ENVIRONMENTAL STATEMENT
IN
FORM-V

(Under Rule-14, Environmental (Protection) Rules, 1986)

(2018-2019)

FOR
CLUSTER NO. – 5
(GROUP OF MINES**)**
Sodepur Area
Eastern Coalfields Limited

Prepared at

Regional Institute – I

Central Mine Planning & Design Institute Ltd.
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CMPDI

ISO 9001:2015 Company

ENVIRONMENTAL STATEMENT FORM – V

Environmental statement for the financial year ending 31st March, 2019

Cluster No. – 5

FOR THE YEAR: 2018-19

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CHAPTER – I

INTRODUCTION

1.1 GENESIS:

The Gazette Notification vide G.S.R No. 329 (E) dated 13th March, 1992 and subsequently renamed to 'Environmental Statement' vide Ministry of Environment & Forests (MOEF), Govt. of India gazette notification No. G.S.R No. 386 (E) Dtd.22nd April'93 reads as follows.

"Every person carrying on an industry, operation or process requiring consent under section 25 of the Water Act, 1974 or under section 21 of the Air Act, 1981 or both or authorisation under the Hazardous Waste Rules, 1989 issued under the Environmental Protection Act, 1986 shall submit an Environmental Audit Report for the year ending 31st March in Form V to the concerned State Pollution Control Board on or before the 30th day of September every year."

In compliance with the above and in fulfillment of condition laid out in the EC for the Cluster, the work of Environmental Statement for Cluster No. 5 was entrusted to CMPDI by GM (Environment and Forest), Eastern Coalfields Limited.

1.2 PROJECT DESCRIPTION:

Prior to 2014 – 15, a large number of taken over mines from pre – nationalization period, mostly underground mines, in the old coalfields of Raniganj and Jharia did not have environmental clearance from the MoEF&CC and were operating on the basis of "Consents' received from the respective PCBs. It was felt that if these mines could be brought under the ambit of EC, several measures for environmental protection and pollution control could be put in place. However, the work of obtaining EC for such mines, individually, would have taken a lot of time. To circumvent the problem, it was mooted that since the environmental problems being faced were of regional nature and not confined to individual mines alone, cluster/groups of such mines could be identified for preparing cluster-wise integrated EIA & EMPs, addressing such environmental concerns comprehensively and ensuring effective co-ordination of environmental control measures within each cluster. 13 such clusters were identified in the Raniganj Coalfield of ECL and EC has been obtained on the cluster approach for 12 such clusters.

Cluster of Mines No. 5 is one of the clusters for which EC has been granted vide letter no. J-11015/288/2010-IA-II.(M) dated 22nd September, 2014 for a combined peak capacity of 0.63 MTY and within a ML area of 2970 Ha.

The mines of Cluster-5 are located in the south-western part of Raniganj Coalfields and south or right bank of the Damodar River in the Purulia District of West Bengal and are having lease boundaries adjacent to each other, The Cluster is located within Latitudes 23^0 38' N & 23^0 41' N and Longitudes 86^0 46' E & 86^0 51' E lying 100m to 140m above MSL.

It comes under the administrative control of Sodepur area, ECL.

Location of cluster – 5 is shown in plate no. – 1.

The composition of the cluster is tabulated as under:

Name of Mine	Peak Production Capacity (MTY)	Lease Hold Area (Ha)	Life of the mine	Production during 2018-19 (MT)
Parbelia UG	0.19	2730	>25 years	0.06
Parbelia OC Patch (10 Ha)	0.13		1.5 years	-
Dubeshwari UG	0.18	240	> 50 years	0.05
Dubeshwari OC Patch (10.2 Ha)	0.13		2.5 years	-
Total	**0.63**	**2970**		**0.11**

1. Dubeswari UG & OC Patch

At present, Dubeswari colliery is working the Hijuli seam (R-VIII) through three inclines No. 1, 2 & 3. Production is obtained from depillaring with caving in Panel P5B. 3 nos. of SDL are presently operating in the mine.

There are presently no mining activities in the proposed OC patch.

2. Parbelia UG & OC Patch

Production from the mine is obtained through depillaring of Panel C by caving method. 3 nos. of SDL are presently operating in the mine.

There are presently no mining activities in the proposed OC patch.

1.3 ENVIRONMENTAL SCENARIO:

CMPDI has been engaged to carry out routine Environmental monitoring of the clusters. The monitoring is carried out every fortnight by collecting 24 – hour samples for ambient air at 2 all - weather stations, 3 pre-monsoon stations and 3 post-monsoon stations (based on local meteorology) and compared with NAAQS, 2009 for quality. The details of sampling stations are given below:

Cluster 5		
Station Code	**Type of Station**	**Name of Station**
5A1	Permanent Air Station	In Ranipur village
5A2	Permanent Air Station	In Bhamaria village
5A3	Post monsoon Air Station	In Digha village
5A4	Post monsoon Air Station	In Dhangajore village
5A5	Post monsoon Air Station	In Sanuri village
5A6	Pre monsoon Air Station	In Raghunathpur village
5A7	Pre monsoon Air Station	In Sialdanga village
5A8	Pre monsoon Air Station	In Shitalpur village

2 nos. of samples of mine water are collected and analysed every fortnight (for 5 parameters i.e., pH, TDS, TSS, COD and O&G) and compared with the MoEF Schedule – VI for discharge of effluents into land / streams. A complete analysis of the mine discharge samples which includes heavy metals and salts is carried out twice every year. Noise level is recorded at 2 locations from the mine pit top (in case of UG mine) and workshops (in case of OC mine) present within the cluster. Groundwater level in the cluster area is monitored by taking measurements at 7 earmarked dugwells in the months of January, May, August and November every year. Samples of groundwater from these wells, which are also utilized by the local population for drinking and other domestic purposes, are analysed once in a year during May and compared with the IS 10500:2012 standards for drinking water quality. Location of the monitoring stations of air, noise & water are shown in Plate- II.

The environmental monitoring results for 24 fortnights ending 31st March, 2019 are appended as Annexures – I, II & III. The environmental monitoring results for the year 2018-19 are summarized below:

AMBIENT AIR QUALITY

The PM_{10} concentration was found in the range of 80.4 to 94.5 µg/m^3 and was within the limits as per the standards. The $PM_{2.5}$ concentration was found in the range of 23.6 to 44.8 µg/m^3 and was within the limits as per NAAQS, 2009. The SO_2 concentration remained below 10.0 µg/m^3 and NO_X concentration was in the range of 11.2 to 21.3 µg/m^3 and was well within the limits as per the standards.

ENVIRONMENTAL STANDARDS:

Environmental Standards for Ambient Air Quality (AAQ):

Station Category	*Environmental standard for Raniganj Coalfield vide MOEF, Govt. of India, Gazette Notification No. GSR 742 (E) dated 25.09.2000 for 24 hourly samples at 500 meters from dust generating point*			*National Ambient Air Quality Standards (NAAQS), 2009 for industrial, residential and rural areas for 24 hours samples*
	Pollutant Concentration (µg/m^3)			
	PM_{10}	**SO_2**	**NO_x**	**$PM_{2.5}$**
Industrial	300.0	120.0	120.0	60.0
Residential	100.00	80.0	80.0	

WATER QUALITY

Ground water percolates into working area from the surrounding aquifers. The mines are dewatered regularly to maintain dry working conditions. This mine discharge water is partly utilized for dust suppression by sprinkling at coal faces and on haul roads and the remainder is discharged onto adjoining cultivable lands for irrigation purposes, if required. Part-B of the Environmental Statement proforma contains the detailed break-up of water consumption.

