



*A Subsidiary of Coal India Limited*

**ANNUAL ROUTINE  
ENVIRONMENTAL  
MONITORING REPORT  
2020-2021**

**TALCHER COALFIELD**

**CENTRAL MINE PLANNING & DESIGN INSTITUTE LTD, RI VII,  
BHUBANESWAR**

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<b>REPORT TITLE</b>	COMPANY NAME	<b>Mahanadi Coalfields Limited, Jagruti Vihar, Burla, Sambalpur – 768020</b>
	SITE LOCATION	<b>Talcher Coalfield</b>
	STUDY PERIOD	<b>Apr'2020-Mar'2021</b>
	REPORT DATE	<b>May 2021</b>
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## 1. TALCHER COALFIELD

### INTRODUCTION

Talcher coalfield is an important coalfield of the country which is a part of Mahanadi Coalfields Limited (MCL), fully owned subsidiary of Coal India Limited a *Maharatna* company.

It is bound by Lat. 20° 45' to 21° 20'N and Long. 84° 20' to 85° 32' E, falling mostly in Angul and partly in Dhenkanal, Deogarh and Sambalpur districts. It occupies an area of about 1800 sq. km. having an elliptical outline with its longer axis trending in WNW-ESE direction and maximum width of about 26 km as observed in the west central part.

MCL realized 148.01 Metric tonne (MT) of coal production in the year 2020-2021 of which Talcher coalfield contributed MT coal production. Coal uptake of 145.99 MT was realized by MCL in the year 2020-2021.

### TOPOGRAPHY

Topographically the coalfield can be divided in two parts - eastern part and the western part. The eastern part largely covered by Barakar Formation (or Lower Kamthi Formation), is slightly undulating with an average elevation of around 150m above MSL. The western part comprises largely of steeply sloping Kamthi hillocks. Minimum and maximum elevation from MSL is 60m and 567m respectively for the coalfield. The terrain is undulating and accommodates large number of villages and fertile lands. The soil in this area varies from rich loams to the gravelly detritus of the hill slopes.

The coalfield is drained by the Brahmani River flowing along eastern fringe of the coalfield. Singhadajhor, Nandira and Tikra, Aunli are some of the important tributaries of the Bramhani River.

### CLIMATE

The climate of the area is generally dry and arid except in monsoon season. It is influenced by prevalence of dry air of the continental type. It is characterized by extreme conditions, summers being intensely warm and winters rather cold. The summer is severe during May-June when temperature rises as high as 49°C accompanied by high humidity. Winter is pleasant, prevails during December-January. The area experiences warm to hot climate with temperature varying from 7.6°C to 41.9°C [4]. Average humidity varies from 26% to 83%. Generally the humidity is highest in August and least in March. The climate of this region resembles with that of Deccan plateau.

Annual mean wind velocity is around 2 Km/hr. [4] It is generally observed that the wind speed in the area is light to moderate except in the early monsoon period when it is generally strong. Higher speed wind blows during latter part of summer or rainy season in the direction of mostly South-West or North- East. Winds blow with slow or moderate speed in rest part of the year. In winter the winds blow either from West or North.

The area has monsoon type climate with rain fall predominantly in the months of June to September and some in the other months. Average rainfall per annum of the area is 1361.8 mm. Maximum rainfall per annum is 351.6 mm and minimum is 197.5 mm as per records available [3]

## MINING AREA

List of approved projects with sanctioned Environmental Clearance of Talcher Coalfield is as follows

Table 1

Name of the Project	Approved MP (MTY) and date	Approved EC (MTY) and date
Jagannath OCP	7.50 (16-05-17)	7.5 (09-09-20)
Bhubaneswari OCP	28.00 (20-11-17)	28 (18-03-19)
Bharatpur OCP	20.00 (10-06-18)	20 (27-05-21)
Ananta OCP	20.00 (30-03-09)	20 (10-12-14 & amended on 16-02-18)
Lingaraj OCP	20.00 (1.7.2011)	20 (27-11-15)
Kaniha OCP	14.00 (08-02-17)	14 (17-07-17)
Hingula - II OCP	20.00 (30-03-09)	15 (28-10-15)
Balram OCP	8	8.00 (24-10-90)
Nandira UG	0.33	0.33 (15-11-20)
Natraj UG	0.64	0.64 (14-07-06)
Talcher (W) UG	0.52	0.52 (08-11-07)
Jagannath UG	0.67	0.67 (08-11-07)
Mandapal Sand Mine	0.25 Million m <sup>3</sup> /annum	28-01-2016
Deulbera UG	0.20	22-06-92

## COMMUNICATION

The south-eastern part of the coalfield where the coal mining activities are taking place at present, is connected by rail to Bhubaneswar (150 Km.) - the capital city of Odisha and located on Howrah-Chennai main railway line. It is also connected by rail and road to Paradeep port. National Highway No.42 connecting Cuttack Angul- Sambalpur passes more or less parallel to the southern fringe of the coalfield at about 5 to 7 Km. NH-23 connecting Talcher-Samal-Pallahara passes through the eastern part of the coalfield. Another prominent district road is Angul- Chhendipada Deogarh road passing through the central part of the coalfield. NH-200 originating from Chandikhol, also passes through north eastern part of the coalfield and joins with NH-23.

The coalfield is also suitably connected by railway network. Sambalpur Talcher rail link, the connector to Howrah-Mumbai and Howrah-Chennai main railway lines, runs almost parallel to NH-42 and passes across the study area in east-west direction. The rail link carries heavy goods traffic of the industrial and mining activities of the region to the main network lines which are accessible at about 100-150 km distance from Talcher.

## 2. PERFORMANCE SUMMARY

Routine Environment Monitoring (REM) work of Mahanadi Coalfields Limited (MCL) mines in Talcher and IB Valley coalfield is undertaken by CMPDI RI-VII Bhubaneswar. MCL is having an incremental coal production every year. The increase in coal production simultaneously increases the pollution load. Because of which Ministry of Environment, Forest & Climate Change (MoEF&CC) has directed MCL to undertake the Routine Environmental Monitoring in core zone & buffer zone. In order to comply with the condition of MoEF&CC, MCL has increased the periodic monitoring. Reference monitoring station (NAAQS complied) located in the buffer zone are also included to monitor & study the impact of mining on residential area in and around mines.

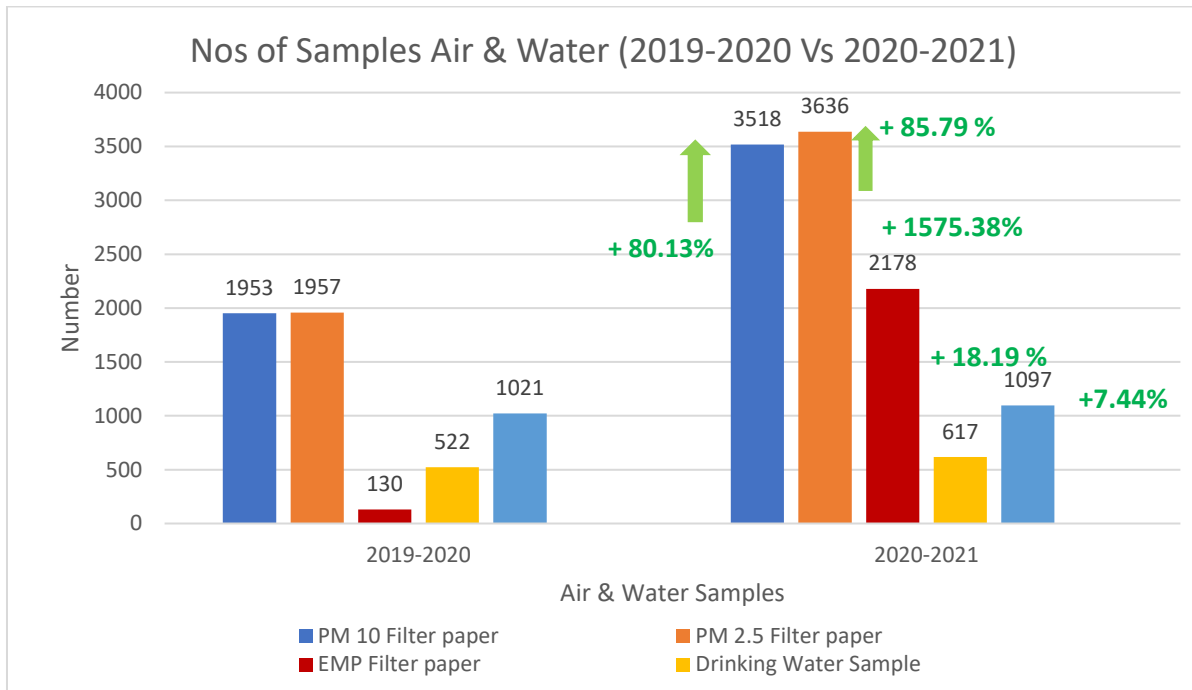
In the financial year 2020-2021, the REM work increased two folds. As opposed to last year, where CMPDI had analysed around 6200 samples for different parameters this financial year as per work order, the samples analysed were around 11120.

With almost 80 % growth rate we at REC Lab, CMPDI, RI VII plan to expand our capital and maximise our in-house testing. by starting analysis of Benzene-Benzo Pyrene in water samples using Gas Chromatography (GC). It is likely to be the first Regional Institute operating GC for the analysis. A Microbiological testing lab is

being made functional for testing presence of harmful coliforms in water. Capital purchases of a second Atomic Absorption Spectrophotometer (AAS) along

with a Chiller & Microwave Digester are proposed to deal with additional work.

**Fig showing Nos of Samples Air & Water (2019-2020 Vs 2020-2021)**



Source: Report on Justification for Hiring 2 no. Bolero Camper for REM Work 2020-21

## LIST OF MONITORING STATIONS AS PER WORK ORDER

### Table 2

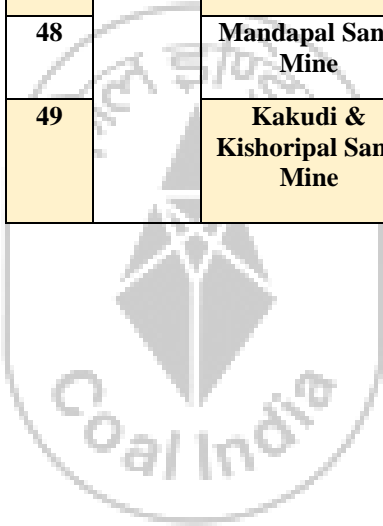
#### List of Air Quality Monitoring Stations & frequency of monitoring

Sl. No.	Area	Project (OCP/UG)	Name of Air Monitoring Station	Type of Station
1	Jagannath	Jagannath	Near NBVL Park	Compliance Station
2			Near MDTP	Compliance Station
3			Officer Club JNC	Reference Station
4			Ananta Vihar Colony ( <b>Reported only</b> )	
5		Ananta	Ananta Project Office	Compliance Station
6			BCML Workshop	Compliance Station
7			Guthasahi Village	Reference Station
8			Ananta Vihar Colony	Reference Station
9	Bharatpur	Bharatpur	Near ETP/Workshop	Compliance Station
10			North-West Point of the Mine	Compliance Station
11			Near MGR-RLS of Bharatpur	Compliance Station
12			Near Regional Store	Compliance Station
13			Natedi Village ( <b>Reported only</b> )	
14			Near Joragadia Village	Reference Station
15		Chhendipada	Near Site Office	Compliance Station
16			Mamuria Sahi	Compliance Station
17		Dolamandap Chhak	Compliance Station	
18		Near Site Office ( <b>Reported</b> )	Reference Station	
19	Lingaraj	Lingaraj	Near OB Dump no. 5 (South Side of the Mine)	Compliance Station
20			Near OB Dump no. 10 (North Side of the Mine)	Compliance Station
21			IWSS	Compliance Station
22			Near CT Road (Lingraj to Dera)	Compliance Station
23			Near Intake Complex	Reference Station
24	Kaniha	Kaniha	Project Office	Compliance Station
25			New Time Office (Near Z-Patch)	Compliance Station
26			Old Site Office	Compliance Station
27			North East Side of Project Office	Compliance Station
28			Near Jatra Padia, Jarada	Compliance Station
29			Near External OB Dump Jamania	Compliance Station
30			West of Mine Quarry	Compliance Station
31	South of Proposed Quarry Limit of KOCP	Reference Station		
32	Hingula	Hingula	Time Office	Compliance Station
33			South West Side of the Mine	Compliance Station
34			North of the Mine, Purnapi, Kumunda Village	Reference Station

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35	Talcher		North East of the Mine, Solada Village	Reference Station
36		Balram	South West of the Mine	Compliance Station
37			Pump House near Outsourcing Working Patch & Coal Transport Road	Compliance Station
38			North West of the Mine, Solada Village ( <b>Reported only</b> )	
39			East of the Mine, Natedi Village	Reference Station
40		Talcher	Near Canteen Talcher Colliery	Compliance Station
41			Officer Club, Talcher Area	Compliance Station
42		Nandira	Project Office	Compliance Station
43			Sub-station	Compliance Station
44			HVDC Sub-station	Compliance Station
45			Nandira Colony	Reference Station
46		Deulbera	Manager's Office	Compliance Station
47		Handhidhua Colliery	Near Project Office	Compliance Station
48		Mandapal Sand Mine	Near Mandapal Hospital	Compliance Station
49		Kakudi & Kishoripal Sand Mine	Near Kishoripal Village	Compliance Station



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**Table 3**  
**List of Noise Level Monitoring Stations**

Sl. No.	Area	Project	Name of the Station
1	Jagannath	Jagannath OCP	Near NBVL Park
2			Near MDTP
3			Officer Club JNC
4			Ananta Vihar Colony
5		Ananta OCP	Ananta Project Office
6			BCML Workshop
7			Guthasahi Village
8			Ananta Vihar Colony ( <b>Reported</b> )
9	Bharatpur	Bharatpur OCP	Near ETP/Workshop
10			North-West Point of the Mine
11			Near MGR-RLS of Bharatpur
12			Near Regional Store
13	Lingaraj	Lingaraj OCP	Near OB Dump no. 5 (South Side of the Mine)
14			Near OB Dump no. 10 (North Side of the Mine)
15			IWSS
16			Near CT Road (Lingraj to Dera)
17	Kaniha	Kaniha OCP	Patharmunda Village
18			Telisingha Village
19			Neaar Jarda Village
20			Site Office
21	Hingula	Hingula OCP	Time Office
22			South West Side of the Mine
23			North of the Mine, Purnapi, Kumunda Village
24			North East of the Mine, Solada Village
25		Balaram OCP	Near Project Office, Balaram OCP
26			Backfilled Area near Dozer Shed
27			South West of the Mine
28			Pump House Near Outsourcing Working Patch & Coal Transport Road
29	Talcher	Talcher Colliery	Near Canteen, Talcher Colliery
30			GM Office, Talcher Area
32		Nandira U/G	Project Office
33			Sub-Station, Nandira colliery
34		Deulbera U/G	Manager's Office
31		Mandapal Sand Mine	Near Gopinathpur Village
35		Kakudi & Kishoripal Sand Mine	Near Kishoripal village

**Table 4****List of Effluent (22 Parameter) Quality Monitoring Stations**

S.NO	Area	OCP	NAME OF STATION	
1	Jagannath	Jagannath	O & G Trap Outlet	
2			STP Outlet	
3	Bharatpur	Bharatpur	Workshop ETP Clear Water Tank Outlet	
4			STP Outlet	
5			Water Loading Point at South Quarry Sump	
6		Chhendipada	Mine Sump Water	
7	Lingaraj	Lingaraj	Inlet of Workshop ETP	
8			Clear Water Reservoir of Workshop ETP	
9			Inlet of MDTP Near Stock No. 17	
10			Clear Water Tank of MDTP Near Stock No. 17	
11			Inlet of Sedimentation Pond Complex near Lingraj Siding	
12			Clear Water Tank of Sedimentation Pond Complex Near Lingraj Siding	
13			Inlet of Sedimentation Pond Complex near Project Office	
14			Clear Water Reservoir of Sedimentation Pond Complex near Project Office	
15			Inlet of Sedimentation Pond Complex near Deulbera Siding	
16			Clear Water Tank of Sedimentation Pond Complex Near Deulbera	
17	Talcher	Talcher	Talcher Colliery Sedimentation Tank Discharge	
18		Nandira	Nandira Colliery Sedimentation Tank Discharge	
19		Deulbera colliery	Deulbera colliery	Deulbera Colliery Mine discharge
20			Rani Park Submersible Pump	
21		Handhidhua Colliery	Handhidhua Colliery Mine Discharge	
22		Mandpal Sand Mine		Upstream - At 200 m Before Leasehold Area
23				Downstream - At 200 m Before Leasehold Area
24		Kakudi & Kishoripal Sand Mine		Upstream - At 200 m Before Leasehold Area
25				Downstream - At 200 m Before Leasehold Area

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**Table 5****List of Effluent (4 Parameter) Quality Monitoring Stations**

Sl. NO	Area	OCP	NAME OF STATION
1	Jagannath	Jagannath	O & G Trap Inlet
2			O & G Trap Outlet
3		Ananta	O & G Trap Inlet
4			O & G Trap Outlet
5	Bharatpur	Bharatpur	Oil & Grease Trap Inlet
6			Oil & Grease Trap Outlet
9	Lingaraj	Lingaraj	Inlet of Workshop ETP
10			Clear Water Reservoir of Workshop ETP
11			Inlet of MDTP Near Stock No. 17
12			Clear Water Tank of MDTP Near Stock No. 17
13			Inlet of Sedimentation Pond Complex near Lingraj Siding
14			Clear Water Tank of Sedimentation Pond Complex Near Lingraj Siding
			Inlet of Sedimentation Pond Complex near Project Office
			Clear Water Reservoir of Sedimentation Pond Complex near Project Office
15			Inlet of Sedimentaion Pond Complex near Deulbera Siding
16			Clear Water Tank of Sedimentation Pond Complex Near Deulbera
17			Kaniha
	Clear Water Pond		
	Kansamunda Sump		
18	Z-Patch Sump		
19	Hingula	Hingula	Inlet of O & G Trap
20			Outlet of O & G Trap
21		Balram	Inlet of O & G Trap
22			Outlet of O & G Trap
23	Talcher	Talcher	Talcher Colliery Sedimentation Tank Discharge
24		Nandira	Nandira Colliery Sedimentation Tank Discharge
25		Duelbera Colliery	Deulbera Colliery Mine Discharge at Pit Top
			Ranipark Submersible Pump
26		Handhidhua Colliery	Handhidhua Colliery Mine Discharge
27		Mandalpal Sand Mine	Upstream - At 200 m Before Leasehold Area
28			Downstream - At 200 m After Leasehold Area
29		Kakudi & Kishoripal Sand mine	Upstream - At 200 m Before Leasehold Area
30			Downstream - At 200 m After Leasehold Area

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**Table 6**  
**List of Effluent (3 Parameter) Quality Monitoring Stations**

Sl. NO.	Area	OCP	NAME OF STATION
1	Jagannath	Jagannath	STP Inlet
2			STP Outlet
3		Ananta	STP Intlet
4			STP Outlet
7	Bharatpur	Bharatpur	STP Intlet
8			STP Outlet (pH, TSS, Faecal Coliform, BOD)
	Hingula	Balram	STP Intlet of Balram Colony
7			STP Outlet of Balram Colony

**Table 7**  
**List of Effluent (1 Parameter) Quality Monitoring Stations**

Sl.NO	Area	OCP	NAME OF STATION
1	Jagannath	Ananta	Mine Sump Water
2	Bharatpur	Bharatpur	Mine Sump Water - South Quarry Sump
3			Mine Sump Water - Main Sump
4			Mine Sump Water - North Quarry Sump
5			Mine Sump Water - Old Quarry Sump
6	Lingaraj	Lingaraj	Mine Sump Water

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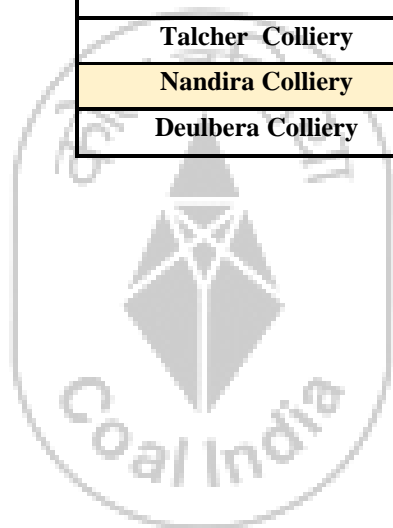
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**Table 8**  
**List of Drinking Water Quality Monitoring Stations**

OCP/UG MINE	NAME OF OCP/UG MINE
<b>Jagannath</b>	Balanda Colony Tap Water
	Jagannath Colony Tap Water
<b>Ananta</b>	Ananta Colony Tap Water
	Dera village Tube well water
<b>Bharatpur</b>	Tap Water in Nehru Shatabdi Nagar A Type Quarters
	Tap Water in Nehru Shatabdi Nagar B Type Quarters
	Tap Water in Nehru Shatabdi Nagar C Type Quarters
	Tap Water in Nehru Shatabdi Nagar Transit House
	Singhada Pump House
	Time Office, BOCP
	Badasinga Village Open Well
Taleipasi Village Open Well	
<b>Chhendipada</b>	Bore Well Water at Site Office
<b>Lingraj</b>	GM Office, Lingraj Area Tap Water
	Balunga Khamar Village Well
	Deulbera Village Well
	Talabera Village Well
<b>Kaniha</b>	Tube Well at Coal Analysis Lab
	Jarda Village Well Water
<b>Hingula</b>	Time Office Water
	Gopalprasad Village Bore Well Water
	Kumunda Village Bore Well Water
<b>Balram</b>	Danara Village Borewell Water
	Balaram Colony Tap Water
	Nakeipasi Village Bore Well Water
<b>Talcher Colliery</b>	Tap-Water, GM Office
	Canteen Tap-Water, Talcher Colliery
<b>Nandira Colliery</b>	Canteen Tap-Water
	Pit Top Tap Water
<b>Deulbera colliery</b>	Deulbera Manager Office Tap Water
<b>Handhidhua colliery</b>	Pit Top Tap Water (Monthly)

**Table 9**  
**List of Well Water Level Stations**

OCP/UG MINE	NAME OF OCP/UG MINE
<b>Jagannath</b>	Rakas Village Well
<b>Ananta</b>	Dera Village Well Water
<b>Bharatpur</b>	Badasinghada Village Open Well
	Taleipasi Village Open Well
<b>Lingraj</b>	Balunga Khamar Village Well
	Deulbera Village Well
	Talabera Village Well
<b>Hingula</b>	Gopal Prasad Village Well
	Kusumpal Village Well
<b>Balram</b>	Danara Village Well
	Nakeipasi Village Well
<b>Talcher Colliery</b>	Narharipur Village Well
<b>Nandira Colliery</b>	Natedi Village
<b>Deulbera Colliery</b>	Deulbera Village well



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**Table 10**  
**List of Surface Water Monitoring Stations**

SL.No.	AREA	Project/OCP	NAME OF STATION
1	Jagannath	Jagannath	West Sump Water
2			Central Sump Water
5	Bharatpur	Bharatpur	Bangaru Jhor river near Joragarhia
6			Jambubahali Village Pond
7	Kaniha	Kaniha	Singada jhor stream nearer to Village Khairnali as u/s Water for Kaniha OCP
8			Before Junction Point of Singadajhor & Brahmani River at Balangi Village as d/s for Kaniha OCP
9			Tikra Nadi Near Kaniah Village as u/s Water for Kaniah OCP
10			Tikra Nadi Near Shagarhi Pala Village as d/s Water for Kaniah OCP
11	Hingula	Hingula	Singadhajhor Stream Near HOCP
12			Pond Water of Kankarei Village
13		Balaram	Derjenga reservoir as a part of Impact Study
14			Pond water of Ambapal village
15	Talcher	Talcher	Pond Water of Dera Village
16		Nandira	Nandira Jhor Near <u>Karnapur</u> Village
17			Nandira Jhor Near <u>Sakasingha</u> Village
18			Nandira Jhor Near <u>Tentolei</u> Village Mine
19			Nandira Jhor Near <u>Pengua</u> village Mine
20		Deulbera	Pond Water of Gopinathpur Village

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**Table 11**  
**List of Piezometer Monitoring Stations**

S. No.	Area	OCP/UG Mine	Name of OCP/UG Mine
1	Jagannath	Bhubaneswari	Piezometer no MTP 07
2			Piezometer no MTP 08
3		Jagannath	Piezometer no MTP 04 ( <b>Reported Only</b> )
4		Ananta	Piezometer no MTP 04
5			Piezometer no MTP 05
6	Bharatpur	Bharatpur	Piezometer no MTP 09
7		Chhendipada	Piezometer no MTP 21
8			Piezometer no MTP 22
9			Piezometer no MTP 23
10	Hingula	Balram	Piezometer no MTP 10
11			Piezometer no MTP 12
12			Piezometer no MTP 13
13			Piezometer no MTP 17
14		Hingula	Piezometer no MTP 14
15			Piezometer no MTP 15
16			Piezometer no MTP 16
17	Kaniha	Kaniha	Piezometer no MTP 18
18			Piezometer no MTP 19
19			Piezometer no MTP 20
20	Lingraj	Lingraj	Piezometer no MTP 01
21			Piezometer no MTP 02
22			Piezometer no MTP 06
23	Talcher	Nandira Colliery	Piezometer no MTP 11
24		Handhidhua Colliery	Piezometer no MTP 03

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## FREQUENCY OF MONITORING

**Table 12: Frequency of Monitoring**

S. No.	Parameters	Sampling Frequency
1.	Air (5 Parameter) Quality Monitoring	Fortnightly/Weekly Twice
2.	Noise level (Day & Night) Monitoring	Fortnightly
3.	Effluent (1 Parameter) Quality Monitoring	Quarterly/Yearly
4.	Effluent (4 & 3 Parameter) Quality Monitoring	Fortnightly/Monthly/Quarterly
5.	Effluent (22 Parameter) Quality Monitoring	Yearly
6.	Drinking Water (26Parameter) Quality Monitoring	Monthly
7.	Piezometer & Ground Water Level Monitoring	Quarterly
8.	Surface Water (21 Parameter) Quality Monitoring	Quarterly



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## METHODOLOGY AND INSTRUMENTS USED

**Table 12: Methodology used for Analysis**

S.No	Materials or Products tested	Parameter	Test Method Specification
1	Ambient Air	NO <sub>2</sub>	IS 5182 (Part 6): 2012
2	Ambient Air	PM 10	IS 5182 (Part 23): 2012
3	Ambient Air	PM 2.5	Quality Assurance Guidance Document 2.12 Monitoring PM <sub>2.5</sub> in Ambient Air Using Designated Reference or Class I Equivalent Methods: 2016
4	Ambient Air	SO <sub>2</sub>	IS 5182 (Part 2 ): 2012
5	Drinking Water	Arsenic	APHA 3114C: 2017
6	Drinking Water	Boron	IS 3025 (part 57): 2005
7	Drinking Water	Boron	APHA 4500-B B.C: 2017
8	Drinking Water	Cadmium	APHA 3113 B: 2017
9	Drinking Water	Copper	APHA 3111 A,B: 2017
10	Drinking Water	Copper	IS 3025 (Part 42): 2014
11	Drinking Water	Iron	APHA 3111 A,B: 2017
12	Drinking Water	Iron	IS 3025 (Part 53 ):
13	Drinking Water	Lead	APHA 3113 B : 2017
14	Drinking Water	Manganese	APHA 3111 A,B: 2017
15	Drinking Water	Total Chromium	IS 3025 (Part 52): 2014
16	Drinking water	Total Chromium	APHA 3113 B: 2017
17	Drinking water	Zinc	IS 3025 (Part 49): 2014
18	Drinking water	Alkalinity (as CaCO <sub>3</sub> )	IS 3025 (Part 23): 2014
19	Drinking Water	Calcium	IS 3025 (Part 40): 2014
20	Drinking Water	Chlorides	IS 3025 (Part 32): 2014
21	Drinking Water	Color	APHA 2120 C: 2017
22	Drinking Water	Flouride	APHA 4500-F-D: 2017
23	Drinking Water	Nitrate	APHA 4500 NO <sub>3</sub> B: 2017
24	Drinking Water	pH	APHA 4500 H-B: 2017
25	Drinking Water	pH value	IS 3025 (Part 11) :
26	Drinking Water	Sulphate	APHA 4500 SO <sub>4</sub> E: 2017
27	Drinking Water	Total Dissolved Solids	IS 3025 ( Part -16):
28	Drinking Water	Total Hardness (CaCO <sub>3</sub> )	IS 3025 (Part 21): 2014
29	Drinking Water	Turbidity	IS 3025 (Part -10):
30	Surface water	Arsenic	APHA 3114 C: 2017
31	Surface water	Cadmium	APHA 3113 B: 2017
32	Surface Water	Copper	IS 3025 (Part 42): 2014
33	Surface water	Copper	APHA 3111 A,B: 2017
34	Surface water	Iron	APHA 3111 A,B: 2017
35	Surface water	Iron	IS 3025 (Part 53 ):
36	Surface water	Lead	APHA 3113 B: 2017
37	Surface water	Zinc	IS 3025 (Part 49): 2014
38	Surface Water	Chloride	IS 3025 (Part 32): 2014
39	Surface Water	Color	APHA 2120 C: 2017
40	Surface Water	Flouride	APHA 4500 F-D: 2017
41	Surface Water	Nitrate	APHA 4500 NO <sub>3</sub> B: 2017
42	Surface Water	pH	APHA 4500-H+B: 2017
43	Surface Water	pH	S 3025 (Part 11 ): 2012

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44	Surface Water	Sulphate	APHA 4500 SO4 E: 2017
45	Surface Water	Total Dissolved Solids	IS 3025 (Part -16):
46	Surface Water	Total Hardness (CaCO <sub>3</sub> )	IS 3025 (Part 21): 2014
47	Waste Water (Effluent / Sewage)	Ammonical Nitrogen as N	APHA 4500 NH <sub>3</sub> B,F: 2017
48	Waste Water (Effluent / Sewage)	Arsenic	APHA 3114 C: 2017
49	Waste Water (Effluent / Sewage)	Biological Oxygen Demand (BOD 3 days)	IS 3025 (Part 44): 2014
50	Waste Water (Effluent / Sewage)	Cadmium	APHA 3113 B : 2017
51	Waste Water (Effluent / Sewage)	Chemical Oxygen demand (COD)	APHA 5220 B, C: 2017
52	Waste Water (Effluent / Sewage)	Colour	APHA 2120 C : 2017
53	Waste Water (Effluent / Sewage)	Copper	IS 3025 (Part 42): 2014
54	Waste Water (Effluent / Sewage)	Copper	APHA 3111, A, B : 2017
55	Waste Water (Effluent / Sewage)	Dissolved Phosphate as P	APHA 4500-P C : 2017
56	Waste Water (Effluent / Sewage)	Fluoride	APHA 4500-F- D: 2017
57	Waste Water (Effluent / Sewage)	Hexavalent Chromium	APHA 3500-B: 2017
58	Waste Water (Effluent / Sewage)	Iron	IS 3025 (Part 53): 2014
59	Waste Water (Effluent / Sewage)	Iron	APHA 3111 A, B : 2017
60	Waste Water (Effluent / Sewage)	Lead	APHA, 3113 A, B: 2017
61	Waste Water (Effluent / Sewage)	Manganese	APHA 3111 A, B: 2017
62	Waste Water (Effluent / Sewage)	Nickel	IS 3025 (Part 54 ): 2014
63	Waste Water (Effluent / Sewage)	Nickel	APHA 3113 A, B : 2017
64	Waste Water (Effluent / Sewage)	Nitrate Nitrogen	APHA 4500 NO <sub>3</sub> B: 2017
65	Waste Water (Effluent / Sewage)	Oil & Grease	IS 3025 (Part 39): 2014
66	Waste Water (Effluent / Sewage)	pH value	IS 3025 (Part 11 :1983): 2012
67	Waste Water (Effluent / Sewage)	pH value	APHA 4500 - H+ A, B : 2017
68	Waste Water (Effluent / Sewage)	Sulphide	APHA, 4500 - S 2- D, : 2017
69	Waste Water (Effluent / Sewage)	Total Chromium	IS 3025 (Part 52:2003): 2014
70	Waste Water (Effluent / Sewage)	Total Kjeldahl Nitrogen	APHA 4500 N org B : 2017
71	Waste Water (Effluent / Sewage)	Total Suspended Solids	IS 3025 (Part 17-1984):
72	Waste Water (Effluent / Sewage)	Zinc	IS 3025 (Part 49): 2014
73	Waste Water (Effluent/Sewage)	Ammonical Nitrogen as N	IS 3025 (Part 34): 2014
74	Waste Water (Effluents/ Sewage)	Temperature	IS 3025 (Part-9): 2012

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Figure 3 Fogging Machine in MCL mine



Figure 4 Birds eye view of SILO in Bharatpur OCP, MCL

Source: EGS Report 2019-2020, CIL



# AIR QUALITY DATA

*cmpdi*

*A Mini Ratna Company*

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### 3. ENVIRONMENTAL PARAMETER ANALYSIS

#### 3.1 TABLES FOR AIR QUALITY DATA

Table: 13

**Area:** Jagannath

**Project:** Jagannath OCP

**Monitoring Station:** Near MDTP

*All values are in  $\mu\text{g}/\text{m}^3$*

Date of Sampling	SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
04-May-20	258	175	41	13.94	27.9
01-Jun-20	273	195	28	11.95	17.5
29-Jun-20	112	75	21	9.25	23.74
01-Jul-20	91	60	35	9.56	22.18
13-Jul-20	163	102	28	8.3	11.68
01-Aug-20	101	43	21	6.04	12.32
17-Aug-20	140	68	21	7.8	11.6
05-Sep-20	109	72	26	7.1	19.33
18-Sep-20	118	79	25	10.73	21.12
08-Oct-20	158	72	28	7.5	13.39
27-Oct-20	302	142	29	12.55	20
09-Nov-20	297	206	62	9.52	15.2
23-Nov-20	347	239	68	11.41	20.25
08-Dec-20	347	230	70	14.58	27.09
22-Dec-20	328	197	66	23.46	37.5
05-Jan-21	317	223	61	19.08	32.62
19-Jan-21	346	229	62	16.64	28.41
04-Feb-21	423	228	68	15.08	37.23
19-Feb-21	393	241	73	20.17	29.85
04-Mar-21	486	234	68	25.47	40.29
18-Mar-21	426	242	75	18.03	50.52
<b>Brief Statistics</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
<b>Maximum</b>	486	242	75	25.47	50.52
<b>Minimum</b>	91	43	21	6	12
<b>Average</b>	263.57	159.62	46.48	13.25	24.75
<b>Standard (24 Hrs)</b>	<b>500</b>	<b>250</b>		<b>120</b>	<b>120</b>
<b>Standard (Annual)</b>	<b>430</b>	<b>215</b>		<b>80</b>	<b>80</b>

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Table:14  
**Area: Jagannath**  
**Project: Jagannath OCP**  
**Monitoring Station: Near NBVL Park**  
*All values are in  $\mu\text{g}/\text{m}^3$*

Date of Sampling	SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
18-May-20	90	68	29	9.82	17.59
01-Jun-20	107	69	48	13.74	21.52
29-Jun-20	95	64	26	12.56	26.62
01-Jul-20	137	65	34	12.61	19.12
13-Jul-20	198	108	27	11.07	16.67
01-Aug-20	87	54	18	9.6	17.93
17-Aug-20	123	76	25	9.83	15.63
05-Sep-20	129	80	33	9.33	17.87
18-Sep-20	134	88	38	9.62	15.37
08-Oct-20	198	90	36	11.37	24.27
27-Oct-20	217	95	25	10.9	18.6
09-Nov-20	198	135	45	11.83	18.94
23-Nov-20	311	230	56	12.11	25.11
08-Dec-20	278	142	62	11.37	19.8
22-Dec-20	258	154	73	15.53	30.98
19-Jan-21	153	80	52	20.24	41.23
04-Feb-21	313	166	59	28.76	53.07
19-Feb-21	271	149	66	19.85	38.17
13-Mar-21	262	155	62	22.68	37.7
<b>Brief Statistics</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
<b>Maximum</b>	313	230	73	28.76	53.07
<b>Minimum</b>	87	54	18	9	15
<b>Average</b>	187.32	108.84	42.84	13.83	25.06
<b>Standard (24 Hrs)</b>	<b>500</b>	<b>250</b>		<b>120</b>	<b>120</b>
<b>Standard (Annual)</b>	<b>430</b>	<b>215</b>		<b>80</b>	<b>80</b>

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**Table: 15**  
**Area: Jagannath**  
**Project: Jagannath OCP**  
**Monitoring Station: Officer Club JNC (RS)**  
*All values are in  $\mu\text{g}/\text{m}^3$*

Date of Sampling	SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
04-May-20	209	141	38	10.76	20.4
18-May-20	110	69	31	9.8	18.76
04-May-20	209	141	38	11	20
18-May-20	110	69	31	10	19
01-Jun-20	177	82	24	8.12	17.14
02-Jun-20	130	76	28	11.2	13.98
13-Jun-20	91	82	54	10.94	17.36
14-Jun-20	176	88	42	21.92	14.27
16-Jun-20	109	66	25	11.36	25.12
17-Jun-20	183	60	30	7.64	18.3
26-Jun-20	110	75	27	9.78	18.96
27-Jun-20	88	62	15	14.31	17.89
01-Jul-20	121	78	23	8.05	18.11
02-Jul-20	Strike				
06-Jul-20	105	65	25	8.44	17.66
07-Jul-20	126	60	21	11.62	22.9
13-Jul-20	142	90	23	6.43	13.04
14-Jul-20	127	81	25	11.98	14.39
17-Jul-20	117	69	20	12.2	18.61
18-Jul-20	118	74	23	16.59	10.39
27-Jul-20	105	67	26	14.5	18.32
28-Jul-20	122	82	27	10.73	14.48
03-Aug-20	98	52	30	7.08	16.8
04-Aug-20	113	71	25	8.5	16.09
10-Aug-20	90	61	22	7.43	12.88
11-Aug-20	108	76	29	8.18	10.97
18-Aug-20	110	79	31	6.06	18.55
19-Aug-20	101	62	25	9.71	22.03
25-Aug-20	86	52	18	9.98	16.08
26-Aug-20	95	55	24	8.97	21.23
01-Sep-20	111	69	34	8.07	16.06
02-Sep-20	93	53	20	7.23	13.99
07-Sep-20	101	64	24	9.23	14.43
08-Sep-20	87	56	19	7.59	19.1
14-Sep-20	98	62	23	11.8	19.64
15-Sep-20	92	59	20	10	23.44
21-Sep-20	143	86	31	14.23	25.71
22-Sep-20	109	68	24	12.89	20.13
28-Sep-20	86	54	21	10.52	15.27
29-Sep-20	89	57	20	10.5	16.18
08-Oct-20	89	63	20	13.39	17.86
09-Oct-20	94	59	19	11.94	20.38
14-Oct-20	104	68	24	7.99	19.09
15-Oct-20	90	58	22	10.83	27.32

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23-Oct-20	148	92	27	12.36	24.12
24-Oct-20	140	91	34	13.48	21.58
29-Oct-20	128	71	35	11.99	21.33
31-Oct-20	134	80	42	12.92	18.67
01-Nov-20	136	88	37	10.21	16.52
07-Nov-20	96	59	27	10.65	20.24
08-Nov-20	110	64	30	8.72	21.15
13-Nov-20	137	80	45	9.19	21.83
14-Nov-20	117	65	32	9.87	18.32
21-Nov-20	148	82	49	10.27	18.98
22-Nov-20	162	95	57	13.95	18.56
27-Nov-20	157	90	49	8.76	21.85
28-Nov-20	149	87	51	12.31	20.48
04-Dec-20	147	76	42	11.13	22.48
05-Dec-20	165	83	45	10.57	30.95
12-Dec-20	147	77	45	13.35	25.61
13-Dec-20	159	85	48	11.82	21.91
19-Dec-20	163	90	45	6.82	23.95
20-Dec-20	140	72	40	14.95	22.09
26-Dec-20	175	92	55	10.45	23.17
27-Dec-20	160	85	51	14.67	37.12
08-Jan-21	158	77	40	16.87	47.87
21-Jan-21	143	84	49	21.81	38.08
22-Jan-21	157	80	42	16.71	30.76
29-Jan-21	133	83	47	23.61	40.4
30-Jan-21	169	92	52	20.11	29
06-Feb-21	Power failure				
07-Feb-21	Power failure				
12-Feb-21	173	76	45	13.41	46.79
13-Feb-21	161	77	43	15.64	32.8
20-Feb-21	163	91	51	25.58	36.36
21-Feb-21	153	84	47	14.21	42.38
27-Feb-21	171	78	43	20.46	45.47
28-Feb-21	159	87	49	30.3	33.88
05-Mar-21	202	87	52	19.57	43.46
06-Mar-21	216	92	49	31.69	52.64
12-Mar-21	143	75	41	24.86	50.39
13-Mar-21	164	82	47	22.42	38.9
19-Mar-21	155	90	49	15.23	26.51
20-Mar-21	167	85	48	24.49	22.95
26-Mar-21	146	92	50	11.63	14.83
27-Mar-21	133	69	43	13	30.23
<b>Brief Statistics</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
<b>Maximum</b>	216	141	57	31.69	52.64
<b>Minimum</b>	86	52	15	6	10
<b>Average</b>	133.20	76.46	34.87	12.89	23.46
<b>Standard (24 Hrs)</b>		<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>
<b>Standard (Annual)</b>		<b>60</b>	<b>40</b>	<b>50</b>	<b>40</b>

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**Table:16**  
**Area: Jagannath**  
**Project: Jagannath OCP**  
**Monitoring Station: Ananta Vihar Colony (Reported Only) (RS)**

*All values are in  $\mu\text{g}/\text{m}^3$*

Date of Sampling	SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
19-May-20	91	66	24	7	14
01-Jun-20	121	83	26	11.1	12.9
02-Jun-20	117	92	26	6.54	13.27
13-Jun-20	83	60	32	9.26	12.23
14-Jun-20	130	88	23	11.2	13.98
16-Jun-20	124	70	40	10.82	34.14
17-Jun-20	105	62	35	8.98	24.74
26-Jun-20	118	67	46	10.22	29.66
27-Jun-20	109	66	36	11.52	30.34
01-Jul-20	137	56	23	10.06	14.46
02-Jul-20	Strike				
06-Jul-20	91	44	22	8.11	18.23
07-Jul-20	101	62	23	10.95	25.36
13-Jul-20	140	89	28	6.64	12.95
14-Jul-20	132	62	36	9.59	12.17
17-Jul-20	93	53	29	10.79	12.95
18-Jul-20	116	52	25	7.58	12.45
27-Jul-20	82	42	22	12.57	18.59
28-Jul-20	106	75	22	11.43	15.88
03-Aug-20	112	60	25	9.01	19.19
04-Aug-20	104	72	31	8.62	11.96
10-Aug-20	92	58	27	10.04	15.49
11-Aug-20	95	53	23	9.32	20.22
18-Aug-20	102	70	27	10.09	18.91
19-Aug-20	84	54	22	9.78	13.58
25-Aug-20	114	75	32	5.96	18.74
26-Aug-20	87	59	24	8.17	18.04
01-Sep-20	116	77	33	6.42	19.56
02-Sep-20	90	63	25	6.07	12.69
07-Sep-20	106	74	23	10.14	18.4
08-Sep-20	119	86	42	9.38	21.25
14-Sep-20	106	72	20	9.54	16.62
15-Sep-20	94	64	18	8.05	18.94
21-Sep-20	89	58	17	8.44	19.59
22-Sep-20	120	78	26	11.15	17.41
28-Sep-20	134	91	33	8.02	18.37
29-Sep-20	124	78	26	10.39	15.08
06-Oct-20	102	68	21	11.05	18.12
07-Oct-20	118	80	27	13.67	23.34
13-Oct-20	128	93	33	10.05	22.89
14-Oct-20	101	52	19	8.38	20.04
21-Oct-20	87	51	20	11.08	20.27
22-Oct-20	120	76	27	10.93	17.81
28-Oct-20	95	61	24	8.66	15.92

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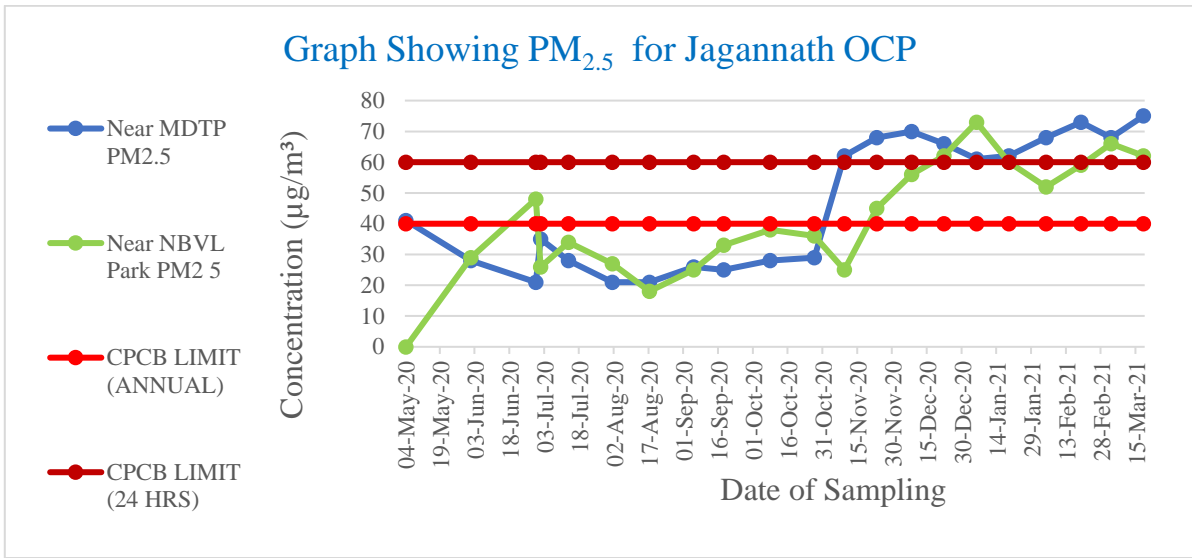
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29-Oct-20	97	62	21	8.73	19.43
30-Oct-20	116	78	29	12.39	18.43
05-Nov-20	144	86	45	12.54	21.49
06-Nov-20	131	78	43	14.16	20.78
11-Nov-20	141	83	36	10.27	22.78
12-Nov-20	130	78	32	9.46	17.55
19-Nov-20	137	64	37	13.1	17.55
20-Nov-20	146	77	35	9.89	17.09
25-Nov-20	140	79	41	13.43	23.88
26-Nov-20	156	90	48	9.13	16.46
01-Dec-20	167	91	55	12.76	29.17
02-Dec-20	154	95	57	14.59	24.25
10-Dec-20	167	84	46	11.5	20.53
11-Dec-20	179	88	50	7.73	22.65
15-Dec-20	128	69	45	15.26	38.59
16-Dec-20	148	84	49	18.5	31.85
24-Dec-20	159	92	51	19.84	35.67
25-Dec-20	143	87	47	12.48	37.54
28-Dec-20	167	94	55	15.85	35.48
04-Jan-21	146	89	47	25.33	39.57
05-Jan-21	147	80	49	16.72	45.54
12-Jan-21	170	92	53	13.23	28.53
13-Jan-21	184	94	55	27.16	35.83
18-Jan-21	168	90	52	22.63	45.15
19-Jan-21	151	83	50	16.88	38.63
25-Jan-21	169	80	47	18.29	38.49
27-Jan-21	149	74	43	21.91	43.73
01-Feb-21	150	79	49	16.38	28.93
02-Feb-21	224	92	54	20.65	61.29
09-Feb-21	209	89	52	30.13	41.79
10-Feb-21	147	66	46	16.12	50.21
16-Feb-21	192	85	51	17.28	49.44
17-Feb-21	178	93	53	16.84	42.75
23-Feb-21	138	60	43	23.8	33.56
24-Feb-21	153	75	47	21.55	35.37
01-Mar-21	192	78	45	22.46	24.31
02-Mar-21	164	86	54	22.3	22.99
08-Mar-21	206	81	43	19.12	22.65
09-Mar-21	172	76	41	24.75	25.14
13-Mar-21	154	70	39	21.25	26.41
16-Mar-21	169	87	48	22.78	23.13
22-Mar-21	171	78	43	32.09	42.58
23-Mar-21	187	88	47	27.09	27.01
<b>Brief Statistics</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
<b>Maximum</b>	224	95	57	32.09	61.29
<b>Minimum</b>	82	42	17	6	12
<b>Average</b>	133.43	74.84	36.47	13.55	24.71
<b>Standard (24 Hrs)</b>		<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>
<b>Standard (Annual)</b>		<b>60</b>	<b>40</b>	<b>50</b>	<b>40</b>

