ENVIRONMENTAL STATEMENT 2022-23

DAKRA OPENCAST PROJECT

N K AREA, DAKRA

September, 2023

CENTRAL COALFIELDS LIMITED

ENVIRONMENT DIVISION

Ranchi

EXECUTIVE - SUMMARY

1.0 BACKGROUND

It is an old mine opened in 1924 and operating from pre-nationalisation period. Dakra Opencast Project of Central Coalfield Limited is situated in North Karanpura Coalfield. Its planned production capacity is 1.3 MTPA. The project has been granted EC for a normative capacity of 0.55MTPA & peak capacity 0.63MTPA in the year 2013. The project produced 0.477 MT of coal during the year 2022-23. The total M.L area of the Project is spread over an area of 249.72 Ha. The total volume of O.B. to be generated during the balance life span of the Project is 30.252Mm3. The balance life of mine is 1 years.

This report is prepared with a view to fulfill the statutory obligations laid down by the Ministry of Environment & Forest.

Environmental statement / audit report has been considered as one such document which can be utilized by the planners and government agencies to understand the environmental implications and also adequacy of existing measures and to take decisions in the interest of the Environment and economy.

2.0. FINDINGS:

Environmental Statement report reveals the following facts regarding environmental aspect of this project

i) The concentration of SO_2, NO_x and CO in ambient air in core zone is well within the permissible limits.

ii) The concentration of SPM in core zone is within permissible limits at all sampling stations.

iii) The quality of sump water at the disposal point is meeting the prescribed standards with respect to all parameters.

iv) The noise level in the core and buffer zone is not crossing the threshold value of 75 dB (A)

v) The plantation over external O.B. dump has been completed. The area planted - 99.84Ha and total no of plants – 257947.

vi) 2.00 km of roadside plantation has been completed by forest department in monsoon 2016. 800 no of saplings have been planted around 2.5 km road in monsoon 2017

vii) At present, the entire volume of OB generated is being reutilized for back – filling.

viii) The volume of waste water generated from the mine, workshop and colony is 990 and 410 m^3/day respectively.

ix) No hazardous waste material is being produced either from any process or any pollution control facilities.

SUMMARISED DATA

1.	Production capacity	: 0.55 MTY
2.	Mineable Balance Reserve	: 13.893 MT
3.	Total Volume of O.B.	: 29.549 Mm^3
4.	Stripping Ratio	: 1 : 2.13
5.	Total land requirement	: 249.72 Ha
6.	Forest land requirement	: NIL
7.	Life of the Project	: 1 Years
8.	Average quality of coal	: Grade G-10
9.	Average Rainfall / annum	: 1450 mm
10.	Temperature	:
	i. Maximum	: 42 ^{0}c
	ii. Minimum	: 02 ^{0}c
11.	Predominant Wind Direction and Av. Wind Velocity :	
	i. Summer	: SW, 9.5 Km/hr
	ii. Rainy	: SE, 8.5 Km/hr
	iii. Winter	: NW, 6.5 Km/hr
12.	Magnitude of waste generated	
	i. Waste water discharge from	
	a. Colony	: 214 m^3/day
	b. Workshop	: 25 m^3/day
	c. Mine	: 383 m^3/day
	ii. Solid Waste	
	a. Top Soil	: NIL
	b. O.B.	: 0.575046 Mm^3

ENVIRONMENT STATEMENT FOR THE FINANCIAL YEAR ENDING 31ST MARCH 2023

PART-A

I. Name and Address of the mine

NAME	: DAKRA OPENCAST PROJECT
POST	: DAKRA
DISTT.	: RANCHI, JHARKHAND

II.	INDUSTRY CATEGORY	: PRIMARY
III.	Date of last Environmental Statement Report submitted	: September-22
IV.	PRODUCTION CAPACITY	: 0.55 MTY
V.	YEAR OF STARTING	: 1924 (Pre-nationalized)

PART - B

WATER AND RAW MATERIAL CONSUMPTION

1. WATER CONSUMPTION (cu.m/day)

a.Mining

i.	Haul road dust suppression	:	95 m^3/Day
ii.	Workshop	:	21 m^3/Day
iii.	Fire Fighting	:	4 m^3/Day
iv.	Others (Service building etc.)	:	16 m^3/Day

b. Domestic

i.	Colony	:	278 m^3/Day

Name of Product	Water Consumption per Unit of Product					
	Financial Year – 2022-23			Financial Year – 2021-22		
	Production (MT)	Industrial (m^3/Te)	Domestic (m^3/Te)	Production (MT)	Industrial (m^3/Te)	Domestic (m^3/Te)
ROM Coal	0.477	0.10	0.21	0.492	0.11	0.20

2. RAW MATERIAL CONSUMPTION:

Name of Products	Name of Raw Material	Consumption of Raw Material	
		Financial Year – 2022-23	Financial Year – 2021-22
ROM Coal	POL	0.89 Lit/cum	1.08 Lit/cum
	Explosives	Coal: 0.17 Kg/Te OBR: 0.46 Kg/ m^3	Coal: 0.17 Kg/Te OBR: 0.46 Kg/ m^3

PART - C

POLLUTION DISCHARGED TO ENVRONMENT/UNIT OF OUTPUT

(PARAMETERS SPECIFIED IN THE CONSENT ISSUED)

Pollutants	Quantity of pollutants generated	Percentage variation from prescribed standards
Water		
a) Discharged from Mine	383 cu.m/day	The quality of mine water at the discharge point vis-a-vis the prescribed standards is given in Annexure.
b) Workshop Effluent	25 cu.m/day	Quantity of effluent from the workshop is low.
c) Domestic Discharged	214 cu.m/day	
Air		
The SPM, SO2 and NOx are main pollutants generated from coal mining project.	The quantity of air pollutants from mine is difficult to measure. However, concentrations of air pollutants are measurable and are given in Annexure.	The results of air pollutants are Under prescribed limits.
Noise		
Operation of HEMMs generated noise	Recorded noise levels are placed as Annexure.	The noise level in and around the project is under the prescribed limits.

PART - D

HAZARDOUS WASTES

(As specified under Hazardous Waste Management and Handling Rules, 1989)

Hazardous Wastes	Total Quantity	
	Financial Year – 2022-23	Financial Year – 2021-22
a)From Mining Process	Nil	NIL
b)From Pollution control facilities	Nil	NIL

PART - E

SOLID WASTES

Description of Solid Waste	Total quantity of solid waste generated in M^3	
	Financial Year – 2022-23	**Financial Year – 2021-22**
a) From mining process - Overburden	0.575046 M m3	0.5518 M m3
b) From pollution control facilities	NIL	NIL
c) Quantity recycled or reutilized	The entire volume of Overburden removed during the process of coal winning is reutilized for back filling	

PART - F

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

Hazardous wastes are not being produced either from mining operation or from any pollution control facilities. During opencast mining, overburden and top soil are produced as solid wastes temporarily as these materials are used for land reclamation. During the year 2021-22, 0.5750 M m^3 million cubic meter of overburden was generated.

The overburden consists of the following constituents:

1. Soil
2. Shale, sandy shale (including carbonaceous shale)
3. Alternate bands of shale and sand stone
4. Sand stone

DISPOSAL PRACTICE

At present, the external dumping of overburden is over. The overburden materials, generated during mining, are being internally dumped. At the end of mining operation some decoaled area will remain as void and it will be used for storing rain water.

Overburden dumps, apart from being unacceptable from aesthetics point of view, are also sources of fugitive dust generation, Soil wash - off and water pollution. In order to minimize these adverse impacts of the dump on surrounding environment, it is proposed to start technical and biological reclamation of the internal dumps

PART - G

IMPACTOF 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 ANTI AIR POLLUTION MEASURES

The following measures have been taken to control air pollution:

i) 42 fixed water sprinklers have been installed along the siding.

ii) Feeder crushers at Dakra Siding have been covered and are fitted with water sprinkling system,

iii) Two high capacity mobile sprinklers of 28-kilolitre capacity are deployed for dust control at siding and in project.

iv) 135 m of toe wall has been constructed in the project

v) During 2016 monsoon about 1700 saplings were planted along railway siding, feeder breaker and avenue plantation of 2.5 km along roads in Dakra OCP.

vi) Similarly during monsoon of 2017, additional 390 saplings were also planted along KD Old siding. Plantation of 800 saplings along 2 km of roads in Dakra OCP has also been completed in monsoon 2017.

vii) Repair of about 3.2 Km of PWD road with side drains has been completed at a cost of Rs. 9.35 crore. Similarly another road from Rohini coal stock yard to Mohan Nagar junction at an expenditure of Rs. 20.34 crore has also been completed. These roads are meant to transport coal from mines to Dakra railway siding.

viii) A wind breaking arrangement to protect the habitation near Dakra siding had been installed at the siding.

ix) Construction of a settling tank near Dakra siding -to check surface runoff from siding has been completed

x) Regular sprinkling of water on haul roads and other roads.

xi) Wetting of ROM coal before crushing in Feeder Breaker.

xii) Water sprinkling on coal stock.

xiii) Plantation on OB dumps and in other vacant space.

xiv) Blasting is done during congenial atmosphere.

xv) Wet drilling is done for blast hole drilling in OB & Coal faces.

xvi) PM10 analyser installed at Dakra Siding

xvii) CAAQMS installed at NK Area , CCL

2.0 ANTI WATER POLLUTION MEASURES

The following measures have been taken to control water pollution from the mine:

i) Check dam at Dhupgarha Nalla acts as a settling pond. The overflow from this pond enters into the river Damodar through Sonadobha Nala, which joins Dhupgarha Nala after Check Dam. Some portions of mine water are also used for haul road dust suppression.

ii) The catch drains has been constructed around the foot of the O.B. dumps in order to collect surface runoff water from the dumps and convey them to the settling ponds.

iii) Garland drain around the mine has been constructed in order to prevent the entry of surface run off inside the mine and thus contamination of rain water.

iv) Each house in the colony has been provided with a septic tank with soak pit arrangement.

3.0. ANTI NOISE POLLUTION MEASURES

i) Blasting operation is carried out between 12.30 PM to 3.00 PM.

ii) Result of noise monitoring, reveal that the noise level is well below 85 dB (A).

4.0. MEASURES FOR RECLAMATION OF LAND

At present overburden generated during mining is being dumped into decoaled area. After the completion of the backfilling operation, it is proposed to start technical and biological reclamation of the internal dumps. At the end of mining operation, an area of 25.0 Ha will be left as void. Its edges would be treated suitably and used for storing rain water. The presence of such a water body will help in increasing the moisture content of soil of adjacent area and ultimately it would promote the growth of vegetation.

PART - H

ADDITIONAL INVESTMENT PROPOSAL FOR ENVIRONMENTAL PROTECTION INCLUDING ABATEMENT OF POLLUTION

In future, investment will be made in following heads for further improvement of environment around the project:

i. The plantation will be done over vacant space within the mine leasehold boundary.

ii. Fixed water sprinkler at railway siding will be installed to suppress dust generation.

PART - I

ANY OTHER PARTICULARS IN RESPECT OF ENVIRONMENTAL PROTECTION AND ABATEMENT OF POLLUTION

The regular monitoring of the ambient air and water quality is being done in and around core zone and the quarterly monitoring report is submitted to the Jharkhand State Pollution Control Board. Ranchi