The analysis results for the mine discharge water reveal that most of the parameters are within permissible limits prescribed by MoEF&CC as General Standards Schedule – VI for Class-'A' effluent (Effluent discharged into inland surface water) and IS 10500:2012 for groundwater standards.

In order to assess the impact of mining on the groundwater level, a network of 7 dugwells has been identified for monitoring of groundwater level in the months of January, May, August and November every year. Samples from these wells are collected and analysed during May every year and compared with IS 10500: 2012 standards for drinking water.

Mine water and ground water analysis results are given in Annexure-III.

Well water level results are given in Annexure – IV.

NOISE LEVEL

The workplace day time noise level was found in the range of 61.3 to 70.6 dB(A). The noise level recorded is below permissible limit prescribed by MoEF&CC.
Noise Level Standard as per Noise Pollution (Regulation and Control) Rules, 2000 for different station categories is given below:

Station Category	**Limits for noise (Leq dB (A))**	
	Day Time (6am-10pm)	Night Time (10pm-6am)
Industrial	75.0	70.0
Commercial	65.0	55.0
Residential	55.0	45.0

CHAPTER - II

ENVIRONMENTAL STATEMENT FORM– V

Environmental statement for the financial year ending March, 2019

PART – A

SL. NO.	HEADING	PARTICULARS
(I)	**NAME AND ADDRESS OF THE PROJECT**	
i	Parbelia UG & OC	Agent, Parbelia UG, Sodepur Area, Dist. – Purulia, W. B.
ii	Dubeswari UG & OC	Agent, Dubeswari UG, Sodepur Area, Dist. – Purulia, W. B.
(II)	**INDUSTRY CATEGORY**	All mines in the cluster fall in red category
(III)	**PRODUCTION CAPACITY**	0.63 MTY
(IV)	**YEAR OF ESTABLISHMENT**	Parbelia UG is taken over mines from pre-nationalisation period. Dubeswari UG was established in 1985 – 86.
(V)	**DATE OF THE LAST ENVIRONMENTAL STATEMENT SUBMITTED**	29.09.2018

PART – B
WATER AND RAW MATERIAL CONSUMPTION

(I) WATER CONSUMPTION (Cu.m/day)

1. Parbelia UG & OC

Sl. No.	Particulars	2017-18	2018-19
	A. MINING (Dust suppression, Firefighting and Others)	Nil	55.0
	B. COOLING (in radiators of trucks/HEMM)	Nil	Nil
	C. DOMESTIC		
i	Colony (Mine water and PHE supply)	1202*	2660.0
	TOTAL	**1202.0**	**2715.0**

*Source – Water from Barakar River

Name of Product	Process water consumption per unit of product output (l/day/te)	
	2017-18	**2018-19**
Coal	-	0.94

2. Dubeswari UG & OC

Sl. No.	Particulars	2017-18	2018-19
	A. MINING (Dust suppression, Firefighting and Others)	Nil	55.0
	B. COOLING (in radiators of trucks/HEMM)	Nil	Nil
	C. DOMESTIC		
i	Colony (Mine water and PHE supply)	15*	1070.0
	TOTAL	**15.0**	**1125.0**

*Source – PHED water

Name of Product	Process water consumption per unit of product output (l/day/te)	
	2017-18	**2018-19**
Coal	-	1.16

RAW MATERIAL CONSUMPTION:

1. Parbelia UG & OC

Name of raw material	Name of products	Consumption of raw material per unit of output	
		During previous financial year (2017-18)	**During current financial year (2018-19)**
1. Explosive	Coal	0.32 kg/te	0.32 kg/te
2. Diesel		0.004 l/te	0.58 l/te
3. Lubricants		0.053 l/te	-

2. Dubeswari UG & OC

Name of raw material	Name of products	Consumption of raw material per unit of output	
		During previous financial year (2017-18)	**During current financial year (2018-19)**
1. Explosive	Coal	0.342 kg/te	0.42 kg/te
2. Diesel		-	0.64 l/te
3. Lubricants		0.023 l/te	0.02 l/te

PART – C
POLLUTION GENERATED

Mine	Pollution	Quantity of pollutants discharged (mass/day)	Concentrations of pollutants generated (mass/volume)	Percentage variation from prescribed standards with reasons
Parbelia	WATER*	Average concentration of 21.0 mg/l. Mine water discharged is 2047.0 KL/day. Hence, total load is 43.0 kg/day.	1. Mine water discharge Analysis results are given in Annexure-III. 2. The main air pollutant is suspended PM_{10} and $PM_{2.5}$. The air quality results are appended as Annexure-I.	1. The analysis results reveal that most of the parameters are below permissible limits prescribed by MOEF as General Standards for class 'A' effluent (Effluent discharged into inland surface water.) 2. Ambient air quality results show that the values of PM_{10}, $PM_{2.5}$, SO_2 and NO_x are within the prescribed standards.
	AIR**	Total pollutant load of PM_{10} is 17.75 kg/day while it is 3.73 kg/day for $PM_{2.5}$.		
Dubeswari	WATER*	-		
	AIR**	Total pollutant load of PM_{10} is 15.56 kg/day while it is 3.27 kg/day for $PM_{2.5}$.		

*Water discharged from the mine contains pollutants in the form of suspended solids (mostly fine coal dust).
**PM_{10} and $PM_{2.5}$ estimation has been done using empirical formula by using Emission Factors derived from S&T studies done by CMPDI.

PART – D
HAZARDOUS WASTE
(As specified under Hazardous Waste (Management and Handling) Rules, 1989)

1. Parbelia UG & OC

Hazardous waste	Total quantity		Disposal method
	During previous financial year (2017-18)	During current financial year (2018-19)	
A) From process			
i)Used oil	-	-	
ii)Lead-Acid Batteries			
a. Automobile batteries	3* Nos.	1* Nos.	Dealt in Part – F
b. Cap-lamp batteries	665* Nos.	1000* Nos.	
iii) Used Cotton waste	Nil	Nil	
iv) Metal Scrap	Nil	Nil	

*for entire Sodepur Area

2. Dubeswari UG & OC

Hazardous waste	Total quantity		
	During previous financial year (2017-18)	During current financial year (2018-19)	Disposal method
A) From process			
i)Used oil	-	-	
ii)Lead-Acid Batteries			
a. Automobile batteries	3* Nos.	1* Nos.	Dealt in Part – F
b. Cap-lamp batteries	665* Nos.	1000* Nos.	
iii) Used Cotton waste	Nil	Nil	
iv) Metal Scrap	Nil	Nil	

*for entire Sodepur Area

Approximate values may be given where actual values are not available.

Note: a) The detail of used oil is to be given to concerned Pollution Control Board in Form-13 as per time mentioned in HW (M & H), Amendment Rules, 2003.

b) The detail of disposal of Lead Acid batteries is to be given to concerned State Pollution Control Board in Form-VIII as per time mentioned in Batteries (M&H) Rules, 2001.