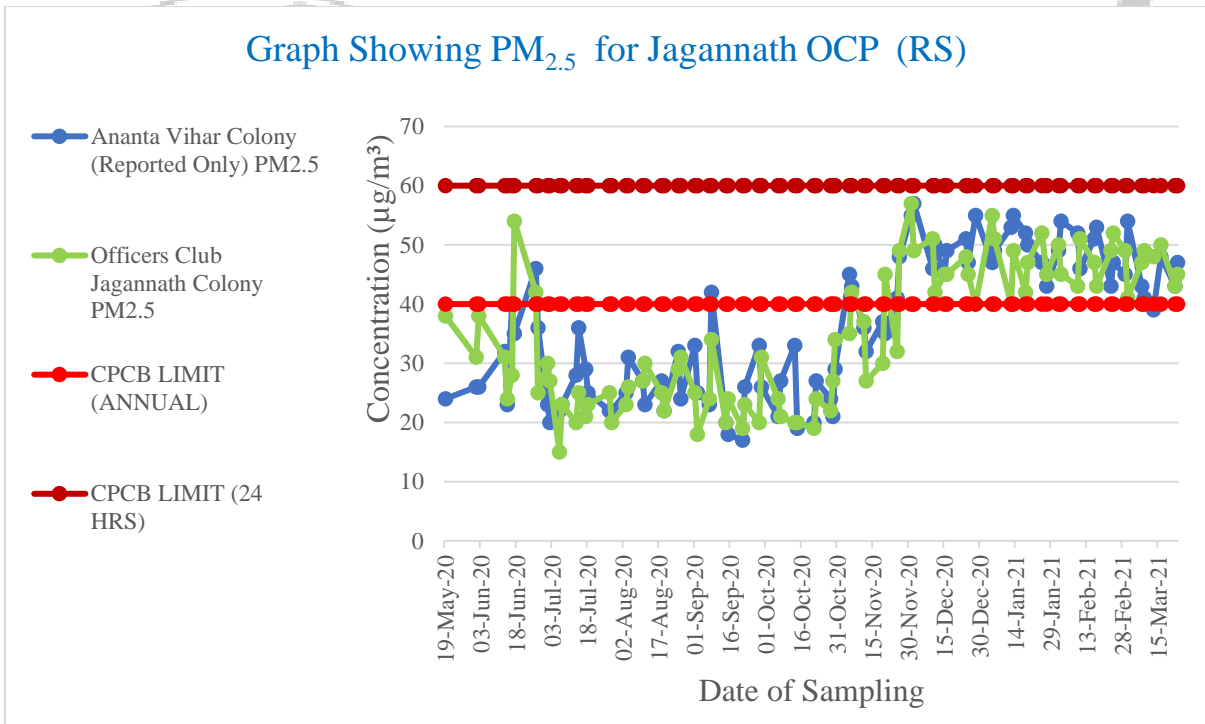
**PREPARED BY: CENTRAL MINE PLANNING & DESIGN ISTITUTE LTD., RI VII, BHUBANESWAR**

**JOB NO.750001**

Graph Showing PM<sub>2.5</sub> for Jagannath OCP



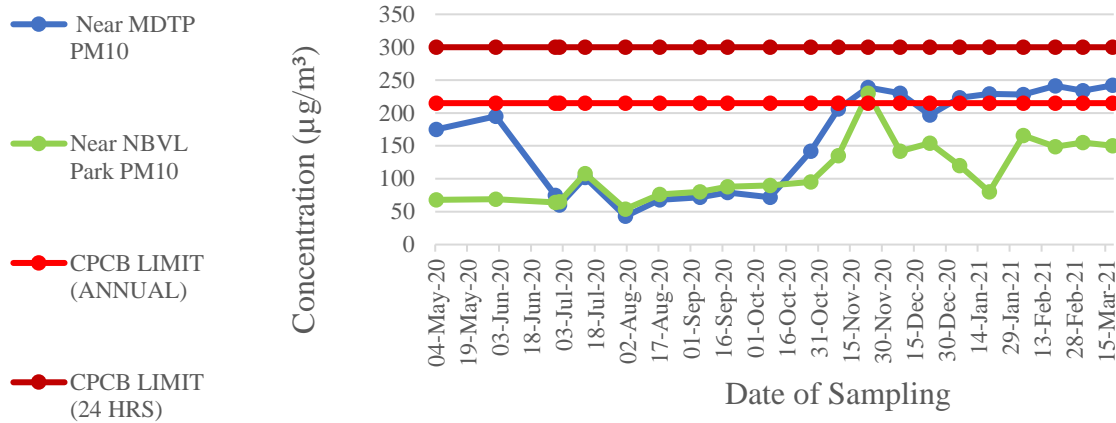
Graph Showing PM<sub>2.5</sub> for Jagannath OCP (RS)



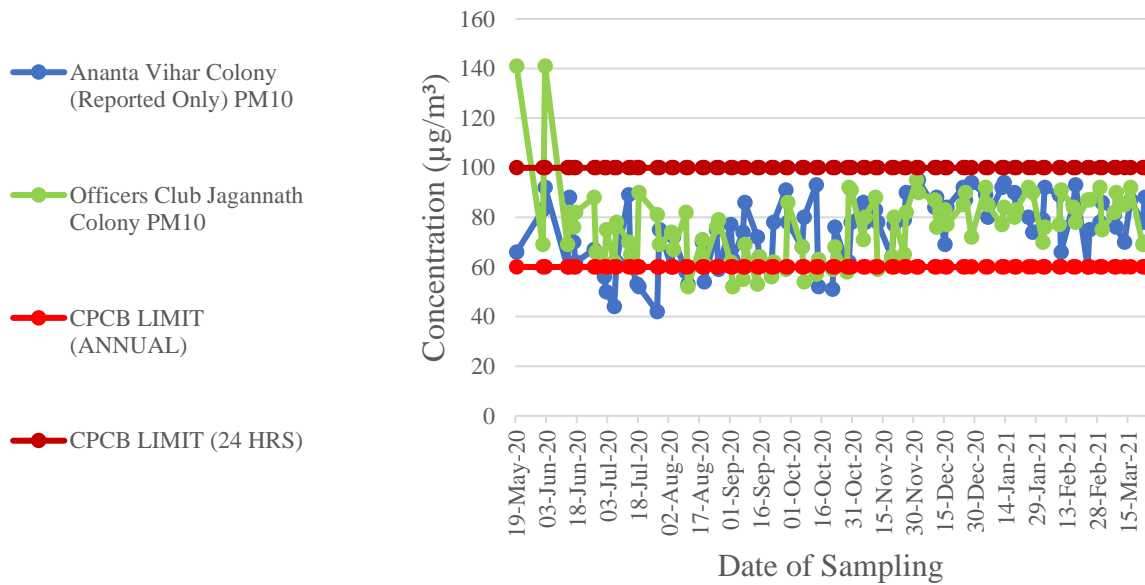
PREPARED BY: CENTRAL MINE PLANNING & DESIGN ISTITUTE LTD., RI VII, BHUBANESWAR

JOB NO.750001

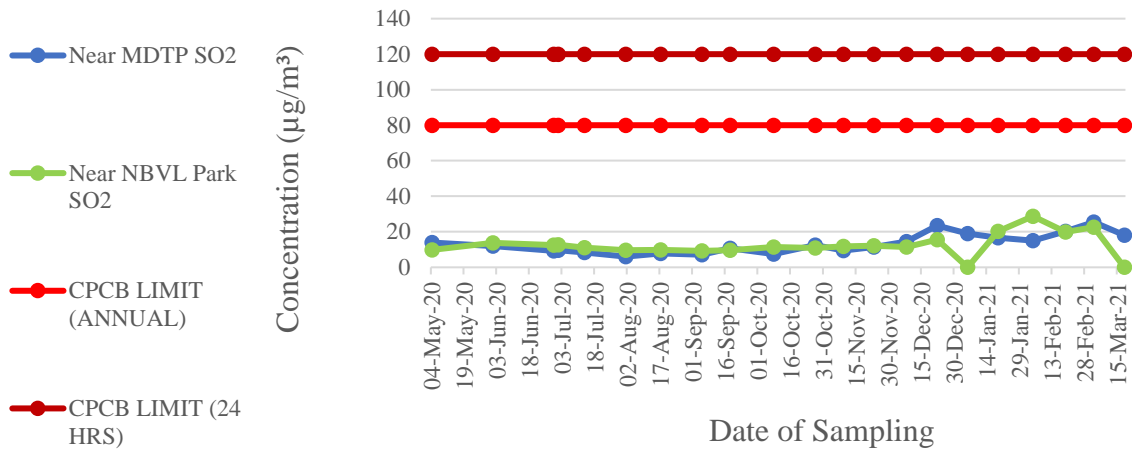
Graph Showing PM<sub>10</sub> for Jagannath OCP



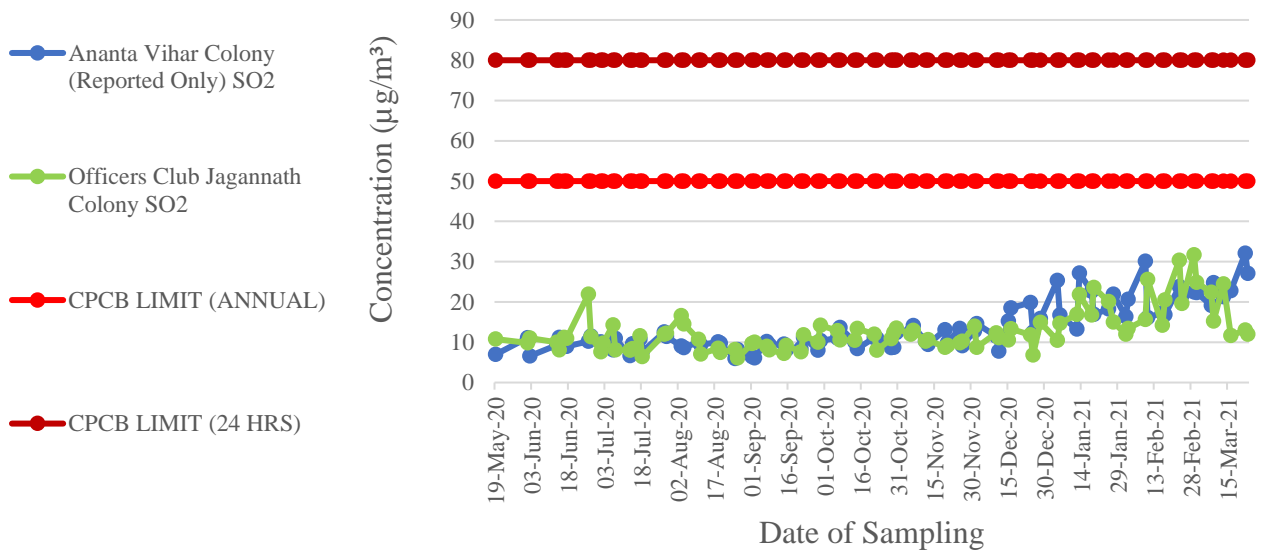
Graph Showing PM<sub>10</sub> for Jagannath OCP (RS)



Graph Showing SO<sub>2</sub> for Jagannath OCP



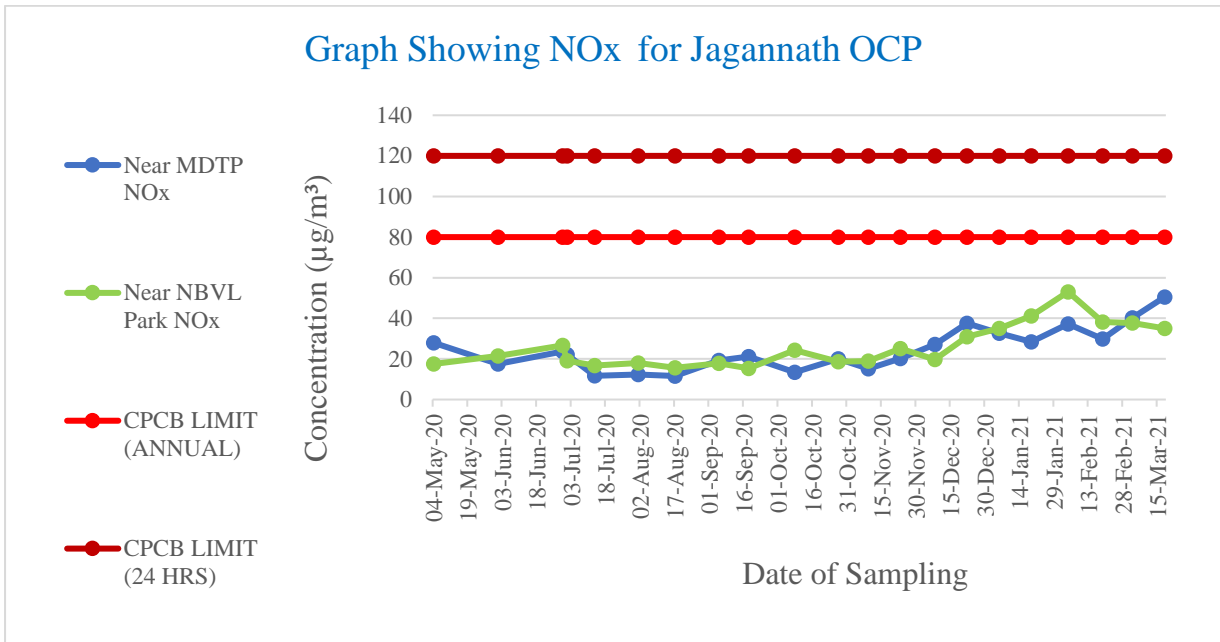
Graph Showing SO<sub>2</sub> for Jagannath OCP



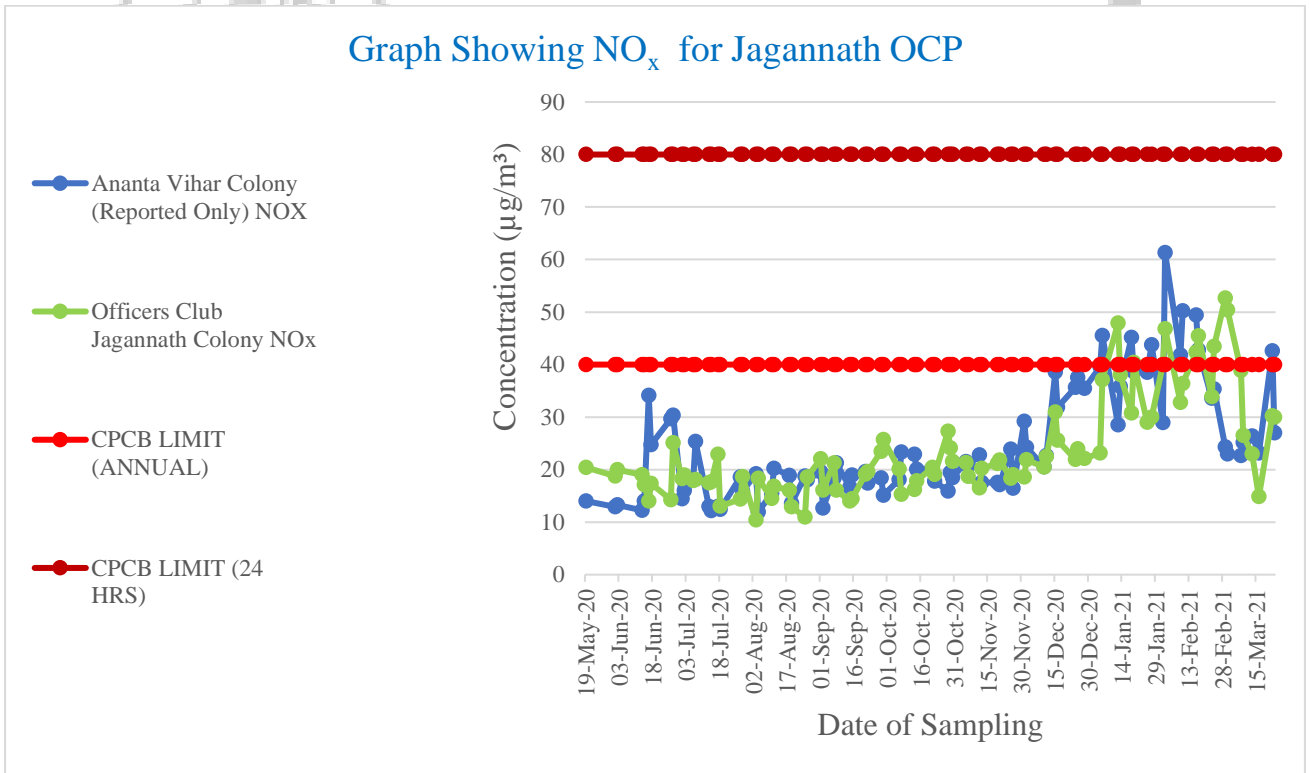
PREPARED BY: CENTRAL MINE PLANNING & DESIGN ISTITUTE LTD., RI VII, BHUBANESWAR

JOB NO.750001

Graph Showing NO<sub>x</sub> for Jagannath OCP



Graph Showing NO<sub>x</sub> for Jagannath OCP



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JOB NO.750001

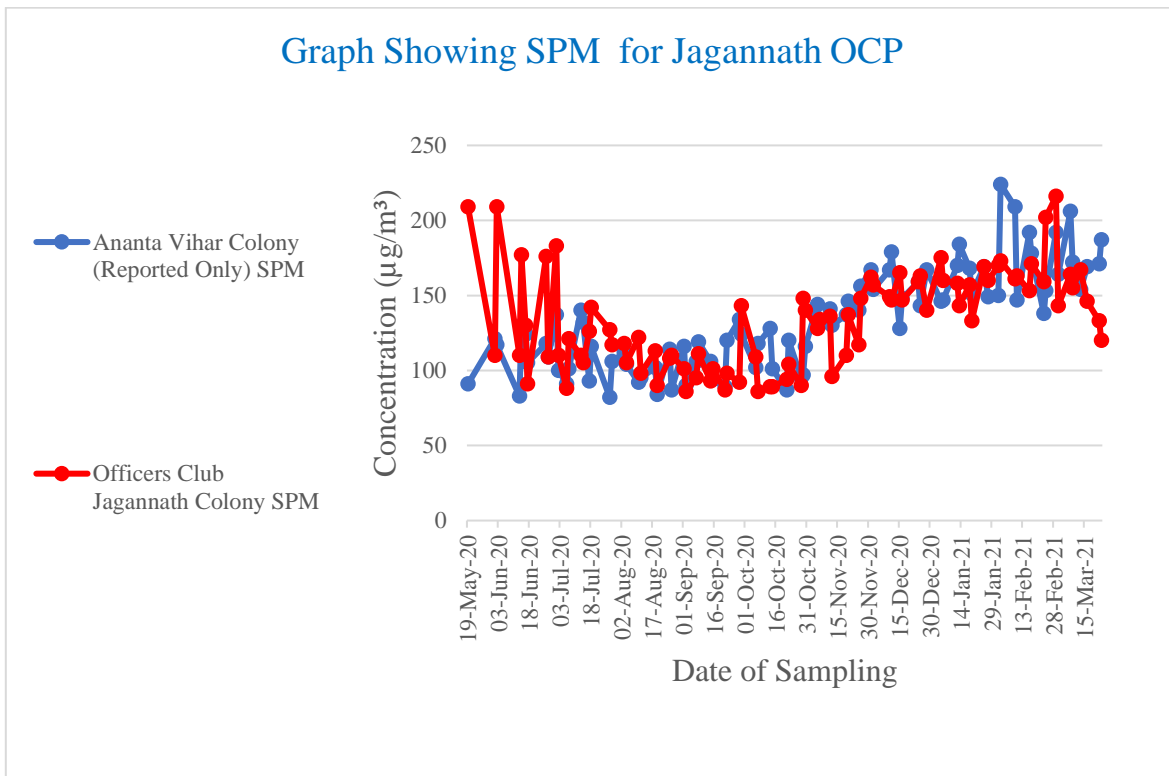
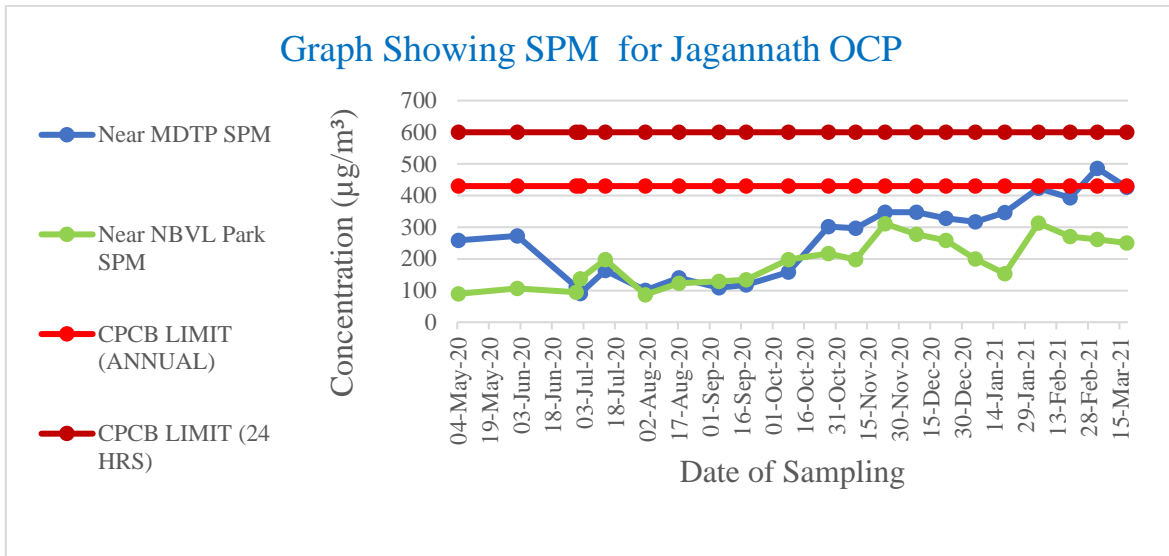


Table:17  
**Area:** Jagannath  
**Project:** Ananta OCP  
**Monitoring Station:** Ananta Project Office  
*All values are in  $\mu\text{g}/\text{m}^3$*

Date of Sampling	SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
05-May-20	227	157	32	14.77	34.91
01-Jun-20	74	56	24	11.21	14.73
01-Jul-20	76	50	20	10.83	16.98
13-Jul-20	102	48	31	13.12	16.53
01-Aug-20	112	60	22	9.08	18
17-Aug-20	109	66	25	8.16	14.15
05-Sep-20	121	81	36	10	16.07
18-Sep-20	136	94	48	13.62	20.07
08-Oct-20	128	87	30	8.28	14.13
27-Oct-20	273	198	26	9.64	14.11
09-Nov-20	305	219	55	9.07	22.01
23-Nov-20	265	184	50	10.32	17.17
08-Dec-20	261	191	42	12.28	26.25
22-Dec-20	337	221	61	14.78	28.29
05-Jan-21	388	240	60	17.23	49.87
19-Jan-21	346	234	64	20.41	47.83
04-Feb-21	451	236	63	21.13	27.32
19-Feb-21	397	223	69	21.53	21.55
04-Mar-21	340	189	61	20.36	19.1
18-Mar-21	436	234	67	19.3	26.94
<b>Brief Statistics</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
<b>Maximum</b>	451	240	69	21.53	49.87
<b>Minimum</b>	74	48	20	8	14
<b>Average</b>	244.20	153.40	44.30	13.76	23.30
<b>Standard (24 Hrs)</b>	<b>500</b>	<b>250</b>		<b>120</b>	<b>120</b>
<b>Standard (Annual)</b>	<b>430</b>	<b>215</b>		<b>80</b>	<b>80</b>

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**JOB NO.750001**

**Table:18**  
**Area: Jagannath**  
**Project: Ananta OCP**  
**Monitoring Station: BCML Workshop**  
*All values are in  $\mu\text{g}/\text{m}^3$*

Date of Sampling	SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
05-May-20	279	181	34	18.25	29.39
15-Jun-20	99	83	21	12.27	16.07
01-Jul-20	130	76	25	8.37	18.34
13-Jul-20	104	46	23	9.9	20.81
01-Aug-20	90	55	21	10.33	19.3
17-Aug-20	86	60	20	10.69	14.21
05-Sep-20	112	71	27	6.62	16.01
21-Sep-20	145	85	28	10.05	17.5
08-Oct-20	242	116	38	9.72	17.78
27-Oct-20	142	76	28	10.61	16.11
09-Nov-20	210	142	37	9.46	13.31
23-Nov-20	328	210	61	13.7	18.99
08-Dec-20	324	206	83	14.03	36.06
22-Dec-20	286	72	63	15.1	36.61
05-Jan-21	-	-	-	-	-
19-Jan-21	332	244	54	39.04	41.49
04-Feb-21	309	183	58	17.36	34.82
19-Feb-21	343	208	73	20.36	30.52
04-Mar-21	445	238	69	45.06	64.98
18-Mar-21	384	215	73	18.32	25.5
<b>Brief Statistics</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
<b>Maximum</b>	445	244	83	45.06	64.98
<b>Minimum</b>	86	46	20	7	13
<b>Average</b>	231.05	135.11	44.00	15.75	25.67
<b>Standard (24 Hrs)</b>	<b>500</b>	<b>250</b>		<b>120</b>	<b>120</b>
<b>Standard (Annual)</b>	<b>430</b>	<b>215</b>		<b>80</b>	<b>80</b>

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**JOB NO.750001**

**Table:19**  
**Area: Jagannath**  
**Project: Ananta OCP**  
**Monitoring Station: Ananta Vihar Colony (RS)**

*All values are in  $\mu\text{g}/\text{m}^3$*

Date of Sampling	SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
19-May-20	91	66	24	7	14
01-Jun-20	121	83	26	11.1	12.9
02-Jun-20	117	92	26	6.54	13.27
13-Jun-20	83	60	32	9.26	12.23
14-Jun-20	130	88	23	11.2	13.98
16-Jun-20	124	70	40	10.82	34.14
17-Jun-20	105	62	35	8.98	24.74
26-Jun-20	118	67	46	10.22	29.66
27-Jun-20	109	66	36	11.52	30.34
01-Jul-20	137	56	23	10.06	14.46
02-Jul-20	Strike				
06-Jul-20	91	44	22	8.11	18.23
07-Jul-20	101	62	23	10.95	25.36
13-Jul-20	140	89	28	6.64	12.95
14-Jul-20	132	62	36	9.59	12.17
17-Jul-20	93	53	29	10.79	12.95
18-Jul-20	116	52	25	7.58	12.45
27-Jul-20	82	42	22	12.57	18.59
28-Jul-20	106	75	22	11.43	15.88
03-Aug-20	112	60	25	9.01	19.19
04-Aug-20	104	72	31	8.62	11.96
10-Aug-20	92	58	27	10.04	15.49
11-Aug-20	95	53	23	9.32	20.22
18-Aug-20	102	70	27	10.09	18.91
19-Aug-20	84	54	22	9.78	13.58
25-Aug-20	114	75	32	5.96	18.74
26-Aug-20	87	59	24	8.17	18.04
01-Sep-20	116	77	33	6.42	19.56
02-Sep-20	90	63	25	6.07	12.69
07-Sep-20	106	74	23	10.14	18.4
08-Sep-20	119	86	42	9.38	21.25
14-Sep-20	106	72	20	9.54	16.62
15-Sep-20	94	64	18	8.05	18.94
21-Sep-20	89	58	17	8.44	19.59
22-Sep-20	120	78	26	11.15	17.41
28-Sep-20	134	91	33	8.02	18.37
29-Sep-20	124	78	26	10.39	15.08
06-Oct-20	102	68	21	11.05	18.12
07-Oct-20	118	80	27	13.67	23.34
13-Oct-20	128	93	33	10.05	22.89
14-Oct-20	101	52	19	8.38	20.04
21-Oct-20	87	51	20	11.08	20.27
22-Oct-20	120	76	27	10.93	17.81
28-Oct-20	95	61	24	8.66	15.92
29-Oct-20	97	62	21	8.73	19.43
30-Oct-20	116	78	29	12.39	18.43
05-Nov-20	144	86	45	12.54	21.49

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**JOB NO.750001**

06-Nov-20	131	78	43	14.16	20.78
11-Nov-20	141	83	36	10.27	22.78
12-Nov-20	130	78	32	9.46	17.55
19-Nov-20	137	64	37	13.1	17.55
20-Nov-20	146	77	35	9.89	17.09
25-Nov-20	140	79	41	13.43	23.88
26-Nov-20	156	90	48	9.13	16.46
01-Dec-20	167	91	55	12.76	29.17
02-Dec-20	154	95	57	14.59	24.25
10-Dec-20	167	84	46	11.5	20.53
11-Dec-20	179	88	50	7.73	22.65
15-Dec-20	128	69	45	15.26	38.59
16-Dec-20	148	84	49	18.5	31.85
24-Dec-20	159	92	51	19.84	35.67
25-Dec-20	143	87	47	12.48	37.54
28-Dec-20	167	94	55	15.85	35.48
04-Jan-21	146	89	47	25.33	39.57
05-Jan-21	147	80	49	16.72	45.54
12-Jan-21	170	92	53	13.23	28.53
13-Jan-21	184	94	55	27.16	35.83
18-Jan-21	168	90	52	22.63	45.15
19-Jan-21	151	83	50	16.88	38.63
25-Jan-21	169	80	47	18.29	38.49
27-Jan-21	149	74	43	21.91	43.73
01-Feb-21	150	79	49	16.38	28.93
02-Feb-21	224	92	54	20.65	61.29
09-Feb-21	209	89	52	30.13	41.79
10-Feb-21	147	66	46	16.12	50.21
16-Feb-21	192	85	51	17.28	49.44
17-Feb-21	178	93	53	16.84	42.75
23-Feb-21	138	60	43	23.8	33.56
24-Feb-21	153	75	47	21.55	35.37
01-Mar-21	192	78	45	22.46	24.31
02-Mar-21	164	86	54	22.3	22.99
08-Mar-21	206	81	43	19.12	22.65
09-Mar-21	172	76	41	24.75	25.14
13-Mar-21	154	70	39	21.25	26.41
16-Mar-21	169	87	48	22.78	23.13
22-Mar-21	171	78	43	32.09	42.58
23-Mar-21	187	88	47	27.09	27.01
<b>Brief Statistics</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
<b>Maximum</b>	224	95	57	32.09	61.29
<b>Minimum</b>	82	42	17	6	12
<b>Average</b>	133.43	74.84	36.47	13.55	24.71
<b>Standard (24 Hrs)</b>		<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>
<b>Standard (Annual)</b>		<b>60</b>	<b>40</b>	<b>50</b>	<b>40</b>

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**JOB NO.750001**

**Table:20**  
**Area: Jagannath**  
**Project: Ananta OCP**  
**Monitoring Station: Guthasahi Village (RS)**  
*All values are in  $\mu\text{g}/\text{m}^3$*

Date of Sampling	SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
19-May-20	86	58	20	9	16
01-Jun-20	107	68	24	9.76	21.35
02-Jun-20	103	53	27	7.68	24.69
13-Jun-20	127	90	41	6.61	13.29
14-Jun-20	93	78	52	8.12	16.95
16-Jun-20	103	63	22	8.77	20.36
17-Jun-20	92	66	24	9.3	31.28
26-Jun-20	120	72	34	10.62	27.35
27-Jun-20	78	55	13	13.46	33.57
01-Jul-20	42	42	22	11.55	13.13
02-Jul-20	Strike				
06-Jul-20	90	59	22	12.04	23.07
07-Jul-20	115	74	26	9.13	20.53
13-Jul-20	86	54	26	9.39	29.05
14-Jul-20	130	86	32	10.08	19.48
17-Jul-20	122	58	24	8.31	16.68
18-Jul-20	98	43	21	11.53	12.88
27-Jul-20	83	56	34	11.28	14.83
28-Jul-20	96	66	25	11.67	17.58
03-Aug-20	135	73	30	10.32	17.9
04-Aug-20	112	64	24	8.65	17.37
10-Aug-20	93	60	27	10.32	15.67
11-Aug-20	118	71	22	8.52	17.11
18-Aug-20	95	57	19	10.76	23.9
19-Aug-20	85	42	23	7.73	25.25
25-Aug-20	101	66	29	7.74	15.79
26-Aug-20	94	58	22	7.71	16.36
01-Sep-20	103	59	20	9.35	21.18
02-Sep-20	109	72	26	10.22	14.71
07-Sep-20	125	86	32	11.26	19.61
08-Sep-20	105	63	23	7.54	17
14-Sep-20	93	60	19	8.46	21.3
15-Sep-20	106	68	22	9.34	19.53
21-Sep-20	119	79	31	8.84	13.39
22-Sep-20	131	87	25	9.66	15.42
28-Sep-20	124	76	34	10.17	15.41
29-Sep-20	100	64	18	6.94	16.12
09-Oct-20	82	58	18	11.94	20.38
10-Oct-20	78	51	20	14.81	21.67
15-Oct-20	104	63	35	8.83	21.85
16-Oct-20	98	60	26	7.76	18.18
22-Oct-20	128	82	30	12.51	22.49
23-Oct-20	114	70	23	11.37	17.92
30-Oct-20	138	86	29	10.53	19.42
31-Oct-20	131	83	27	10.42	17.57
06-Nov-20	127	73	31	9.72	21.57

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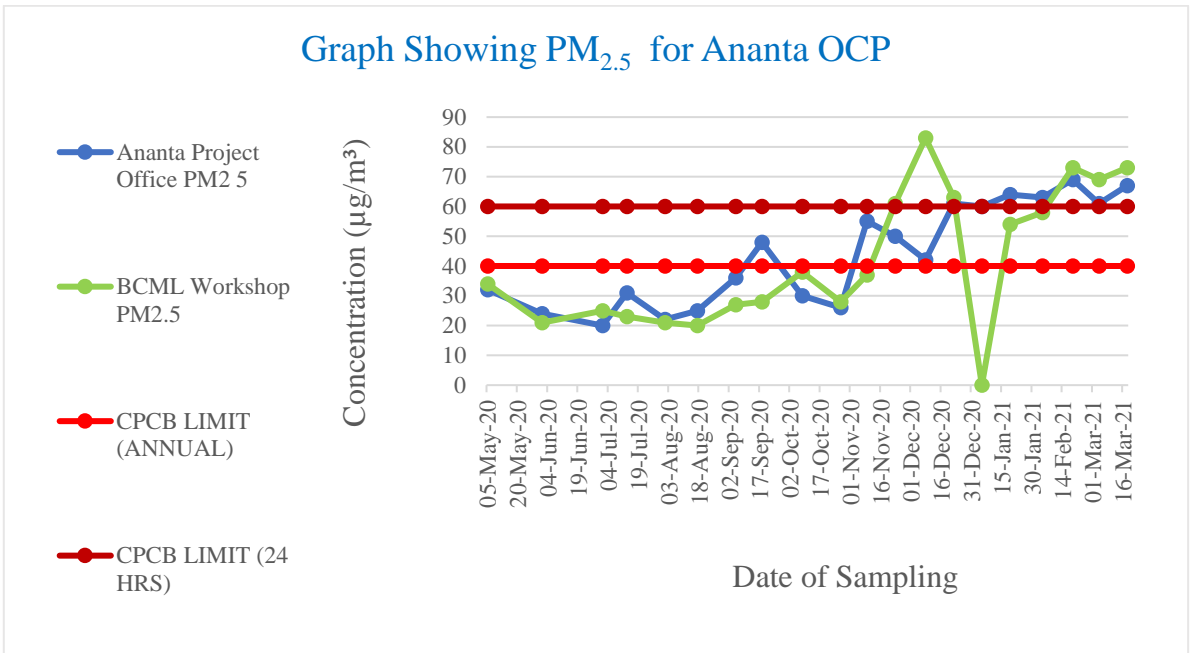
**JOB NO.750001**

07-Nov-20	107	62	27	11.09	26.76
12-Nov-20	130	69	32	7.92	27.08
13-Nov-20	131	82	37	11.57	21.55
20-Nov-20	140	88	46	11.11	21.57
21-Nov-20	129	84	42	13.49	25.53
26-Nov-20	143	84	47	16.7	26.05
27-Nov-20	162	92	53	10.97	18.24
05-Dec-20	180	86	54	13.06	36.17
06-Dec-20	160	92	50	13.61	31.95
11-Dec-20	154	74	44	13.64	35.26
12-Dec-20	165	86	53	13.95	34.02
18-Dec-20	147	81	49	14.14	52.35
19-Dec-20	163	90	53	13.53	29.99
25-Dec-20	177	94	57	14.55	38.53
26-Dec-20	160	87	52	10.16	35.64
30-Dec-20	153	79	48	15.32	36.94
08-Jan-21	154	82	47	35.81	34.11
09-Jan-21	168	91	51	27.86	43.78
15-Jan-21	145	76	40	22.06	42.99
16-Jan-21	149	86	45	18.43	30.34
22-Jan-21	178	90	51	17.96	27.17
23-Jan-21	185	94	54	34.81	50.15
29-Jan-21	162	79	54	24.93	33.67
30-Jan-21	193	92	53	46.1	53.66
05-Feb-21	Power failure				
06-Feb-21	231	93	53	31.41	42.59
12-Feb-21	Power failure				
13-Feb-21	Power failure				
20-Feb-21	168	82	48	18.7	37.48
21-Feb-21	160	89	52	26.13	49.84
25-Feb-21	173	73	47	27.93	43.25
26-Feb-21	181	64	49	35.29	56.3
05-Mar-21	192	84	50	34.94	68.56
06-Mar-21	185	90	53	18.24	47.81
12-Mar-21	138	71	49	31.92	33.13
13-Mar-21	122	74	47	23.01	39.13
19-Mar-21	208	86	50	34.19	45.98
20-Mar-21	175	92	53	15.9	18.59
26-Mar-21	181	77	46	17.57	36.38
27-Mar-21	152	82	39	14.89	22.71
<b>Brief Statistics</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
<b>Maximum</b>	231	94	57	46.1	68.56
<b>Minimum</b>	42	42	13	7	13
<b>Average</b>	130.73	73.77	35.96	14.67	27.21
<b>Standard (24 Hrs)</b>		<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>
<b>Standard (Annual)</b>		<b>60</b>	<b>40</b>	<b>50</b>	<b>40</b>

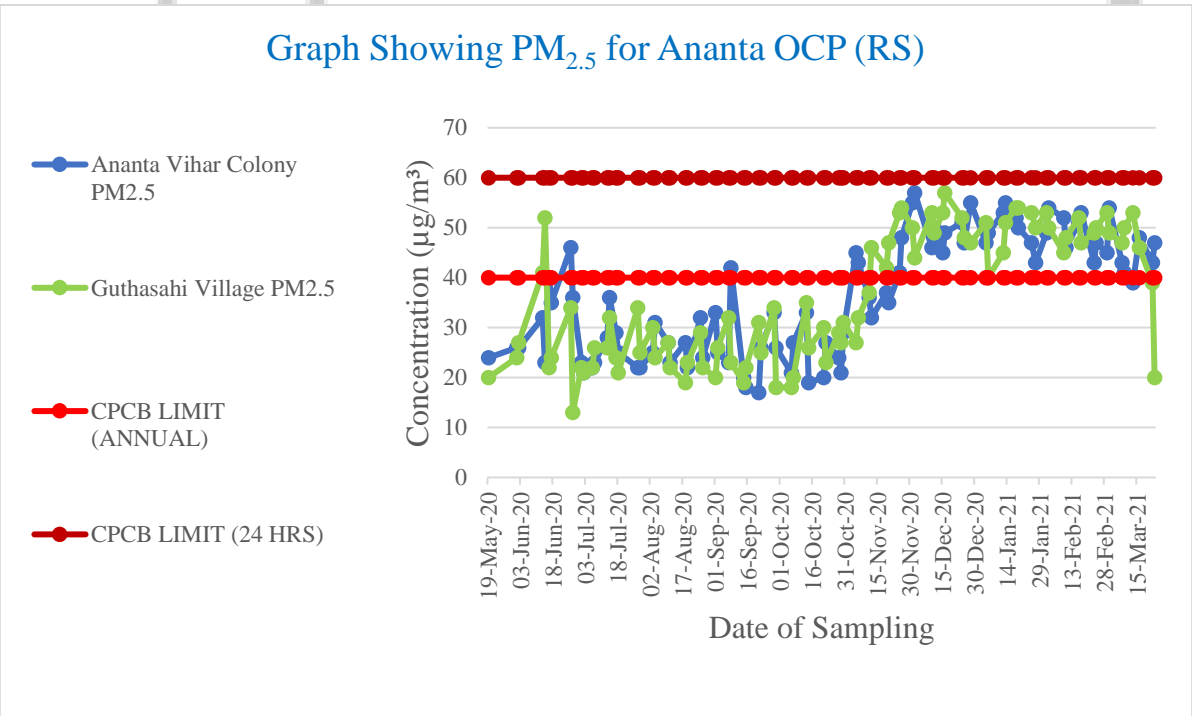
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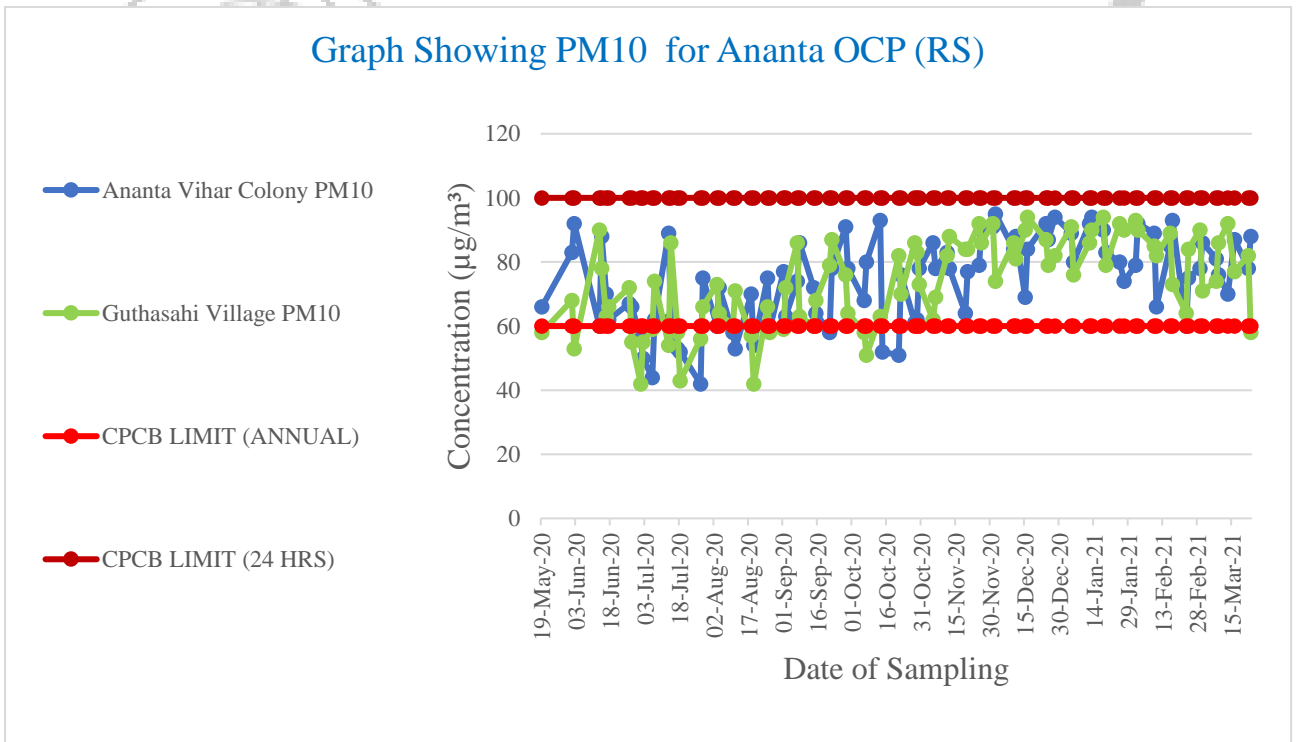
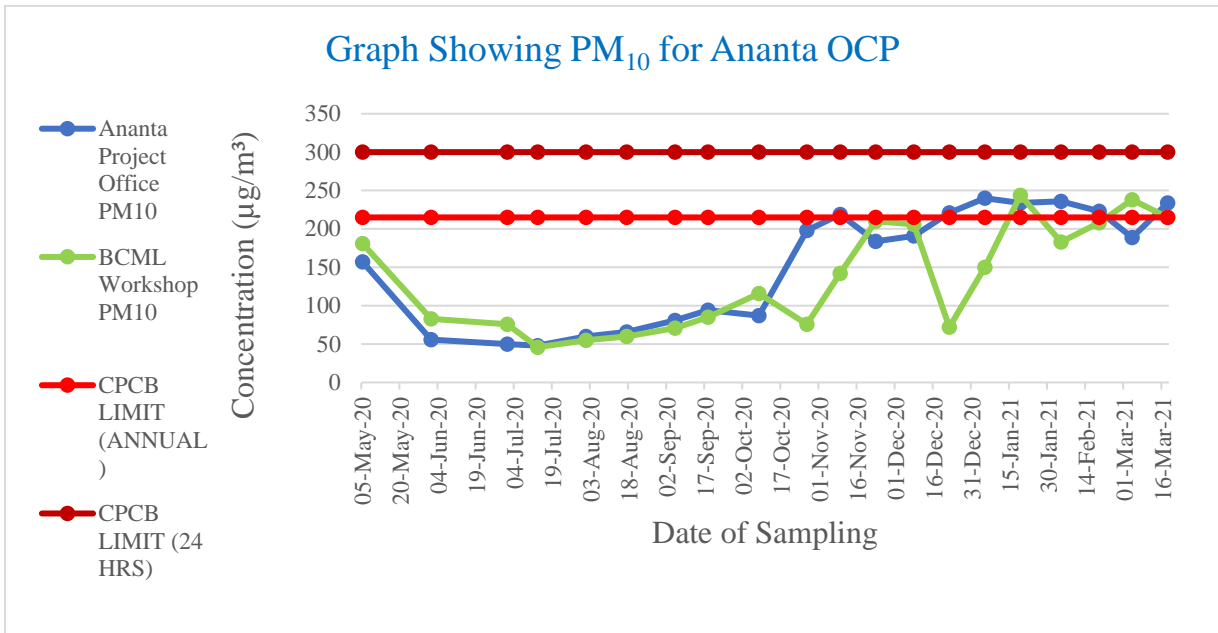
**JOB NO.750001**

Graph Showing PM<sub>2.5</sub> for Ananta OCP



Graph Showing PM<sub>2.5</sub> for Ananta OCP (RS)

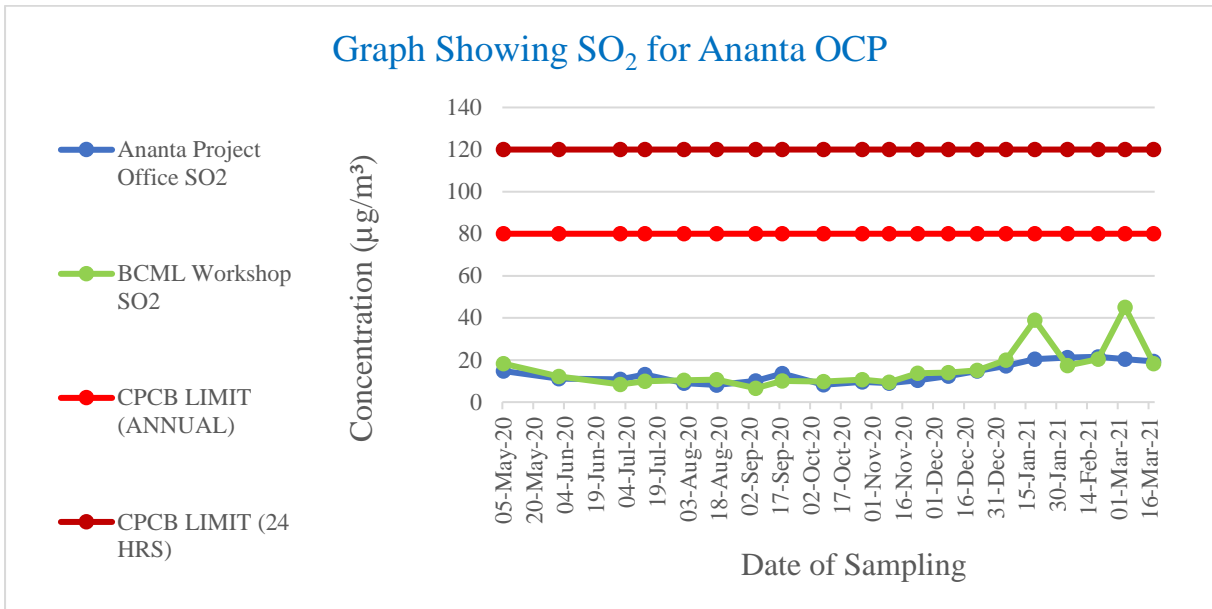




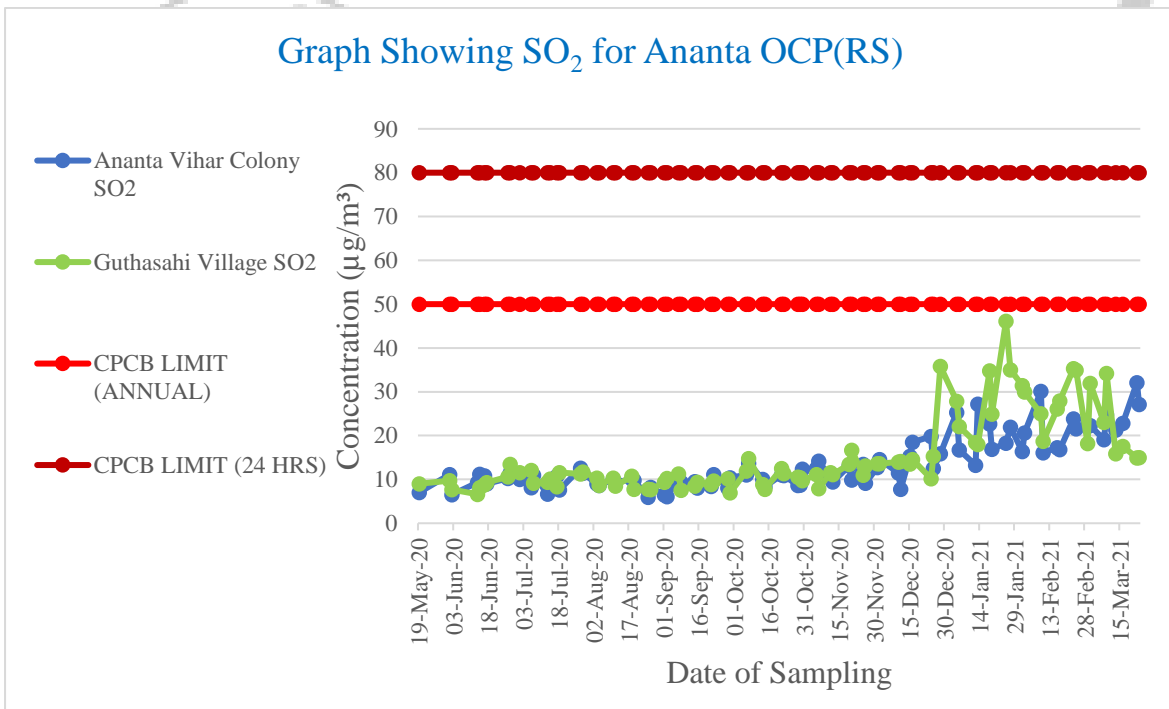
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Graph Showing SO<sub>2</sub> for Ananta OCP