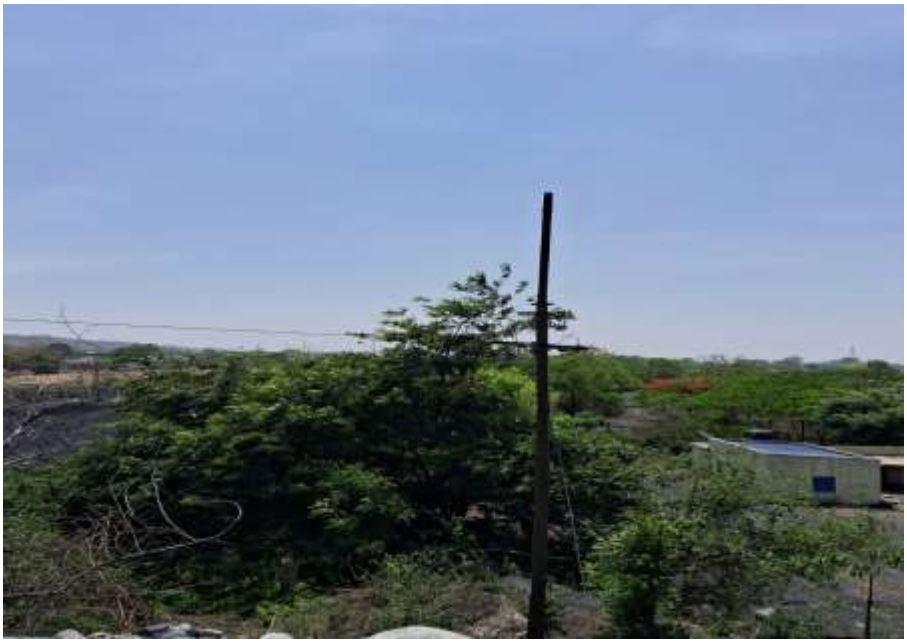
Dy Manager (Envt)
NK Area

Environment Officer/IC
Dakra OCP
NK Area

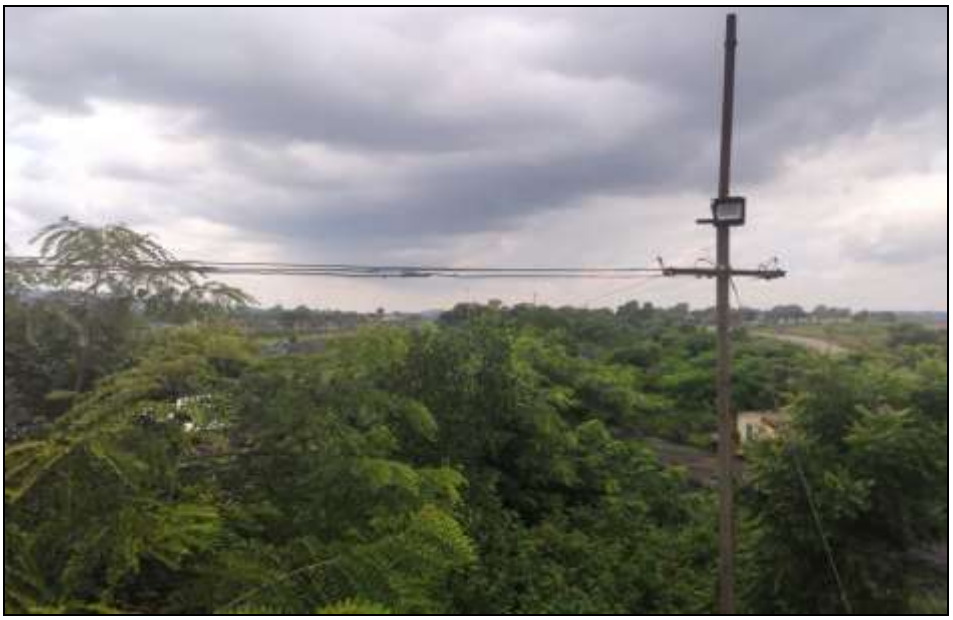
Project Officer
Dakra OCP
NK Area

Annexure A Photographs

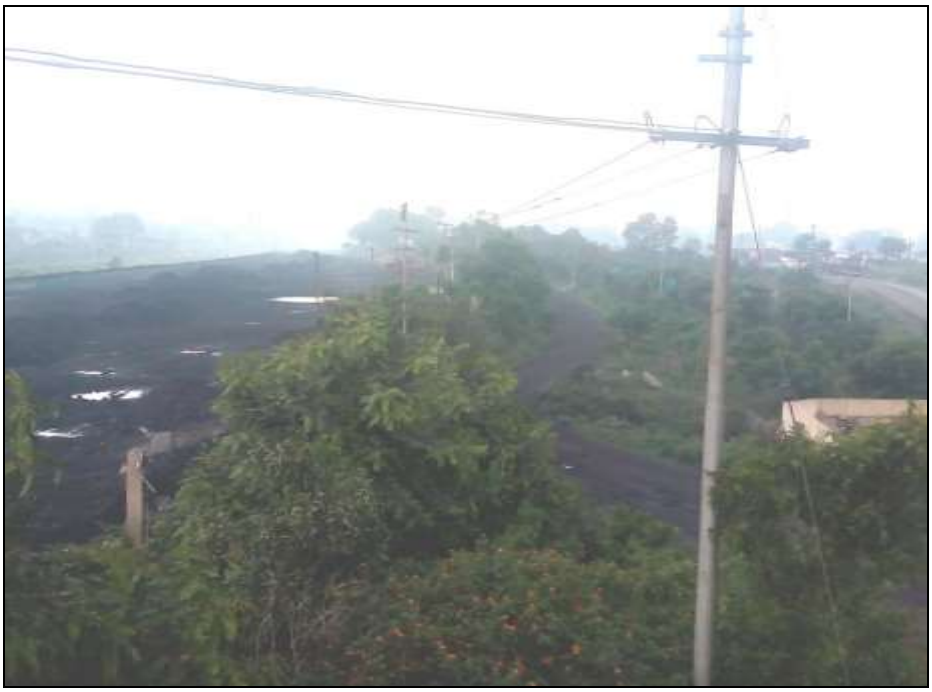
a) Water sprinkler system with plantation (May 2023)



b) Water sprinkler system with plantation (August 2020)



c) Water sprinkler system with plantation (July 2019)



d) Water sprinkler system with plantation (July 2018)

e) Water sprinkler system with plantation (August 2016)

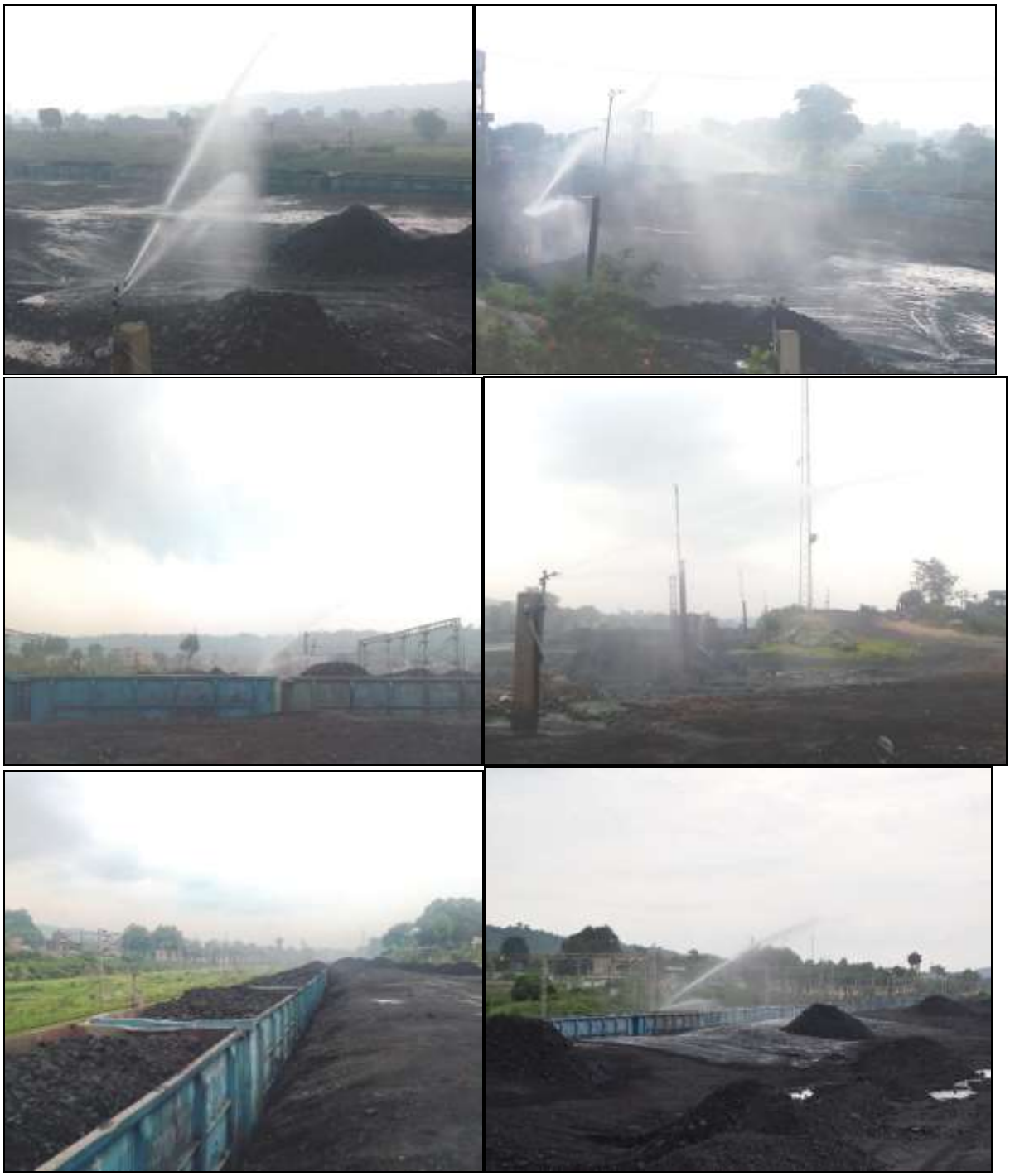


Figure 1.2 High Capacity Fixed water sprinklers on both sides of railway track

a) Covered Feeder Crusher with additional water sprinkling system (July 2019)

