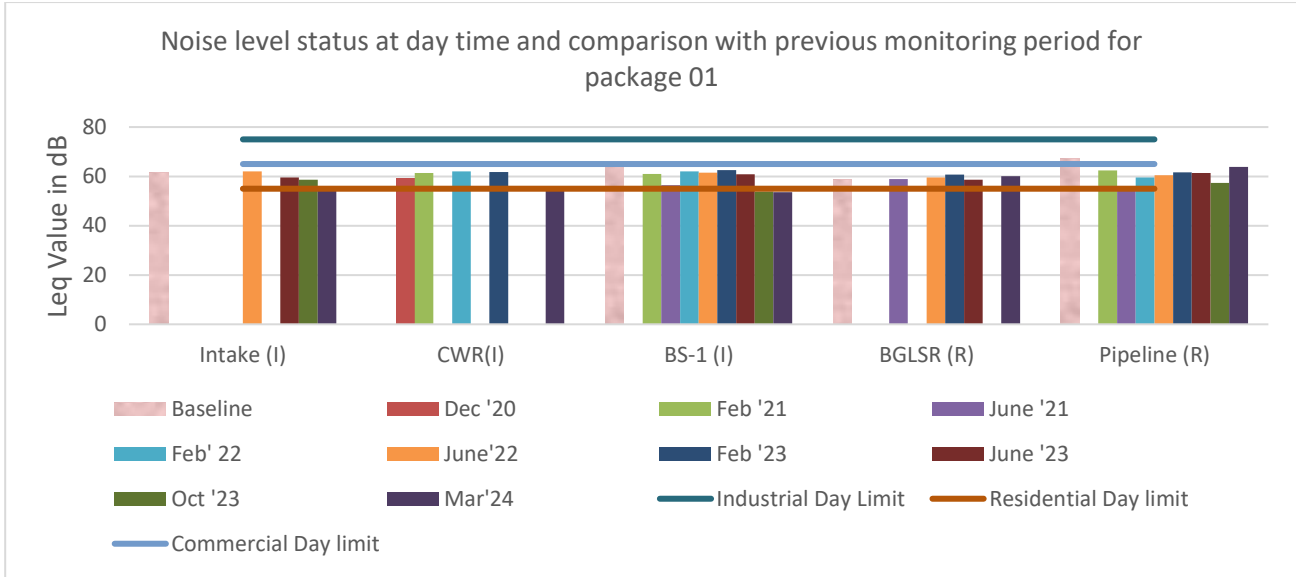
136. Sample and analysis of PM₁₀ and PM_{2.5} data collected over time at the various zones of Package 1 is presented by different season in the graphs shown below



137. The PM10 and PM2.5 concentrations as per above plotted graph were found above the stipulated limits set by WHO as well as CPCB at Intake, CWR, BS-1, Bhangar GLSR and pipeline activities during the present campaign (Jan-Mar 2024). The contribution of air pollutants into ambient air seems higher in comparison to previous monitoring period (i.e. Oct-Dec 2023 and Apr-June 2023) at Intake, BS-1, CWR, Bhangar GLSR and pipeline due to increased dust emitting construction activities. Seasonal variation is another factor for increasing pattern of PM10 and PM2.5.

a. Noise Level

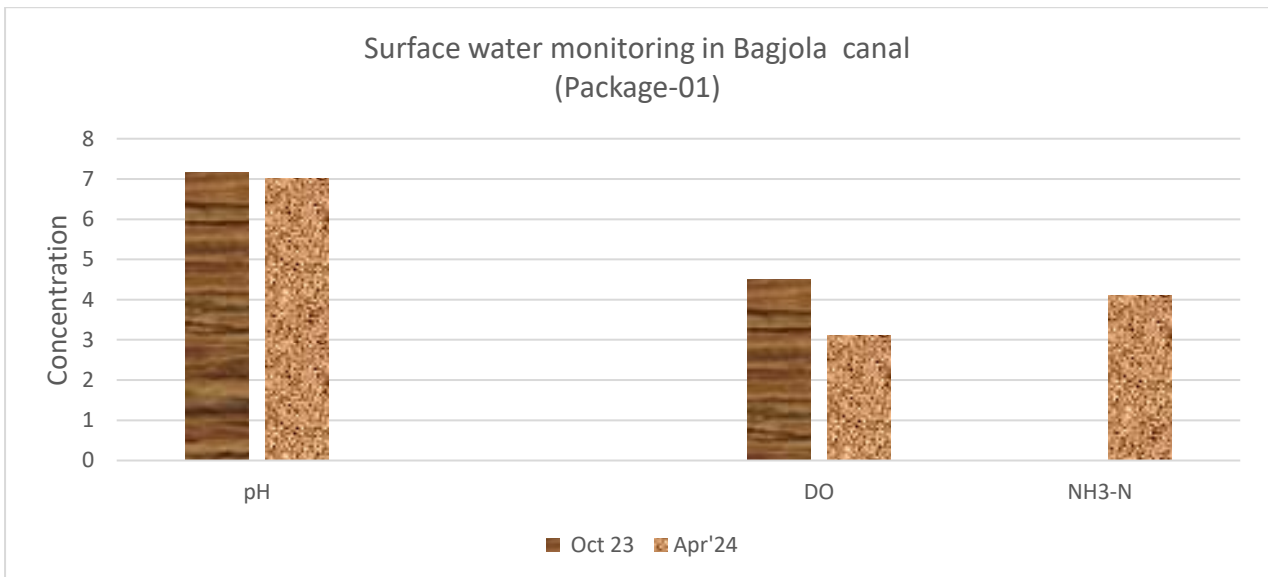
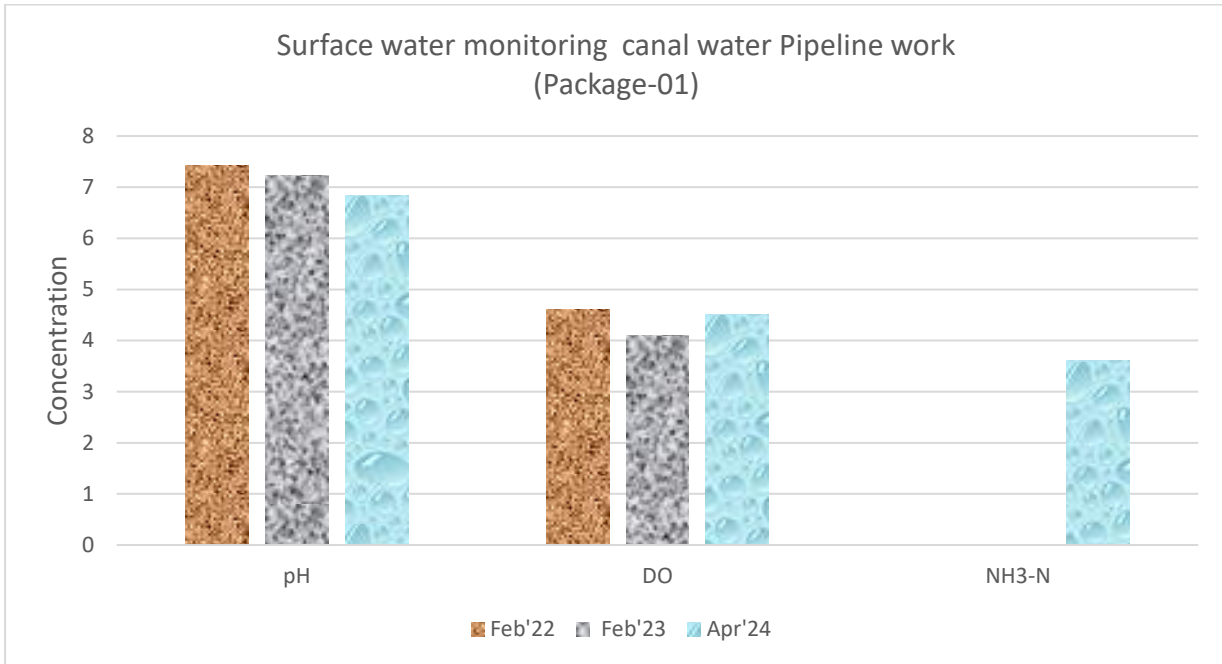
138. The noise level data collected over time and different seasons at the various zones of Package-1 is presented below.



139. As per above graph representing the noise levels at the various monitored locations, it is evident that for industrial (intake, CWR and BS-1) and residential (Bhangar GLSR and Pipeline) areas. The noise levels are within respective prescribed limits for both day as well as night time for industrial locations (intake, CWR and BS-1), however it is slightly increased for residential locations (pipeline and Bhangar GLSR). This may be attributed to excavation, welding, grinding and pile breaking activities performed at these locations.

140. Further the noise level dip at night as compare to day time in all monitored locations, however higher traffic and construction activity also affects the noise level in Bhangar GLSR and Pipeline area.

b. Water Quality



141. Surface water samples were collected from Kestopur canal (sub-channel) and Bagjola canal. Analysis of these samples represents erratic trend in DO, while it is increasing in Kestopur, the reverse is seen in Bagjola canal when compared to last monitoring campaign. This behaviour is most likely due to local changes in the canal water feed pattern. However, pH level found within prescribed limit but free ammonia in both locations found higher than prescribed limit as per CPCB class D water category.

142. During Construction, air quality, noise level and water quality monitoring will be continued as per Environment Management and Monitoring Plan. All monitoring expenses will be borne by contractors from their project Health safety monitoring budget

143. All original test certificates are available in DSISC/PIU office as back-up.

II. Environmental Monitoring Results of Bankura Packages and observations

144. Environmental monitoring results and observations of different packages under Bankura District are given below.

Table 27A: Ambient Air Quality Monitoring Results- Bankura- During Construction: November 2023 to April 2024

Sl. no.	Date of Sampling	Site Location	Parameters				
			PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	CO (µg/m ³)	SO ₂ (µg/m ³)	NO ₂ (µg/m ³)
Contract Package: WBDWSIP/DWW/NCB/BK/01/2017-18							
1	23-01-2024	Intake and WTP	96	55	721	6.8	26.7
Contract Package: WBDWSIP/DWW/NCB/BK/02A/2018-19							
1	26-12-2023	Chaukighata	43	24	492	4.5	20.6
2	26-12-2023	Raghunathpur	36	15	515	4.9	19.8
3	27-12-2023	Tunamara	39	16	435	4.8	18.8
4	27-12-2023	Bholarkhap	48	25	561	5.4	22.6
5	28-12-2023	Nayekhir	37	21	400	4.4	19.3
6	20-04-2024	Hatagram OHSR	70	37	721	6.5	27.3
7	20-04-2024	Gattariya OHSR	93	51	812	7.2	32.8
8	21-04-2024	Brahmandiha OHSR	77	40	755	6.9	30.5
9	21-04-2024	Surulia OHSR	85	47	789	7.4	31.3
10	21-04-2024	Gobindpur IBPS	81	45	766	7.0	30.8
Contract Package: WBDWSIP/DWW/NCB/BK/02B/2018-19							
1	29-12-2023	Belasui Shyam Sundarpur OHSR	51	24	583	5.8	23.1
2	29-12-2023	Phulmati OHSR	48	21	572	5.1	20.6
3	30-12-2023	Mulberiya Village	42	20	549	5.2	21.2
4	30-12-2023	Bhutama Maheshpur OHSR	36	18	595	4.5	18.8
4	31-12-2023	Chenchuriya Village	40	24	435	4.8	20.3
5	17-04-2024	Rajpur	74	38	480	5.9	24.8
6	17-04-2024	Chandabila	59	25	572	5.5	23.9
7	18-04-2024	Douni	114	53	709	6.0	26.5
8	18-04-2024	Chenchuriya Village	55	20	526	5.0	24.1
9	19-04-2024	Bibarda	69	31	606	5.4	25.8
Contract Package: WBDWSIP/DWW/NCB/BK/03/2018-19							
1	26-11-2023	WTP Site (Basudebpur)	66	34	714	7.2	28.0
2	26-11-2023	Intake Site (Natungram)	72	37	550	7.0	24.3
3	30-03-2024	WTP Site (Basudebpur)	135	63	789	9.6	29.4
4	30-03-2024	Intake Site (Natungram)	186	77	1087	10.4	32.5
Contract Package: WBDWSIP/DWW/NCB/BK/04/2018-19							
1	24-11-2023	Kapista OHSR	88	47	675	6.0	31.9
2	24-11-2023	Gobindham OHSR	74	39	755	6.3	32.5
3	25-11-2023	Lakhiyara OHR	71	36	652	6.2	29.8
4	25-11-2023	Arbat OHSR	78	41	732	6.6	28.9
5	25-11-2023	Banasuriya OHSR	81	43	721	7.1	33.3

Sl. no.	Date of Sampling	Site Location	Parameters				
			PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	CO (µg/m ³)	SO ₂ (µg/m ³)	NO ₂ (µg/m ³)
6	25-11-2023	Deuli OHSR	83	40	744	6.9	30.5
7	27-11-2023	Barshal OHSR	77	31	778	6.5	31.1
8	27-11-2023	Subiyara OHSR	65	32	686	5.6	31.9
9	28-11-2023	Mejhia OHSR	98	53	801	7.0	32.4
10	28-11-2023	Chotonabagram	72	34	755	6.4	28.7
11	27-03-2024	Mejhia OHSR	59	24	469	5.2	24.5
12	27-03-2024	Mochrakend	51	18	572	5.0	23.6
13	27-03-2024	Benagari	66	26	503	4.8	25.0
14	27-03-2024	Chausal	70	29	618	5.6	24.3
15	27-03-2024	Subiyara OHSR	55	19	549	5.1	23.7
16	28-03-2024	Kapista OHSR	53	20	583	6.2	25.7
17	28-03-2024	Deuli OHSR	42	11	526	4.8	24.7
18	28-03-2024	Banasuriya OHSR	42	11	526	4.8	24.7
19	28-03-2024	Chotonabagram	48	21	561	6.0	25.4
20	28-03-2024	Lachhmanpur	46	16	480	5.4	23.9
National Ambient Air Quality Standard			100	60	2000	80	80
WHO standard			100	50	-	50*	40*

**Interim target 2, ** 8 hours monitoring

Note: National level Central Pollution Control Board's (Govt. of India) guideline/ protocol used for sampling, For analysis. INDIAN STANDARD IS 5182 and USEPA CFR 40 (International protocol) used for analysis

Table 27B: Noise Level Monitoring Data- Bankura- During Construction: November 2023 to April 2024

Site No	Date of Sampling	Site Location	Leq dB(A)	
			Day Time	Night Time
Contract Package: WBDWSIP/DWW/NCB/BK/01/2017-18				
1	23-01-24	Intake & WTP Mukutmanipur	56.9	46.2
Contract Package: WBDWSIP/DWW/NCB/BK/02A/2018-19				
1	26-12-2023	Chaukighata	58.7	46.8
2	26-12-2023	Raghunathpur	53.9	43.6
3	27-12-2023	Tunamara	57.7	49.0
4	27-12-2023	Bholarkhap	60.2	49.6
5	28-12-2023	Nayekhir	57.2	44.8
6	20-04-2024	Hatagram OHSR	54.6	43.9
7	20-04-2024	Gattariya OHSR	50.0	42.6
8	21-04-2024	Brahmandiha OHSR	53.7	44.3
9	21-04-2024	Surulia OHSR	55.5	42.8
10	21-04-2024	Gobindpur IBPS	54.0	44.2
			Average Leq dB (A)	
11	28-12-2023	Nayekhir	41.4	
12	28-12-2023	Bheduasole Village	57.4	
13	28-12-2023	Tanamara Village	39.6	
14	28-12-2023	Baurisole Village	50.3	
15	28-12-2023	Maukuri Village	51.2	
16	28-12-2023	Paharpur Village	50.6	
17	28-12-2023	Jhaktor Village	59.0	
18	28-12-2023	Rampur Village	42.1	
19	28-12-2023	Gunnath Village	43.8	
20	28-12-2023	Araldhi Village	58.0	
21	21-04-2024	Parulia Village	48.2	

Site No	Date of Sampling	Site Location	Leq dB(A)	
			Day Time	Night Time
22	21-04-2024	Uttarpairachali	47.3	
23	21-04-2024	Satami	49.4	
24	21-04-2024	Tungi	50.5	
25	21-04-2024	Bamundiha	46.9	
Contract Package: WBDWSIP/DWW/NCB/BK/02B/2018-19				
1	29-12-2023	Belasuii Shyam Sundarpur OHSR	53.1	43.9
2	29-12-2023	Phulmati OHSR	54.1	43.3
3	30-12-2023	Bhutama Maheshpur OHSR	53.2	43.5
4	30-12-2023	Chenchuriya Village	54.8	42.9
5	31-12-2023	Parirdihi	54.9	43.7
6	17-04-2024	Rajpur	53.0	41.7
7	17-04-2024	Chandabila	53.5	44.5
8	18-04-2024	Douni	52.3	43.2
9	18-04-2024	Chenchuriya Village	50.9	42.9
10	19-04-2024	Bibarda	51.5	42.2
Average Leq dB (A)				
11	31-12-2023	Parirdihi	51.7	
12	31-12-2023	Dauni	45.1	
13	31-12-2023	Joypur	49.6	
14	31-12-2023	Taldangra High School Road	51.3	
15	31-12-2023	Phulmati Zone	43.4	
16	31-12-2023	Bhutama	41.6	
17	31-12-2023	Dhengashimul	37.2	
18	31-12-2023	Muragram	45.7	
19	31-12-2023	Piakagram	58.9	
20	31-12-2023	Belasuli	44.8	
21	16-04-2024	Mandi OHSR	51.4	
22	16-04-2024	Asthasol OHSR	47.9	
23	18-04-2024	Beldangra	49.4	
24	18-04-2024	Paikgram	53.2	
25	18-04-2024	Bibarda	48.6	
Contract Package: WBDWSIP/DWW/NCB/BK/03/2018-19				
1	26-11-2023	Intake (Natungram)	58.4	47.7
2	26-11-2023	WTP (Basudebpur)	56.4	46.2
3	30-03-2024	Intake (Natungram)	57.1	48.5
4	30-03-2024	WTP (Basudebpur)	53.8	44.7
Contract Package: WBDWSIP/DWW/NCB/BK/04/2018-19				
1	23-11-2023	Kapista OHSR	55.5	42.7
2	23-11-2023	Gobindham OHSR	56.4	47.3
3	24-11-2023	Lakhiyara OHR	50.2	43.0
4	24-11-2023	Arbat OHSR	55.6	40.9
5	25-11-2023	Banasuriya OHSR	54.6	46.0
6	25-11-2023	Deuli OHSR	56.1	47.4
7	26-11-2023	Barshal OHSR	54.5	44.6
8	26-11-2023	Subiyara OHSR	54.8	46.0
9	27-11-2023	Mejhia OHSR	52.4	44.0
10	27-11-2023	Chotonabagram	52.7	43.7
11	26-03-2024	Mejhia OHSR	51.5	40.2
12	26-03-2024	Mochrakend	52.4	42.7

Site No	Date of Sampling	Site Location	Leq dB(A)	
			Day Time	Night Time
13	26-03-2024	Benibari	49.3	41.1
14	26-03-2024	Chausal	52.7	40.2
15	27-03-2024	Subiyara OHSR	51.8	42.4
16	27-03-2024	Kapista OHSR	52.8	41.4
17	27-03-2024	Deuli OHSR	53.0	43.7
18	27-03-2024	Banasuriya OHSR	52.4	43.9
19	28-03-2024	Chotonabagram	52.0	43.3
20	28-03-2024	Lachhmanpur	51.0	42.9

Code/Category	Leq Day Time dB(A) - Standard	Leq Night Time dB(A) - Standard	Note	Remarks
A/Industrial	75	70	Day Time: 6:00 Hr. to 22:00 Hr. Night Time: 22:00 Hr. to 6:00 Hr.	All the noise monitoring sites are falling under Residential Category.
B/Commercial	65	55		
C/Residential	55	45		
D/Ecological-Sensitive	50	40		
Note: National level Central Pollution Control Board's, CPCB's (Govt. of India) guideline/ protocol used for sampling				

Table 27C: Ground Water Quality Monitoring Data for BK/02A- Bankura- During Construction- November 2023 to April 2024

Sl.No.	Parameters	Unit	Contract Package: WBDWSIP/DWW/NCB/BK/02A/2018-19										National Standards for Drinking Water-BIS 10500-2012 Acceptable limit (Maximum permissible limit)
			Results (During Construction)										
			Chaukighata Date of sampling 25-12-23	Raghunathpur Date of sampling: 25-12-23	Tunamara Date of sampling: 26-12-23	Bholarkhap Date of sampling: 26-12-23	Nayekhir Date of sampling: 20-01-24	Chaukighata Date of sampling: 19-04-24	Raghunathpur Date of sampling: 19-04-24	Tunamara Date of sampling: 20-04-24	Bholarkhap Date of sampling: 20-04-24	Nayekhir Date of sampling: 20-04-24	
1	Color	Hazan Unit	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	6.5-8.5
2	Taste and Odor	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	5 (15)
3	pH	-	7.13	7.29	7.33	7.47	7.21	7.22	7.33	7.14	7.26	7.04	Agreeable
4	Turbidity	NTU	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1 (5)
5	TDS	Mg/l	224	198	142	158	142	234	216	126	168	136	500 (2000)
6	Aluminum	Mg/l	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	200 (600)
7	Ammonia	Mg/l	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	250 (1000)
8	Calcium	Mg/l	33.3	30.1	22.2	23.8	20.6	36.4	34.8	20.6	26.9	22.2	200 (600)
9	Chloride	Mg/l	45.0	41.1	27.4	29.4	25.4	43.1	41.1	25.4	31.3	27.4	200 (400)
10	Copper	Mg/l	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	45
11	Fluoride	Mg/l	0.31	0.26	0.21	0.27	0.22	0.35	0.32	0.19	0.33	0.26	1 (1.5)
12	Residual Free Cl	Mg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	75(200)
13	Iron	Mg/l	0.27	0.23	0.18	0.24	0.25	0.28	0.23	0.12	0.27	0.21	0.3
14	Manganese	Mg/l	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.2(1.0)
15	Nitrate	Mg/l	0.81	0.77	0.69	0.74	0.71	0.87	0.81	0.61	0.79	0.77	0.5
16	Sulphate	Mg/l	20.3	16.4	13.1	17.2	15.2	22.5	22.3	10.5	21.4	18.1	0.05
17	Alkalinity	Mg/l	162.8	145.2	105.6	114.4	101.2	184.0	152.0	96.0	120.0	96.0	0.05 (1.5)
18	Total Hardness	Mg/l	150.5	138.6	99.0	103.0	95.0	158.4	146.5	87.1	110.9	91.1	0.01 (0.05)
19	Zinc	Mg/l	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	5 (15)
20	Cadmium	Mg/l	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.001

SI.No.	Parameters	Unit	Contract Package: WBDWSIP/DWW/NCB/BK/02A/2018-19										National Standards for Drinking Water-BIS 10500-2012 Acceptable limit (Maximum permissible limit)	
			Results (During Construction)											
			Chaukighata Date of sampling: 25-12-23	Raghunathpur Date of sampling: 25-12-23	Tunamara Date of sampling: 26-12-23	Bholarkhap Date of sampling: 26-12-23	Nayekhir Date of sampling: 20-01-24	Chaukighata Date of sampling: 19-04-24	Raghunathpur Date of sampling: 19-04-24	Tunamara Date of sampling: 20-04-24	Bholarkhap Date of sampling: 20-04-24	Nayekhir Date of sampling: 20-04-24		
21	Cyanide	Mg/l	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.1 (0.3)
22	Mercury	Mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.03(0.2)
23	Arsenic	Mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03 (0.2)
24	Chromium	Mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.05 (No relaxation)
25	E-Coli	MPN/100 ml	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	Must not be detectable in 100 ml sample
26	Total Coliform	MPN/ 100 ml	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	Must not be detectable in 100 ml sample

Table 27D: Ground Water Quality Monitoring Data for BK/02B- Bankura- During Construction- November 2023 to April 2024

Sl.No	Parameters	Unit	Contract Package: WBDWSIP/DWW/NCB/BK/02B/2018-19									National Standards for Drinking Water- BIS 10500-2012 Acceptable limit (Maximum permissible limit)
			Results (During Construction)									
			Belasuii Shyam Sundarpur OHSR Date of sampling: 28-12-23	Phulimati OHSR Date of sampling: 28-12-23	Bhutama Maheshpur OHSR Date of sampling: 29-12-23	Chenchuriya Village Date of sampling: 30-12-23	Belasuii Shyam Sundarpur OHSR Date of sampling: 16-04-24	Phulimati OHSR Date of sampling: 16-04-24	Bhutama Maheshpur OHSR Date of sampling: 17-04-24	Chenchuriya Village Date of sampling: 17-04-24	Mahulbera Date of sampling :18-04-24	
1	Color	Hazan Unit	<5	<5	<5	<5	<5	<5	<5	<5	<5	6.5-8.5
2	Taste and Odor	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	5 (15)
3	pH	-	7.84	7.21	7.35	7.83	7.25	7.86	7.49	7.81	7.14	Agreeable
4	Turbidity	NTU	<1	<1	<1	<1	<1	<1	<1	<1	<1	1 (5)
5	TDS	Mg/l	196	236	188	272	192	214	140	164	254	500 (2000)
6	Aluminum	Mg/l	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	200 (600)
7	Ammonia	Mg/l	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	250 (1000)
8	Calcium	Mg/l	28.5	31.7	23.8	36.4	31.7	33.3	20.6	22.2	38.0	200 (600)
9	Chloride	Mg/l	43.1	48.9	35.2	48.9	47.0	50.9	27.4	31.3	45.0	200 (400)
10	Copper	Mg/l	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	45
11	Fluoride	Mg/l	0.32	0.37	0.28	0.46	0.37	0.41	0.28	0.34	0.51	1 (1.5)
12	Residual Free Cl	Mg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	75(200)
13	Iron	Mg/l	0.44	0.51	0.37	0.57	0.49	0.55	0.35	0.43	0.64	0.3
14	Manganese	Mg/l	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.2(1.0)
15	Nitrate	Mg/l	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5
16	Sulphate	Mg/l	29.3	34.2	26.8	38.1	32.4	31.3	25.6	29.1	42.6	0.05
17	Alkalinity	Mg/l	110.0	123.2	114.4	180.4	104.0	132.0	92.0	116.0	176.0	0.05 (1.5)
18	Total Hardness	Mg/l	126.7	142.6	95.0	154.4	142.6	138.6	79.2	103.0	162.4	0.01 (0.05)

Sl.No	Parameters	Unit	Contract Package: WBDWSIP/DWW/NCB/BK/02B/2018-19									National Standards for Drinking Water- BIS 10500-2012 Acceptable limit (Maximum permissible limit)
			Results (During Construction)									
			Belasuii Shyam Sundarpur OHSR Date of sampling: 28-12-23	Phulmati OHSR Date of sampling: 28-12-23	Bhutama Maheshpur OHSR Date of sampling: 29-12-23	Chenchuriya Village Date of sampling: 30-12-23	Belasuii Shyam Sundarpur OHSR Date of sampling: 16-04-24	Phulmati OHSR Date of sampling: 16-04-24	Bhutama Maheshpur OHSR Date of sampling: 17-04-24	Chenchuriya Village Date of sampling: 17-04-24	Mahulbera Date of sampling :18-04-24	
19	Zinc	Mg/l	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	5 (15)
20	Cadmium	Mg/l	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.001
21	Cyanide	Mg/l	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.1 (0.3)
22	Mercury	Mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.03(0.2)
23	Arsenic	Mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03 (0.2)
24	Chromium	Mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.05 (No relaxation)
25	E-Coli	MPN/100 ml	ND	ND	ND	ND	ND	ND	ND	ND	ND	Must not be detectable in 100 ml sample
26	Total Coliform	MPN/ 100 ml	ND	ND	ND	ND	ND	ND	ND	ND	ND	Must not be detectable in 100 ml sample

Table 27E: Ground Water Quality Monitoring Data for BK/04- Bankura- During Construction- November 2023 to April 2024

Sl.No	Parameter s	Unit	Contract Package: WBDWSIP/DWW/NCB/BK/04/2018-19										National Standards for Drinking Water- BIS 10500-2012 Acceptable limit (Maximum permissible limit)
			Results (During Construction)										
			Banasuriya OHSR Date of sampling: 23-11-23	Kapista OHSR Date of sampling: 23-11-23	Mejhia OHSR Date of sampling: 23-11-23	Deuli OHSR Date of sampling: 24-11-23	Lakhiyara OHR Date of sampling: 24-11-23	Barshal OHSR Date of sampling: 24-11-23	Arbat OHSR Date of sampling: 23-11-23	Subiyara OHSR Date of sampling: 24-11-23	Gabindham OHSR Date of sampling: 23-11-23	Chotonabagram Date of sampling: 24-11-23	
1	Color	Hazan Unit	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	6.5-8.5
2	Taste and Odor	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	5 (15)
3	pH	-	7.23	7.71	7.14	7.17	7.83	7.92	7.29	7.19	7.05	7.59	Agreeable
4	Turbidity	NTU	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1 (5)
5	TDS	Mg/l	190	236	198	246	234	152	214	184	216	142	500 (2000)
6	Aluminum	Mg/l	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	200 (600)
7	Ammonia	Mg/l	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	250 (1000)
8	Calcium	Mg/l	30.4	36.8	27.2	38.4	35.2	24.0	35.2	25.6	36.8	22.4	200 (600)
9	Chloride	Mg/l	36.9	40.8	42.7	46.6	42.7	29.1	44.2	40.8	42.7	25.3	200 (400)
10	Copper	Mg/l	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	45
11	Fluoride	Mg/l	<0.1	<0.1	0.21	0.25	0.16	<0.1	0.32	<0.1	0.32	<0.1	1 (1.5)
12	Residual Free Cl	Mg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	75(200)
13	Iron	Mg/l	0.22	0.34	0.18	0.41	0.22	0.14	0.28	0.15	0.23	0.21	0.3
14	Manganese	Mg/l	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.2(1.0)
15	Nitrate	Mg/l	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.81	0.61	1.19	0.50	0.5
16	Sulphate	Mg/l	22.5	24.4	15.1	29.4	16.7	13.4	27.3	15.7	16.2	14.6	0.05
17	Alkalinity	Mg/l	132.0	184.8	167.2	171.6	202.4	123.2	136.4	149.6	171.6	114.4	0.05 (1.5)
18	Total Hardness	Mg/l	136.0	164.0	116.0	168.0	164.0	108.0	156.0	112.0	160.0	100.0	0.01 (0.05)
19	Zinc	Mg/l	<0.02	<0.02	<0.02	0.14	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	5 (15)
20	Cadmium	Mg/l	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.001
21	Cyanide	Mg/l	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.1 (0.3)
22	Mercury	Mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.03(0.2)