PART – E
SOLID WASTE

Particulars	Name of Mine	Total quantity (In Million Cu.m)	
		During previous financial year (2017-18)	During current financial year (2018-19)
a) From process (Mining)	Parbelia OC	Not yet started	
	Dubeswari OC		
b) From pollution control facilities	Parbelia OC		
	Dubeswari OC		
c) Quantity recycled or reutilized back filled	Parbelia OC		
	Dubeswari OC		

PART – F

PLEASE SPECIFY THE CHARACTERISTICS (IN TERMS OF CONCENTRATION AND QUANTUM) OF HAZARDOUS AS WELL AS SOLID WASTE AND INDICATE THE DISPOSAL PRACTICE ADOPTED FOR BOTH THESE CATEGORIES OF WASTE.

Hazardous waste generated is given in the table of PART-D which has been deposited at area store disposal stock yard.

Cap lamp batteries are received from HQ Central Stores and stored in Area Store. From Area Store, they are supplied to unit cap lamp room as per allocation by technical HOD of Area. At unit cap lamp room, they are stored in racks with cap lamp number.

HEMM batteries are stored in Area stores.

Metal scraps are declared and report is sent to HQ. The scraps are then auctioned and sold through HQ.

Used oil are brought from different opencast mines and are used for lubrication of coal tubs.

PART – G

IMPACT OF POLLUTION CONTROL MEASURES ON CONSERVATION OF NATURAL RESOURCES AND CONSEQUENTLY ON COST OF PRODUCTION.

In order to carry out mining in an eco-friendly manner following pollution control measures have been implemented.

1.0 **AIR POLLUTION CONTROL MEASURES:**

- Surfacing of all service roads/permanent roads by asphalt.
- The un-metalled roads is kept free of ruts, potholes, etc.
- Regular maintenance of HEMM engines to limit emission of harmful exhaust fumes.
- Physical removal of dust from the roads.

- Greenbelts around quarry, industrial sites, service building area besides avenue plantation along roads.
- Plantation over subsided area of 6.0 Ha was carried out during 2018 – 19 in Parbelia Colliery. Local species like Shishu, Karanch, Mohaneem, Jarul and Chatim has been planted.
- Installation of water sprinkler at Chinakuri Railway Siding work is complete.
- Plantation will be carried out in future also as per the programme and availability of land.

2.0 **WATER POLLUTION CONTROL MEASURES:**

(for Mine/CHP/Workshop/Colony discharge water)

- There is no workshop in both the mines of the cluster.
- 1 no. of sedimentation tank is available for entire Sodepur area.
- Septic tank has been provided in Parbelia colliery for treating the domestic effluent.
- Excess mine water is discharged in the low lying area under the command area of ECL.
- Regular monitoring of mine discharge water and groundwater is being carried out by CMPDI.

3.0 **NOISE POLLUTION CONTROL MEASURES:**

- Regular maintenance of machines and other equipment at Bunker and workshop including mine fan.
- Providing green belt around core activity area, along road side in colony and in other vacant space.
- All HEMM & light vehicle are provided with silencers.
- Noise monitoring is being carried out regularly.

4.0 **LAND RESOURCE MANAGEMENT:**

- Both the OC patches are yet to start production and as such there was no OB generation during 2018 – 19.

PART – H

ADDITIONAL INVESTMENT PROPOSAL FOR ENVIRONMENTAL PROTECTION INCLUDING ABATEMENT OF POLLUTION

The following are the additional investment proposals for environmental protection:

- The Environmental monitoring of the project will be continued fortnightly as per the guidelines of Ministry of Environment and Forest (MOEF).
- Necessary Consent for discharge may be taken from Competent Authority, if required.
- Rainwater harvesting system has been installed at the Area office.
- Roof top solar panel with 5 kW capacity is present at the Area office.
- Various programmes are being carried out under CSR head like construction of community hall, fitter and electrician room at Ramkanali Purushottam ITI in Sodpeur Area, water supply scheme, classrooms, etc.

PART – I

ANY OTHER PARTICULAR IN RESPECT OF ENVIRONMENTAL PROTECTION AND ABATMENT OF POLLUTION.

The Environmental Monitoring is carried out fortnightly for the project by CMPDI, RI-I as per the guideline of Ministry of Environment and Forest (MOEF) and based on the result thereof; colliery takes necessary action if needed.

Annexure – I

Cluster No	Station No	Station Name	Month	Fortnight	Date of Sampling	PM_{10}	$PM_{2.5}$	SO_2	NO_X
5	5A1	In Ranipur village	April	First	13-Apr-18	88.3	36.8	<10.0	15.5
5	5A1	In Ranipur village	April	Second	17-Apr-18	88.5	37.2	<10.0	15.8
5	5A1	In Ranipur village	May	First	08-May-18	89.6	37	<10.0	15.6
5	5A1	In Ranipur village	May	Second	30-May-18	89.1	36.8	<10.0	15.8
5	5A1	In Ranipur village	June	First	01-Jun-18	88.6	35.9	<10.0	15.2
5	5A1	In Ranipur village	June	Second	23-Jun-18	88.4	35.6	<10.0	14.9
5	5A1	In Ranipur village	July	First	12-Jul-18	86.2	33.5	<10.0	13.8
5	5A1	In Ranipur village	July	Second	23-Jul-18	85.4	33.3	<10.0	13.6
5	5A1	In Ranipur village	August	First	01-Aug-18	83.2	30.2	<10.0	12.4
5	5A1	In Ranipur village	August	Second	23-Aug-18	83.2	30.2	<10.0	12.4
5	5A1	In Ranipur village	September	First	05-Sep-18	82.4	29.5	<10.0	12
5	5A1	In Ranipur village	September	Second	28-Sep-18	82.1	29.2	<10.0	11.8
5	5A1	In Ranipur village	October	First	05-Oct-18	84.5	30.5	<10.0	12.9
5	5A1	In Ranipur village	October	Second	22-Oct-18	85.3	30.6	<10.0	13
5	5A1	In Ranipur village	November	First	03-Nov-18	85.8	30.8	<10.0	13.3
5	5A1	In Ranipur village	November	Second	16-Nov-18	86.2	30.9	<10.0	13.5
5	5A1	In Ranipur village	December	First	10-Dec-18	87.8	32.4	<10.0	15.2
5	5A1	In Ranipur village	December	Second	17-Dec-18	87.9	32.7	<10.0	15.5
5	5A1	In Ranipur village	January	First	02-Jan-19	88.2	38.4	<10.0	16.8
5	5A1	In Ranipur village	January	Second	21-Jan-19	88.5	38.4	<10.0	18.3
5	5A1	In Ranipur village	February	First	13-Feb-19	88.7	41.6	<10.0	20.8
5	5A1	In Ranipur village	February	Second	26-Feb-19	88.5	38.4	<10.0	17.5
5	5A1	In Ranipur village	March	First	07-Mar-19	89.7	42.5	<10.0	18.6
5	5A1	In Ranipur village	March	Second	25-Mar-19	89.9	44.8	<10.0	18.7
5	5A2	In Bhamaria village	April	First	02-Apr-18	86.9	36.7	<10.0	15.3
5	5A2	In Bhamaria village	April	Second	17-Apr-18	87.2	36.8	<10.0	15
5	5A2	In Bhamaria village	May	First	08-May-18	88	36.5	<10.0	15.2
5	5A2	In Bhamaria village	May	Second	30-May-18	88.2	36.2	<10.0	15
5	5A2	In Bhamaria village	June	First	01-Jun-18	87.5	35.7	<10.0	14.7
5	5A2	In Bhamaria village	June	Second	30-Jun-18	87.2	35.6	<10.0	14.6
5	5A2	In Bhamaria village	July	First	12-Jul-18	85.4	34	<10.0	13.6
5	5A2	In Bhamaria village	July	Second	23-Jul-18	85	33.7	<10.0	13.2
5	5A2	In Bhamaria village	August	First	01-Aug-18	82.6	28.5	<10.0	12
5	5A2	In Bhamaria village	August	Second	23-Aug-18	82.6	28.5	<10.0	12
5	5A2	In Bhamaria village	September	First	11-Sep-18	82	28.4	<10.0	11.8
5	5A2	In Bhamaria village	September	Second	28-Sep-18	81.6	28.3	<10.0	11.5
5	5A2	In Bhamaria village	October	First	12-Oct-18	83.6	30.2	<10.0	12.7
5	5A2	In Bhamaria village	October	Second	22-Oct-18	84.2	30.4	<10.0	12.9
5	5A2	In Bhamaria village	November	First	03-Nov-18	84.7	30.6	<10.0	13
5	5A2	In Bhamaria village	November	Second	16-Nov-18	85.1	30.8	<10.0	13.3
5	5A2	In Bhamaria village	December	First	10-Dec-18	86.4	33.2	<10.0	16.1
5	5A2	In Bhamaria village	December	Second	17-Dec-18	86.7	33.8	<10.0	16.3
5	5A2	In Bhamaria village	January	First	02-Jan-19	86.9	41.6	<10.0	18.5
5	5A2	In Bhamaria village	January	Second	21-Jan-19	87	40.7	<10.0	17.8
5	5A2	In Bhamaria village	February	First	13-Feb-19	87.4	40.8	<10.0	18.7
5	5A2	In Bhamaria village	February	Second	26-Feb-19	87.6	39.4	<10.0	18.3
5	5A2	In Bhamaria village	March	First	07-Mar-19	88.3	41.1	<10.0	20.2
5	5A2	In Bhamaria village	March	Second	25-Mar-19	88.7	42.3	<10.0	20.3
5	5A3	In Digha village	October	First	04-Oct-18	84.5	23.6	<10.0	12.6