b) **Covered Feeder Crusher with water sprinkling system (August 2018)**

c) **Feeder Crusher with water sprinkling system (August 2016)**

Figure1.3feeder crusher at Dakra Siding

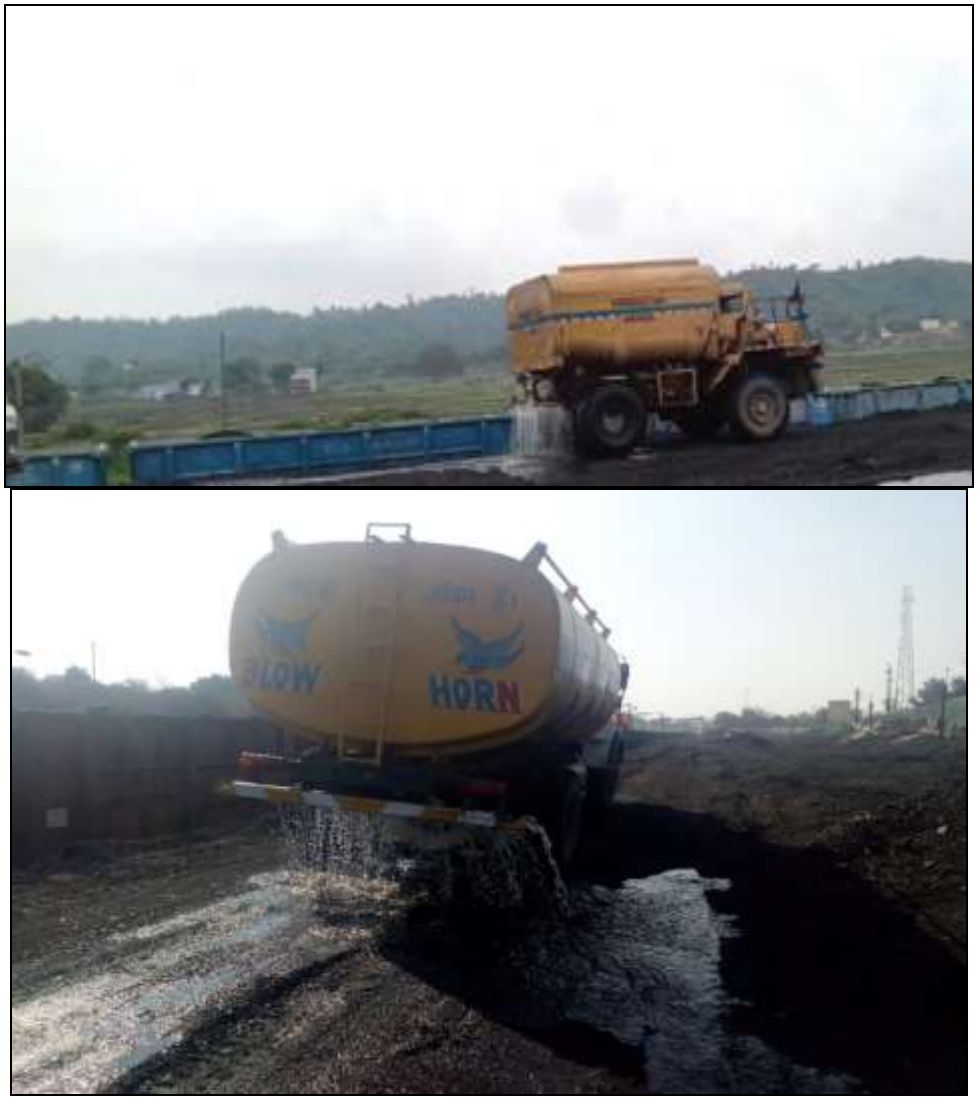


Figure 1.4 28 KL Mobile Sprinkler Mobile water sprinkler at Dakra siding

Figure 1.5 Plantation at Dakra Siding

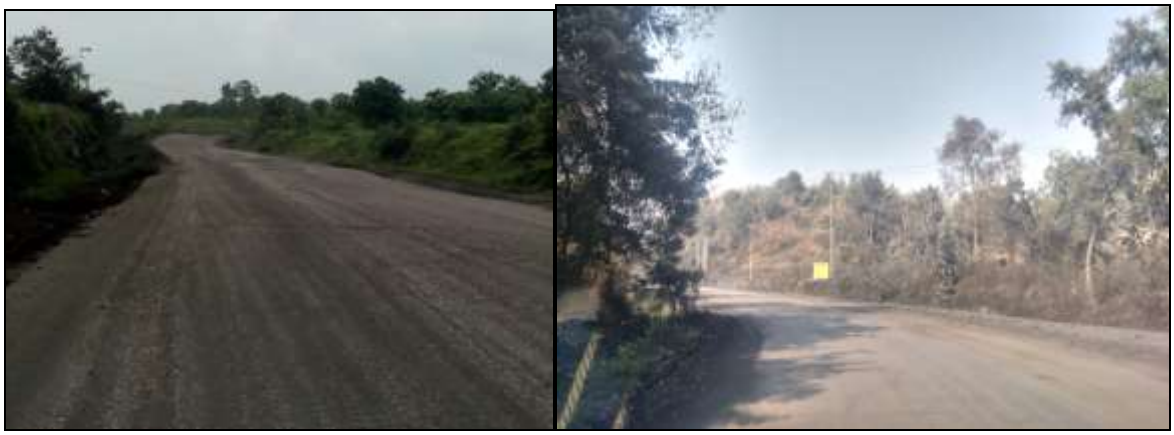


Figure 1.6 3.2 Km approach road

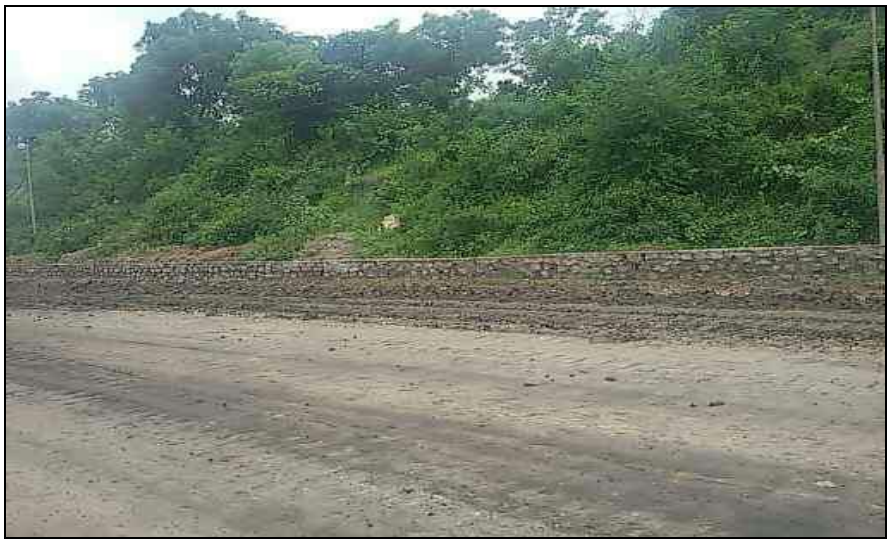


Figure 1.7 Toe wall constructed in Dakra OCP

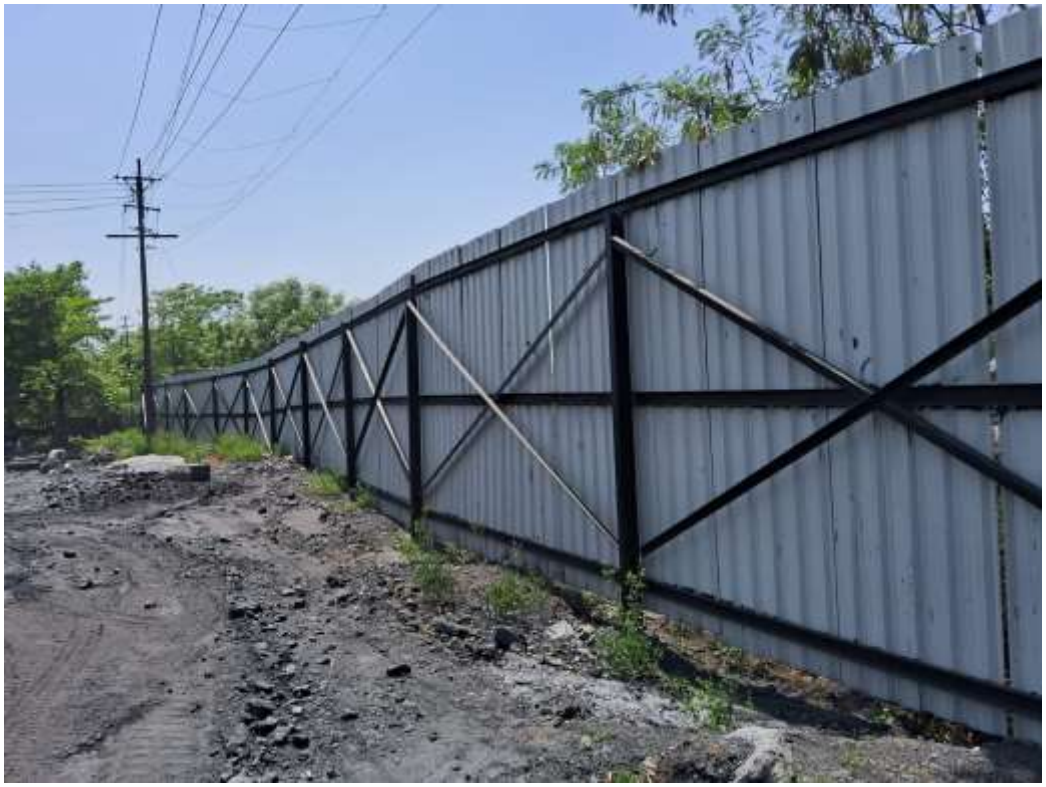


Figure 1.8 Wind breaking Screen with retention walls at Dakra Siding

Figure 1.9 Sedimentation Pond at Dakra Siding

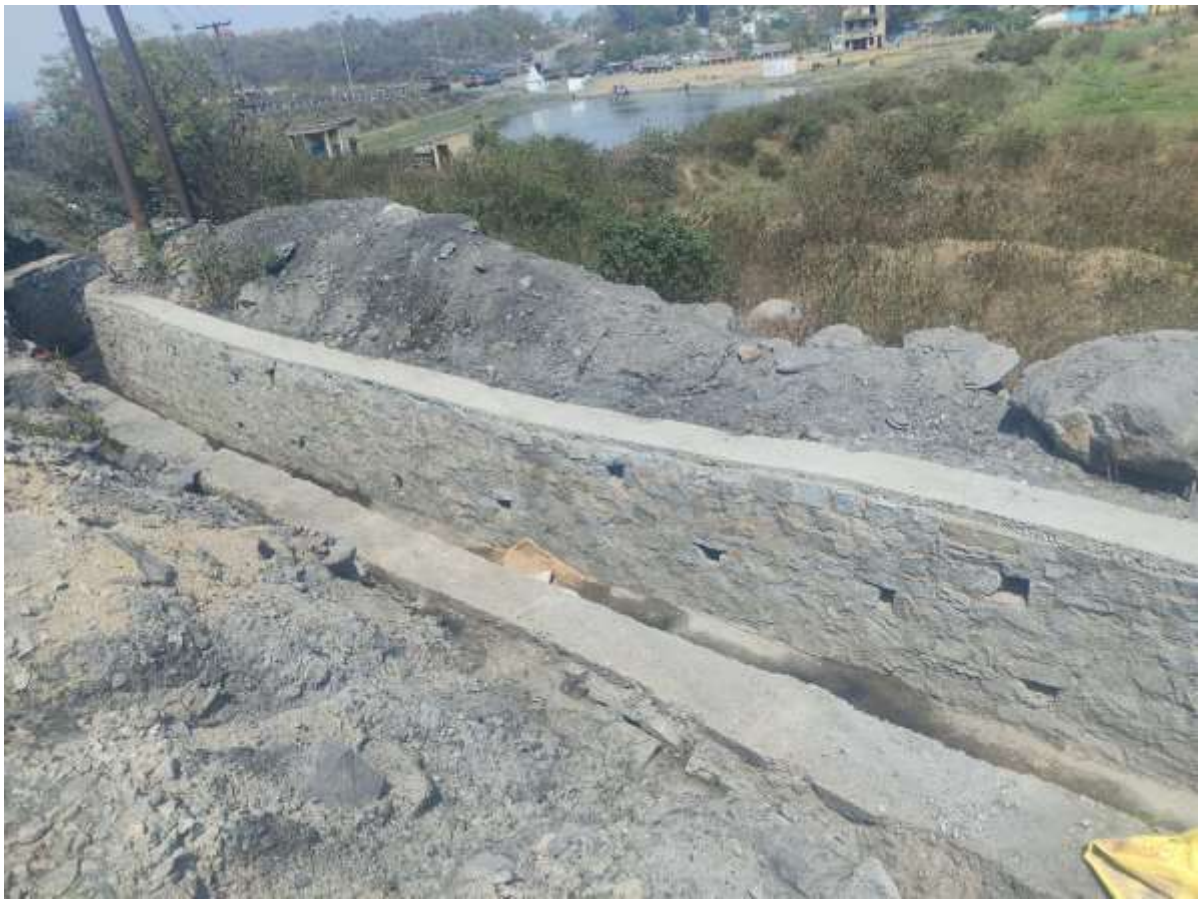