SI.No	Parameter s	Unit	Contract Package: WBDWSIP/DWW/NCB/BK/04/2018-19										National Standards for Drinking Water-BIS 10500-2012 Acceptable limit (Maximum permissible limit)
			Results (During Construction)										
			Banasuriya OHSR Date of sampling: 23-11-23	Kapista OHSR Date of sampling: 23-11-23	Mejhia OHSR Date of sampling: 23-11-23	Deuli OHSR Date of sampling: 24-11-23	Lakhiyara OHR Date of sampling: 24-11-23	Barshal OHSR Date of sampling: 24-11-23	Arbat OHSR Date of sampling: 23-11-23	Subiyara OHSR Date of sampling: 24-11-23	Gabindham OHSR Date of sampling: 23-11-23	Chotonabagram Date of sampling: 24-11-23	
23	Arsenic	Mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03 (0.2)
24	Chromium	Mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.05 (No relaxation)
25	E-Coli	MPN/100 ml	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	Must not be detectable in 100 ml sample
26	Total Coliform	MPN/ 100 ml	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	Must not be detectable in 100 ml sample

SI.No.	Parameters	Unit	Contract Package: WBDWSIP/DWW/NCB/BK/04/2018-19										National Standards for Drinking Water-BIS 10500-2012 Acceptable limit (Maximum permissible limit)
			Results (During Construction)										
			Banasuriya OHSR Date of sampling: 26-03-24	Kapista OHSR Date of sampling: 26-03-24	Mejhia OHSR Date of sampling: 26-03-24	Deuli OHSR Date of sampling: 26-03-24	Lakhiyara OHR Date of sampling: 26-03-24	Barshal OHSR Date of sampling: 27-03-24	Arbat OHSR Date of sampling: 27-03-24	Subiyara OHSR Date of sampling: 27-03-24	Gabindham OHSR Date of sampling: 27-03-24	Chotonabagram Date of sampling: 27-03-24	
1	Color	Hazan Unit	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	6.5-8.5
2	Taste and Odor	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	5 (15)
3	pH	-	7.31	7.55	7.23	7.81	7.39	7.81	7.39	7.81	7.47	7.87	Agreeable
4	Turbidity	NTU	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1 (5)
5	TDS	Mg/l	188	242	192	254	246	148	226	196	236	166	500 (2000)
6	Aluminum	Mg/l	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	200 (600)

Sl.No.	Parameters	Unit	Contract Package: WBDWSIP/DWW/NCB/BK/04/2018-19										National Standards for Drinking Water-BIS 10500-2012 Acceptable limit (Maximum permissible limit)
			Results (During Construction)										
			Banasuriya OHSR Date of sampling: 26-03-24	Kapista OHSR Date of sampling: 26-03-24	Mejhia OHSR Date of sampling: 26-03-24	Deuli OHSR Date of sampling: 26-03-24	Lakhiyara OHR Date of sampling: 26-03-24	Barshal OHSR Date of sampling: 27-03-24	Arbat OHSR Date of sampling: 27-03-24	Subiyara OHSR Date of sampling: 27-03-24	Gabindham OHSR Date of sampling: 27-03-24	Chotonabagram Date of sampling: 27-03-24	
7	Ammonia	Mg/l	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	250 (1000)
8	Calcium	Mg/l	33.3	36.9	26.1	36.9	38.4	21.5	36.9	27.4	35.3	23.0	200 (600)
9	Chloride	Mg/l	38.6	42.4	38.6	48.2	40.5	28.9	46.3	38.6	44.4	27.0	200 (400)
10	Copper	Mg/l	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	45
11	Fluoride	Mg/l	<0.1	<0.1	<0.1	0.25	0.19	<0.1	<0.1	<0.1	0.35	<0.1	1 (1.5)
12	Residual Free Cl	Mg/l	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	75(200)
13	Iron	Mg/l	0.27	0.37	<0.5	0.46	0.25	0.18	0.33	0.18	0.27	0.26	0.3
14	Manganese	Mg/l	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.2(1.0)
15	Nitrate	Mg/l	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.03	<0.5	0.5
16	Sulphate	Mg/l	23.1	25.4	14.5	30.2	18.1	15.1	28.5	16.7	18.3	19.3	0.05
17	Alkalinity	Mg/l	126.7	186.1	162.4	178.2	209.9	118.8	142.6	150.5	178.2	110.9	0.05 (1.5)
18	Total Hardness	Mg/l	142.1	172.8	119.0	172.8	176.6	96.0	165.1	115.2	161.3	99.8	0.01 (0.05)
19	Zinc	Mg/l	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	5 (15)
20	Cadmium	Mg/l	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.001
21	Cyanide	Mg/l	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.1 (0.3)
22	Mercury	Mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.03(0.2)
23	Arsenic	Mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03 (0.2)
24	Chromium	Mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.05 (No relaxation)
25	E-Coli	MPN/100 ml	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	Must not be detectable in 100 ml sample
26	Total Coliform	MPN/ 100 ml	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	Must not be detectable in 100 ml sample

Table 27F: Surface Water Quality Monitoring data–PKG BK/01, Bankura- During construction- November 2023 to April 2024

Sl. no.	Date of sampling	Site Location	Parameters												
			pH	Total Hardness as CaCO ₃ (mg/L)	Total Alkalinity (mg/L)	DO (min) (mg/L)	COD (mg/l)	BOD (mg/l)	Oil & Grease (mg/l)	Turbidity (NTU)	Chloride as Cl (mg/L)	Nitrate as NO ₃ (mg/L)	Fluoride as F (mg/L)	Total coliform (MPN/100 ml)	Faecal coliform (MPN/100ml)
Contract Package: WBDWSIP/DWW/NCB/BK/01/2018-19															
1	20-11-2023	Intake site at Mukutmanipur	8.20	78.4	90	5.6	20	<2	<1.4	9.8	17.6	<0.5	<0.1	110	90
2	20-12-2023		8.14	78.4	90	5.6	20	<2	<1.4	9.8	17.6	<0.5	<0.1	202	90
3	20-01-2024		8.14	78.4	90	5.6	20	<2	<1.4	9.8	17.6	<0.5	<0.1	201	90
4	20-02-2024		8.14	78.4	90	5.6	20	<2	<1.4	9.8	17.6	<0.5	<0.1	202	90
5	20-03-2024		8.14	78.4	90	5.6	20	<2	<1.4	9.8	17.6	<0.5	<0.1	100	96
Surface water quality criteria as per IS:2296 (Class C- drinking water with conventional treatment followed by disinfection)			6.0-9.0	-	-	4.0	-	3.0	0.1	-	600	50	1.5	5000	-

Table 27G: Surface Water Quality Monitoring data –PKG BK/02A, Bankura- During Construction – November 2023 to April 2024

Sl. no.	Date of sampling	Site Location	Parameters												
			pH	Total Hardness as CaCO ₃ (mg/L)	Total Alkalinity (mg/L)	DO (min) (mg/L)	COD (mg/l)	BOD (mg/l)	Oil & Grease (mg/l)	Turbidity (NTU)	Chlorides Cl (mg/L)	Nitrate as NO ₃ (mg/L)	Fluoride as F (mg/L)	Total coliform (MPN/100 ml)	Fecal coliform (MPN/100ml)
Contract Package: WBDWSIP/DWW/NCB/BK/02A/2018-19															
1	25-12-23	Chaukighata	7.22	79.2	132.0	5.2	11	2.9	2.4	5.1	39.1	0.53	<0.1	46	17
2	25-12-23	Raghunathpur	7.41	95.0	114.4	4.8	7	2.3	2.7	4.6	35.2	<0.5	<0.1	58	22
3	26-12-23	Tunamara	7.53	71.3	83.6	4.5	6	2.1	2.2	4.1	23.5	<0.5	<0.1	63	14
4	26-12-23	Bholarkhap	7.75	162.5	184.8	6.3	17	4.6	2.6	5.7	54.8	0.67	<0.1	94	23
5	27-12-23	Nayekhir	7.86	164.2	215.6	6.5	15	4.2	3.2	5.2	60.7	0.74	<0.1	79	31
6	23-04-24	Chaukighata	7.02	71.3	136.0	5.5	12	3.1	2.1	5.4	31.3	0.51	<0.1	39	14
7	19-04-24	Raghunathpur	7.81	87.1	112.0	4.9	8	2.5	2.9	4.1	33.3	<0.5	<0.1	46	25
8	20-04-24	Tunamara	7.12	67.3	84.0	4.2	6	1.7	2.5	4.5	21.5	<0.5	<0.1	70	26
9	20-04-24	Bholarkhap	7.13	166.3	180.0	6.5	18	6.5	2.5	5.2	50.9	0.62	<0.1	84	31
10	23-04-24	Nayekhir	7.99	186.1	212.0	6.1	16	4.5	3.8	5.6	62.6	0.71	<0.1	70	22
Surface water quality criteria as per IS:2296 (Class B- outdoor bathing)			6.5-8.5	-	-	5.0	-	3.0	-	-	-	-	1.5	500	-

Table 27H: Surface Water Quality Monitoring data –PKG BK/02B, Bankura- During Construction- November 2023 to April 2024

Sl. no.	Date of sampling	Site Location	Parameters												
			pH	Total Hardness as CaCO ₃ (mg/L)	Total Alkalinity (mg/L)	DO (min) (mg/L)	COD (mg/l)	BOD (mg/l)	Oil & Grease (mg/l)	Turbidity (NTU)	Chloride as Cl (mg/L)	Nitrate as NO ₃ (mg/L)	Fluoride as F (mg/L)	Total coliform (MPN/100 ml)	Faecal coliform (MPN/100 ml)
Contract Package: WBDWSIP/DWW/NCB/BK/02B/2018-19															
1	28-12-23	Belasuii Shyam Sundarpur OHSR	7.41	103.0	96.8	5.8	13	3.1	2.2	3.6	45.0	<0.5	0.19	94	26
2	28-12-23	Phulmati OHSR	7.32	95.0	92.4	5.3	9	2.7	2.5	3.2	37.2	<0.5	0.16	70	21
3	29-12-23	Bhutama Maheshpur OHSR	7.15	106.9	83.6	4.8	7	2.1	1.8	3.9	33.3	<0.5	0.18	110	34
4	29-12-23	Chenchuriya Village	6.68	87.1	57.2	4.5	6	2.3	1.4	3.1	21.5	<0.5	0.13	63	17
5	30-12-23	Mahulbera	7.62	126.7	118.8	5.5	11	3.2	2.8	4.6	43.1	<0.5	0.22	120	48
6	16-04-24	Belasuii Shyam Sundarpur OHSR	7.92	110.9	96.0	5.2	14	3.6	2.8	4.1	48.9	<0.5	0.23	63	17
7	16-04-24	Phulmati OHSR	7.66	99.0	88.0	5.7	10	2.4	2.1	3.7	39.1	<0.5	0.21	42	13
8	17-04-24	Bhutama Maheshpur OHSR	7.83	103.0	84.0	4.7	8	2.3	2.1	4.2	31.3	<0.5	0.21	84	27
9	17-04-24	Chenchuriya Village	6.78	83.2	52.0	4.2	6	1.9	1.4	3.5	19.6	<0.5	0.11	58	13
10	18-04-24	Mahulbera	7.11	130.7	124.7	5.1	12	3.5	2.5	4.1	41.1	<0.5	0.25	110	43
Surface water quality criteria as per IS:2296 (Class B- outdoor bathing)			6.5-8.5	-	-	5.0	-	3.0	-	-	-	-	1.5	500	-

Table 27J: Monthly Surface Water Quality Monitoring data PKG BK/03, Bankura- During Construction- November 2023 to April 2024

Sl. no.	Date of sampling	Site Location	Parameters												
			pH	Total Hardness as CaCO ₃ (mg/L)	Total Alkalinity (mg/L)	DO (min) (mg/L)	COD (mg/l)	BOD (mg/l)	Oil & Grease (mg/l)	Turbidity (NTU)	Chloride as Cl (mg/L)	Nitrate as NO ₃ (mg/L)	Fluoride as F (mg/L)	Total coliform (MPN/100 ml)	Faecal coliform (MPN/100ml)
Contract Package: WBDWSIP/DWW/NCB/BK/03/2018-19															
1	25-11-23	Intake site	7.94	134.6	102.6	5.7	8	2.5	1.6	3.2	23.4	<0.5	0.12	47	14
2	22-12-23		7.65	140.0	96.0	4.6	40	12	2.3	5.8	25.6	<0.5	0.16	46	21
3	20-01-24		7.41	150.5	118.8	5.2	10	2.7	1.9	3.5	29.4	<0.5	0.17	41	10
4	29-03-24		7.59	161.3	134.6	5.1	15	3.6	2.2	3.8	34.7	<0.5	0.22	47	14
Surface water quality criteria as per IS:2296 (Class C- drinking water with conventional treatment followed by disinfection)			6.0-9.0	-	-	4.0	-	3.0	0.1	-	600	50	1.5	5000	-

Note:

BDL= Below Detectable Limit

*<1, indicates no colony developed in 1 ml sample.

<10, indicates no colony developed in 10 ml sample.

<100, indicates no colony developed in 100 ml sample.

Table 27K: Surface Water Quality Monitoring data –PKG BK/ 04, Bankura- During Construction- November 2023 to April 2024

Sl. no.	Date of sampling	Site Location	Parameters												
			pH	Total Hardness as CaCO ₃ (mg/L)	Total Alkalinity (mg/L)	DO (min) (mg/L)	COD (mg/l)	BOD (mg/l)	Oil & Grease (mg/l)	Turbidity (NTU)	Chloride as Cl (mg/L)	Nitrate as NO ₃ (mg/L)	Fluoride as F (mg/L)	Total coliform (MPN/100 ml)	Faecal coliform (MPN/100ml)
Contract Package: WBDWSIP/DWW/NCB/BK/04/2018-19															
1	23-11-23	Banasuriya OHSR	7.42	88.0	74.8	5.1	10	2.6	<1.4	1.2	46.6	1.23	<0.1	24	23
2	23-11-23	Kapista OHSR	7.33	48.0	101.2	4.8	<4	<2	<1.4	2.6	40.8	2.3	<0.1	40	14
3	24-11-23	Mejhia OHSR	7.31	84.0	145.2	4.7	<4	<2	<1.4	4.3	54.4	0.94	<0.1	40	26
4	23-11-23	Deuli OHSR	7.11	76.0	105.6	4.6	8	1.9	<1.4	5.2	36.9	0.95	<0.1	40	26
5	23-11-23	Lakhiyara OHR	7.37	112.0	79.2	5.2	12	3.5	<1.4	3.1	42.7	1.86	<0.1	22	12
6	24-11-23	Barshal OHSR	7.43	84.0	70.4	5.0	14	3.4	<1.4	2.3	25.3	1.56	<0.1	62	34
7	23-11-23	Arbat OHSR	7.59	92.0	79.2	4.6	<4.0	<2.0	<1.4	1.9	27.2	0.82	<0.1	21	14
8	24-11-23	Subiyara OHSR	6.97	68.0	74.8	4.1	<4.0	<2.0	<1.4	1.9	25.3	0.91	<0.1	30	11
9	23-11-23	Gabindham OHSR Site	7.72	92.0	92.4	4.1	<4	<2	<1.4	2.1	38.9	1.13	<0.1	26	17
10	24-11-23	Chotonabagram OHSR	7.63	96.0	88.0	5.6	14	4.1	<1.4	4.3	42.7	1.41	<0.1	27	14
11	26-03-24	Banasuriya OHSR	7.13	84.5	75.2	5.4	12	2.9	<1.4	1.4	50.1	1.41	<0.1	34	26
12	26-03-24	Kapista OHSR	7.91	53.8	103.0	4.4	<4	<2.0	<1.4	2.4	42.4	1.9	<0.1	30	11
13	26-03-24	Mejhia OHSR	7.54	88.3	150.5	4.3	<4	<2.0	<1.4	4.8	55.9	1.06	<0.1	50	33
14	26-03-24	Deuli OHSR	7.66	88.3	110.9	4.5	10	2.3	<1.4	5.6	42.4	1.23	<0.1	30	17
15	26-03-24	Lakhiyara OHR	7.87	119.0	87.1	5.1	14	3.8	<1.4	3.5	46.3	1.23	<0.1	34	17
16	27-03-24	Barshal OHSR	7.91	92.3	79.2	4.6	<4	<2.0	<1.4	2.7	28.9	1.13	<0.1	70	27
17	27-03-24	Arbat OHSR	7.19	96.0	87.1	4.9	<4	<2.0	<1.4	2.3	28.9	0.95	<0.1	17	08
18	27-03-24	Subiyara OHSR	6.81	69.1	75.2	4.6	<4	<2.0	<1.4	2.3	27.0	1.26	<0.1	60	33
19	10-04-24	Gabindham OHSR Site	7.33	96.0	103.0	4.8	<4	<2.0	<1.4	2.4	44.4	1.51	<0.1	34	13
20	27-03-24	Chotonabagram OHSR	7.74	107.5	94.1	5.3	16	4.5	2.1	4.7	46.2	1.65	<0.1	30	11
Surface water quality criteria as per IS:2296 (Class B- outdoor bathing)			6.5-8.5	-	-	5.0	-	3.0	-	-	-	-	1.5	500	-

Table 27L: Soil Quality Monitoring data –PKG BK/02A, Bankura- During Construction- November 2023 to April 2024

Sl. no.	Date of sampling	Site Location	Parameters												
			pH	Elec. Conductivity (µS/cm)	Moisture (%)	Organic Matter (%)	Texture	Potassium as K(mg/kg)	Phosphate as PO4 (mg/kg)	Calcium as Ca (mg/kg)	Magnesium as Mg (mg/kg)	Nitrogen as N (mg/kg)	Sodium as Na (mg/kg)	Oil & Grease (mg/kg)	Permeability (cm/S)
Contract Package: WBDWSIP/DWW/NCB/BK/02A/2018-19															
1	25-12-23	Chaukighata	7.74	1.72	2.1	0.78	Clay loam	89	67.2	0.28	0.11	154	43	0.8	0.9
2	25-12-23	Raghunathpur	8.06	0.91	2.4	0.51	Clay loam	124	69.7	0.29	0.08	210	61	0.4	0.98
3	26-12-23	Tunamara	7.33	0.58	2.3	1.24	Clay loam	149	70.1	0.24	0.7	294	72	0.4	1.2
4	26-12-23	Bholarkhap	7.15	0.78	2.7	0.7	Sandy loam	127	58.3	0.3	0.11	168	67	0.4	1.4
5	28-12-23	Nayekhir	6.87	1.43	3.1	1.09	Silty Loam	157	76.4	0.29	0.08	266	59	0.4	0.78
6	25-04-24	Hatagram OHSR	6.81	0.92	2.6	0.91	Sandy loam	129	67.4	0.34	0.12	126	47.4	1.6	0.8
7	25-04-24	Gobindpur IBPS	7.46	1.08	3.2	0.97	Clay loam	116	71	0.29	0.06	154	51.2	0.8	1.1
8	20-04-24	Gattariya OHSR	8.06	1.29	2.3	0.47	Clay	76	67	0.25	0.06	84	43.4	0.40	0.44
9	19-04-24	Surulia OHSR	7.74	1.12	2.4	0.76	Clay	83	58.4	0.28	0.10	112	48.4	0.4	0.38
10	20-04-24	Brahmandiha OHSR	7.51	0.79	1.8	0.66	Clay loam	92	53.7	0.29	0.07	70	39.6	0.8	0.56

Table 27M: Soil Quality Monitoring data –PKG BK/02B, Bankura- During Construction- November 2023 to April 2024

Sl. no.	Date of sampling	Site Location	Parameters												
			pH	Elec. Conductivity (µS/cm)	Moisture (%)	Organic Matter (%)	Texture	Potassium as K(mg/kg)	Phosphate as PO4 (mg/kg)	Calcium as Ca (mg/kg)	Magnesium as Mg (mg/kg)	Nitrogen as N (mg/kg)	Sodium as Na (mg/kg)	Oil & Grease (mg/kg)	Permeability (cm/S)
Contract Package: Contract Package: WBDWSIP/DWW/NCB/BK/02B/2018-19															
1	28-12-23	Belasuii Shyam Sundarpur OHSR	7.38	1.22	2.3	1.41	Sandy Clay	83	71.9	0.28	0.06	308	61	0.4	1.7
2	28-12-23	Phulmati OHSR	7.19	0.43	1.6	0.84	Sandy loam	103	76.1	0.32	0.08	196	69	0.4	1.8
3	29-12-23	Mahulbera	7.44	0.52	2.0	0.95	Sandy loam	98	62.3	0.29	0.10	210	56	0.4	1.6
4	29-12-23	Bhutama Maheshpur OHSR	7.24	0.36	1.5	0.72	Sandy loam	114	80.4	0.25	0.07	238	74	0.4	1.3
5	29-12-23	Chenchuriya	6.83	1.02	2.4	0.67	Sandy loam	107	78.2	0.31	0.09	182	81	0.4	2.2
6	18-04-24	Bibarda Yard	7.23	0.94	2.5	0.82	Clay loam	134	73.2	0.28	0.07	154	61.6	0.4	0.9
7	16-04-24	Chenchuriya	6.92	0.78	1.9	0.92	Sandy loam	91	64.9	0.27	0.08	168	72.2	0.4	2.5
8	16-04-24	Chandabila OHSR Site	7.09	0.63	2.3	0.42	Sandy loam	82	63.7	0.24	0.11	84	59.3	0.4	2.0
9	16-04-24	Rajpur	7.14	0.51	2.8	0.54	Sandy loam	77	53.3	0.27	0.04	70	51.7	1.2	2.4
10	17-04-24	Doumi	7.22	0.47	1.6	0.39	Clay loam	95	59.3	0.26	0.06	112	55.4	0.8	1.7

Table 27N: Soil Quality Monitoring data –PKG BK/04, Bankura- During Construction - November 2023 to April 2024

Sl. no.	Date of sampling	Site Location	Parameters												
			pH	Elec. Conductivity (µS/cm)	Moisture (%)	Organic Matter (%)	Texture	Potassium as K(mg/kg)	Phosphate as PO4 (mg/kg)	Calcium as Ca (mg/kg)	Magnesium as Mg (mg/kg)	Nitrogen as N (mg/kg)	Sodium as Na (mg/kg)	Oil & Grease (mg/kg)	Permeability (cm/S)
Contract Package: WBDWSIP/DWW/NCB/BK/04/2018-19															
1	23-11-23	Kapista OHSR	7.68	0.71	2.4	0.85	Sandy Clay	137	72.6	0.33	0.10	294	54.4	0.8	0.5
2	23-11-23	Gabindham OHSR Site	7.38	0.92	2.3	0.95	Silty loam	142	81.3	0.29	0.08	336	64.6	0.4	0.65
3	23-11-23	Lakhiyara OHR	7.53	0.76	1.7	0.64	clay loam	129	82.2	0.31	0.08	322	77.3	0.4	0.26
4	23-11-23	Arbat OHSR	7.31	0.51	2.1	1.10	Silty loam	124	73.8	0.26	0.07	462	74.3	0.4	0.7
5	23-11-23	Banasuriya OHSR	7.18	0.64	2.3	0.76	clay loam	159	91.6	0.38	0.06	476	64.8	0.4	0.52
6	24-11-23	Barshal OHSR	7.23	0.58	1.8	1.0	Clay	135	84.2	0.31	0.09	294	67.5	0.4	0.62
7	24-11-23	Deuli OHSR	7.25	0.52	2.4	1.58	Sandy loam	151	89.7	0.39	0.09	420	75.2	1.2	0.78
8	24-11-23	Subiyara OHSR	7.27	2.14	1.6	0.95	Sandy loam	132	54.8	0.26	0.09	210	53.8	0.4	0.95
9	24-11-23	Mejhia OHSR	7.34	0.47	2.9	1.05	Sandy loam	119	51.7	0.36	0.11	238	69.5	0.4	1.9
10	24-11-23	Chotonabagram OHSR	7.33	0.46	2.6	1.21	Clay	127	84.4	0.32	0.10	308	68.7	0.4	0.42
11	26-03-24	Mejhia OHSR	7.39	0.41	2.3	1.1	Sandy loam	114	46.2	0.33	0.09	280	61.4	1.2	2.5
12	26-03-24	Mochrakend	7.19	1.46	1.8	0.62	Clay loam	133	62.2	0.27	0.08	238	64.3	0.8	1.6
13	26-03-24	Benagari OHSR	7.53	0.52	1.9	0.84	Clay loam	124	72.5	0.31	0.09	266	53.7	0.8	1.1
14	26-03-24	Chausal OHSR	7.37	0.59	2.1	0.95	Silty loam	141	74.6	0.28	0.1	322	67.1	1.2	0.5
15	26-03-24	Subiyara OHSR	7.18	1.29	1.3	0.72	Sandy loam	119	58.3	0.25	0.07	224	60.7	0.4	1.2
16	27-03-24	Kapista OHSR	7.54	0.62	1.8	1.09	Clay loam	144	66.9	0.30	0.09	336	71.2	1.6	0.4
17	27-03-24	Deuli OHSR	7.32	0.37	1.6	1.13	Clay loam	147	77.6	0.36	0.10	134	68.2	2.0	0.8
18	27-03-24	Banasuriya OHSR	7.34	0.47	2.0	1.24	Clay loam	138	82.6	0.32	0.08	448	67.2	0.4	0.6
19	27-03-24	Chotonabagram OHSR	7.42	0.38	2.1	0.93	Clay	122	79.4	0.28	0.11	266	65.4	0.8	0.54
20	26-03-24	Lachhmanpur	6.91	0.83	1.4	0.72	Sandy clay	103	62.2	0.26	0.08	224	54.7	0.4	2.6

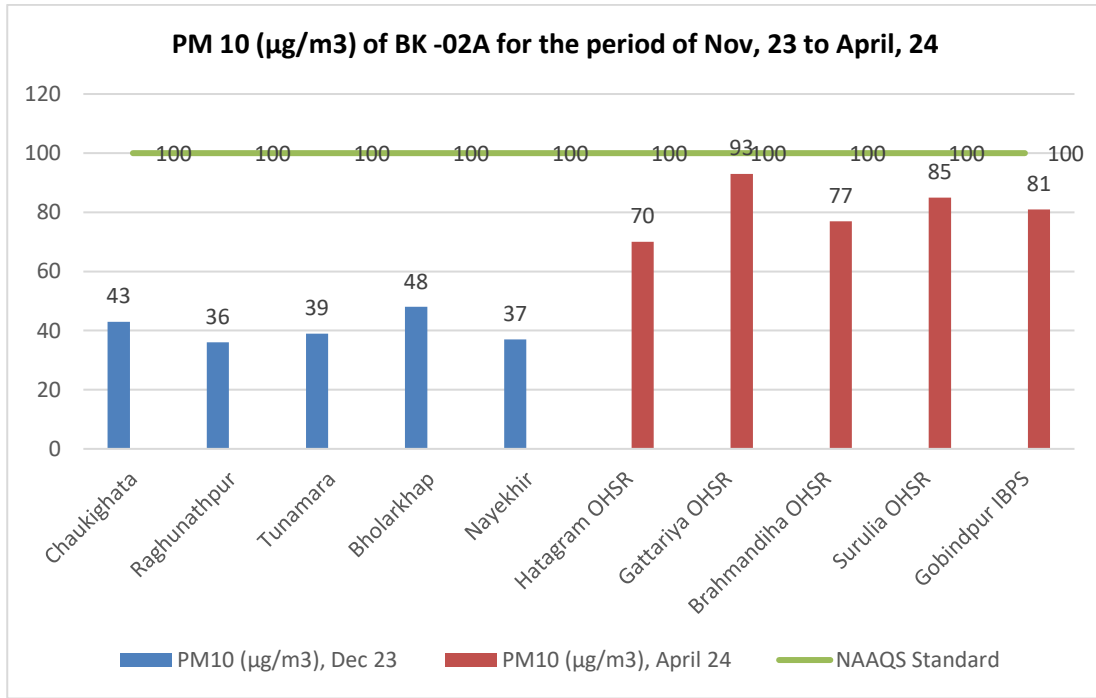
Comparative Analysis of Monitoring Results