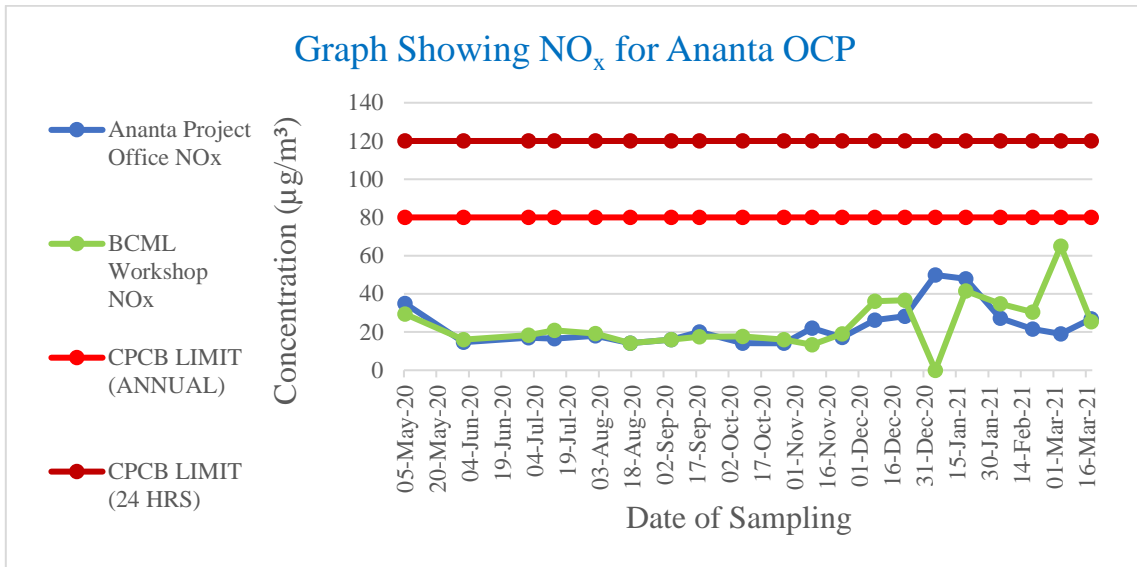
Graph Showing SO<sub>2</sub> for Ananta OCP(RS)



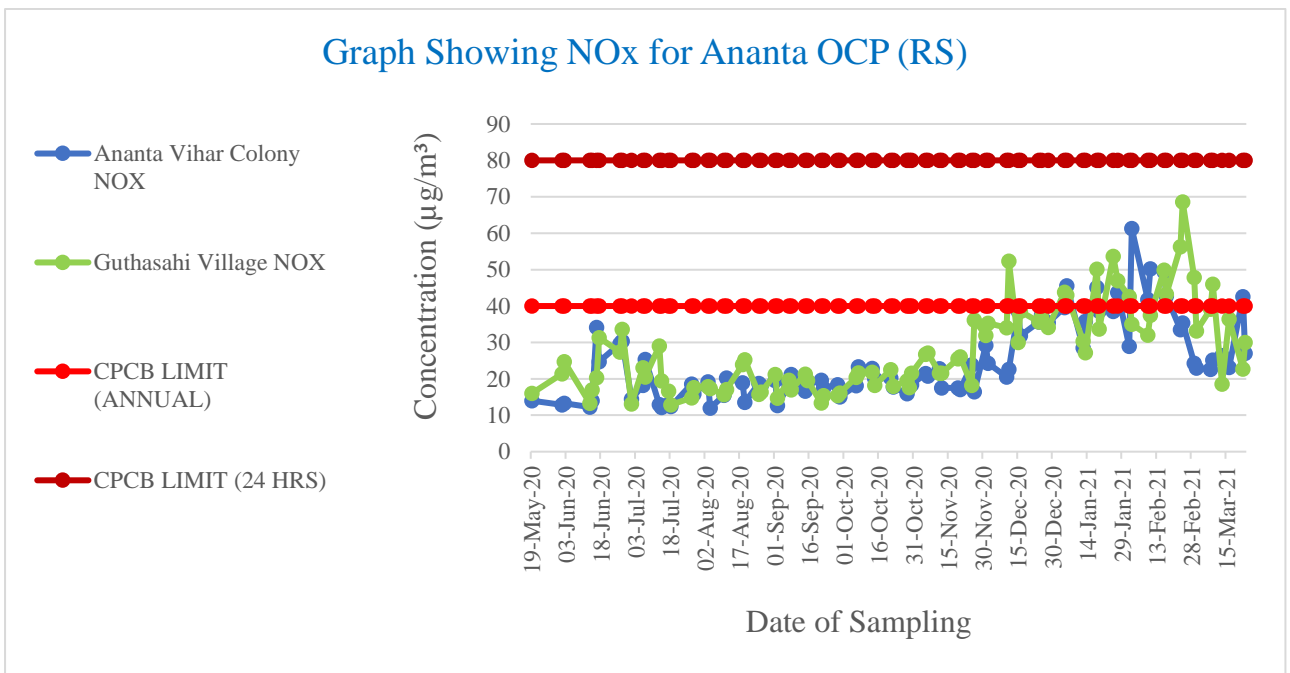
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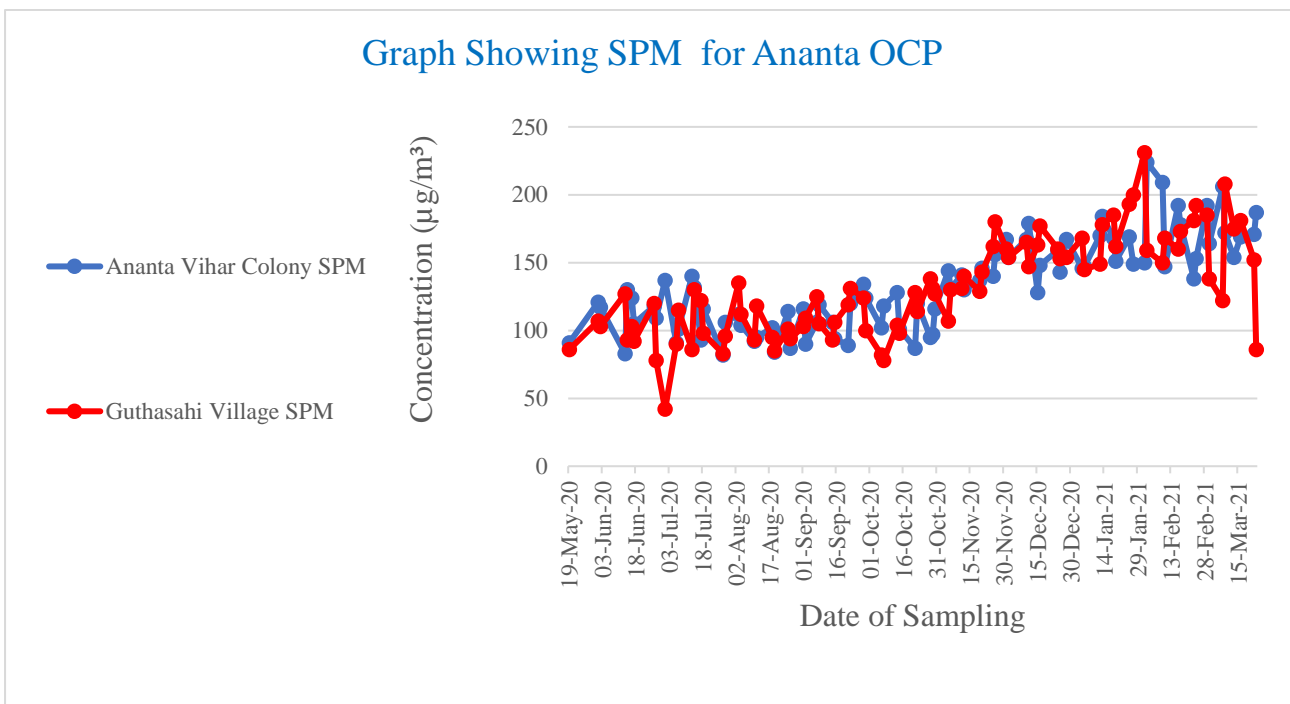
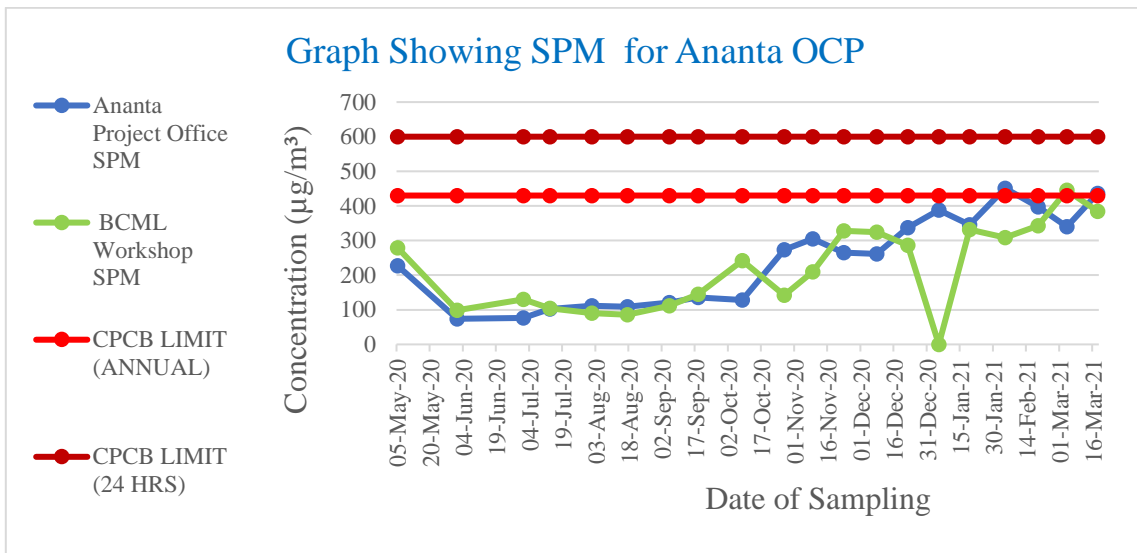
JOB NO.750001

Graph Showing NO<sub>x</sub> for Ananta OCP



Graph Showing NO<sub>x</sub> for Ananta OCP (RS)





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**JOB NO.750001**

**Table:21**  
**Area: Bharatpur**  
**Project: Bharatpur OCP**  
**Monitoring Station: Near MGR-RLS of Bharatpur**  
*All values are in  $\mu\text{g}/\text{m}^3$*

<b>Date of Sampling</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
20-May-20	114	86	30	8.97	21.64
02-Jun-20	195	147	54	8.06	21.12
18-Jun-20	170	148	23	12.68	22.4
01-Jul-20	Movement Restriction Due to Covid-19				
14-Jul-20	92	57	23	7.96	17.24
03-Aug-20	103	59	20	11.46	16.57
18-Aug-20	132	90	29	5.85	15.58
07-Sep-20	98	69	21	11.28	17.54
22-Sep-20	90	54	22	9.87	20.93
07-Oct-20	89	58	21	10.29	19.97
21-Oct-20	120	78	26	12.87	24.17
05-Nov-20	207	125	50	11.58	21.41
19-Nov-20	198	120	42	14.03	21.15
07-Dec-20	277	166	42	9.81	19.43
21-Dec-20	259	167	65	8.93	35.63
07-Jan-21	285	158	72	19.39	37.25
21-Jan-21	321	176	57	24.04	34.63
10-Feb-21	566	290	78	22.22	34.83
24-Feb-21	420	261	71	17.4	31.96
10-Mar-21	276	133	52	27.14	37.77
24-Mar-21	307	193	53	16.79	24.04
<b>Brief Statistics</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
<b>Maximum</b>	566	290	78	27.14	37.77
<b>Minimum</b>	89	54	20	6	16
<b>Average</b>	215.95	131.75	42.55	13.53	24.76
<b>Standard (24 Hrs)</b>	<b>600</b>	<b>300</b>		<b>120</b>	<b>120</b>
<b>Standard (Annual)</b>	<b>430</b>	<b>215</b>		<b>80</b>	<b>80</b>

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**JOB NO.750001**

**Table:22**  
**Area: Bharatpur**  
**Project: Bharatpur OCP**  
**Monitoring Station: Near ETP/Workshop**

*All values are in  $\mu\text{g}/\text{m}^3$*

<b>Date of Sampling</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
06-May-20	330	219	55	17.01	33.83
02-Jun-20	67	49	36	9.55	16.32
16-Jun-20	104	99	32	10.81	22.12
01-Jul-20	Movement Restriction Due to Covid-19				
14-Jul-20	164	118	23	9.11	17.01
03-Aug-20	122	69	26	7.44	17.43
18-Aug-20	125	83	31	7.44	15.49
07-Sep-20	112	70	24	6.91	15.37
21-Sep-20	110	71	26	8.42	16.86
07-Oct-20	196	120	42	10.59	28.94
21-Oct-20	224	128	28	14.43	23.1
05-Nov-20	198	120	47	9.59	28.94
19-Nov-20	206	134	44	13.31	24.03
07-Dec-20	290	196	74	18.82	38.24
21-Dec-20	354	247	74	8.54	29.19
07-Jan-21	367	233	73	21.94	41.79
21-Jan-21	398	259	76	18.06	26.27
10-Feb-21	261	185	70	18.68	39.74
24-Feb-21	386	233	66	15.85	23.93
10-Mar-21	197	119	51	20.44	43.45
24-Mar-21	479	268	67	12.82	28.61
<b>Brief Statistics</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
<b>Maximum</b>	479	268	76	21.94	43.45
<b>Minimum</b>	67	49	23	7	15
<b>Average</b>	234.50	151.00	48.25	12.99	26.53
<b>Standard (24 Hrs)</b>	<b>600</b>	<b>300</b>		<b>120</b>	<b>120</b>
<b>Standard (Annual)</b>	<b>430</b>	<b>215</b>		<b>80</b>	<b>80</b>

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**JOB NO.750001**

**Table:23**  
**Area: Bharatpur**  
**Project: Bharatpur OCP**  
**Monitoring Station: North-West Point of the Mine**

*All values are in  $\mu\text{g}/\text{m}^3$*

Date of Sampling	SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
02-Jun-20	134	101	28	11.71	18.01
18-Jun-20	99	59	26	14.35	29.85
01-Jul-20	-	-	-	-	-
14-Jul-20	142	70	22	9.84	13.68
01-Aug-20	136	91	49	9.74	16.9
17-Aug-20	102	63	21	12.07	20.2
08-Sep-20	77	56	18	9.72	18.47
23-Sep-20	87	48	18	7.27	14.06
07-Oct-20	(Monitoring Station/Home was under Quarantine)				
21-Oct-20	139	85	23	9.21	17.86
05-Nov-20	155	86	43	11.4	19.7
19-Nov-20	258	173	52	12.12	18.07
07-Dec-20	184	92	38	11	17.52
21-Dec-20	230	154	47	10.99	24.67
07-Jan-21	389	235	67	17	25.89
21-Jan-21	307	146	51	37.77	44.44
10-Feb-21	396	258	82	24.13	49.65
24-Feb-21	357	228	74	17.37	48.26
10-Mar-21	356	234	53	24.23	29.67
18-Mar-21	282	150	47	23.07	45.28
<b>Brief Statistics</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
<b>Maximum</b>	396	258	82	37.77	49.65
<b>Minimum</b>	77	48	18	7	14
<b>Average</b>	212.78	129.39	42.17	15.17	26.23
<b>Standard (24 Hrs)</b>	<b>600</b>	<b>300</b>		<b>120</b>	<b>120</b>
<b>Standard (Annual)</b>	<b>430</b>	<b>215</b>		<b>80</b>	<b>80</b>

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**JOB NO.750001**

**Table:24**  
**Area: Bharatpur**  
**Project: Bharatpur OCP**  
**Monitoring Station: Near Regional Store**

*All values are in  $\mu\text{g}/\text{m}^3$*

<b>Date of Sampling</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
06-May-20	256	190	44	27.42	26.4
27-May-20	101	72	20	8.2	17.66
02-Jun-20	277	215	53	13.5	26.2
29-Jun-20	68	66	30	8.23	18.24
01-Jul-20	Movement Restriction Due to Covid-19				
14-Jul-20	122	56	36	7.85	15.76
08-Aug-20	100	63	20	8.19	14.86
24-Aug-20	85	59	17	9.48	18.68
12-Sep-20	108	72	27	8.07	16.07
24-Sep-20	135	94	44	10.47	18.23
07-Oct-20	86	59	21	16.27	32.42
21-Oct-20	131	63	25	14.65	20.46
05-Nov-20	239	148	53	8.32	28.45
19-Nov-20	248	168	74	11.2	18.63
08-Dec-20	326	214	76	8.13	25.33
21-Dec-20	297	184	66	10.99	26.5
07-Jan-21	-	-	-	-	-
21-Jan-21	262	133	54	21.34	36.55
09-Feb-21	493	267	79	20.06	22.94
23-Feb-21	291	169	54	12.69	24.6
10-Mar-21	306	192	47	28	30.92
24-Mar-21	383	235	54	17.75	24.03
<b>Brief Statistics</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
<b>Maximum</b>	493	267	79	28	36.55
<b>Minimum</b>	68	56	17	8	15
<b>Average</b>	215.70	135.95	44.70	13.54	23.15
<b>Standard (24 Hrs)</b>	<b>600</b>	<b>300</b>		<b>120</b>	<b>120</b>
<b>Standard (Annual)</b>	<b>430</b>	<b>215</b>		<b>80</b>	<b>80</b>

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**JOB NO.750001**

**Table:25**  
**Area: Bharatpur**  
**Project: Bharatpur OCP**  
**Monitoring Station: Natedi Village (Reported Only)**

*All values are in  $\mu\text{g}/\text{m}^3$*

Date of Sampling	SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
05-Jun-20	149	98	53	11.07	23.11
10-Jun-20	68	44	24	13.17	16.44
06-Jun-20	93	61	32	9.57	21.26
11-Jun-20	116	68	39	13.13	22.44
20-Jun-20	110	73	30	14.19	9.17
21-Jun-20	148	85	30	11.32	9.95
22-Jun-20	167	92	16	10.88	6.79
23-Jun-20	100	90	33	12.66	7.14
04-Jul-20	Strike				
05-Jul-20	Movement Restriction Due to Covid-19				
08-Jul-20	130	87	37	12.19	15.85
09-Jul-20	128	91	35	10.06	19.01
20-Jul-20	99	70	23	8.3	16.67
21-Jul-20	104	66	29	12.45	19.32
22-Jul-20	127	86	23	10.37	22.15
23-Jul-20	138	94	26	12.48	16.19
29-Jul-20	112	68	24	10.11	16.6
30-Jul-20	98	63	24	11.63	18.23
06-Aug-20	101	58	22	9.63	17.55
07-Aug-20	92	68	26	8.17	13.39
11-Aug-20	87	48	20	12.68	17.6
12-Aug-20	96	63	23	9.87	12.84
21-Aug-20	136	80	29	11.04	26.65
22-Aug-20	118	68	22	13.29	23.06
25-Aug-20	97	52	21	8.33	17.35
26-Aug-20	111	71	25	7.93	22.94
02-Sep-20	97	58	22	12.63	20.16
03-Sep-20	89	50	18	10.13	22.54
10-Sep-20	113	67	29	7.99	20.88
11-Sep-20	93	54	20	8.42	17.11
15-Sep-20	93	56	21	9.93	18.16
16-Sep-20	86	52	19	15.81	27.54
25-Sep-20	80	48	17	8.45	22.08
26-Sep-20	102	66	24	11.12	15.49
30-Sep-20	85	53	18	7.25	14.86
01-Oct-20	98	62	23	8.84	20.38
09-Oct-20	Monitoring Station/Home was under Quarantine				
10-Oct-20	Monitoring Station/Home was under Quarantine				
16-Oct-20	108	66	23	14.79	27.78
17-Oct-20	101	58	27	15.59	23.28
22-Oct-20	138	84	40	12.24	27.85
23-Oct-20	131	70	28	8.87	19.68
31-Oct-20	133	78	36	14.23	20.41
06-Nov-20	141	79	49	11.01	21.97

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07-Nov-20	155	88	45	9.76	25.08
12-Nov-20	143	80	46	13.13	21.12
13-Nov-20	160	85	51	14.87	20.86
20-Nov-20	153	94	49	9.6	18.63
21-Nov-20	140	86	44	11	22.69
26-Nov-20	159	96	51	12.76	20.49
27-Nov-20	140	78	47	12.99	25.07
04-Dec-20	147	80	49	8.71	33.11
05-Dec-20	161	92	52	12.09	30.14
11-Dec-20	Power Failure				
12-Dec-20	178	94	57	13.38	25.95
18-Dec-20	172	87	56	14.48	36.11
19-Dec-20	179	89	52	12.32	40.95
25-Dec-20	159	83	47	11.89	26.35
26-Dec-20	166	88	49	9.3	16.74
30-Dec-20	176	88	54	23.1	39.88
08-Jan-21	140	78	49	25.86	34.67
09-Jan-21	131	72	46	30.7	45.22
16-Jan-21	213	86	50	27.13	35.53
22-Jan-21	192	82	46	29.11	52.36
23-Jan-21	189	76	44	30.78	32.24
24-Jan-21	223	92	52	28.14	40.53
30-Jan-21	183	76	40	26.49	37
05-Feb-21	178	84	52	33.63	56.41
06-Feb-21	156	71	40	10.14	21.05
12-Feb-21	148	80	47	14.44	40.62
13-Feb-21	179	85	50	18.19	25.86
20-Feb-21	169	70	48	18.23	36.7
21-Feb-21	172	69	42	26.58	45.44
25-Feb-21	179	77	46	19.77	21.22
26-Feb-21	194	91	52	24.3	36.88
06-Mar-21	182	75	47	26.17	40.8
07-Mar-21	194	79	49	36.01	60.11
12-Mar-21	206	88	52	27.41	38.7
13-Mar-21	194	79	50	29.97	47.58
19-Mar-21	204	88	51	23.53	35.11
20-Mar-21	219	92	53	30.53	43.41
26-Mar-21	207	83	49	27.87	37.75
27-Mar-21	214	87	48	22.51	36.69
<b>Brief Statistics</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
<b>Maximum</b>	223	98	57	36.01	60.11
<b>Minimum</b>	68	44	16	7	7
<b>Average</b>	141.88	75.81	37.59	15.62	26.37
<b>Standard (24 Hrs)</b>		<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>
<b>Standard (Annual)</b>		<b>60</b>	<b>40</b>	<b>50</b>	<b>40</b>

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**JOB NO.750001**

**Table:26**  
**Area: Bharatpur**  
**Project: Bharatpur OCP**  
**Monitoring Station: Near Joragdia Village**

*All values are in  $\mu\text{g}/\text{m}^3$*

Date of Sampling	SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
20-May-20	126	91	25	10.6	14.6
03-Jun-20	120	82	31	11.74	16.98
04-Jun-20	77	59	38	9.98	22.48
13-Jun-20	110	85	32	8.14	16.99
14-Jun-20	106	65	24	11	17.16
17-Jun-20	132	82	24	7.39	25.36
18-Jun-20	120	78	28	11.38	22.12
26-Jun-20	98	66	20	6.58	18.89
27-Jun-20	106	70	26	8.36	20.45
02-Jul-20	Strike				
03-Jul-20	Strike				
08-Jul-20	108	71	34	10.9	17.91
09-Jul-20	106	57	24	13.06	14.3
15-Jul-20	137	63	22	11.25	16.87
16-Jul-20	116	69	22	9.24	15.18
22-Jul-20	101	64	25	15.76	17.72
23-Jul-20	140	76	20	11.35	15.78
27-Jul-20	128	89	32	20.83	22.82
28-Jul-20	105	79	51	11.5	16.07
04-Aug-20	106	65	28	11.59	17.13
05-Aug-20	108	59	35	8.62	15.75
10-Aug-20	98	53	22	10.89	21.26
11-Aug-20	103	59	19	8.16	15.57
19-Aug-20	94	65	22	12.57	21.8
20-Aug-20	107	62	22	10	25.25
25-Aug-20	85	51	18	7.45	14.36
26-Aug-20	104	69	26	9.88	17.13
01-Sep-20	106	64	29	10.22	20.13
02-Sep-20	123	86	32	9.36	21.19
08-Sep-20	108	68	25	11.94	13.86
09-Sep-20	132	89	35	7.95	19.56
14-Sep-20	90	52	19	10.77	20.14
15-Sep-20	84	48	18	12.9	21.69
22-Sep-20	94	60	23	11.22	20.36
23-Sep-20	80	46	20	11.12	21.69
30-Sep-20	102	63	22	11.52	17.45
09-Oct-20	76	51	20	10.36	18.31
10-Oct-20	70	48	19	9.81	20.94
15-Oct-20	111	72	25	13.71	23.41
16-Oct-20	108	69	23	10.3	21.1
22-Oct-20	114	73	20	14.73	19.44
23-Oct-20	128	83	31	12.91	22.89
30-Oct-20	141	89	38	13.63	26.45

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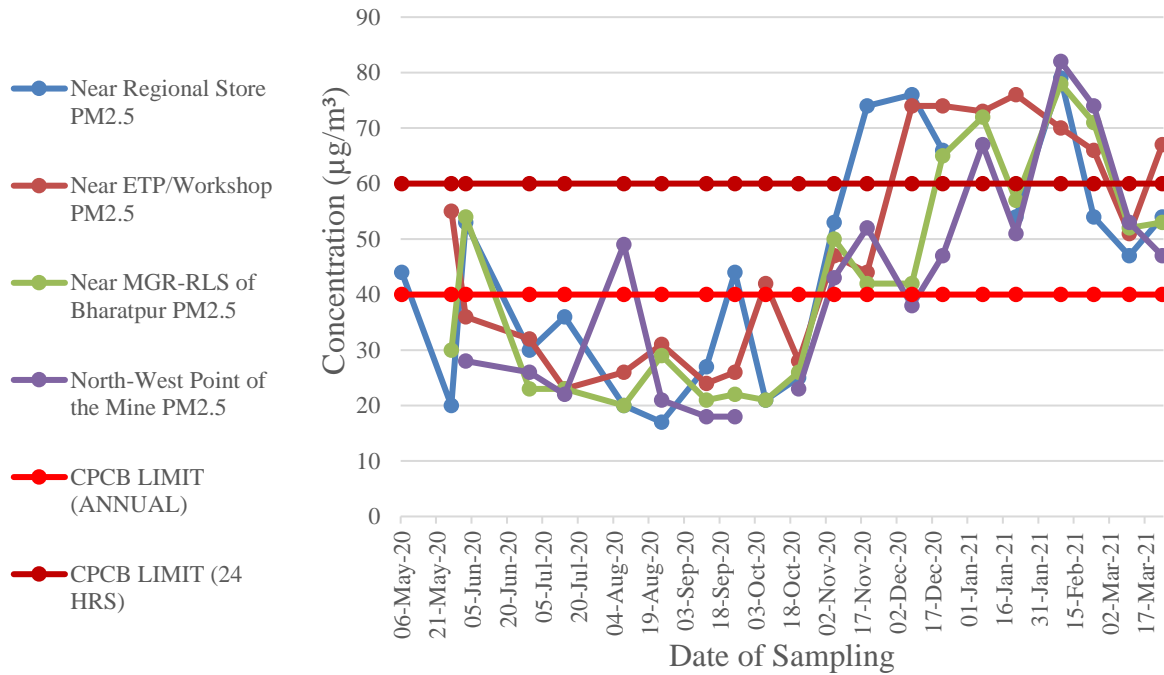
**JOB NO.750001**

31-Oct-20	126	78	32	12.38	18.12
06-Nov-20	123	80	39	13.1	25.27
07-Nov-20	111	76	37	15.27	26.94
12-Nov-20	136	89	41	14.74	19.93
13-Nov-20	124	73	38	15.63	24.27
20-Nov-20	148	78	46	10.78	20.38
21-Nov-20	164	86	54	14.21	24.45
26-Nov-20	148	85	52	14.08	30.35
27-Nov-20	154	95	48	12.78	24.04
05-Dec-20	160	85	55	14.26	32.17
06-Dec-20	143	80	53	16.58	24.62
11-Dec-20	148	81	51	15.47	33.28
12-Dec-20	155	76	47	10.3	19.57
18-Dec-20	164	78	46	13.67	30
19-Dec-20	153	75	44	18.7	32.98
25-Dec-20	171	82	48	16.31	23.07
26-Dec-20	155	85	50	27.1	42.04
30-Dec-20	142	74	45	14.48	33.88
08-Jan-21	144	81	54	19.44	38.18
09-Jan-21	142	83	49	24.88	49.64
15-Jan-21	186	82	49	22.32	46.34
16-Jan-21	159	72	44	21.2	31.73
22-Jan-21	209	81	51	15.25	31.22
23-Jan-21	197	86	47	23.02	43.85
27-Jan-21	176	78	45	17.96	45.07
29-Jan-21	208	90	53	22.58	38.44
05-Feb-21	188	83	50	23.66	43.29
06-Feb-21	129	66	45	30.79	44.6
12-Feb-21	176	88	53	27.3	41.63
13-Feb-21	167	93	51	22.35	35.41
20-Feb-21	146	70	45	22.58	44.68
21-Feb-21	159	73	37	17.87	35.64
25-Feb-21	178	82	49	18.33	42.08
26-Feb-21	189	89	53	32.08	35.87
05-Mar-21	227	81	52	15.11	40.29
06-Mar-21	220	76	49	19.61	39.41
12-Mar-21	178	78	50	29.39	58.92
13-Mar-21	162	84	46	20.3	37.53
16-Mar-21	208	85	50	15.74	47.36
19-Mar-21	214	67	47	26.8	48.26
20-Mar-21	189	91	53	24.69	22.67
26-Mar-21	190	85	49	15.99	27.2
27-Mar-21	181	75	45	13.49	39.93
<b>Brief Statistics</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
<b>Maximum</b>	227	95	55	32.08	58.92
<b>Minimum</b>	70	46	18	7	14
<b>Average</b>	137.56	74.58	37.04	15.04	27.18
<b>Standard (24 Hrs)</b>		<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>
<b>Standard (Annual)</b>		<b>60</b>	<b>40</b>	<b>50</b>	<b>40</b>

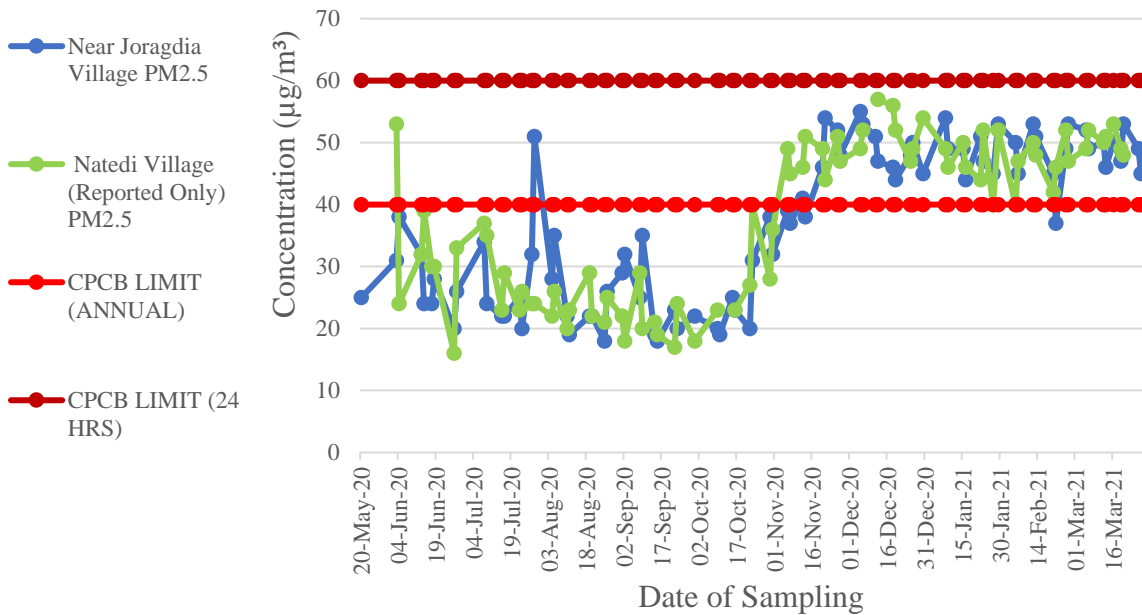
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**JOB NO.750001**

Graph Showing PM<sub>2.5</sub> for Bharatpur OCP

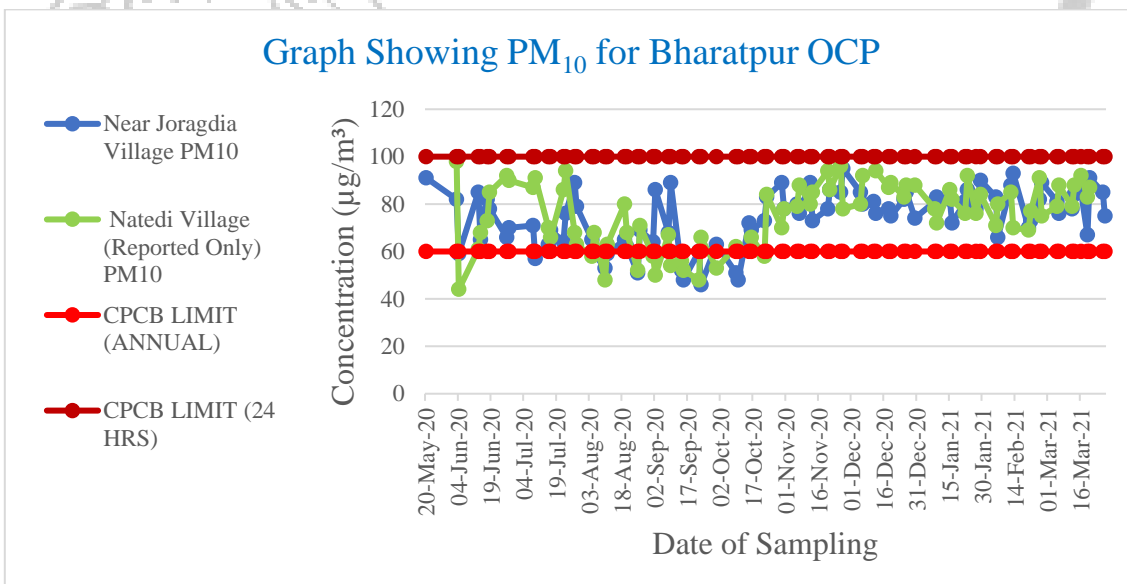
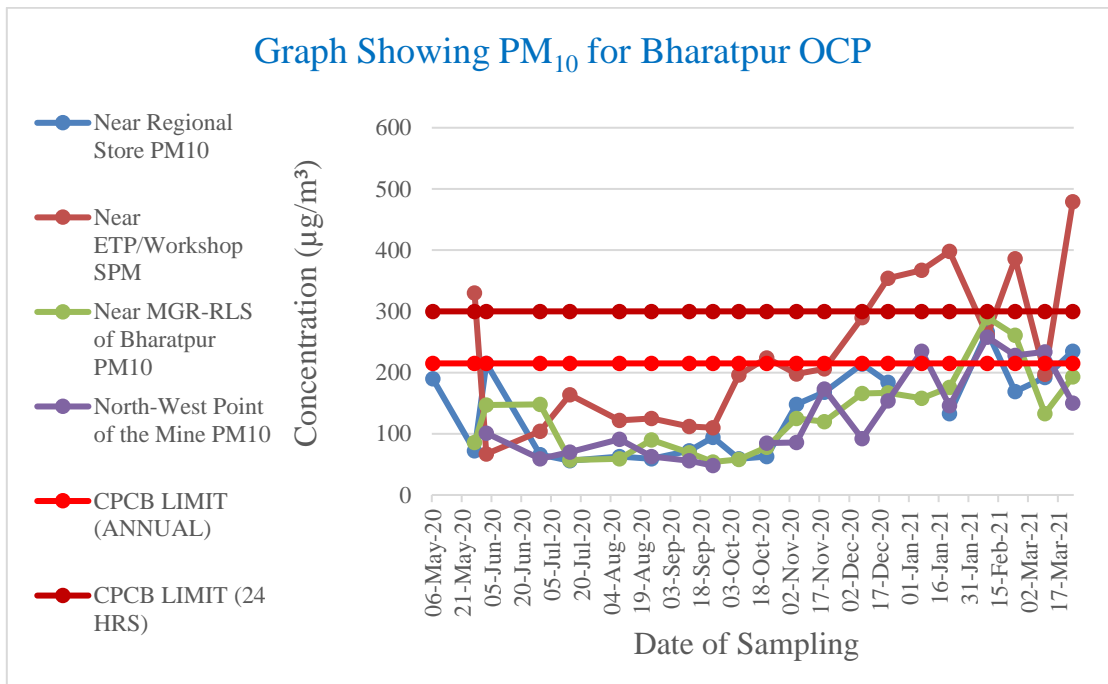


Graph Showing PM<sub>2.5</sub> for Bharatpur OCP



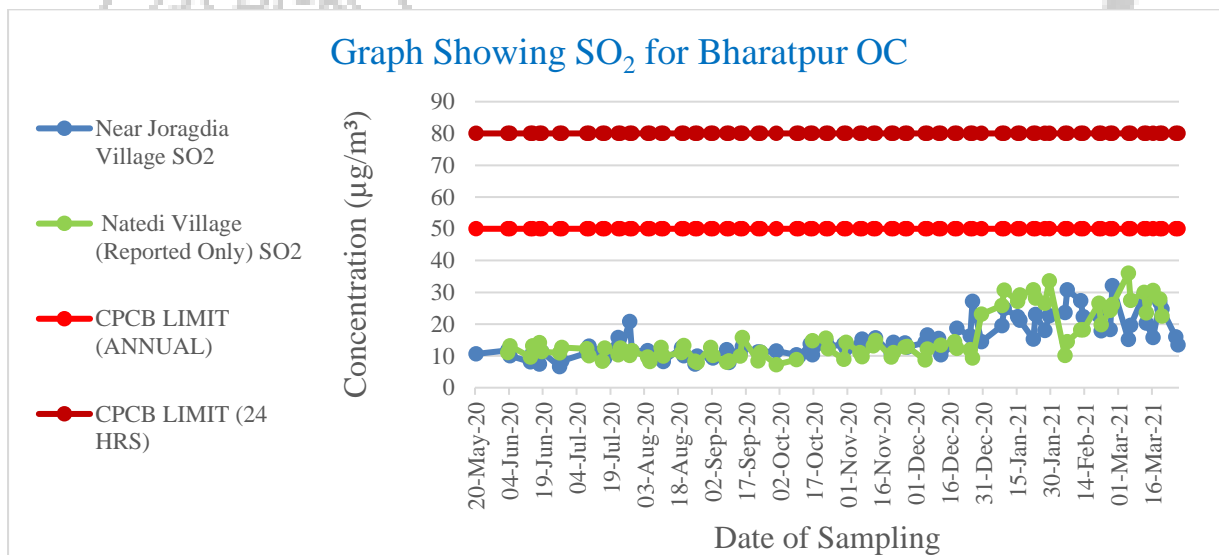
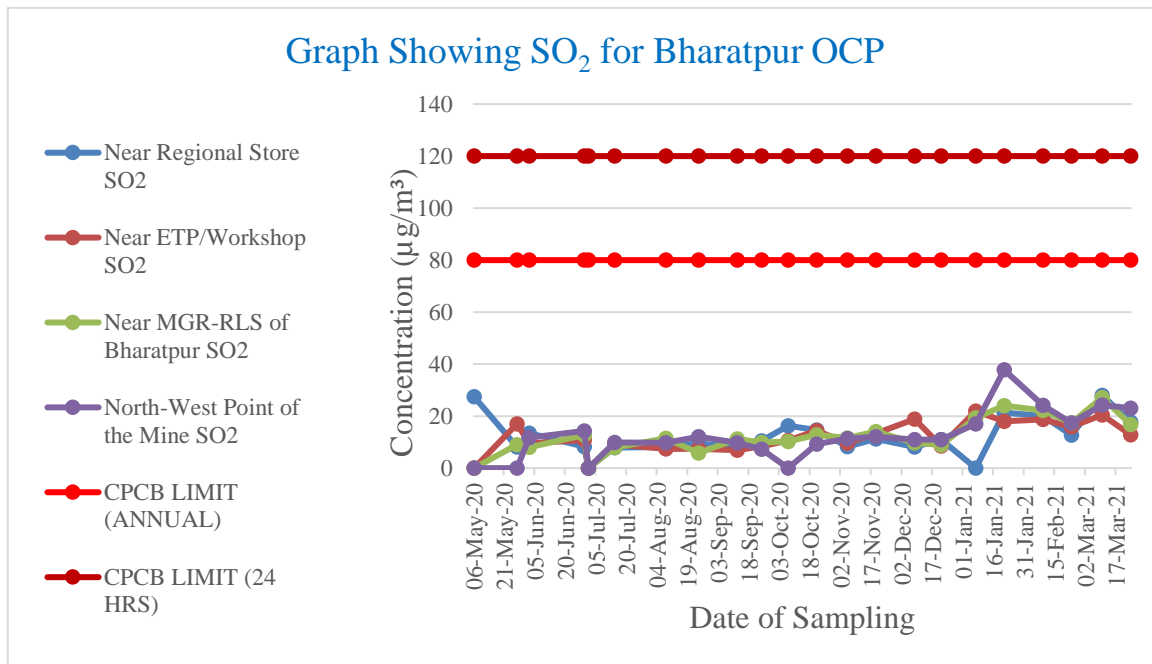
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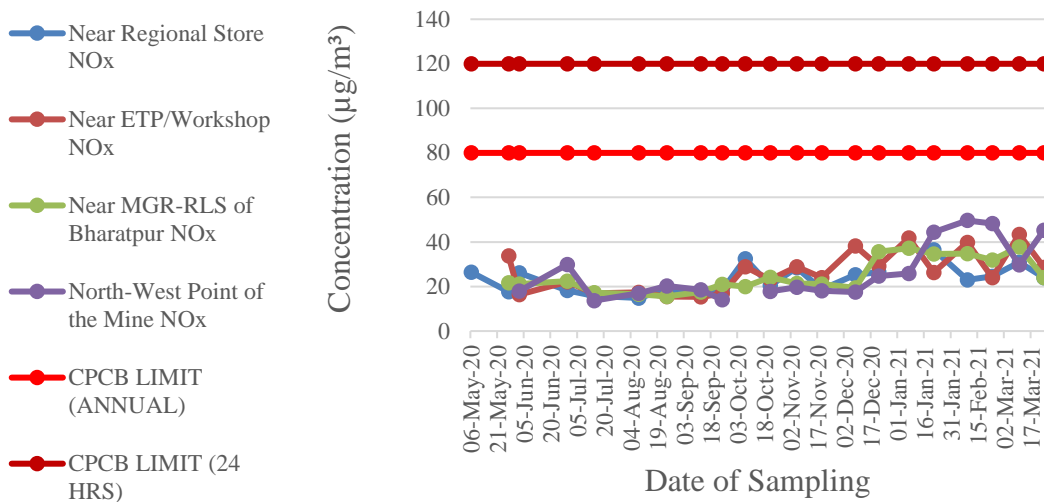
**JOB NO.750001**



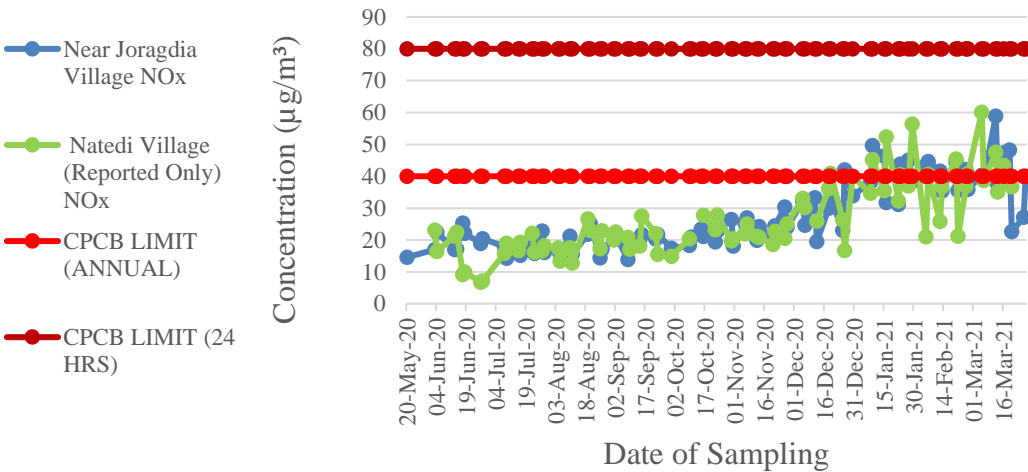
**PREPARED BY: CENTRAL MINE PLANNING & DESIGN ISTITUTE LTD., RI VII, BHUBANESWAR**

**JOB NO.750001**

Graph Showing NO<sub>x</sub> for Bharatpur OCP



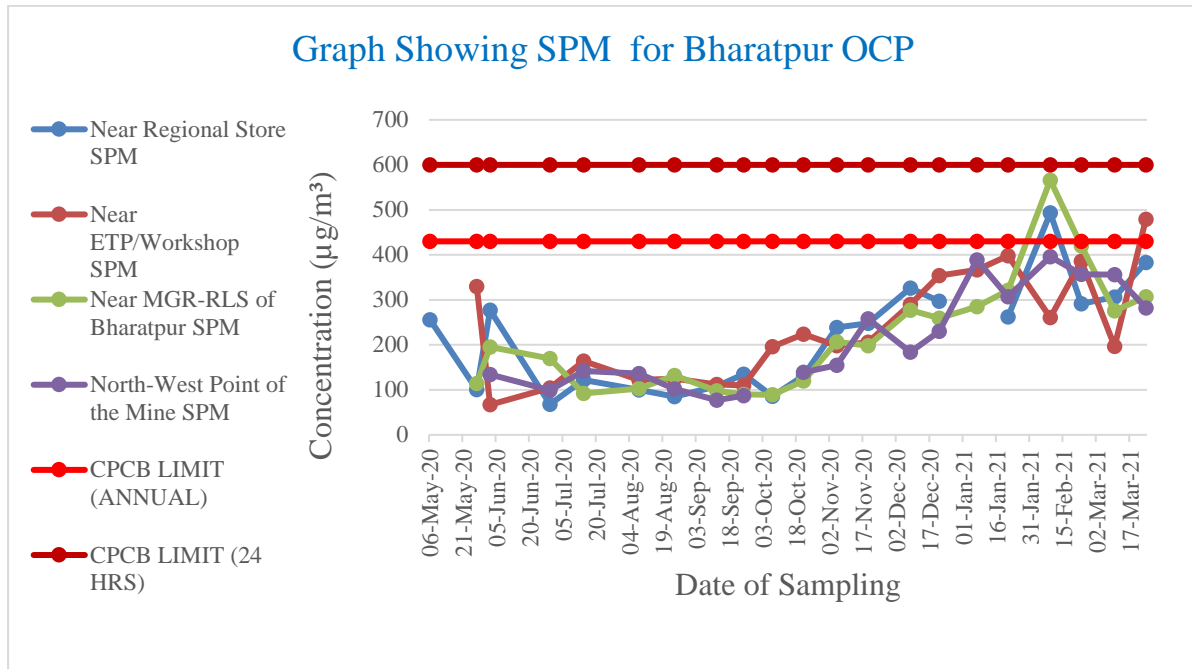
Graph Showing NO<sub>x</sub> for Bharatpur OCP