Figure 1.10 Drains in Dakra Siding

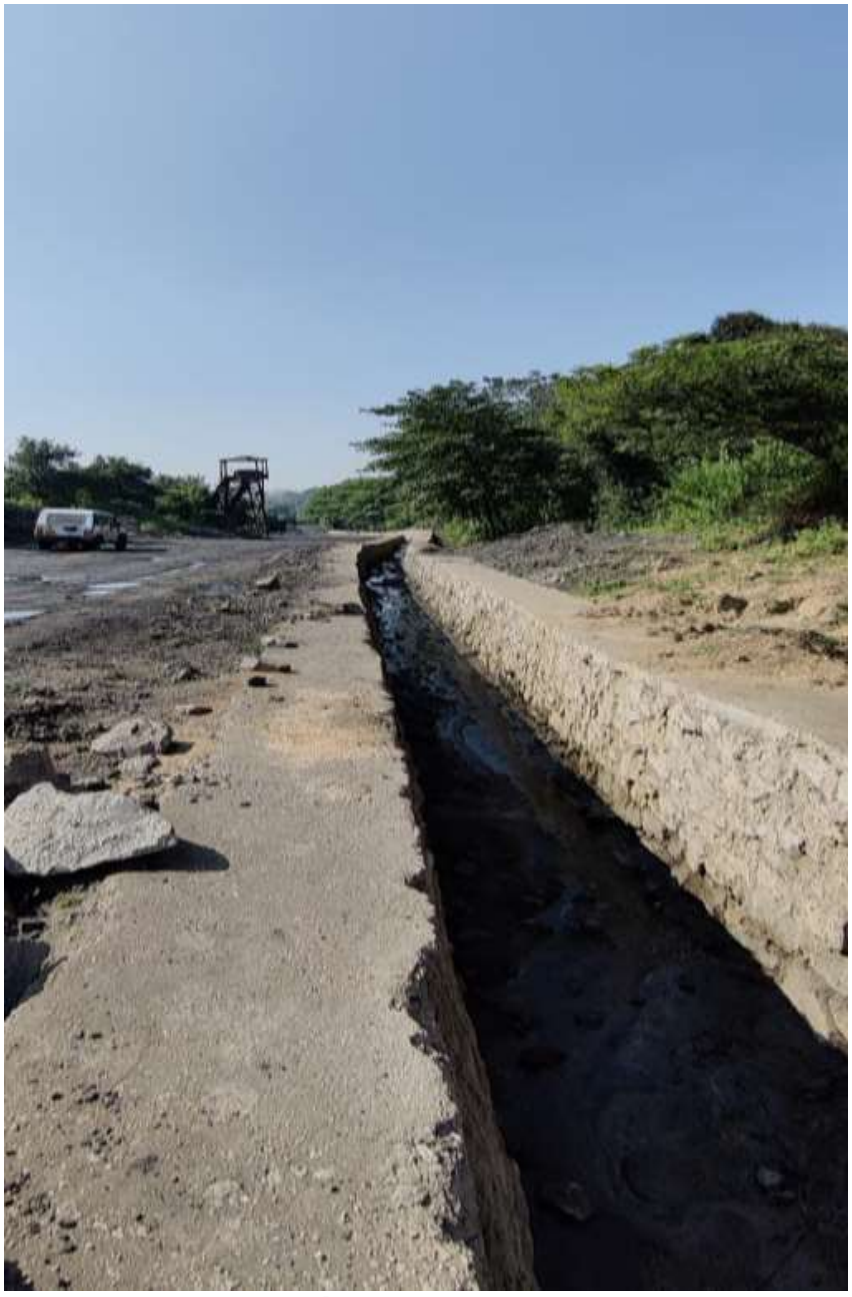


Figure 1.11 Drains in Dakra Mine

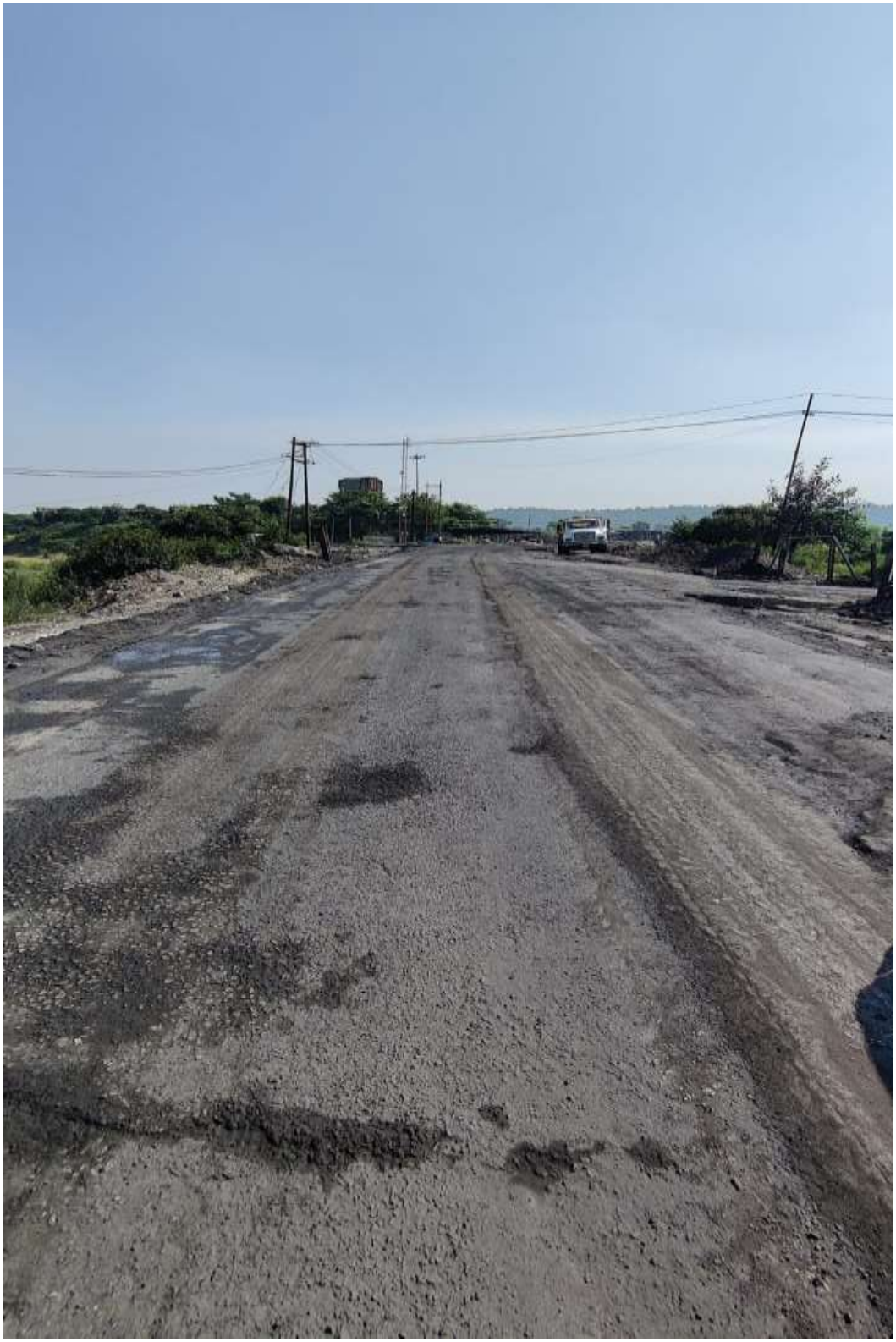


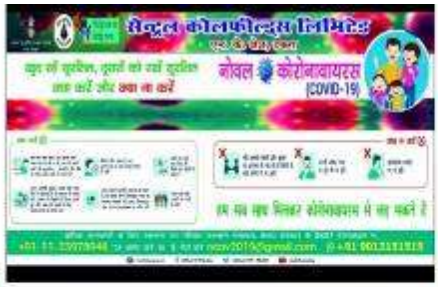
Figure 1.12 approach road to Dakra Siding

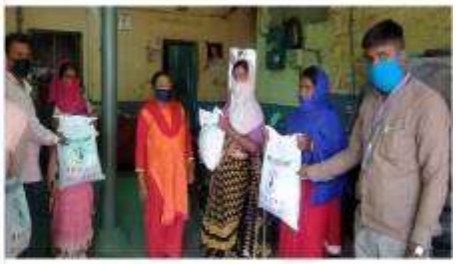
CSR activities in NK Area

NK Area carries out CSR activities in 14 different panchayats of Khalari and Tandwa circle. Some of CSR activities are as follows:

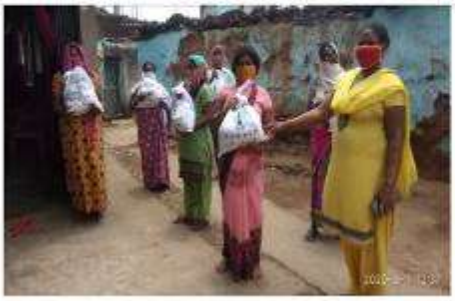
Drinking Water

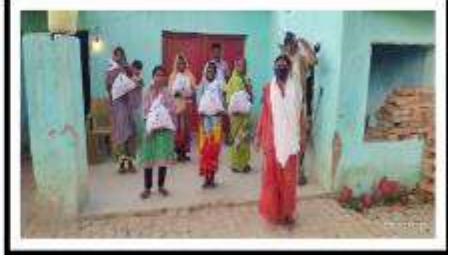
3 Deep borings, 9 wells, 6 handpumps, 3 water purifiers at Khalari & Mcluskieganj railway station and khalari block


सेन्ट्रल कोलफील्ड्स लिमिटेड
नोवल कोरोनावायरस
(COVID-19)