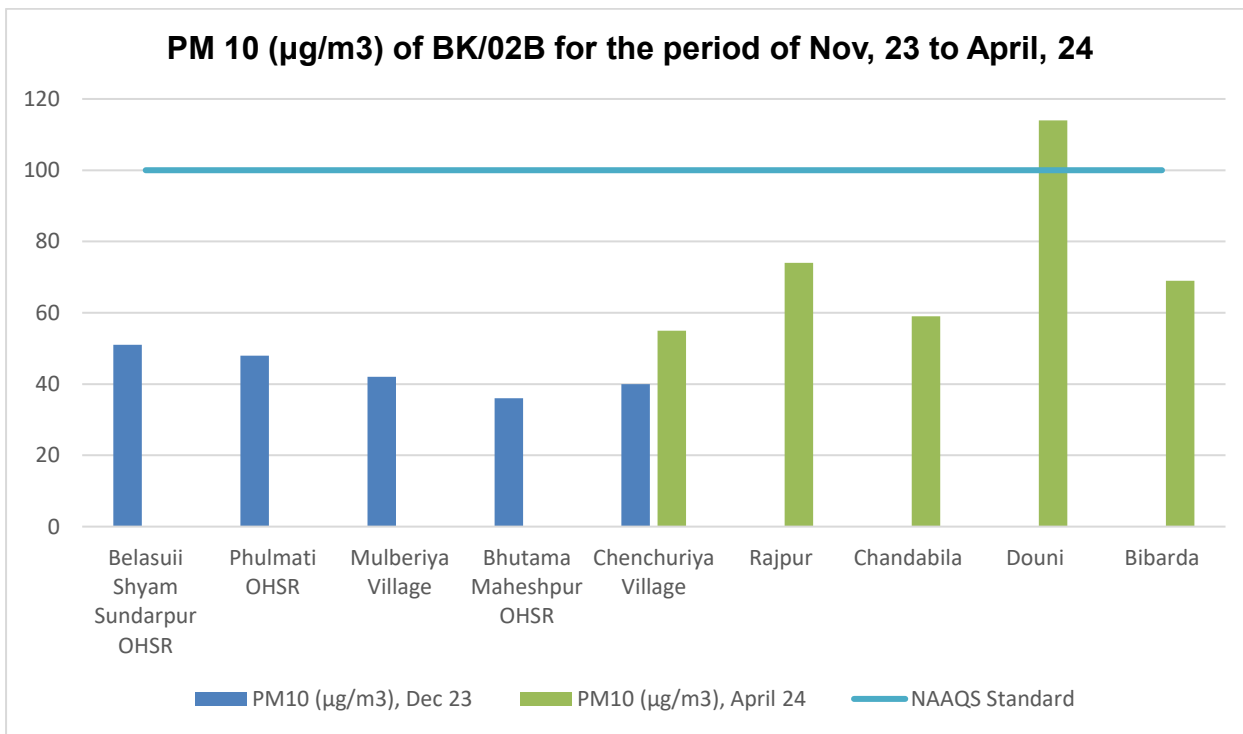
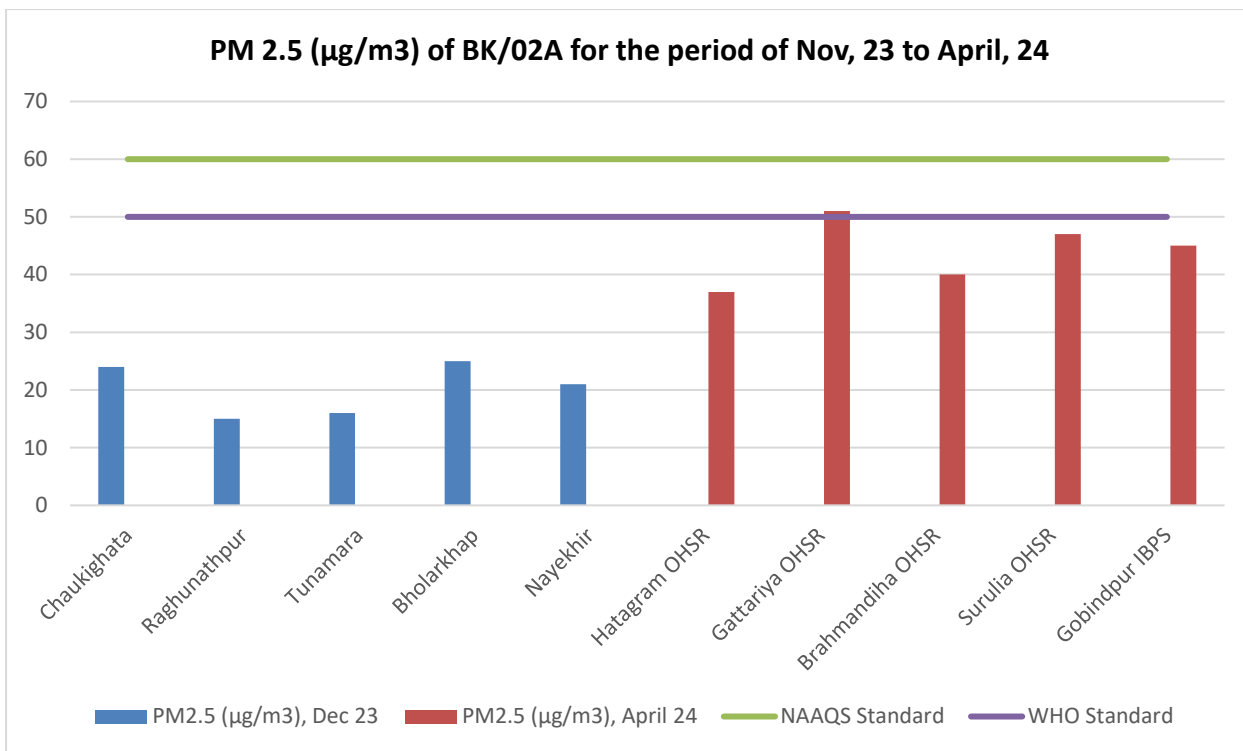
145. The monitoring results obtained from same locations over time have been compared in the charts are presented below.

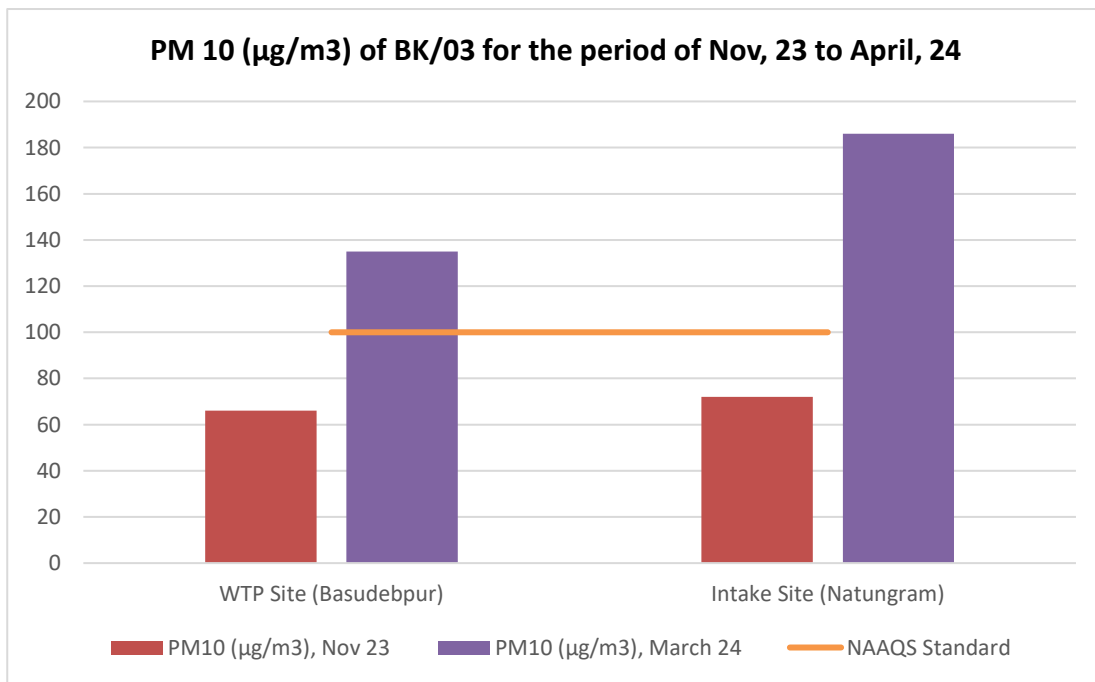
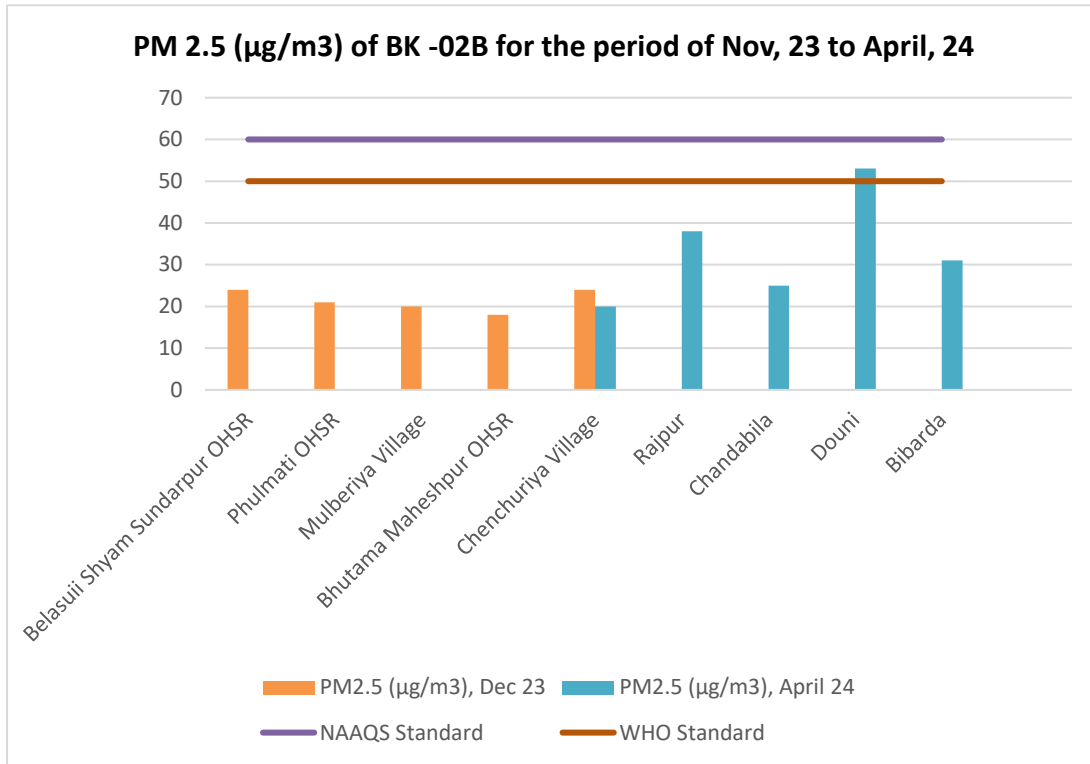
Air Quality Monitoring Results for the period of November 2023 to April 2024

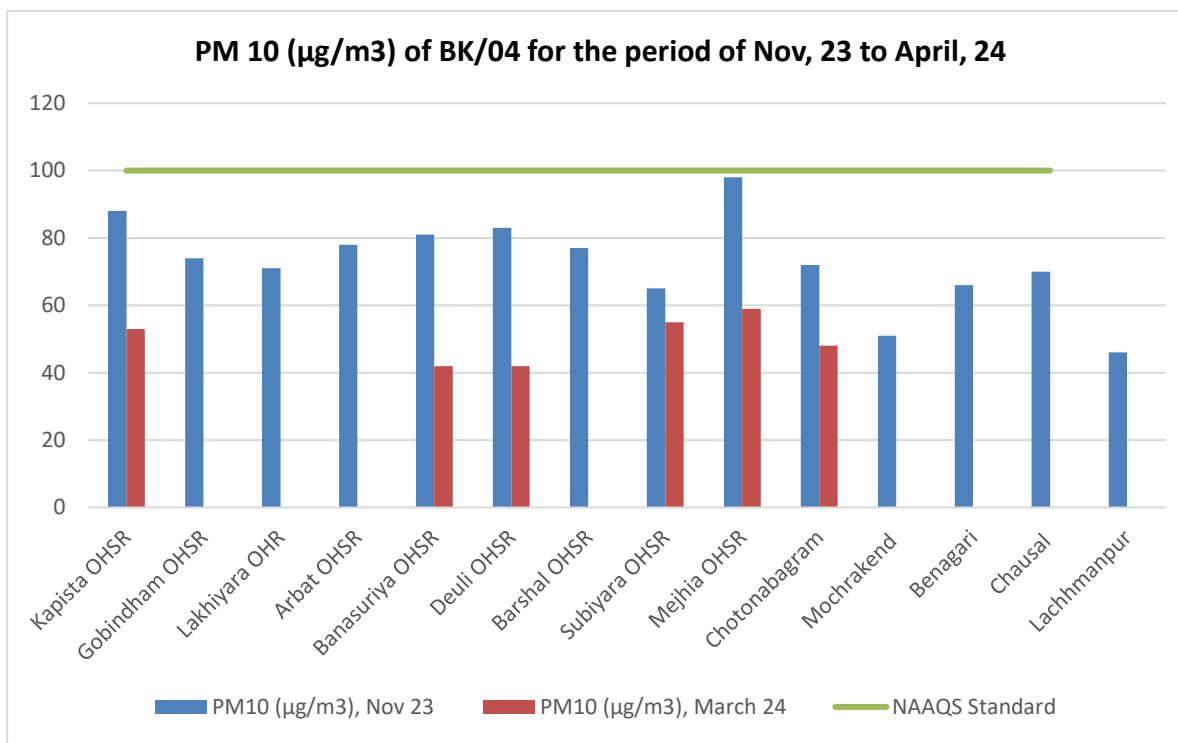
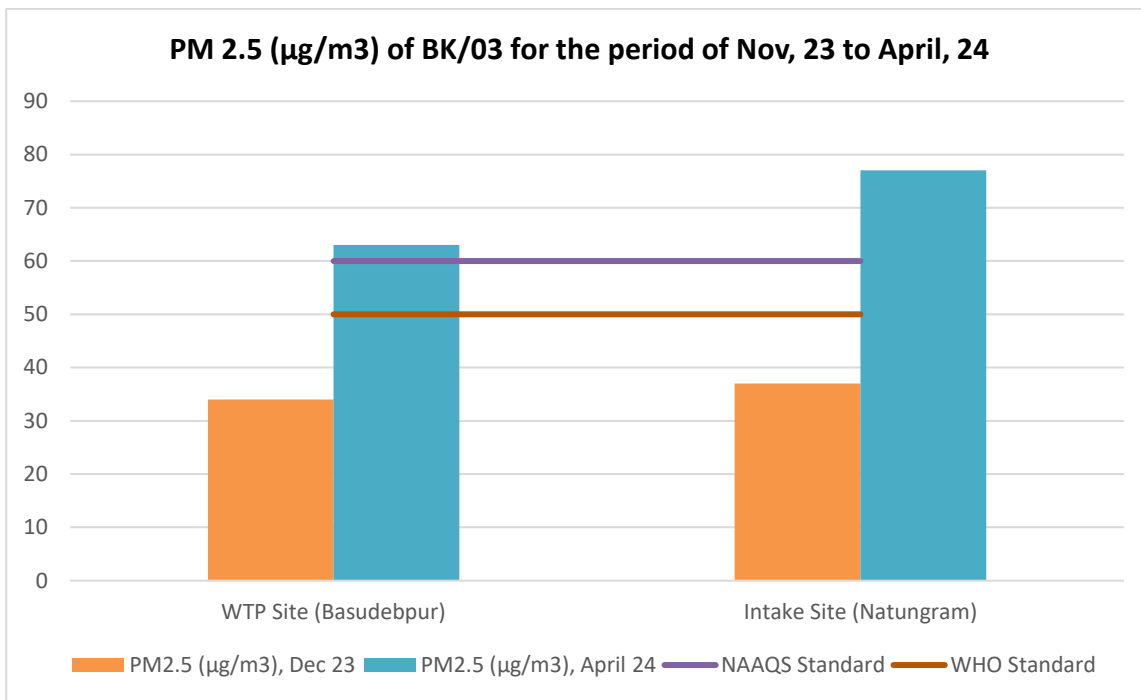
146. During Construction ambient air quality monitoring has been done in all 5 sub project packages and results are presented below graphically. Ambient air quality has been consistently monitored at Intake/ WTP location for BK/01 and Intake and WTP for BK/03 under bulk water supply subproject.

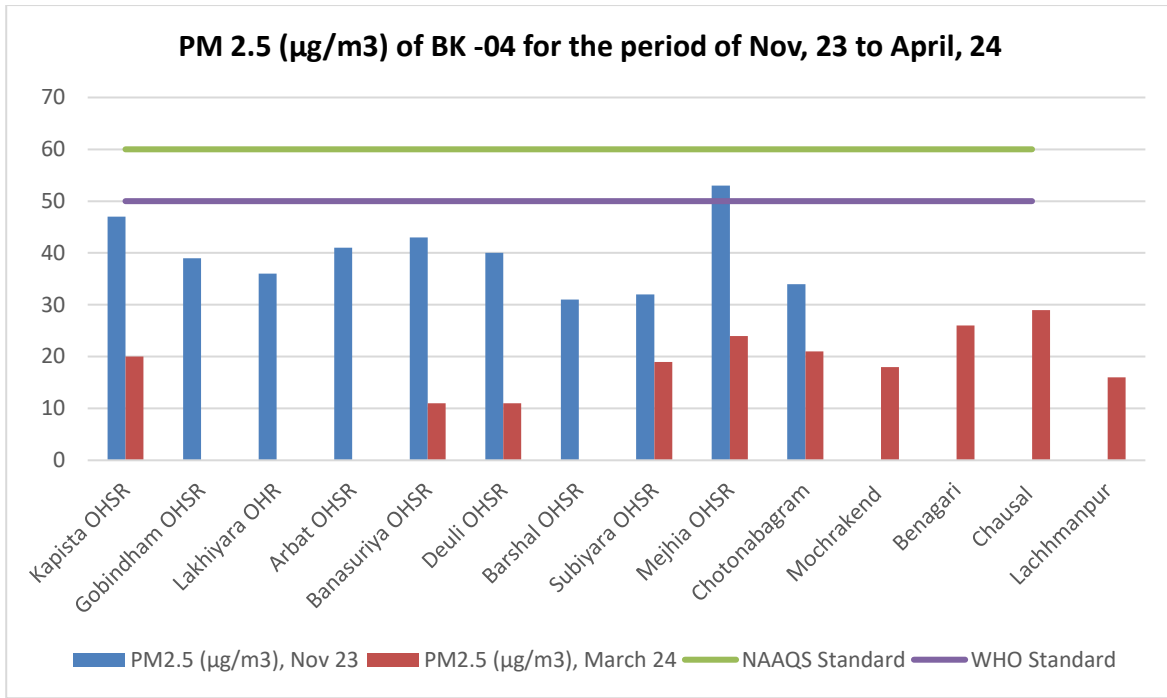
147. By plotting the results for the period November, 2023 to April 2024 in the form of graphs, it is observed that, at most of the cases parameters are within permissible limit as set by WHO and NAAQS at most of the locations. The concentration of PM2.5 slightly higher than WHO standard at Gattariya OHSR under package 02A. Concentration of PM2.5 also exceed (WHO standard) at Douni under package 02B. Concentration of PM2.5 and PM10 also exceed at intake and WTP site during April 2024 due construction works and generated dust under package 03. The concentration of PM2.5 slightly higher than WHO standard at Mejhia OHSR under package 04. At Douni PM10 concentration exceed the NAAQS and WHO standard. At all the locations irrespective of packages concentration of SO2, NO2 and CO are much below the NAAQS and WHO standards.





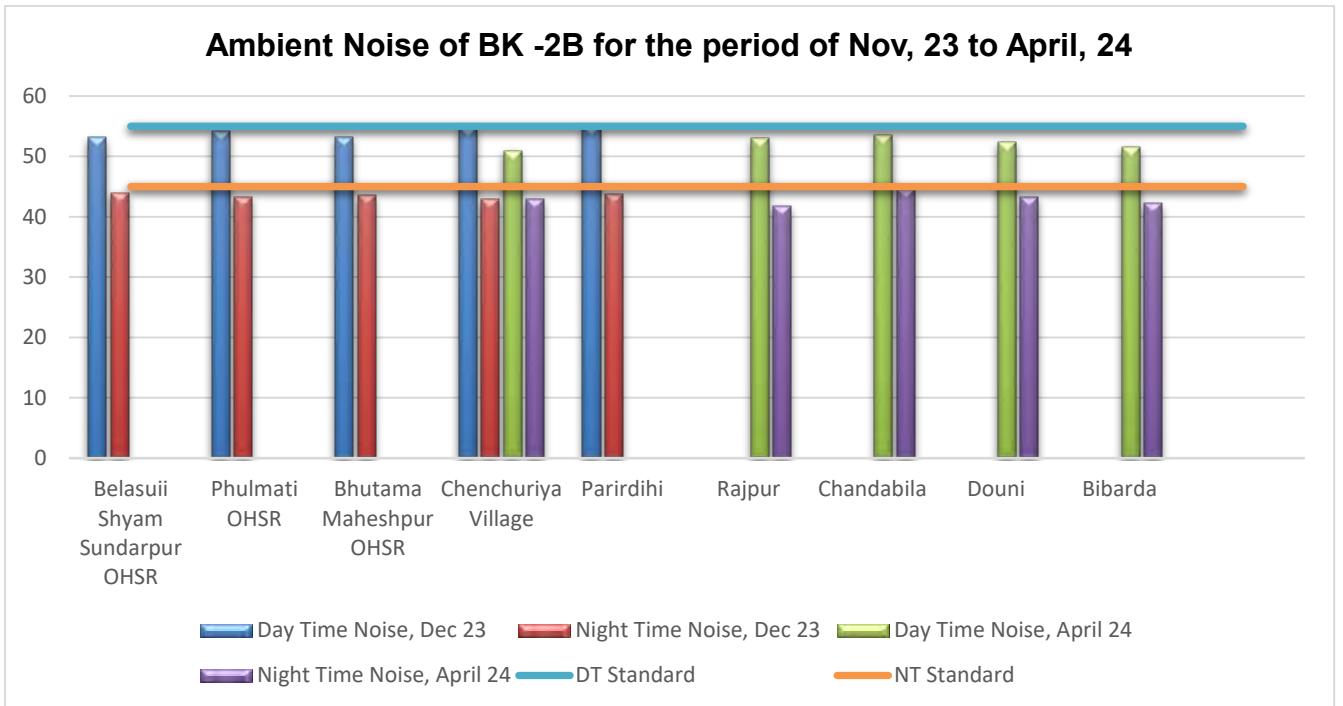
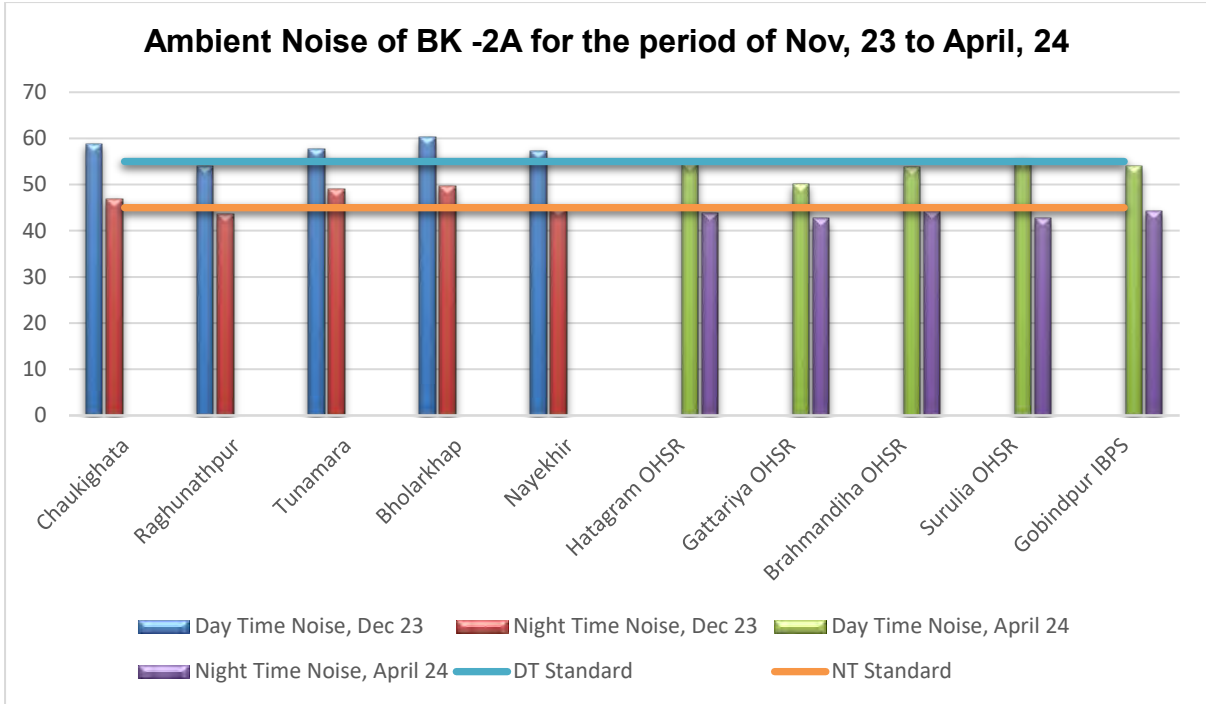


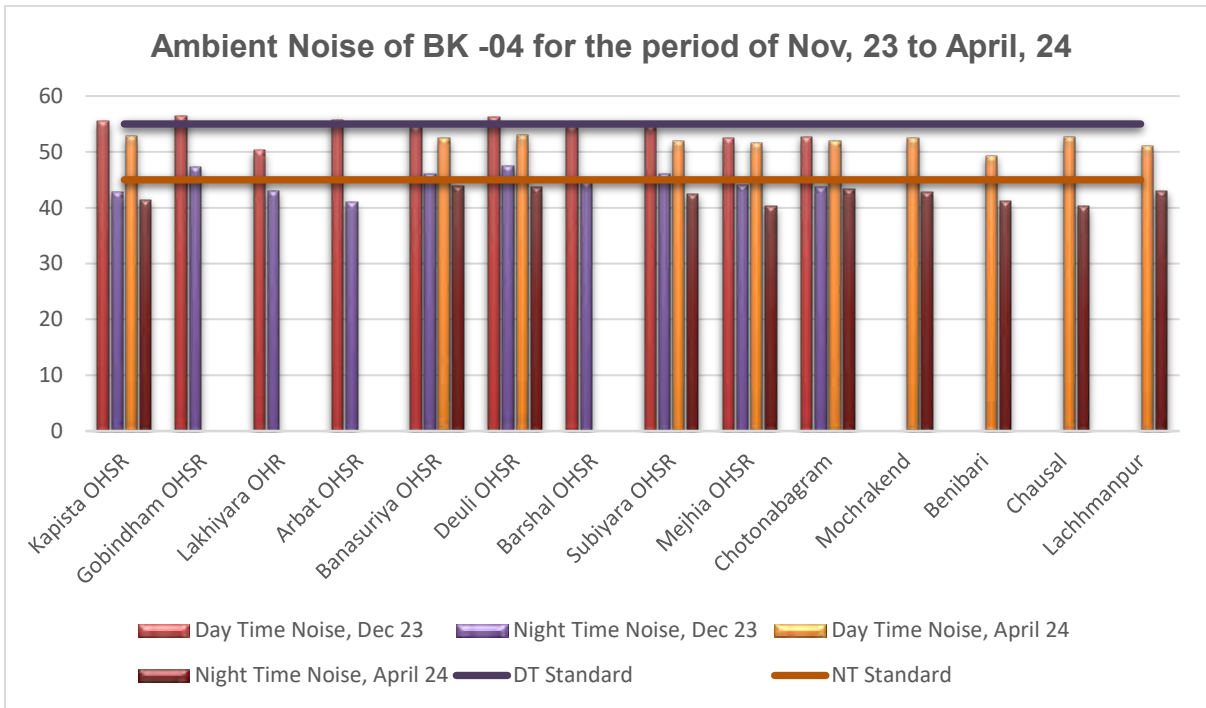
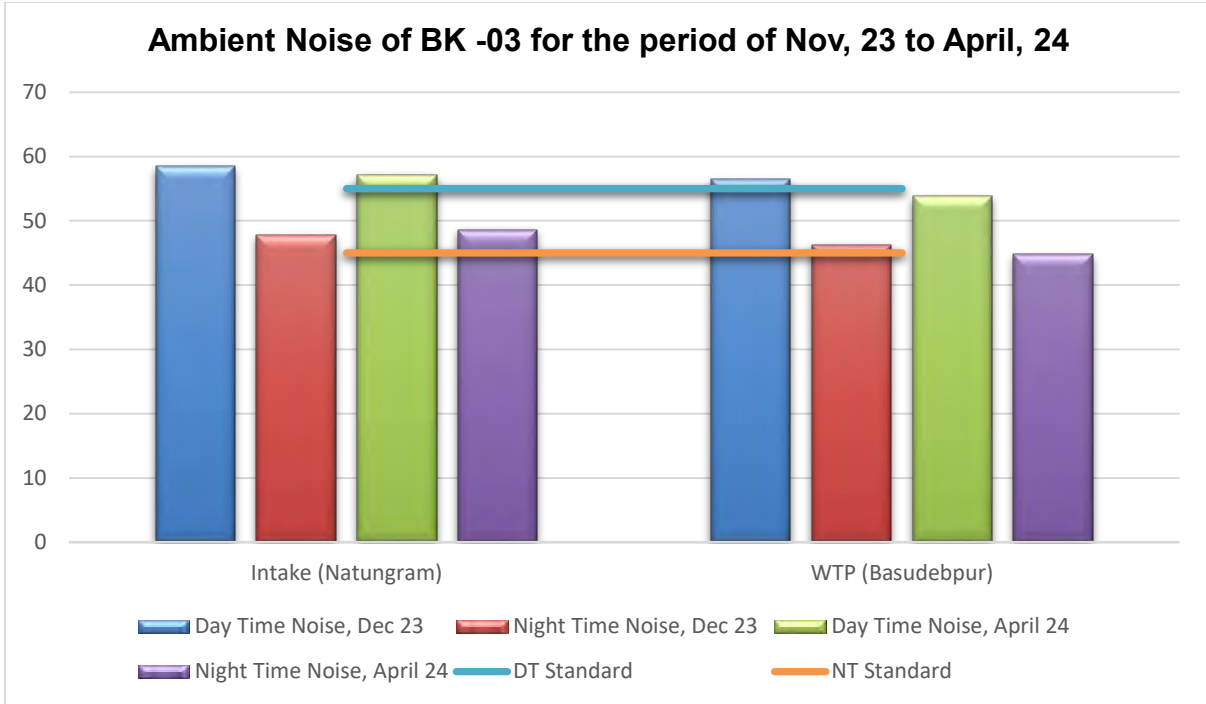




Noise Level for the period November 2023 to April 2024

148. During Construction noise level monitoring has been done in 5 sub project packages and are shown below graphically. In Package Bk/02A day time ambient noise exceed at Chaukighata village, Tunamara, Bholarkhap, Nayekhir and Surulia OHSR. At Bholarkhap site night time noise level is below the standard. At Bk/02B package work location noise level is below day and night standard. At BK/03-day time and night time ambient noise exceeds at WTP(Basudebpur) and Intake (Natungram) location. At BK/04-day time ambient noise slightly exceed at Arbat OHSR and Deuli OHSR.