Cluster No	Station No	Station Name	Month	Fortnight	Date of Sampling	PM_{10}	$PM_{2.5}$	SO_2	NO_X
5	5A3	In Digha village	October	Second	25-Oct-18	85.1	30.2	<10.0	12.7
5	5A3	In Digha village	November	First	03-Nov-18	86	30.4	<10.0	12.9
5	5A3	In Digha village	November	Second	22-Nov-18	86.3	30.6	<10.0	13.1
5	5A3	In Digha village	December	First	10-Dec-18	86.9	32.1	<10.0	15.2
5	5A3	In Digha village	December	Second	17-Dec-18	87.2	32.3	<10.0	15.7
5	5A3	In Digha village	January	First	02-Jan-19	87.4	39.8	<10.0	17.3
5	5A3	In Digha village	January	Second	21-Jan-19	87.5	41.9	<10.0	19.6
5	5A3	In Digha village	February	First	13-Feb-19	87.8	39.7	<10.0	19.2
5	5A3	In Digha village	February	Second	26-Feb-19	88.1	36.5	<10.0	19.7
5	5A3	In Digha village	March	First	07-Mar-19	89.2	42.3	<10.0	18.3
5	5A3	In Digha village	March	Second	25-Mar-19	89.6	43.6	<10.0	19.6
5	5A4	In Dhangajare village	October	First	12-Oct-18	87.8	31.5	<10.0	13.7
5	5A4	In Dhangajare village	October	Second	27-Oct-18	88.3	31.7	<10.0	13.9
5	5A4	In Dhangajare village	November	First	03-Nov-18	89	31.8	<10.0	13.7
5	5A4	In Dhangajare village	November	Second	16-Nov-18	90.2	32.2	<10.0	13.8
5	5A4	In Dhangajare village	December	First	06-Dec-18	91.3	34.9	<10.0	17.4
5	5A4	In Dhangajare village	December	Second	17-Dec-18	91.6	35.2	<10.0	17.8
5	5A4	In Dhangajare village	January	First	03-Jan-19	91.4	40.8	<10.0	16.5
5	5A4	In Dhangajare village	January	Second	18-Jan-19	91.6	39.8	<10.0	16.4
5	5A4	In Dhangajare village	February	First	15-Feb-19	91.8	36.4	<10.0	17.5
5	5A4	In Dhangajare village	February	Second	26-Feb-19	92.3	41.8	<10.0	21.3
5	5A4	In Dhangajare village	March	First	01-Mar-19	94.1	41.3	<10.0	17.5
5	5A4	In Dhangajare village	March	Second	25-Mar-19	94.5	42.5	<10.0	20.8
5	5A5	In Sanuri village	October	First	04-Oct-18	84.6	30.2	<10.0	12.5
5	5A5	In Sanuri village	October	Second	27-Oct-18	85.2	30.4	<10.0	12.9
5	5A5	In Sanuri village	November	First	03-Nov-18	86.4	30.7	<10.0	13.2
5	5A5	In Sanuri village	November	Second	16-Nov-18	86.8	30.9	<10.0	13.3
5	5A5	In Sanuri village	December	First	06-Dec-18	87.5	31.6	<10.0	15.4
5	5A5	In Sanuri village	December	Second	18-Dec-18	87.9	32.2	<10.0	15.6
5	5A5	In Sanuri village	January	First	03-Jan-19	87.6	36.8	<10.0	15.3
5	5A5	In Sanuri village	January	Second	18-Jan-19	87.8	37.6	<10.0	17.5
5	5A5	In Sanuri village	February	First	15-Feb-19	87.9	38.3	<10.0	18.3
5	5A5	In Sanuri village	February	Second	26-Feb-19	88.2	37.6	<10.0	20.6
5	5A5	In Sanuri village	March	First	01-Mar-19	89.8	41.6	<10.0	19.3
5	5A5	In Sanuri village	March	Second	25-Mar-19	90.2	42.6	<10.0	17.4
5	5A6	In Raghunathpur village	April	First	02-Apr-18	85.5	34	<10.0	14.2
5	5A6	In Raghunathpur village	April	Second	20-Apr-18	85.8	34.2	<10.0	14.4
5	5A6	In Raghunathpur village	May	First	05-May-18	86.4	34.8	<10.0	14.6
5	5A6	In Raghunathpur village	May	Second	17-May-18	86.3	34.4	<10.0	14.4
5	5A6	In Raghunathpur village	June	First	02-Jun-18	85.6	34	<10.0	14.2
5	5A6	In Raghunathpur village	June	Second	18-Jun-18	85.8	34.2	<10.0	14.4
5	5A6	In Raghunathpur village	July	First	03-Jul-18	83.7	32.6	<10.0	13.8
5	5A6	In Raghunathpur village	July	Second	18-Jul-18	82.9	32.5	<10.0	13.6
5	5A6	In Raghunathpur village	August	First	01-Aug-18	82	29.3	<10.0	12.1
5	5A6	In Raghunathpur village	August	Second	27-Aug-18	82	29.3	<10.0	12.1
5	5A6	In Raghunathpur village	September	First	10-Sep-18	81.8	28.6	<10.0	11.7
5	5A6	In Raghunathpur village	September	Second	21-Sep-18	81.4	28	<10.0	11.3
5	5A7	In Sialdanga village	April	First	13-Apr-18	86.4	34.8	<10.0	14.6
5	5A7	In Sialdanga village	April	Second	18-Apr-18	86.8	34.6	<10.0	14.5
5	5A7	In Sialdanga village	May	First	05-May-18	87.3	35.1	<10.0	15
5	5A7	In Sialdanga village	May	Second	18-May-18	86.5	34.9	<10.0	14.5