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JOB NO.750001

Graph Showing SPM for Bharatpur OCP



Graph Showing SPM for Bharatpur OCP

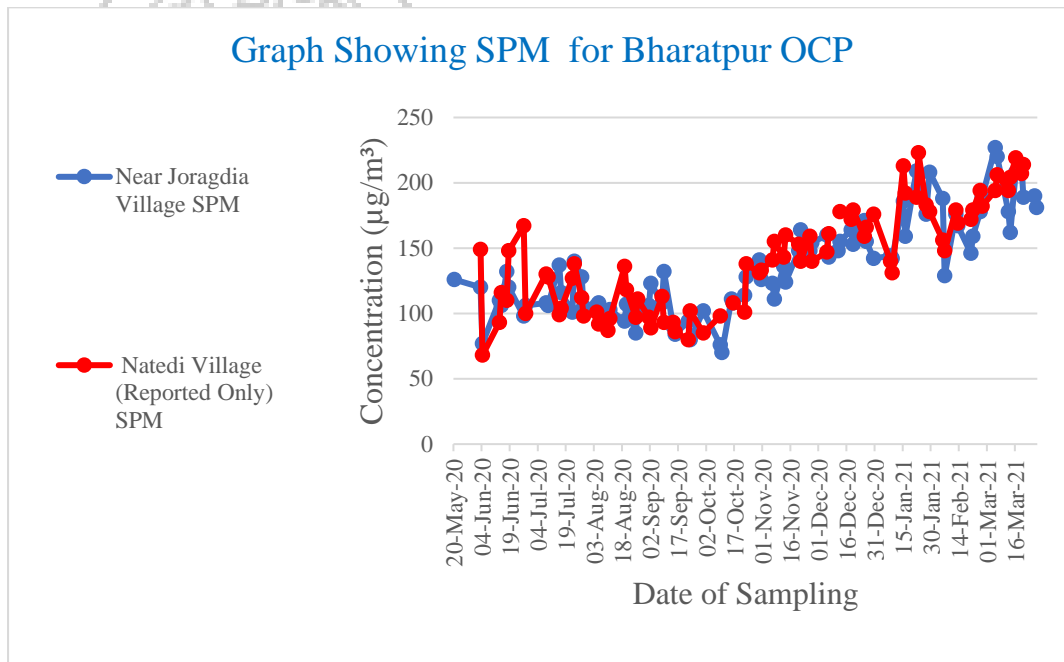


Table:27  
**Area: Bharatpur**  
**Project: Chhendipada OCP**  
**Monitoring Station: Dolamandap Chhak**  
*All values are in  $\mu\text{g}/\text{m}^3$*

Date of Sampling	SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
25-May-20	168	129	13	10.04	18.38
03-Jun-20	84	50	34	15.97	23.09
17-Jun-20	130	96	24	12.4	16.25
02-Jul-20	Strike				
15-Jul-20	102	79	50	12.78	22.04
04-Aug-20	219	149	38	14.45	26.16
22-Aug-20	125	90	24	9.33	20.22
07-Sep-20	128	88	39	13.72	13.79
22-Sep-20	121	76	23	7.56	18.6
01-Oct-20	176	112	45	22.86	43.71
20-Oct-20	131	85	38	13.8	22.09
04-Nov-20	181	105	52	13.83	27.61
18-Nov-20	194	123	58	7.73	15.65
01-Dec-20	364	237	67	13.42	30.67
15-Dec-20	372	245	78	11.44	28.53
01-Jan-21	260	185	46	16.79	40.04
14-Jan-21	224	142	41	21.66	36.46
08-Feb-21	437	192	59	28.92	53.21
22-Feb-21	376	213	62	16.64	36.02
09-Mar-21	206	138	54	25.59	43.52
22-Mar-21	-	-	-	-	-
<b>Brief Statistics</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
<b>Maximum</b>	437	245	78	28.92	53.21
<b>Minimum</b>	84	50	13	8	14
<b>Average</b>	210.42	133.37	44.47	15.21	28.21
<b>Standard (24 Hrs)</b>	<b>600</b>	<b>300</b>		<b>120</b>	<b>120</b>
<b>Standard (Annual)</b>	<b>430</b>	<b>215</b>		<b>80</b>	<b>80</b>

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**JOB NO.750001**

Table: 28  
**Area: Bharatpur**  
**Project: Chhendipada OCP**  
**Monitoring Station: Mamuria Sahi**  
*All values are in  $\mu\text{g}/\text{m}^3$*

Date of Sampling	SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
25-May-20	134	90	27	8.7	15.92
03-Jun-20	167	118	32	20.42	23.88
17-Jun-20	146	116	36	12.72	24.78
02-Jul-20	Strike				
15-Jul-20	152	82	24	9.37	27.16
04-Aug-20	123	74	32	21.22	32.72
22-Aug-20	99	54	22	8.59	14.9
07-Sep-20	195	132	24	10.93	15.57
22-Sep-20	129	89	28	9.69	18.28
01-Oct-20	126	81	37	15.89	24.59
20-Oct-20	106	67	23	12.59	25.79
04-Nov-20	263	170	63	16.55	34.42
18-Nov-20	228	165	63	13.43	23.11
01-Dec-20	326	205	72	11.75	31.26
15-Dec-20	389	253	81	20.46	35.63
01-Jan-21	337	208	40	20.33	39.04
14-Jan-21	241	123	44	26.73	35.97
08-Feb-21	298	167	62	24.26	46.51
22-Feb-21	293	198	69	29.91	49.26
08-Mar-21	486	289	73	37.22	57.56
22-Mar-21	337	199	64	42.14	45.98
<b>Brief Statistics</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
<b>Maximum</b>	486	289	81	42.14	57.56
<b>Minimum</b>	99	54	22	9	15
<b>Average</b>	228.75	144.00	45.80	18.65	31.12
<b>Standard (24 Hrs)</b>	<b>600</b>	<b>300</b>		<b>120</b>	<b>120</b>
<b>Standard (Annual)</b>	<b>430</b>	<b>215</b>		<b>80</b>	<b>80</b>

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**JOB NO.750001**

Table: 29  
**Area:** Bharatpur  
**Project:** Chhendipada OCP  
**Monitoring Station:** Near Site Office  
*All values are in  $\mu\text{g}/\text{m}^3$*

Date of Sampling	SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
03-Jun-20	273	241	22	13.23	22.61
02-Jul-20	Strike				
15-Jul-20	130	61	24	47.07	26.16
04-Aug-20	92	55	18	9.34	17.68
19-Aug-20	61	42	20	9.73	16.88
08-Sep-20	176	118	34	11.66	24.82
22-Sep-20	118	77	24	10.18	26.59
01-Oct-20	96	67	25	13.59	24.99
19-Oct-20	96	60	22	12.41	23.31
03-Nov-20	202	119	54	15.47	21.78
17-Nov-20	209	129	50	10.37	19.72
01-Dec-20	347	241	74	10.91	18.13
15-Dec-20	339	193	78	10.81	37.52
01-Jan-21	392	212	81	22.04	35.36
14-Jan-21	207	100	40	22.08	26.22
09-Feb-21	216	104	63	16.83	14.12
23-Feb-21	278	217	57	22.55	31.52
08-Mar-21	368	246	62	21.61	17.23
22-Mar-21	362	150	58	15.94	32.03
Brief Statistics	SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
Maximum	392	246	81	47.07	37.52
Minimum	61	42	18	9	14
Average	220.11	135.11	44.78	16.43	24.26
Standard (24 Hrs)	<b>600</b>	<b>300</b>		<b>120</b>	<b>120</b>
Standard (Annual)	<b>430</b>	<b>215</b>		<b>80</b>	<b>80</b>

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**JOB NO.750001**

**Table:30**  
**Area: Bharatpur**  
**Project: Chhendipada OCP**  
**Monitoring Station: Near Fire Station**  
*All values are in  $\mu\text{g}/\text{m}^3$*

Date of Sampling	SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NOx
25-May-20	96	68	23	11	16
03-Jun-20	115	85	41	15.14	17.24
04-Jun-20	56	41	36	32.48	18.77
13-Jun-20	109	87	45	8.1	24.42
14-Jun-20	98	66	38	7.8	22.12
17-Jun-20	108	85	23	7.57	18.32
18-Jun-20	112	71	18	8.24	21.58
26-Jun-20	135	89	13	8.43	24.63
27-Jun-20	128	78	20	10.9	22.76
02-Jul-20	Strike				
03-Jul-20	Strike				
08-Jul-20	94	62	23	7.37	17.15
09-Jul-20	87	52	27	8.14	15.48
15-Jul-20	202	93	26	10.67	24.35
16-Jul-20	160	75	40	12.97	16.2
22-Jul-20	130	76	25	10.14	12.87
23-Jul-20	150	87	22	8.79	16.85
27-Jul-20	116	71	22	11.91	15.65
28-Jul-20	128	93	41	10.25	17.73
04-Aug-20	98	45	23	13.45	16.66
05-Aug-20	112	60	28	9.15	15.03
10-Aug-20	107	64	25	10.73	18.61
11-Aug-20	88	55	20	11.05	23.34
19-Aug-20	92	54	20	10.86	29.22
20-Aug-20	104	65	25	12.24	15.04
25-Aug-20	116	76	29	9.25	18.88
26-Aug-20	96	59	21	10.22	21.29
01-Sep-20	93	60	23	7.68	14.71
02-Sep-20	111	69	28	7.28	18.32
08-Sep-20	141	82	34	12.65	23.08
09-Sep-20	127	91	30	10.42	17.29
14-Sep-20	134	87	37	12.96	29.35
15-Sep-20	118	69	36	9.05	18.91
22-Sep-20	89	54	27	9.68	14.66
23-Sep-20	76	45	20	10.81	19.68
30-Sep-20	78	38	17	11.98	20.86
01-Oct-20	128	79	28	11.36	21.56
03-Oct-20	148	89	24	12.69	27.09
07-Oct-20	134	84	32	13.71	16.62
08-Oct-20	141	95	31	14.11	32.12
12-Oct-20	84	48	24	11.3	22.81
13-Oct-20	94	58	20	8.48	17.76
19-Oct-20	123	79	20	12.8	18.73
20-Oct-20	129	84	28	14.62	25.36

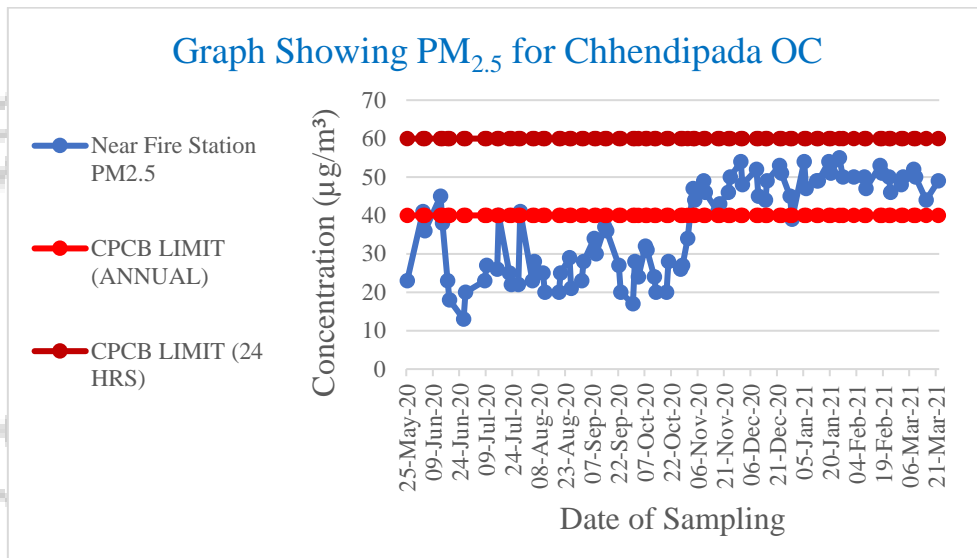
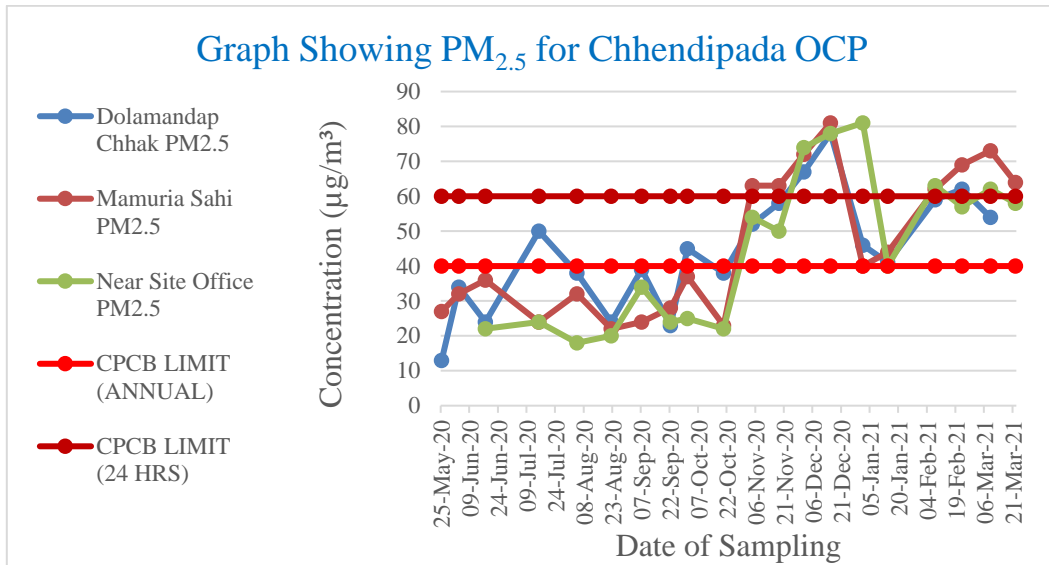
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**JOB NO.750001**

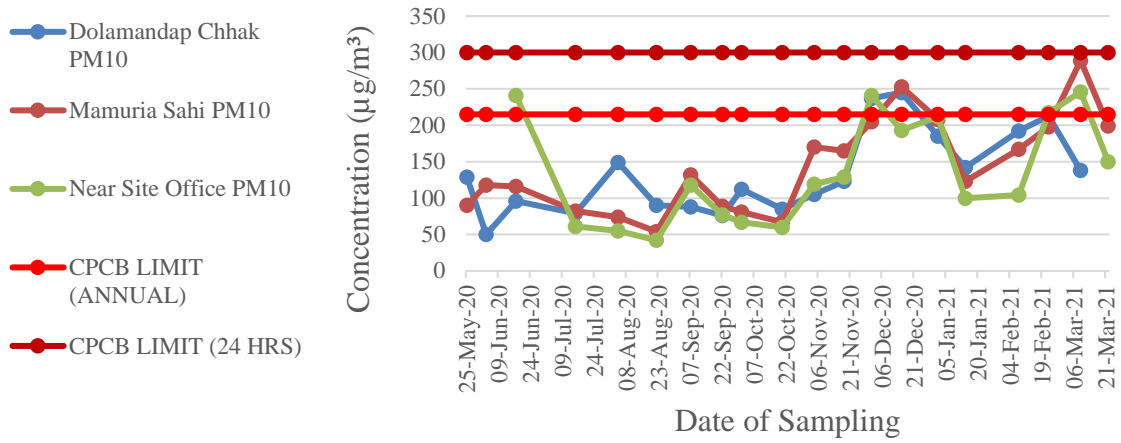
27-Oct-20	122	81	26	10.63	25.93
28-Oct-20	117	76	27	7.13	15.74
31-Oct-20	133	86	34	7.56	17.94
03-Nov-20	161	91	47	11.14	24.1
04-Nov-20	145	79	44	8.84	22.06
09-Nov-20	142	84	49	8.37	21.21
10-Nov-20	135	74	46	9.85	31.87
17-Nov-20	179	90	41	19.05	26.03
18-Nov-20	162	82	43	14.39	23.93
23-Nov-20	176	92	46	12.5	17.71
24-Nov-20	182	94	50	13.25	19.6
30-Nov-20	163	88	54	26.86	27.08
01-Dec-20	158	83	48	13.78	28.63
09-Dec-20	140	88	52	8.85	21.11
10-Dec-20	157	74	45	12.98	23.97
14-Dec-20	143	81	44	14.34	26.48
15-Dec-20	158	87	49	17.19	35.72
22-Dec-20	168	92	53	18.51	49.57
23-Dec-20	158	84	51	24.62	171
28-Dec-20	145	77	45	19.12	51.21
29-Dec-20	139	79	39	16.89	39.58
05-Jan-21	173	88	54	20.38	30.84
06-Jan-21	160	78	47	16.56	34.7
12-Jan-21	147	77	49	20.05	49.26
13-Jan-21	125	68	49	24.7	44.26
19-Jan-21	219	93	54	25.83	33.33
20-Jan-21	197	91	51	27.23	25.29
25-Jan-21	205	86	55	17.24	42.34
27-Jan-21	201	89	50	15.44	31.98
02-Feb-21	128	80	50	39.86	52.33
03-Feb-21	Power failure				
08-Feb-21	151	77	50	20.21	31.29
09-Feb-21	164	78	47	25.57	40.36
17-Feb-21	177	89	53	22.37	32.41
18-Feb-21	194	84	51	18.9	27.18
22-Feb-21	166	71	50	19.2	31.45
23-Feb-21	154	69	46	17.29	35.82
01-Mar-21	177	76	48	40.51	52.69
02-Mar-21	189	78	50	17.99	35.71
08-Mar-21	239	86	52	34.75	53.2
09-Mar-21	176	82	50	25.95	53.59
15-Mar-21	188	80	44	34.74	60.61
22-Mar-21	212	89	49	18.3	39.87
<b>Brief Statistics</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
<b>Maximum</b>	239	95	55	40.51	171
<b>Minimum</b>	56	38	13	7	13
<b>Average</b>	139.40	76.65	37.08	15.09	28.55
<b>Standard (24 Hrs)</b>		<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>
<b>Standard (Annual)</b>		<b>60</b>	<b>40</b>	<b>50</b>	<b>40</b>

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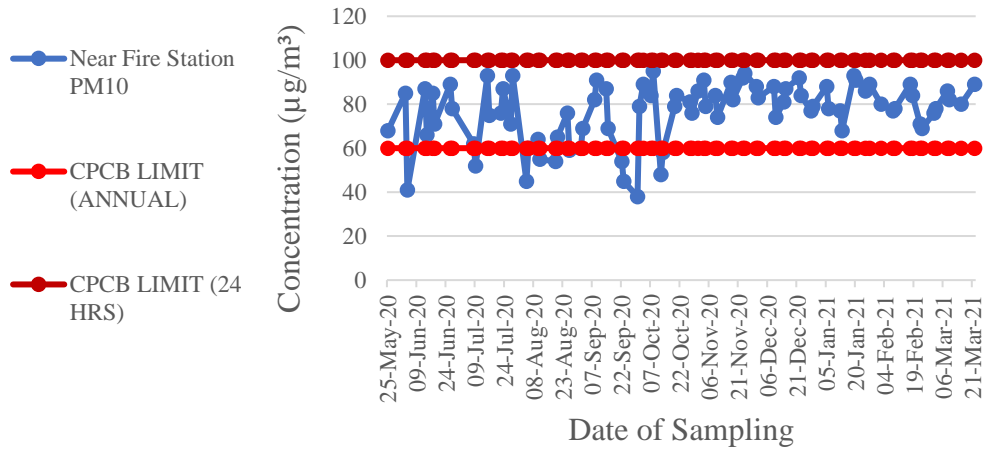
**JOB NO.750001**



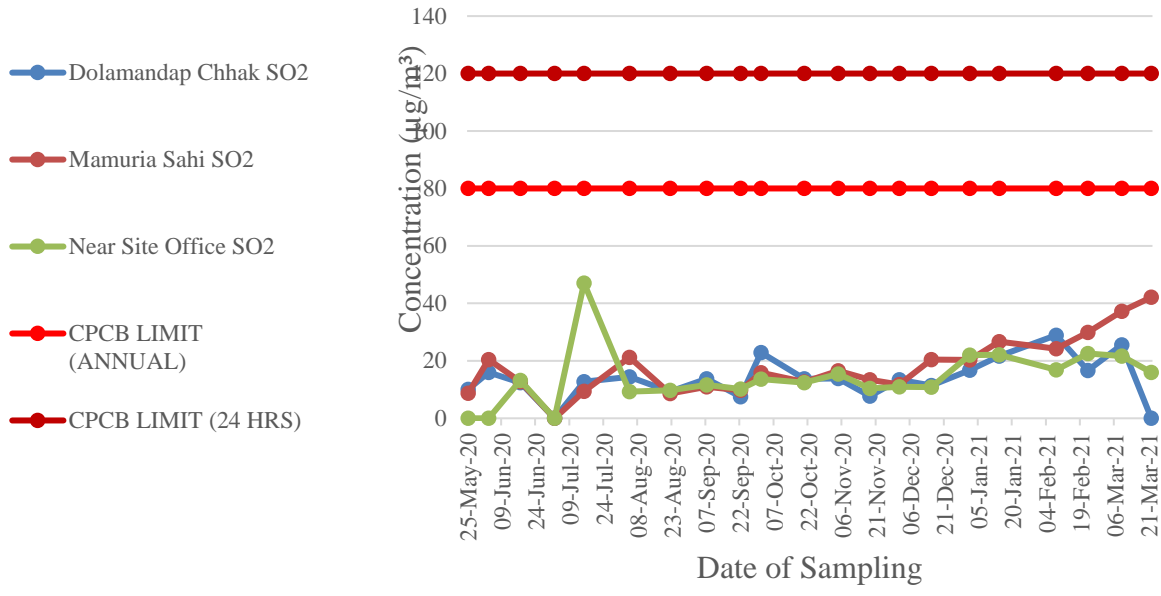
Graph Showing PM<sub>10</sub> for Chhendipada OCP



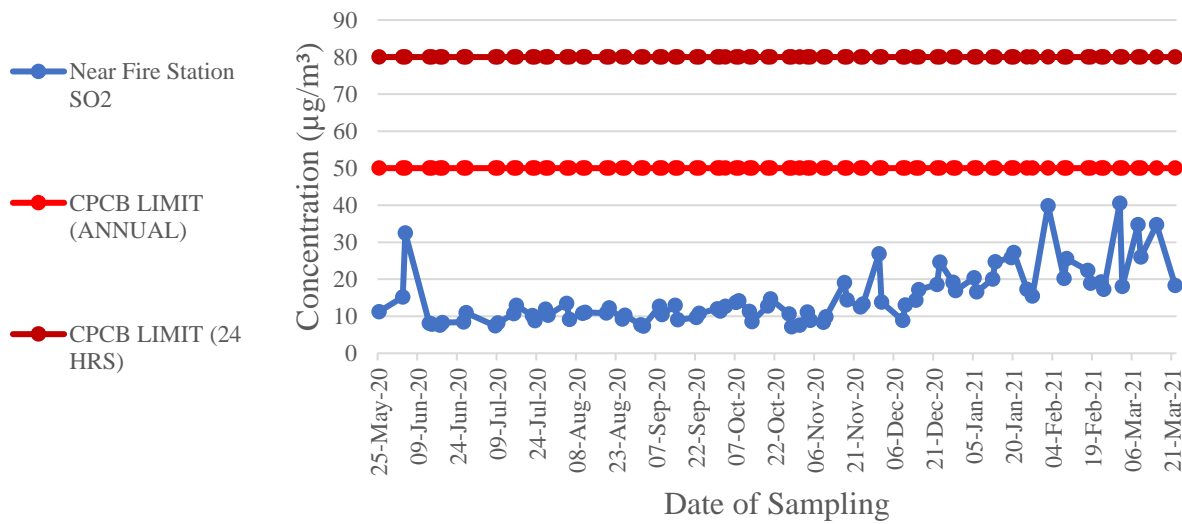
Graph Showing PM<sub>10</sub> for Chhendipada OCP



Graph Showing SO<sub>2</sub> for Chhendipada OCP



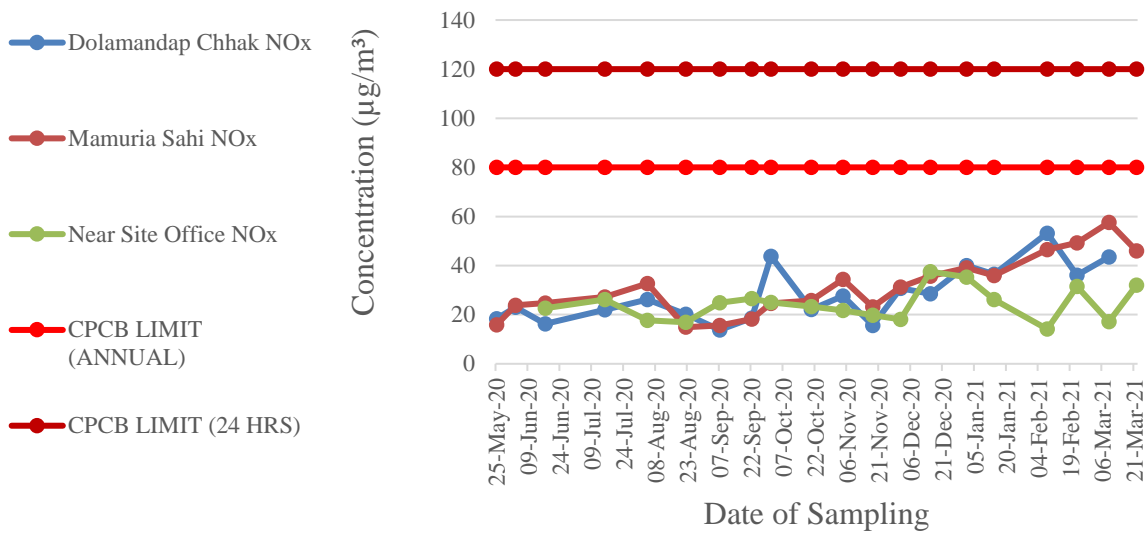
Graph Showing SO<sub>2</sub> for Chhendipada OCP



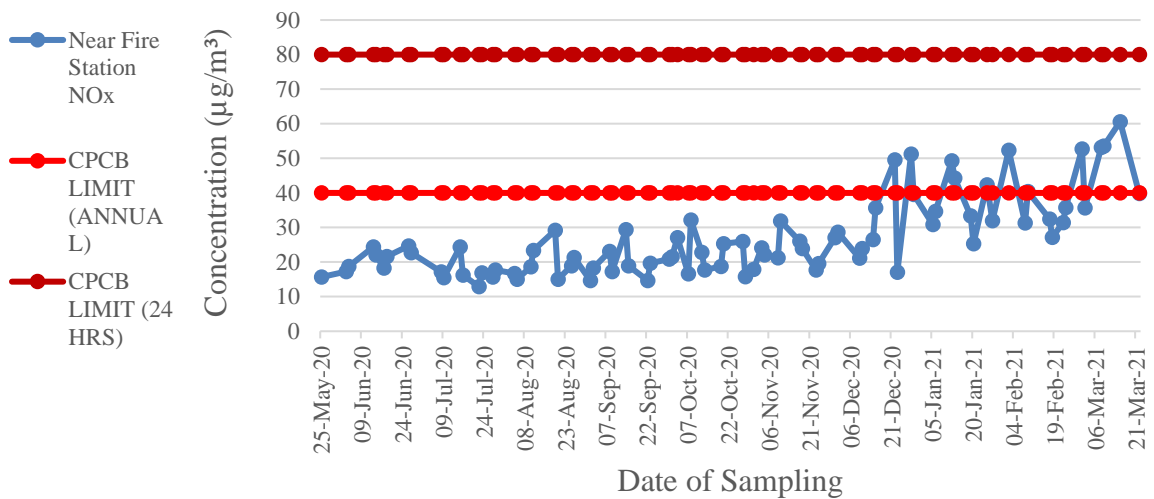
PREPARED BY: CENTRAL MINE PLANNING & DESIGN ISTITUTE LTD., RI VII, BHUBANESWAR

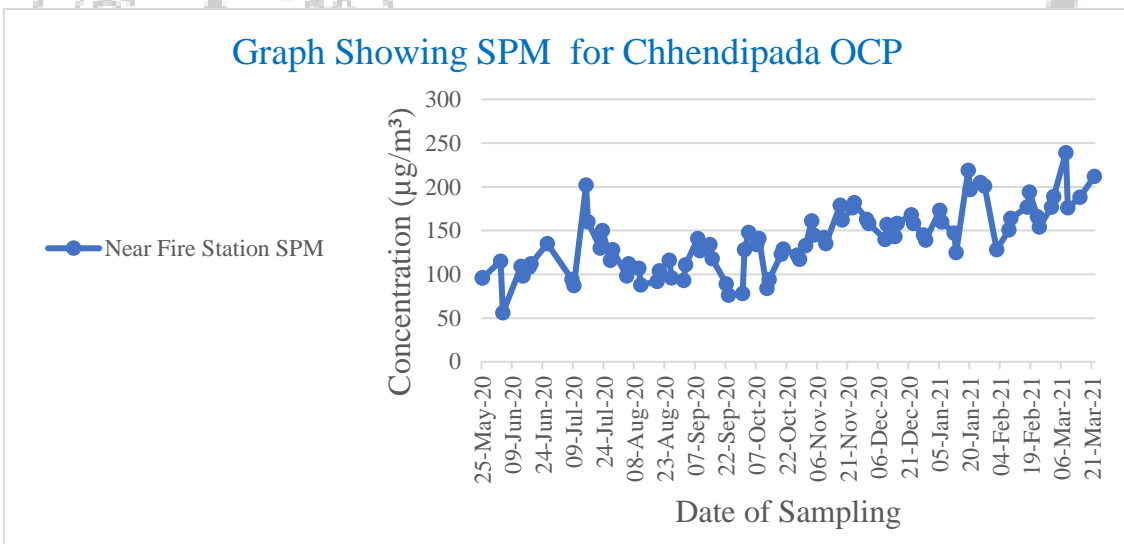
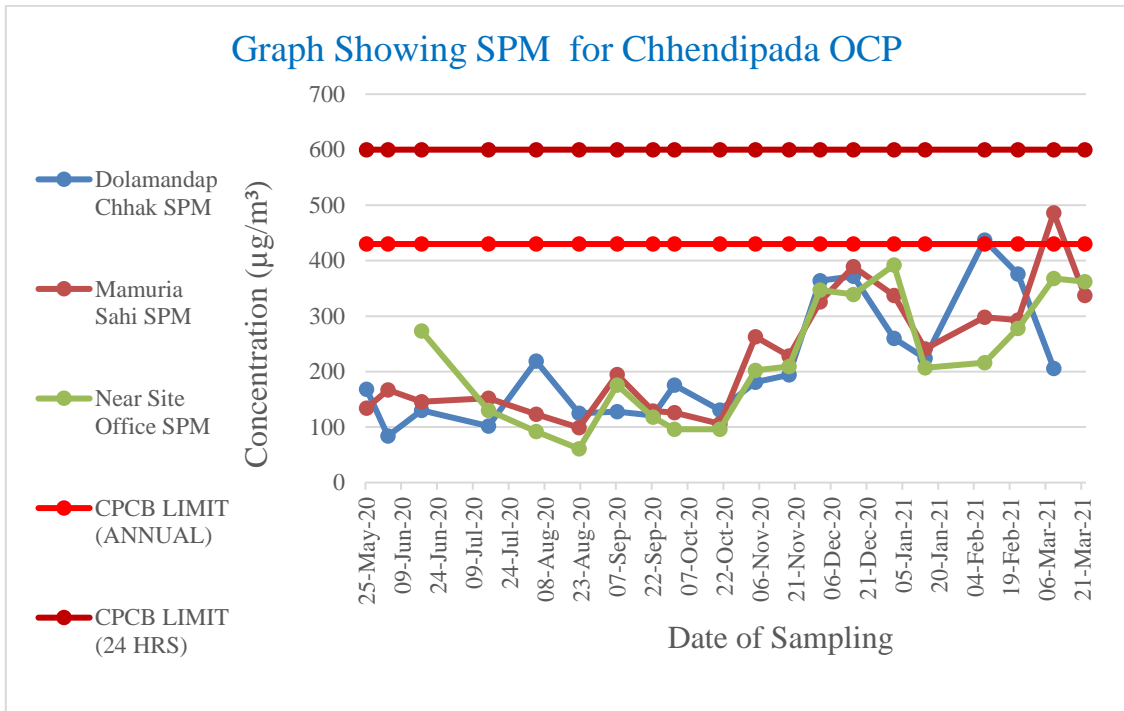
JOB NO.750001

Graph Showing NO<sub>x</sub> for Chhendipada OCP



Graph Showing NO<sub>x</sub> for Chhendipada OCP





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**JOB NO.750001**

Table:31  
**Area: Lingaraj**  
**Project: Lingaraj OCP**  
**Monitoring Station: IWSS**  
*All values are in  $\mu\text{g}/\text{m}^3$*

Date of Sampling	SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
21-May-20	342	266	18	8.2	20.48
04-Jun-20	121	91	43	9.8	12.94
18-Jun-20	169	84	18	8.01	23.12
03-Jul-20	Strike				
16-Jul-20	211	158	21	11.52	12.12
05-Aug-20	83	52	17	8.97	10.58
20-Aug-20	96	64	24	8.22	18.14
09-Sep-20	83	55	21	9.66	17.53
24-Sep-20	126	83	32	8.45	19.13
12-Oct-20	139	95	36	9.61	17.78
28-Oct-20	296	181	29	10.64	15.58
10-Nov-20	171	107	41	7.17	23.19
24-Nov-20	283	183	58	11.25	20.16
09-Dec-20	260	169	45	10.27	29.03
23-Dec-20	284	178	73	16.39	22.71
06-Jan-21	374	233	63	17.32	34.03
20-Jan-21	339	194	58	17.02	33.09
04-Feb-21	288	176	73	19.52	39.93
19-Feb-21	263	158	60	21.55	40.76
04-Mar-21	471	222	64	17.78	38.55
18-Mar-21	413	219	61	14.18	21.28
<b>Brief Statistics</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
<b>Maximum</b>	471	266	73	21.55	40.76
<b>Minimum</b>	83	52	17	7	11
<b>Average</b>	240.60	148.40	42.75	12.28	23.51
<b>Standard (24 Hrs)</b>	<b>500</b>	<b>250</b>		<b>120</b>	<b>120</b>
<b>Standard (Annual)</b>	<b>430</b>	<b>215</b>		<b>80</b>	<b>80</b>

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**JOB NO.750001**

Table:32  
**Area: Lingaraj**  
**Project: Lingaraj OCP**  
**Monitoring Station: Near C.T. Road (Lingaraj to Dera)**  
*All values are in  $\mu\text{g}/\text{m}^3$*

Date of Sampling	SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
21-May-20	98	68	17	7.79	16.4
04-Jun-20	58	42	20	8.58	17.11
29-Jun-20	122	67	21	7.48	25.47
03-Jul-20	Strike				
16-Jul-20	97	70	23	7.08	17.79
05-Aug-20	90	57	20	9.33	18.88
20-Aug-20	106	70	25	7.42	17.87
09-Sep-20	137	88	28	6.62	16
24-Sep-20	118	69	24	7.29	14.7
12-Oct-20	114	72	26	9.28	21.6
28-Oct-20	195	111	52	9.22	24.59
10-Nov-20	191	117	56	8.77	16.04
24-Nov-20	326	200	68	12.13	20.18
09-Dec-20	409	238	84	13.22	26.2
23-Dec-20	367	223	74	22.34	19.42
06-Jan-21	343	197	57	24.24	51.88
20-Jan-21	369	209	69	15.11	26.38
04-Feb-21	369	233	66	18.86	33.55
19-Feb-21	418	237	81	17.43	46.16
04-Mar-21	489	242	70	15.51	35.81
18-Mar-21	350	212	72	14.05	26.48
<b>Brief Statistics</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
<b>Maximum</b>	489	242	84	24.24	51.88
<b>Minimum</b>	58	42	17	7	15
<b>Average</b>	238.30	141.10	47.65	12.09	24.63
<b>Standard (24 Hrs)</b>	<b>500</b>	<b>250</b>		<b>120</b>	<b>120</b>
<b>Standard (Annual)</b>	<b>430</b>	<b>215</b>		<b>80</b>	<b>80</b>

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Table:33

**Area:** Lingaraj**Project:** Lingaraj OCP**Monitoring Station:** Near OB Dump No. 10 (Near North Side of Mine)*All values are in  $\mu\text{g}/\text{m}^3$* 

Date of Sampling	SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
07-May-20	207	144	44	11.92	14.34
04-Jun-20	75	62	22	10.24	13.3
18-Jun-20	163	145	36	9.07	25.95
03-Jul-20	Strike				
16-Jul-20	270	186	25	11.84	25.28
05-Aug-20	102	57	22	8.59	15.58
20-Aug-20	97	61	21	9.76	12.87
09-Sep-20	88	53	23	8.48	13.42
24-Sep-20	135	86	31	11.59	21.74
12-Oct-20	107	74	27	12.59	13.61
28-Oct-20	187	123	26	11.81	24.48
10-Nov-20	160	83	38	9.98	17.87
24-Nov-20	196	116	52	12.56	21.61
09-Dec-20	311	218	68	14.16	22.75
23-Dec-20	346	220	72	11.98	34.24
06-Jan-21	-	-	-	-	-
20-Jan-21	289	192	55	23.77	54.13
08-Feb-21	407	233	63	11.86	31.65
23-Feb-21	299	182	74	14.66	34.57
04-Mar-21	297	190	58	17.84	20.01
18-Mar-21	335	228	59	16	35.46
<b>Brief Statistics</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
<b>Maximum</b>	407	233	74	23.77	54.13
<b>Minimum</b>	75	53	21	8	13
<b>Average</b>	214.26	139.63	42.95	12.56	23.83
<b>Standard (24 Hrs)</b>	<b>500</b>	<b>250</b>		<b>120</b>	<b>120</b>
<b>Standard (Annual)</b>	<b>430</b>	<b>215</b>		<b>80</b>	<b>80</b>

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**JOB NO.750001**

Table: 34  
**Area: Lingaraj**  
**Project: Lingaraj OCP**  
**Monitoring Station: Near OB Dump No. 5 (South Side of the Mine)**  
*All values are in  $\mu\text{g}/\text{m}^3$*

Date of Sampling	SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
07-May-20	225	161	49	13.86	25.13
30-May-20	332	236	22	13.86	27.14
04-Jun-20	82	55	24	7.73	18.34
18-Jun-20	175	125	42	8.43	21.36
03-Jul-20	Strike				
16-Jul-20	232	118	25	17.89	19.94
05-Aug-20	99	63	23	8.16	14.87
20-Aug-20	83	52	17	7.33	16.96
09-Sep-20	86	58	20	7.56	14.72
24-Sep-20	169	122	51	12.01	20.15
12-Oct-20	110	64	34	11.50	16.61
28-Oct-20	91	57	19	11.28	20.86
10-Nov-20	132	76	34	6.55	17.56
24-Nov-20	194	95	45	13.61	22.00
09-Dec-20	358	241	69	9.17	23.62
23-Dec-20	347	236	75	13.12	33.93
06-Jan-21	-	-	-	-	-
20-Jan-21	278	163	49	20.07	35.04
04-Feb-21	467	219	66	14.35	31.22
19-Feb-21	320	166	76	19.3	38.84
04-Mar-21	498	233	74	13.78	26.05
17-Mar-21	375	197	55	12.39	31.61
<b>Brief Statistics</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
<b>Maximum</b>	498	241	76	20.07	38.84
<b>Minimum</b>	82	52	17	7	15
<b>Average</b>	233.05	135.58	43.16	12.00	23.73
<b>Standard (24 Hrs)</b>	<b>500</b>	<b>250</b>		<b>120</b>	<b>120</b>
<b>Standard (Annual)</b>	<b>430</b>	<b>215</b>		<b>80</b>	<b>80</b>

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**JOB NO.750001**

**Table:35**  
**Area: Lingaraj**  
**Project: Lingaraj OCP**  
**Monitoring Station: Near Intake Complex**  
*All values are in  $\mu\text{g}/\text{m}^3$*

Date of Sampling	SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
30-May-20	154	89	20	9.98	36.39
03-Jun-20	68	49	22	9.54	13.86
04-Jun-20	58	36	25	10.75	30.3
13-Jun-20	45	32	21	5.63	8.14
14-Jun-20	75	42	28	8.98	11.34
19-Jun-20	145	93	44	7	27.08
20-Jun-20	70	42	28	5.88	29.48
24-Jun-20	66	46	15	5.71	22.21
25-Jun-20	96	88	60	9.29	25.42
02-Jul-20	Strike				
03-Jul-20	Strike				
08-Jul-20	150	89	36	12.05	19.8
09-Jul-20	119	69	28	10.69	20.76
15-Jul-20	109	74	30	10.14	19.69
16-Jul-20	96	63	28	8.32	12.9
22-Jul-20	111	51	26	8.72	14.32
23-Jul-20	112	82	31	14.83	19.49
27-Jul-20	109	76	33	8.76	12.34
28-Jul-20	84	56	33	7.15	20.87
04-Aug-20	125	55	24	7.45	15.52
05-Aug-20	119	64	31	9.46	19.4
10-Aug-20	76	53	24	11.42	14.15
11-Aug-20	105	68	21	12	22.71
20-Aug-20	103	63	23	8.62	23.93
25-Aug-20	126	80	25	10.34	21.79
26-Aug-20	117	74	28	8.22	17.12
01-Sep-20	82	49	18	10	14.73
02-Sep-20	92	58	20	8.57	27.85
08-Sep-20	81	53	21	9.2	16.7
09-Sep-20	97	67	29	8.81	12.79
14-Sep-20	127	81	26	7.25	19.64
15-Sep-20	114	70	24	10.19	23.4
23-Sep-20	76	45	19	6.92	17.41
24-Sep-20	95	60	28	8.46	18.07
30-Sep-20	82	39	18	11.95	19.27
01-Oct-20	108	73	27	12.7	22.55
09-Oct-20	98	63	23	13.25	21.72
10-Oct-20	78	48	21	9.22	19.32
15-Oct-20	131	80	39	8.35	17.22
16-Oct-20	118	72	31	7.98	20.45
22-Oct-20	132	76	36	11.15	27.7
23-Oct-20	117	69	28	9.47	28.29
30-Oct-20	128	82	37	11.21	20.56
31-Oct-20	130	74	27	8.45	18.65
06-Nov-20	120	74	39	10.07	20.4
07-Nov-20	103	60	36	10.01	20.12
12-Nov-20	136	87	46	6.3	22.82
13-Nov-20	147	86	50	7.86	22.88

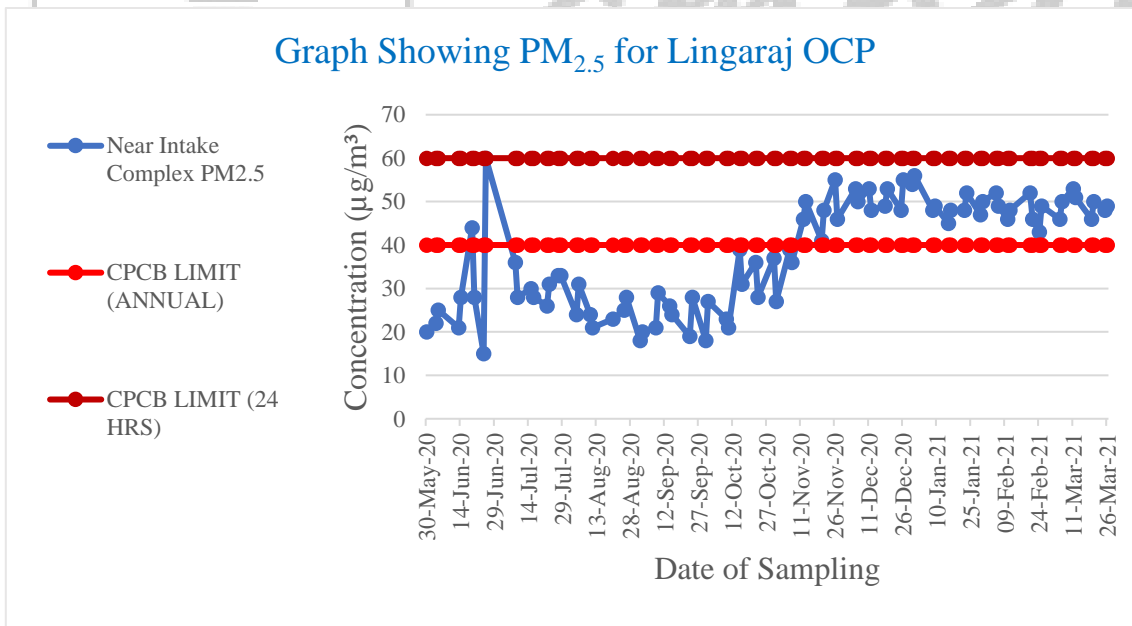
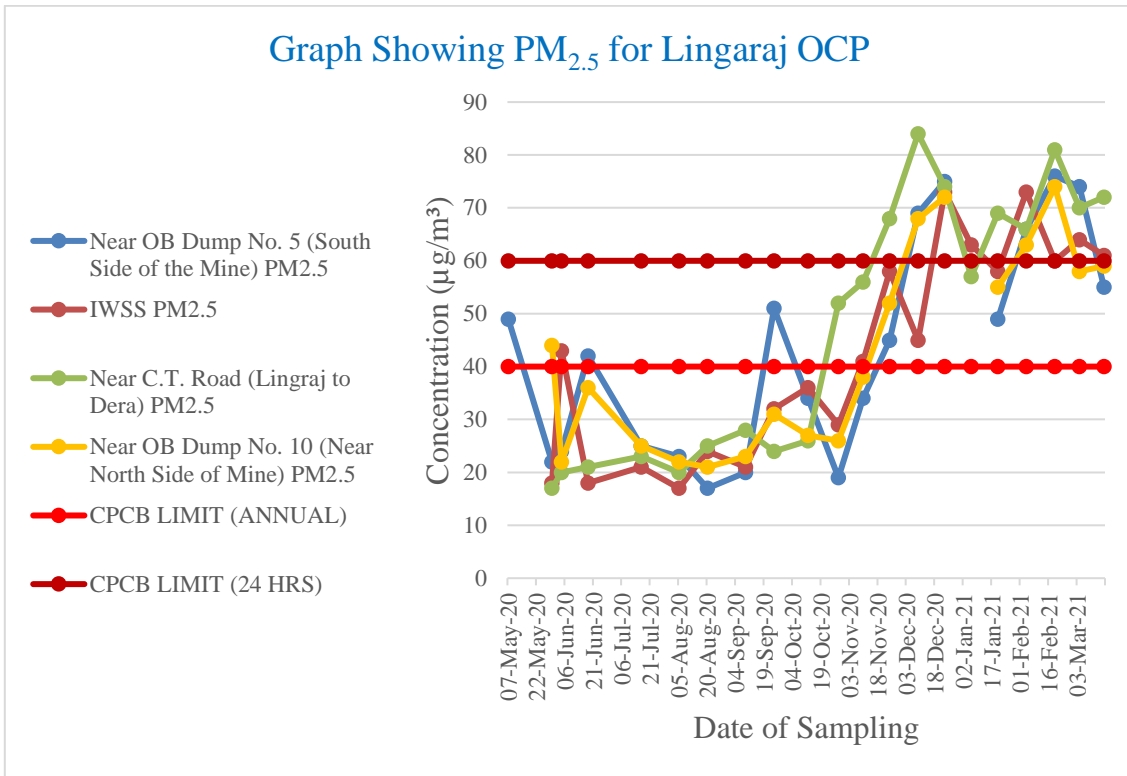
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20-Nov-20	138	86	41	2.43	3.46
21-Nov-20	152	89	48	9.89	19.61
26-Nov-20	168	93	55	7.6	20.87
27-Nov-20	149	84	46	11.64	19.37
05-Dec-20	186	95	53	9.28	23.78
06-Dec-20	171	86	50	12.06	17.64
11-Dec-20	177	84	53	9.12	16.42
12-Dec-20	163	81	48	13.32	24.61
18-Dec-20	161	86	49	10.34	23.2
19-Dec-20	174	91	53	12.71	22.54
25-Dec-20	139	79	48	16.13	24.86
26-Dec-20	153	83	55	17.6	31.69
30-Dec-20	169	93	54	24.72	20.55
31-Dec-20	176	90	56	14.75	29.68
08-Jan-21	153	82	48	15.28	32.69
09-Jan-21	159	77	49	23.38	46.46
15-Jan-21	152	83	45	17.9	34.18
16-Jan-21	171	90	48	28.88	40.15
22-Jan-21	206	87	48	18.61	33.24
23-Jan-21	223	93	52	17.65	30.15
29-Jan-21	192	81	47	14.33	34.29
30-Jan-21	215	89	50	19.46	36.73
05-Feb-21	203	90	52	16.65	29.04
06-Feb-21	157	79	49	14.32	30.03
10-Feb-21	174	87	46	17.08	29.8
11-Feb-21	189	74	48	14.88	39.46
20-Feb-21	159	90	52	17.34	25.45
21-Feb-21	173	83	46	17.27	38.19
24-Feb-21	133	63	43	15.02	25.86
25-Feb-21	184	79	49	17.74	31.02
05-Mar-21	198	79	46	21.78	45.46
06-Mar-21	217	87	50	19.38	23.63
11-Mar-21	213	91	53	32.59	43.55
12-Mar-21	166	90	51	23.37	39.76
19-Mar-21	187	82	46	19.65	43.86
20-Mar-21	179	88	50	21.05	49.41
25-Mar-21	162	71	48	11.51	36.79
26-Mar-21	178	66	49	17.72	30.86
<b>Brief Statistics</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
<b>Maximum</b>	223	95	60	32.59	49.41
<b>Minimum</b>	45	32	15	2	3
<b>Average</b>	136.30	73.82	38.11	12.53	24.76
<b>Standard (24 Hrs)</b>		<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>
<b>Standard (Annual)</b>		<b>60</b>	<b>40</b>	<b>50</b>	<b>40</b>