Surface Water Quality for the period November 2023 to April 2024

149. Water quality for the surface water bodies could not be compared due to change in monitoring locations over time. It is observed the parameters are within prescribed standard of CPCB Class C (drinking water with conventional treatment followed by disinfection) water quality except slightly higher BOD and Oil & Grease level at pkg BK/03 intake site. This higher

trend is might be due to construction activities in nearby sites. However, necessary preventive measures are already recommended as per EMP to the contractor.

150. Surface water quality results are within the prescribed standard of Class B (water for outdoor bathing) for all the packages. There is no other surface water body (pond/canal) adjacent to any of sampling locations (OHSR sites) and has no relation with project activities. Necessary preventive measures are already recommended under EMP.

151. In all the cases, Ground water parameters are within the prescribed limit of drinking water quality standard (IS: 10500). Fluoride is not detected in any samples. Comparatively high concentrations of Turbidity, TDS, Hardness, Chloride and Calcium are observed at few locations.

152. In all the cases, soil quality results were within standard level. In most places Sandy Loamy to Clay Loamy soils were noted.

153. During Construction, air quality, noise level, soil and water quality monitoring will be continued as per Environment Management and Monitoring Plan. All monitoring expenses will be borne by contractors from their project Health safety monitoring budget.

154. All original test certificates are available in DSISC office as back-up

III. Environmental Monitoring Results of Purba Medinipur Package and observation

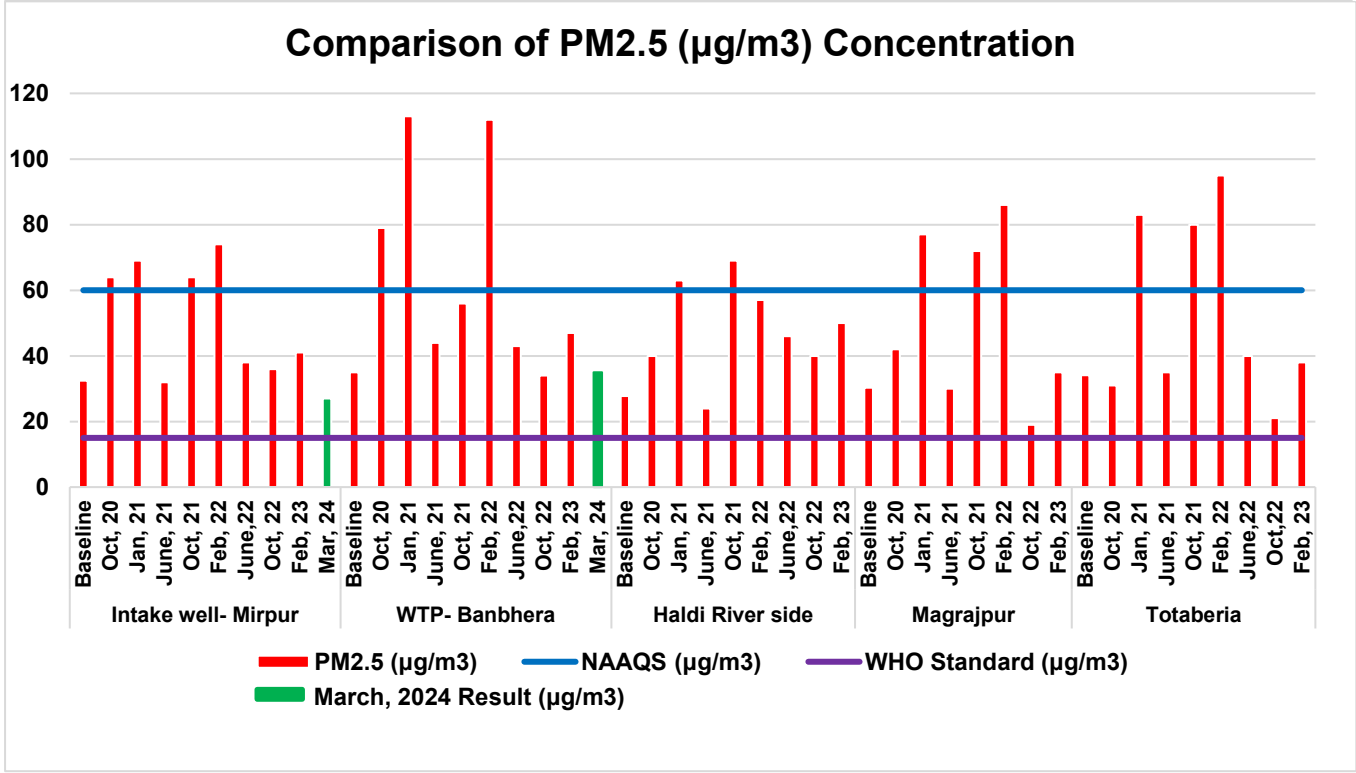
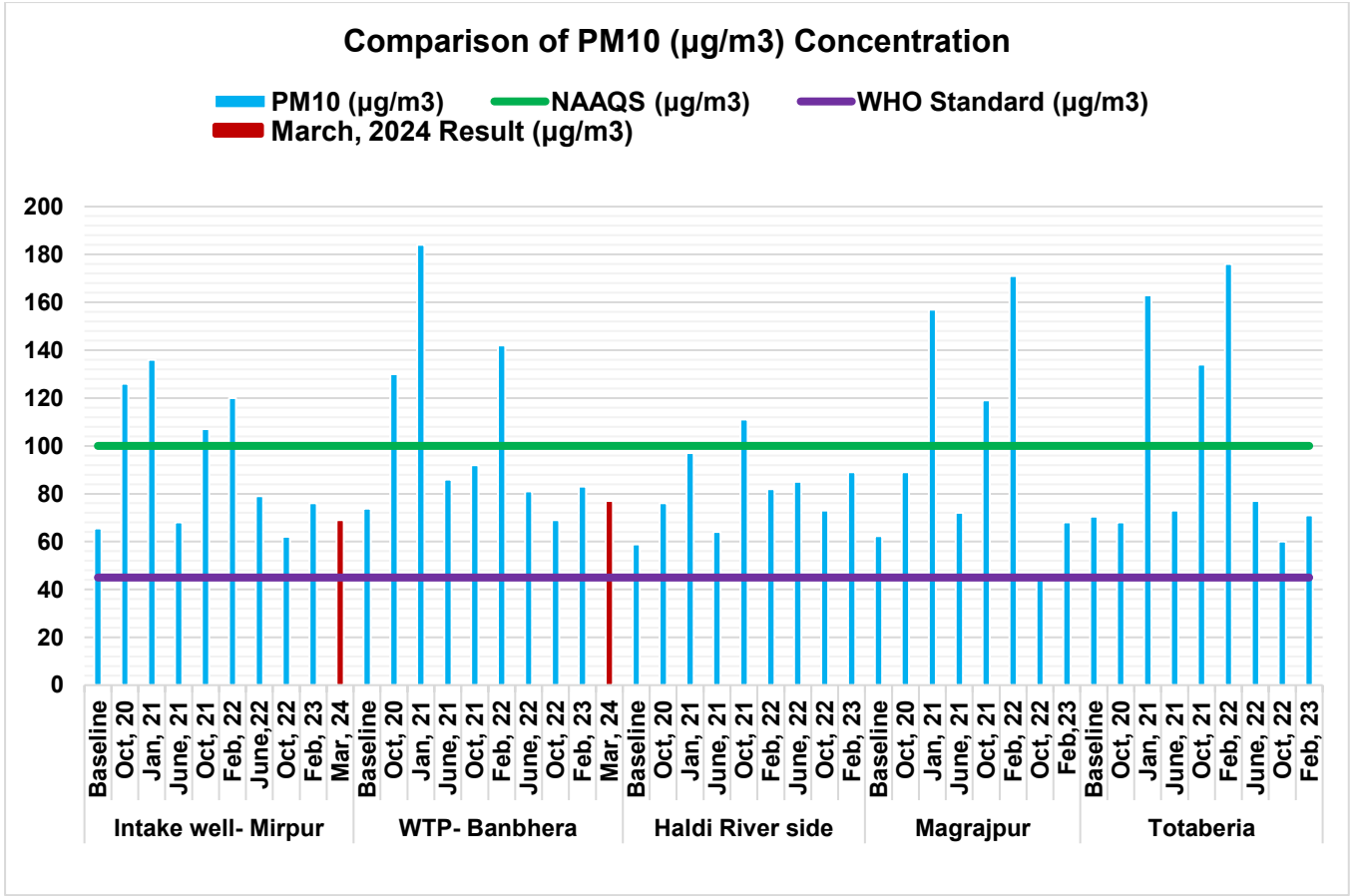
155. Baseline as well as during construction environmental monitoring has been continued as per IEE. Monitoring results are submitted by contractor. All original test certificates are available in DSISC office as back-up.

Package: Purba Medinipur- EM/01

156. Monitoring has been conducted from 1st to 2nd March 2024, at intake and WTP sites. Results are shown below.

Table 28A: Ambient Air Monitoring Data (Package- EM/01)- During Construction

SI No	Station Code	Village Name	Study Area	Date	Parameters				
					PM10 (µg/m ³)	PM2.5 (µg/m ³)	CO (µg/m ³)	SO2 (µg/m ³)	NO2 (µg/m ³)
1	AQ1	Intake well- Mirpur	Rural Residential	01.03.2024- 02.03.2024	69	27	766	4.9	24.3
2	AQ3	WTP	Rural Residential	01.03.2024- 02.03.2024	77	35	675	5.1	24.9
National Ambient Air Quality Standard					100	60	2000	80	80
WHO Standard (2021)					45	15	-	50	-



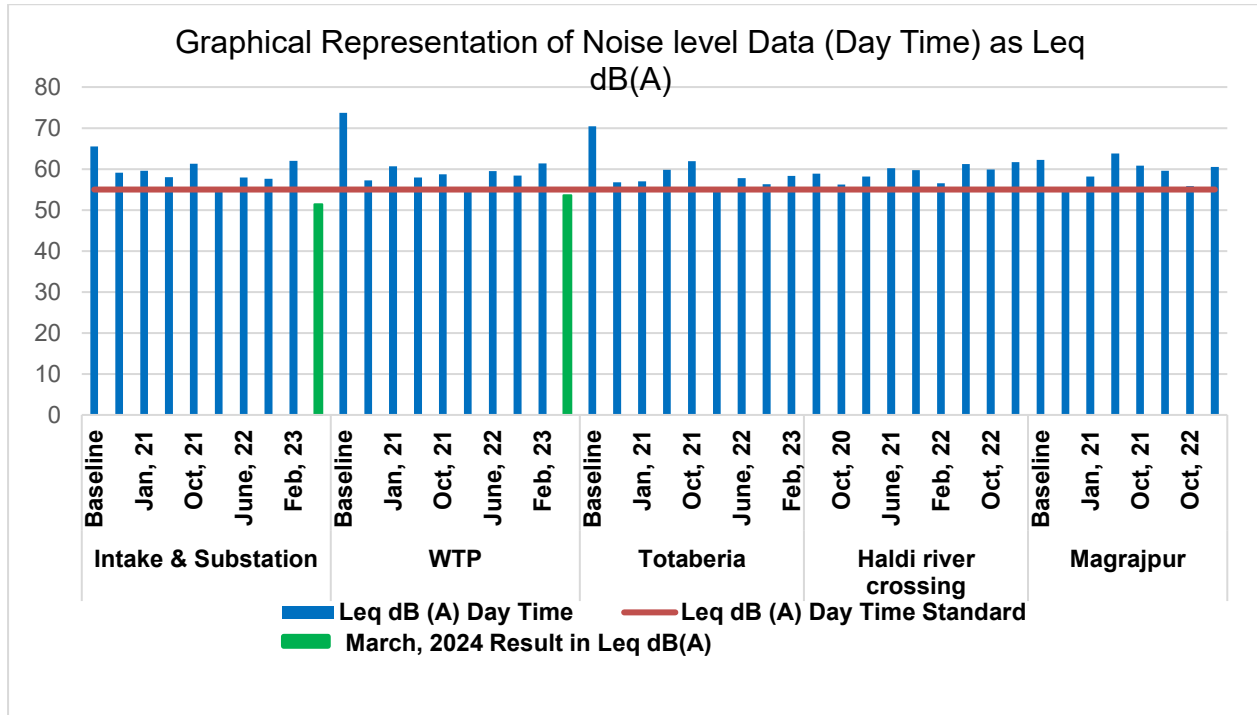
157. From above graphs it is visible that PM₁₀ Concentrations of March, 2024 is relatively low than previous monitoring result as major construction work which produce dust is completed. PM 10 concentration for Intake and WTP is 69 and 77 (µg/m³) respectively. PM 2.5 concentration for Intake and WTP is 27 and 35 (µg/m³) respectively. All values are within the prescribed standard.

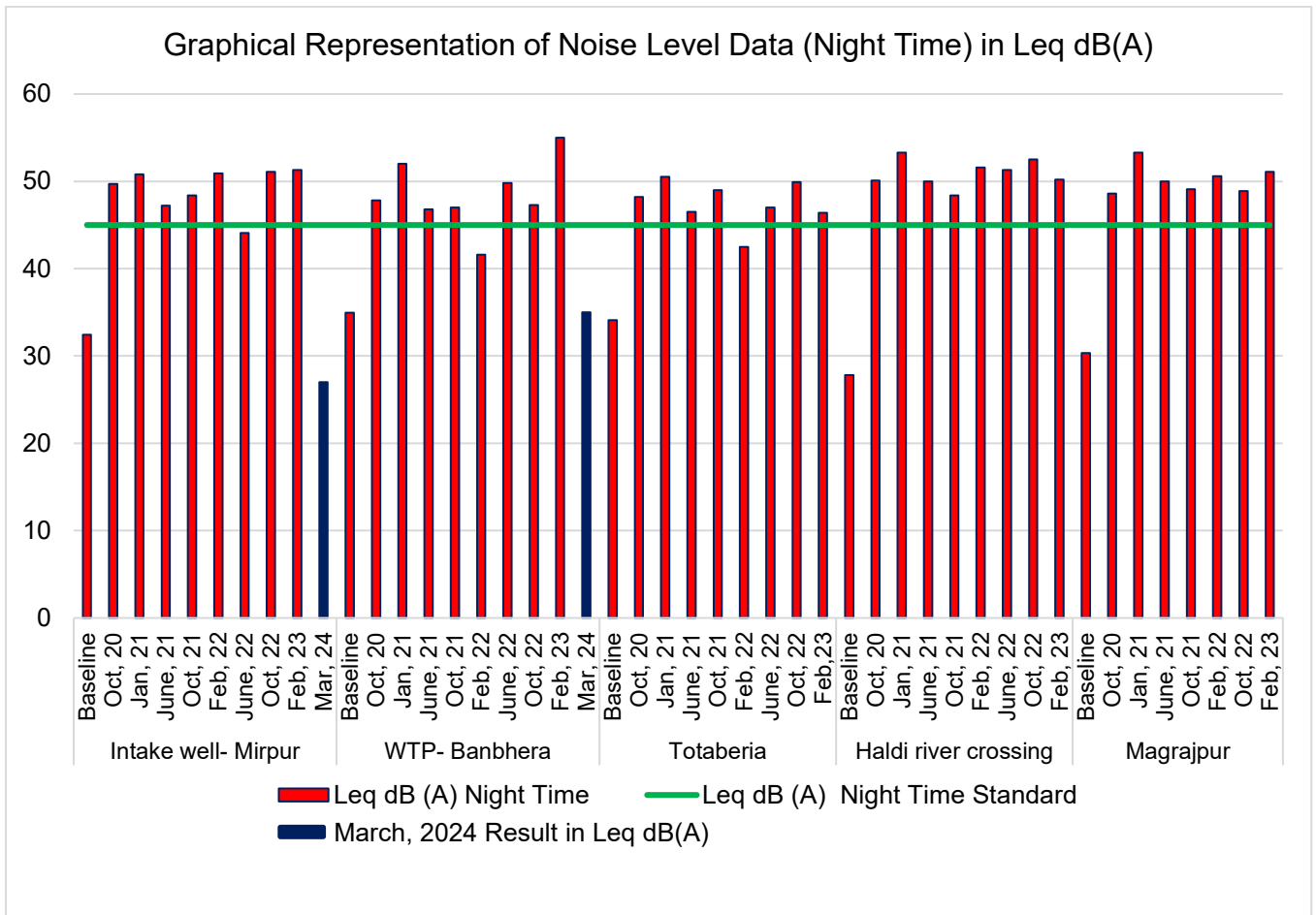
Ambient Noise Level

158. Noise level monitoring has been conducted from 1st to 2nd March 2024, at intake and WTP sites. Results are shown below.

Table 28B: Noise Monitoring Data (Package- EM/01)- During Construction

Sl. No.	Station Code	Village Name	Study Area	Date	Leq dB (A) Day Time	Leq dB (A) Night Time
1	N1	Intake & Substation	Residential	01.02.2024-02.03.2024	51.4	43.2
2	N3	WTP	Residential	01.02.2024-02.03.2024	53.6	44.8
Code/Category		Leq Day Time dB(A) - Standard			Leq Night Time dB(A) - Standard	
A/Industrial		75			70	
B/Commercial		65			55	
C/Residential		55			45	
D/Ecological-Sensitive		50			40	
Note: National level Central Pollution Control Board’s, CPCB’s (Govt. of India) guideline/ protocol used for sampling						





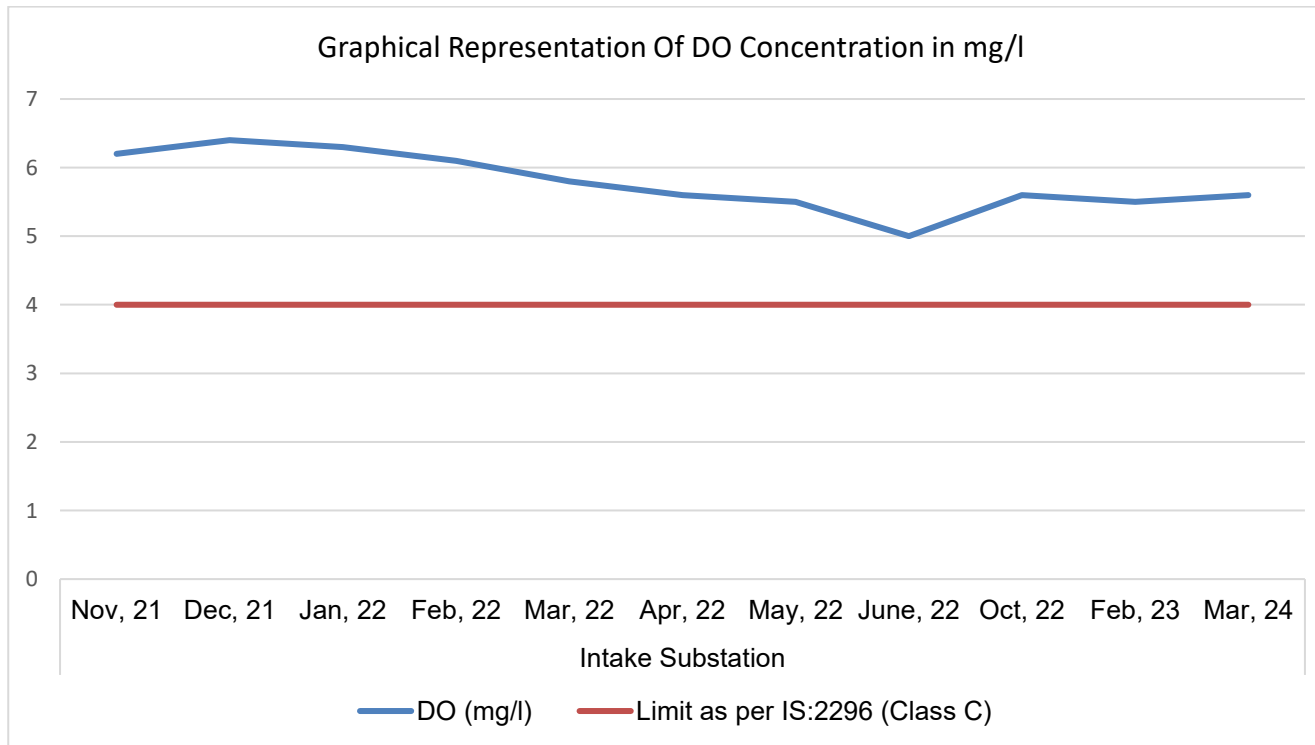
159. The graphical comparison of noise level data of day time and night time, shows that the day time and night time noise value is below the permissible limit of residential areas for March, 2024. It is mainly due to completion of construction of major components.

Surface Water Quality

160. During report period surface water sample have been collected from intake site and results are shown below.

Table 28C: Surface water (River) monitoring result- during construction (EM01)

Location Name	Date	Parameters														
		pH (25 °C)	TDS in mg/l	Turbidity (NTU)	Chloride as Cl in mg/l	Fluoride as F in mg/l	Nitrate as NO ₃ in mg/l	CO D in mg/l	BOD in mg/l	DO in mg/l	Total alkalinity as CaCO ₃ in mg/l	Hardness as CaCO ₃ in mg/l	Oil & Grease in mg/l	Total Coliform MPN/100 ml	Faecal Coliform MPN/100 ml	Salinity in ppt
Intake & substation	02.03.2024	7.51	132	1.8	44	<0.1	0.82	10	2.6	5.6	88	85.4	<1.4	94	31	--
Desirable Limit as per IS:2296 (Class C)		6.5 to 8.5		--	600	1.5	50	--	3	4	--	--	0.1	5000	--	--



161. All the parameter of surface water mentioned in above table, are within the desirable limit. Also DO concentration is (5.6 mg/l) high at sampling location. Chloride concentration is 44 mg/l and value is within the permissible limit. pH of the surface water sample is 7.51.

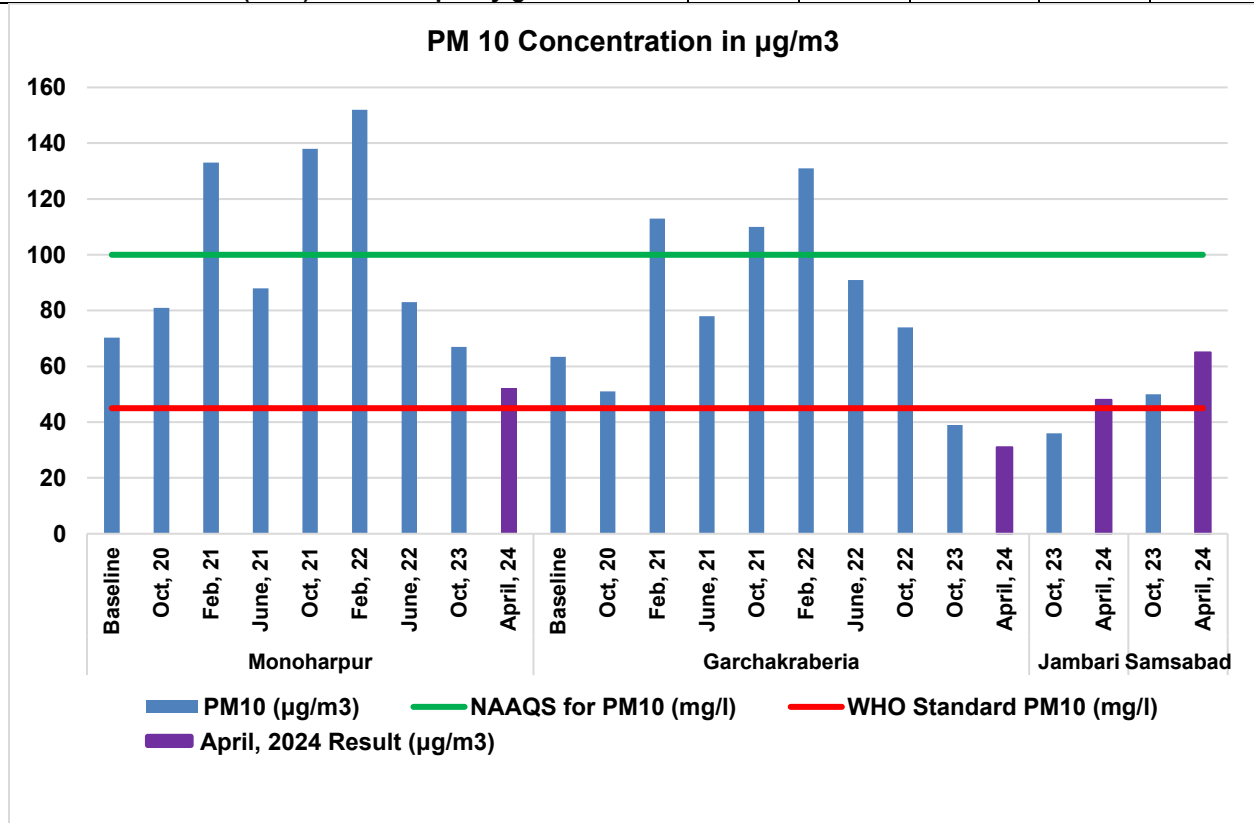
Package Purba Medinipur - EM/02

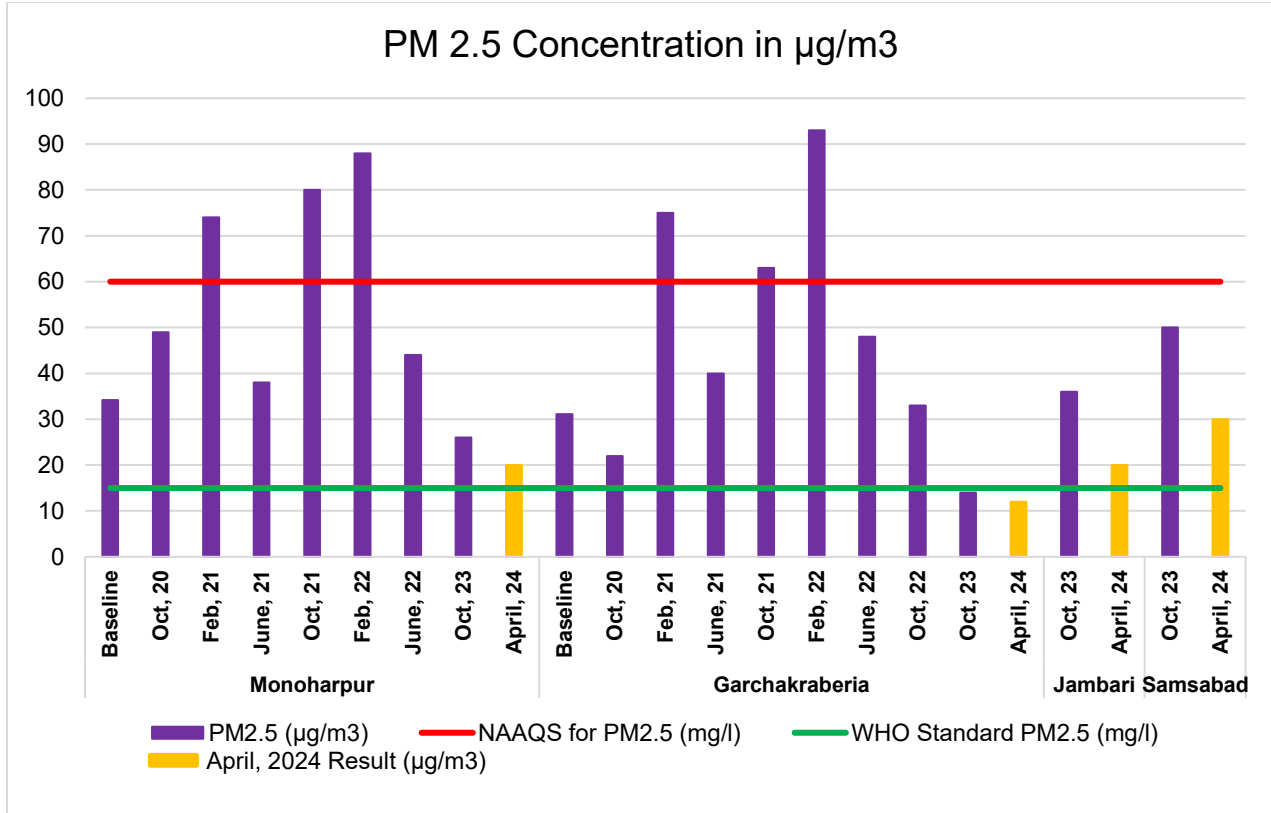
Ambient Air Quality

162. During report period ambient air quality monitoring has been conducted at 4 locations within the package.

Table 28D: During construction Ambient Air Monitoring data (package- EM/02)

Sl no.	Village name	Study area	Date	Parameters				
				PM10 (µg/m³)	PM2.5 (µg/m³)	CO (µg/m³)	SO ₂ (µg/m³)	NO ₂ (µg/m³)
1	Manoharpur GLSR	Sensitive	30.04.2024-01.05.2024	52	20	755	6.7	27.1
2	Garchakraberia	Rural Residential	29.04.2024-30.04.2024	31	12	606.3	5.4	22
3	Jambari OHSR	Sensitive	29.04.2024-30.04.2024	48	20	732	6.1	25.4
4	Samsabad OHSR	Rural Residential	30.04.2024-01.05.2024	65	30	801	7.2	29.5
National Ambient Air Quality Standard				100	60	2000	80	80
WHO Standard (2021) AQG- Air quality guideline				45	15	-	50	-





163. According to April 2024 ambient air quality monitoring data, the concentration of PM 10 and PM 2.5 is lowest compared to the previous monitoring results. All concentration of PM 10 and PM 2.5 are below the baseline monitoring result. According to April 2024 monitoring data, highest PM 10 concentration was found in Samsabad OHSR (65 µg/m³), whereas lowest PM 10 concentration was found in Garchakraberia (31 µg/m³) and Highest level of PM 2.5 concentration was found in Samsabad OHSR (30 µg/m³) and lowest was found in Garchakraberia (12 µg/m³).