Cluster No	Station No	Station Name	Month	Fortnight	Date of Sampling	PM_{10}	$PM_{2.5}$	SO_2	NO_X
5	5A7	In Sialdanga village	June	First	02-Jun-18	85.7	34.5	<10.0	14.4
5	5A7	In Sialdanga village	June	Second	23-Jun-18	85.8	34.6	<10.0	14.5
5	5A7	In Sialdanga village	July	First	03-Jul-18	86.6	32.5	<10.0	13.5
5	5A7	In Sialdanga village	July	Second	19-Jul-18	83	32.1	<10.0	13.2
5	5A7	In Sialdanga village	August	First	11-Aug-18	81.9	29.2	<10.0	11.8
5	5A7	In Sialdanga village	August	Second	27-Aug-18	81.9	29.2	<10.0	11.8
5	5A7	In Sialdanga village	September	First	11-Sep-18	80.9	28.2	<10.0	11.5
5	5A7	In Sialdanga village	September	Second	20-Sep-18	80.4	27.6	<10.0	11.2
5	5A8	In Shitalpur village	April	First	02-Apr-18	87.9	35.4	<10.0	15
5	5A8	In Shitalpur village	April	Second	18-Apr-18	88.2	35.8	<10.0	15.4
5	5A8	In Shitalpur village	May	First	05-May-18	89.6	36.3	<10.0	15.6
5	5A8	In Shitalpur village	May	Second	16-May-18	88.1	35.6	<10.0	15.4
5	5A8	In Shitalpur village	June	First	01-Jun-18	87.2	35	<10.0	15
5	5A8	In Shitalpur village	June	Second	18-Jun-18	87.4	35.4	<10.0	14.9
5	5A8	In Shitalpur village	July	First	03-Jul-18	84.8	33.6	<10.0	13.7
5	5A8	In Shitalpur village	July	Second	19-Jul-18	83.6	33.2	<10.0	13.4
5	5A8	In Shitalpur village	August	First	11-Aug-18	82.1	29.4	<10.0	11.9
5	5A8	In Shitalpur village	August	Second	27-Aug-18	82.1	29.4	<10.0	11.9
5	5A8	In Shitalpur village	September	First	11-Sep-18	81.4	28.3	<10.0	11.6
5	5A8	In Shitalpur village	September	Second	20-Sep-18	81	27.8	<10.0	11.4

Analysis of Heavy Metals in Air

Station No	Station Name	Month	Fortnight	Date of Sampling	Arsenic (ng/m^3)	Cadmium ($\mu g/m^3$)	Chromium ($\mu g/m^3$)	Mercury ($\mu g/m^3$)	Nickel (ng/m^3)	Lead ($\mu g/m^3$)
5A1	In Ranipur village	Sept	Second	28-Sep-18	<1.0	<0.001	<0.01	<0.001	<0.10	<0.005
5A1	In Ranipur village	March	First	07-Mar-19	<0.005	<0.001	<0.01	<0.001	<0.10	<0.005
5A2	In Bhamaria village	Sept	Second	28-Sep-18	<1.0	<0.001	<0.01	<0.001	<0.10	<0.005
5A2	In Bhamaria village	March	First	07-Mar-19	<0.005	<0.001	<0.01	<0.001	<0.10	<0.005
5A3	In Digha village	March	First	07-Mar-19	<0.005	<0.001	<0.01	<0.001	<0.10	<0.005
5A4	In Dhangajare village	March	First	01-Mar-19	<0.005	<0.001	<0.01	<0.001	<0.10	<0.005
5A5	In Sanuri village	March	First	01-Mar-19	<0.005	<0.001	<0.01	<0.001	<0.10	<0.005
5A6	In Raghunathpur village	Sept	Second	21-Sep-18	<1.0	<0.001	<0.01	<0.001	<0.10	<0.005
5A7	In Sialdanga village	Sept	Second	20-Sep-18	<1.0	<0.001	<0.01	<0.001	<0.10	<0.005
5A8	In Shitalpur village	Sept	Second	20-Sep-18	<1.0	<0.001	<0.01	<0.001	<0.10	<0.005

Environmental standards:

National Ambient Air Quality Standards (NAAQS), 2009 for residential, industrial and rural areas for 24 hourly/yearly samples:

Heavy Metal	Arsenic (As) (ng/m^3)	Cadmium (Cd) ($\mu g/m^3$)	Chromium (Cr) ($\mu g/m^3$)	Mercury (Hg) ($\mu g/m^3$)	Nickel (Ni) (ng/m^3)	Lead (Pb) ($\mu g/m^3$)
Concentration	6	Not specified	Not specified	Not specified	20	0.5

Annexure – II

Noise Level

Cluster No	Station No	Station Name	Month	Fortnight	Date of Sampling	Noise Level dB(A)
5	5N1	Pit-top Parbelia UG	April	First	02-Apr-18	69.1
5	5N1	Pit-top Parbelia UG	April	Second	17-Apr-18	62.8
5	5N1	Pit-top Parbelia UG	August	First	01-Aug-18	67.5
5	5N1	Pit-top Parbelia UG	November	First	03-Nov-18	69.7
5	5N1	Pit-top Parbelia UG	February	First	13-Feb-19	70.6
5	5N2	Pit-top Dubeswari UG	April	First	02-Apr-18	64.5
5	5N2	Pit-top Dubeswari UG	April	Second	17-Apr-18	61.3
5	5N2	Pit-top Dubeswari UG	August	First	01-Aug-18	63.2
5	5N2	Pit-top Dubeswari UG	November	First	03-Nov-18	64.2
5	5N2	Pit-top Dubeswari UG	February	First	13-Feb-19	68.2