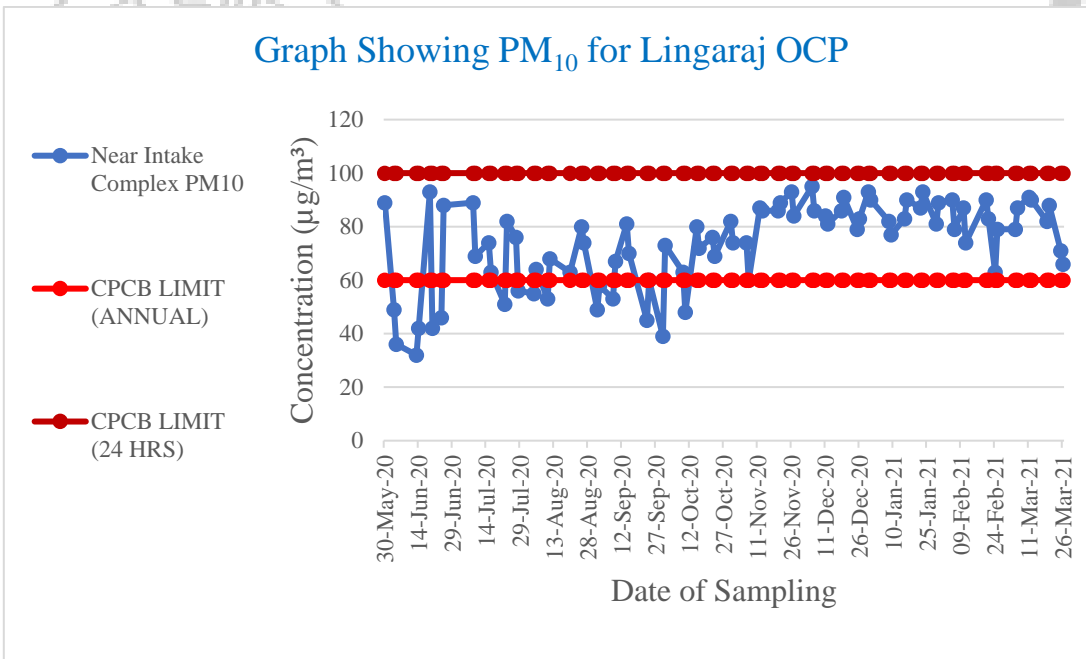
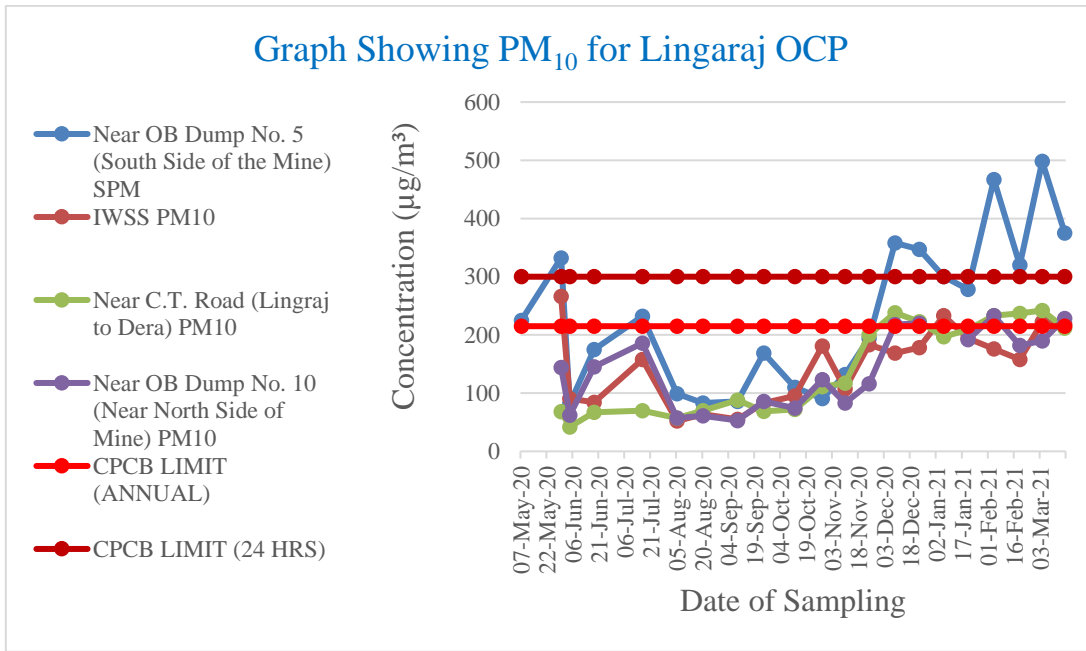
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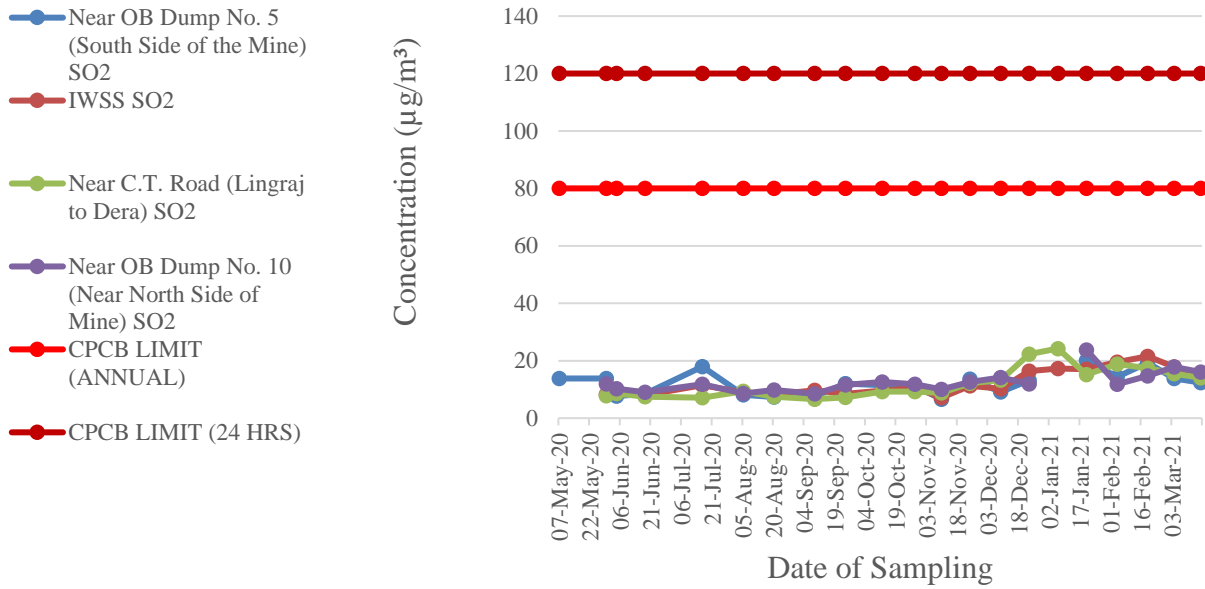
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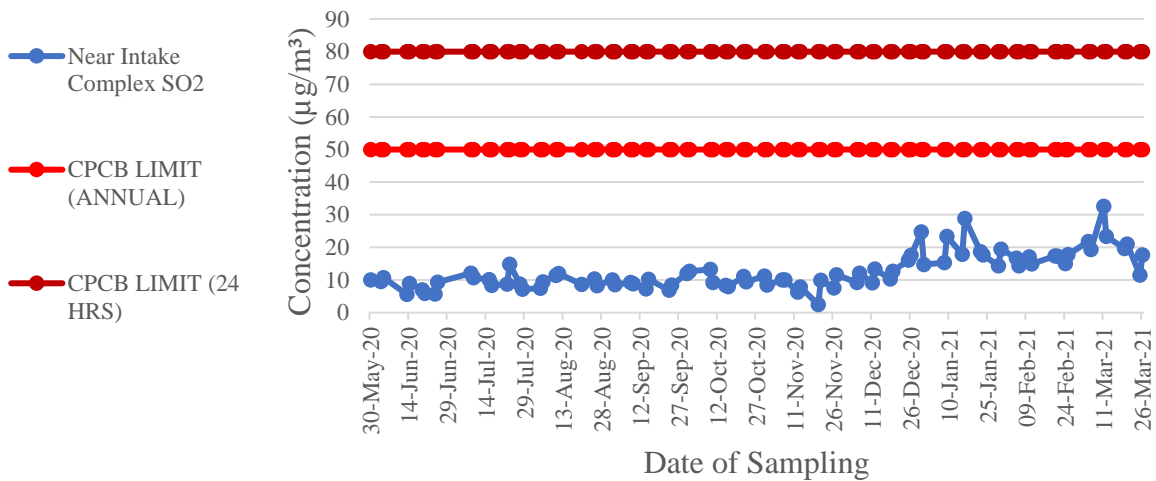
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Graph Showing SO<sub>2</sub> for Lingaraj OCP

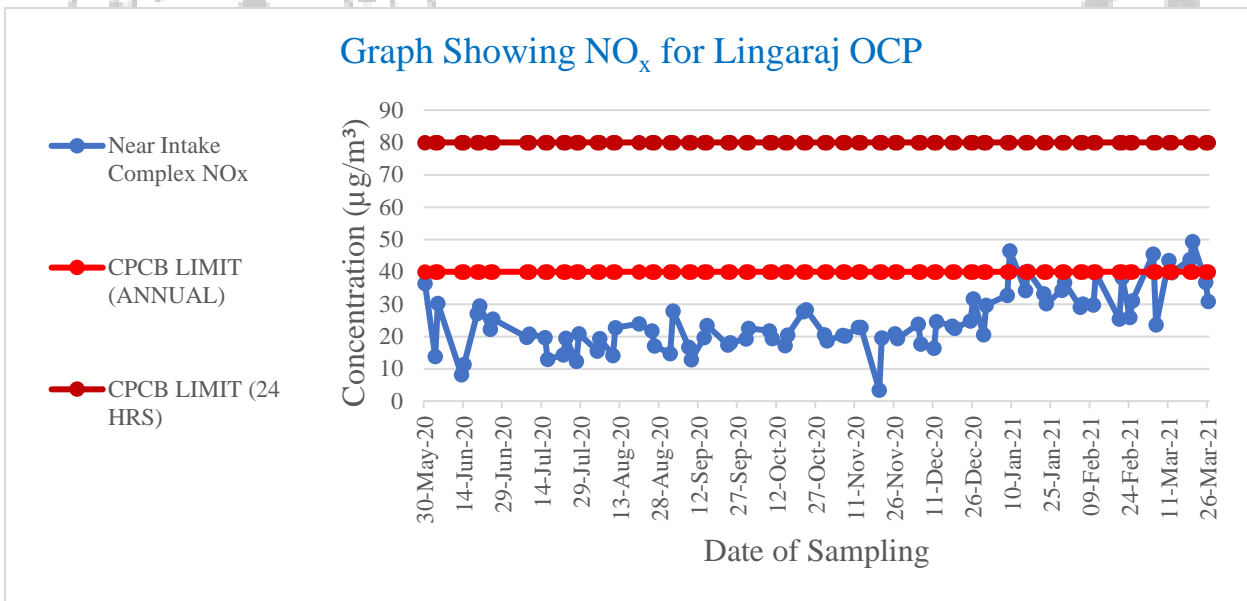
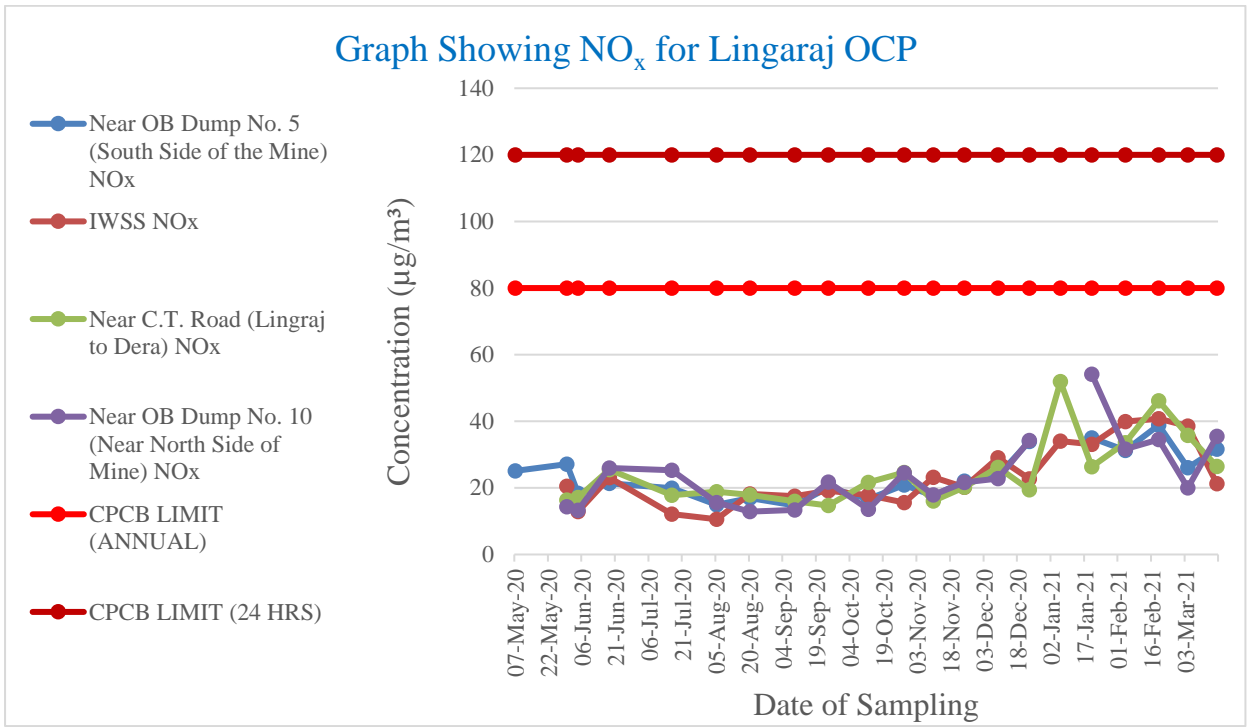


Graph Showing SO<sub>2</sub> for Lingaraj OCP



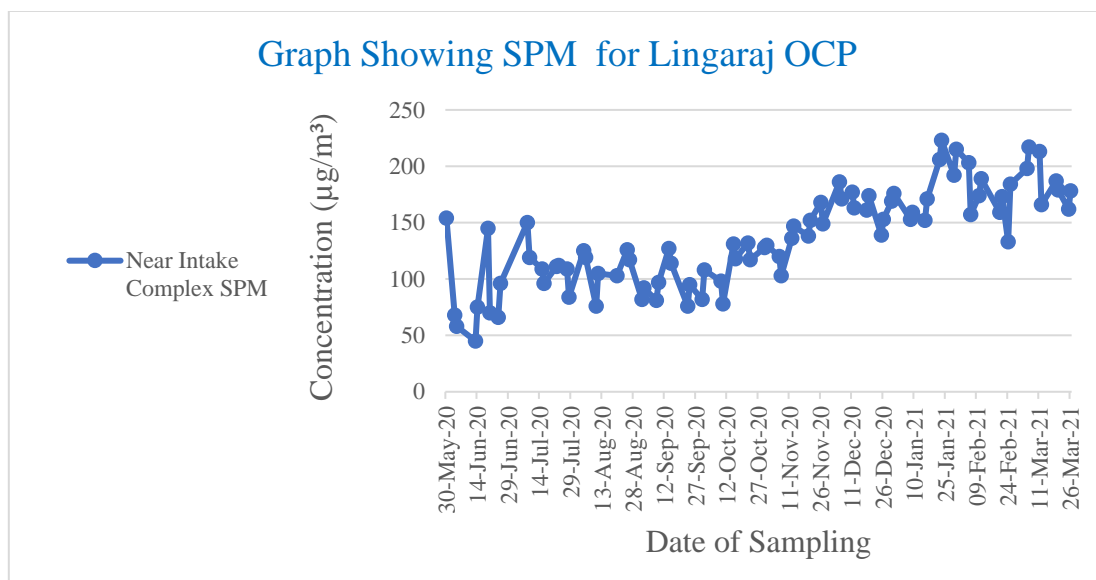
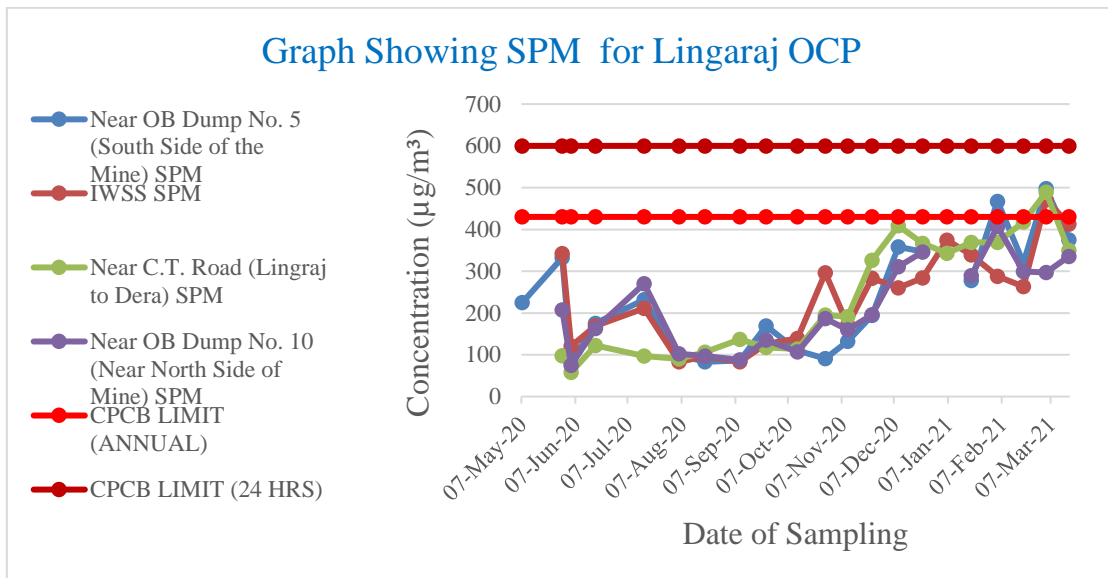
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Table: 36  
**Area: Kaniha**  
**Project: Kaniha OCP**  
**Monitoring Station: Near External OB Dump Jamania**  
*All values are in  $\mu\text{g}/\text{m}^3$*

Date of Sampling	SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
23-May-20	215	173	25	15.41	26.55
09-Jun-20	108	80	35	10.51	21.22
20-Jun-20	266	221	16	6.56	24.58
07-Jul-20	110	54	28	11.78	25
18-Jul-20	89	53	22	8.29	13.62
08-Aug-20	80	48	19	8.56	20.25
24-Aug-20	134	81	35	11.38	15
12-Sep-20	132	88	42	10.56	21.14
30-Sep-20	148	100	32	12.29	38.22
03-Oct-20	148	91	41	10.58	30.42
17-Oct-20	268	194	30	12.85	19.74
02-Nov-20	231	141	79	9.19	18.92
16-Nov-20	269	178	64	13.75	29.74
03-Dec-20	283	197	89	13.3	28.15
16-Dec-20	340	214	80	23.95	41.23
04-Jan-21	-	-	-	-	-
14-Jan-21	284	151	57	16.39	33.81
02-Feb-21	348	212	57	21.78	24.91
17-Feb-21	381	233	65	23.03	50.21
03-Mar-21	402	251	57	45.14	45.14
17-Mar-21	-	-	-	-	-
<b>Brief Statistics</b>	<b>SPM</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>
<b>Maximum</b>	402	251	89	45.14	50.21
<b>Minimum</b>	80	48	16	7	14
<b>Average</b>	222.95	145.26	45.95	15.02	27.78
<b>Standard (24 Hrs)</b>	<b>500</b>	<b>250</b>		<b>120</b>	<b>120</b>
<b>Standard (Annual)</b>	<b>430</b>	<b>215</b>		<b>80</b>	<b>80</b>

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Table: 37  
**Area: Kaniha**  
**Project: Kaniha OCP**  
**Monitoring Station: Near Jatra Padia, Jarda**  
*All values are in  $\mu\text{g}/\text{m}^3$*

Date of Sampling	SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
23-May-20	137	93	29	10.73	21.26
08-Jun-20	152	60	28	8.12	21.22
19-Jun-20	152	92	32	8.44	19.56
06-Jul-20	95	52	27	8.96	18.58
17-Jul-20	199	85	24	7	12.22
08-Aug-20	94	63	17	9.6	24.98
24-Aug-20	97	62	19	9.46	22.97
12-Sep-20	179	120	36	9.54	25.42
29-Sep-20	139	98	30	7.48	13.03
03-Oct-20	93	61	19	14.89	22.03
17-Oct-20	108	74	26	8.31	18.92
02-Nov-20	202	129	69	13.01	21.64
16-Nov-20	246	163	59	14.18	25.64
02-Dec-20	383	236	66	7.49	19.91
16-Dec-20	326	191	71	13.81	22.95
02-Jan-21	364	230	67	26.82	36.73
14-Jan-21	289	159	55	24.22	39.87
01-Feb-21	347	204	73	20.9	21.16
16-Feb-21	290	170	67	17.31	36.29
01-Mar-21	-	-	-	-	-
16-Mar-21	324	187	59	27.78	35.7
<b>Brief Statistics</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
<b>Maximum</b>	383	236	73	27.78	39.87
<b>Minimum</b>	93	52	17	7	12
<b>Average</b>	214.68	128.21	44.42	13.54	24.15
<b>Standard (24 Hrs)</b>	<b>500</b>	<b>250</b>		<b>120</b>	<b>120</b>
<b>Standard (Annual)</b>	<b>430</b>	<b>215</b>		<b>80</b>	<b>80</b>

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**JOB NO.750001**

**Table:38**  
**Area: Kaniha**  
**Project: Kaniha OCP**  
**Monitoring Station: New Time Office-Near Z-Patch**  
*All values are in  $\mu\text{g}/\text{m}^3$*

Date of Sampling	SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
22-May-20	190	144	50	11.1	13.97
08-Jun-20	128	58	22	11.51	13.34
19-Jun-20	73	65	28	8.06	22.78
06-Jul-20	64	33	28	11.8	18.73
17-Jul-20	185	94	22	7.87	13.68
08-Aug-20	116	78	36	9.01	17.86
24-Aug-20	102	68	25	6.33	16.8
11-Sep-20	108	71	25	12.74	16.65
28-Sep-20	169	113	29	9.79	19.89
05-Oct-20	341	233	68	14.74	23.23
19-Oct-20	288	196	30	12.34	31.06
03-Nov-20	176	108	56	8.36	20.87
17-Nov-20	248	168	68	15.62	29.45
03-Dec-20	348	191	75	9.57	23.49
17-Dec-20	369	227	67	19.42	24.21
04-Jan-21	241	168	71	20.59	35.06
18-Jan-21	269	180	64	15.94	31.4
01-Feb-21	339	222	46	14.05	32.24
17-Feb-21	385	244	61	17.41	33.37
02-Mar-21	409	257	57	17.18	26.56
16-Mar-21	301	273	59	18.85	24.94
<b>Brief Statistics</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
<b>Maximum</b>	409	273	75	20.59	35.06
<b>Minimum</b>	64	33	22	6	13
<b>Average</b>	230.90	151.95	47.00	12.97	23.31
<b>Standard (24 Hrs)</b>	<b>500</b>	<b>250</b>		<b>120</b>	<b>120</b>
<b>Standard (Annual)</b>	<b>430</b>	<b>215</b>		<b>80</b>	<b>80</b>

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**JOB NO.750001**

**Table:39**  
**Area: Kaniha**  
**Project: Kaniha OCP**  
**Monitoring Station: North East Side of Project Office**  
*All values are in  $\mu\text{g}/\text{m}^3$*

Date of Sampling	SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
22-May-20	187	193	33	12.26	14.69
08-Jun-20	156	132	23	10.26	11.22
19-Jun-20	124	79	25	5.28	17.36
06-Jul-20	73	41	22	11.39	18.71
17-Jul-20	144	66	20	10.25	19.24
08-Aug-20	95	58	23	9.98	16.53
24-Aug-20	89	52	17	7.73	19.37
12-Sep-20	92	66	22	8.42	20.36
29-Sep-20	126	86	26	9.78	17.81
03-Oct-20	126	84	32	10.93	24.59
17-Oct-20	138	80	37	9.39	20.84
02-Nov-20	165	104	38	10.81	23.71
16-Nov-20	260	178	67	8.72	21.28
03-Dec-20	246	174	62	11.97	33.17
16-Dec-20	307	227	72	16.13	23.46
02-Jan-21	369	241	64	19.59	40.73
14-Jan-21	409	235	63	19.59	46.74
02-Feb-21	326	193	76	16.85	44.88
17-Feb-21	116	66	33	21.46	49.49
03-Mar-21	329	197	67	24.29	51.15
17-Mar-21	372	247	73	30.52	55.71
<b>Brief Statistics</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
<b>Maximum</b>	409	247	76	30.52	55.71
<b>Minimum</b>	73	41	17	5	11
<b>Average</b>	202.33	133.29	42.62	13.60	28.14
<b>Standard (24 Hrs)</b>	<b>500</b>	<b>250</b>		<b>120</b>	<b>120</b>
<b>Standard (Annual)</b>	<b>430</b>	<b>215</b>		<b>80</b>	<b>80</b>

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**JOB NO.750001**

Table:40  
**Area: Kaniha**  
**Project: Kaniha OCP**  
**Monitoring Station: Old Site Office**  
*All values are in  $\mu\text{g}/\text{m}^3$*

Date of Sampling	SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
08-May-20	226	159	40	9.67	17.82
22-May-20	128	94	22	7.54	16.88
08-Jun-20	264	242	25	8.60	19.10
19-Jun-20	98	88	36	15.63	25.69
06-Jul-20	81	55	35	7.60	15.31
17-Jul-20	78	57	27	7.89	12.27
08-Aug-20	99	64	24	11.40	16.96
24-Aug-20	82	59	19	8.57	19.59
12-Sep-20	113	77	32	9.79	20.15
30-Sep-20	104	60	20	8.48	16.11
05-Oct-20	138	92	36	14.83	26.22
19-Oct-20	106	72	21	11.27	20.62
03-Nov-20	219	143	68	6.85	22.78
17-Nov-20	259	139	55	10.53	23.35
02-Dec-20	275	158	52	10.55	29.68
17-Dec-20	298	179	57	21.34	22.70
04-Jan-21	307	222	69	15.71	41.15
18-Jan-21	292	209	77	14.74	36.32
01-Feb-21	295	186	63	19.69	40.95
17-Feb-21	309	185	71	19.42	47.05
01-Mar-21	359	268	67	16.06	27.31
15-Mar-21	312	209	55	19.08	27.62
<b>Brief Statistics</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
<b>Maximum</b>	359	268	77	21.34	47.05
<b>Minimum</b>	78	55	19	7	12
<b>Average</b>	201.91	137.14	44.14	12.51	24.80
<b>Standard (24 Hrs)</b>	<b>500</b>	<b>250</b>		<b>120</b>	<b>120</b>
<b>Standard (Annual)</b>	<b>430</b>	<b>215</b>		<b>80</b>	<b>80</b>

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**JOB NO.750001**

**Table:41**  
**Area: Kaniha**  
**Project: Kaniha OCP**  
**Monitoring Station: Project Office**  
*All values are in  $\mu\text{g}/\text{m}^3$*

Date of Sampling	SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
08-May-20	216	152	35	31.78	16.69
22-May-20	176	130	22	11.07	18.2
08-Jun-20	181	156	41	7.81	10.67
19-Jun-20	162	125	27	9.15	28.36
07-Jul-20	86	44	21	8.96	21.74
18-Jul-20	147	83	31	10.79	10.9
08-Aug-20	123	64	24	13.02	28.24
24-Aug-20	96	64	18	8.91	14.85
11-Sep-20	85	56	18	11.98	17.78
30-Sep-20	104	64	24	7.73	20.58
05-Oct-20	180	88	40	9.85	18.42
19-Oct-20	275	188	26	9.25	17.78
03-Nov-20	210	122	65	10.5	24.74
17-Nov-20	241	152	60	12.69	19.12
03-Dec-20	305	187	53	10.22	24.51
17-Dec-20	285	163	50	16.19	19.87
04-Jan-21	239	156	69	17.31	39.3
18-Jan-21	289	163	61	19.6	24.64
01-Feb-21	329	154	69	17.55	28.83
16-Feb-21	380	186	61	21.44	41.79
01-Mar-21	543	281	50	16.1	25.05
15-Mar-21	333	201	46	17.88	35.04
<b>Brief Statistics</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
<b>Maximum</b>	543	281	69	31.78	41.79
<b>Minimum</b>	85	44	18	8	11
<b>Average</b>	226.59	135.41	41.41	13.63	23.05
<b>Standard (24 Hrs)</b>	<b>500</b>	<b>250</b>		<b>120</b>	<b>120</b>
<b>Standard (Annual)</b>	<b>430</b>	<b>215</b>		<b>80</b>	<b>80</b>

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**JOB NO.750001**

Table: 42  
**Area: Kaniha**  
**Project: Kaniha OCP**  
**Monitoring Station: West of Mine Quarry**  
*All values are in  $\mu\text{g}/\text{m}^3$*

Date of Sampling	SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
11-May-20	298	204	43	9.76	20.19
23-May-20	130	100	21	10.45	22.99
09-Jun-20	57	46	26	9.63	15.54
20-Jun-20	132	114	30	11.32	20.36
07-Jul-20	120	92	31	9.09	17.93
18-Jul-20	241	170	23	11.72	16.05
08-Aug-20	95	63	23	7.30	13.41
24-Aug-20	108	70	26	10.08	21.65
12-Sep-20	78	48	19	10.21	14.68
24-Sep-20	139	91	40	9.77	18.57
03-Oct-20	168	115	32	11.85	20.96
17-Oct-20	103	76	25	11.45	26.07
02-Nov-20	198	129	76	9.62	18.78
16-Nov-20	275	165	63	12.12	25.20
02-Dec-20	269	149	65	12.18	27.00
16-Dec-20	314	184	69	23.55	33.93
02-Jan-21	272	148	40	19.54	28.59
14-Jan-21	246	171	50	19.97	46.49
02-Feb-21	293	168	81	19.19	37.22
17-Feb-21	317	196	61	27.11	41.34
03-Mar-21	446	286	86	15.38	38.63
17-Mar-21	198	152	61	29.05	50.41
<b>Brief Statistics</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
<b>Maximum</b>	446	286	86	29.05	50.41
<b>Minimum</b>	57	46	19	7	13
<b>Average</b>	204.41	133.50	45.05	14.11	26.18
<b>Standard (24 Hrs)</b>	<b>500</b>	<b>250</b>		<b>120</b>	<b>120</b>
<b>Standard (Annual)</b>	<b>430</b>	<b>215</b>		<b>80</b>	<b>80</b>

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**JOB NO.750001**

**Table:43**  
**Area: Kaniha**  
**Project: Kaniha OCP**  
**Monitoring Station: South of Proposed Quarry Limit of KOCP**  
*All values are in  $\mu\text{g}/\text{m}^3$*

Date of Sampling	SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
23-May-20	136	87	17	11.22	21.08
06-Jun-20	100	48	32	11.87	20.29
07-Jun-20	94	83	21	10.79	14.75
08-Jun-20	154	70	21	12.04	17.63
09-Jun-20	92	61	38	14.81	15.57
19-Jun-20	113	62	26	10.55	18.49
20-Jun-20	126	82	20	11.32	16.89
24-Jun-20	107	67	27	5.17	18.88
25-Jun-20	81	38	21	9.28	17.36
04-Jul-20	Strike				
05-Jul-20	Movement Restriction Due to Covid-19				
10-Jul-20	127	58	24	8.65	14.86
11-Jul-20	122	62	20	10.45	17.81
20-Jul-20	158	61	31	8.77	20
21-Jul-20	137	62	28	8.27	16.14
24-Jul-20	109	70	26	8.85	12.36
25-Jul-20	113	88	29	13.89	37.65
29-Jul-20	109	85	34	13.77	19.14
30-Jul-20	75	46	42	10.44	20.58
06-Aug-20	84	68	33	15.59	15.91
07-Aug-20	139	92	44	11.21	19.45
12-Aug-20	107	76	36	13.07	17
13-Aug-20	95	64	29	11.59	15.64
21-Aug-20	97	66	28	7.79	20.28
22-Aug-20	83	51	24	8.6	13.43
27-Aug-20	113	72	27	7.22	19.22
28-Aug-20	91	55	24	6.79	18.84
03-Sep-20	105	73	29	12.91	19.03
04-Sep-20	129	88	34	9.38	16.34
10-Sep-20	114	64	23	11.58	20.17
11-Sep-20	96	57	25	10.68	19.37
19-Sep-20	142	90	27	9.93	20.75
21-Sep-20	130	76	23	12.41	15.43
25-Sep-20	114	72	24	6.64	17.73
26-Sep-20	137	84	28	9.76	4.68
28-Sep-20	134	88	29	12.89	18.13
05-Oct-20	110	60	21	14.19	20.77
06-Oct-20	98	57	19	14.49	21.54
12-Oct-20	128	92	32	25.22	33.64
13-Oct-20	110	72	28	6.78	17.71
19-Oct-20	98	66	19	9.15	23.44
20-Oct-20	104	72	23	9.34	26.58

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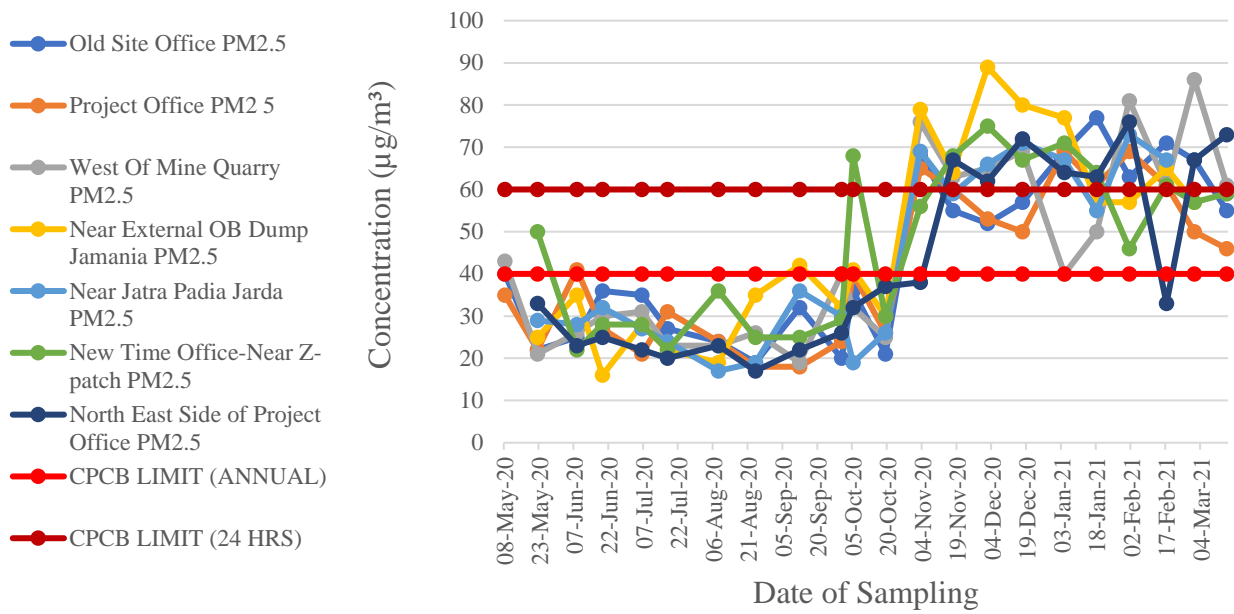
**JOB NO.750001**

27-Oct-20	123	77	28	12.16	23.95
03-Nov-20	144	88	53	16.63	41.5
04-Nov-20	129	86	55	20.36	46.41
09-Nov-20	118	77	49	6.47	18.35
10-Nov-20	141	82	54	14.97	48.42
17-Nov-20	127	65	39	9.42	19.29
18-Nov-20	123	77	44	11.4	22.13
23-Nov-20	138	76	47	9.53	29.72
24-Nov-20	126	70	42	12.83	26.67
30-Nov-20	149	88	48	10.22	25.86
02-Dec-20	178	91	55	15.13	22.63
09-Dec-20	158	79	43	8.9	21.84
10-Dec-20	150	72	39	11.36	25.18
14-Dec-20	163	94	55	18.03	32.8
15-Dec-20	144	86	49	22.87	42.24
22-Dec-20	161	89	42	14	43.97
23-Dec-20	149	84	47	17.02	32.83
28-Dec-20	169	87	50	20.89	45.78
29-Dec-20	173	92	53	27.78	31.75
05-Jan-21	139	83	51	24.91	51.96
06-Jan-21	159	92	49	17.32	34.89
12-Jan-21	156	90	53	20.16	46.56
13-Jan-21	144	88	46	19.62	44.96
19-Jan-21	157	78	45	24.05	48.45
20-Jan-21	173	83	49	21.5	33.48
25-Jan-21	189	92	52	25.95	55.45
27-Jan-21	177	86	50	18.04	31.5
01-Feb-21	202	82	51	32.73	54.9
02-Feb-21	216	92	47	15.29	44.88
08-Feb-21	200	88	52	25.57	42.89
09-Feb-21	167	83	50	26.93	38.71
16-Feb-21	137	83	45	23.7	32.11
17-Feb-21	156	76	39	24.31	47.11
22-Feb-21	178	84	49	26.06	44.84
23-Feb-21	162	89	52	26.66	33.28
01-Mar-21	177	81	50	33.02	52.51
02-Mar-21	168	87	46	27.13	41.86
08-Mar-21	147	78	47	31.01	59.47
09-Mar-21	153	81	43	35.34	44.83
22-Mar-21	172	81	51	36.97	65.3
<b>Brief Statistics</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
<b>Maximum</b>	216	94	55	36.97	65.3
<b>Minimum</b>	75	38	17	5	5
<b>Average</b>	135.04	76.53	37.44	15.67	28.82
<b>Standard (24 Hrs)</b>		<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>
<b>Standard (Annual)</b>		<b>60</b>	<b>40</b>	<b>50</b>	<b>40</b>

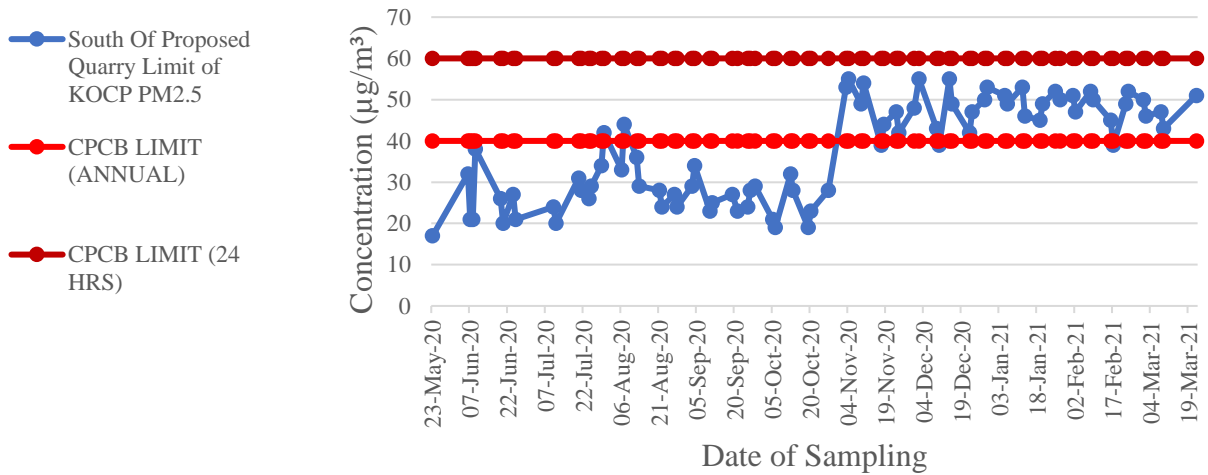
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**JOB NO.750001**

Graph Showing PM<sub>2.5</sub> for Kaniha OCP



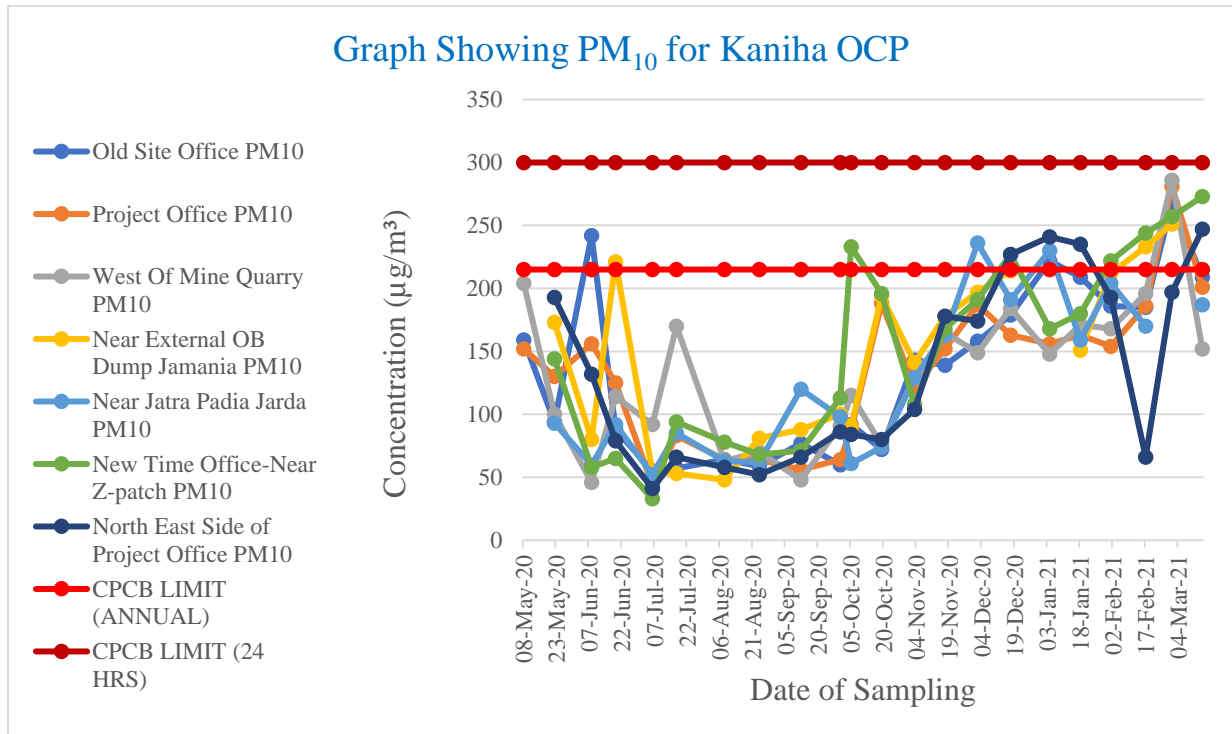
Graph Showing PM<sub>2.5</sub> for Kaniha OCP



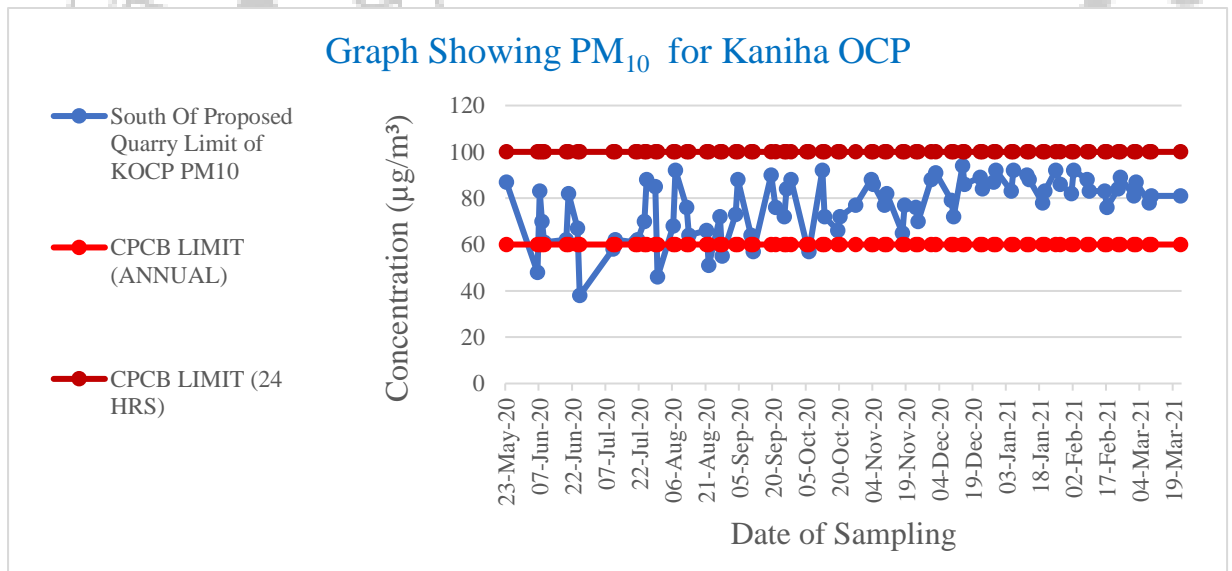
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Graph Showing PM<sub>10</sub> for Kaniha OCP



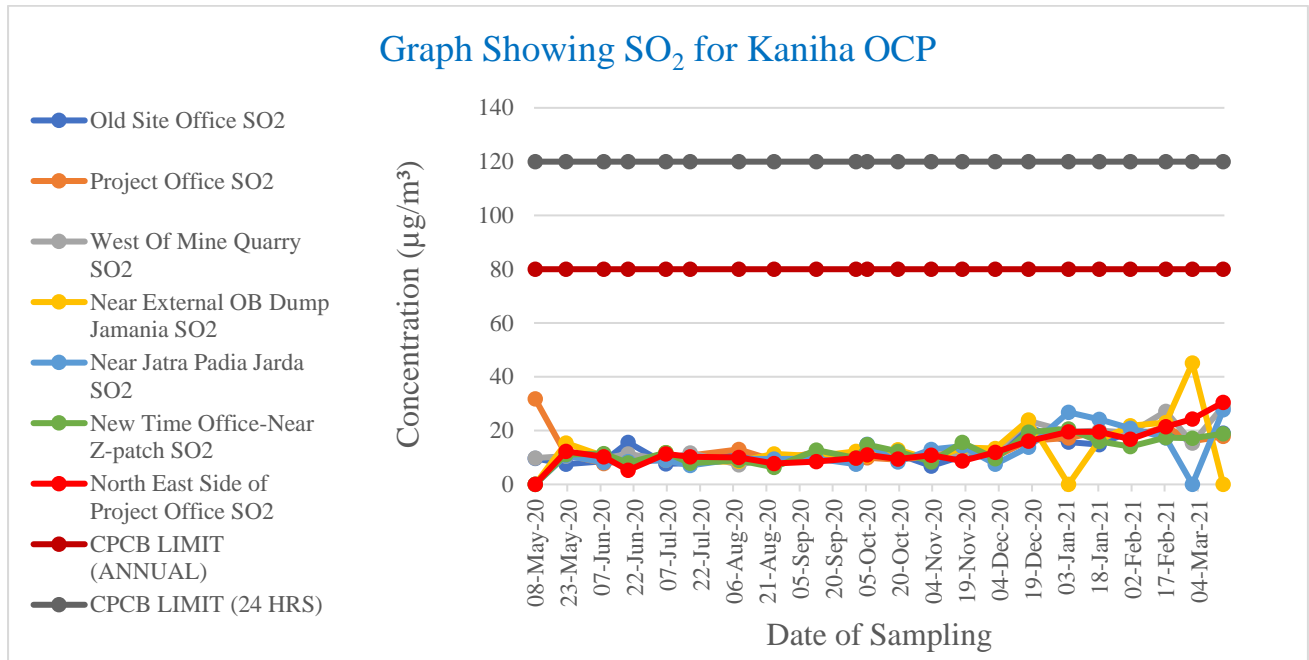
Graph Showing PM<sub>10</sub> for Kaniha OCP