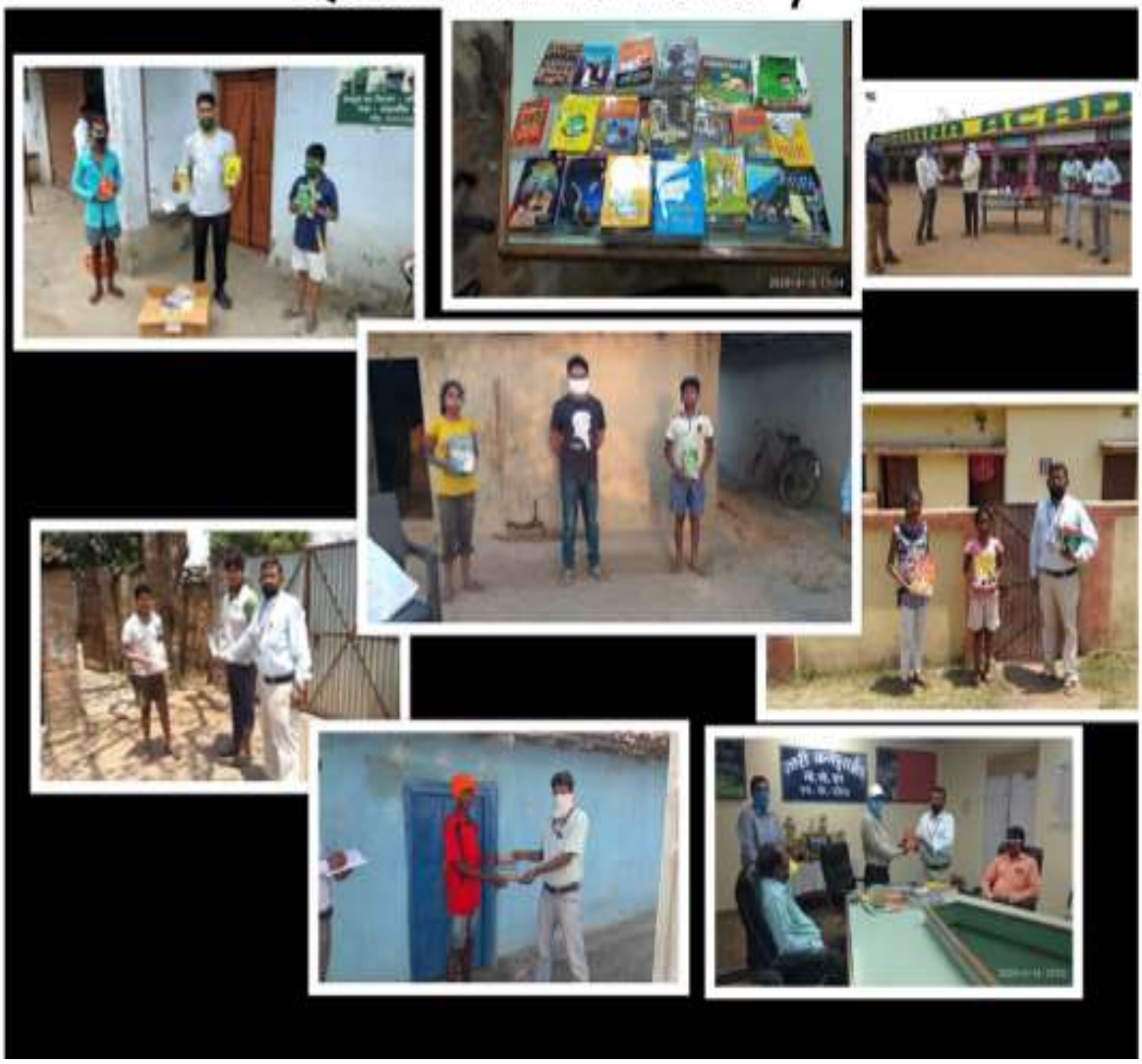



खाद्य सामग्री
का
वितरण

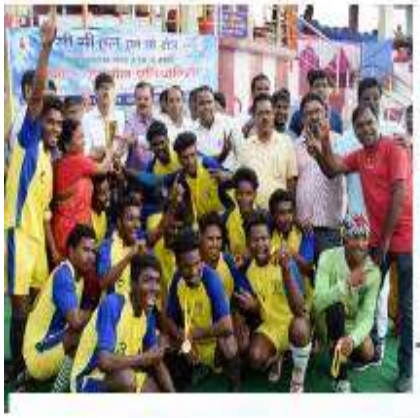


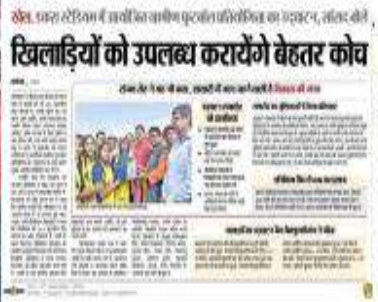


Quarantine library



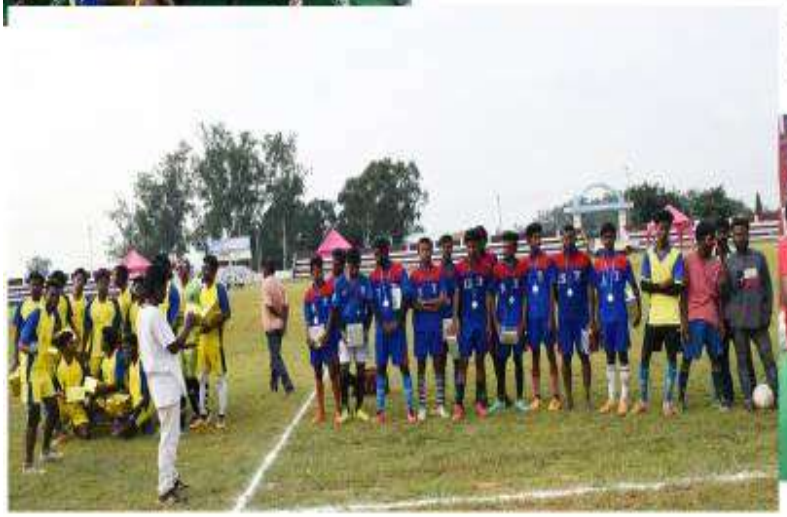
Graameen Football

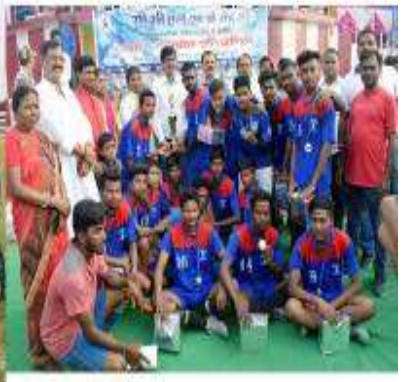




खिलाड़ियों को उपलब्ध करायेंगे बेहतर कोच

बालिका वर्ग में गणेश स्पोर्टिंग क्लब राय व बालक वर्ग में विश्रामपुर की टीम विजयी





Distribution of sports items

Swachhta Hi Sewa 2019

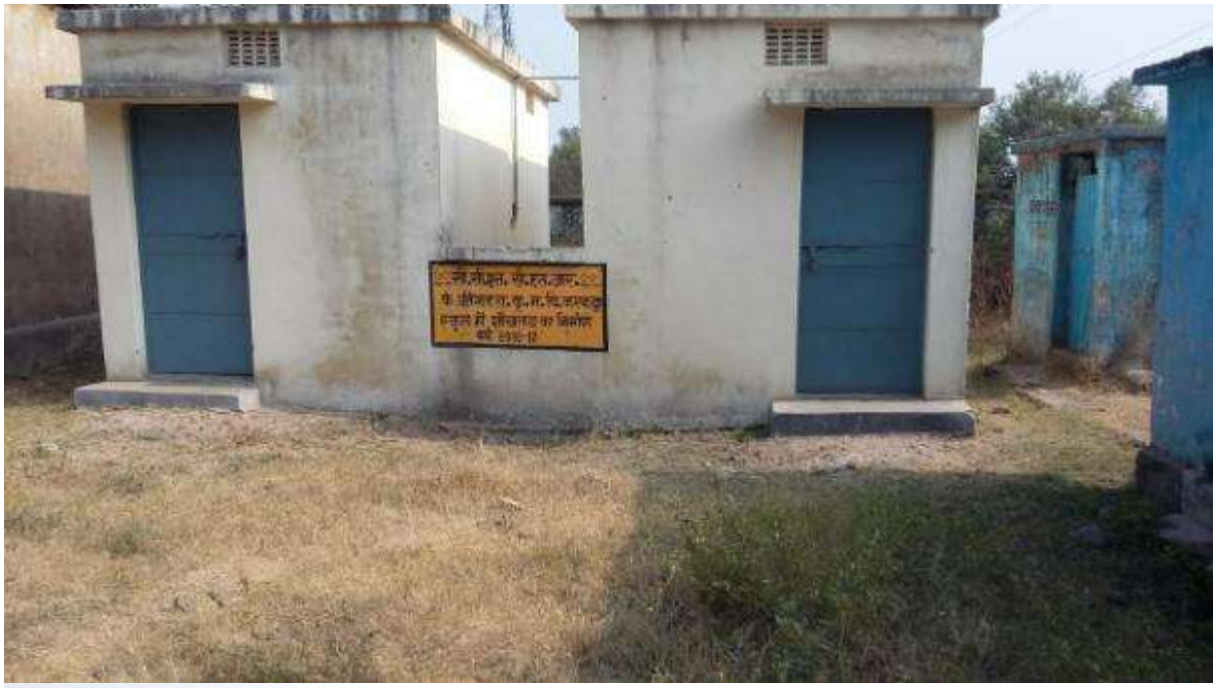
1000 cloth bag distribution, social message and branding with help of 3000 pamphlets depicting restriction on use of single use plastic at houses, shops and public places in NK Area

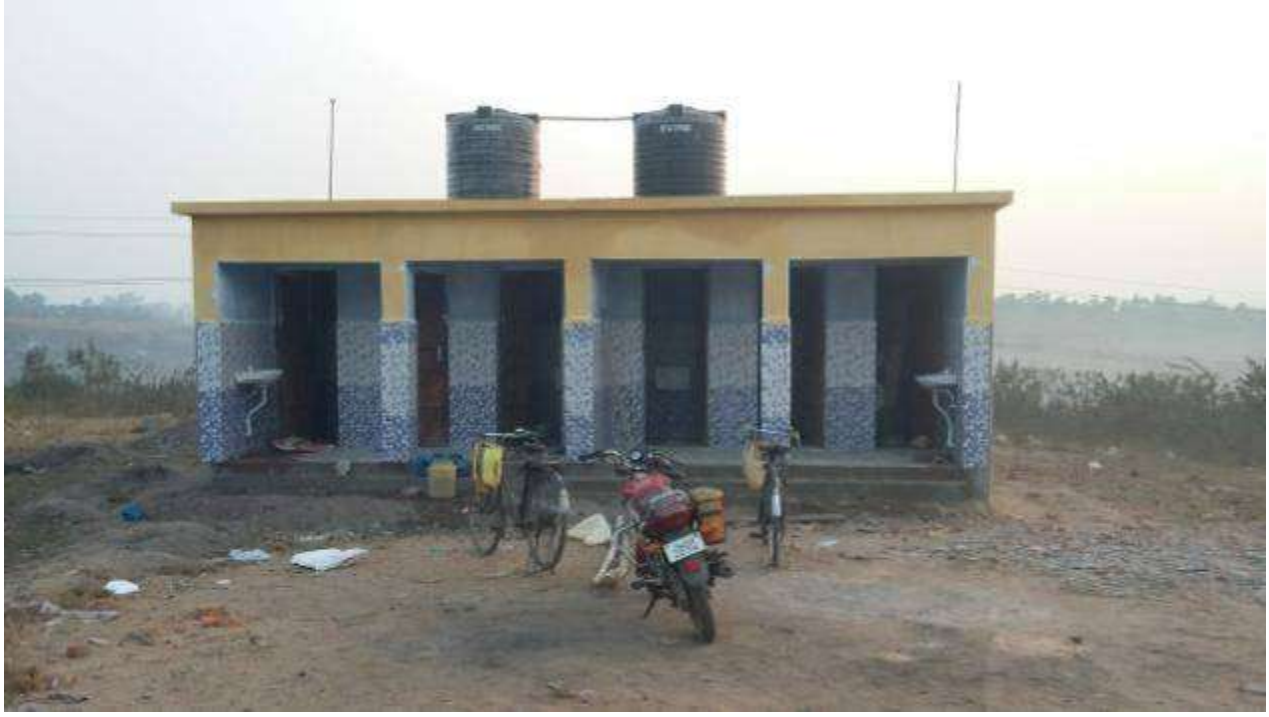
Tricycles for physically challenged

39 tricycles for physically challenged

Village/School health Camps

Total -175 Camps

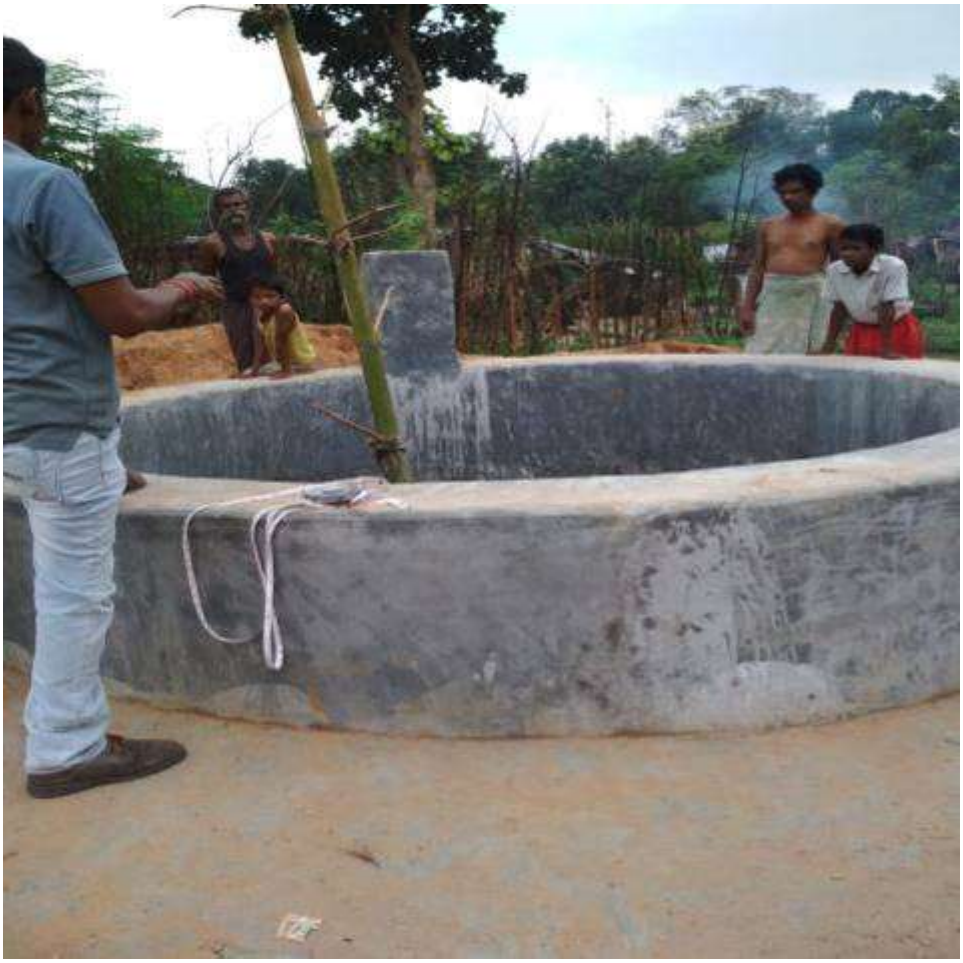




Construction of toilets

Community hall constructed under CSR scheme of NK Area

Installation of Hand pipes



Construction of well at Mcluskiganj

Construction of road and bridge near Purnadih village

TEST REPORT

06/22 Test Report No. 2212	**Job No. 094321044**	**Year**	FY2022-23
Type of Sample	Ambient Air	Quarter Ending	Jun-22
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : **North Karanpura** **Project:** **Dakra OCP** **Stations:** P.O.Office

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters (in µg/m^3)					Wind Direction (from) & Weather
				Total Particulate Matter (PM_{10}+ >PM_{10})TPM	Particulate Matter (PM_{10})	Particulate Matter ($PM_{2.5}$)	Sulphur Dioxide (SO_2)	Nitrogen Oxides (as NO_x)	
Apr-22 1st FN	02/04/22-03/04/22	16-04-2022	16/04/22-19/04/22	219	113	73	< 25	< 6	East Sunny
Apr-22 2nd FN	19/04/22-20/04/22	02-05-2022	02/05/22-06/05/22	171	92	56	< 25	< 6	East Sunny
May-22 3rd FN	03/05/22-04/05/22	16-05-2022	16/05/22-20/05/22	134	63	23	< 25	< 6	East Sunny
May-22 4th FN	17/05/22-18/05/22	01-06-2022	01/06/22-07/06/22	229	138	61	< 25	< 6	East Sunny
Jun-22 5th FN	02/06/22-03/06/22	16-06-2022	16/06/22-18/06/22	220	121	52	< 25	< 6	East Sunny
Jun-22 6th FN	17/06/22-18/06/22	01-07-2022	01/07/22-06/07/22	372	151	72	< 25	< 6	East Sunny

Note:
1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

Analysed By Authorized Signatory

Note: 1) This Report refers to the values obtained at the time of testing and results related to the items tested
2) This Report cannot be reproduced in part or full without written permission of the management.
3) This is computer generated report and requires no signature.

TEST REPORT

06/22 Test Report No. 2213	**Job No. 094321044**	**Year**	FY2022-23
Type of Sample	Ambient Air	Quarter Ending	Jun-22
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : **North Karanpura** **Project:** **Dakra OCP** **Stations:** Mohan Nagar Colony

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters (in µg/m^3)					Wind Direction (from) & Weather
				Total Particulate Matter (PM_{10}+ >PM_{10})TPM	Particulate Matter (PM_{10})	Particulate Matter ($PM_{2.5}$)	Sulphur Dioxide (SO_2)	Nitrogen Oxides (as NO_x)	
Apr-22 1st FN	02/04/22-03/04/22	16-04-2022	16/04/22-19/04/22	129	61	24	< 25	< 6	East Sunny
Apr-22 2nd FN	19/04/22-20/04/22	02-05-2022	02/05/22-06/05/22	144	70	42	< 25	< 6	East Sunny
May-22 3rd FN	03/05/22-04/05/22	16-05-2022	16/05/22-20/05/22	123	66	28	< 25	< 6	East Sunny
May-22 4th FN	17/05/22-18/05/22	01-06-2022	01/06/22-07/06/22	215	130	65	< 25	< 6	East Sunny
Jun-22 5th FN	02/06/22-03/06/22	16-06-2022	16/06/22-18/06/22	184	87	42	< 25	< 6	East Sunny
Jun-22 6th FN	17/06/22-18/06/22	01-07-2022	01/07/22-06/07/22	290	83	46	< 25	< 6	East Sunny

Note:
1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

Analysed By Authorized Signatory

TEST REPORT

06/22 Test Report No. 2214	**Job No. 094321044**	**Year**	FY2022-23
Type of Sample	Ambient Air	Quarter Ending	Jun-22
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : **North Karanpura** **Project:** **Dakra OCP** **Stations:** Nehru Stadium

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters (in µg/m^3)					Wind Direction (from) & Weather
				Total Particulate Matter (PM_{10}+ >PM_{10})TPM	Particulate Matter (PM_{10})	Particulate Matter ($PM_{2.5}$)	Sulphur Dioxide (SO_2)	Nitrogen Oxides (as NO_x)	
Apr-22 1st FN	03/04/22-04/04/22	16-04-2022	16/04/22-19/04/22	133	71	38	< 25	< 6	East Sunny
Apr-22 2nd FN	20/04/22-21/04/22	02-05-2022	02/05/22-06/05/22	171	77	37	< 25	< 6	East Sunny
May-22 3rd FN	04/05/22-05/05/22	16-05-2022	16/05/22-20/05/22	110	58	32	< 25	< 6	East Sunny
May-22 4th FN	18/05/22-19/05/22	01-06-2022	01/06/22-07/06/22	104	55	21	< 25	< 6	East Sunny
Jun-22 5th FN	03/06/22-04/06/22	16-06-2022	16/06/22-18/06/22	116	59	32	< 25	< 6	East Sunny
Jun-22 6th FN	18/06/22-19/06/22	01-07-2022	01/07/22-06/07/22	200	71	36	< 25	< 6	East Sunny

Note:
1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

Analysed By Authorized Signatory

TEST REPORT

06/22 Test Report No. 2215	Job No. 094321044	Year	FY2022-23
Type of Sample	Ambient Air	Quarter Ending	Jun-22
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : **North Karanpura** **Project:** **Dakra OCP** **Stations:** Workshop