Annexure – III

Effluent Water Quality for 5 parameters

Cluster No	Station No	Station Name	Month	Fortnight	Date of Sampling	pH	TSS	TDS	O&G	COD
5	5MW1	Parbelia UG	April	First	02-Apr-18	7.4	24	735	<2.0	32
5	5MW1	Parbelia UG	April	Second	17-Apr-18	7.5	28	770	<2.0	28
5	5MW1	Parbelia UG	MAY	First	14-May-18	7.6	20	654	<2.0	24
5	5MW1	Parbelia UG	MAY	Second	30-May-18	7.8	14	700	<2.0	32
5	5MW1	Parbelia UG	June	First	02-Jun-18	7.6	22	664	<2.0	24
5	5MW1	Parbelia UG	June	Second	18-Jun-18	7.8	18	706	<2.0	20
5	5MW1	Parbelia UG	July	First	12-Jul-18	7.6	14	670	<2.0	28
5	5MW1	Parbelia UG	July	Second	23-Jul-18	7.6	18	636	<2.0	32
5	5MW1	Parbelia UG	August	First	01-Aug-18	8.2	18	636	<2.0	24
5	5MW1	Parbelia UG	August	Second	23-Aug-18	8.2	14	668	<2.0	20
5	5MW1	Parbelia UG	September	Second	28-Sep-18	8.1	18	726	<2.0	12
5	5MW1	Parbelia UG	October	First	05-Oct-18	8	20	678	<2.0	16
5	5MW1	Parbelia UG	October	Second	22-Oct-18	8.3	22	698	<2.0	20
5	5MW1	Parbelia UG	November	First	02-Nov-18	8	22	654	<2.0	12
5	5MW1	Parbelia UG	November	Second	28-Nov-18	8.1	20	676	<2.0	16
5	5MW1	Parbelia UG	December	First	10-Dec-18	8.3	14	490	<2.0	12
5	5MW1	Parbelia UG	December	Second	18-Dec-18	8.7	24	626	<2.0	16
5	5MW1	Parbelia UG	January	First	04-Jan-19	8.6	14	654	<2.0	16
5	5MW1	Parbelia UG	January	Second	26-Jan-19	7.3	26	630	<2.0	24
5	5MW1	Parbelia UG	February	First	13-Feb-19	8.4	28	652	<2.0	20
5	5MW1	Parbelia UG	February	Second	25-Feb-19	8.1	30	670	<2.0	32
5	5MW1	Parbelia UG	March	Second	22-Mar-19	8.3	34	544	<2.0	24
5	5MW2	Dubeswari UG	April	First	02-Apr-18	7.9	30	700	<2.0	44
5	5MW2	Dubeswari UG	April	Second	17-Apr-18	7.2	34	744	<2.0	36
5	5MW2	Dubeswari UG	MAY	First	14-May-18	7.4	26	718	<2.0	28
5	5MW2	Dubeswari UG	MAY	Second	31-May-18	7.7	20	742	<2.0	24
5	5MW2	Dubeswari UG	June	First	02-Jun-18	7.7	14	712	<2.0	16
5	5MW2	Dubeswari UG	June	Second	18-Jun-18	7.6	22	592	<2.0	16
5	5MW2	Dubeswari UG	July	First	12-Jul-18	8.2	18	550	<2.0	32
5	5MW2	Dubeswari UG	July	Second	23-Jul-18	8.1	16	576	<2.0	24
5	5MW2	Dubeswari UG	August	First	07-Aug-18	8.4	28	522	<2.0	36
5	5MW2	Dubeswari UG	August	Second	23-Aug-18	8.7	22	490	<2.0	28
5	5MW2	Dubeswari UG	September	Second	28-Sep-18	8.6	16	480	<2.0	20
5	5MW2	Dubeswari UG	October	First	12-Oct-18	8.2	18	508	<2.0	24
5	5MW2	Dubeswari UG	October	Second	25-Oct-18	8.1	16	532	<2.0	24
5	5MW2	Dubeswari UG	November	First	02-Nov-18	8.2	24	512	<2.0	20
5	5MW2	Dubeswari UG	November	Second	16-Nov-18	8.2	32	526	<2.0	24
5	5MW2	Dubeswari UG	December	First	10-Dec-18	7.7	16	498	<2.0	28
5	5MW2	Dubeswari UG	December	Second	18-Dec-18	7.8	22	500	<2.0	36
5	5MW2	Dubeswari UG	January	First	04-Jan-19	7.3	16	536	<2.0	32
5	5MW2	Dubeswari UG	January	Second	26-Jan-19	8.5	36	508	<2.0	40
5	5MW2	Dubeswari UG	February	First	13-Feb-19	7.9	34	528	<2.0	32
5	5MW2	Dubeswari UG	February	Second	25-Feb-19	7.5	32	548	<2.0	44
5	5MW2	Dubeswari UG	March	Second	22-Mar-19	7.7	36	516	<2.0	32

Note: All parameters in mg/l unless otherwise specified.

Effluent Water Quality Standards (MoEF Schedule – VI Standards)

Parameters	pH	TSS	TDS	Oil & Grease	COD
Limit	5.5-9.0	100	Not Specified	10	250

Effluent Water Quality for full parameters (29 parameters)

Cluster	5	5	5	5	Effluent Water (MOEF Schedule-VI Standard)
Station No	5MW1	5MW1	5MW2	5MW2	
Station Name	Parbelia UG	Parbelia UG	Dubeswari UG	Dubeswari UG	
Month	September	March	September	March	
Fortnight	First	First	First	First	
Date of Sampling	05-Sep-18	06-Mar-19	14-Sep-18	06-Mar-19	
Colour	3	5	4	4	Unobjectionable
Odour	Unobjectionable	Unobjectionable	Unobjectionable	Unobjectionable	Unobjectionable
TSS	24	24	16	22	100.0
pH	8.21	8.31	8.33	7.24	5.5-9.0
Temperature(Deg C)	30.1	29.8	29.5	29.7	Shall not exceed 5^0C above the receiving water temp
Oil & Grease	<2.0	<2.0	<2.0	<2.0	10.0
Total Residual Chlorine	<0.02	<0.02	<0.02	<0.02	1.0
Ammonical Nitrogen	0.62	0.69	0.49	0.52	50.0
Total Kjeldahl Nitrogen	1.65	1.84	1.79	1.64	100.0
Free Ammonia	<0.4	<0.02	<0.4	<0.02	5.0
BOD	4	2	8	5	30.0
COD	16	24	28	40	250.0
Arsenic	<0.005	<0.002	<0.005	<0.002	0.2
Lead	<0.005	<0.005	<0.005	<0.005	0.1
Hexavalent Chromium	0.04	0.04	0.03	0.02	0.1
Total Chromium	0.06	0.07	0.06	0.07	2.0
Copper	0.03	0.03	0.04	0.03	3.0
Zinc	0.03	0.04	0.03	0.03	5.0
Selenium	<0.005	<0.002	<0.005	<0.002	0.05
Nickel	<0.10	<0.01	<0.10	<0.01	3.0
Fluoride	0.75	0.79	0.62	0.66	2.0
Dissolved Phosphate	1.56	1.68	1.42	1.36	5.0
Sulphide	0.006	0.005	0.007	0.006	2.0
Phenolics	<0.001	<0.001	<0.001	<0.001	1.0
Manganese	0.28	0.26	0.26	0.24	2.0
Iron	0.15	0.14	0.14	0.12	3.0
Nitrate Nitrogen	2.8	3.6	3.4	2.6	10.0
Cadmium	<0.001	<0.005	<0.001	<0.005	0.003
Total Dissolved Solids	692	512	456	480	Not Specified

Note: All parameters in mg/l unless otherwise specified.