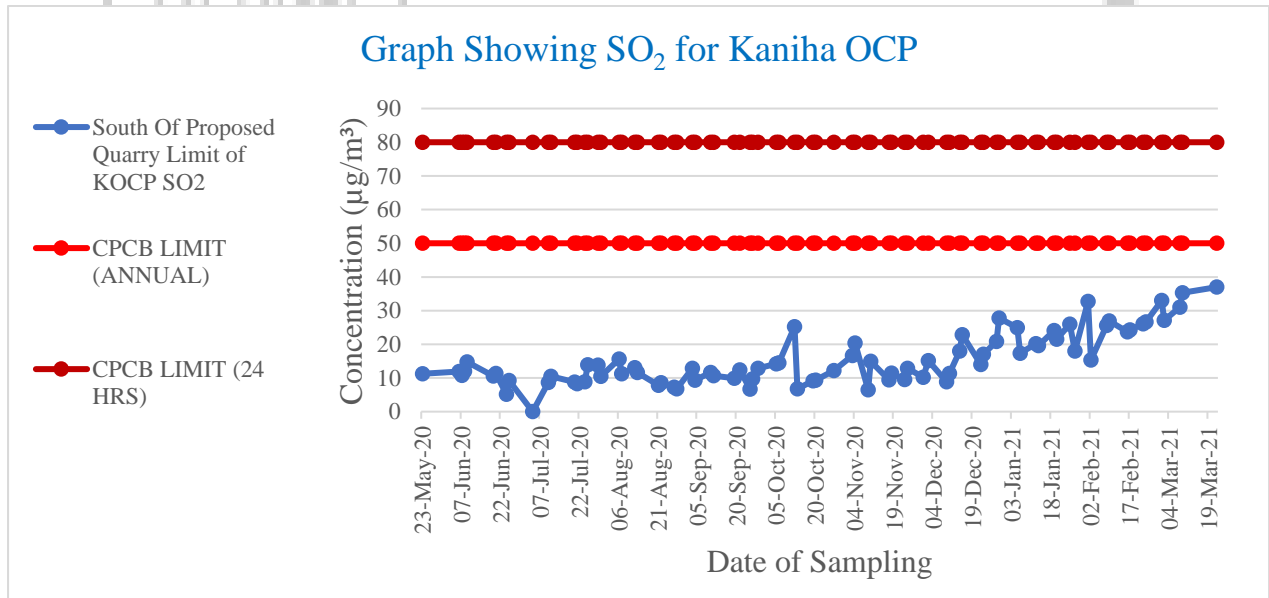
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JOB NO.750001

Graph Showing SO<sub>2</sub> for Kaniha OCP



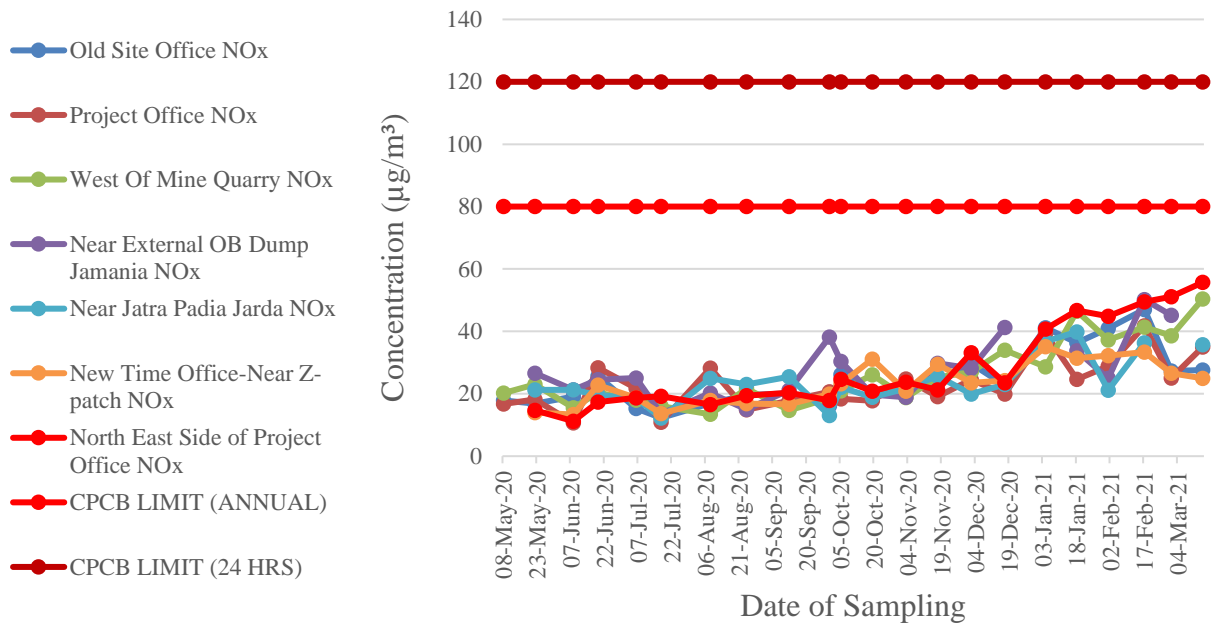
Graph Showing SO<sub>2</sub> for Kaniha OCP



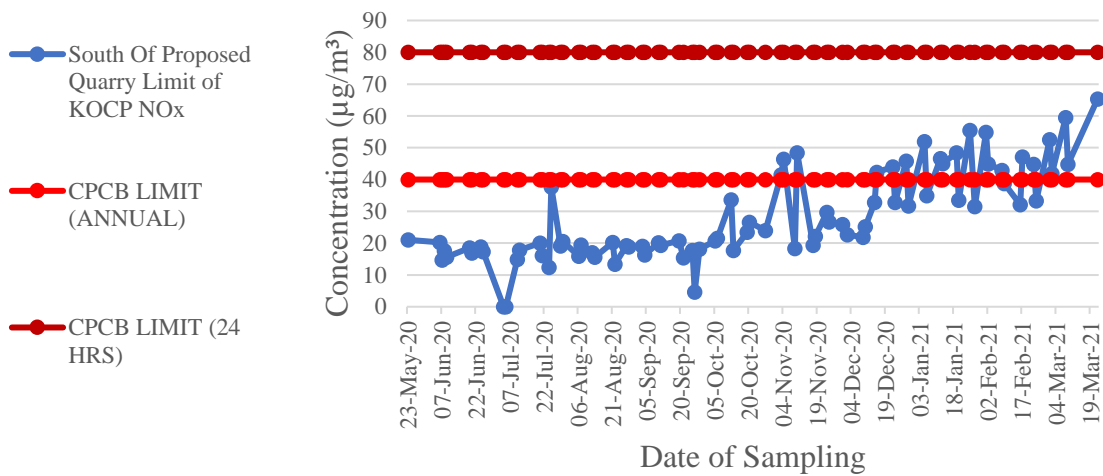
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JOB NO.750001

Graph Showing NO<sub>x</sub> for Kaniha OCP



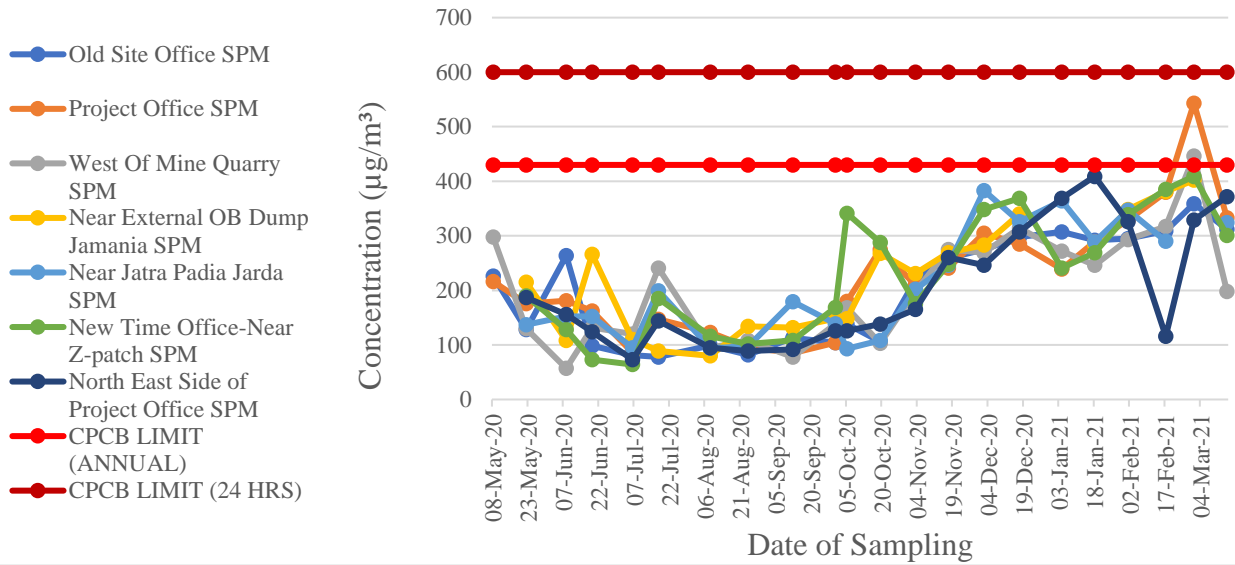
Graph Showing NO<sub>x</sub> for Kaniha OCP



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Graph Showing SPM for Kaniha OCP



Graph Showing SPM for Kaniha OCP

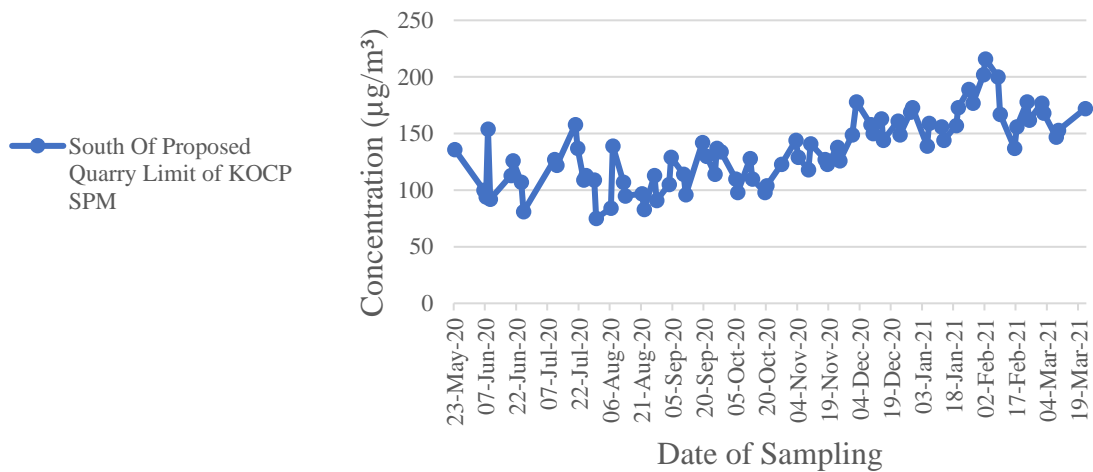


Table:44  
**Area: Hingula**  
**Project: Hingula OCP**  
**Monitoring Station: South-West Side of Mine**  
*All values are in  $\mu\text{g}/\text{m}^3$*

Date of Sampling	SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
26-May-20	99	66	27	11.86	20.42
09-Jun-20	63	50	32	7.47	12.08
25-Jun-20	149	89	34	9.09	14.47
08-Jul-20	70	41	26	17.57	24.74
22-Jul-20	83	50	21	6.83	10.58
07-Aug-20	166	81	29	11.23	19.48
21-Aug-20	130	79	27	6.39	17.24
10-Sep-20	76	43	17	8.41	21.58
19-Sep-20	150	65	30	8	21.67
05-Oct-20	89	58	20	9.22	20.75
20-Oct-20	96	62	21	12.13	19.33
04-Nov-20	306	195	82	7.95	13.23
18-Nov-20	248	167	67	9.98	22.52
03-Dec-20	222	131	54	13.12	25.78
17-Dec-20	269	197	30	8.53	31.5
07-Jan-21	369	237	78	16.74	38.41
18-Jan-21	403	245	78	15.62	39.95
03-Feb-21	473	267	76	12.8	19.46
18-Feb-21	394	241	68	22.65	39.61
02-Mar-21	293	178	46	15.92	24.07
17-Mar-21	295	149	68	23.86	31.56
<b>Brief Statistics</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
<b>Maximum</b>	473	267	82	23.86	39.95
<b>Minimum</b>	63	41	17	6	11
<b>Average</b>	211.57	128.14	44.33	12.16	23.26
<b>Standard (24 Hrs)</b>	<b>500</b>	<b>250</b>		<b>120</b>	<b>120</b>
<b>Standard (Annual)</b>	<b>430</b>	<b>215</b>		<b>80</b>	<b>80</b>

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**JOB NO.750001**

Table:45  
**Area: Hingula**  
**Project: Hingula OCP**  
**Monitoring Station: Time Office**  
*All values are in  $\mu\text{g}/\text{m}^3$*

Date of Sampling	SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
11-May-20	267	184	39	11.66	22.46
26-May-20	173	118	29	8.68	23.91
09-Jun-20	88	57	21	7.69	13.90
25-Jun-20	317	244	24	7.78	24.63
07-Jul-20	93	63	21	9.44	18.88
20-Jul-20	125	57	25	9.53	11.57
14-Aug-20	72	54	34	10.48	11.04
29-Aug-20	98	60	19	7.45	14.22
05-Sep-20	87	48	19	7.10	17.78
18-Sep-20	112	72	20	8.44	14.70
05-Oct-20	142	85	30	12.91	25.44
20-Oct-20	278	184	24	10.25	22.88
04-Nov-20	270	172	79	10.20	18.28
18-Nov-20	292	196	70	11.16	20.88
03-Dec-20	364	241	89	14.18	33.67
17-Dec-20	319	194	76	15.17	25.22
04-Jan-21	310	192	77	15.80	29.42
18-Jan-21	397	235	71	14.46	29.02
03-Feb-21	538	273	68	10.07	18.84
18-Feb-21	481	232	71	20.63	37.33
03-Mar-21	567	275	68	16.01	27.89
17-Mar-21	466	251	63	16.32	33.54
<b>Brief Statistics</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
<b>Maximum</b>	567	275	89	20.63	37.33
<b>Minimum</b>	72	48	19	7	11
<b>Average</b>	266.18	158.50	47.14	11.61	22.52
<b>Standard (24 Hrs)</b>	<b>500</b>	<b>250</b>		<b>120</b>	<b>120</b>
<b>Standard (Annual)</b>	<b>430</b>	<b>215</b>		<b>80</b>	<b>80</b>

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**JOB NO.750001**

**Table:46**  
**Area: Hingula**  
**Project: Hingula OCP**  
**Monitoring Station: North East of the Mine, Solda Village**  
*All values are in  $\mu\text{g}/\text{m}^3$*

Date of Sampling	SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
26-May-20	147	95	22	10.36	16.36
05-Jun-20	108	82	28	10.33	24.51
06-Jun-20	93	43	37	8.37	16.99
09-Jun-20	148	99	21	9.67	18.37
10-Jun-20	58	53	38	7.16	17.58
26-Jun-20	109	70	32	9.13	6.01
27-Jun-20	166	80	28	8.16	13.76
04-Jul-20	Strike				
05-Jul-20	Movement Restriction Due to Covid-19				
08-Jul-20	90	58	27	13.65	31.21
09-Jul-20	80	49	29	8.97	18.42
14-Jul-20	111	65	22	12.18	17.28
15-Jul-20	Machine Break Down				
21-Jul-20	102	59	25	10.68	25.34
22-Jul-20	130	85	25	8.79	23.25
23-Jul-20	122	85	23	11.67	12.79
29-Jul-20	98	70	32	9.14	16.68
30-Jul-20	90	54	36	7.61	17.96
06-Aug-20	104	42	23	8.59	20.39
07-Aug-20	102	48	17	11.17	19.38
11-Aug-20	73	67	25	11.47	13.51
12-Aug-20	99	60	21	9.98	21.26
21-Aug-20	96	61	21	11.34	19.68
22-Aug-20	111	77	31	8.13	15.77
25-Aug-20	92	59	24	8.15	19.08
26-Aug-20	88	48	19	6.78	18.82
01-Sep-20	105	60	21	8.42	18.33
02-Sep-20	99	78	30	8.9	21.54
10-Sep-20	106	65	23	11.24	17.12
11-Sep-20	97	63	26	7.97	18.52
15-Sep-20	72	44	18	12.64	24.76
16-Sep-20	87	55	24	7.56	10.07
25-Sep-20	105	73	32	8.87	12.37
26-Sep-20	119	80	25	9.43	18.25
28-Sep-20	129	86	30	11.74	16.35
29-Sep-20	110	68	23	8.42	21.18
09-Oct-20	108	76	27	14.87	22.01
10-Oct-20	123	84	29	14.04	23.97
15-Oct-20	97	68	19	11.71	19.08
16-Oct-20	110	73	21	12.67	19.46
22-Oct-20	125	80	38	15.33	23.26
23-Oct-20	117	69	28	9.97	24.77
30-Oct-20	133	85	30	9.45	18.01
31-Oct-20	144	88	33	12.72	21.07
06-Nov-20	131	79	43	12.11	20.87
07-Nov-20	130	69	47	15	24.94
12-Nov-20	151	88	50	12.29	24.52
13-Nov-20	148	80	44	14.83	21.58
20-Nov-20	124	80	44	9.27	24

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21-Nov-20	138	95	48	10.62	22.07
26-Nov-20	119	76	40	13.19	21.95
27-Nov-20	130	93	44	10.19	22.34
05-Dec-20	161	74	43	10.48	20.11
06-Dec-20	178	87	49	13.61	37.71
11-Dec-20	148	82	46	9.34	26.4
12-Dec-20	174	93	49	12.53	24.99
18-Dec-20	153	84	44	7.8	52.69
19-Dec-20	159	79	47	10.1	30.21
25-Dec-20	167	84	47	13	44.13
26-Dec-20	179	89	51	7.65	24.17
31-Dec-20	171	87	49	15.47	31.55
08-Jan-21	167	84	49	16.87	50.49
09-Jan-21	142	73	39	22.13	43.46
15-Jan-21	194	78	51	27.92	35.21
16-Jan-21	208	83	49	17.47	35.74
22-Jan-21	192	79	47	23.01	43.71
23-Jan-21	172	73	44	29.02	56.7
29-Jan-21	167	71	44	30.37	41.93
30-Jan-21	197	84	53	31.83	37.95
04-Feb-21	173	80	50	29.92	43.91
05-Feb-21	Power failure				
06-Feb-21	216	79	48	29.73	48.55
12-Feb-21	183	77	49	10.63	23.78
20-Feb-21	141	77	39	19.36	39.78
21-Feb-21	156	72	44	17.41	48.98
25-Feb-21	171	65	47	14.49	35.64
26-Feb-21	187	92	53	20.53	34.43
05-Mar-21	208	88	51	16.19	33.58
06-Mar-21	212	79	53	22.72	38.65
12-Mar-21	183	89	49	20.55	47.43
13-Mar-21	166	86	47	22.97	51.4
19-Mar-21	170	68	41	22.19	29.19
20-Mar-21	156	77	47	30.82	41.43
26-Mar-21	183	86	51	28	38.87
27-Mar-21	153	80	46	22.36	25.83
<b>Brief Statistics</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
<b>Maximum</b>	216	99	53	31.83	56.7
<b>Minimum</b>	58	42	17	7	6
<b>Average</b>	136.56	74.60	36.53	14.09	26.86
<b>Standard (24 Hrs)</b>		<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>
<b>Standard (Annual)</b>		<b>60</b>	<b>40</b>	<b>50</b>	<b>40</b>

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**JOB NO.750001**

**Table:47**  
**Area: Hingula**  
**Project: Hingula OCP**  
**Monitoring Station: North of the Mine, Purnapi, Kumunda Village**  
*All values are in  $\mu\text{g}/\text{m}^3$*

Date of Sampling	SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
26-May-20	136	84	26	11.3	18.57
05-Jun-20	71	55	34	12.94	18.42
06-Jun-20	83	45	34	11.68	22.8
09-Jun-20	135	38	30	9.71	17.63
10-Jun-20	93	64	29	9.05	15.47
20-Jun-20	125	75	22	7.92	20.07
21-Jun-20	116	62	26	7.75	17.5
22-Jun-20	97	82	16	7.19	16.54
23-Jun-20	118	79	14	5.97	16.03
04-Jul-20	Strike				
05-Jul-20	96	64	22	9.38	19.23
08-Jul-20	125	88	28	10.41	19.8
09-Jul-20	94	74	23	10.47	20.43
14-Jul-20	133	84	26	13.57	22.29
15-Jul-20	Machine Break Down				
22-Jul-20	98	68	24	7.4	18.23
23-Jul-20	91	65	23	10.12	16.63
29-Jul-20	78	49	25	11.19	14.38
30-Jul-20	79	55	23	10.12	20.08
06-Aug-20	84	53	22	8.16	10.62
07-Aug-20	74	46	24	9.46	12.68
10-Aug-20	88	60	26	10.88	14.15
11-Aug-20	90	55	18	11.57	17.1
21-Aug-20	109	67	31	10.67	20
22-Aug-20	91	52	26	8.15	18.84
25-Aug-20	118	76	36	7.45	16.79
26-Aug-20	117	66	28	10.56	16.65
01-Sep-20	74	49	24	7.94	20.74
02-Sep-20	95	68	29	9.48	20.19
10-Sep-20	124	85	34	9.34	20.15
11-Sep-20	102	57	25	8.05	15.42
14-Sep-20	121	75	28	10.77	13.05
15-Sep-20	112	85	32	7.69	12.72
25-Sep-20	82	51	22	8.45	13.08
26-Sep-20	86	48	21	7.07	10.78
30-Sep-20	120	63	24	8.42	11.73
01-Oct-20	108	73	28	9.34	22.78
09-Oct-20	104	79	31	11.91	22.88
10-Oct-20	98	63	24	11.92	17.33
15-Oct-20	110	73	32	11.98	23.86
16-Oct-20	123	83	35	10.54	16.55
22-Oct-20	128	76	33	11	21.91
23-Oct-20	134	80	34	7.86	20.12
30-Oct-20	143	88	28	10.01	21.19
31-Oct-20	130	82	30	10.29	17.34
06-Nov-20	146	92	52	8.33	16.94
07-Nov-20	161	94	46	13.23	20.38
12-Nov-20	138	76	41	10.01	16.64

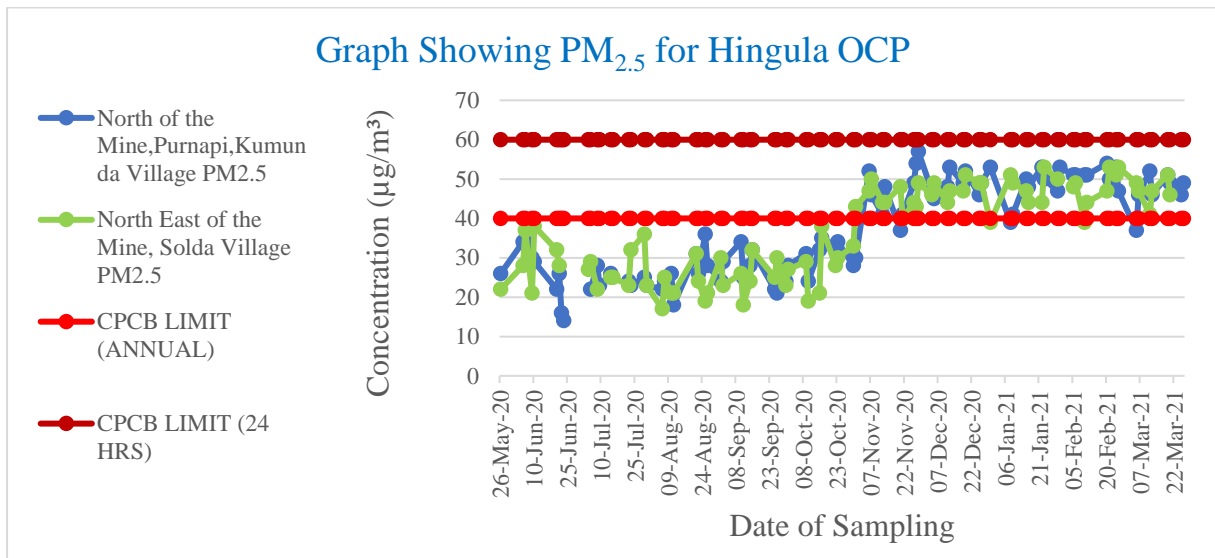
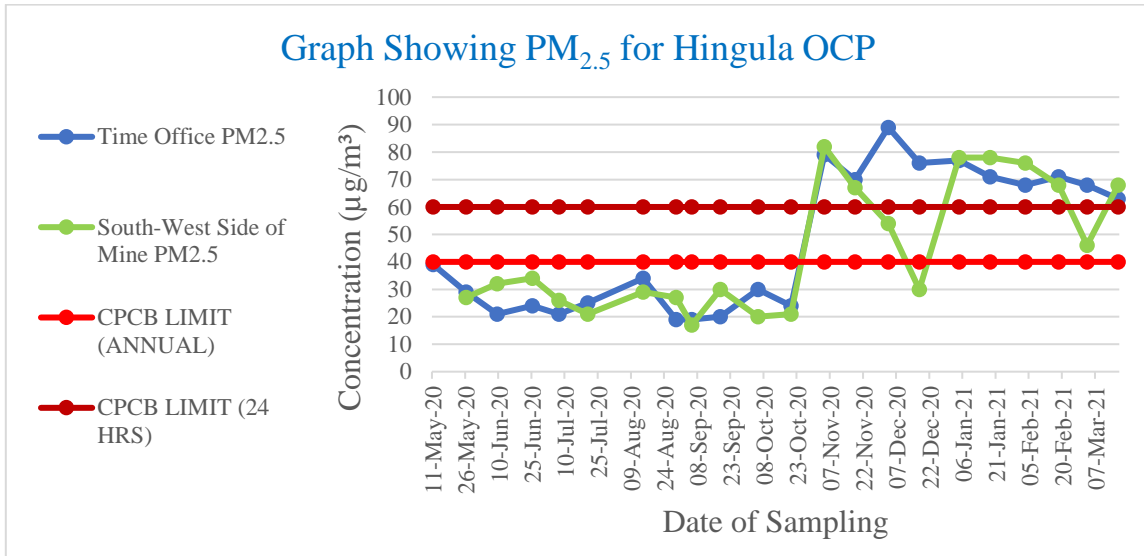
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**JOB NO.750001**

13-Nov-20	151	84	48	9.46	18.47
20-Nov-20	136	79	37	12.98	16.55
21-Nov-20	152	83	41	10.13	20.5
26-Nov-20	147	78	49	11.24	18.92
27-Nov-20	168	86	54	11.87	24.14
28-Nov-20	162	94	57	12.97	22.34
04-Dec-20	188	87	47	8.56	21.69
05-Dec-20	172	77	45	13.46	39.78
11-Dec-20	154	89	48	10.92	28.82
12-Dec-20	165	92	53	15.67	32.57
18-Dec-20	176	93	49	14.53	25.89
19-Dec-20	168	86	52	13.92	40.77
25-Dec-20	183	89	46	11.55	24.2
26-Dec-20	170	81	49	8.92	25.94
30-Dec-20	162	88	53	13.22	29.3
08-Jan-21	157	79	39	18.01	40.19
09-Jan-21	149	83	41	15.61	28.96
15-Jan-21	170	82	50	21.66	51.06
16-Jan-21	159	77	48	24.46	38.2
22-Jan-21	180	94	53	21.44	55.16
23-Jan-21	193	85	50	15.83	31.28
29-Jan-21	188	86	47	31.4	39.47
30-Jan-21	208	91	53	17.38	31.16
05-Feb-21	179	83	51	17.56	36.32
06-Feb-21	217	93	51	16.73	39.09
10-Feb-21	175	92	51	18.28	35.57
11-Feb-21	163	93	51	24.84	36.59
20-Feb-21	147	87	54	29.01	55.35
21-Feb-21	144	81	50	36.06	42.56
24-Feb-21	175	90	53	15.85	30.88
25-Feb-21	155	79	47	15.54	34.5
05-Mar-21	163	77	37	20.04	23.65
06-Mar-21	197	82	46	18.1	33.86
11-Mar-21	188	91	52	24.46	38.4
12-Mar-21	159	90	46	25.08	51.92
19-Mar-21	174	90	51	17.35	29.5
20-Mar-21	186	83	49	25.38	40.89
25-Mar-21	148	61	46	22.98	22.34
26-Mar-21	154	78	49	24.69	25.59
<b>Brief Statistics</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
<b>Maximum</b>	217	94	57	36.06	55.35
<b>Minimum</b>	71	38	14	6	11
<b>Average</b>	136.00	75.99	37.44	13.46	24.70
<b>Standard (24 Hrs)</b>		<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>
<b>Standard (Annual)</b>		<b>60</b>	<b>40</b>	<b>50</b>	<b>40</b>

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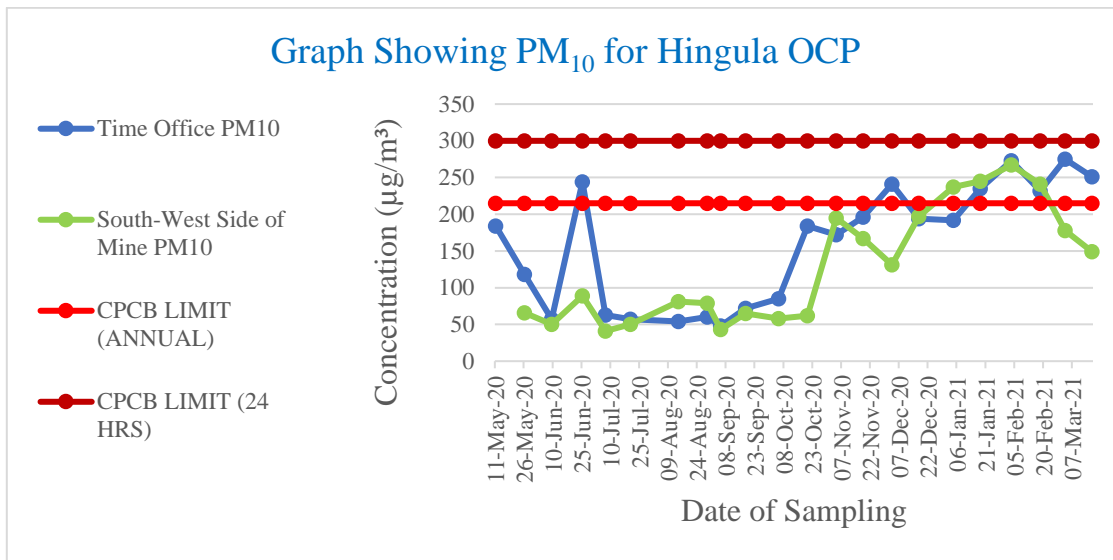
**JOB NO.750001**



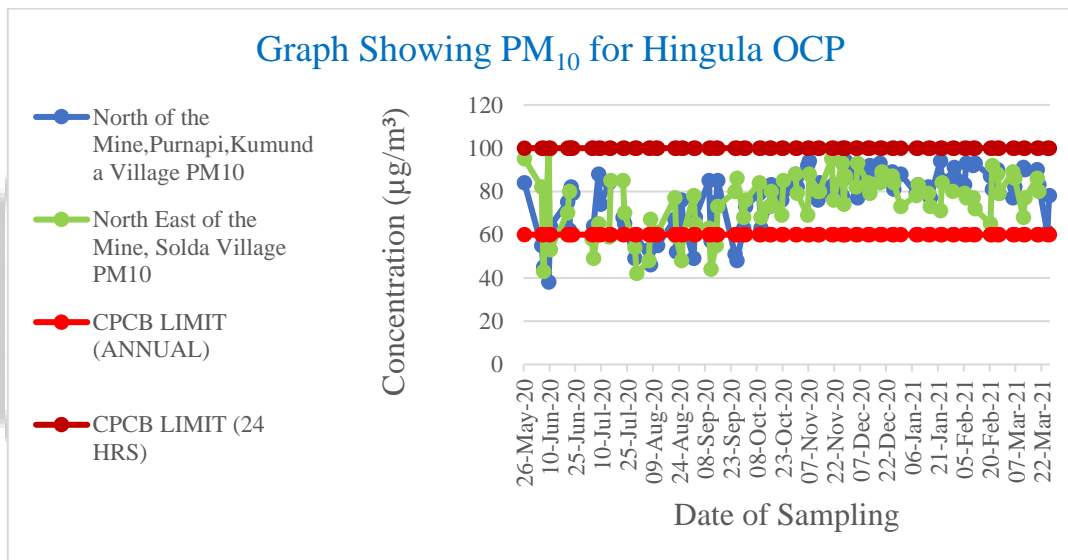
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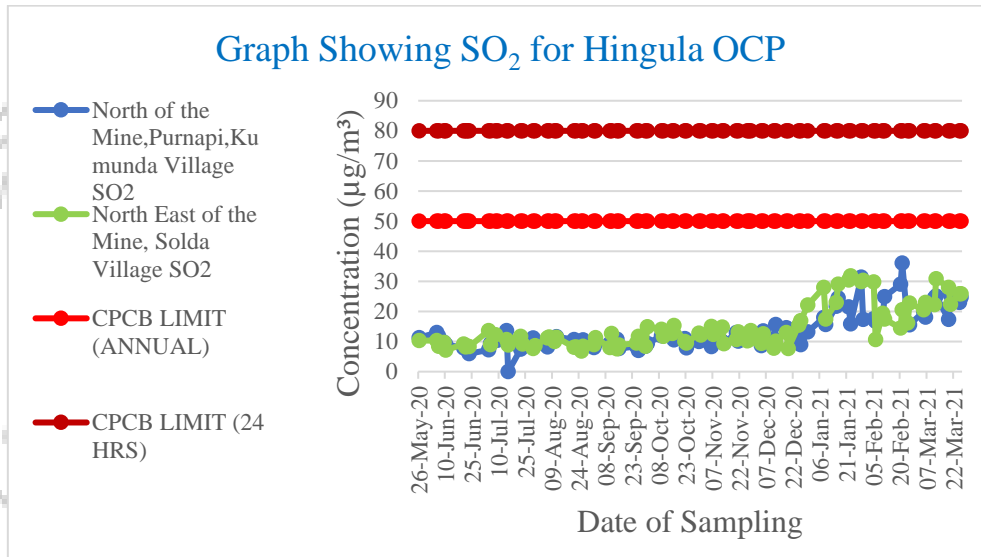
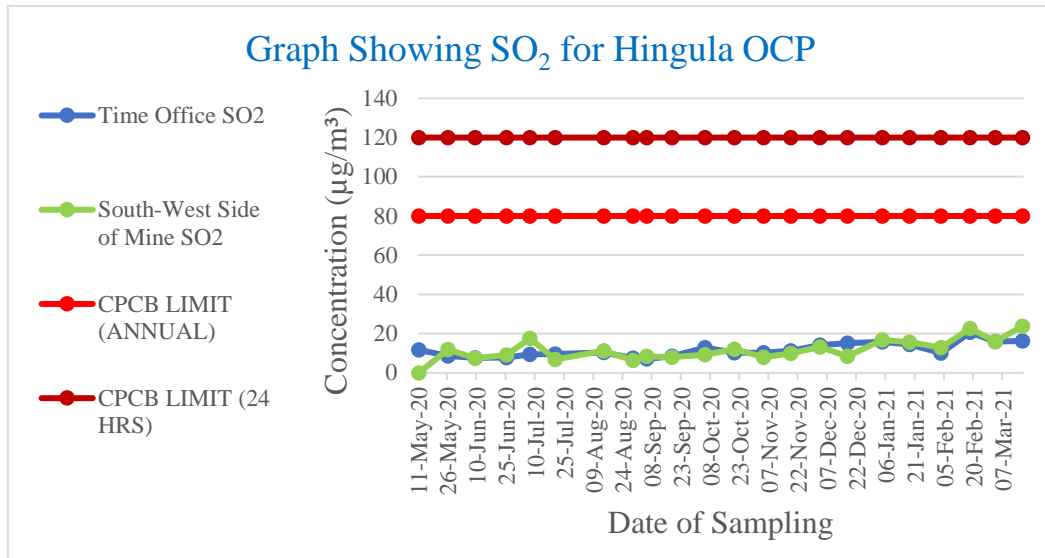
**JOB NO.750001**

Graph Showing PM<sub>10</sub> for Hingula OCP



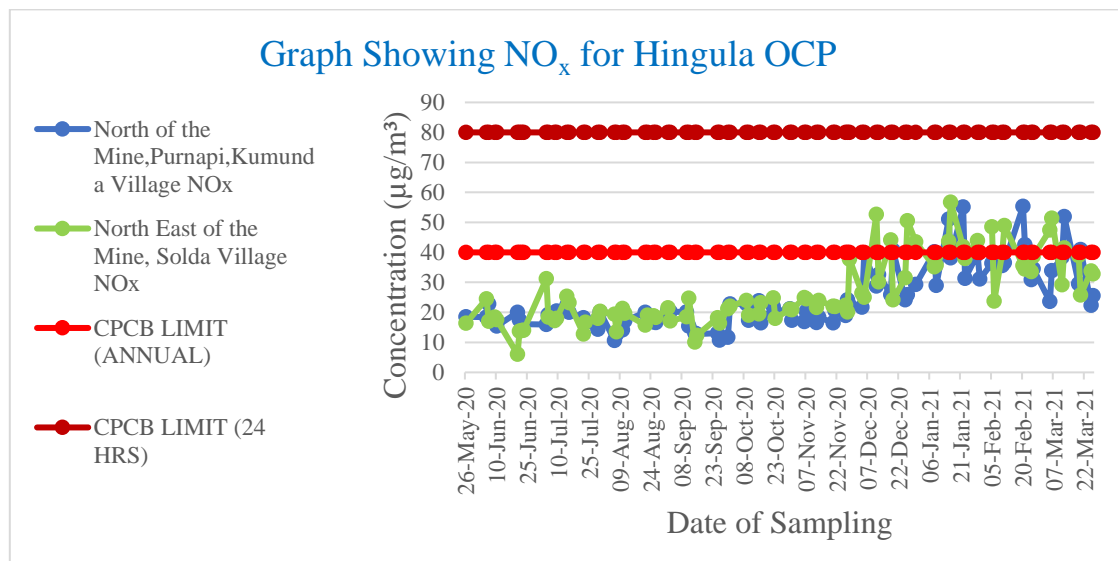
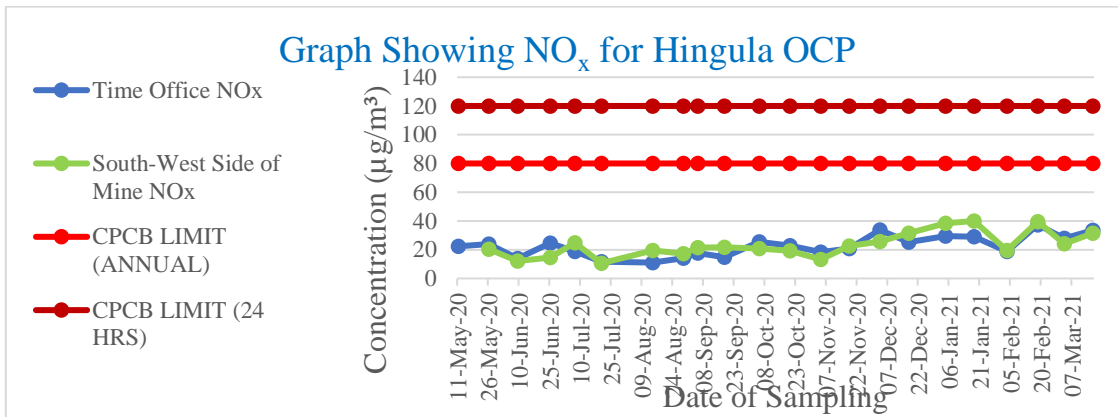
Graph Showing PM<sub>10</sub> for Hingula OCP





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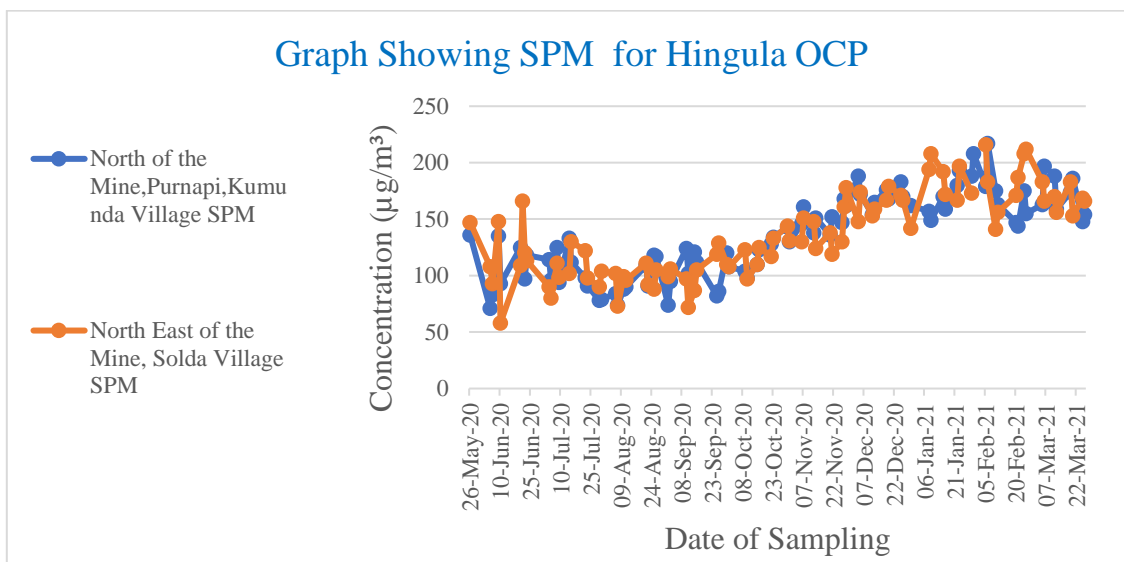
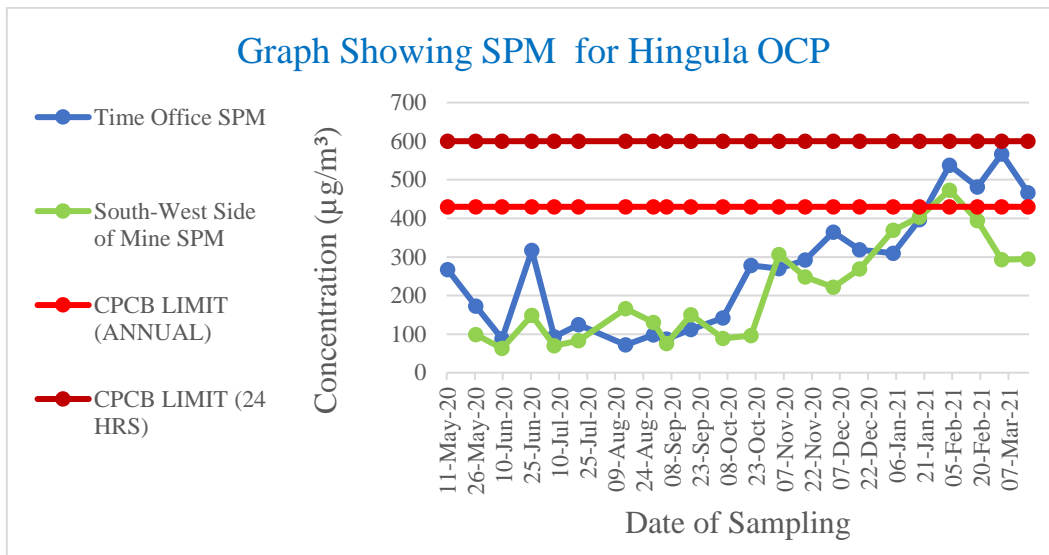
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**JOB NO.750001**

Table: 48

**Area: Hingula****Project: Balram OCP****Monitoring Station: Pump House Near Outsourcing Working Pach & Coal TR***All values are in  $\mu\text{g}/\text{m}^3$* 

Date of Sampling	SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
12-May-20	268	193	33	13.77	17.85
27-May-20	166	135	34	13.99	22.24
11-Jun-20	125	74	32	9.99	24.83
24-Jun-20	239	186	13	11.58	8.16
09-Jul-20	105	43	22	10.77	14.86
23-Jul-20	92	59	21	9.47	13.08
06-Aug-20	94	61	21	9.49	17.95
21-Aug-20	126	77	31	8.55	14.83
10-Sep-20	135	71	24	8.41	18.09
25-Sep-20	98	57	26	8.55	19.84
06-Oct-20	132	83	30	10.09	17.84
21-Oct-20	289	198	32	11.74	16.41
05-Nov-20	337	216	87	11.86	20.45
19-Nov-20	281	162	70	10.19	24.65
07-Dec-20	209	150	57	12.8	30.04
21-Dec-20	369	220	78	21.36	42.36
07-Jan-21	377	217	75	22.43	35.38
21-Jan-21	398	229	63	16.39	44.15
09-Feb-21	287	159	73	16.26	32.73
23-Feb-21	403	229	75	19.49	38.95
09-Mar-21	502	283	77	25.57	59.81
23-Mar-21	498	290	70	18.06	27.18
<b>Brief Statistics</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
<b>Maximum</b>	502	290	87	25.57	59.81
<b>Minimum</b>	92	43	13	8	8
<b>Average</b>	251.36	154.18	47.45	13.67	25.53
<b>Standard (24 Hrs)</b>	<b>600</b>	<b>300</b>	<b>60</b>	<b>120</b>	<b>120</b>
<b>Standard (Annual)</b>	<b>430</b>	<b>215</b>	<b>40</b>	<b>80</b>	<b>80</b>

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**JOB NO.750001**

Table:49  
**Area: Hingula**  
**Project: Balram OCP**  
**Monitoring Station: South West of the Mine**  
*All values are in  $\mu\text{g}/\text{m}^3$*

Date of Sampling	SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
27-May-20	150	83	29	7.7	15.02
11-Jun-20	214	181	20	8.68	23.73
24-Jun-20	119	69	20	11.48	17.16
10-Jul-20	70	44	23	8.56	17.26
24-Jul-20	81	56	21	8.32	19.87
06-Aug-20	85	54	19	8.38	16.72
27-Aug-20	148	88	40	11.77	20.41
03-Sep-20	121	67	19	9.39	16.35
25-Sep-20	138	83	33	8.76	10.41
05-Oct-20	136	98	37	10.89	18.6
21-Oct-20	268	176	30	7.52	20.96
04-Nov-20	287	186	80	10.88	21.57
19-Nov-20	296	196	73	12.09	17.6
07-Dec-20	272	174	64	10.64	25.07
21-Dec-20	-	-	-	-	-
04-Jan-21	246	160	81	19.27	26.24
21-Jan-21	383	244	69	11.45	36.23
10-Feb-21	484	231	73	16.14	41.61
25-Feb-21	396	219	74	18.26	23.67
09-Mar-21	373	256	81	21.43	32.81
23-Mar-21	349	214	66	17.58	37.37
<b>Brief Statistics</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
<b>Maximum</b>	484	256	81	21.43	41.61
<b>Minimum</b>	70	44	19	8	10
<b>Average</b>	230.80	143.95	47.60	11.96	22.93
<b>Standard (24 Hrs)</b>	<b>600</b>	<b>300</b>	<b>60</b>	<b>120</b>	<b>120</b>
<b>Standard (Annual)</b>	<b>430</b>	<b>215</b>	<b>40</b>	<b>80</b>	<b>80</b>

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**JOB NO.750001**

**Table:50**  
**Area: Hingula**  
**Project: Balram OCP**  
**Monitoring Station: North West of the Mine, Solada Village (Reported only)**  
*All values are in  $\mu\text{g}/\text{m}^3$*