164. Although, CO, SO₂ and NO₂ typically emitted due to combustion of fossil fuels – are all found within the prescribed National standard. Therefore, it can be inferred that the decreased levels of PM₁₀ and PM_{2.5} are due to low background concentration, change of weather conditions and alsomost of the primary construction activities were completed.

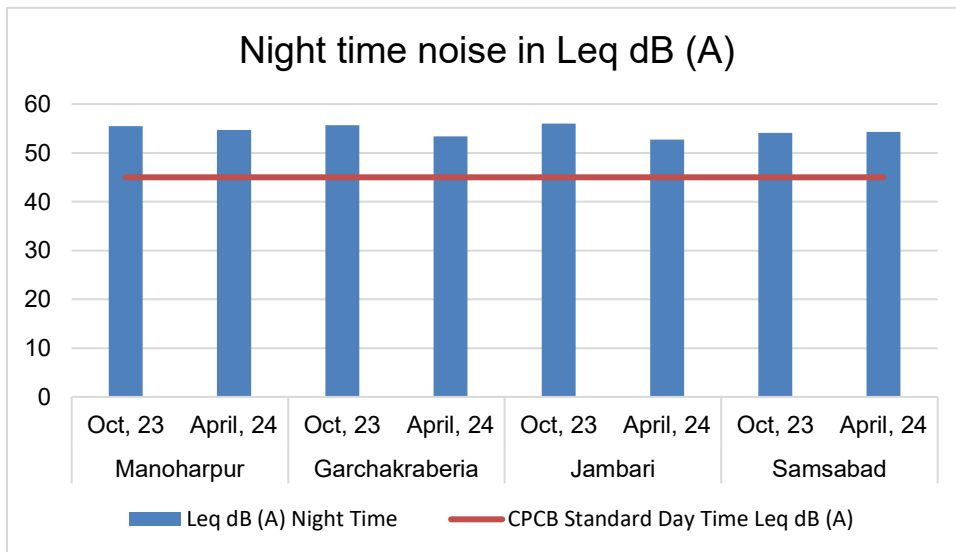
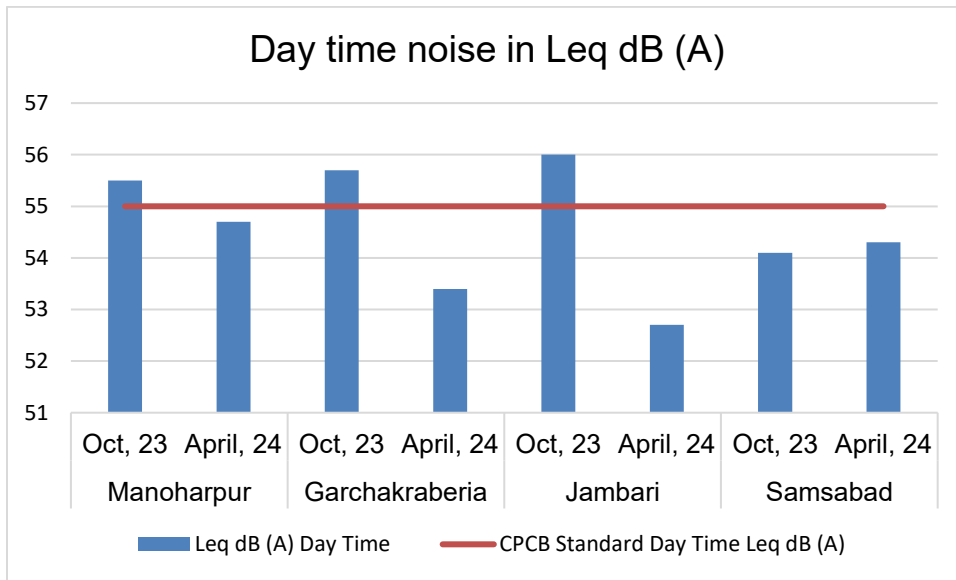
Noise Level data

Table 28E: During construction Ambient Noise Level Monitoring data (package- EM/02)

Sl. No.	Village Name	Study Area	Date	Average dB	
				Leq dB (A) Day Time	Leq dB (A) Night Time
1	Manoharpur	Silent Zone	30.04.2024	54.7	43.8
2	Garchakraberia	Residential	29.04.2024	53.4	42.4
3	Jambari	Residential	29.04.2024	52.7	44.2
4	Samsabad	Residential	30.04.2024	54.3	44.2
Code/Category				Leq Day Time/ Leq Night Time dB(A) - Standard	
A/Industrial				75/70	

Sl. No.	Village Name	Study Area	Date	Average dB	
				Leq dB (A) Day Time	Leq dB (A) Night Time
B/Commercial				65/55	
C/Residential				55/45	
D/Ecological- Sensitive				50/40	

165. In case of noise level monitoring, common monitoring locations are found in this package therefore data from the sub project have been compared with average baseline data and previous period monitoring data. All the Location has day and night time values are close to the permissible limit, in few cases marginally above the standard. Highest and lowest day time noise level has been found in Manoharpur and Samsabad respectively. Whereas, Highest and lowest night time noise has been found in Manoharpur and Garchakraberia respectively.

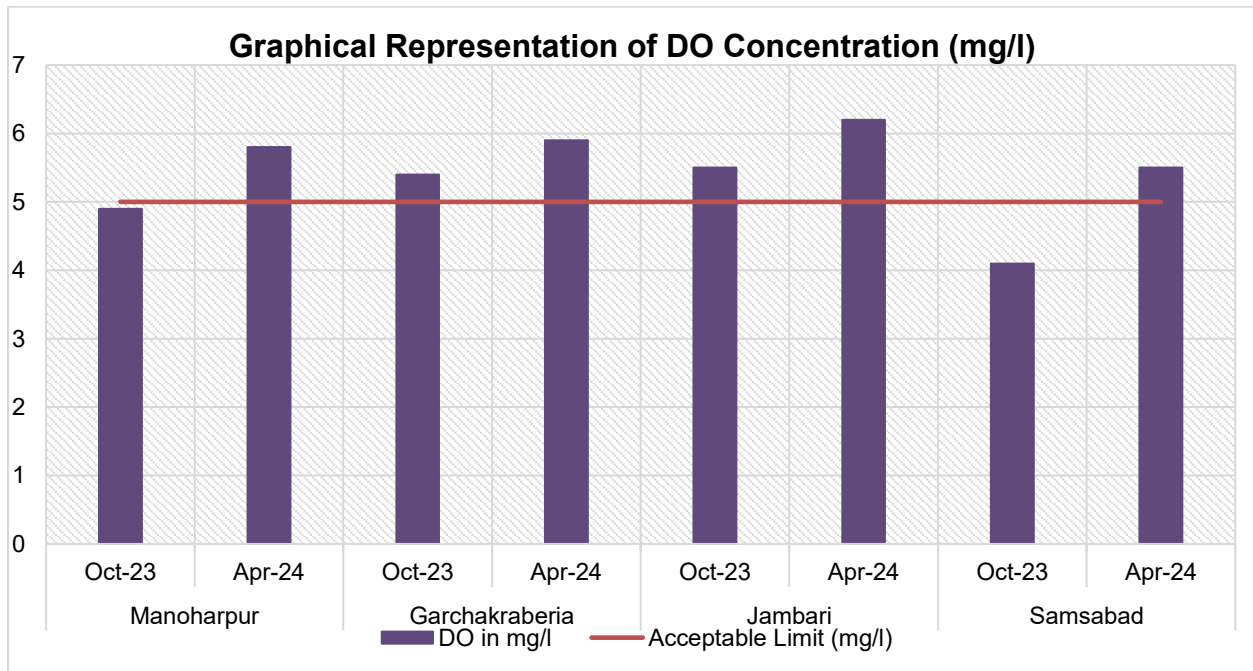


Surface water quality

Table 28F: During construction Surface Water Monitoring data (package- EM/02)

Location Name	Date	Parameters												
		pH (25 °C)	Turbidity (NTU)	Chloride as Cl in mg/l	Fluoride as F in mg/l	Nitrate as NO ₃ in mg/l	CO ₂ in mg/l	BOD in mg/l	DO in mg/l	Total alkalinity as CaCO ₃ in mg/l	Hardness as CaCO ₃ in mg/l	Oil & Grease in mg/l	Total Coliform MPN /100 ml	Faecal Coliform MPN/100ml
Manoharpur	30.04.2024	7.63	2.8	39.1	<0.1	0.97	10	2.8	5.8	117.6	134.6	2.8	40	11
Garchakraberia	29.04.2024	7.52	4.2	52.8	<0.1	2.1	12	2.7	5.9	121.8	130.7	3.3	70	22
Jambari	29.04.2024	7.31	3.1	35.2	<0.1	1.4	8	2	6.2	109.2	103	2.2	50	17
Samsabad	30.04.2024	7.64	6.9	47	<0.1	1.26	15	3.6	5.5	155.4	170.3	<1.4	60	27
Surface water quality criteria by CPCB and IS:2296 (class B outdoor bathing)		6.5-8.5	--	--	1.5	--	--	3	5	--	--	--	500	--

Graphical Representation of DO

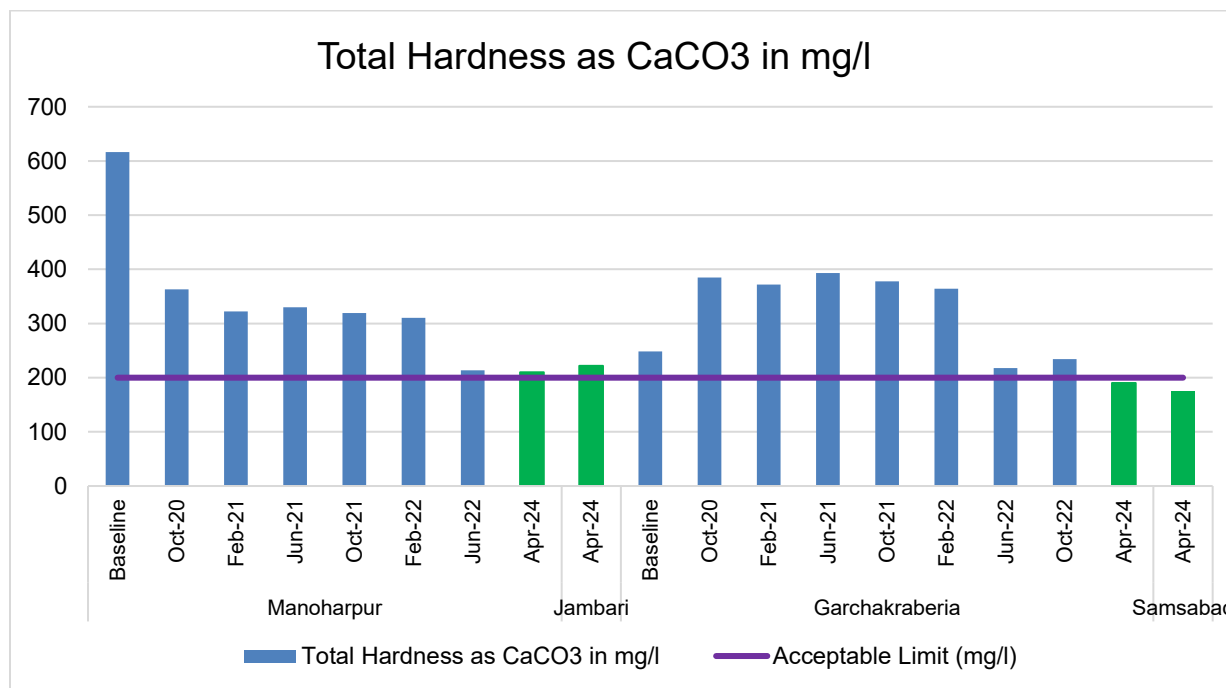


166. The above graphs show the comparison of DO value between baseline and till report period. The graphs show that DO concentration is higher than minimum requirement. No surface water body is located within the work area. BOD concentration is above the standard at Samsabad. Higher BOD indicates more oxygen is required which is less for oxygen demanding species to feed on and signifies lower water quality. It is mainly due to eutrophication condition of ponds and also for the household's use of ponds like cleaning, bathing etc.

Ground Water Quality

Table 28G: During construction Ground Water Monitoring data (package- EM/02)

Location Name	Date	Parameter													
		pH (25 °C)	Turbidity (NTU)	Total Alkalinity as CaCO3 in mg/l	TDS in mg/l	Total Hardness as CaCO3 in mg/l	Magnesium (as mg) in mg/l	Chloride as Cl in mg/l	Sulfate as SO ₄ in mg/l	Nitrate as NO ₃ in mg/l	Iron as Fe in mg/l	Copper As Cu in mg/l	Lead as Pb in mg/l	Total Arsenic as As in mg/l	Mercury as Hg in mg/l
Manoharpur	30.04.2024	7.33	<1	201.6	340	209.9	16.2	60.7	33.7	0.76	0.34	<0.02	<0.01	<0.01	
Garchakraberia	29.04.2024	7.29	<1	184.8	308	190.1	15.2	52.8	36.4	0.61	0.27	<0.02	<0.01	<0.01	
Jambari	29.04.2024	7.19	<1	197.4	346	221.8	16.2	68.5	31.9	0.71	0.35	<0.02	<0.01	<0.01	
Samsabad	30.04.2024	7.23	<1	163.8	284	174.2	13.3	56.7	25.3	<0.5	0.26	<0.02	<0.01	<0.01	
Acceptable Limit		6.5 to 8.5	1 NTU	200	500	200		250	200	45	0.3	0.05	0.01	0.01	
Permissible limit in the absence of alternate source		No Relaxation	5	400	2000	600		1000	400	No relaxation	1.0	1.5	No relaxation	No relaxation	



Soil Quality Data

Table 28H: During construction Soil Quality monitoring data (Package- EM/02)

Location Name	Parameters	Result	Unit
Manoharpur		Sampling date: 29.04.2024	
1	pH (at 18 °C) Value (1:2)	7.37	--
2	Elect. Conductivity (1:5)	1.32	ms/ cm
3	Moisture	2.1	%
4	Texture	Clay Loam	
5	Calcium as Ca	0.44	%
6	Magnesium as Mg	0.09	%
7	Permeability	1.5	cm/hr
8	Organic Matter	0.78	%
9	Oil & Grease	<0.4	mg/kg
10	Phosphate	67.4	mg/kg
11	Sodium as Na	53.6	mg/kg
12	Potassium as K	126	mg/kg
13	Available Nitrogen as N	168	Mg/kg
Garchakraberia		Sampling date: 29.04.2024	
1	pH (at 18 °C) Value (1:2)	8.11	--
2	Elect. Conductivity (1:5)	1.04	ms/ cm
3	Moisture	2.2	%
4	Texture	Silty Clay	
5	Calcium as Ca	0.58	%
6	Magnesium as Mg	0.15	%
7	Permeability	1	cm/hr
8	Organic Matter	0.72	%
9	Oil & Grease	1.2	mg/kg
10	Phosphate	74.3	mg/kg
11	Sodium as Na	70.2	mg/kg
12	Potassium as K	153	mg/kg
13	Available Nitrogen as N	140	Mg/kg
Jambari		Sampling date: 29.04.2024	
1	pH (at 18 °C) Value (1:2)	8.17	--
2	Elect. Conductivity (1:5)	1.29	ms/ cm
3	Moisture	1.8	%
4	Texture	Silty Clay	
5	Calcium as Ca	0.54	%
6	Magnesium as Mg	0.11	%
7	Permeability	1.2	cm/hr
8	Organic Matter	0.81	%
9	Oil & Grease	0.4	mg/kg
10	Phosphate	28.9	mg/kg
11	Sodium as Na	53.8	mg/kg
12	Potassium as K	104	mg/kg
13	Available Nitrogen as N	154	Mg/kg
Samsabad		Sampling date: 29.04.2024	
1	pH (at 18 °C) Value (1:2)	7.16	--
2	Elect. Conductivity (1:5)	0.91	ms/ cm
3	Moisture	1.5	%
4	Texture	Clay Loam	
5	Calcium as Ca	0.39	%
6	Magnesium as Mg	0.12	%
7	Permeability	1.7	cm/hr
8	Organic Matter	0.63	%
9	Oil & Grease	<0.4	mg/kg
10	Phosphate	70.4	mg/kg
11	Sodium as Na	69.2	mg/kg
12	Potassium as K	136	mg/kg
13	Available Nitrogen as N	196	Mg/kg

167. The results of four locations showing that all the soil parameters are within the normal range including pH and electrical conductivity.

VII SUMMARY OF KEY ISSUES AND REMEDIAL ACTIONS

168. Status of EMP application discussed in earlier section. Some partial compliance issues have been noted during report period.

169. **Table 29** lists the implementation status of corrective action observed from November 2023 to April 2024 in work sites of North 24 pgs, Bankura and Purba Medinipur packages that were active during May 2023 to October 2023. The implementation plan for partially completed corrective actions are presented in **Table 29**.

Table 29: Implementation of Corrective Action Plan (North 24 pgs, Bankura and Purba Medinipur)

Sr no.	Pending issues (May to October 2023 period)	Status	Further Action Required	Responsible-Implementation	Budget
North 24 pgs					
1	Access and access to working area inside WTP, BS-1, GLSR-Harua and partially at pipeline side not satisfactory (N24pgs/01)	Improvement noted at site	To be continued and maintained		
2	Hard barricading near intake, flocculation tank, BS-1 and 1200 mm pipeline work sometimes found misplaced and needs improvement on regular basis (N24pgs/01)	Available - Complied	To be continued		
3	Road restoration and street cleaning partially seen at 1200 mm dia. pipeline work site (N24pgs/01)	Improved. Further improvement is required	Immediate improvement is required Restoration should be at earliest	Contractor/PIU	Contractor work cost and EMP budget
4	Placement of road diversion and flag man some time found missing in 1200 mm dia. pipeline work site(N24pgs/01)	Improvement noted	To be maintained		
5	Use of PPEs such as helmet, safety jacket and shoes often found missing during work (N24pgs/01)	Further improvement is required	Instructed to the contractor and immediate improvement is required for complete use of PPEs	Contractor	Contractor work cost and EMP budget
6	Availability of first aid materials in first aid box and placement of first aid register not found in few sites (N24pgs/ 02A and 02B).	Improvement done	Need to be maintained at all work sites		

Sr no.	Pending issues (May to October 2023 period)	Status	Further Action Required	Responsible-Implementation	Budget
7	Caution board and tape, barricade sometimes found missing (N24pgs/ 02A and 02B) .	Improvement noted Pipe laying work almost completed	To be maintained		
8	Use of Shoes, Hand gloves, Googles and safety belt in OHR and pipeline canal crossing work often found missing. (N24pgs/ 02A and 02B) .	Further improvement is required	Instructed to the contractor and immediate improvement is required for complete use of PPEs	Contractor	Contractor work cost and EMP budget
9	Worker's camp including toilets at few locations is not satisfactory (N24pgs/ 02A and 02B) .	Improvement noted	To be maintained		
Bankura					
1	Project display board and safety signage board not placed properly (BK/01)	Improvement noted Sufficient safety signage board in local language missing	Immediate improvement is required – sufficient safety signage board needs to be placed	Contractor	Contractor work cost and EMP budget
2	Sufficient drinking water and washing water, toilet management -partially complied (BK/01)	Arranged	To be maintained		
3	Partial use of PPEs noted at site (BK/01)	Further improvement is required	Instructed to the contractor and immediate improvement is required for complete use of PPEs	Contractor	Contractor work cost and EMP budget
4	HSE officer from contractor end not available (BK/03)	Already joined	-		
5	HSE training not done for workers on regular basis (BK/03)	Improvement noted	Further improvement is required	Contractor	Contractor work cost and EMP budget
6	Placement of display board, emergency contact no. board and signage board and replacement of all boards not done (BK/02A, BK/02B and BK/04)	Improvement noted Sufficient safety signage board in local language missing	Immediate improvement is required – sufficient safety signage board needs to be placed	Contractor	Contractor work cost and EMP budget
7	Toilet facility not available at work sites (BK/02A, BK/02B and BK/04)	Improvement noted for pack BK/02A and BK/02B	Further improvement is required for package BK/04	Contractor	Contractor work cost and EMP budget

Sr no.	Pending issues (May to October 2023 period)	Status	Further Action Required	Responsible-Implementation	Budget
Purba Medinipur					
1	Water sprinkling as per site condition not done (EM/01 and EM/02)	Improvement noted	To be continued		
2	Public consultation not done on regular basis (EM/01 and EM/02)	Improvement noted	To be continued		
3	Placement of flagman and caution signage is missing (EM01)	Complied	To be maintained		
4	Backfilling and early road restoration partially complied (EM/02)	Improvement noted	Further improvement is required	Contractor	Contractor work cost and EMP budget
5	Signage board is not available at all sites (EM/02)	Done at most of the locations	To be maintained		
6	Barricading incomplete at few locations (EM/02)	Improvement noted	Further improvement is required	Contractor	Contractor work cost and EMP budget

170. **Table 30** provides the recommended corrective action plan that has been devised and target dates that have been set so as to remove these non-compliances. The concerned Contractors have been suitably advised. Contractors have also been advised to provide written commitment for implementation of corrective action plan.

Table 30: Implementation Plan for Pending/ New Corrective Actions (North 24 pgs, Bankura and Purba Medinipur)

Sr no.	New/ Pending issues	Action Required	Responsible - Implementation/ Budget	Target Date	Responsible - Monitoring	Responsible - Reporting	Indicator of Compliance
North 24 pgs							
1	Road restoration and street cleaning after laying of pipeline (N24pgs/01)	Complete restoration as per work schedule	Contractor/ Contractor work cost and EMP budget	Immediate	DSISC, PIU	PIU, PMU-PMC	Site observation
2	Use of PPEs such as helmet, safety jacket and shoes often found missing during work (N24pgs/01)	Immediate action is needed for complete availability and use of PPEs	Contractor/ Contractor work cost and EMP budget	Immediate	DSISC, PIU	PIU, PMU-PMC	Site observation
3	Improvement of electrical safety at few work sites (N24pgs/01)	Immediate action is required for improvement	Contractor/ Contractor work cost and EMP budget	Immediate	DSISC, PIU	PIU, PMU-PMC	Site observation and checking
4	Use of Shoes, Hand gloves,	Immediate arrangement of	Contractor/ Contractor	Immediate	DSISC, PIU	PIU, PMU-PMC	Site observation

Sr no.	New/ Pending issues	Action Required	Responsible - Implementation/ Budget	Target Date	Responsible – Monitoring	Responsible – Reporting	Indicator of Compliance
	Googles and safety belt in OHR and pipeline canal crossing work often found missing. (N24pgs/ 02A and 02B).	required PPEs at site necessary	work cost and EMP budget				
5	Safety signage and caution board in local language not available (N24pgs/ 02A)	Needs to be arranged immediately	Contractor/ Contractor work cost and EMP budget	Immediate	DSISC, PIU	PIU, PMU-PMC	Site observation
6	Housekeeping not done on regular basis (N24pgs/ 02B)	Housekeeping should be on regular basis	Contractor/ Contractor work cost and EMP budget	Immediate	DSISC, PIU	PIU, PMU-PMC	Site observation
Bankura							
1	Project display board and safety signage board not placed properly (BK/01)	Safety signage board in local language needs to be placed at proper location	Contractor/ Contractor work cost and EMP budget	Immediate	DSISC, PIU	PIU, PMU-PMC	Site observation and checking
2	Partial use of PPEs noted at site (BK/01)	Complete use of PPEs by the workers	Contractor/ Contractor work cost and EMP budget	Immediate	DSISC, PIU	PIU, PMU-PMC	Site observation and checking
3	Sometime barricade/ placement of caution tape is missing (BK/01)	Complete use of caution tape/ barricade as per requirement	Contractor/ Contractor work cost and EMP budget	Immediate	DSISC, PIU	PIU, PMU-PMC	Site observation and checking
4	HSE training not done for workers on regular basis (BK/03)	Health & Safety training on regular basis	Contractor/ Contractor work cost and EMP budget	Immediate	DSISC, PIU	PIU, PMU-PMC	Site observation and checking
5	Placement of safety signage board in local language (BK/02A, BK/02B and BK/04)	Immediate placement of Safety signage board and which should be sufficient	Contractor/ Contractor work cost and EMP budget	Immediate	DSISC, PIU	PIU, PMU-PMC	Site observation and checking
6	Maintained toilet facility at all work sites (BK/02A, BK/02B and BK/04)	Toilet needs to be maintained at all work sites	Contractor/ Contractor work cost and EMP budget	Immediate	DSISC, PIU	PIU, PMU-PMC	Site observation and checking
Purba Medinipur							
1	Housekeeping not	Immediate	Contractor/	Immediate	DSISC, PIU	PIU, PMU-	Site

Sr no.	New/ Pending issues	Action Required	Responsible - Implementation/ Budget	Target Date	Responsible – Monitoring	Responsible – Reporting	Indicator of Compliance
	satisfactory at intake site (EM 01)	improvement is required	Contractor work cost and EMP budget			PMC	observation
2	Backfilling and early road restoration partially complied (EM/02)	Immediate filling up of excavated areas after pipe laying	Contractor/ Contractor work cost and EMP budget	Immediate and continuous process	DSISC, PIU	PIU, PMU- PMC	Site observation
3	Barricading incomplete at few locations (EM/02)	Complete barricading at work site	Contractor/ Contractor work cost and EMP budget	Immediate and continuous process	DSISC, PIU	PIU, PMU- PMC	Site observation

APPENDIX

APPENDIX - 1: PHOTO ILLUSTRATION

North 24 pgs



Pipe laying placement of Barricade and caution tape In Street No 71 -WTP



Super Structure Beam construction at CWR-WTP. Use of PPEs noted



Canal crossing through anchoring at zone 4 OHR -Haroa Block



Paved road restoration at zone 21 -PWD road -Haroa Block



IEE Executive summary and GRM-GRC display in local language with fire extinguisher at zone 5 OHR Bhangar-II Block



Pipeline and cage work completed at zone-08 canal crossing Bhangar-II Block

Bankura



Chausal OHR – package Bk/04 under construction



Gobindadham OHR site in package Bk/04. Project display board noted at site



Clariflocculator -II at WTP site- Bk/01 under construction.



Worker's camp with drinking water facility – noted

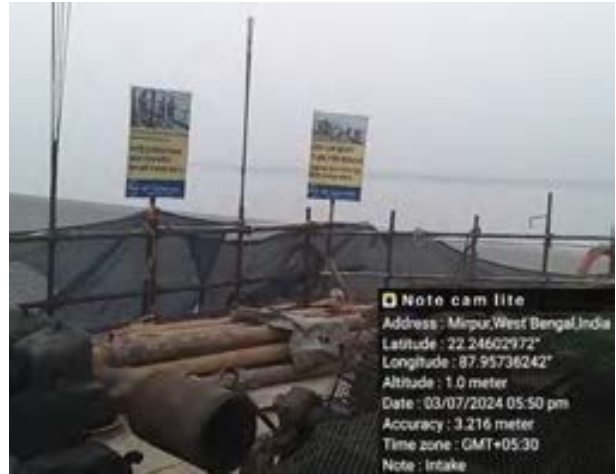


Chakaltore OHR in package Bk/02A under construction. Safety net noted



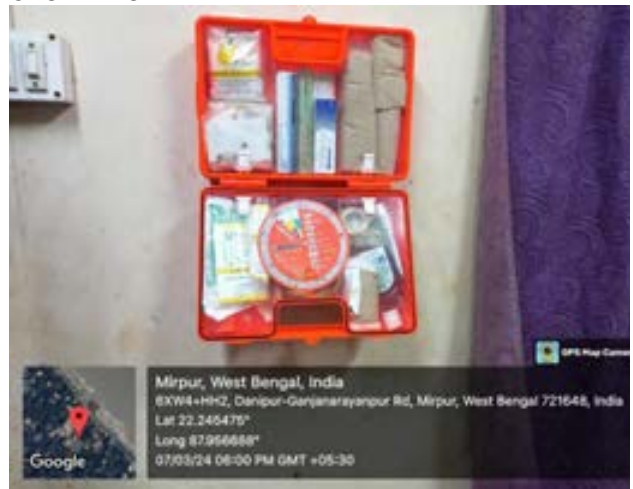
Project display board noted at WTP site under package Bk/03

East Medinipur



Intake Approach Bridge under construction

Safety signage board is noted at piling site over River



WTP Filter House under construction

First aid box available at site



Safety signage and protection net noted at Samsabad OHR site

Grievance redressal related information displayed at Banasri Gouri OHSR site

APPENDIX - 2: LABOUR LICENSE

SAMPLE PACKAGE- BK/03- BANKURA



GOVERNMENT OF WEST BENGAL
OFFICE OF THE DEPUTY LABOUR COMMISSIONER ,
OFFICE OF THE DEPUTY LABOUR COMMISSIONER, BANKURA, SHRAMIK BHAVAN,
KESHRA ROAD, KATJURIDANGA, BANKURA - 722102.