Annexure – III

Groundwater Quality

Cluster No	5	5	5	5	5	5	5	Indian Drinking Water Standard (IS-10500:2012)	
Station No	5GW3	5GW1	5GW4	5GW2	5GW6	5GW7	5GW3		
Station Name	Dugwell near Shiv Mandir in Digha village	Dugwell at upper Dhawra near Qtrs of Satyanaran Ram	Dugwell near Gawalapara in Sunuri village	Dugwell near Bhamaria Star Club	Dugwell at Dishergarh line Dhawra beside the road near Hussunia More	Dugwell at Sheetalpur village near New Kalimandir	Dugwell near Shiv Mandir in Digha village		
Month	May'18	May'18	May'18	May'18	May'18	May'18	May'18		
Fortnight	Second	Second	Second	Second	Second	Second	Second		
Date of sampling	08-May-18	16-May-18	18-May-18	18-May-18	30-May-18	30-May-18	08-May-18	Acceptable Limit	Permissible Limit
Colour, Hazen unit Max	3	4	4	3	5	2	3	5.0	15.0
Odour	Unobjectionable	Unobjectionable	Unobjectionable	Unobjectionable	Unobjectionable	Unobjectionable	Unobjectionable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity, NTU Max	2	2	1	1	2	1	2	1.0	5.0
pH	8.03	8.26	8.42	8.23	8.15	8.34	8.03	6.5-8.5	No relaxation
Total Hardness	488	264	180	188	528	168	488	200.0	600.0
Iron	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	0.30	No relaxation
Chlorides	270	86	32	25	114	57	270	250.0	1000.0
Res Free chlorine	0.04	0.05	0.04	0.06	0.05	0.04	0.04	0.20	1.0
Dissolved Solids	990	520	282	350	1156	300	990	500.0	2000.0
Calcium	208	92	92	96	216	76	208	75.0	200.0
Copper	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.05	1.5
Manganese	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.1	0.3
Sulphate	156	93	26	32	88	37	156	200.0	400.0
Nitrate	56.70	13.73	1.42	3.98	6.3	6.20	56.70	45.0	No relaxation
Fluoride	0.40	0.03	0.41	0.50	0.38	0.51	0.40	1.0	1.5
Selenium	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.01	No relaxation
Arsenic	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.01	0.05
Lead	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.01	No relaxation
Zinc	0.05	0.05	0.03	0.04	0.02	0.04	0.05	5.0	15.0
Hex Chromium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.05	No relaxation
Boron	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.5	1.0
Coliforms (MPN)	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Shall not be detectable in any 100 ml sample	
Phenolics	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	0.001
Alkalinity	224	208	280	212	256	200	224	200.0	200.0
Cadmium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.003	0.003

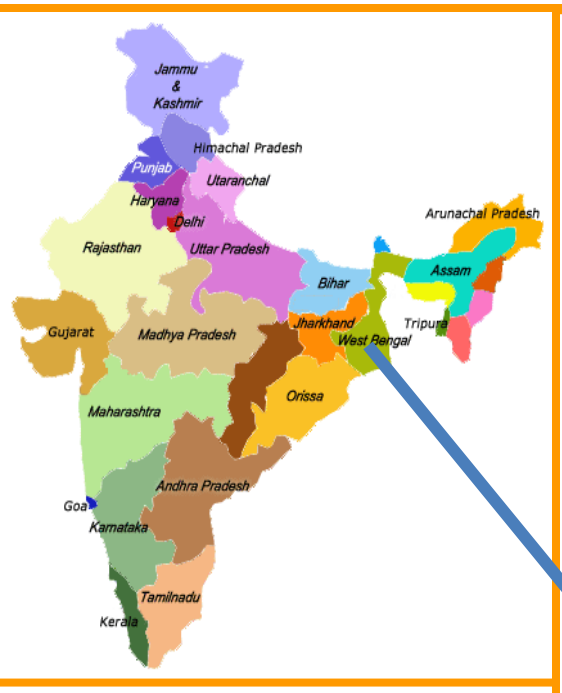
Note: All parameters in mg/l unless otherwise specified.