Date of Sampling	SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
26-May-20	147	95	22	10.36	16.36
05-Jun-20	108	82	28	10.33	24.51
06-Jun-20	93	43	37	8.37	16.99
09-Jun-20	148	99	21	9.67	18.37
10-Jun-20	58	53	38	7.16	17.58
26-Jun-20	109	70	32	9.13	6.01
27-Jun-20	166	80	28	8.16	13.76
04-Jul-20	Strike				
05-Jul-20	Movement Restriction Due to Covid-19				
08-Jul-20	90	58	27	13.65	31.21
09-Jul-20	80	49	29	8.97	18.42
14-Jul-20	111	65	22	12.18	17.28
15-Jul-20	Machine Break Down				
21-Jul-20	102	59	25	10.68	25.34
22-Jul-20	130	85	25	8.79	23.25
23-Jul-20	122	85	23	11.67	12.79
29-Jul-20	98	70	32	9.14	16.68
30-Jul-20	90	54	36	7.61	17.96
06-Aug-20	104	42	23	8.59	20.39
07-Aug-20	102	48	17	11.17	19.38
11-Aug-20	73	67	25	11.47	13.51
12-Aug-20	99	60	21	9.98	21.26
21-Aug-20	96	61	21	11.34	19.68
22-Aug-20	111	77	31	8.13	15.77
25-Aug-20	92	59	24	8.15	19.08
26-Aug-20	88	48	19	6.78	18.82
01-Sep-20	105	60	21	8.42	18.33
02-Sep-20	99	78	30	8.9	21.54
10-Sep-20	106	65	23	11.24	17.12
11-Sep-20	97	63	26	7.97	18.52
15-Sep-20	72	44	18	12.64	24.76
16-Sep-20	87	55	24	7.56	10.07
25-Sep-20	105	73	32	8.87	12.37
26-Sep-20	119	80	25	9.43	18.25
28-Sep-20	129	86	30	11.74	16.35
29-Sep-20	110	68	23	8.42	21.18
09-Oct-20	108	76	27	14.87	22.01
10-Oct-20	123	84	29	14.04	23.97
15-Oct-20	97	68	19	11.71	19.08
16-Oct-20	110	73	21	12.67	19.46
22-Oct-20	125	80	38	15.33	23.26
23-Oct-20	117	69	28	9.97	24.77
30-Oct-20	133	85	30	9.45	18.01
31-Oct-20	144	88	33	12.72	21.07
06-Nov-20	131	79	43	12.11	20.87
07-Nov-20	130	69	47	15	24.94
12-Nov-20	151	88	50	12.29	24.52
13-Nov-20	148	80	44	14.83	21.58
20-Nov-20	124	80	44	9.27	24

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**JOB NO.750001**

21-Nov-20	138	95	48	10.62	22.07
26-Nov-20	119	76	40	13.19	21.95
27-Nov-20	130	93	44	10.19	22.34
05-Dec-20	161	74	43	10.48	20.11
06-Dec-20	178	87	49	13.61	37.71
11-Dec-20	148	82	46	9.34	26.4
12-Dec-20	174	93	49	12.53	24.99
18-Dec-20	153	84	44	7.8	52.69
19-Dec-20	159	79	47	10.1	30.21
25-Dec-20	167	84	47	13	44.13
26-Dec-20	179	89	51	7.65	24.17
31-Dec-20	171	87	49	15.47	31.55
08-Jan-21	167	84	49	16.87	50.49
09-Jan-21	142	73	39	22.13	43.46
15-Jan-21	194	78	51	27.92	35.21
16-Jan-21	208	83	49	17.47	35.74
22-Jan-21	192	79	47	23.01	43.71
23-Jan-21	172	73	44	29.02	56.7
29-Jan-21	167	71	44	30.37	41.93
30-Jan-21	197	84	53	31.83	37.95
04-Feb-21	173	80	50	29.92	43.91
05-Feb-21	Power failure				
06-Feb-21	216	79	48	29.73	48.55
12-Feb-21	183	77	49	10.63	23.78
20-Feb-21	141	77	39	19.36	39.78
21-Feb-21	156	72	44	17.41	48.98
25-Feb-21	171	65	47	14.49	35.64
26-Feb-21	187	92	53	20.53	34.43
05-Mar-21	208	88	51	16.19	33.58
06-Mar-21	212	79	53	22.72	38.65
12-Mar-21	183	89	49	20.55	47.43
13-Mar-21	166	86	47	22.97	51.4
19-Mar-21	170	68	41	22.19	29.19
20-Mar-21	156	77	47	30.82	41.43
26-Mar-21	183	86	51	28	38.87
27-Mar-21	153	80	46	22.36	25.83
<b>Brief Statistics</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
<b>Maximum</b>	216	99	53	31.83	56.7
<b>Minimum</b>	58	42	17	7	6
<b>Average</b>	136.56	74.60	36.53	14.09	26.86
<b>Standard (24 Hrs)</b>		<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>
<b>Standard (Annual)</b>		<b>60</b>	<b>40</b>	<b>50</b>	<b>40</b>

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**JOB NO.750001**

**Table: 51**  
**Area: Hingula**  
**Project: Balram OCP**  
**Monitoring Station: East of the Mine, Natedi Village**  
*All values are in  $\mu\text{g}/\text{m}^3$*

Date of Sampling	SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
27-May-20	95	74	24	9.94	23.81
05-Jun-20	149	98	53	11.07	23.11
06-Jun-20	93	61	32	9.57	21.26
10-Jun-20	68	44	24	13.17	16.44
11-Jun-20	116	68	39	13.13	22.44
20-Jun-20	110	73	30	14.19	9.17
21-Jun-20	148	85	30	11.32	9.95
22-Jun-20	167	92	16	10.88	6.79
23-Jun-20	100	90	33	12.66	7.14
04-Jul-20	Strike				
05-Jul-20	Movement Restriction Due to Covid-19				
08-Jul-20	130	87	37	12.19	15.85
09-Jul-20	128	91	35	10.06	19.01
20-Jul-20	99	70	23	8.3	16.67
21-Jul-20	104	66	29	12.45	19.32
22-Jul-20	127	86	23	10.37	22.15
23-Jul-20	138	94	26	12.48	16.19
29-Jul-20	112	68	24	10.11	16.6
30-Jul-20	98	63	24	11.63	18.23
06-Aug-20	101	58	22	9.63	17.55
07-Aug-20	92	68	26	8.17	13.39
11-Aug-20	87	48	20	12.68	17.6
12-Aug-20	96	63	23	9.87	12.84
21-Aug-20	136	80	29	11.04	26.65
22-Aug-20	118	68	22	13.29	23.06
25-Aug-20	97	52	21	8.33	17.35
26-Aug-20	111	71	25	7.93	22.94
02-Sep-20	97	58	22	12.63	20.16
03-Sep-20	89	50	18	10.13	22.54
10-Sep-20	113	67	29	7.99	20.88
11-Sep-20	93	54	20	8.42	17.11
15-Sep-20	93	56	21	9.93	18.16
16-Sep-20	86	52	19	15.81	27.54
25-Sep-20	80	48	17	8.45	22.08
26-Sep-20	102	66	24	11.12	15.49
30-Sep-20	85	53	18	7.25	14.86
01-Oct-20	98	62	23	8.84	20.38
09-Oct-20	Monitoring Station/Home was under Quarantine				
10-Oct-20	Monitoring Station/Home was under Quarantine				
16-Oct-20	108	66	23	14.79	27.78
17-Oct-20	101	58	27	15.59	23.28
22-Oct-20	138	84	40	12.24	27.85
23-Oct-20	131	70	28	8.87	19.68
31-Oct-20	133	78	36	14.23	20.41
06-Nov-20	141	79	49	11.01	21.97
07-Nov-20	155	88	45	9.76	25.08
12-Nov-20	143	80	46	13.13	21.12
13-Nov-20	160	85	51	14.87	20.86

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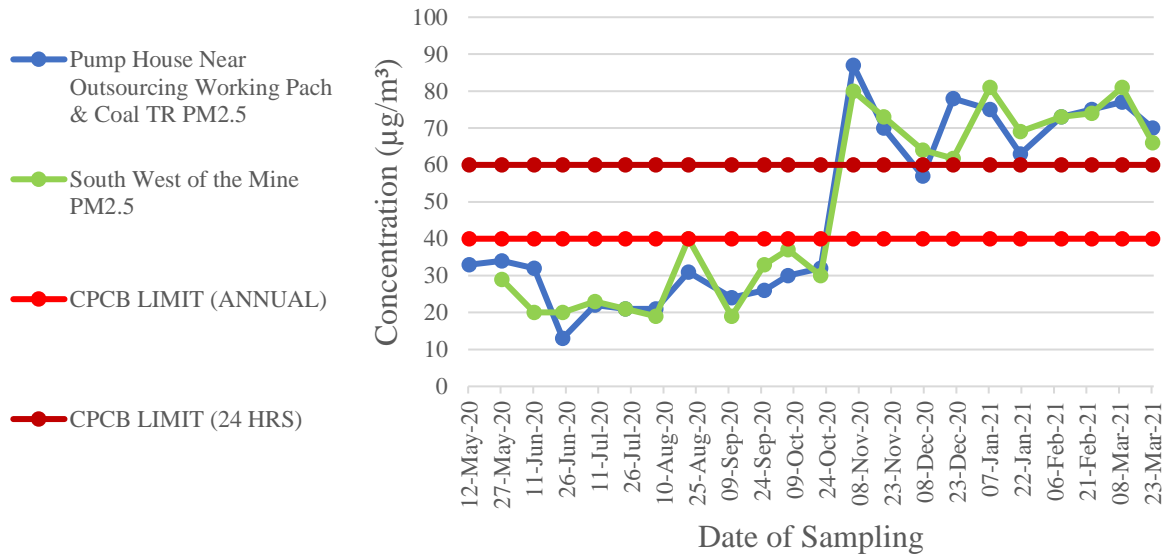
**JOB NO.750001**

20-Nov-20	153	94	49	9.6	18.63
21-Nov-20	140	86	44	11	22.69
26-Nov-20	159	96	51	12.76	20.49
27-Nov-20	140	78	47	12.99	25.07
04-Dec-20	147	80	49	8.71	33.11
05-Dec-20	156	87	52	12.09	30.14
11-Dec-20	Power Failure				
12-Dec-20	172	88	50	13.38	25.95
18-Dec-20	172	87	50	14.48	36.11
19-Dec-20	179	89	52	12.32	40.95
25-Dec-20	159	83	47	11.89	26.35
26-Dec-20	166	88	49	9.3	16.74
30-Dec-20	176	88	54	23.1	39.88
08-Jan-21	140	78	49	25.86	34.67
09-Jan-21	131	72	46	30.7	45.22
16-Jan-21	213	86	50	27.13	35.53
22-Jan-21	192	82	46	29.11	52.36
23-Jan-21	189	76	44	30.78	32.24
24-Jan-21	223	92	52	28.14	40.53
30-Jan-21	183	76	40	26.49	37
05-Feb-21	178	84	52	33.63	56.41
06-Feb-21	156	71	40	10.14	21.05
12-Feb-21	148	80	47	14.44	40.62
13-Feb-21	179	85	50	18.19	25.86
20-Feb-21	169	70	48	18.23	36.7
21-Feb-21	172	69	42	26.58	45.44
25-Feb-21	179	77	46	19.77	21.22
26-Feb-21	194	91	52	24.3	36.88
06-Mar-21	182	75	47	26.17	40.8
07-Mar-21	194	79	49	36.01	60.11
12-Mar-21	206	88	52	27.41	38.7
13-Mar-21	194	79	50	29.97	47.58
19-Mar-21	204	88	51	23.53	35.11
20-Mar-21	219	92	53	30.53	43.41
26-Mar-21	207	83	49	27.87	37.75
27-Mar-21	214	87	48	22.51	36.69
<b>Brief Statistics</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
<b>Maximum</b>	223	98	54	36.01	60.11
<b>Minimum</b>	68	44	16	7	7
<b>Average</b>	141.15	75.65	37.25	15.55	26.34
<b>Standard (24 Hrs)</b>		<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>
<b>Standard (Annual)</b>		<b>60</b>	<b>40</b>	<b>50</b>	<b>40</b>

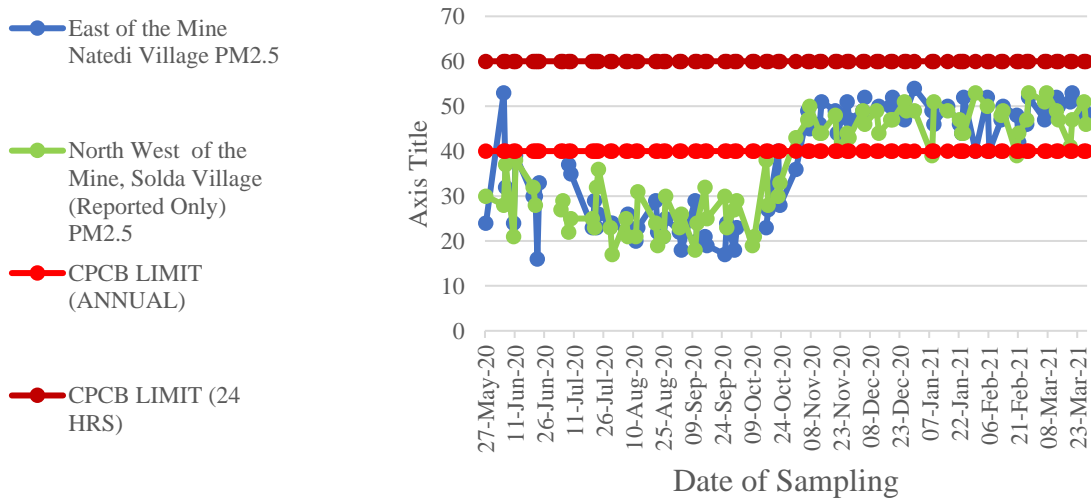
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**JOB NO.750001**

Graph Showing PM<sub>2.5</sub> for Balram OCP



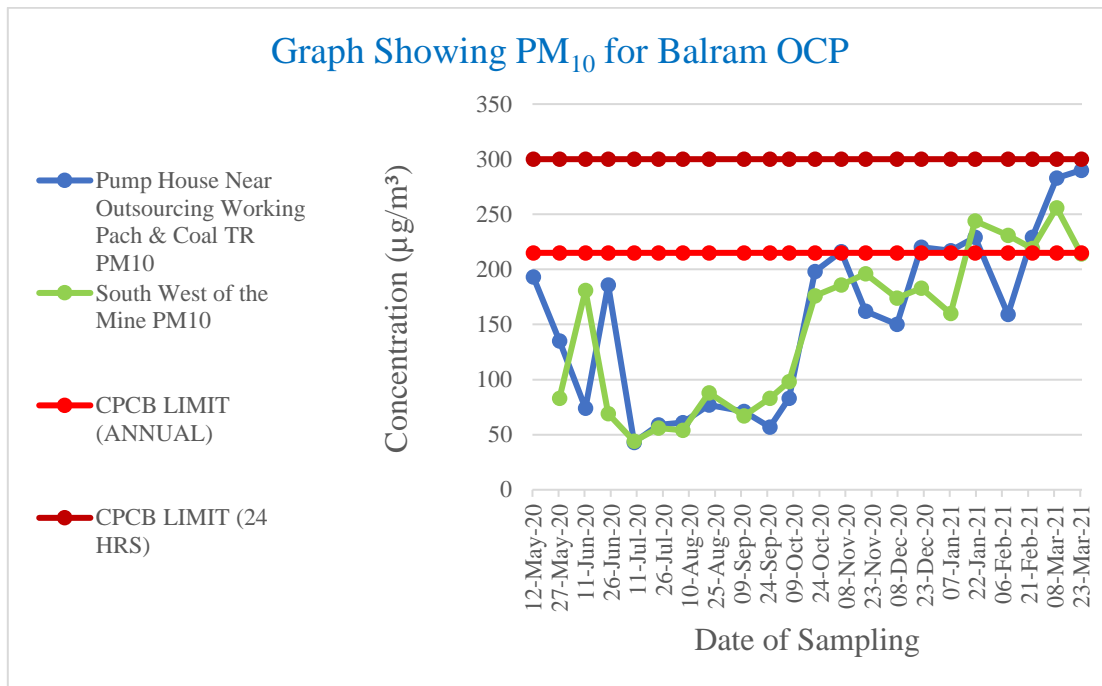
Graph Showing PM<sub>2.5</sub> for Balram OCP



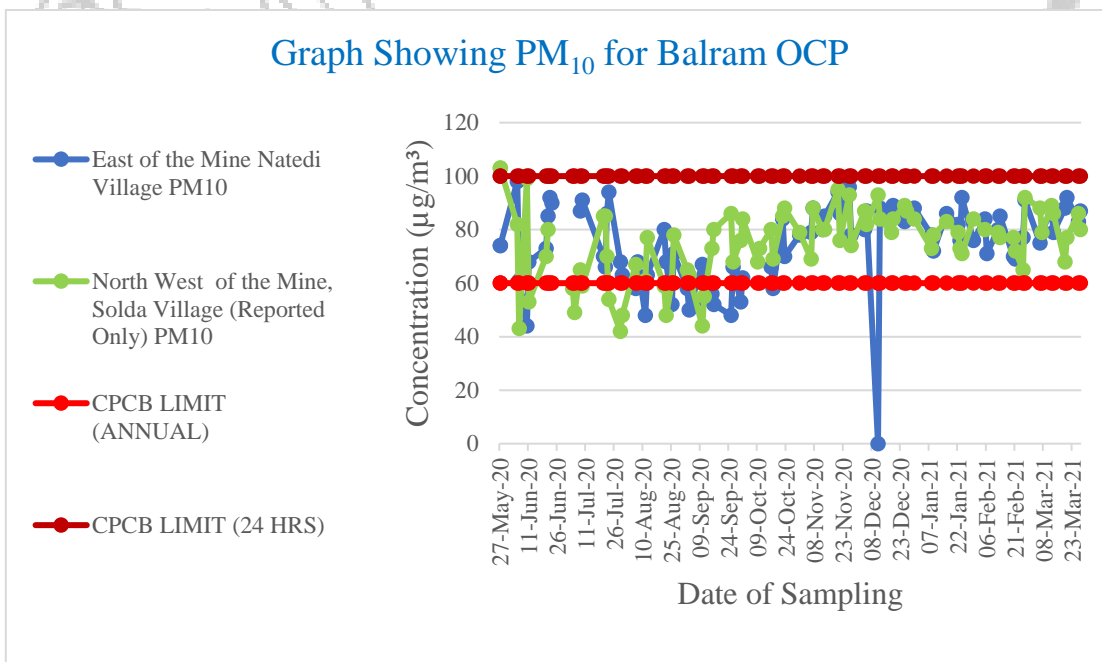
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JOB NO.750001

Graph Showing PM<sub>10</sub> for Balram OCP



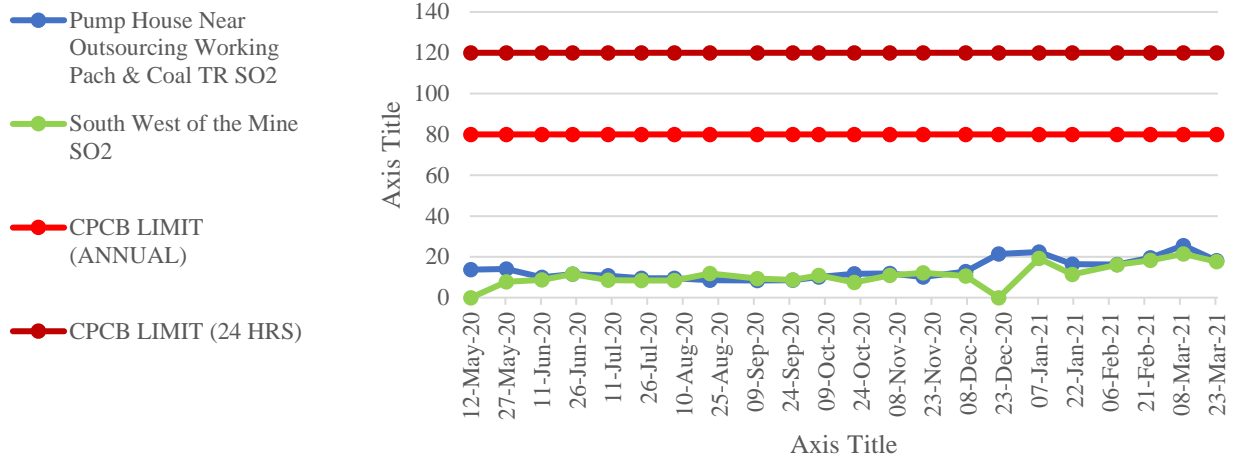
Graph Showing PM<sub>10</sub> for Balram OCP



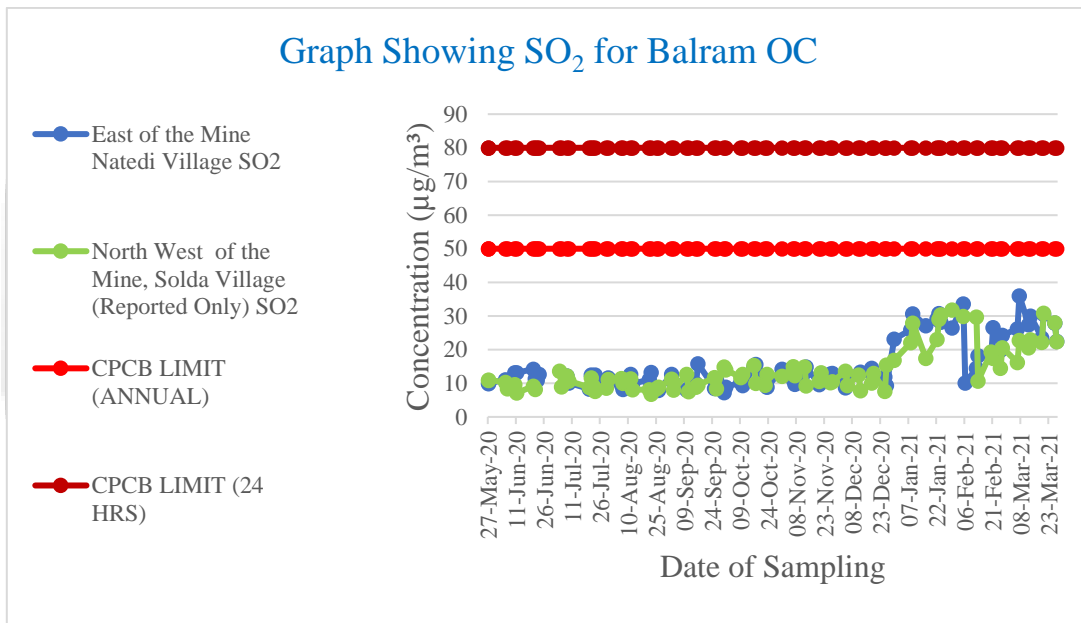
PREPARED BY: CENTRAL MINE PLANNING & DESIGN ISTITUTE LTD., VII, BHUBANESWAR

JOB NO.750001

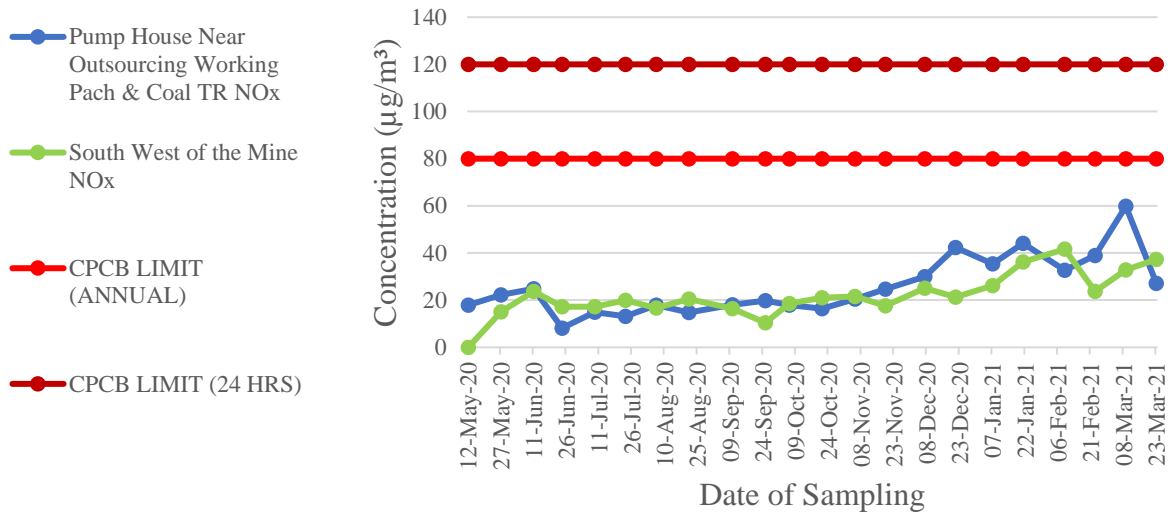
Graph Showing SO<sub>2</sub> for Balram OCP



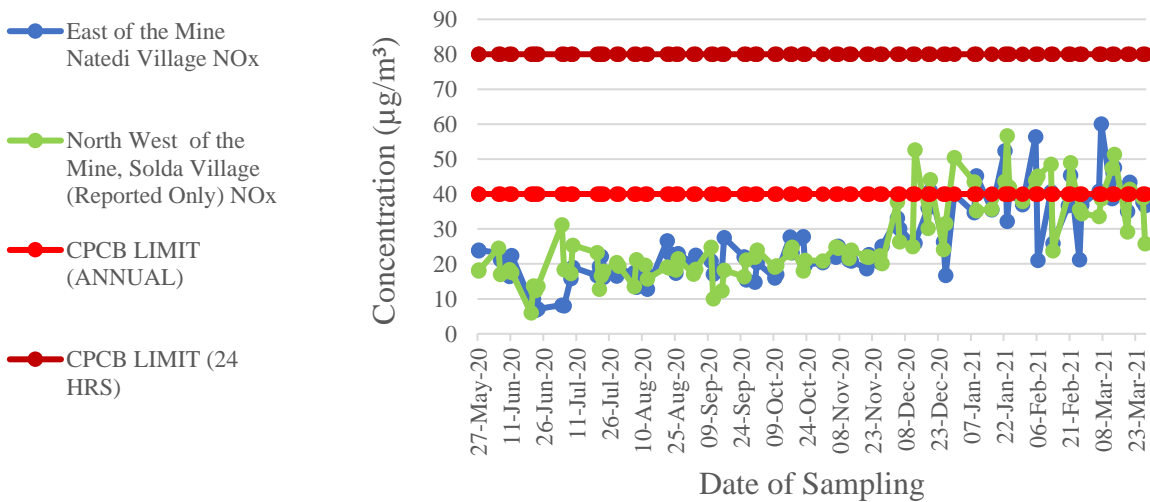
Graph Showing SO<sub>2</sub> for Balram OC



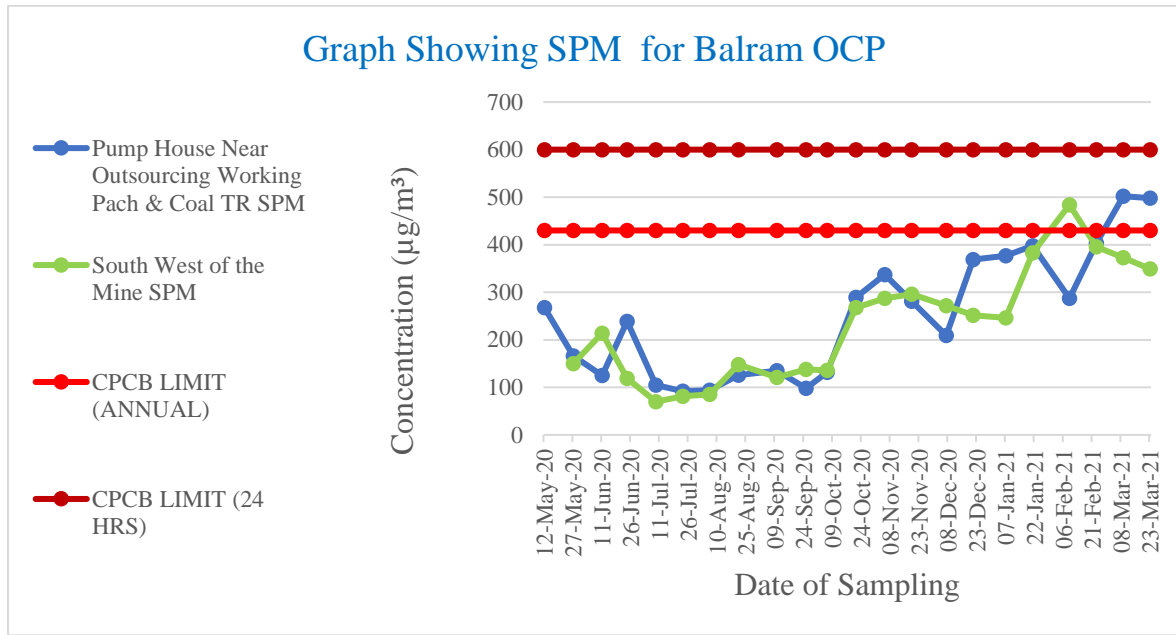
Graph Showing NO<sub>x</sub> for Balram OCP



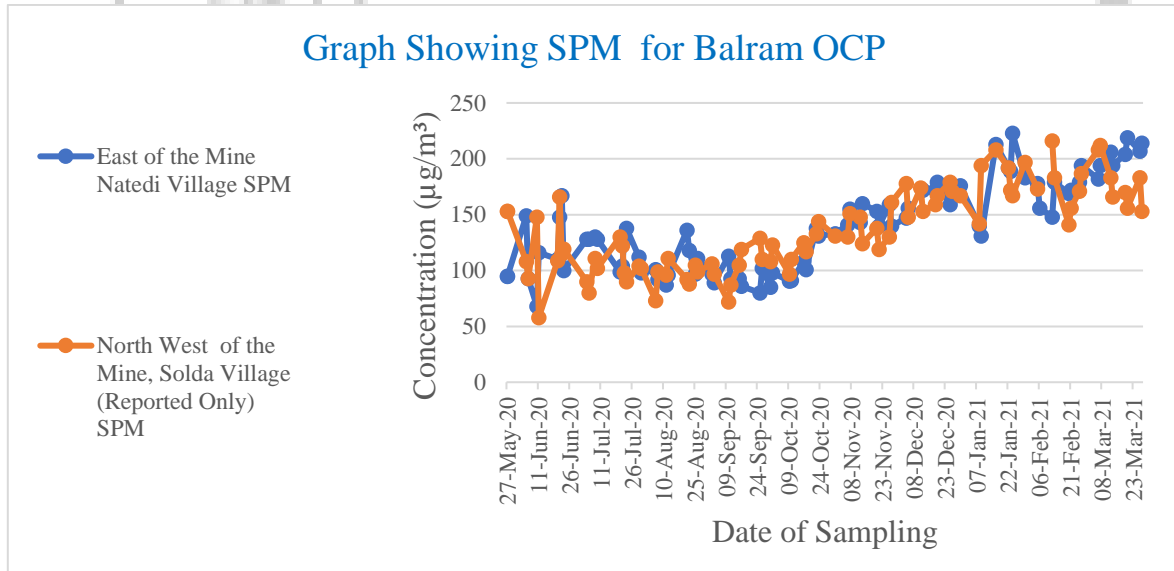
Graph Showing NO<sub>x</sub> for Balram OCP



Graph Showing SPM for Balram OCP



Graph Showing SPM for Balram OCP



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JOB NO.750001

**Table:52**  
**Area: Talcher**  
**Project: Talcher Colliery U/G**  
**Monitoring Station: Office Club, Talcher Area**

*All values are in  $\mu\text{g}/\text{m}^3$*

Date of Sampling	SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
15-May-20	191	125	21	9.88	20.44
28-May-20	232	144	27	11.32	20.25
11-Jun-20	85	59	20	9.68	16.54
29-Jun-20	175	142	33	14.44	13.94
10-Jul-20	75	49	20	12.43	17.5
24-Jul-20	66	42	24	5.68	13.7
12-Aug-20	174	115	31	10.54	12.19
27-Aug-20	105	68	22	5.82	16.4
03-Sep-20	89	61	24	12.66	19.11
16-Sep-20	84	48	22	12.68	28.23
13-Oct-20	101	66	23	7.28	17.4
29-Oct-20	184	112	24	11.69	15.69
11-Nov-20	183	116	43	11.84	21.89
25-Nov-20	186	78	40	8.76	18.55
10-Dec-20	225	143	52	11.6	29.89
24-Dec-20	247	159	51	14.67	27.44
11-Jan-21	198	81	52	24.53	38.69
28-Jan-21	213	143	42	18.05	38.9
11-Feb-21	378	227	53	22.86	37.02
27-Feb-21	192	125	43	17.81	35.24
10-Mar-21	456	224	54	19.58	36.8
24-Mar-21	337	199	51	31.1	28.55
<b>Brief Statistics</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
<b>Maximum</b>	456	227	54	31.1	38.9
<b>Minimum</b>	66	42	20	6	12
<b>Average</b>	189.82	114.82	35.09	13.86	23.83
<b>Standard (24 Hrs)</b>	<b>600</b>	<b>300</b>	<b>60</b>	<b>120</b>	<b>120</b>
<b>Standard (Annual)</b>	<b>430</b>	<b>215</b>	<b>40</b>	<b>80</b>	<b>80</b>

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**JOB NO.750001**

**Table:53**  
**Area: Talcher**  
**Project: Talcher Colliery U/G**  
**Monitoring Station: Near Canteen Talcher Colliery**

*All values are in  $\mu\text{g}/\text{m}^3$*

Date of Sampling	SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
15-May-20			25		
28-May-20	133	65	25	8.67	18.07
11-Jun-20	264	229	40	10.09	14.66
24-Jun-20	201	128	26	15.56	12.59
10-Jul-20	116	61	37	8.09	18.12
24-Jul-20	101	67	22	7.85	12.9
12-Aug-20	104	64	25	10.03	11.6
27-Aug-20	94	60	18	6.69	19.35
03-Sep-20	106	67	22	5.75	16.94
16-Sep-20	96	59	20	9.28	16.16
13-Oct-20	154	81	29	9.19	21.84
29-Oct-20	224	158	43	8.7	21.05
11-Nov-20	197	125	52	10	22.86
25-Nov-20	210	138	48	8.8	24.15
10-Dec-20	265	146	67	13.56	28.18
24-Dec-20	292	169	58	12.78	37.76
11-Jan-21	136	71	41	20.11	30.64
28-Jan-21	266	154	47	30.39	33.16
12-Feb-21	294	187	62	17.5	35.88
27-Feb-21	265	148	50	21.7	30.57
10-Mar-21	263	187	50	19.49	44.71
24-Mar-21	277	146	42	25.16	34.94
<b>Brief Statistics</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
<b>Maximum</b>	294	229	67	30.39	44.71
<b>Minimum</b>	94	59	18	6	12
<b>Average</b>	193.24	119.52	38.59	13.30	24.10
<b>Standard (24 Hrs)</b>	<b>600</b>	<b>300</b>	<b>60</b>	<b>120</b>	<b>120</b>
<b>Standard (Annual)</b>	<b>430</b>	<b>215</b>	<b>40</b>	<b>80</b>	<b>80</b>

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**JOB NO.750001**

**Table:54**  
**Area: Talcher**  
**Project: Nandira Colliery U/G**  
**Monitoring Station: Sub Station**

*All values are in  $\mu\text{g}/\text{m}^3$*

Date of Sampling	SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
13-May-20	184	117	28	12.72	19.3
28-May-20	293	205	20	10.56	30.3
12-Jun-20	268	249	22	8.63	13.93
23-Jun-20	172	133	29	10.97	17.48
10-Jul-20	132	44	20	9.11	19.96
24-Jul-20	80	51	23	9.13	16.95
13-Aug-20	78	50	18	6.7	15.5
28-Aug-20	88	59	20	9.34	18.79
04-Sep-20	98	64	25	9.23	16.07
17-Sep-20	126	73	28	8.88	11.04
05-Oct-20	130	87	35	10.61	19.63
16-Oct-20	149	97	29	11.62	18.32
02-Nov-20	244	151	78	9.89	17.09
16-Nov-20	268	178	68	9.12	18.45
03-Dec-20	336	219	55	11.28	18.75
16-Dec-20	354	237	54	20.29	27.17
02-Jan-21	364	244	69	17.15	27.31
16-Jan-21	-	-	-	-	-
03-Feb-21	332	157	73	16.21	25.67
18-Feb-21	290	171	61	20.06	35.17
03-Mar-21	416	286	65	13.82	26.44
17-Mar-21	349	203	76	17.96	34.01
<b>Brief Statistics</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
<b>Maximum</b>	416	286	78	20.29	35.17
<b>Minimum</b>	78	44	18	7	11
<b>Average</b>	226.24	146.43	42.67	12.06	21.30
<b>Standard (24 Hrs)</b>	<b>600</b>	<b>300</b>	<b>60</b>	<b>120</b>	<b>120</b>
<b>Standard (Annual)</b>	<b>430</b>	<b>215</b>	<b>40</b>	<b>80</b>	<b>80</b>

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**JOB NO.750001**

**Table:55**  
**Area: Talcher**  
**Project: Nandira Colliery U/G**  
**Monitoring Station: Project Office**

*All values are in  $\mu\text{g}/\text{m}^3$*

Date of Sampling	SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
28-May-20	119	70	21	9.75	22.98
12-Jun-20	71	42	20	10.9	18.62
23-Jun-20	116	85	38	10.74	12.36
10-Jul-20	120	52	22	9.93	23.1
24-Jul-20	88	56	20	7.58	18.68
13-Aug-20	104	63	25	8.57	18.59
28-Aug-20	94	66	21	6.41	19.79
04-Sep-20	94	63	22	10.79	14.1
17-Sep-20	118	71	25	11.7	19.93
05-Oct-20	119	70	35	11.05	22.65
16-Oct-20	168	113	34	10.04	15.72
11-Nov-20	222	134	72	13.58	19.68
16-Nov-20	226	163	64	8.75	18.99
02-Dec-20	267	143	38	8.64	22.26
16-Dec-20	317	193	73	12.43	27.95
11-Jan-21	367	197	39	17.46	38.12
15-Jan-21	323	218	59	15.4	28.57
03-Feb-21	288	199	49	9.13	28.7
18-Feb-21	223	166	66	16.98	30.57
03-Mar-21	367	211	43	18.56	41.58
17-Mar-21	377	224	52	15.98	30.72
<b>Brief Statistics</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
<b>Maximum</b>	377	224	73	18.56	41.58
<b>Minimum</b>	71	42	20	6	12
<b>Average</b>	199.43	123.76	39.90	11.64	23.51
<b>Standard (24 Hrs)</b>	<b>600</b>	<b>300</b>	<b>60</b>	<b>120</b>	<b>120</b>
<b>Standard (Annual)</b>	<b>430</b>	<b>215</b>	<b>40</b>	<b>80</b>	<b>80</b>

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**JOB NO.750001**

**Table:56**  
**Area: Talcher**  
**Project: Nandira Colliery U/G**  
**Monitoring Station: Nandira Colony**

*All values are in  $\mu\text{g}/\text{m}^3$*

Date of Sampling	SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
29-May-20	149	93	36	11	15
29-May-20	149	93	36	11.41	14.93
05-Jun-20	110	56	48	10.5	14.04
06-Jun-20	98	65	59	11.32	15.36
10-Jun-20	52	43	35	14.55	24.87
11-Jun-20	122	87	52	12.13	19.36
20-Jun-20	112	77	38	11.39	10.47
21-Jun-20	123	85	44	12.19	16.39
22-Jun-20	89	75	51	14.46	15.28
23-Jun-20	137	99	30	12.03	12.85
04-Jul-20	Strike				
05-Jul-20	Movement Restriction Due to Covid-19				
10-Jul-20	99	68	25	8.06	15.89
11-Jul-20	110	80	24	10.59	17.4
20-Jul-20	159	95	23	9.13	19.76
21-Jul-20	134	82	27	8.28	17.18
24-Jul-20	107	64	22	8.69	13.68
25-Jul-20	95	56	20	14.82	24.35
29-Jul-20	88	50	23	9.71	18.13
30-Jul-20	77	50	35	6.7	22.02
06-Aug-20	102	62	28	8.19	10.34
07-Aug-20	116	81	34	11.06	15.64
12-Aug-20	111	69	29	7.81	10.16
13-Aug-20	125	86	30	10.05	22.2
21-Aug-20	98	64	27	8.96	21.91
22-Aug-20	94	54	24	5.96	16.81
27-Aug-20	120	79	35	8.12	14.88
28-Aug-20	103	60	26	7.81	15.58
03-Sep-20	113	73	24	8.45	14.71
04-Sep-20	124	80	25	8.82	16.64
10-Sep-20	98	63	21	10.22	17.8
11-Sep-20	130	88	28	12.63	18.33
17-Sep-20	128	83	32	9.38	21.25
19-Sep-20	114	74	25	10.17	14.63
21-Sep-20	92	52	22	9.19	16.65
25-Sep-20	86	45	24	9.21	18.04
26-Sep-20	110	68	26	8.45	16.92
28-Sep-20	143	90	36	6.53	17.4
29-Sep-20	129	78	28	8	20.53
06-Oct-20	86	53	21	9.21	20.73
07-Oct-20	93	53	21	13.17	20.08
14-Oct-20	76	43	18	9.76	21.21
15-Oct-20	110	69	24	9.27	17.99
19-Oct-20	115	82	28	11.38	25.15
20-Oct-20	131	86	41	13.87	17.77
27-Oct-20	131	86	41	11.82	19.3

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28-Oct-20	141	90	34	9.04	22.04
03-Nov-20	159	88	48	9.57	15.26
04-Nov-20	145	77	40	13.55	24.27
09-Nov-20	152	70	45	9.19	19.65
10-Nov-20	147	82	52	12.5	22.32
17-Nov-20	160	85	45	9.86	17.67
18-Nov-20	142	89	48	14.33	19.22
23-Nov-20	168	94	54	10.19	24.65
24-Nov-20	168	93	52	12.27	21.22
30-Nov-20	148	76	48	9.57	15.91
01-Dec-20	152	78	43	12.06	25.06
08-Dec-20	168	82	38	11.77	26.34
09-Dec-20	174	86	46	9.87	29.18
14-Dec-20	158	79	36	12.99	26.99
15-Dec-20	170	83	41	21.45	37.45
22-Dec-20	183	87	47	10.1	20.3
23-Dec-20	171	90	51	13.7	30.36
28-Dec-20	149	84	50	16.01	45.74
29-Dec-20	140	77	41	13.23	21.99
05-Jan-21	178	83	47	20.76	32.8
06-Jan-21	187	92	53	15.63	27.29
12-Jan-21	147	87	44	13.42	30.33
13-Jan-21	134	77	42	18.69	29
19-Jan-21	187	80	43	19.5	26.75
20-Jan-21	175	75	45	13.99	34.07
25-Jan-21	197	89	51	15.83	23.14
27-Jan-21	216	93	53	19.42	33.91
03-Feb-21	170	87	49	16.31	52.6
04-Feb-21	260	175	58	16.76	33.86
10-Feb-21	169	82	50	15.11	30
11-Feb-21	177	90	49	18.4	30.29
18-Feb-21	174	77	51	19.71	34.37
19-Feb-21	189	89	53	23.43	27.66
24-Feb-21	151	86	48	27.94	28.28
25-Feb-21	176	71	43	12.26	25.86
05-Mar-21	138	84	49	29.37	31.01
07-Mar-21	151	81	47	17.48	32.22
11-Mar-21	189	80	46	35.05	46.37
12-Mar-21	206	86	49	22.46	34.5
19-Mar-21	204	89	44	15.06	25.61
20-Mar-21	216	86	49	20.44	30.5
25-Mar-21	202	91	51	17.68	37.24
26-Mar-21	189	88	48	14.89	44.17
<b>Brief Statistics</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
<b>Maximum</b>	260	175	59	35.05	52.6
<b>Minimum</b>	52	43	18	6	10
<b>Average</b>	140.98	78.70	38.70	13.05	23.18
<b>Standard (24 Hrs)</b>		<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>
<b>Standard (Annual)</b>		<b>60</b>	<b>40</b>	<b>50</b>	<b>40</b>

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**JOB NO.750001**

**Table:57**  
**Area: Talcher**  
**Project: Nandira Colliery U/G**  
**Monitoring Station: HVDC Sub- Station**

*All values are in  $\mu\text{g}/\text{m}^3$*

Date of Sampling	SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
13-May-20	224	143	35	10.07	20.84
29-May-20	133	79	30	7.34	14.87
12-Jun-20	266	202	25	12.52	21.39
23-Jun-20	124	90	23	13.3	14.23
11-Jul-20	139	69	36	7.27	18.59
25-Jul-20	101	63	22	15.02	22.78
14-Aug-20	171	115	32	10.82	15.02
29-Aug-20	103	72	22	5.44	14.83
05-Sep-20	109	67	29	6.15	16.07
17-Sep-20	135	77	26	8.03	15.39
06-Oct-20	97	62	30	9.3	19.06
20-Oct-20	102	64	22	9.39	21.65
04-Nov-20	257	171	73	11.3	20.18
18-Nov-20	230	158	59	12.26	21.85
03-Dec-20	-	-	-	-	-
17-Dec-20	376	248	65	15.06	22
04-Jan-21	213	129	57	18.69	36.72
18-Jan-21	203	136	60	16.82	32.55
03-Feb-21	273	185	51	14.31	26.19
18-Feb-21	328	190	60	24.55	26.65
11-Mar-21	320	200	70	11.78	22.98
16-Mar-21	376	250	76	20.33	30.34
<b>Brief Statistics</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
<b>Maximum</b>	376	250	76	24.55	36.72
<b>Minimum</b>	97	62	22	5	14
<b>Average</b>	203.81	131.90	43.00	12.37	21.63
<b>Standard (24 Hrs)</b>	<b>600</b>	<b>300</b>	<b>60</b>	<b>120</b>	<b>120</b>
<b>Standard (Annual)</b>	<b>430</b>	<b>215</b>	<b>40</b>	<b>80</b>	<b>80</b>

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**JOB NO.750001**

**Table:58**  
**Area: Talcher**  
**Project: Deulbera Colliery U/G**  
**Monitoring Station: Deulbera Manager Office**

*All values are in  $\mu\text{g}/\text{m}^3$*

Date of Sampling	SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
14-May-20	133	81	22	15.47	26.08
29-May-20	200	152	16	10.63	14.15
12-Jun-20	155	98	35	11.68	17.23
29-Jun-20	162	96	19	13.87	17.62
11-Jul-20	183	82	21	11.31	16.35
25-Jul-20	99	55	20	11.12	16.75
13-Aug-20	157	107	38	10.57	14.17
28-Aug-20	107	66	28	7.73	20.11
04-Sep-20	96	57	20	9.3	15.43
17-Sep-20	93	59	24	9.49	22.05
14-Oct-20	98	60	21	10.65	18.18
29-Oct-20	158	117	40	11.72	17.86
11-Nov-20	236	114	39	10.51	22.58
26-Nov-20	262	154	49	12.27	19.6
11-Dec-20	174	99	53	8.55	19.17
24-Dec-20	236	147	44	11.92	43.77
11-Jan-21	162	77	34	22.65	27.68
28-Jan-21	186	81	43	16.93	39.42
12-Feb-21	384	227	51	11.33	32.95
27-Feb-21	289	183	49	23.16	45.32
08-Mar-21	386	237	73	19.06	34.99
25-Mar-21	344	188	54	21.81	35.24
<b>Brief Statistics</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
<b>Maximum</b>	386	237	73	23.16	45.32
<b>Minimum</b>	93	55	16	8	14
<b>Average</b>	195.45	115.32	36.05	13.26	24.40
<b>Standard (24 Hrs)</b>	<b>600</b>	<b>300</b>	<b>60</b>	<b>120</b>	<b>120</b>
<b>Standard (Annual)</b>	<b>430</b>	<b>215</b>	<b>40</b>	<b>80</b>	<b>80</b>

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**JOB NO.750001**

**Table:59**  
**Area: Talcher**  
**Project: Mandapal Sand Mine**  
**Monitoring Station: Near Mandapal Hospital**

*All values are in  $\mu\text{g}/\text{m}^3$*

Date of Sampling	SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
30-May-20	166	102	25	8.2	15.54
12-Jun-20	142	58	26	9.2	23.06
22-Jun-20	148	105	20	17.17	9.42
11-Jul-20	155	68	23	9.5	19.87
25-Jul-20	68	46	21	9.3	15.27
13-Aug-20	136	90	24	9.83	11.37
28-Aug-20	77	48	18	8.17	28.36
04-Sep-20	82	59	17	8.88	16.32
19-Sep-20	76	46	20	8.42	16.13
13-Oct-20	90	61	22	11.72	23.65
29-Oct-20	114	77	24	8.77	21.78
11-Nov-20	138	88	35	10.65	17.72
25-Nov-20	221	142	46	10.52	17.5
10-Dec-20	229	104	49	10.61	22.2
24-Dec-20	257	142	53	27.38	38.52
11-Jan-21	-	-	-	-	-
28-Jan-21	-	-	-	-	-
13-Feb-21	303	177	39	23.21	31.14
27-Feb-21	209	139	42	24.73	54.92
09-Mar-21	313	200	67	17.05	29
25-Mar-21	248	166	59	18.65	43.04
<b>Brief Statistics</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
<b>Maximum</b>	313	200	67	27.38	54.92
<b>Minimum</b>	68	46	17	8	9
<b>Average</b>	166.95	100.95	33.16	13.26	23.94
<b>Standard (24 Hrs)</b>	<b>600</b>	<b>300</b>	<b>60</b>	<b>120</b>	<b>120</b>
<b>Standard (Annual)</b>	<b>430</b>	<b>215</b>	<b>40</b>	<b>80</b>	<b>80</b>