FORM - VI
[See Rule 25 (1)]

Licence No. : BAN04/CLL/000188 **Date : 13th Aug, 2019**

Lic Fees	₹ 250
S.Deposit	₹ 10000

Licence

*Licence is hereby granted to **Larsen & Toubro Limited** at **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: **12th Aug, 2020***

Licensing Officer

Renewal
[Rule 29]

Renewal vide AIN No	RENEWAL-LIC-0011252-0023837-30454-2023
1. Date of Renewal	06th Sep, 2023
2. Fees paid for Renewal	₹ 1000 (One Thousand only)
3. Date of Expiry	12th Aug, 2024

Licensing Officer



FORM- V: 00130087
Establishment Information: [BAN08/CLR/000036]
PROJECT IMPLEMENTATION UNIT, PUBLIC HEATH
ENGINEERING DIRECTORATE
Alakundi, PHE Complex
Anchuri, Block - Bankura -I ,
Bankura Sadar , PS - Bankura ,
Bankura , PIN- 722102

****This Renewal Certificate is system generated and does not require any signature.
For authenticity, please scan the QR Code**

Renewal

[Rule 29]

Renewal vide AIN No. RENEWAL-LIC-0011252-0018766-30454-2022
1. Date of Renewal 29th Jul, 2022
2. Fees paid for Renewal ₹ 1000 (One Thousand only)
3. Date of Expiry 12th Aug, 2023

Licensing Officer

Renewal

[Rule 29]

Renewal vide AIN No. RENEWAL-LIC-0011252-0015181-30454-2021
1. Date of Renewal 29th Oct, 2021
2. Fees paid for Renewal ₹ 1000 (One Thousand only)
3. Date of Expiry 12th Aug, 2022

Licensing Officer

Renewal

[Rule 29]

Renewal vide AIN No. RENEWAL-LIC-0011252-0011057-30454-2020
1. Date of Renewal 23rd Nov, 2020
2. Fees paid for Renewal ₹ 1250 (One Thousand Two Hundred And Fifty only)
3. Date of Expiry 12th Aug, 2021

Licensing Officer

Amendment

[Rule 28]

Amendment vide AIN No. AMEND-LIC-0011252-00625-30454-2020
1. Date of Amendment 11th Sep, 2020
2. Additional Fees paid for Amendment ₹ 750 (Seven Hundred And Fifty only)
3. Additional Security Fees paid for Amendment ₹ 14000

Licensing Officer

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 **240 (Two Hundred And Forty)**.
- (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.

SAMPLE-PACKAGE EM/01- EAST MEDINIPUR



GOVERNMENT OF WEST BENGAL
OFFICE OF THE ASSISTANT LABOUR COMMISSIONER ,

*C/O - Office of the District Magistrate & Collector, Purba Medinipur, (Block - "B", 2nd Floor),
Vill- Ganapatinagar, P.O. - Uttar Sonamui, P.S. - Tamluk, Dist - Purba Medinipur, PIN -
721648 Email.- atc.tamluk2010@gmail.com, Phone No. 03228-270391*

FORM - VI
[See Rule 25 (1)]

Licence No. : TAM06/CLL/000194 **Date : 04th Jun, 2020**

Lic Fees	₹ 1250
S. Deposit	₹ 45000

Licence

*Licence is hereby granted to **Larsen & Toubro Ltd. at Tamluk Municipality , Ward-4, Tamluk, PS - Tamluk, District - Purba Medinipur, Pin Code - 721636** 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: **03rd Jun, 2021***

Licensing Officer

Renewal
[Rule 29]

Renewal vide AIN No	RENEWAL-LIC-0013100-0023032-38894-2023
1. Date of Renewal	22nd Jun, 2023
2. Fees paid for Renewal	₹ 1250 (One Thousand Two Hundred And Fifty only)
3. Date of Expiry	03rd Jun, 2024

Licensing Officer



FORM - VI: 00178615
Establishment Information: [TAM06/CLR/000016]
O/O THE SUPERINTENDING ENGINEER, PROJECT IMPLEMENTATION UNIT , PURBA MEDINIPUR , WBDWSIP , PHE DTE
BAR PADUMBASAN, MANIKTALA, TAMLUK
Ward-4, Tamluk Municipality ,
Tamluk, PS - Tamluk,
Purba Medinipur , PIN- 721636


****This Renewal Certificate is system generated and does not require any signature.**
For authenticity, please scan the QR Code

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 **450 (Four Hundred And Fifty)**.
- (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.

APPENDIX -3: SAMPLE CONTRACTOR’S INSURANCE POLICY FOR WORKERS
PACKAGE – N24PGS/02A- NORTH 24 PGS



Employee Compensation Insurance Policy - Endorsement

Policy Serving Office	: OE Code-15,Future Generali India Insurance Co Ltd, 1st Floor D.No.5-L-21A, APDC, Estate Opp Country Club, Begumpet, Hyderabad, Telangana, Pincode : 500016, Tel No:-646-66036600		
Policy No	: LR25424-E001	Period of Insurance	: From 01/01/2024 To midnight of 31/03/2024
Insured	: NCC LTD	Intermediary Name/Code	: TROVITY INSURETECH INSURANCE BROKING SERVICES PRIVATE LIMITED,6086338
Address	: 5TH FLOOR, BLOCK-4A, ECOSPACE BUSINESS PARK, NEWTOWN, KOLKATA, WEST BENGAL, 700156	Telephone(Mob./Home)	: 9764998919/9764998919
		Email Id	: RAN@TROVITY.COM
GSTIN Number	: 19AAACN7138C1ZM	FGI GSTIN Number	: 36AABCED91R1ZA
Policy No.	: LR25424-E001		
Endorsement effective date	: 31/03/2024		
Endorsement no.	: 001		

Notwithstanding anything stated therein to the contrary, it is hereby declared and agreed that the following changes are made under the above mentioned policy:-

The Insured Policy Risk Location details should be read as follows and not as mentioned there in

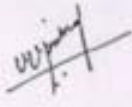
Location & Work Description-Design & Construction of overhead reservoir including water supply distribution & metering works in Harnu Block

All Other Terms, Condition And Exclusions Under The Policy Remains Unaltered.


Product UN : IRDIAN1228F0003V02201213

Place : Mumbai
Date : 18/03/2024

For Future Generali India Insurance Co. Ltd.


 Authorized Signatory

Signature Not Verified
 Digitally signed by DE FUTURE GENERALI INDIA INSURANCE COMPANY LIMITED 01
 Date: 2024.03.18 16:27:55 IST
 Reason:
 Location: Mumbai



Future Generali India Insurance Company Limited, Registered and Corporate Office address: 801 and 802, 8th Floor, Tower C, Embassy 24X7 Park, L.B.S. Marg, Vikhroli - West, Mumbai, Maharashtra - 400081. Call Centre: 1800-220-233, 1800-508-1333, 022-47817840, Email: fgi@futuregenerali.in, Website: www.futuregenerali.in, IRDA Reg.No. 182, CIN - U00208MH2008PLC163247



Employee Compensation Insurance Policy- Policy Schedule			
Policy Servicing Office	Off Code-15, Future Generali India Insurance Co. Ltd, 1st Floor D.No 7-1-21A, APDCL Estate Opp. Country Club, Bagampani, Hyderabad, Telangana, Pincode- 500016, Tel. No - 04646018600		
Policy No	IG254624	Period of Insurance	From 00-09-21/02/2024 To Midnight of 20/02/2025
Insured	NCC LTD	Intermediary Name/Code	TROVITY INSURTECH INSURANCE BROKING SERVICES PRIVATE LIMITED/0096330
Address	3TH FLOOR, BLOCK-4A, ECOSPACE BUSINESS PARK, NEWTOWN, KOLKATA, WEST BENGAL, 700136	Telephone/Mob./Home Email Id	970499099/970499099 RAM@TROVITY.COM
GSTIN Number	19AAACN733C12M	FGI GSTIN Number	36AADCF0191R1ZA
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	Future Generali India Insurance Company Limited	Share (In %)	100%
		Gross Premium	33,534.00
		Goods and Service Tax	6,036.13
		Total Premium	39,570.00
Risk Details			
Nature of Business	Design & Construction of overhead reservoir including water supply distribution & metering works in Bhargava II Block		
Project Name	:NA		
Location	Design & Construction of overhead reservoir including water supply distribution & metering works in Bhargava II Block		
Contractor/Sub-Contractor Name	CONTRACTOR AND SUBCONTRACTOR ARE COVERED		
No. of Employees	Description of work	Declared Wages during the Period of Insurance (₹)	
2	Highly Skilled workers	Monthly wages of Rs.15,000/- per person	160,000.00
5	Skilled workers	Monthly wages of Rs.17,000/- per person	900,000.00
5	Semi Skilled Workers	Monthly wages of Rs.13,000/- per person	900,000.00
13	Unskilled Workers	Monthly wages of Rs.13,000/- per person	2,700,000.00
	Total		4,660,000.00
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	
Employer's Compensation Act, 1923 and subsequent amendments thereof 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 or include i. Any interest and/or penalty imposed on the insured on account of his/her failure to comply with the requirements laid down under WC Act 1923 ii. Occupational disease of any kind			
Additional Clauses, Conditions, Warranties & Exclusions			
Territories is excluded from coverage No cover for Medical Expenses, Unless specifically allowed in the policy. The maximum liability of Future Generali India Insurance Co. Ltd. will not be more than INR 60 crores in aggregate No Cover for Medical Expenses No Cover for occupational Diseases Jurisdiction / Territory : India Excluding Wet Risk, Blasting, Tunnelling and Handling of Explosives Excluding loss arising out of installation & 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. Compensation of claim in case of Accident - as per Employer Compensation Act, Common Law & Fatal Accident Any Direct or indirect loss by infectious or contagious disease is excluded from scope of policy Communicable Disease Exclusion Endorsement - Employee Compensation/Workers Compensation Sanction Limitation and Exclusion Clause			



Future Generali India Insurance Company Limited, Registered and Corporate Office address: 801 and 802, 8th Floor, Tower C, Embassy 34X7 Park, L.B.S. Marg, Vileparle - West, Mumbai, Maharashtra - 400083. Care Line - 1800-220-233, 1860-590-3333, 022-67073000, Email: fgi@futuregeneraliala.com, Website: www.futuregeneraliala.com, IRDA Regs.No. 132, CEN - 106609AMC000PLC140287.

PACKAGE – EM/01 – EAST MEDINIPUR



Date : 29/03/2024

TO WHOMSOEVER IT MAY CONCERN

This is to certify that we have issued Workman compensation Policy to M/S. Larsen & Toubro Limited for the year valid from 31/03/2024 to 30/03/2025.

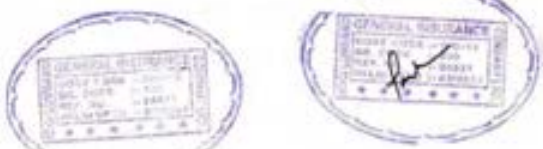
This policy covers all category of workers including but not limited to Highly Skilled, Skilled, Semi-skilled and Un skilled workers, Direct workers, Subcontractor workers, apprentices, security guards, Drivers, trainee workers, workmen of JV / Consortium of Larsen & Toubro Limited, all Subsidiary & Associate Companies, L&T Infrastructure Development Projects, L&T Energy Hydrocarbon Engineering Ltd , L&T Geostucture Private Limited, located anywhere in India.

The Policy is under preparation & issuance. Until issuance of policy, this risk confirmation shall hold good and is a valid proof of insurance as per details mentioned above.

Thanking you and assuring you of our best of services always,

Yours truly,

Thanking you and assuring you of our best of services always.



ICICI Lombard General Insurance Company Limited

ICICI Lombard General Insurance Company Limited

IRDA Reg. No. 115	CIN: U51200MB2005PLC125403	Toll free No. : 1100 2900
Mailing Address:	Registered Office:	Alternate No.: +9192382960 (charge)
101 & 102, 16 th Floor, Interpace II, ICICI Lombard House 414, Vardhmani Marg, New Sakinaka Road, Malad (West), New Sakinaka Marg, Palpada, Mumbai - 400 024	101 & 102, 16 th Floor, Interpace II, ICICI Lombard House 414, Vardhmani Marg, New Sakinaka Road, Malad (West), New Sakinaka Marg, Palpada, Mumbai - 400 024	Email: customer.support@icicilombard.com Website: www.icicilombard.com

APPENDIX 4: TREE FELLING NOC AND COMPLIANCE

BANKURA

Tree felling NOC Bankura (WTP site – Package Bk/ 03)

To Mandal Sir

Part I | THE KOLKATA GAZETTE, EXTRAORDINARY, FEBRUARY 9, 2007 17

Form III
Form for Permission for Felling / Disposing of Trees in Non-Forest Areas
[See Rule 5 (2)]

Permit No. 40/GG Dated 5/12/19

Whereas the applicant, Sri/Smt./Messrs Public Health Engineering dept
Address : Aitakandi, Bankura, Pin - 72201 has
submitted an application with the prescribed fee on 9/7/19 for permission for felling /
disposing of trees for the purpose of Development purpose at the following site

(a) Location : G. Ghati

(b) Details of Plot(s) of Land : plot no - 851, mouza - Barudebpur
7.1 ha - 13

AND Whereas the undersigned is satisfied with regard to the legality of documents towards
the proof of ownership or lease of the land on which such tree stands;

AND Whereas the purpose for which the trees are required to be felled is in conformity
with rule 4 (1) of the West Bengal Trees (Protection and Conservation in Non-Forest Areas)
Rules, 2006 :

AND Whereas an inquiry in the prescribed manner has been carried out on 21/10/19
and the undersigned has examined the inquiry report with due care;

AND Whereas the land in question belongs to the Tea Garden and the applicant
has produced a specific scheme framed under the provisions of the Plantations Labour Act,
1951 for utilizing the sale proceeds strictly for the purpose of welfare of the labourers;

AND Whereas the applicant is a developer who has already obtained a Certificate of Clearance
No dated Issued by the undersigned and sanction of the
building / construction plan by the sanctioning authority, viz.
..... vide his letter No. Dated

AND Whereas it is found on inquiry that the proposed felling will not alter nature or character
or mode of use of the land.

OR

The Applicant has produced the requisite permission under section 4C of the West Bengal
Land Reforms Act, 1955.

14 THE KOLKATA GAZETTE, EXTRAORDINARY, FEBRUARY 9, 2007 [Part I

AND whereas the applicant has deposited the prescribed security amount for plantation of trees to the undersigned;

OR

The applicant has been exempted by the undersigned from the obligation of plantation of trees under sub-rule (2) of rule 6 of the West Bengal Trees (Protection and Conservation in Non-Forest Areas) Rules, 2006.

OR

The applicant has expressed his inability to undertake the plantation to trees by himself and has deposited to the undersigned the amount for the designated agency as prescribed under sub-rule (3) of rule 6 of the West Bengal Trees (Protection and Conservation in Non-Forest Areas) Rules, 2007.

OR

The applicant is a developer and not required to deposit the security amount.

* Strike off if not applicable.
* Strike off the option which is not applicable.

Now, therefore, in persons to the power conferred under sub-section (1) of section 5 of the West Bengal Trees (Protection and Conservation in Non-Forest Areas) Act, 2006, the undersigned permits the applicant to undertake the felling of the trees as included in the Annexure.

The undersigned also permits the applicant (not a developer) under the first proviso to section 8 of the West Bengal Trees (Protection and Conservation in Non-Forest Areas) Act, 2006, to plant only _____ number of trees instead of the number prescribed under sub-rule (1) of rule 6 of the West Bengal Trees (Protection and Conservation in Non-Forest Areas) rules 2007. OR permits the applicant to plant number of trees over different plots(s) of land (as indicated in Condition No. 3 below) because (give reasons) which is in conformity with sub-rule (2) of rule 6 of the West Bengal Trees (Protection and Conservation in Non-Forest Areas) Rules, 2007:

The permission as given above is subject to the following conditions:-

This permit is non-transferable and valid only up to 18/3/2020

1. the applicant (if a developer) shall take up plantation of trees in accordance with the approved plantation plan and the Certificate of Clearance within month(s) from the date of sanction of the building / construction plan by the sanctioning authority:
2. The applicant (if not a developer) shall take up plantation of 1160 number of trees 222 nos over the Plot(s) No. 85, Basudebpur mouza within 3 months from the date of issue of this permit:

Part II

THE KOLKATA GAZETTE, EXTRAORDINARY, FEBRUARY 9, 2007 15

- As provided in section 10 of the West Bengal Trees (Protection and Conservation in Non-Forest Areas) Act, 2006, the applicant (if not a developer) shall start preparatory work for plantation within sixty days from the date for permit or the date of receipt of directions from the undersigned, as the case may be, and shall undertake plantation for trees in accordance with such directions;
- The applicant shall inform the undersigned in writing immediately on completion of the plantation of trees;
- The applicant shall, within a week of carrying out felling of trees, submit a report to the undersigned indicating the total number of logs and firewood produced against each species;
- Stumps of the felled trees shall be retained for a least one month from the date of felling;
- The felling and carriage of trees shall not be carried out after the sun-set and before the sun-rise.
- This permission is subject to the provisions of the West Bengal forest (Establishment and Regulation of Saw Mills and Other Wood-based Industries) Rules, 1982 and The West Bengal Forest Produce Transit Rules, 1959.
- This permit should be produced for inspection on demand to the undersigned or any of the authorities specified in sections 15 and 17 of the West Bengal Trees (Protection and Conservation in Non-Forest Areas) Act, 2006.

(Signature of the Competent Authority)

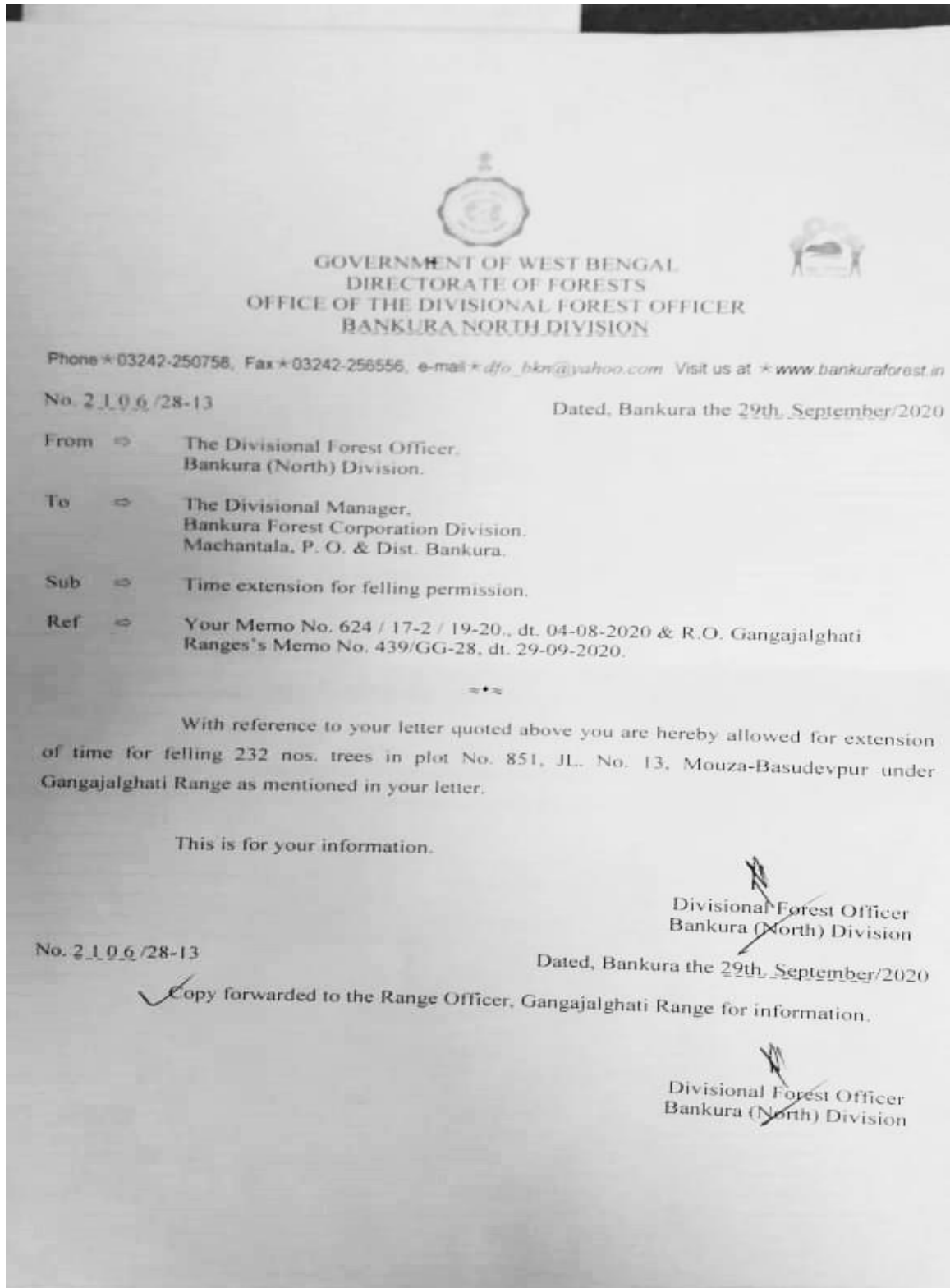
Name : D. Pyne

Designation FR

Official Seal : ... **Permit Range Officer**
Gangajalghat Range

* Strike off if not applicable.

Copy of extension letter (Tree felling- VALIDITY)



COMPLIANCE OF PERMISSION FOR FELLING OF TREES -PKG-BK/03

Sl. No.	General Conditions for Permission for Felling of Trees	Compliance Status	Remarks
1	The applicant shall take up plantation of trees in accordance with the approved plantation plan and the certificate of clearance within months from date of sanction of the building/construction plan by the sanctioning authority.	Partially done	5000 no. of plantation done at WTP site during monsoon, however due to lack of proper care and cattle movement, only 50% survival observed (mainly local species of mango, sonajhuri and palash). Balance plantation suggested after completion of site boundary/ before onset of this year monsoon.
2	The applicant shall take up planation of 1160 number of trees 232 nos. over the Plot No. 851, Basudevpur Mouza within 3 months from the date of issue of this permit.	Partially done	Re-plantation will be taken once the construction of boundary wall completed
3	As provided in section 10 of the West Bengal Trees (Protection and Conservation in non-forest areas) Act, 2006, the applicant shall start preparatory work for plantation within sixty days from the date for permit or the date of receipt of directions from the undersigned, as the case may be, and shall undertake plantation for trees in accordance with such directions.	Partially done	2000 no. of plantation done at WTP site during last monsoon, however due to lack of proper care and cattle movement, survival rate is not good. Replantation suggested after completion of site boundary wall/ before onset of this year monsoon.
4	The applicant shall inform the undersigned in writing immediately on completion of the plantation of trees.	Not done	Will inform in writing on completion of plantation of trees.
5	The applicant shall, within a week of carrying out felling of trees, submit a report to the undersigned indicating the total number of logs and firewood produced against each species.	Not Applicable	Felling of trees carried out by the respective Forest Department only.
6	Stamps of the felled trees shall be retained for a least one month from the date of felling.	Not applicable	Felling of trees carried out by the respective Forest Department only.
7	The felling and carriage of trees shall not be carried out after the sun-set and before the sun-rise.	Complied	No tree felling carried out after sun-set and before sun-rise.

PURBA MEDINIPUR

Package EM/01

NOC for tree felling from INTAKE(MIRPUR) to GANJANARYANPUR (98 Nos)

Part I] THE KOLKATA GAZETTE, EXTRAORDINARY, FEBRUARY 9, 2007 13

Form III

Form for Permission for Felling / Disposing of Trees in Non-Forest Areas
[See Rule 5 (2)]

Permit No. 227/AFR-17 Dated: 16/10/2020

Whereas the applicant, Sri/Smt./Messrs Amritan Chatterjee, office of the ex. eng.
Address: 1, W. Pk., T. B. Rd. has submitted an application with the prescribed fee on for permission for felling / disposing of trees for the purpose of rippe for drinking water at the following site:

(a) Location :
(b) Details of Plot(s) of Land : Plot no - 11, 55, 60, 140, 145, 52, 61
Jh. No. - 46, 49, 53, 54.
Dist. - Nandyalpur, Batabara, Talabari, Ichapur, Mirpur.

AND Whereas the undersigned is satisfied with regard to the legality of documents towards the proof of ownership or lease of the land on which such tree stands;

AND Whereas the purpose for which the trees are required to be felled is in conformity with rule 4 (1) of the West Bengal Trees (Protection and Conservation in Non-Forest Areas) Rules, 2006 :

AND Whereas an inquiry in the prescribed manner has been carried out on and the undersigned has examined the inquiry report with due care;

AND Whereas the land in question belongs to the Tea Garden and the applicant has produced a specific scheme framed under the provisions of the Plantations Labour Act, 1951 for utilizing the sale proceeds strictly for the purpose of welfare of the labourers;

AND Whereas the applicant is a developer who has already obtained a Certificate of Clearance No. dated Issued by the undersigned and sanction of the building / construction plan by the sanctioning authority, viz. vide his letter No. Dated

AND Whereas it is found on inquiry that the proposed felling will not alter nature or character or mode of use of the land.

OR

The Applicant has produced the requisite permission under section 4C of the West Bengal Land Reforms Act, 1955.

Allow to fell
[Signature]
Forest Range Officer
N.R. Panchayat, Nandyalpur
16/10/2020

AND whereas the applicant has deposited the prescribed security amount for plantation of trees to the undersigned;

OR

The applicant has been exempted by the undersigned from the obligation of plantation of trees under sub-rule (2) of rule 6 of the West Bengal Trees (Protection and Conservation in Non-Forest Areas) Rules, 2006;

OR

The applicant has expressed his inability to undertake the plantation to trees by himself and has deposited to the undersigned the amount for the designated agency as prescribed under sub-rule (3) of rule 6 of the West Bengal Trees (Protection and Conservation in Non-Forest Areas) Rules, 2007.

OR

The applicant is a developer and not required to deposit the security amount.

- * Strike off if not applicable.
- * Strike off the option which is not applicable.

Now, therefore, in persons to the power conferred under sub-section (1) of section 5 of the West Bengal Trees (Protection and Conservation in Non-Forest Areas) Act, 2006, the undersigned permits the applicant to undertake the felling of the trees as included in the Annexure.

The undersigned also permits the applicant (not a developer) under the first proviso to section 8 of the West Bengal Trees (Protection and Conservation in Non-Forest Areas) Act, 2006, to plant only 498 number of trees instead of the number prescribed under sub-rule (1) of rule 6 of the West Bengal Trees (Protection and Conservation in Non-Forest Areas) rules 2007. OR permits the applicant to plant 498 number of trees over different plots(s) of land (as indicated in Condition No. 3 below) because (give reasons), which is in conformity with sub-rule (2) of rule 6 of the West Bengal Trees (Protection and Conservation in Non-Forest Areas) Rules, 2007;

The permission as given above is subject to the following conditions:-

This permit is non-transferable and valid only up to

1. the applicant (if a developer) shall take up plantation of trees in accordance with the approved plantation plan and the Certificate of Clearance within month(s) from the date of sanction of the building / construction plan by the sanctioning authority;
2. The applicant (if not a developer) shall take up plantation of 498 number of trees over the Plot(s) No. 1155, 66, 148, 448, 50, 66 within 1 (one) months from the date of issue of this permit;

Part I] THE KOLKATA GAZETTE, EXTRAORDINARY, FEBRUARY 9, 2007 15

3. As provided in section 10 of the West Bengal Trees (Protection and Conservation in Non-Forest Areas) Act, 2006, the applicant (if not a developer) shall start preparatory work for plantation within sixty days from the date for permit or the date of receipt of directions from the undersigned, as the case may be, and shall undertake plantation for trees in accordance with such directions;
4. The applicant shall inform the undersigned, in writing immediately on completion of the plantation of trees;
5. The applicant shall, within a week of carrying out felling of trees, submit a report to the undersigned indicating the total number of logs and firewood produced against each species;
6. Stamps of the felled trees shall be retained for a least one month from the date of felling;
7. The felling and carriage of trees shall not be carried out after the sun-set and before the sun-rise.
8. This permission is subject to the provisions of the West Bengal forest (Establishment and Regulation of Saw Mills and Other Wood-based Industries) Rules, 1982 and The West Bengal Forest Produce Transit Rules, 1959.
9. This permit should be produced for inspection on demand to the undersigned or any of the authorities specified in sections 15 and 17 of the West Bengal Trees (Protection and Conservation in Non-Forest Areas) Act, 2006.