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters (in µg/m^3)					Wind Direction (from) & Weather
				Total Particulate Matter (PM_{10}+ >PM_{10})TPM	Particulate Matter (PM_{10})	Particulate Matter ($PM_{2.5}$)	Sulphur Dioxide (SO_2)	Nitrogen Oxides (as NO_x)	
Apr-22 1st FN	03/04/22-04/04/22	16-04-2022	16/04/22-19/04/22	241	94	48	< 25	< 6	East Sunny
Apr-22 2nd FN	20/04/22-21/04/22	02-05-2022	02/05/22-06/05/22	226	110	45	< 25	< 6	East Sunny
May-22 3rd FN	04/05/22-05/05/22	16-05-2022	16/05/22-20/05/22	175	85	36	< 25	< 6	East Sunny
May-22 4th FN	18/05/22-19/05/22	01-06-2022	01/06/22-07/06/22	243	122	67	< 25	< 6	East Sunny
Jun-22 5th FN	03/06/22-04/06/22	16-06-2022	16/06/22-18/06/22	286	137	68	< 25	< 6	East Sunny
Jun-22 6th FN	18/06/22-19/06/22	01-07-2022	01/07/22-06/07/22	208	93	40	< 25	< 6	East Sunny

Note:
1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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TEST REPORT

06/22 Test Report No. 2216	Job No. 094321044	Year	FY2022-23
Type of Sample:	Noise	Quarter Ending	Jun-22
Customer	CCL		
Testing/ Sampling Protocol:	*'The noise pollution (Regulation and Control), Rules,2000*, LQR 34		
Remarks:			

TEST RESULT

The sample has been tested with the following results: -

Area : **North Karanpura** **Project:** **Dakra OCP**

Station Name	Noise Level dB(A) Leq					
	Apr-22 1st FN	Apr-22 2nd FN	May-22 3rd FN	May-22 4th FN	Jun-22 5th FN	Jun-22 6th FN
	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night
Date of recording	02-04-2022	19-04-2022	03-05-2022	17-05-2022	02-06-2022	17-06-2022
1. P.O.Office	69.5/62.7	71.5/66.7	71.2/65.3	72.5/66.6	70.7/64.8	71.8/65.6
Date of recording	02-04-2022	19-04-2022	03-05-2022	17-05-2022	02-06-2022	17-06-2022
2. Mohan Nagar Colony	68.8/61.9	70.6/65.4	70.4/64.5	69.9/63.8	69.9/63.7	69.7/63.6

Ambient Air Quality Standards in respect of Noise as per 'The noise pollution (Regulation and Control), Rules,2000		
Time Frame	*Limits in dB(A) Leq*	
	Day Time 6.00 AM to 10.00 PM	*Night Time 10.00 PM to 6.00 AM*
Industrial Area	*75*	*70*
Commercial Area	*65*	*55*
Residential area	*55*	*45*
Silence Zone	*50*	*40*

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TEST REPORT

06/22 Test Report No. 2217	**Job No. 094321044**	**Year**	FY2022-23
Type of Sample:	**Effluent Water**	Quarter Ending	Jun-22
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	**MOEF -SCH-VI STANDARDS, Class 'A',** LQR 33		
Remarks & Observation:	Samples received in 5 ltrs plastic Jerri cane, Colour as observed is transparent		

TEST RESULT

The sample has been tested with the following results: -

Area : **North Karanpura** **Project:** **Dakra OCP** **Stations:** Mine Lagoon Discharge

Analysis Results of FN Effluent Water							
Parameters →				**COD**	**O & G**	**pH value**	**TSS**
Detection Limit				**4**	**2**	**0.2**	**10**
MOEF -SCH-VI, STANDARDS, Class 'A'				**250**	**10**	**5.5 to 9.0**	**100**
Month	Date of Sampling	Date of Receipt of Sample	Date of Analysis	**Value in mg/l, except pH**			
Apr-22 1st FN	06/04/22	18/04/22	18/04/22-29/04/22	28	<2.00	7.76	41.3
Apr-22 2nd FN	23/04/22	02/04/22	02/04/22-13/05/22	24	<2.00	7.54	38.6
May-22 3rd FN	06/05/22	16/05/22	16/05/22-31/05/22	16	<2.00	7.98	25
May-22 4th FN	21/05/22	01/06/22	01/06/22-17/06/22	32	<2.00	7.5	28.9
Jun-22 5th FN	06/06/22	16/06/22	16/06/22-30/06/22	20	<2.00	8	26.9
Jun-22 6th FN	21/06/22	01/07/22	01/07/22-15/07/22	16	<2.00	7.6	25.9
BIS Standard & Method				APHA, 23rd Edition, Closed Reflux, Titrimetric Method, 2017	IS 3025/39:1991, R : 2003, Partition Gravimetric	IS-3025/11:1983, R-1996, Electrometric	IS 3025/17:1984, R :1996, Gravimetric Method

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TEST REPORT

09/22 Test Report No. 2212	**Job No. 094322160**	**Year**	FY2022-23
Type of Sample	Ambient Air	Quarter Ending	Sep-22
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : **North Karanpura** **Project:** **Dakra OCP** **Stations:** P.O.Office

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters (in µg/m^3)					Wind Direction (from) & Weather
				Total Particulate Matter (PM_{10}+ >PM_{10})TPM	Particulate Matter (PM_{10})	Particulate Matter ($PM_{2.5}$)	Sulphur Dioxide (SO_2)	Nitrogen Oxides (as NO_x)	
Jul-22 1st FN	02/07/22-03/07/22	18-07-2022	18/07/22-20/07/22	235	101	56	< 25	< 6	East Sunny
Jul-22 2nd FN	19/07/22-20/07/22	01-08-2022	01/08/22-04/08/22	259	143	73	< 25	< 6	East Sunny
Aug-22 3rd FN	02/08/22-03/08/22	16-08-2022	16/08/22-23/08/22	235	112	50	< 25	< 6	East Sunny
Aug-22 4th FN	17/08/22-18/08/22	01-09-2022	01/09/22-10/09/22	157	71	47	< 25	< 6	East Sunny
Sep-22 5th FN	02/09/22-03/09/22	16-09-2022	16/09/22-20/09/22	231	111	53	< 25	< 6	East Sunny
Sep-22 6th FN	17/09/22-18/09/22	01-10-2022	01/10/22-08/10/22	139	67	34	< 25	< 6	East Sunny

Note:
1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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TEST REPORT

09/22 Test Report No. 2213	**Job No. 094322160**	**Year**	FY2022-23
Type of Sample	Ambient Air	Quarter Ending	Sep-22
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : **North Karanpura** **Project:** **Dakra OCP** **Stations:** Mohan Nagar Colony

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters (in µg/m^3)					Wind Direction (from) & Weather
				Total Particulate Matter (PM_{10}+ >PM_{10})TPM	Particulate Matter (PM_{10})	Particulate Matter ($PM_{2.5}$)	Sulphur Dioxide (SO_2)	Nitrogen Oxides (as NO_x)	
Jul-22 1st FN	02/07/22-03/07/22	18-07-2022	18/07/22-20/07/22	130	66	32	< 25	< 6	East Sunny
Jul-22 2nd FN	19/07/22-20/07/22	01-08-2022	01/08/22-04/08/22	111	58	28	< 25	< 6	East Sunny
Aug-22 3rd FN	02/08/22-03/08/22	16-08-2022	16/08/22-23/08/22	123	67	26	< 25	< 6	East Sunny
Aug-22 4th FN	17/08/22-18/08/22	01-09-2022	01/09/22-10/09/22	129	62	32	< 25	< 6	East Sunny
Sep-22 5th FN	02/09/22-03/09/22	16-09-2022	16/09/22-20/09/22	163	75	39	< 25	< 6	East Sunny
Sep-22 6th FN	17/09/22-18/09/22	01-10-2022	01/10/22-08/10/22	149	64	28	< 25	< 6	East Sunny

Note:
1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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TEST REPORT

09/22 Test Report No. 2214	**Job No. 094322160**	**Year**	FY2022-23
Type of Sample	Ambient Air	Quarter Ending	Sep-22
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : **North Karanpura** **Project:** **Dakra OCP** **Stations:** Nehru Stadium

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters (in µg/m^3)					Wind Direction (from) & Weather
				Total Particulate Matter (PM_{10}+ >PM_{10})TPM	Particulate Matter (PM_{10})	Particulate Matter ($PM_{2.5}$)	Sulphur Dioxide (SO_2)	Nitrogen Oxides (as NO_x)	
Jul-22 1st FN	03/07/22-04/07/22	18-07-2022	18/07/22-20/07/22	112	53	26	< 25	< 6	East Sunny
Jul-22 2nd FN	20/07/22-21/07/22	01-08-2022	01/08/22-04/08/22	180	68	32	< 25	< 6	East Sunny
Aug-22 3rd FN	03/08/22-04/08/22	16-08-2022	16/08/22-23/08/22	215	107	63	< 25	< 6	East Sunny
Aug-22 4th FN	18/08/22-19/08/22	01-09-2022	01/09/22-10/09/22	205	83	47	< 25	< 6	East Sunny
Sep-22 5th FN	03/09/22-04/09/22	16-09-2022	16/09/22-20/09/22	209	87	44	< 25	< 6	East Sunny
Sep-22 6th FN	18/09/22-19/09/22	01-10-2022	01/10/22-08/10/22	171	79	37	< 25	< 6	East Sunny

Note:
1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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TEST REPORT

09/22 Test Report No. 2215	**Job No. 094322160**	**Year**	FY2022-23
Type of Sample	Ambient Air	Quarter Ending	Sep-22
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : **North Karanpura** **Project:** **Dakra OCP** **Stations:** Workshop

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters (in µg/m^3)					Wind Direction (from) & Weather
				Total Particulate Matter (PM_{10}+ >PM_{10})TPM	Particulate Matter (PM_{10})	Particulate Matter ($PM_{2.5}$)	Sulphur Dioxide (SO_2)	Nitrogen Oxides (as NO_x)	
Jul-22 1st FN	03/07/22-04/07/22	18-07-2022	18/07/22-20/07/22	234	192	38	< 25	< 6	East Sunny
Jul-22 2nd FN	20/07/22-21/07/22	01-08-2022	01/08/22-04/08/22	238	108	62	< 25	< 6	East Sunny
Aug-22 3rd FN	03/08/22-04/08/22	16-08-2022	16/08/22-23/08/22	176	99	49	< 25	< 6	East Sunny
Aug-22 4th FN	18/08/22-19/08/22	01-09-2022	01/09/22-10/09/22	129	66	34	< 25	< 6	East Sunny
Sep-22 5th FN	03/09/22-04/09/22	16-09-2022	16/09/22-20/09/22	207	98	43	< 25	< 6	East Sunny
Sep-22 6th FN	18/09/22-19/09/22	01-10-2022	01/10/22-08/10/22	278	117	72	< 25	< 6	East Sunny

Note:
1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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TEST REPORT

09/22 Test Report No. 2216	**Job No. 094322160**	**Year**	FY2022-23
Type of Sample:	Noise	Quarter Ending	Sep-22
Customer	CCL		
Testing/ Sampling Protocol:	*'The noise pollution (Regulation and Control), Rules,2000*, LQR 34		
Remarks:			

TEST RESULT

The sample has been tested with the following results: -

Area : **North Karanpura** **Project:** **Dakra OCP**

Station Name	Noise Level dB(A) Leq					
	Jul-22 1st FN	**Jul-22 2nd FN**	**Aug-22 3rd FN**	**Aug-22 4th FN**	**Sep-22 5th FN**	**Sep-22 6th FN**
	Day/Night	**Day/Night**	**Day/Night**	**Day/Night**	**Day/Night**	**Day/Night**
Date of recording	02-07-2022	19-07-2022	02-08-2022	22-08-2022	02-09-2022	17-09-2022
1. P.O.Office	72.3/67.4	70.6/66.5	72.2/66.1	68.9/62.7	72.3/66.2	72.3/66.2
Date of recording	02-07-2022	19-07-2022	02-08-2022	22-08-2022	02-09-2022	17-09-2022
2. Mohan Nagar Colony	70.2/64.1	69.7/65.8	68.9/62.8	70.2/64.3	69.5/63.6	69.6/63.7

Ambient Air Quality Standards in respect of Noise as per 'The noise pollution (Regulation and Control), Rules,2000		
Time Frame	*Limits in dB(A) Leq*	
	Day Time 6.00 AM to 10.00 PM	*Night Time 10.00 PM to 6.00 AM*
Industrial Area	*75*	*70*
Commercial Area	*65*	*55*
Residential area	*55*	*45*
Silence Zone	*50*	*40*

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TEST REPORT

09/22 Test Report No. 2217	**Job No. 094322160**	**Year**	FY2022-23
Type of Sample:	**Effluent Water**	Quarter Ending	Sep-22
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	**MOEF -SCH-VI STANDARDS, Class 'A',** LQR 33		
Remarks & Observation:	Samples received in 5 ltrs plastic Jerri cane, Colour as observed is transparent		