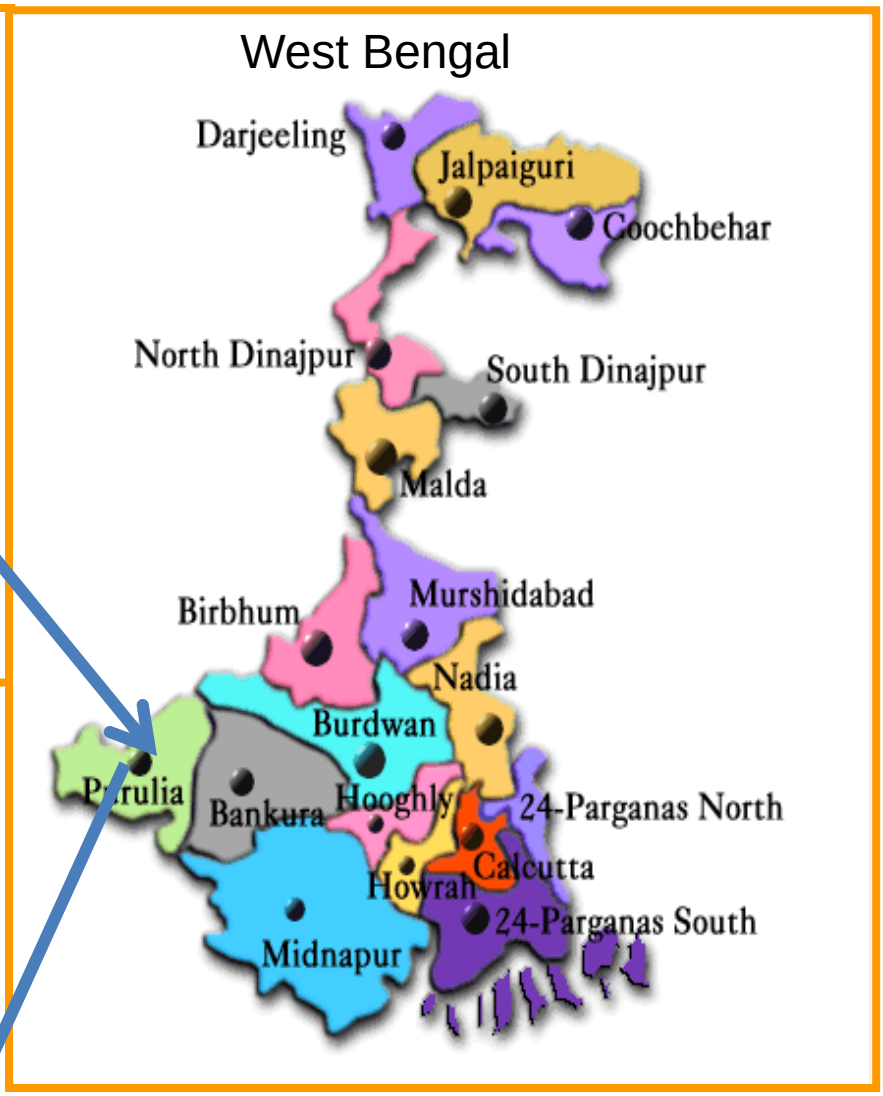
Annexure – IV

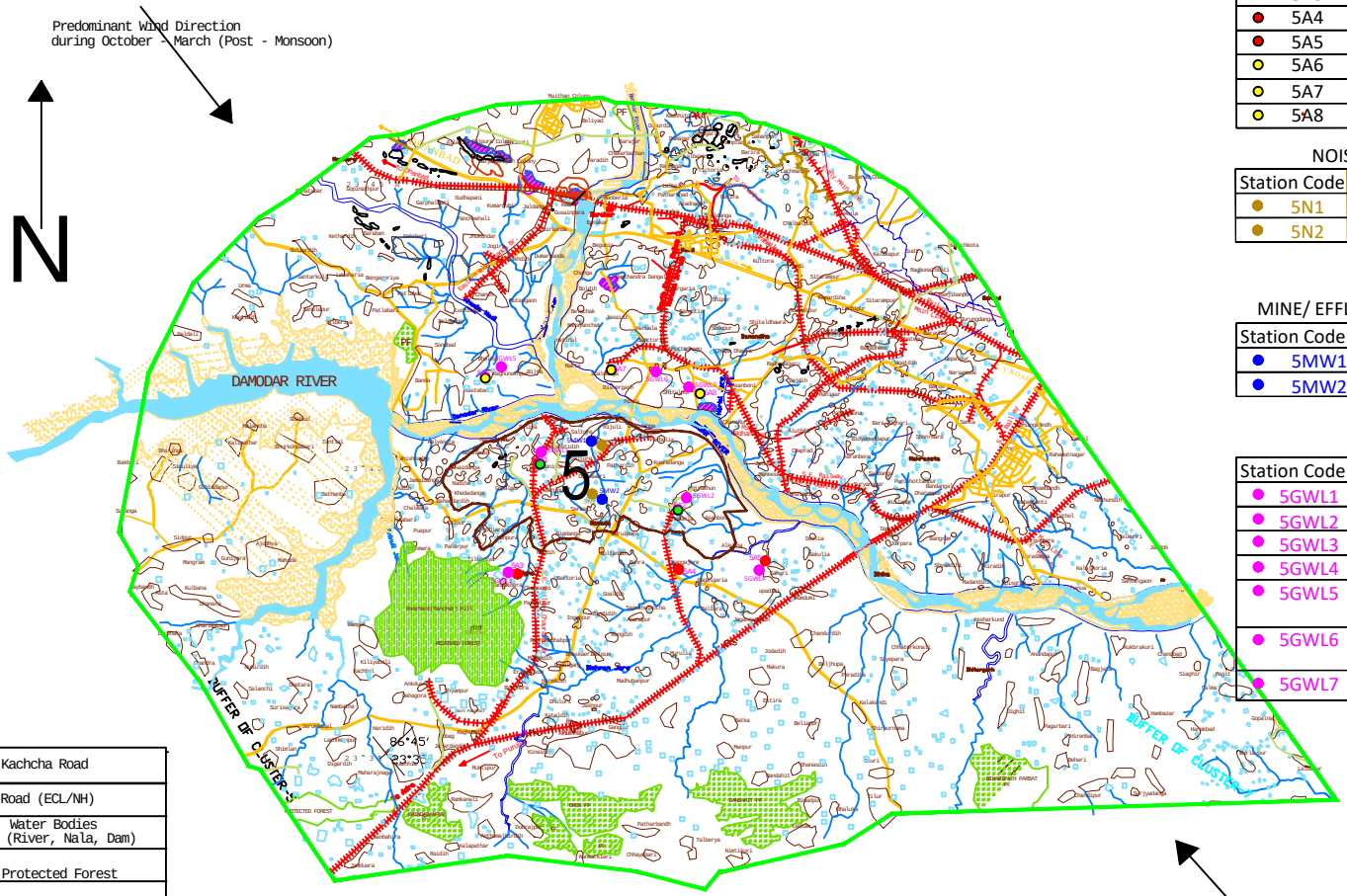
Groundwater Level

Cluster No	Station No	Station Name	Month	Fortnight	Date of Sampling	Ground Water Level BGL (mtr)
5	5GW1	Dugwell at upper Dhawra near Qtrs of Satyanaran Ram	May	First	16-May-18	3.75
5	5GW1	Dugwell at upper Dhawra near Qtrs of Satyanaran Ram	August	First	25-Aug-18	0.85
5	5GW1	Dugwell at upper Dhawra near Qtrs of Satyanaran Ram	November	First	30-Nov-18	5.95
5	5GW1	Dugwell at upper Dhawra near Qtrs of Satyanaran Ram	January	First	25-Jan-19	10.90
5	5GW2	Dugwell near Bhamaria Star Club	May	First	18-May-18	3.75
5	5GW2	Dugwell near Bhamaria Star Club	August	First	20-Aug-18	1.05
5	5GW2	Dugwell near Bhamaria Star Club	November	First	22-Nov-18	2.75
5	5GW2	Dugwell near Bhamaria Star Club	January	First	25-Jan-19	3.55
5	5GW3	Dugwell near Shiv Mandir in Digha village	May	First	08-May-18	5.45
5	5GW3	Dugwell near Shiv Mandir in Digha village	August	First	20-Aug-18	1.0
5	5GW3	Dugwell near Shiv Mandir in Digha village	November	First	22-Nov-18	3.1
5	5GW3	Dugwell near Shiv Mandir in Digha village	January	First	25-Jan-19	3.65
5	5GW4	Dugwell near Gawalapara in Sunuri village	May	First	18-May-18	3.65
5	5GW4	Dugwell near Gawalapara in Sunuri village	August	First	20-Aug-18	0.95
5	5GW4	Dugwell near Gawalapara in Sunuri village	November	First	22-Nov-18	7.25
5	5GW4	Dugwell near Gawalapara in Sunuri village	January	First	24-Jan-19	8.55
5	5GW6	Dugwell at Dishergarh line Dhawra beside the road near Hussunia More	May	First	30-May-18	4.6
5	5GW6	Dugwell at Dishergarh line Dhawra beside the road near Hussunia More	August	First	03-Aug-18	2.05
5	5GW6	Dugwell at Dishergarh line Dhawra beside the road near Hussunia More	November	First	19-Nov-18	3.3
5	5GW6	Dugwell at Dishergarh line Dhawra beside the road near Hussunia More	January	First	01-Jan-19	4.45
5	5GW7	Dugwell at Sheetalpur village near New Kalimandir	May	First	30-May-18	5.25
5	5GW7	Dugwell at Sheetalpur village near New Kalimandir	August	First	03-Aug-18	1.05
5	5GW7	Dugwell at Sheetalpur village near New Kalimandir	November	First	16-Nov-18	2.5
5	5GW7	Dugwell at Sheetalpur village near New Kalimandir	January	First	25-Jan-19	3.15

Plate – 1: Location Plan Of Cluster 5 in Country/ State/District







	Kachcha Road
	Road (ECL/NH)
	Water Bodies (River, Nala, Dam)
	Protected Forest
	Reserved Forest
	SAND
	Built Up
	River/Nalah

Permanent Air Station
Pre - monsoon
Post - monsoon

AIR QUALITY MONITORING STATIONS

Station Code	Type of Station	Name of Station
5A1	Permanent Air Station	In Ranipur Village
5A2	Permanent Air Station	In Bhamaria Village
5A3	Post monsoon Air Station	In Digha Village
5A4	Post monsoon Air Station	In Dhangajore Village
5A5	Post monsoon Air Station	In Sanuri Village
5A6	Pre monsoon Air Station	In Raghunathpur Village
5A7	Pre monsoon Air Station	In Sialdanga Village
5A8	Pre monsoon Air Station	In Shitalpur Village

NOISE SAMPLING STATIONS

Station Code	Name of Station (Workplace)
5N1	Parbelia UG
5N2	Dubeswari UG

MINE/ EFFLUENT WATER STATIONS

Station Code	Mine/Effluent Water Station
5MW1	Parbelia UG
5MW2	Dubeswari UG

GROUND WATER LEVEL

Station Code	Location of Dug Well
5GWL1	Dugwell at upper dhawrah near qrts. of Satyanarayan Ram
5GWL2	Dugwell near Bhamaria star club
5GWL3	Dugwell near Shiv Mandir in Digha village
5GWL4	Dugwell near gawalapara in Shunuri village
5GWL5	Dugwell near G.G.Lang school opposite of Maszid, Raghunathpur
5GWL6	Dugwell at Dishergarh line Dhawrah beside the road near Hussunia more
5GWL7	Dugwell at Sheetalpur village near New Kali Mandir

JOB NO

EASTERN COALFIELDS LIMITED	111653
ENVIRONMENT STATEMENT FOR CLUSTER NO. 5	
SAMPLING STATIONS OF CLUSTER NO. 5	
CMPDI ISO 9001 Company	Sheet 1 OF 1
	RL ENV XXXX12 REV. No. 0