(Signature of the Competent Authority)

Name : Bakosh Kumar Maiti

Designation : F.O.

Official Seal :

* Strike off if not applicable.

Annexure To Form III

Permit Number

Date:

Number of Tree	Location (Plot No.)	Species	Diameter at Breast-Height (in cm)	Condition of the tree
54 nos		Coconut		
9 "		K. chaur.		
8 "		Aksh.		
5 "		Peepal		
5 "		Neem		
1 "		Banyan		
3 "		Sitab		
1 "		Tamarind		
1 "		Kadam		
4 "		Sham		
2 "		Mahajir		
1 "		Chhatra		
3 "		Jali		
1 "		Kashmir		

Bhd = 98 m

ABSTRACT

Species	Total No. of Trees
A.
B.
C.
D.
E.

Grand Total 98 m.

(Signature of the Competent Authority)
 Name: Prakash Kumar Mahto
 Designation: For.
 Official Seal: Forest Range Office

Package EM/01

NOC FOR tree felling from MOGRAJPUR TO CHAKPATNA (698 Nos)

Part I] THE KOLKATA GAZETTE, EXTRAORDINARY, FEBRUARY 9, 2007 13

Form III
Form for Permission for Felling / Disposing of Trees in Non-Forest Areas
[See Rule 5 (2)]

Permit No. 010/PK-28 Dated: 11/01/2024

Whereas the applicant, Sri/Smt./Messrs Balaram, Nandapada Baraghum G. P.
Address : Nandapur, Chantapur, Purba Medinipur has
submitted an application with the prescribed fee on 04/01/24 for permission for felling /
disposing of trees for the purpose of installation of P.H.F. pipes at the following site :

(a) Location : 2nd Post, Talpa
(b) Details of Plot(s) of Land : 137, 1324, 1325, 1328, 1329, 1376

AND Whereas the undersigned is satisfied with regard to the legality of documents towards
the proof of ownership or lease of the land on which such tree stands;

AND Whereas the purpose for which the trees are required to be felled is in conformity
with rule 4 (1) of the West Bengal Trees (Protection and Conservation in Non-Forest Areas)
Rules, 2006 :

AND Whereas an inquiry in the prescribed manner has been carried out on
and the undersigned has examined the inquiry report with due care;

AND Whereas the land in question belongs to the Tea Garden and the applicant
has produced a specific scheme framed under the provisions of the Plantations Labour Act,
1951 for utilizing the sale proceeds strictly for the purpose of welfare of the labourers;

AND Whereas the applicant is a developer who has already obtained a Certificate of Clearance
No. dated Issued by the undersigned and sanction of the
building / construction plan by the sanctioning authority, viz.
..... vide his letter No. Dated

AND Whereas it is found on inquiry that the proposed felling will not alter nature or character
or mode of use of the land.

OR

The Applicant has produced the requisite permission under section 4C of the West Bengal
Land Reforms Act, 1955.

14

THE KOLKATA GAZETTE, EXTRAORDINARY, FEBRUARY 9, 2007

[Part]

AND whereas the applicant has deposited the prescribed security amount for plantation of trees to the undersigned;

OR

The applicant has been exempted by the undersigned from the obligation of plantation of trees under sub-rule (2) of rule 6 of the West Bengal Trees (Protection and Conservation in Non-Forest Areas) Rules, 2006;

OR

The applicant has expressed his inability to undertake the plantation to trees by himself and has deposited to the undersigned the amount for the designated agency as prescribed under sub-rule (3) of rule 6 of the West Bengal Trees (Protection and Conservation in Non-Forest Areas) Rules, 2007.

OR

The applicant is a developer and not required to deposit the security amount.

- * Strike off if not applicable.
- * Strike off the option which is not applicable.

Now, therefore, in persons to the power conferred under sub-section (1) of section 5 of the West Bengal Trees (Protection and Conservation in Non-Forest Areas) Act, 2006, the undersigned permits the applicant to undertake the felling of the trees as included in the Annexure.

The undersigned also permits the applicant (not a developer) under the first proviso to section 8 of the West Bengal Trees (Protection and Conservation in Non-Forest Areas) Act, 2006, to plant only 20 number of trees instead of the number prescribed under sub-rule (1) of rule 6 of the West Bengal Trees (Protection and Conservation in Non-Forest Areas) rules 2007. OR permits the applicant to plant number of trees over different plots(s) of land (as indicated in Condition No. 3 below) because (give reasons), which is in conformity with sub-rule (2) of rule 6 of the West Bengal Trees (Protection and Conservation in Non-Forest Areas) Rules, 2007;

The permission as given above is subject to the following conditions:-

This permit is non-transferable and valid only up to

1. the applicant (if a developer) shall take up plantation of trees in accordance with the approved plantation plan and the Certificate of Clearance within month(s) from the date of sanction of the building / construction plan by the sanctioning authority;
2. The applicant (if not a developer) shall take up plantation of number of trees over the Plot(s) No. within months from the date of issue of this permit;

Part I]

THE KOLKATA GAZETTE, EXTRAORDINARY, FEBRUARY 9, 2007

15

3. As provided in section 10 of the West Bengal Trees (Protection and Conservation in Non-Forest Areas) Act, 2006, the applicant (if not a developer) shall start preparatory work for plantation within sixty days from the date for permit or the date of receipt of directions from the undersigned, as the case may be, and shall undertake plantation for trees in accordance with such directions;
4. The applicant shall inform the undersigned in writing immediately on completion of the plantation of trees;
5. The applicant shall, within a week of carrying out felling of trees, submit a report to the undersigned indicating the total number of logs and firewood produced against each species;
6. Stamps of the felled trees shall be retained for a least one month from the date of felling.
7. The felling and carriage of trees shall not be carried out after the sun-set and before the sun-rise.
8. This permission is subject to the provisions of the West Bengal forest (Establishment and Regulation of Saw Mills and Other Wood-based Industries) Rules, 1982 and The West Bengal Forest Produce Transit Rules, 1959.
9. This permit should be produced for inspection on demand to the undersigned or any of the authorities specified in sections 15 and 17 of the West Bengal Trees (Protection and Conservation in Non-Forest Areas) Act, 2006.

(Signature of the Competent Authority)

Name : SAMIK JANA
Designation Forest Range Officer, Borkul Range

Official Seal :

Range Officer
Borkul Forest Range

* Strike off if not applicable.



Annexure To Form III

Permit Number

Date :

Number of Tree	Location (Plot No.)	Species	Diameter at Breast-Height (in cm)	Condition of the tree
350	1394, 1395	Akshuni	25-30 cm	Standing
43	1396, 1399	"	25-40 cm	Standing
305	1376, 1378	Eucalyptus	25-35 cm	Standing

ABSTRACT

- Species
- A. Akshuni
 - B. Eucalyptus
 - C. /
 - D. /
 - E. /

Total No. of Trees

293

305

Grand Total 698 (6 is hundred and in eight only)

(Signature of the Competent Authority)

Name : SAMIK JANA

Designation : Forest Range Officer, Bally

Official Seal : Bally Forest Range Officer

Package EM 01

NOC for Tree Felling - Ganjanarayanpur to Nandakumar Market (201 nos.)

Part I] THE KOLKATA GAZETTE, EXTRAORDINARY, FEBRUARY 9, 2007

Form III

Form for Permission for Felling / Disposing of Trees in Non-Forest Areas
[See Rule 5 (2)]

Permit No. 238/17 Dated: 22/01/24

Whereas the applicant, Sri/Smt./Messrs Superintending Engineer, PU,
Address: PM, WBDWSIP, PHE, Bannardighan, Tarapur has
submitted an application with the prescribed fee on 09.01.24 for permission for felling /
disposing of trees for the purpose of Water supply Project at the following site:

(a) Location :
(b) Details of Plot(s) of Land : Mouza: Paramhanspur, J.L. 64,
Paramanandapur, J.L. 60, Puyada, J.L. 35,
Hariharapur, J.L. 42, Naradipi, 41, Gurdya 45,
Taragaria, J.L. 51, D. Srikrishnapur, J.L. 59,

AND Whereas the undersigned is satisfied with regard to the legality of documents towards
the proof of ownership or lease of the land on which such tree stands;
Khejuria - 86 Janubasan - 87

AND Whereas the purpose for which the trees are required to be felled is in conformity
with rule 4 (1) of the West Bengal Trees (Protection and Conservation in Non-Forest Areas)
Rules, 2006 :

AND Whereas an inquiry in the prescribed manner has been carried out on 09.01.2024
and the undersigned has examined the inquiry report with due care;

AND Whereas the land in question belongs to the Tea Garden and the applicant
has produced a specific scheme framed under the provisions of the Plantations Labour Act,
1951 for utilizing the sale proceeds strictly for the purpose of welfare of the labourers;

AND Whereas the applicant is a developer who has already obtained a Certificate of Clearance
No. dated Issued by the undersigned and sanction of the
building / construction plan by the sanctioning authority, viz.
..... vide his letter No. Dated

AND Whereas it is found on inquiry that the proposed felling will not alter nature or character
or mode of use of the land.

OR

The Applicant has produced the requisite permission under section 4C of the West Bengal
Land Reforms Act, 1955.

14 THE KOLKATA GAZETTE, EXTRAORDINARY, FEBRUARY 9, 2007 [Part I

AND whereas the applicant has deposited the prescribed security amount for plantation of trees to the undersigned;

OR

The applicant has been exempted by the undersigned from the obligation of plantation of trees under sub-rule (2) of rule 6 of the West Bengal Trees (Protection and Conservation in Non-Forest Areas) Rules, 2006 ;

OR

The applicant has expressed his inability to undertake the plantation to trees by himself and has deposited to the undersigned the amount for the designated agency as prescribed under sub-rule (3) of rule 6 of the West Bengal Trees (Protection and Conservation in Non-Forest Areas) Rules, 2007.

OR

The applicant is a developer and not required to deposit the security amount.

- * Strike off if not applicable.
- * Strike off the option which is not applicable.

Now, therefore, in persons to the power conferred under sub-section (1) of section 5 of the West Bengal Trees (Protection and Conservation in Non-Forest Areas) Act, 2006, the undersigned permits the applicant to undertake the felling of the trees as included in the Annexure.

The undersigned also permits the applicant (not a developer) under the first proviso to section 8 of the West Bengal Trees (Protection and Conservation in Non-Forest Areas) Act, 2006, to plant only _____ number of trees instead of the number prescribed under sub-rule (1) of rule 6 of the West Bengal Trees (Protection and Conservation in Non-Forest Areas) rules 2007. OR permits the applicant to plant _____ number of trees over different plots(s) of land (as indicated in Condition No. 3 below) because (give reasons) _____, which is in conformity with sub-rule (2) of rule 6 of the West Bengal Trees (Protection and Conservation in Non-Forest Areas) Rules, 2007;

The permission as given above is subject to the following conditions:-

This permit is non-transferable and valid only up to 18.02.2024 .

1. the applicant (if a developer) shall take up plantation of trees in accordance with the approved plantation plan and the Certificate of Clearance within ...12... month(s) from the date of sanction of the building / construction plan by the sanctioning authority;
2. The applicant (if not a developer) shall take up plantation of number of trees over the Plot(s) No. within months from the date of issue of this permit;

Part 1] THE KOLKATA GAZETTE, EXTRAORDINARY, FEBRUARY 9, 2007 15

3. As provided in section 10 of the West Bengal Trees (Protection and Conservation in Non-Forest Areas) Act, 2006, the applicant (if not a developer) shall start preparatory work for plantation within sixty days from the date for permit or the date of receipt of directions from the undersigned, as the case may be, and shall undertake plantation for trees in accordance with such directions;
4. The applicant shall inform the undersigned in writing immediately on completion of the plantation of trees;
5. The applicant shall, within a week of carrying out felling of trees, submit a report to the undersigned indicating the total number of logs and firewood produced against each species;
6. Stumps of the felled trees shall be retained for a least one month from the date of felling;
7. The felling and carriage of trees shall not be carried out after the sun-set and before the sun-rise.
8. This permission is subject to the provisions of the West Bengal forest (Establishment and Regulation of Saw Mills and Other Wood-based Industries) Rules, 1982 and The West Bengal Forest Produce Transit Rules, 1959.
9. This permit should be produced for inspection on demand to the undersigned or any of the authorities specified in sections 15 and 17 of the West Bengal Trees (Protection and Conservation in Non-Forest Areas) Act, 2006.

(Signature of the Competent Authority)

Name : Satyajit Roy, WBFS.

Designation Divisional Forest Officer

S. Roy
Divisional Forest Officer,

Official Seal : Purba Medinipur Forest Dist.

* Strike off if not applicable.

ABSTRACT


Species	Total No. of Trees
A. <u>Segun, Mahagoni</u>	<u>02</u>
B. <u>Kanthal, Akashmoni</u>	<u>08</u>
C. <u>Sirish, Eucalyptus, Mango, Jam, Tal</u>	<u>19</u>
D. <u>Kadam</u>	<u>05</u>
E. <u>Coconut, Chalta, Bel etc.</u>	<u>167</u>
Grand Total	<u>201</u>

Place: Ganapati Nagar,
Date: 16.01.24 Nimitouzi

(Signature of the Competent Authority)
Name: Satyajit Roy WBFS,
Designation: Divisional Forest Officer

Satyajit Roy
Divisional Forest Officer,
Purba Medinipur Forest Divn.

Official Seal ✓



Package – EM 02

NOC for tree felling for Sonachura (63 Nos)

Part I] THE KOLKATA GAZETTE EXTRAORDINARY, FEBRUARY 9, 2007 13

Form for Permission for Felling or Disposal of Trees in Non-Forest Areas
[See Rule 3 (2)]

Permit No. 12/BK-28/22-23 Dated 15-06-2022

Whereas the applicant, Sri/Smt/Messrs Pradhar Sonachura G.P. has submitted an application with the prescribed fee on 10-06-2022 for permission for felling and disposal of trees for the purpose of extension of canal at the following site:

(a) Location: Gangrachar water line

(b) Details of Plot(s) of Land: 253, 250, 251, 249.

AND Whereas the undersigned is satisfied with regard to the legality of documents towards the proof of ownership or lease of the land on which such tree stands;

AND Whereas the purpose for which the trees are required to be felled is in conformity with rule 4 (1) of the West Bengal Trees (Protection and Conservation in Non-Forest Areas) Rules, 2006 :

AND Whereas an inquiry in the prescribed manner has been carried out on and the undersigned has examined the inquiry report with due care

AND Whereas the land in question belongs to the Tea Garden and the applicant has produced a specific scheme framed under the provisions of the Plantations Labour Act, 1951 for utilizing the sale proceeds strictly for the purpose of welfare of the labourers;

AND Whereas the applicant is a developer who has already obtained a Certificate of Clearance No. dated Issued by the undersigned and sanction of the building / construction plan by the sanctioning authority, viz. vide his letter No. Dated


AND Whereas it is found on inquiry that the proposed felling will not alter nature or character or mode of use of the land.

OR

The Applicant has produced the requisite permission under section 4C of the West Bengal Land Reforms Act, 1955

14 THE KOLKATA GAZETTE, EXTRAORDINARY, FEBRUARY 9, 2007 Part I

AND whereas the applicant has deposited the prescribed security amount for plantation of trees to the undersigned;


OR

The applicant has been exempted by the undersigned from the obligation of plantation of trees under sub-rule (2) of rule 6 of the West Bengal Trees (Protection and Conservation in Non-Forest Areas) Rules, 2006.

OR

The applicant has expressed his inability to undertake the plantation of trees by himself and has deposited to the undersigned the amount for the designated agency as prescribed under sub-rule (3) of rule 6 of the West Bengal Trees (Protection and Conservation in Non-Forest Areas) Rules, 2007

OR

The applicant is a developer and not required to deposit the security amount

- * Strike off if not applicable.
- * Strike off the option which is not applicable.

Now, therefore, in persons to the power conferred under sub-section (1) of section 5 of the West Bengal Trees (Protection and Conservation in Non-Forest Areas) Act, 2006, the undersigned permits the applicant to undertake the felling of the trees as included in the Annexure.


The undersigned also permits the applicant (not a developer) under the first proviso to section 8 of the West Bengal Trees (Protection and Conservation in Non-Forest Areas) Act, 2006, to plant only _____ number of trees instead of the number prescribed under sub-rule (1) of rule 6 of the West Bengal Trees (Protection and Conservation in Non-Forest Areas) rules 2007. OR permits the applicant to plant _____ number of trees over different plot(s) of land (as indicated in Condition No. 3 below) because (give reasons) _____ which is in conformity with sub-rule (2) of rule 6 of the West Bengal Trees (Protection and Conservation in Non-Forest Areas) Rules, 2007;

The permission as given above is subject to the following conditions:-

This permit is non-transferable and valid only up to 15.06.2026 *up to before sunset*

1. the applicant (if a developer) shall take up plantation of trees in accordance with the approved plantation plan and the Certificate of Clearance within _____ months from the date of sanction of the building / construction plan by the sanctioning authority.
2. The applicant (if not a developer) shall take up plantation of _____ number of trees _____ over the Plot(s) No. _____ within _____ months from the date of issue of this permit;

Part I] THE KOLKATA GOVERNMENT EXTRAORDINARY, FEBRUARY 9, 2007




3. As provided in section 10 of the West Bengal Trees (Protection and Conservation in Non-Forest Areas) Act, 2006, the applicant (if not a developer) shall start preparatory work for plantation within sixty days from the date for permit or the date of receipt of directions from the undersigned, as the case may be, and shall undertake plantation for trees in accordance with such directions;
4. The applicant shall inform the undersigned in writing immediately on completion of the plantation of trees;
5. The applicant shall, within a week of carrying out felling of trees, submit a report to the undersigned indicating the total number of logs and firewood produced against each species;
6. Stumps of the felled trees shall be retained for a least one month from the date of felling;
7. The felling and carriage of trees shall not be carried out after the sun-set and before the sun-rise.
8. This permission is subject to the provisions of the West Bengal forest (Establishment and Regulation of Saw Mills and Other Wood-based Industries) Rules, 1982 and The West Bengal Forest Produce Transit Rules, 1959.
9. This permit should be produced for inspection on demand to the undersigned or any of the authorities specified in sections 15 and 17 of the West Bengal Trees (Protection and Conservation in Non-Forest Areas) Act, 2006.

(Signature of the Competent Authority)

Name : **SAMUK JANA**

Designation: **Forest Ranger, Bajkul Range**

Official Seal : 

* Strike off if not applicable.

Tree Plantation by EM/01 (16.08.2023) – Dibakarpur village



Tree Plantation by EM/02 (Saudkhali, Nandigram 1)



Sapling plantation near Saudkhali Char, Gangra (Nandigram 1)



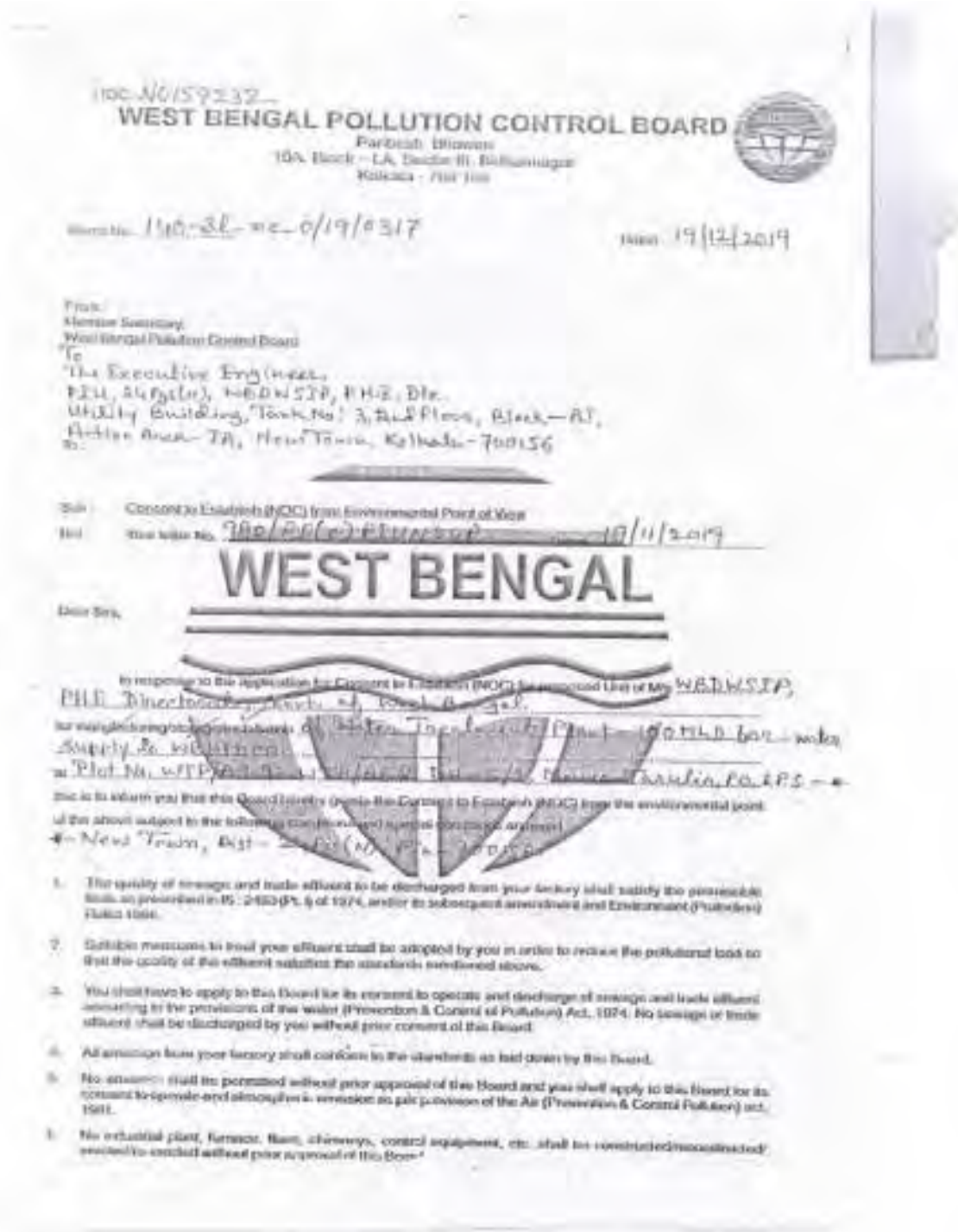
Current growth of Saplings planted



APPENDIX -5: CTE FOR WTP AND BATCHING PLANT

NORTH 24 PGS

Package N 24 pgs/01- Water Treatment Plant – CTE



Annexure to NOC Sl. NO159232

Special Conditions issued to Water Treatment Plant -100 MLD by WBDWSIP, PHE Directorate, Govt. of West Bengal located at Plot No. WTP/A1 TO WTP/A6 & Dist-5/1, Mouza-Tarulia, P.D&P.S-New Town, Dist-24 Pgs(N), PH-700156.

A. Emission:- Nil


B. Raw Water Treatment :-

Raw river water, 100 MLD to be treated in Water Treatment Plant as per process description and finally treated water to be supplied to WBHDCO through the supply pipeline.

C. Solid Waste :- WTP sludge to be used for landfilling and PVC/Plastic waste /gunny bags to be sold.

D. General :-

1. The unit shall take proper measures to control air, water and noise pollution.
2. This NOC is valid only subject to obtaining permission/clearances from the other Competent Authorities as applicable.
3. Ambient noise level not to exceed the permissible limit.
4. No addition/alteration/modification can be done without prior permission from the State Board.
5. The unit shall obtain Consent to Operate of the State Board before starting operation.
6. Good housekeeping to be maintained.
7. Adequate green belt around the unit to be developed.
8. This NOC is valid upto 30.11.2026 for setting up the Water Treatment Plant - 100 MLD capacity.


Environmental Engineer
West Bengal Pollution Control Board
Environmental Engineer
W. B. Pollution Control Board
Operation & Execution Cell

1981. BY THE MEMBER IN CHARGE
emission as per provision of the Air (Prevention & Control Pollution) Act,

E. No industrial plant, furnace, flues, chimneys, control equipment, etc. shall be constructed/reconstructed/erected/re-erected without prior approval of this Board.

COMPLIANCE OF CTE

Sl. No.	General Conditions of NOC for WTP	Compliance Status	Remarks
1	The quality of sewage and trade effluent to be discharged from your factory shall satisfy the permissible limits as prescribed in IS: 2490 (Pt 1) of 1974, and /or its subsequent amendment and Environment (Protection) Rules 1986.	Complied	It is a Zero Discharge facility
2	Suitable measures to treat your effluent shall be adopted by you in order to reduce the pollution at load so that the quality of the effluent satisfies the standards mentioned above.	Complied	Designed to meet regulatory requirements
3	You shall have to apply to this Board for its consent to operate and discharge of sewage and trade effluent according to the provisions of the water (Prevention & Control of Pollution) Act. 1974. No sewage or trade effluent shall be discharged by you without prior consent of this Board.	To be complied during operation phase	Consent to Operate will be obtained prior to operation
4	All emissions from your factory shall conform to the standards as laid down by this Board.	Not applicable presently	Regulatory compliance to air emissions will be ensured, as applicable
5	No emission shall be permitted without prior approval of this Board and you shall apply to this Board for its consent to operate and atmospheric emission as per provision of the Air (Prevention & Control Pollution) act, 1981.	To be complied during operation phase	Consent to Operate will be obtained prior to operation
6	No industrial plant, furnace. flues, chimneys., control equipment, etc. shall be constructed/ reconstructed/ erected/ re-erected without prior approval of this Board.	Not applicable	
7	You shall Comply with:		
	(i) Water (Prevention and Control of Pollution) Cess Act, 1977, if applicable.	Not Applicable	Repealed
	(ii) Water (Prevention and Control of Pollution) Cess Act, 1978, if applicable.	Not Applicable	Repealed
	(iii) Environment (Protection) Act, 1986	Complied	
	(iv) Environment (Protection) Rules, 1986	Complied	
	(v) Hazardous Wastes (Management and Handling) Rules, 1989 and Amended Rules, 2000	Complied	Authorized vendor is used for disposal
	(vi) Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 and Amended Rules, 2000	Complied	Authorization for additional chlorine toners will be obtained prior to operation
	(vii) Manufacture, Use, Import and Storage and Hazardous Micro-Organisms, Genetically Engineered Organisms or Cell Rules. 1989	Not Applicable	
	(viii) The Public Liability Insurance Act, 1991 and Amended Act, 1992	Complied	Covered under all risk insurance policy
	(ix) The Public Liability Insurance Rules, 1991 and Amended Rules, 1993	Complied	Covered under all risk insurance policy

Sl. No.	General Conditions of NOC for WTP	Compliance Status	Remarks
	(x) Biomedical Wastes (Management & Handling) Rules, 1998 and Amended Rules 2000, if applicable.	Not Applicable	Minimal first-aid related bio-medical wastes are generated.
	(xi) Recycled Plastics Manufacture and Usage Rules 1999, if applicable and	Complied	
	(xii) Ozone Depleting Substances (Regulation & Control) Rules 2000, if applicable	Complied	Designed to meet regulatory requirements
SPECIAL CONDITION:			
A.	Emission - Nil	-	
B.	Raw Water Treatment	-	
	Raw river water: 100 MLD to be treated in Water Treatment Plant as per process description and finally treated water to be supplied to WBHIDCO through the supply pipeline.		
C.	Solid Waste: WTP sludge to be used for landfilling and PVC/Plastic waste /gunny bags to be sold.	Complied	
D	General:		
	1. The unit shall take proper measures to control air, water and noise pollution.	To be complied during operation phase	
	2. This NOC is valid only subject to obtaining permission/clearances from the other Competent Authorities as applicable.	-	Noted
	3. Ambient noise level not to exceed the permissible limit.	Complied	Refer: Ambient Noise Monitoring data
	4. No addition/alteration/modification can be done without prior permission from the State Board.	Complied	
	5. The unit shall obtain Consent to Operate of the State Board before starting operation.	-	Noted
	6. Good housekeeping to be maintained.	Complied	
	7. Adequate green belt around the unit to be developed.	-	Noted
	8. This NOC is valid upto 30.11.2026 for setting up the Water Treatment Plant - 100 MLD capacity.	-	Noted

Batching Plant -CTE

WEST BENGAL POLLUTION CONTROL BOARD
PARIBESH BHAWAN
10A, Block-LA, Sector-III, Bidhannagar, Kolkata - 700 006

Registration No - 163173

Certificate for "Consent to Establish"
No. 40/CDE(G)/2020/DIC/NOTICE-1/17 **S.A.F. GREEN CATEGORY** Date _____

The West Bengal Pollution Control Board hereby grants its "Consent to Establish" under section 25 (j) of Water (Prevention & Control of Pollution) Amendment Act - 1988 and section 21 of Air (Prevention & Control of Pollution) Amendment Act - 1987 and the Rules and Orders made thereunder to

M/s. FFIL-RIL JV
Chief Operating Officer - Sri. Sujog Das

for its unit located at
Action Area-I, New Town near tank No. 7, New Town, Kol-700156.

to establish the industrial plant and to manufacture/store/install Ready-Mix Concrete at
Bag No. 341 Shalid, L. No. 2, Mouza-Tarulia and to discharge liquid effluents through outlets/outfalls and to emit the gaseous emission in accordance with the conditions as mentioned below provided on any day at any instant the quantity and quality of liquid discharge and gaseous emission shall not exceed the permissible limits specified in the Environment (Protection) Act - 1986.

Breach of the conditions and/or failure to comply with the directions/conditions as stated below shall render the applicant liable for prosecution under the provisions of Water (Prevention & Control of Pollution) Act - 1974 and Air (Prevention & Control of Pollution) Act - 1981

The State Board reserves its right to revoke, withdraw or make any reasonable variation of the conditions or change or alter this consent by giving one month's notice to the applicant.