TEST RESULT

The sample has been tested with the following results: -

Area : **North Karanpura** **Project:** **Dakra OCP** **Stations:** Mine Lagoon Discharge

Analysis Results of FN Effluent Water							
Parameters →				**COD**	**O & G**	**pH value**	**TSS**
Detection Limit				**4**	**2**	**0.2**	**10**
MOEF -SCH-VI, STANDARDS, Class 'A'				**250**	**10**	**5.5 to 9.0**	**100**
Month	Date of Sampling	Date of Receipt of Sample	Date of Analysis	**Value in mg/l, except pH**			
Jul-22 1st FN	06/07/22	18/07/22	18/07/22-30/07/22	24	<2.00	7.7	39.3
Jul-22 2nd FN	23/07/22	01/08/22	01/08/22-13/08/22	20	<2.00	8.1	53.6
Aug-22 3rd FN	06/08/22	16/08/22	16/08/22-30/08/22	20	<2.00	8.2	24.8
Aug-22 4th FN	21/08/22	01/09/22	01/09/22-15/09/22	20	<2.00	7.6	39.7
Sep-22 5th FN	06/09/22	16/09/22	16/09/22-30/09/22	12	<2.00	7.6	28
Sep-22 6th FN	21/09/22	01/10/22	01/10/22-14/10/22	20	<2.00	7.4	27
BIS Standard & Method				APHA, 23rd Edition, Closed Reflux, Titrimetric Method, 2017	IS 3025/39:1991, R : 2003, Partition Gravimetric	IS-3025/11:1983, R-1996, Electrometric	IS 3025/17:1984, R :1996, Gravimetric Method

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TEST REPORT

12/22 Test Report No. 2213	Job No. 094322160	Year	FY2022-23
Type of Sample	Ambient Air	Quarter Ending	Dec-22
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : **North Karanpura** **Project:** **Dakra OCP** **Stations:** P.O.Office

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters (in µg/m³)					Wind Direction (from) & Weather
				Total Particulate Matter (PM_{10}+ >PM_{10})TPM	Particulate Matter (PM_{10})	Particulate Matter ($PM_{2.5}$)	Sulphur Dioxide (SO_2)	Nitrogen Oxides (as NO_x)	
Oct-22 1st FN	04/10/22-05/10/22	17-10-2022	17/10/22-26/10/22	207	92	66	< 25	6	East Sunny
Oct-22 2nd FN	18/10/22-19/10/22	01-11-2022	01/11/22-07/11/22	176	88	39	< 25	< 6	East Sunny
Nov-22 3rd FN	02/11/22-03/11/22	16-11-2022	16/11/22-23/11/22	158	71	36	< 25	< 6	East Sunny
Nov-22 4th FN	17/11/22-18/11/22	01-12-2022	01/12/22-09/12/22	163	82	45	< 25	< 6	East Sunny
Dec-22 5th FN	02/12/22-03/12/22	16-12-2022	16/12/22-21/12/22	234	118	51	< 25	< 6	East Sunny
Dec-22 6th FN	17/12/22-18/12/22	02-01-2023	02/01/23-10/01/23	187	102	36	< 25	< 6	East Sunny

Note:
1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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TEST REPORT

12/22 Test Report No. 2214	**Job No. 094322160**	**Year**	FY2022-23
Type of Sample	Ambient Air	Quarter Ending	Dec-22
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : **North Karanpura** **Project:** **Dakra OCP** **Stations:** Mohan Nagar Colony

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters (in µg/m^3)					Wind Direction (from) & Weather
				Total Particulate Matter (PM_{10}+ >PM_{10})TPM	Particulate Matter (PM_{10})	Particulate Matter ($PM_{2.5}$)	Sulphur Dioxide (SO_2)	Nitrogen Oxides (as NO_x)	
Oct-22 1st FN	04/10/22-05/10/22	17-10-2022	17/10/22-26/10/22	210	83	49	< 25	< 6	East Sunny
Oct-22 2nd FN	18/10/22-19/10/22	01-11-2022	01/11/22-07/11/22	153	73	36	< 25	< 6	East Sunny
Nov-22 3rd FN	02/11/22-03/11/22	16-11-2022	16/11/22-23/11/22	151	79	38	< 25	< 6	East Sunny
Nov-22 4th FN	17/11/22-18/11/22	01-12-2022	01/12/22-09/12/22	115	54	23	< 25	< 6	East Sunny
Dec-22 5th FN	02/12/22-03/12/22	16-12-2022	16/12/22-21/12/22	218	96	54	< 25	< 6	East Sunny
Dec-22 6th FN	17/12/22-18/12/22	02-01-2023	02/01/23-10/01/23	176	90	43	< 25	< 6	East Sunny

Note:
1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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TEST REPORT

12/22 Test Report No. 2215	**Job No. 094322160**	**Year**	FY2022-23
Type of Sample	Ambient Air	Quarter Ending	Dec-22
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : **North Karanpura** **Project:** **Dakra OCP** **Stations:** Nehru Stadium

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters (in µg/m^3)					Wind Direction (from) & Weather
				Total Particulate Matter (PM_{10}+ >PM_{10})TPM	Particulate Matter (PM_{10})	Particulate Matter ($PM_{2.5}$)	Sulphur Dioxide (SO_2)	Nitrogen Oxides (as NO_x)	
Oct-22 1st FN	05/10/22-06/10/22	17-10-2022	17/10/22-26/10/22	138	74	37	< 25	< 6	East Sunny
Oct-22 2nd FN	19/10/22-20/10/22	01-11-2022	01/11/22-07/11/22	129	69	30	< 25	< 6	East Sunny
Nov-22 3rd FN	03/11/22-04/11/22	16-11-2022	16/11/22-23/11/22	179	86	44	< 25	< 6	East Sunny
Nov-22 4th FN	18/11/22-19/11/22	01-12-2022	01/12/22-09/12/22	217	88	49	< 25	< 6	East Sunny
Dec-22 5th FN	03/12/22-04/12/22	16-12-2022	16/12/22-21/12/22	203	82	47	< 25	< 6	East Sunny
Dec-22 6th FN	18/12/22-19/12/22	02-01-2023	02/01/23-10/01/23	232	72	38	< 25	< 6	East Sunny

Note:
1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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TEST REPORT

12/22 Test Report No. 2216	**Job No. 094322160**	**Year**	FY2022-23
Type of Sample	Ambient Air	Quarter Ending	Dec-22
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : **North Karanpura** **Project:** **Dakra OCP** **Stations:** Workshop

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters (in µg/m^3)					Wind Direction (from) & Weather
				Total Particulate Matter (PM_{10}+ >PM_{10})TPM	Particulate Matter (PM_{10})	Particulate Matter ($PM_{2.5}$)	Sulphur Dioxide (SO_2)	Nitrogen Oxides (as NO_x)	
Oct-22 1st FN	05/10/22-06/10/22	17-10-2022	17/10/22-26/10/22	176	75	39	< 25	< 6	East Sunny
Oct-22 2nd FN	19/10/22-20/10/22	01-11-2022	01/11/22-07/11/22	133	74	31	< 25	< 6	East Sunny
Nov-22 3rd FN	03/11/22-04/11/22	16-11-2022	16/11/22-23/11/22	227	93	48	< 25	< 6	East Sunny
Nov-22 4th FN	18/11/22-19/11/22	01-12-2022	01/12/22-09/12/22	222	104	53	< 25	< 6	East Sunny
Dec-22 5th FN	03/12/22-04/12/22	16-12-2022	16/12/22-21/12/22	305	142	72	< 25	6	East Sunny
Dec-22 6th FN	18/12/22-19/12/22	02-01-2023	02/01/23-10/01/23	261	171	50	< 25	< 6	East Sunny

Note:
1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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TEST REPORT

12/22 Test Report No. 2217	**Job No. 094322160**	**Year**	FY2022-23
Type of Sample:	Noise	Quarter Ending	Dec-22
Customer	CCL		
Testing/ Sampling Protocol:	*'The noise pollution (Regulation and Control), Rules,2000,* LQR 34		
Remarks:			

TEST RESULT

The sample has been tested with the following results: -

Area : **North Karanpura** **Project:** **Dakra OCP**

Station Name	Noise Level dB(A) Leq					
	Oct-22 1st FN	Oct-22 2nd FN	Nov-22 3rd FN	Nov-22 4th FN	Dec-22 5th FN	Dec-22 6th FN
	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night
Date of recording	04-10-2022	18-10-2022	02-11-2022	17-11-2022	02-12-2022	17-12-2022
1. P.O.Office	71.3/65.2	70.7/64.5	72.3/66.2	71.7/65.8	70.6/64.7	70.6/64.7
Date of recording	04-10-2022	18-10-2022	02-11-2022	17-11-2022	02-12-2022	17-12-2022
2. Mohan Nagar Colony	68.9/62.8	69.6/63.7	70.5/64.3	69.8/63.6	69.2/63.3	68.8/62.6

Ambient Air Quality Standards in respect of Noise as per 'The noise pollution (Regulation and Control), Rules,2000		
Time Frame	*Limits in dB(A) Leq*	
	Day Time 6.00 AM to 10.00 PM	*Night Time 10.00 PM to 6.00 AM*
Industrial Area	*75*	*70*
Commercial Area	*65*	*55*
Residential area	*55*	*45*
Silence Zone	*50*	*40*

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TEST REPORT

12/22 Test Report No. 2218	**Job No. 094322160**	**Year**	FY2022-23
Type of Sample:	**Effluent Water**	Quarter Ending	Dec-22
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	**MOEF -SCH-VI STANDARDS, Class 'A',** LQR 33		
Remarks & Observation:	Samples received in 5 ltrs plastic Jerri cane, Colour as observed is transparent		

TEST RESULT

The sample has been tested with the following results: -

Area : **North Karanpura** **Project:** **Dakra OCP** **Stations:** Mine Lagoon Discharge

Analysis Results of FN Effluent Water							
Parameters →				**COD**	**O & G**	**pH value**	**TSS**
Detection Limit				**4**	**2**	**0.2**	**10**
MOEF -SCH-VI, STANDARDS, Class 'A'				**250**	**10**	**5.5 to 9.0**	**100**
Month	Date of Sampling	Date of Receipt of Sample	Date of Analysis	**Value in mg/l, except pH**			
Oct-22 1st FN	08/10/22	17/10/22	17/10/22-31/10/22	16	<2.00	7.95	31
Oct-22 2nd FN	22/10/22	01/11/22	01/11/22-15/11/22	12	<2.00	7.7	31
Nov-22 3rd FN	05/11/22	16/11/22	16/11/22-30/11/22	16	<2.00	7.8	34
Dec-22 5th FN	06/12/22	16/12/22	16/12/22-30/12/22	16	<2.00	7.7	39
Dec-22 6th FN	21/12/22	02/01/23	02/01/23-13/01/23	16	<2.00	7.8	31
BIS Standard & Method				APHA, 23rd Edition, Closed Reflux, Titrimetric Method, 2017	IS 3025/39:1991, R : 2003, Partition Gravimetric	IS-3025/11:1983, R-1996, Electrometric	IS 3025/17:1984, R :1996, Gravimetric Method

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TEST REPORT

12/22 Test Report No. 2219	Job No. 094322160	Year	2022-23
Type of Sample:	**Effluent Water**	Quarter Ending	**Dec.'22**
Customer / W. O. no. & Date:	CCL	Date of Receipt of Sample:	01/12/22
Mode of Receipt of Sample:	Joint sampling with customer	Date of Analysis:	01/12/22-06/01/23
Testing /Sampling Protocol	**MOEF -SCH-VI STANDARDS, Class 'A',** LQR 33		
Remarks & Observation:	Samples received in 5 ltrs plastic Jerri cane, Colour as observed is transparent		