Conditions

01. The Applicant shall be responsible for the quantity and quality of liquid effluent and gaseous emissions
02. The Applicant shall ensure maintenance of the quality of liquid effluent discharge and air emissions within statutory limits as mentioned in Environment (Protection) Act - 1986 and Rules made thereunder
03. The Applicant shall adopt suitable measures to reduce the liquid effluent to reduce the pollutional load so that quality of the water meets the prescribed standard
04. The Applicant shall have to apply to this Board for its 'Consent to Operate' as per provisions of Water (Prevention & Control of Pollution) Act 1974 and Air (Prevention & Control of Pollution) Act - 1981 for discharge of liquid effluent and gaseous emissions. No liquid effluent and gaseous emission shall be discharged by the Applicant without prior consent of the Board
05. To bring into any change in industrial plant, furnace, fuels, chimneys, place and/or point discharge of liquid and gaseous effluents, pollution control equipments the Applicant shall obtain prior permission of the Board in this regard
06. The Applicant shall maintain good house keeping, good working condition and take adequate measures for control of pollution from all sources
07. The Applicant shall bring about at least 33% of the available open land under green coverage/plantation
08. The Applicant shall ensure that fugitive emissions from the activity are controlled so as to maintain clean and safe environment in and around the factory premises
09. The Applicant shall provide drainage system for conveying liquid wastes
10. The Applicant shall allow the officers of the Board to enter into the applicant's premises at any reasonable time for inspecting the unit
11. The solid waste generated within the factory premises, sweepings etc. be disposed off scientifically so as not to cause any nuisance/pollution
12. The Applicant should adopt adequate precautionary measures to prevent any inconvenience or annoyance to the denizens of the locality due to its activity or be a cause for environmental concern.
13. In case of using Diesel Generator, adequate precautionary measures to be taken as per norms fixed up by CPCB

* Bag No. 339 - Bil
and Bag No. 340 - Doba
may not be considered.

For and on behalf of the West Bengal Pollution Control Board


Chaleng 17/2/20
General Manager
District Industries Centre
&
Ex-Officio Environment Officer
West Bengal Pollution Control Board

SEAL

SI No.	Conditions	Compliance	Remarks
1.	The applicant shall be responsible for the quantity and quality of liquid effluent and gaseous emissions		Since installation, this batching plant has not yet been operated.
2.	The applicant shall ensure maintaining quantum of liquid effluent discharge and air emissions within statutory limits as mentioned in Environmental (Protection) Rules, 1986 and rules made thereunder		
3.	The applicant shall adopt suitable measures to adapt the liquid effluent to reduce the pollution load so that quality of the sample meets the prescribed standard		
4.	The applicant have to apply to this board for its 'consent to operate' as per provisions of Water (Prevention and control of pollution) Act 1974 and Air (Prevention and Control of Pollution) Act, 1981 for discharge of liquid and gaseous emissions. No liquid effluent and gaseous emission shall be discharged by the applicant without prior consent of the board.		
5.	To bring into any change in industrial plant, furnace, fuels, chimneys, place and /or point discharge of liquid and gaseous effluents, pollution control equipment the Applicant shall obtain permission of the board in this regard		
6.	The applicant shall maintain good housekeeping, good working condition and take adequate measures for control of pollution from all sources.		
7.	The applicant shall bring about at IPurba 33% of the available open land under green coverage/plantation		
8.	The applicant shall ensure that fugitive emissions from the activity are controlled so as to maintain clean and safe environment in and around the factory premises.		
9.	The applicant shall provide drainage system for conveying liquid wastes.		
10.	The applicant shall allow officers of the board to enter into the applicant's premises at any reasonable time for inspecting the limit.		
11.	The solid waste generated within the factory premises, sweepings, etc. be disposed off scientifically so as not to cause any nuisance/pollution		
12.	The applicant should adopt adequate precautionary measures to prevent any inconvenience or annoyance to the denizens of the locality due to its activity or be a cause for environmental concern.		
13.	In case of using Diesel Generator, adequate precautionary measures to be taken as per norms fixed up by CPCB		

Consent to Operate – RMC batching plant

West Bengal Pollution Control Board
Paribesh Bhawan, 10A, Block - LA, Sector III, Bidhannagar
Kolkata - 700 106



Certificate for 'Consent to Operate'
Registration No. - 012 7455

No. 12/Coo(8)/2020/DIC/N 24 Pgs Date: 03-02-2020

GREEN CATEGORY

The West Bengal Pollution Control Board hereby grants its 'Consent to Operate' under section 25 & 26 of the water (Prevention & Control of Pollution) Act, 1974 and under section 21 of the Air (Prevention & Control of Pollution) Act, 1981 and the Rules and Orders made thereunder to M/s F.T.C. Concrete Pvt. Ltd., Director - Sri Sandeep Chindalia for its unit located at Kalikapur, Po - Kashinathpur, P.S. Rajarhat, Dist. N. 24 Pgs. Kolkata - 700135 to run the industrial plant and to manufacture /store / install Ready mix Concrete for a period from 03-02-2020 to 31-01-2027 to operate the industrial plant and to discharge liquid effluents through outlets / outfalls and to emit the gaseous emission in accordance with the conditions as mentioned below provided on any day at any instant the quantity and quality of liquid discharge and gaseous emission shall not exceed the permissible limit as specified in the Environment (Protection) Act, 1986.

Breach of the conditions and / or failure to comply with the directions / conditions as stated below shall render the applicant liable for prosecution under the provisions of Water (Prevention & Control of Pollution) Act, 1974 and Air (Prevention & Control of Pollution) Act, 1981.

The State Board reserves its right to revoke, withdraw or make any reasonable variation of the conditions of or change or alter this consent by giving one month's notice to the applicant.

Conditions No - 724, Kh No - 176, 927, 928, 929, JI No - 90, Mouza - Kalikapur

01. The Applicant shall be responsible for the quantity and quality of liquid effluent and gaseous emissions.
02. The Applicant shall maintain the quality of liquid effluent and gaseous emissions and noise levels within statutory limits as mentioned in Environment (Protection) Act, 1986 *(this consent will be revoked if there is any violation of E.P.A. 1986 or if any complaint is found valid against the industry regarding environment pollution)*
03. The Applicant shall submit applications regarding environment and air emissions by Board-recognised laboratories with their applications, in case of any, discharge / Emission is involved in the process of manufacture.
04. To bring into any change in industrial plant, furnace, flues, chimneys, place and/or point of discharge of liquid and gaseous effluents, pollution control equipments the Applicant shall obtain prior permission of the Board in the regard.
05. The Applicant shall maintain good house keeping, good working condition and take adequate measures for control of pollution from all sources.
06. The Applicant shall bring about at least 33% of the available open land under green coverage/plantation.
07. The Applicant shall control the fugitive emissions from the activity are so as to maintain clean and safe environment in and around the factory premises.
08. The Applicant shall provide drainage system of conveying liquid wastes.
09. The Applicant shall allow the officers of the Board to enter into the applicant's premises at any reasonable time for inspecting the unit.
10. The Applicant shall make an application to the State Board in the prescribed form for renewal of the consent at least 30 days before the date of expiry of this consent.
11. The solid waste generated within the factory premises, sweepings etc. be disposed off scientifically so as not to cause any nuisance / pollution.
12. The Applicant should adopt adequate precautionary measures to prevent any inconvenience or annoyance to the denizens of the locality due to its activity or be a cause for environmental concern.
13. In case of using Diesel Generator, adequate precautionary measures to be taken as per norms fixed up by CPCB.
14. **Date of Commencement - 13-12-2013**

For and on behalf of the West Bengal Pollution Control Board
Chalagopal
General Manager
District Industries Centre
&
District Environment Officer

Seal

BANKURA

Water Treatment plant CTE

Bankura – Package Bk 01 CTE for WTP- NEW LOCATION

Amendment of CTE- PKG BK/01



WEST BENGAL POLLUTION CONTROL BOARD
(Department of Environment, Govt of West Bengal)
Paribesh Bhawan
Bldg. No. 10 A, Block-L.A, Sector-III, Bidhannagar
Kolkata – 700 098
Tel : 0091 (033) 2335-9088 / 8861 / 8211 / 8073 / 6731
2335-0261 / 8212 / 8213 / 7428 / 5975
Fax : 0091 (033) 2335 6730 / 2813
Website : www.wbpcb.gov.in e-mail : wbpcbnet@wbpcb.gov.in

Memo No: 710 - dr_nc_o/20/0054 Date: 28/10/2021

To
The Executive Engineer (Civil)
PIU, Bankura WBDWSIP, Public Health Engineering Dte.
Govt. of West Bengal
Aailakundi, Katjuridanga,
Dist-Bankura, Pin-722102

Sub.: Amendment of Consent to Establish(NOC) for installation of raw Water Treatment Plant (Capacity-44 MLD) abstracted from Mukutmanipur Dam for Indpur & Taldangra Block Water Supply Scheme (Phase-II) under WBDWSIP

Ref.: (i) *Consent to Establish* certificate NO164607 issued vide memo no.221-dr_nc_o/20/0054 dated 16.03.2020
(ii) Your letter Ref no. 145/EE/PIU-Bankura dated 17.09.2021.

Sir,

In reference to the above, this is to inform you that the following amendments are made in the above mentioned Consent to Establish certificate issued by this office:-

The State Board permitted for alternative land located at Kungarbaha Mouza, JL No.159, Plot No.01 and Jhantipahari Mouza, JL No.162, Plot No.02 both under P.S-Khatra, Dist-Bankura for treatment of raw water abstracted from Mukutmanipur Dam for execution of Indpur-Taldangra piped water supply scheme.

This letter may be treated as an annexure to the *Consent to Establish* certificate no. NO164607 dated 16.03.2020. All other terms & conditions of the above mentioned Consent to Establish will remain unchanged.


Yours faithfully,


28/10/21
Environmental Engineer
Operation & Execution Cell
Environmental Engineer
W. B. Pollution Control Board
Operation & Execution Cell

দূষণ মুক্ত নির্মল গঙ্গা চাই

Original CTE

NOC NO164607
WEST BENGAL POLLUTION CONTROL BOARD
Paribesh Bhawan
10A, Block - LA, Sector III, Bidhannagar
Kolkata - 700 105



Memo No. 221-dn-nc-0/20/0054 Dated 16/03/2020

From: Member Secretary,
West Bengal Pollution Control Board
To: The Executive Engineer (Civil)
PIU, Bankura WBDWSIP, Public Health Engineering Dte.
Govt. of West Bengal.
Plot No. 02, Lohadihi Road, P.O. & P.S. - Khatra
To: Dist- Bankura, Pin - 722140.

Sub: Consent to Establish (NOC) from Environmental Point of View
Ref: Your letter No. 452/EB/PSU - Bankura Dated 08/02/2020

WEST BENGAL

Dear Sirs,

In response to the application for Consent to Establish (NOC) for proposed Unit of M/s Public Health Engineering Dte. Project Implementation Unit (PIU), Bankura WBDWSIP Govt of WB. for manufacturing and installation of Rain water Treatment Plant (Capacity 44 MLD) for Tadangan Block Water Supply Scheme (Chorandi) WBDWSIP at Plot No. 02, Lohadihi Road, P.O. & P.S. - Khatra, Dist- Bankura, Pin-722140. Dist- Bankura, Pin-722140. this is to inform you that this Board hereby grants the Consent to Establish (NOC) from the environmental point of the above subject to the following conditions and special conditions annexed.

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

NOG NO164607

7. You shall comply with
- (i) Water (Prevention and Control of Pollution) Cess Act, 1977, if applicable.
 - (ii) Water (Prevention and Control of Pollution) Cess Act, 1978, if applicable.
 - (iii) Environment (Protection) Act, 1986
 - (iv) Environment (Protection) Rules, 1986
 - (v) Hazardous Wastes (Management and Handling) Rules, 1989 and Amended Rules, 2000
 - (vi) Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 and Amended Rules, 2000
 - (vii) Manufacture, Use, Import and Storage and Hazardous Micro-Organisms, Genetically Engineered Organisms or Cell Rules, 1989
 - (viii) The Public Liability Insurance Act, 1991 and Amended Act, 1992
 - (ix) The Public Liability Insurance Rules, 1991 and Amended Rules 1993
 - (x) Biomedical Wastes (Management & Handling) Rules, 1988 and Amended Rules 2000 if applicable.
 - (xi) Recycled Plastics Manufacture and Usage Rules 1999, if applicable and
 - (xii) Ozone Depleting Substances (Regulation & Control) Rules, 2000, if applicable
8. You will have to abide by any other stipulations as may be prescribed by any authority/local bodies/Government Departments etc.

SPECIAL CONDITION: Please see Annexure.

Gross Capital investment of the project is Rs. 473700000/-

Any violation of the aforesaid conditions shall entail cancellation of this Consent to Establish (NOC)

Yours faithfully,
Member Secretary
West Bengal Pollution Control Board
Dated: 16/03/20

Memo No. _____

Copy forwarded for information to :

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

Himalaya Bhawan
Delhi Road, Dankuni
Dist. Hooghly

Vill. Ranpur
Kalyani Expressway
P.O. Narayanpur
Dist. 24 Pgs. (N)

Sahid Khudiram Sarani
City Centre, Durgapur-16
Dist. Burdwan
Kolkata-700 017

Paribesh Bhawan
10A, LA-Block, Sector-III
Salt Lake City,
Kolkata - 700 098

Block-05 at 40
Flats Complex
Adjacent to Priyambada
Housing Estate
P.O. : Khanjanchak,
P.S. Durgachak,
Haldia-721602
Dist. : Purba Medinipur

Paribesh Nagar
Madigara, Siliguri
Dist.-Darjeeling

Satyra Chowdhury
Indoor Stadium
Balurchar Bandh Road
Mekka-732101

Asansol Sub-Regional Office
ADDA Commercial Market (2nd Floor)
Opposite Asansol Fire Station
G.T. Road, Asansol-713 301

Member Secretary,
West Bengal Pollution Control Board

Annexure to NOC Sl. NO 164607

Special Conditions issued to Public Health Engineering Dte, Project Implementation Unit (PIU), Bankura WBDWSIP for installation of Raw river Water Treatment Plant (Capacity: 44 MLD) for Indpur & Taldangra Block Water Supply Scheme(Phase-II) under WBDWSIP at Plot No. 2, Dag no.2, J.L. No. 158, Mouza: Lohadiha, P.O. & P.S.: Khatra, District: Bankura.Pin- 722140.

A. Emission: Nil

B. Raw Water Treatment :- Raw river water: 44 MLD to be treated in Water Treatment Plant as per process description submitted by the unit and for bulk water supply for Indpur Taldangra Block under WBDWSIP.

C. Solid Waste :-

- i. WTP sludge to be used as one of the raw material for making bricks as proposed by the unit and PVC/Plastic waste /gunny bags to be sold.
- ii. Plastic / PVC wastes to be sold to the State Board's authorised recyclers

D. General:

1. At any instant, total quantity of Chlorine stored onsite shall be less than the threshold quantity of Chlorine as prescribed in the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules.
2. The unit shall take all preventive and precautionary measure for controlling adverse impact of chlorine in case of any accidental release.
3. The unit shall take proper measures to control air, water and noise pollution.
4. This NOC is valid only subject to obtaining permission/clearances from the other Competent Authorities as applicable.
5. Ambient noise level not to exceed the permissible limit.
6. No addition/alteration/modification can be done without prior permission from the State Board.
7. The unit shall obtain Consent to Operate of the State Board before starting operation.
8. Good housekeeping to be maintained.
9. Adequate green belt around the unit to be developed.
10. This NOC is valid upto 31.03.2027 for setting up the Water Treatment Plant – 44 MLD capacity.

Atarshi
16/03/20

Environmental Engineer
Operation & Execution Cell
West Bengal Pollution Control Board
Environmental Engineer
W. B. Pollution Control Board
Operation & Execution Cell

COMPLIANCE OF CTE -PKG-BK/01

Sl. No.	General Conditions of NOC for WTP	Compliance Status	Remarks
1	The quality of sewage and trade effluent to be discharged from your factory shall satisfy the permissible limits as prescribed in IS: 2490 (Pt 1) of 1974, and /or its subsequent amendment and Environment (Protection) Rules 1986.	Complied	It is a Zero Discharge facility
2	Suitable measures to treat your effluent shall be adopted by you in order to reduce the pollution at load so that the quality of the effluent satisfies the standards mentioned above.	Complied	Designed to meet regulatory requirements
3	You shall have to apply to this Board for its consent to operate and discharge of sewage and trade effluent according to the provisions of the water (Prevention & Control of Pollution) Act. 1974. No sewage or trade effluent shall be discharged by you without prior consent of this Board.	To be complied during operation phase	Consent to Operate will be obtained prior to operation
4	All emissions from your factory shall conform to the standards as laid down by this Board.	Not applicable presently	Regulatory compliance to air emissions will be ensured, as applicable
5	No emission shall be permitted without prior approval of this Board and you shall apply to this Board for its consent to operate and atmospheric emission as per provision of the Air (Prevention & Control Pollution) act, 1981.	To be complied during operation phase	Consent to Operate will be obtained prior to operation
6	No industrial plant, furnace. flues, chimneys., control equipment, etc. shall be constructed/ reconstructed/ erected/ re-erected without prior approval of this Board.	Not applicable	
7	You shall Comply with:		
	(i) Water (Prevention and Control of Pollution) Cess Act, 1977, if applicable.	Not Applicable	Repealed
	(ii) Water (Prevention and Control of Pollution) Cess Act, 1978, if applicable.	Not Applicable	Repealed
	(iii) Environment (Protection) Act, 1986	Complied	
	(iv) Environment (Protection) Rules, 1986	Complied	
	(v) Hazardous Wastes (Management and Handling) Rules, 1989 and Amended Rules, 2000	Complied	
	(vi) Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 and Amended Rules, 2000	Complied	Authorization for additional chlorine toners will be obtained prior to operation
	(vii) Manufacture, Use, Import and Storage and Hazardous Micro-Organisms, Genetically Engineered Organisms or Cell Rules. 1989	Not Applicable	
	(viii) The Public Liability Insurance Act, 1991 and Amended Act, 1992	Complied	Covered under all risk insurance policy
	(ix) The Public Liability Insurance Rules, 1991 and Amended Rules, 1993	Complied	Covered under all risk insurance policy

Sl. No.	General Conditions of NOC for WTP	Compliance Status	Remarks
	(x) Biomedical Wastes (Management & Handling) Rules, 1998 and Amended Rules 2000, if applicable.	Not Applicable	Minimal first-aid related bio-medical wastes are generated.
	(xi) Recycled Plastics Manufacture and Usage Rules 1999, if applicable and	Complied	
	(xii) Ozone Depleting Substances (Regulation & Control) Rules 2000, if applicable	Complied	Designed to meet regulatory requirements
SPECIAL CONDITION:			
A.	Emission - Nil	-	
B.	Raw Water Treatment	-	
	Raw river water: 44 MLD to be treated in Water Treatment Plant as per process description and for bulk water supply for Indpur and Taldangra under WBDWSIP		
C.	Solid Waste: WTP sludge to be used for landfilling and PVC/Plastic waste /gunny bags to be sold.	Complied	
D	General:		
	1. At any instant, total quantity of Chlorine stored onsite shall be less than the threshold quantity of Chlorine as prescribed in the Manufacture, Storage and Import of Hazardous Chemicals (MSHHC) Rules		Noted
	2. The unit shall take all preventive and precautionary measures for controlling adverse impact of chlorine in case of any accidental release	Considered under design	
	3. The unit shall take proper measures to control air, water and noise pollution.	To be complied during operation phase	
	4. This NOC is valid only subject to obtaining permission/clearances from the other Competent Authorities as applicable.	-	Noted
	5. Ambient noise level not to exceed the permissible limit.	Complied	Refer: Ambient Noise Monitoring data
	6. No addition/alteration/modification can be done without prior permission from the State Board.	Complied	
	7. The unit shall obtain Consent to Operate of the State Board before starting operation.	-	Noted
	8. Good housekeeping to be maintained.	Complied	
	9. Adequate green belt around the unit to be developed.	-	Noted
	10. This NOC is valid upto 31.03.2027 for setting up the Water Treatment Plant - 44 MLD capacity.	-	Noted

Bankura – Package Bk 03- CTE for WTP

From: Member Secretary,
West Bengal Pollution Control Board
To: The Executive Engineer (Civil)
PIU, Bankura WBDWSIP, Public Health Engineering Dte.
Govt. of West Bengal.
Plot No. 851, Durlapur - Boojona Road, Basudevpur
P.O. & P.S. - Gangajalghati, Bankura, Pin - 722133

Sub: Consent to Establish (NOC) from Environmental Point of View
Ref: Your letter No. 43/EE/PIU-Bankura dated 09/02/2020

WEST BENGAL

Dear Sirs,

In response to the application for Consent to Establish (NOC) for proposed Unit of M/s Public Health Engineering Dte. Govt. of West Bengal, Unit (P.H.U.) Bankura WBDWSIP, Govt. of W.B. for manufacturing/ installation of Water Treatment Plant (Capacity: 36 MLD) at Plot No. 851, Durlapur - Boojona Road, Basudevpur, P.O. & P.S. - Gangajalghati, Bankura, Pin - 722133.

This is to inform you that this Board hereby grants the Consent to Establish (NOC) from the environmental point of view of the above subject to the following conditions:


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

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Annexure to NOC SL NO 164601

Special Conditions issued to Public Health Engineering Dte, Project Implementation Unit (PIU), Bankura WBDWSIP for installation of Raw river Water Treatment Plant (Capacity: 36 MLD) for Mejhia and Gangajalghati Block Water Supply Scheme under WBDWSIP at Plot No. 851, Dag no. 851, J.L. No. 13, Khatian no. 973, Mouza: Basudevpur, P.O. & P.S.: Gangajalghati, District: Bankura. Pin- 722133.

- A. Emission:** Nil
- B. Raw Water Treatment :-** Raw river water: 36 MLD to be treated in Water Treatment Plant as per process description submitted by the unit and for bulk water supply for Majhia and Galgajalghati under WBDWSIP.
- C. Solid Waste :-**
- WTP sludge to be used as one of the raw material for making bricks as proposed by the unit and PVC/Plastic waste /gunny bags to be sold.
 - Plastic / PVC wastes to be sold to the State Board's authorised recyclers
- D. General:**
- At any instant, total quantity of Chlorine stored onsite shall be less than the threshold quantity of Chlorine as prescribed in the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules.
 - The unit shall take all preventive and precautionary measure for controlling adverse impact of chlorine in case of any accidental release.
 - The unit shall take proper measures to control air, water and noise pollution.
 - This NOC is valid only subject to obtaining permission/clearances from the other Competent Authorities as applicable.
 - Ambient noise level not to exceed the permissible limit.
 - No addition/alteration/modification can be done without prior permission from the State Board.
 - The unit shall obtain Consent to Operate of the State Board before starting operation.
 - Good housekeeping to be maintained.
 - Adequate green belt around the unit to be developed.
 - This NOC is valid upto 28.02.2027 for setting up the Water Treatment Plant – 36 MLD capacity.


02/03/2024
Environmental Engineer
Operation & Execution Cell
West Bengal Pollution Control Board
Environmental Engineer
W. B. Pollution Control Board
Operation & Execution Cell

Memorandum No. W/164501

You shall comply with

- Water (Prevention and Control of Pollution) Act, 1977, if applicable.
- Water (Prevention and Control of Pollution) Cess Act, 1978, if applicable.
- Environment (Protection) Act, 1986.
- Environment (Protection) Rules, 1986.
- Hazardous Waste (Management and Handling) Rules, 1989 and Amended Rules, 2000.
- Manufacture, Storage and Transport of Hazardous Chemicals Rules, 1989 and Amended Rules, 2000.
- Manufacture, Use, Import and Storage and Hazardous Micro-Organisms, Genetically Engineered Organisms or Cell Rules, 1989.
- The Public Liability Insurance Act, 1991 and Amended Act, 1992.
- The Public Liability Insurance Rules, 1991 and Amended Rules 1993.
- Biomedical Waste (Management & Handling) Rules, 1986 and Amended Rules 2000 if applicable.
- Recycled Plastics Manufacture and Usage Rules 1999, if applicable and
- Ozone Depleting Substances (Regulation & Control) Rules, 2000, if applicable.

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

SPECIAL CONDITION: Please see Annexure.
Gross Capital investment of the project is Rs. 37,13,00,000/-
(Rupees thirty-seven crores thirteen lakhs) only.

Any violation of the aforesaid conditions shall entail cancellation of the Consent to Establish (NOC)

Yours faithfully,
Member Secretary
West Bengal Environmental Engineer
W. B. Pollution Control Board
Operation & Execution Cell
02/05/20

Memorandum No. _____
Copy recorded for information to :

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

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

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COMPLIANCE OF CTE -PKG-BK/03

Sl. No.	General Conditions of NOC for WTP	Compliance Status	Remarks
1	The quality of sewage and trade effluent to be discharged from your factory shall satisfy the permissible limits as prescribed in IS: 2490 (Pt 1) of 1974, and /or its subsequent amendment and Environment (Protection) Rules 1986.	Complied	It is a Zero Discharge facility
2	Suitable measures to treat your effluent shall be adopted by you in order to reduce the pollution at load so that the quality of the effluent satisfies the standards mentioned above.	Complied	Designed to meet regulatory requirements
3	You shall have to apply to this Board for its consent to operate and discharge of sewage and trade effluent according to the provisions of the water (Prevention & Control of Pollution) Act. 1974. No sewage or trade effluent shall be discharged by you without prior consent of this Board.	To be complied during operation phase	Consent to Operate will be obtained prior to operation
4	All emissions from your factory shall conform to the standards as laid down by this Board.	Not applicable presently	Regulatory compliance to air emissions will be ensured, as applicable
5	No emission shall be permitted without prior approval of this Board and you shall apply to this Board for its consent to operate and atmospheric emission as per provision of the Air (Prevention & Control Pollution) act, 1981.	To be complied during operation phase	Consent to Operate will be obtained prior to operation
6	No industrial plant, furnace. flues, chimneys., control equipment, etc. shall be constructed/ reconstructed/ erected/ re-erected without prior approval of this Board.	Not applicable	
7	You shall Comply with:		
	(i) Water (Prevention and Control of Pollution) Cess Act, 1977, if applicable.	Not Applicable	Repealed
	(ii) Water (Prevention and Control of Pollution) Cess Act, 1978, if applicable.	Not Applicable	Repealed
	(iii) Environment (Protection) Act, 1986	Complied	
	(iv) Environment (Protection) Rules, 1986	Complied	
	(v) Hazardous Wastes (Management and Handling) Rules, 1989 and Amended Rules, 2000	Complied	
	(vi) Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 and Amended Rules, 2000	Complied	Authorization for additional chlorine toners will be obtained prior to operation
	(vii) Manufacture, Use, Import and Storage and Hazardous Micro-Organisms, Genetically Engineered Organisms or Cell Rules. 1989	Not Applicable	
	(viii) The Public Liability Insurance Act, 1991 and Amended Act, 1992	Complied	Covered under all risk insurance policy
	(ix) The Public Liability Insurance Rules, 1991 and Amended Rules, 1993	Complied	Covered under all risk insurance policy

Sl. No.	General Conditions of NOC for WTP	Compliance Status	Remarks
	(x) Biomedical Wastes (Management & Handling) Rules, 1998 and Amended Rules 2000, if applicable.	Not Applicable	Minimal first-aid related bio-medical wastes are generated.
	(xi) Recycled Plastics Manufacture and Usage Rules 1999, if applicable and	Complied	
	(xii) Ozone Depleting Substances (Regulation & Control) Rules 2000, if applicable	Complied	Designed to meet regulatory requirements
SPECIAL CONDITION:			
A.	Emission - Nil	-	
B.	Raw Water Treatment	-	
	Raw river water: 36 MLD to be treated in Water Treatment Plant as per process description and for bulk water supply for Mijhia and Gangajalghati under WBDWSIP		
C.	Solid Waste: WTP sludge to be used for landfilling and PVC/Plastic waste /gunny bags to be sold.	Complied	
D	General:		
	1. At any instant, total quantity of Chlorine stored onsite shall be less than the threshold quantity of Chlorine as prescribed in the Manufacture, Storage and Import of Hazardous Chemicals (MSHHC) Rules		Noted
	2. The unit shall take all preventive and precautionary measures for controlling adverse impact of chlorine in case of any accidental release	Considered under design	
	3. The unit shall take proper measures to control air, water and noise pollution.	To be complied during operation phase	
	4. This NOC is valid only subject to obtaining permission/clearances from the other Competent Authorities as applicable.	-	Noted
	5. Ambient noise level not to exceed the permissible limit.	Complied	Refer: Ambient Noise Monitoring data
	6. No addition/alteration/modification can be done without prior permission from the State Board.	Complied	
	7. The unit shall obtain Consent to Operate of the State Board before starting operation.	-	Noted
	8. Good housekeeping to be maintained.	Complied	
	9. Adequate green belt around the unit to be developed.	-	Noted
	10. This NOC is valid upto 28.02.2027 for setting up the Water Treatment Plant - 36 MLD capacity.	-	Noted


NOC NO164647

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

SPECIAL CONDITION:

See Annexure.
Gross Capital Investment of Rs. 95,00,00,000

Any violation of the aforesaid conditions shall entail cancellation of this Consent to Establish (NOC)

Yours faithfully,

 Member Secretary,
 West Bengal Pollution Control Board
 Environmental Engineer
 Dated: 05/11/20
 W. B. Pollution Control Board
 Operation & Execution Cell

Memo No. _____
Copy forwarded for information to :

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

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