TEST RESULT

The sample has been tested with the following results: -

Area : **North Karanpura** **Project:** **Dakra OCP**

Stations: **Date of Sampling:**

1. Mine Lagoon Discharge (Nov 2nd FN) 21/11/2022

Sl.No.	Parameter	Sampling Stations			Detection Limit	MOEF -SCH-VI STANDARDS Class 'A'	BIS Standard & Method
		1	2	3			
1	Ammonical Nitrogen, mg/l, Max	0.78			0.02	50.0	IS 3025/34:1988, R : 2009, Nessler's Method
2	Arsenic (as As), mg/l, *Max*	<0.002			0.002	0.2	IS 3025/37:1988 R : 2003, AAS-VGA
3	B.O.D (3 days 27°C), mg/l, Max	<2.00			2.00	30.0	IS 3025 /44:1993, R:2003 3 day incubation at 27°C
4	Cadmium(as Cd), mg/l, Max	<0.0004			0.0004	2.0	APHA, 23rd Edition 3120 B ICP Method, 2017
5	COD, mg/l, Max	12			4.00	250.0	APHA, 23rd Edition, Closed Reflux, Titrimetric Method: 2017
6	Copper (as Cu), mg/l, *Max*	<0.02			0.02	3.0	IS 3025/42: 1992, R : 2009, AAS (Air-Ac-Flame)
7	Dissolved Phosphate, mg/l, Max	<0.30			0.30	5.0	APHA, 23rd Edition Molybdovanadate Method, 2017
8	Fluoride (as F) mg/l, *Max*	1.07			0.02	2.0	APHA, 23rd Edition, SPADNS Method, 2017
9	Free Ammonia, mg/l, Max	<0.02			0.02	5.0	IS:3025/34:1988, Nesseler's
10	Hexavalent Chromium, mg/l, Max	<0.01			0.01	0.1	APHA, 23rd Edition, Diphenylcarbohydrazide
11	Iron (as Fe), mg/l, *Max*	<0.04			0.04	3.0	IS 3025 /53: 2003, R : 2009 , AAS-(Air-Ac-Flame)
12	Lead (as Pb), mg/l, *Max*	<0.001			0.001	0.1	APHA, 23rd Edition 3120 B ICP Method, 2017
13	Manganese(as Mn), mg/l, Max	<0.01			0.01	2.0	IS-3025/59:2006, AAS (Air-Ac-Flame)
14	Nickel (as Ni), mg/l, *Max*	<0.003			0.003	3.0	APHA, 23rd Edition 3120 B ICP Method, 2017
15	Nitrate Nitrogen, mg/l, *Max*	1.42			0.50	10.0	APHA, 23rd Edition, UV-Spectrphotometric Method, 2017
16	Oil & Grease, mg/l, Max	<2.00			2.00	10.0	IS 3025/39:1991, R : 2003, Partition Gravimetric Method
17	pH value	7.67			1.0	5.5 to 9.0	IS-3025/11:1983, R-1996, Electrometric Method
18	Phenolic compounds (as C_6H_5OH),mg/l, *Max*	<0.001			0.001	1.0	APHA, 23rd Edition, 4- Amino Antipyrine Method, 2017
19	Selenium (as Se), mg/l, *Max*	<0.0005			0.0005	0.05	APHA, 23rd Edition 3120 B ICP Method, 2017
20	Sulphide (as S^{-2}), mg/l, Max	<0.005			0.005	2.0	APHA, 23rd Edition Methylene Blue Method, 2017
21	Temperature (° C)	20.5			Shall not exceed 5^0 C above the receiving temp.		IS-3025/09:1984, R;2002, Thermometeric
22	Total Chromium (as Cr), mg/l, *Max*	<0.002			<0.002	2.0	APHA, 23rd Edition 3120 B ICP Method, 2017
23	Total Kjeldahl Nitrogen, mg/l, Max	2.8			1.00	100.0	APHA, 23rd Edition, Kjeldahl Method: 2017
24	Total Residual Chlorine, mg/l, Max	<0.02			0.02	1.0	APHA, 23rd Edition, DPD Method, 2017
25	Total Suspended Solids, mg/l, Max	24			10.00	100.0	IS 3025/17:1984, R :1996, Gravimetric Method
26	Zinc (as Zn), mg/l, *Max*	<0.005			0.005	5.0	IS 3025 /49: 1994, R: 2009, AAS (Air-Ac-Flame)

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TEST REPORT

03/23 Test Report No. 2212	**Job No. 094322160**	**Year**	FY2022-23
Type of Sample	Ambient Air	Quarter Ending	Mar-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : **North Karanpura** **Project:** **Dakra OCP** **Stations:** P.O.Office

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters (in µg/m³)					Wind Direction (from) & Weather
				Total Particulate Matter (PM_{10}+ >PM_{10})TPM	Particulate Matter (PM_{10})	Particulate Matter ($PM_{2.5}$)	Sulphur Dioxide (SO_2)	Nitrogen Oxides (as NO_x)	
Jan-23 1st FN	03/01/23-04/01/23	16-01-2023	16/01/23-19/01/23	232	119	40	< 25	< 6	East Sunny
Jan-23 2nd FN	17/01/23-18/01/23	01-02-2023	01/02/23-08/02/23	236	125	62	< 25	< 6	East Sunny
Feb-23 3rd FN	02/02/23-03/02/23	16-02-2023	16/02/23-17/02/23	191	77	37	< 25	< 6	East Sunny
Feb-23 4th FN	17/02/23-18/02/23	01-03-2023	01/03/23-14/03/23	228	111	49	< 25	< 6	East Sunny
Mar-23 5th FN	02/03/23-03/03/23	16-03-2023	16/03/23-22/03/23	269	122	67	< 25	< 6	East Sunny
Mar-23 6th FN	17/03/23-18/03/23	01-04-2023	01/04/23-17/04/23	305	228	39	< 25	< 6	East Sunny

Note:
1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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TEST REPORT

03/23 Test Report No. 2213	**Job No. 094322160**	**Year**	FY2022-23
Type of Sample	Ambient Air	Quarter Ending	Mar-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : **North Karanpura** **Project:** **Dakra OCP** **Stations:** Mohan Nagar Colony

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters (in µg/m^3)					Wind Direction (from) & Weather
				Total Particulate Matter (PM_{10}+ >PM_{10})TPM	Particulate Matter (PM_{10})	Particulate Matter ($PM_{2.5}$)	Sulphur Dioxide (SO_2)	Nitrogen Oxides (as NO_x)	
Jan-23 1st FN	03/01/23-04/01/23	16-01-2023	16/01/23-19/01/23	186	77	36	< 25	< 6	East Sunny
Jan-23 2nd FN	17/01/23-18/01/23	01-02-2023	01/02/23-08/02/23	180	85	49	< 25	< 6	East Sunny
Feb-23 3rd FN	02/02/23-03/02/23	16-02-2023	16/02/23-17/02/23	125	66	26	< 25	< 6	East Sunny
Feb-23 4th FN	17/02/23-18/02/23	01-03-2023	01/03/23-14/03/23	129	61	36	< 25	< 6	East Sunny
Mar-23 5th FN	02/03/23-03/03/23	16-03-2023	16/03/23-22/03/23	133	67	35	< 25	< 6	East Sunny
Mar-23 6th FN	17/03/23-18/03/23	01-04-2023	01/04/23-17/04/23	174	85	45	< 25	< 6	East Sunny

Note:
1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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TEST REPORT

03/23 Test Report No. 2214	**Job No. 094322160**	**Year**	FY2022-23
Type of Sample	Ambient Air	Quarter Ending	Mar-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : **North Karanpura** **Project:** **Dakra OCP** **Stations:** Nehru Stadium

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters (in µg/m^3)					Wind Direction (from) & Weather
				Total Particulate Matter (PM_{10}+ >PM_{10})TPM	Particulate Matter (PM_{10})	Particulate Matter ($PM_{2.5}$)	Sulphur Dioxide (SO_2)	Nitrogen Oxides (as NO_x)	
Jan-23 1st FN	04/01/23-05/01/23	16-01-2023	16/01/23-19/01/23	160	68	29	< 25	< 6	East Sunny
Jan-23 2nd FN	18/01/23-19/01/23	01-02-2023	01/02/23-08/02/23	200	72	37	< 25	< 6	East Sunny
Feb-23 3rd FN	03/02/23-04/02/23	16-02-2023	16/02/23-17/02/23	191	87	41	< 25	< 6	East Sunny
Feb-23 4th FN	18/02/23-19/02/23	01-03-2023	01/03/23-14/03/23	189	91	51	< 25	< 6	East Sunny
Mar-23 5th FN	03/03/23-04/03/23	16-03-2023	16/03/23-22/03/23	217	114	63	< 25	< 6	East Sunny
Mar-23 6th FN	18/03/23-19/03/23	01-04-2023	01/04/23-17/04/23	140	79	38	< 25	< 6	East Sunny

Note:
1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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TEST REPORT

03/23 Test Report No. 2215	**Job No. 094322160**	**Year**	FY2022-23
Type of Sample	Ambient Air	Quarter Ending	Mar-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	IS 5182 (part 14): 2000 ,R -2010, Methods for Measurement of Air Pollution, LQR 32		
Remarks & Observation:	All samplers placed 1.5 m above ground level		

TEST RESULT

The sample has been tested with the following results: -

Area : **North Karanpura** **Project:** **Dakra OCP** **Stations:** Workshop

Month	Date of Sampling	Date of receipt of sample	Date of analysis	Parameters (in µg/m^3)					Wind Direction (from) & Weather
				Total Particulate Matter (PM_{10}+ >PM_{10})TPM	Particulate Matter (PM_{10})	Particulate Matter ($PM_{2.5}$)	Sulphur Dioxide (SO_2)	Nitrogen Oxides (as NO_x)	
Jan-23 1st FN	04/01/23-05/01/23	16-01-2023	16/01/23-19/01/23	266	139	49	< 25	< 6	East Sunny
Jan-23 2nd FN	18/01/23-19/01/23	01-02-2023	01/02/23-08/02/23	204	107	54	< 25	< 6	East Sunny
Feb-23 3rd FN	03/02/23-04/02/23	16-02-2023	16/02/23-17/02/23	229	103	43	< 25	< 6	East Sunny
Feb-23 4th FN	18/02/23-19/02/23	01-03-2023	01/03/23-14/03/23	205	106	54	< 25	< 6	East Sunny
Mar-23 5th FN	03/03/23-04/03/23	16-03-2023	16/03/23-22/03/23	248	110	49	< 25	6	East Sunny
Mar-23 6th FN	18/03/23-19/03/23	01-04-2023	01/04/23-17/04/23	140	62	25	< 25	< 6	East Sunny

Note:
1. Gazette Notification No. G.S.R 742(E) dt.25th Sept.'2000 is applicable in core zone.
2. Gazette Notification No. G.S.R 826 (E) dt.Nov.'2009 is applicable in buffer zone.

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TEST REPORT

03/23 Test Report No. 2216	**Job No. 094322160**	**Year**	FY2022-23
Type of Sample:	Noise	Quarter Ending	Mar-23
Customer	CCL		
Testing/ Sampling Protocol:	*'The noise pollution (Regulation and Control), Rules,2000,* LQR 34		
Remarks:			

TEST RESULT

The sample has been tested with the following results: -

Area : **North Karanpura** **Project:** **Dakra OCP**

Station Name	Noise Level dB(A) Leq					
	Jan-23 1st FN	Jan-23 2nd FN	Feb-23 3rd FN	Feb-23 4th FN	Mar-23 5th FN	Mar-23 6th FN
	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night
Date of recording	03-01-2023	17-01-2023	02-02-2023	17-02-2023	02-03-2023	17-03-2023
1. P.O.Office	70.4/64.5	71.3/65.6	70.1/64.2	72.3/66.4	70.3/64.1	70.3/64.2
Date of recording	03-01-2023	17-01-2023	02-02-2023	17-02-2023	02-03-2023	17-03-2023
2. Mohan Nagar Colony	67.7/61.5	69.3/63.7	67.9/61.8	69.7/63.8	67.5/50.2	67.7/61.6

Ambient Air Quality Standards in respect of Noise as per 'The noise pollution (Regulation and Control), Rules,2000		
Time Frame	*Limits in dB(A) Leq*	
	Day Time 6.00 AM to 10.00 PM	*Night Time 10.00 PM to 6.00 AM*
Industrial Area	*75*	*70*
Commercial Area	*65*	*55*
Residential area	*55*	*45*
Silence Zone	*50*	*40*

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TEST REPORT

03/23 Test Report No. 2217	**Job No. 094322160**	**Year**	FY2022-23
Type of Sample:	**Effluent Water**	Quarter Ending	Mar-23
Customer	CCL		
Mode of Receipt of Sample:	Joint sampling with customer		
Testing/ Sampling Protocol:	**MOEF -SCH-VI STANDARDS, Class 'A',** LQR 33		
Remarks & Observation:	Samples received in 5 ltrs plastic Jerri cane, Colour as observed is transparent		

TEST RESULT

The sample has been tested with the following results: -

Area : **North Karanpura** **Project:** **Dakra OCP** **Stations:** Mine Lagoon Discharge

Analysis Results of FN Effluent Water							
Parameters →				**COD**	**O & G**	**pH value**	**TSS**
Detection Limit				**4**	**2**	**0.2**	**10**
MOEF -SCH-VI, STANDARDS, Class 'A'				**250**	**10**	**5.5 to 9.0**	**100**
Month	Date of Sampling	Date of Receipt of Sample	Date of Analysis	**Value in mg/l, except pH**			
Jan-23 1st FN	07/01/23	16/01/23	16/01/23-31/01/23	16	<2.00	8.1	32
Jan-23 2nd FN	21/01/23	01/02/23	01/02/23-15/02/23	20	<2.00	7.7	44.5
Feb-23 3rd FN	06/02/23	16/02/23	16/02/23-28/02/23	24	<2.00	8.1	53.1
Feb-23 4th FN	21/02/23	01/03/23	01/03/23-15/03/23	16	<2.00	8	41
Mar-23 5th FN	06/03/23	16/03/23	16/03/23-31/03/23	20	<2.00	7.6	43
Mar-23 6th FN	21/03/23	03/04/23	03/04/23-13/04/23	24	<2.00	8.2	92
BIS Standard & Method				APHA, 23rd Edition, Closed Reflux, Titrimetric Method, 2017	IS 3025/39:1991, R : 2003, Partition Gravimetric	IS-3025/11:1983, R-1996, Electrometric	IS 3025/17:1984, R :1996, Gravimetric Method

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