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**JOB NO.750001**

**Table:60**  
**Area: Talcher**  
**Project: Handidhua Colliery**  
**Monitoring Station: Handidhua Project Office**

*All values are in  $\mu\text{g}/\text{m}^3$*

Date of Sampling	SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
15-May-20	119	79	20	13.07	24.78
29-May-20	328	239	43	13.66	28.24
12-Jun-20	264	211	22	13.53	15.41
22-Jun-20	132	89	31	9.23	14.69
11-Jul-20	140	89	20	9.83	21.00
25-Jul-20	78	55	21	11.66	15.83
13-Aug-20	151	81	33	13.77	20.35
28-Aug-20	91	57	20	6.92	15.55
04-Sep-20	102	61	26	8.41	20.49
17-Sep-20	138	88	38	9.56	17.63
14-Oct-20	86	52	22	13.82	21.91
29-Oct-20	101	67	20	14.39	23.67
11-Nov-20	201	133	47	11.51	16.50
25-Nov-20	245	169	57	8.80	19.02
11-Dec-20	344	238	66	8.06	26.06
24-Dec-20	384	269	74	6.22	35.26
02-Jan-21	417	268	76	15.52	30.18
28-Jan-21	392	241	70	18.99	27.92
11-Feb-21	306	188	62	23.92	44.97
25-Feb-21	285	149	58	22.86	29.14
09-Mar-21	352	218	63	19.91	28.22
25-Mar-21	453	288	69	22.57	49.67
<b>Brief Statistics</b>	<b>SPM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
<b>Maximum</b>	453	288	76	23.92	49.67
<b>Minimum</b>	78	52	20	6	15
<b>Average</b>	232.23	151.32	43.55	13.46	24.84
<b>Standard (24 Hrs)</b>	<b>600</b>	<b>300</b>	<b>60</b>	<b>120</b>	<b>120</b>
<b>Standard (Annual)</b>	<b>430</b>	<b>215</b>	<b>40</b>	<b>80</b>	<b>80</b>

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**Table:61**  
**Area: Talcher**  
**Project: Kakudi & Kishoripal Sand Mine**  
**Monitoring Station: Near Kishoripal Village**

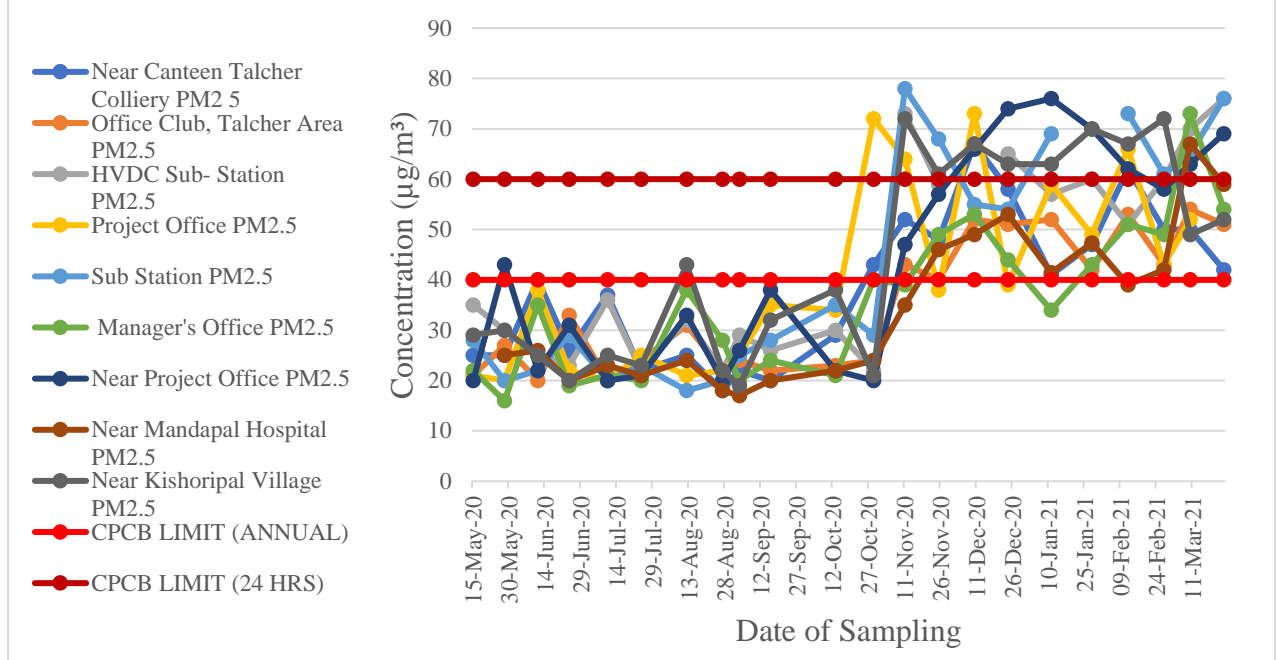
*All values are in  $\mu\text{g}/\text{m}^3$*

Date of Sampling	SPM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>
14-May-20	159	106	29	7.40	17.73
30-May-20	320	198	30	7.12	16.97
13-Jun-20	122	86	25	12.45	20.58
22-Jun-20	243	137	20	15.45	10.28
11-Jul-20	177	95	25	8.23	14.69
25-Jul-20	129	95	23	8.81	22.43
14-Aug-20	154	94	43	10.80	18.74
29-Aug-20	77	48	22	11.17	14.13
05-Sep-20	97	64	19	9.22	16.05
18-Sep-20	131	75	32	10.53	24.46
13-Oct-20	138	94	38	8.80	17.89
29-Oct-20	108	71	21	9.08	19.21
11-Nov-20	348	219	72	9.16	21.20
25-Nov-20	254	163	61	10.55	24.20
10-Dec-20	296	192	67	14.43	34.13
24-Dec-20	263	157	63	10.40	23.27
11-Jan-21	406	273	63	20.39	48.41
28-Jan-21	369	223	70	13.89	31.66
11-Feb-21	386	243	67	15.75	34.34
27-Feb-21	363	221	72	18.52	51.44
08-Mar-21	277	162	49	18.47	29.05
25-Mar-21	269	149	52	20.43	37.23
<b>Brief Statistics</b>					
<b>Maximum</b>	406	273	72	20.43	51.44
<b>Minimum</b>	77	48	19	7	10
<b>Average</b>	231.18	143.86	43.77	12.32	24.91
<b>Standard (24 Hrs)</b>	<b>600</b>	<b>300</b>	<b>60</b>	<b>120</b>	<b>120</b>
<b>Standard (Annual)</b>	<b>430</b>	<b>215</b>	<b>40</b>	<b>80</b>	<b>80</b>

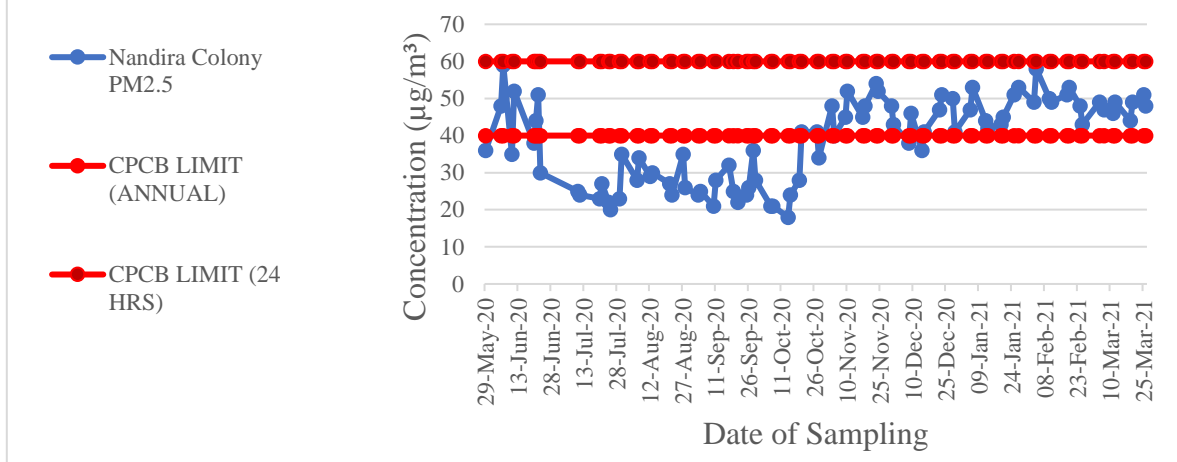
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**JOB NO.750001**

Graph Showing PM<sub>2.5</sub> for Talcher Area



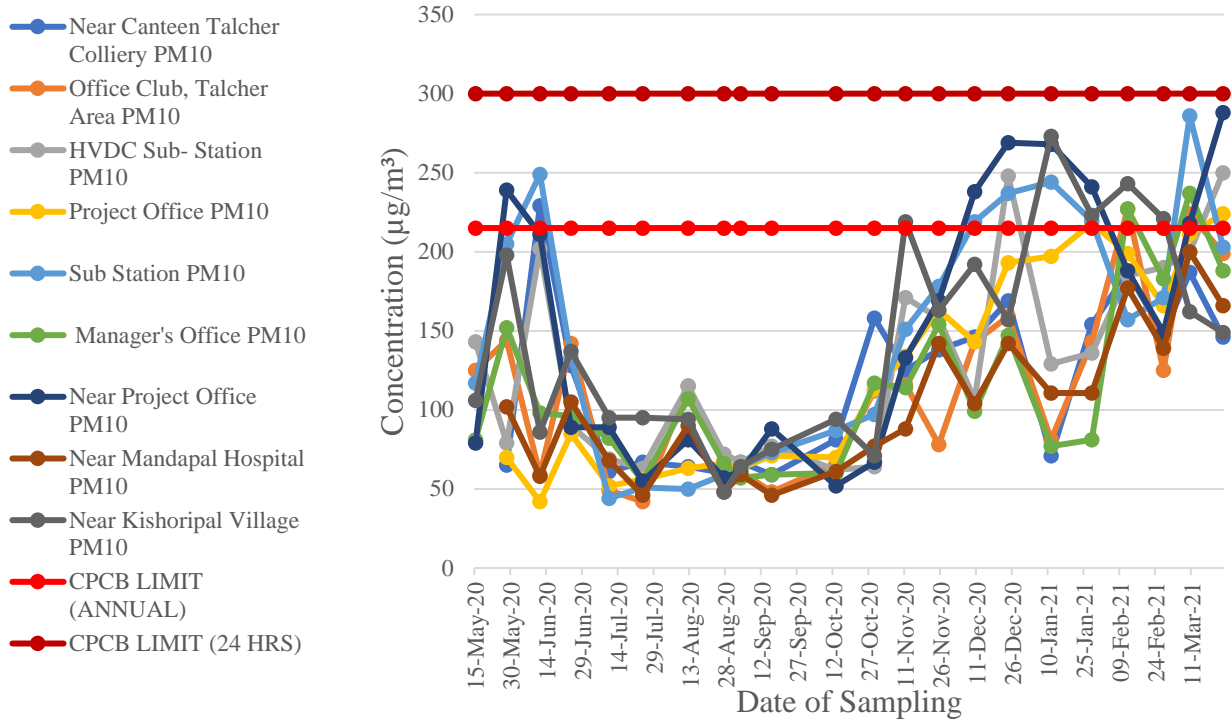
Graph Showing PM<sub>2.5</sub> for Nandira Colliery



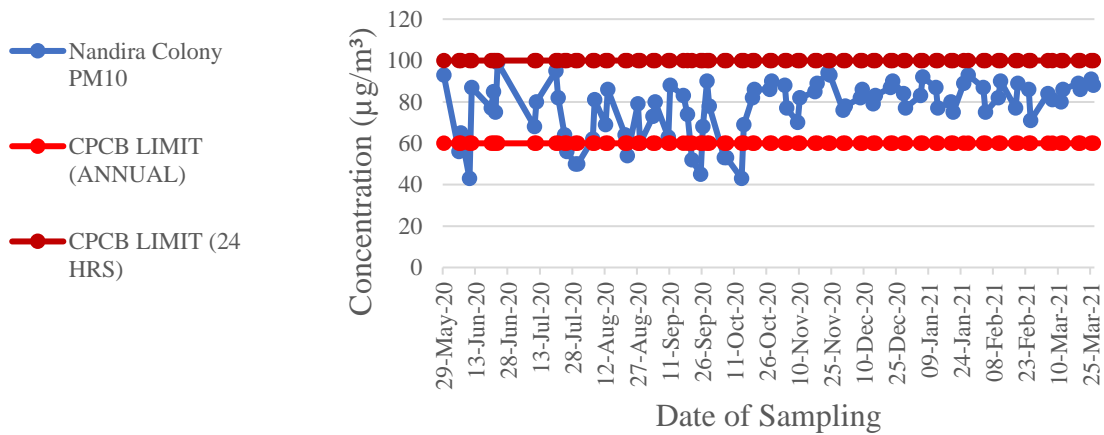
PREPARED BY: CENTRAL MINE PLANNING & DESIGN ISTITUTE LTD., RI VII, BHUBANESWAR

JOB NO.750001

Graph Showing PM<sub>10</sub> for Talcher Area



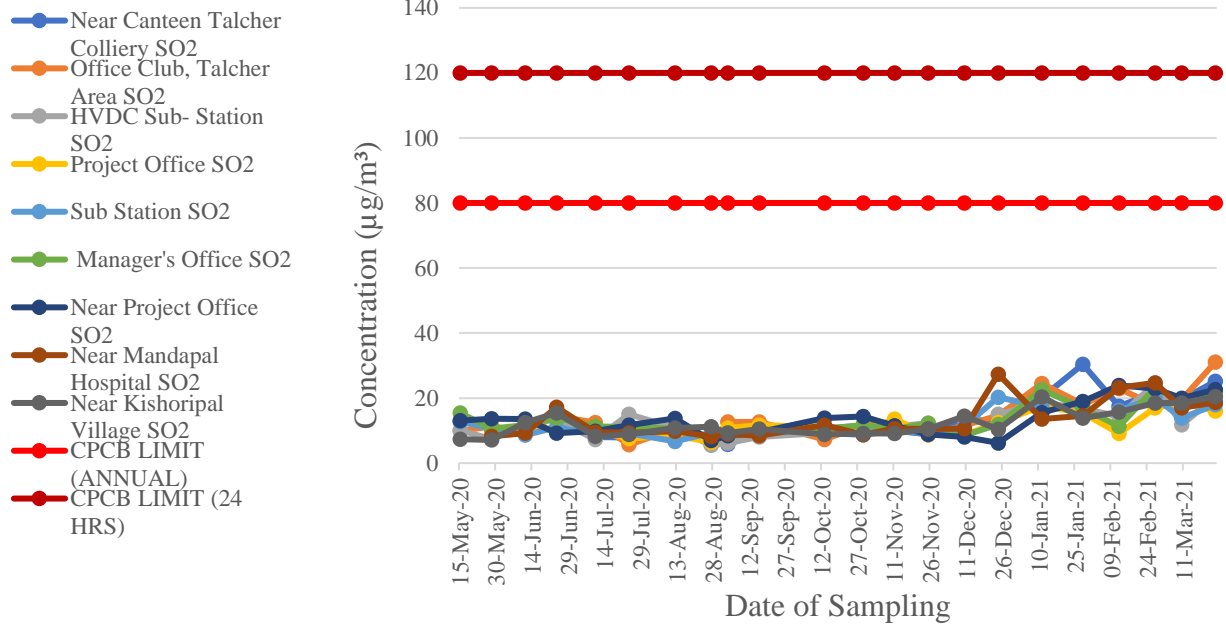
Graph Showing PM<sub>10</sub> for Nandira Colliery



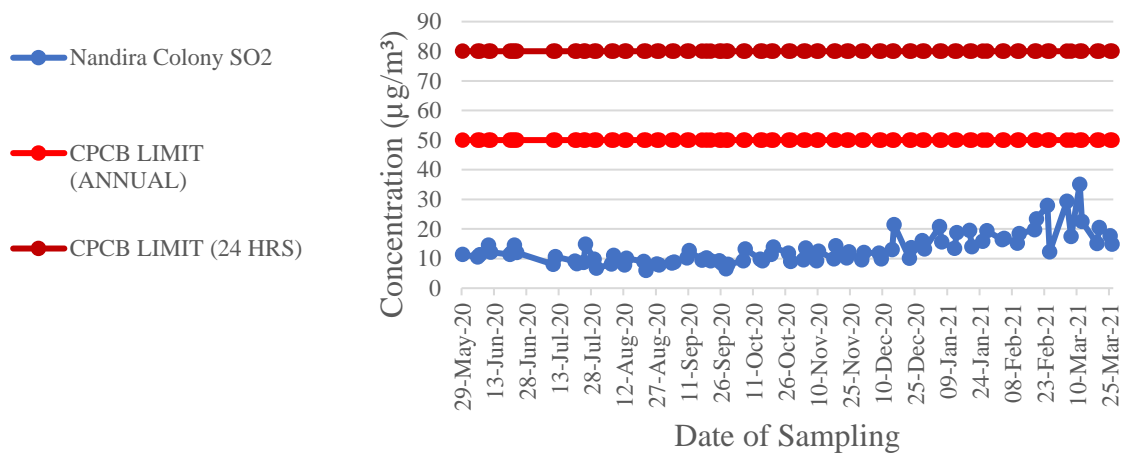
PREPARED BY: CENTRAL MINE PLANNING & DESIGN ISTITUTE LTD.,  
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JOB NO.750001

Graph Showing SO<sub>2</sub> for Talcher Area

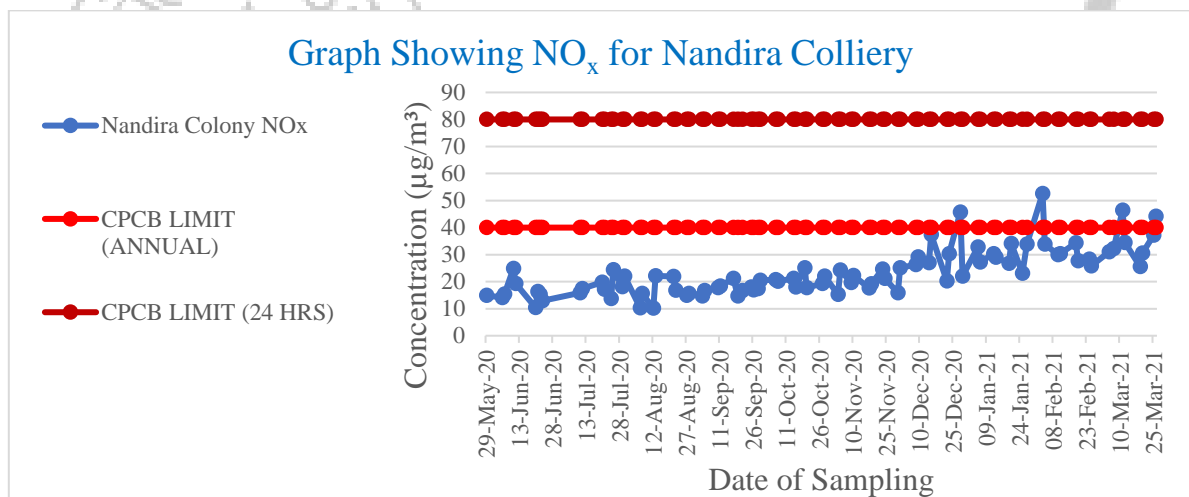
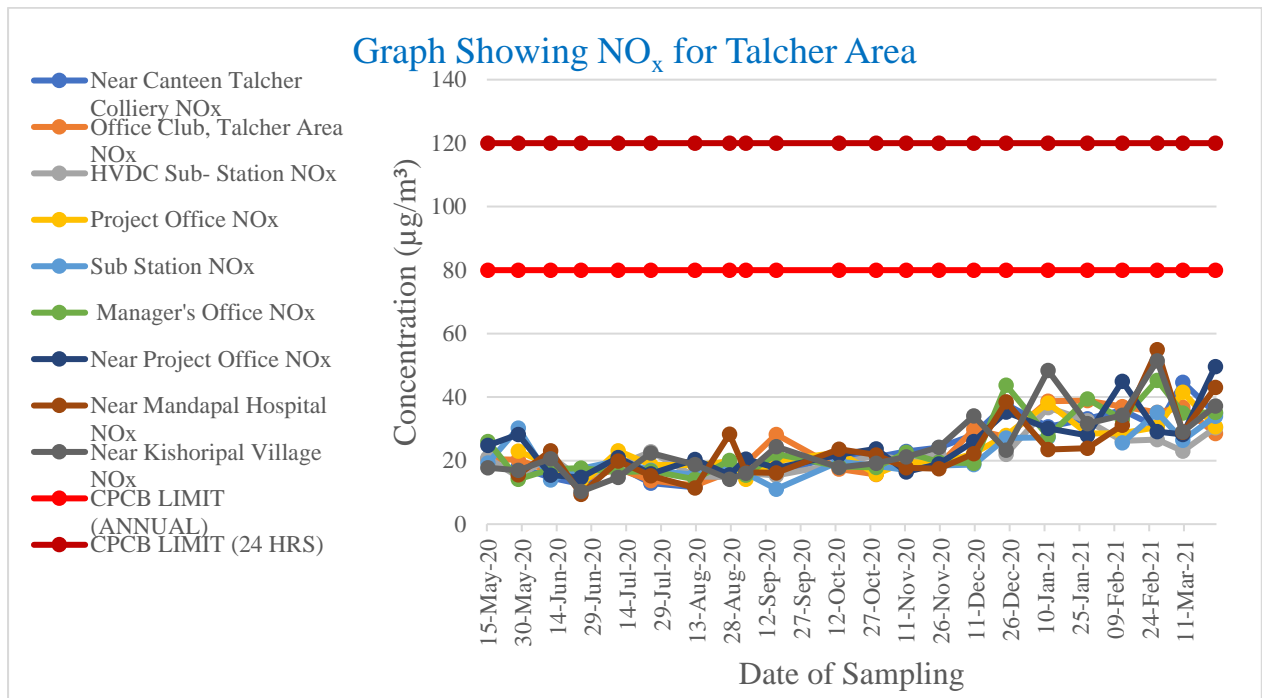


Graph Showing SO<sub>2</sub> for Nandira Colliery



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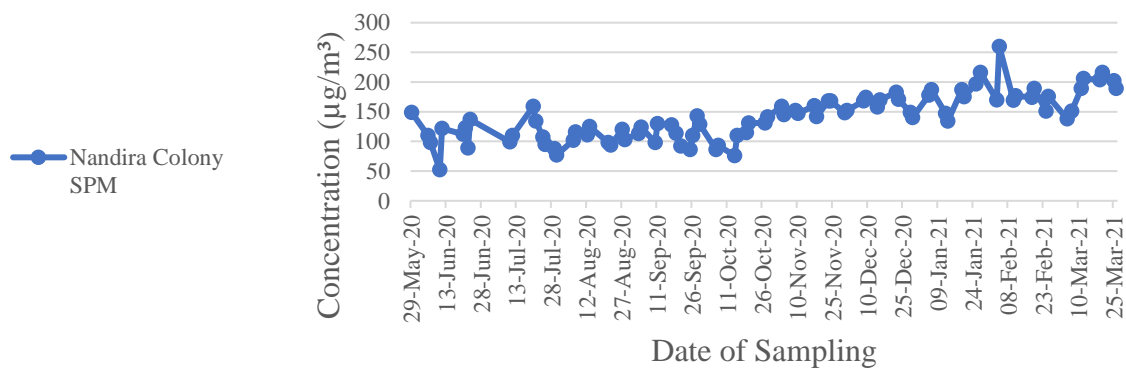
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Graph Showing SPM for Talcher Area



Graph Showing SPM for Nandira Colliery



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# NOISE QUALITY

*empdi*  
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### 3.2 TABLES FOR NOISE LEVEL MONITORING DATA

Table:62

Area: Jagannath

Project: Jagannath OCP

Monitoring Station: Ananta Vihar Colony

DATE	DAY	NIGHT	LeqDN(dB)
24-Apr-20	61.5	55.2	59.4
04-May-20	63.7	61.5	62.7
28-May-20	61.6	56.2	59.7
01-Jun-20	59.2	57.5	58.4
15-Jun-20	61.6	56.2	59.7
02-Jul-20	63.6	57.5	61.5
16-Jul-20	62.6	61	61.9
03-Aug-20	56.7	55	55.9
27-Aug-20	58.7	52.3	56.6
02-Sep-20	55.4	55.3	55.4
15-Sep-20	55.8	54.2	55.1
10-Oct-20	60.8	56.3	59.1
20-Oct-20	59.3	55.6	57.8
06-Nov-20	60.9	55.4	59.0
23-Nov-20	63.8	56.4	61.5
08-Dec-20	59.4	54.8	57.7
30-Jan-21	63	60.2	61.8
03-Feb-21	58.8	55.3	57.4
15-Feb-21	56.2	54.4	55.4
10-Mar-21	59.7	53.4	57.6
27-Mar-21	58.4	55.3	57.1
<b>Minimum</b>	55.4	52.3	55.1
<b>Maximum</b>	63.8	61.5	62.7
<b>Mean</b>	60.0	56.1	58.6
<b>Standard</b>	<b>70</b>	<b>75</b>	

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JOB NO.750001

**Table:63**  
**Area: Jagannath**  
**Project: Jagannath OCP**  
**Monitoring Station: Near NBVL Park**

DATE	DAY	NIGHT	LeqDN(dB)
24-Apr-20	67.1	66.3	66.7
04-May-20	60.1	56.2	58.6
28-May-20	61	57.6	59.6
01-Jun-20	63.6	57.2	61.5
15-Jun-20	67	63.2	65.5
01-Jul-20	65.8	62.5	64.5
15-Jul-20	69.3	61.7	67.0
03-Aug-20	59.2	55.1	57.6
27-Aug-20	59.4	55.2	57.8
01-Sep-20	59	58.4	58.7
15-Sep-20	58.9	56.4	57.8
10-Oct-20	62.5	59.7	61.3
20-Oct-20	62.4	58.6	60.9
09-Nov-20	60.4	58.3	59.5
23-Nov-20	61.4	57.4	59.8
08-Dec-20	58.9	56.4	57.8
30-Jan-21	68.5	63.1	66.6
03-Feb-21	64.5	58.9	62.5
15-Feb-21	58.4	56.7	57.6
10-Mar-21	62.9	57.4	61.0
27-Mar-21	60.4	58.9	59.7
<b>Minimum</b>	58.4	55.1	57.6
<b>Maximum</b>	69.3	66.3	67.0
<b>Mean</b>	62.4	58.8	61.1
<b>Standard</b>	<b>70</b>	<b>75</b>	

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**JOB NO.750001**

Table:64  
**Area:** Jagannath  
**Project:** Jagannath OCP  
**Monitoring Station:** Near MDTP

DATE	DAY	NIGHT	LeqDN(dB)
24-Apr-20	64.8	64	64.4
04-May-20	60.2	57.3	59.0
28-May-20	60.6	59.2	60.0
01-Jun-20	64.2	58.1	62.1
15-Jun-20	69.6	62.5	67.4
01-Jul-20	65.5	60.6	63.7
15-Jul-20	65.8	62.5	64.5
03-Aug-20	60.3	56.8	58.9
27-Aug-20	58.7	52	56.5
01-Sep-20	57.8	57.6	57.7
15-Sep-20	57.6	54.3	56.3
10-Oct-20	70.3	68.4	69.5
20-Oct-20	69.8	67.4	68.8
09-Nov-20	71.1	69.7	70.5
23-Nov-20	70.9	68.4	69.8
08-Dec-20	56.4	55	55.8
30-Jan-21	70.1	67.8	69.1
03-Feb-21	72.3	66.4	70.3
15-Feb-21	60.3	58.6	59.5
10-Mar-21	60.8	56.3	59.1
27-Mar-21	62.9	57	60.9
<b>Minimum</b>	56.4	52.0	55.8
<b>Maximum</b>	72.3	69.7	70.5
<b>Mean</b>	64.3	60.9	63.0
<b>Standard</b>	<b>70</b>	<b>75</b>	

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**JOB NO.750001**

**Table:65**  
**Area: Jagannath**  
**Project: Jagannath OCP**  
**Monitoring Station: Office Club JNC**

DATE	DAY	NIGHT	LeqDN(dB)
24-Apr-20	60	57.6	59.0
04-May-20	62.3	60.7	61.6
28-May-20	64.8	62.6	63.8
01-Jun-20	61	60.6	60.8
15-Jun-20	65.5	60	63.6
01-Jul-20	62.2	57	60.3
15-Jul-20	63.5	57.6	61.5
03-Aug-20	57.6	54.7	56.4
27-Aug-20	60.2	54.6	58.2
01-Sep-20	60.4	56.4	58.8
15-Sep-20	62.2	59.9	61.2
10-Oct-20	61.1	57.1	59.5
20-Oct-20	63.1	58.4	61.4
09-Nov-20	59.4	56.3	58.1
23-Nov-20	60.4	56.4	58.8
08-Dec-20	57.6	52.4	55.7
30-Jan-21	62.3	58.9	60.9
03-Feb-21	62.1	56.5	60.1
15-Feb-21	58.9	54.7	57.3
10-Mar-21	57.9	55	56.7
27-Mar-21	58.3	56.6	57.5
<b>Minimum</b>	57.6	52.4	55.7
<b>Maximum</b>	65.5	62.6	63.8
<b>Mean</b>	61.0	57.3	59.6
<b>Standard</b>	<b>70</b>	<b>75</b>	

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**JOB NO.750001**

Table:66  
**Area:** Jagannath  
**Project:** Ananta OCP  
**Monitoring Station:** Ananta Vihar Colony

DATE	DAY	NIGHT	LeqDN(dB)
24-Apr-20	61.5	55.2	59.4
04-May-20	63.7	61.5	62.7
28-May-20	61.6	56.2	59.7
01-Jun-20	59.2	57.5	58.4
15-Jun-20	61.6	56.2	59.7
02-Jul-20	63.6	57.5	61.5
16-Jul-20	62.6	61	61.9
03-Aug-20	56.7	55	55.9
27-Aug-20	58.7	52.3	56.6
02-Sep-20	55.4	55.3	55.4
15-Sep-20	55.8	54.2	55.1
10-Oct-20	60.8	56.3	59.1
20-Oct-20	59.3	55.6	57.8
06-Nov-20	60.9	55.4	59.0
23-Nov-20	63.8	56.4	61.5
08-Dec-20	59.4	54.8	57.7
30-Jan-21	63	60.2	61.8
03-Feb-21	58.8	55.3	57.4
15-Feb-21	56.2	54.4	55.4
10-Mar-21	59.7	53.4	57.6
27-Mar-21	58.4	55.3	57.1
<b>Minimum</b>	55.4	52.3	55.1
<b>Maximum</b>	63.8	61.5	62.7
<b>Mean</b>	60.0	56.1	58.6
<b>Standard</b>	<b>70</b>	<b>75</b>	

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**JOB NO.750001**

**Table:67**  
**Area: Jagannath**  
**Project: Ananta OCP**  
**Monitoring Station: BCML Workshop**

DATE	DAY	NIGHT	LeqDN(dB)
24-Apr-20	65.7	63.9	64.9
04-May-20	63.8	58.6	61.9
28-May-20	65.6	61	63.9
01-Jun-20	67.6	59.5	65.2
16-Jun-20	69	61.6	66.7
01-Jul-20	65.8	62.5	64.5
16-Jul-20	63.6	57.5	61.5
04-Aug-20	61.7	58.4	60.4
27-Aug-20	63.9	59.7	62.3
02-Sep-20	62.1	60.3	61.3
15-Sep-20	63.1	59.8	61.8
10-Oct-20	65.9	60.6	64.0
20-Oct-20	67.6	62.4	65.7
06-Nov-20	67.3	63.4	65.8
23-Nov-20	66.4	60.1	64.3
08-Dec-20	59.7	56.8	58.5
30-Jan-21	63.7	55.1	61.3
03-Feb-21	62.9	58.6	61.3
15-Feb-21	62.6	60.4	61.6
10-Mar-21	66.7	65.3	66.1
27-Mar-21	67.8	63.8	66.2
<b>Minimum</b>	59.7	55.1	58.5
<b>Maximum</b>	69.0	65.3	66.7
<b>Mean</b>	64.9	60.4	63.3
<b>Standard</b>	<b>70</b>	<b>75</b>	

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**JOB NO.750001**

**Table:68**  
**Area: Jagannath**  
**Project: Ananta OCP**  
**Monitoring Station: Guthasahi Village**

DATE	DAY	NIGHT	LeqDN(dB)
24-Apr-20	60.2	60	60.1
04-May-20	64.5	63.9	64.2
28-May-20	61.2	54.6	59.0
02-Jun-20	61.2	53.6	58.9
16-Jun-20	62.6	9.5	61.3
02-Jul-20	63.6	57.5	61.5
16-Jul-20	61.6	53.5	59.2
04-Aug-20	57.6	53	55.9
27-Aug-20	56.7	51.2	54.8
02-Sep-20	56.2	56.1	56.2
15-Sep-20	56.1	56	56.1
10-Oct-20	55.1	52.3	53.9
20-Oct-20	63.4	59.4	61.8
06-Nov-20	56.1	53	54.8
23-Nov-20	57.4	53.6	55.9
08-Dec-20	56.7	53.4	55.4
30-Jan-21	56.1	51.5	54.4
03-Feb-21	54.1	50.3	52.6
15-Feb-21	56.3	53.8	55.2
10-Mar-21	55.4	52.1	54.1
27-Mar-21	57.4	52.8	55.7
<b>Minimum</b>	54.1	50.3	52.6
<b>Maximum</b>	64.5	63.9	64.2
<b>Mean</b>	58.5	54.8	57.2
<b>Standard</b>	<b>70</b>	<b>75</b>	

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**JOB NO.750001**

**Table:69**  
**Area: Jagannath**  
**Project: Ananta OCP**  
**Monitoring Station: Ananta Project office**

DATE	DAY	NIGHT	LeqDN(dB)
24-Apr-20	68.7	62.2	66.6
04-May-20	63.7	61.5	62.7
28-May-20	67.5	62.2	65.6
01-Jun-20	65.2	61	63.6
15-Jun-20	65.8	62.5	64.5
01-Jul-20	69	61.5	66.7
15-Jul-20	69.5	61.6	67.1
04-Aug-20	60.4	59.7	60.1
27-Aug-20	65.7	63.8	64.9
02-Sep-20	65.4	65.1	65.3
15-Sep-20	65.2	60.1	63.4
10-Oct-20	70	64.9	68.2
20-Oct-20	70.4	65.1	68.5
06-Nov-20	73.4	65.8	71.1
23-Nov-20	72.4	69.4	71.2
08-Dec-20	60.8	59.4	60.2
30-Jan-21	67.4	61.5	65.4
03-Feb-21	72	66.9	70.2
15-Feb-21	66.8	65.7	66.3
10-Mar-21	65.8	53.4	63.0
27-Mar-21	68.4	65.6	67.2
<b>Minimum</b>	60.4	53.4	60.1
<b>Maximum</b>	73.4	69.4	71.2
<b>Mean</b>	67.3	62.8	65.8
<b>Standard</b>	<b>70</b>	<b>75</b>	

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**JOB NO.750001**

Table:70  
**Area:** Bharatpur  
**Project:** Bharatpur OCP  
**Monitoring Station:** Near ETP/Workshop

DATE	DAY	NIGHT	LeqDN(dB)
25-Apr-20	64.8	64.1	64.5
12-May-20	60.1	60.3	60.2
29-May-20	64.9	62.9	64.0
02-Jun-20	69.5	61.6	67.1
16-Jun-20	65.8	62.5	64.5
02-Jul-20	61.6	53.5	59.2
16-Jul-20	69	60.1	66.5
05-Aug-20	62.7	59.3	61.3
27-Aug-20	59.7	57.2	58.6
07-Sep-20	58.1	56.4	57.3
15-Sep-20	58.5	56.2	57.5
15-Oct-20	66.1	60.3	64.1
28-Oct-20	65.7	61.4	64.1
05-Nov-20	65.4	59.3	63.3
21-Nov-20	65.4	60.1	63.5
07-Dec-20	65.4	63.1	64.4
27-Jan-21	65.7	62.4	64.4
03-Feb-21	68.1	63.8	66.5
15-Feb-21	66.4	63.8	65.3
10-Mar-21	60.8	57.5	59.5
27-Mar-21	69.4	66.7	68.3
<b>Minimum</b>	58.1	53.5	57.3
<b>Maximum</b>	69.5	66.7	68.3
<b>Mean</b>	64.4	60.6	63.0
<b>Standard</b>	<b>70</b>	<b>75</b>	

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**JOB NO.750001**

Table:71  
**Area:** Bharatpur  
**Project:** Bharatpur OCP  
**Monitoring Station:** Near MGR-RLS of Bharatpur

DATE	DAY	NIGHT	LeqDN(dB)
25-Apr-20	64.9	62.9	64.0
12-May-20	67.5	65.9	66.8
29-May-20	69.6	67.6	68.7
02-Jun-20	66.6	62.5	65.0
16-Jun-20	61.5	56.5	59.7
02-Jul-20	61.7	59	60.6
16-Jul-20	62.4	61.1	61.8
05-Aug-20	59.6	57.6	58.7
27-Aug-20	59.2	57.3	58.4
07-Sep-20	59.1	57.8	58.5
21-Sep-20	60.8	59.1	60.0
15-Oct-20	63.6	59.8	62.1
28-Oct-20	63.4	60.4	62.2
05-Nov-20	65.6	60.8	63.8
21-Nov-20	63.9	59.3	62.2
07-Dec-20	69.7	65.8	68.2
27-Jan-21	66.1	61.2	64.3
03-Feb-21	62.6	57.9	60.9
15-Feb-21	74.9	69.9	73.1
10-Mar-21	70.4	65.8	68.7
27-Mar-21	70.4	66.8	69.0
<b>Minimum</b>	59.1	56.5	58.4
<b>Maximum</b>	74.9	69.9	73.1
<b>Mean</b>	64.9	61.7	63.6
<b>Standard</b>	<b>70</b>	<b>75</b>	

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**JOB NO.750001**

Table:72  
**Area:** Bharatpur  
**Project:** Bharatpur OCP  
**Monitoring Station:** North West Point of Mine

DATE	DAY	NIGHT	LeqDN(dB)
25-Apr-20	62.3	60.9	61.7
12-May-20	66.3	67.1	66.7
29-May-20	66.3	66	66.2
02-Jun-20	62.2	57	60.3
16-Jun-20	63.6	57.5	61.5
02-Jul-20	69.6	62.5	67.4
16-Jul-20	63.5	57.6	61.5
05-Aug-20	61.3	58.4	60.1
27-Aug-20	57.3	51.9	55.4
07-Sep-20	59.6	56.2	58.2
21-Sep-20	59.8	58.1	59.0
15-Oct-20	57.3	54.5	56.1
28-Oct-20	60.2	55.6	58.5
05-Nov-20	56.8	55.4	56.2
21-Nov-20	67.1	63.9	65.8
07-Dec-20	67.8	66.7	67.3
27-Jan-21	61.3	57.7	59.9
03-Feb-21	56.3	54.9	55.7
15-Feb-21	70.4	68.3	69.5
10-Mar-21	65.6	63.8	64.8
27-Mar-21	68.1	65.6	67.0
<b>Minimum</b>	56.3	51.9	55.4
<b>Maximum</b>	70.4	68.3	69.5
<b>Mean</b>	63.0	60.0	61.8
<b>Standard</b>	<b>70</b>	<b>75</b>	

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**JOB NO.750001**

Table:73  
**Area:** Bharatpur  
**Project:** Bharatpur OCP  
**Monitoring Station:** Regional store

DATE	DAY	NIGHT	LeqDN(dB)
25-Apr-20	60.3	58.2	59.4
12-May-20	61.3	59.5	60.5
29-May-20	60.2	59	59.6
02-Jun-20	61.7	59	60.6
16-Jun-20	67	60.7	64.9
02-Jul-20	62.5	57.5	60.7
16-Jul-20	66.4	61.5	64.6
05-Aug-20	58.3	56.7	57.6
27-Aug-20	60.6	57.2	59.2
07-Sep-20	60.8	56.2	59.1
21-Sep-20	61.2	60.2	60.7
15-Oct-20	64.5	58.8	62.5
28-Oct-20	61.3	56.7	59.6
05-Nov-20	65.8	56.7	63.3
21-Nov-20	60.3	58.4	59.5
07-Dec-20	60.4	58.4	59.5
27-Jan-21	62.2	56.3	60.2
03-Feb-21	63.7	59.8	62.2
15-Feb-21	60.3	56.7	58.9
10-Mar-21	56.4	53.4	55.2
27-Mar-21	64.8	58.3	62.7
<b>Minimum</b>	56.4	53.4	55.2
<b>Maximum</b>	67.0	61.5	64.9
<b>Mean</b>	61.9	58.1	60.5
<b>Standard</b>	<b>70</b>	<b>75</b>	

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**JOB NO.750001**

Table:74  
**Area:** Lingraj  
**Project:** Lingraj OCP  
**Monitoring Station:** IWSS

DATE	DAY	NIGHT	LeqDN(dB)
25-Apr-20	65.7	63.9	64.9
07-May-20	59	56.8	58.0
29-May-20	61.5	58.8	60.4
04-Jun-20	66.6	61.5	64.8
18-Jun-20	62.6	59.5	61.3
04-Jul-20	69.5	61.6	67.1
17-Jul-20	69.5	61.4	67.1
06-Aug-20	60.4	58.6	59.6
25-Aug-20	57.6	54.3	56.3
09-Sep-20	60.3	60.1	60.2
21-Sep-20	61.6	60.1	60.9
10-Oct-20	63.3	60.8	62.2
20-Oct-20	67.7	62.4	65.8
10-Nov-20	64.8	61.3	63.4
20-Nov-20	65.7	60.1	63.7
09-Dec-20	69.8	65.6	68.2
30-Jan-21	67.4	62.6	65.6
03-Feb-21	67.3	62.8	65.6
15-Feb-21	66.6	60.5	64.5
10-Mar-21	60.1	57.4	59.0
27-Mar-21	70.4	65.8	68.7
<b>Minimum</b>	57.6	54.3	56.3
<b>Maximum</b>	70.4	65.8	68.7
<b>Mean</b>	64.6	60.8	63.2
<b>Standard</b>	<b>70</b>	<b>75</b>	

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**JOB NO.750001**

Table:75  
**Area:** Lingraj  
**Project:** Lingraj OCP  
**Monitoring Station:** Near CT Road (Lingaraj to Dera)

DATE	DAY	NIGHT	LeqDN(dB)
25-Apr-20	59	56.8	58.0
07-May-20	65.7	63.9	64.9
29-May-20	62.9	59	61.4
04-Jun-20	60	57.5	58.9
18-Jun-20	62.2	57	60.3
04-Jul-20	63.6	57.2	61.5
17-Jul-20	65.8	60.6	63.9
06-Aug-20	59.3	55.4	57.8
25-Aug-20	56.6	51.03	54.7
09-Sep-20	58.2	56.3	57.4
21-Sep-20	58.4	56.4	57.5
10-Oct-20	58.8	53.3	56.9
20-Oct-20	58.9	54.4	57.2
10-Nov-20	59.3	54.6	57.6
20-Nov-20	60.4	56.8	59.0
09-Dec-20	59.6	55.3	58.0
30-Jan-21	64.8	58.9	62.8
03-Feb-21	67.8	59.3	65.4
15-Feb-21	60.3	55.3	58.5
10-Mar-21	56.4	53.9	55.3
27-Mar-21	60.4	58.9	59.7
<b>Minimum</b>	56.4	51.0	54.7
<b>Maximum</b>	67.8	63.9	65.4
<b>Mean</b>	60.9	56.8	59.4
<b>Standard</b>	<b>70</b>	<b>75</b>	

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**JOB NO.750001**

**Table:76**  
**Area: Lingraj**  
**Project: Lingraj OCP**  
**Monitoring Station: Near OB Dump No.10 (North Side of the Mine)**

DATE	DAY	NIGHT	LeqDN(dB)
04-Jul-20	68.9	61.5	66.6
17-Jul-20	62.5	57.5	60.7
06-Aug-20	62.8	59.3	61.4
25-Aug-20	62.1	58.7	60.7
09-Sep-20	62.4	60.1	61.4
21-Sep-20	61.2	60.2	60.7
10-Oct-20	64.5	59.9	62.8
20-Oct-20	63.8	58.5	61.9
10-Nov-20	62.3	58.4	60.8
20-Nov-20	61.8	58.3	60.4
09-Dec-20	65.6	60.6	63.8
27-Jan-21	66.6	62.3	65.0
03-Feb-21	68.5	65.9	67.4
15-Feb-21	59.3	56	58.0
10-Mar-21	65.3	59.8	63.4
27-Mar-21	63.7	59.4	62.1
25-Apr-20	67.2	67	67.1
07-May-20	58.7	58.2	58.5
29-May-20	66	62.5	64.6
04-Jun-20	65.5	60	63.6
18-Jun-20	66.6	61.5	64.8
<b>Minimum</b>	58.7	56.0	58.0
<b>Maximum</b>	68.9	67.0	67.4
<b>Mean</b>	64.1	60.3	62.6
<b>Standard</b>	<b>70</b>	<b>75</b>	

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**JOB NO.750001**

Table:77  
**Area:** Lingraj  
**Project:** Lingraj OCP  
**Monitoring Station:** Near OB Dump No.5 (South Side of the Mine)

DATE	DAY	NIGHT	LeqDN(dB)
25-Apr-20	59.7	57.4	58.7
07-May-20	58.7	58.2	58.5
29-May-20	65.5	62.6	64.3
04-Jun-20	62.6	59.5	61.3
18-Jun-20	65.5	60	63.6
04-Jul-20	66.6	61.5	64.8
17-Jul-20	65.8	62.5	64.5
06-Aug-20	63.4	60.4	62.2
25-Aug-20	63.7	59.8	62.2
09-Sep-20	63.8	60.2	62.4
21-Sep-20	60.2	58.7	59.5
10-Oct-20	62.6	58.5	61.0
20-Oct-20	65.6	59.1	63.5
10-Nov-20	60.6	57.6	59.4
20-Nov-20	59.4	56.7	58.3
09-Dec-20	63.4	58.1	61.5
27-Jan-21	62.5	59.6	61.3
03-Feb-21	64.6	59.5	62.8
15-Feb-21	62.6	58.6	61.0
10-Mar-21	60.4	56.8	59.0
27-Mar-21	65.6	60.3	63.7
<b>Minimum</b>	58.7	56.7	58.3
<b>Maximum</b>	66.6	62.6	64.8
<b>Mean</b>	63.0	59.3	61.6
<b>Standard</b>	<b>70</b>	<b>75</b>	

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**JOB NO.750001**

Table:78  
**Area:** Kaniha  
**Project:** Kaniha OCP  
**Monitoring Station:** Near Jarda Village

DATE	DAY	NIGHT	LeqDN(dB)
27-Apr-20	58.7	58.2	58.5
08-May-20	62.3	60.9	61.7
30-May-20	59.6	52.2	57.3
08-Jun-20	62.2	52.2	59.6
19-Jun-20	61.6	59.2	60.6
08-Jul-20	69.5	61.6	67.1
18-Jul-20	61.7	59	60.6
07-Aug-20	61.6	59.2	60.6
25-Aug-20	60.03	57.01	58.8
11-Sep-20	59.8	56.8	58.6
28-Sep-20	60.8	58.4	59.8
07-Oct-20	63.5	59.4	61.9
17-Oct-20	62.8	58.2	61.1
03-Nov-20	65.3	59.3	63.3
19-Nov-20	67.3	61.8	65.4
02-Dec-20	65.6	60.1	63.7
28-Jan-21	62.7	54.6	60.3
04-Feb-21	62.5	58.4	60.9
13-Feb-21	65.6	60.3	63.7
12-Mar-21	65.6	63.4	64.6
28-Mar-21	68.7	65.3	67.3
<b>Minimum</b>	58.7	52.2	57.3
<b>Maximum</b>	69.5	65.3	67.3
<b>Mean</b>	63.2	58.8	61.7
<b>Standard</b>	<b>70</b>	<b>75</b>	

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**JOB NO.750001**

**Table:79**  
**Area: Kaniha**  
**Project: Kaniha OCP**  
**Monitoring Station: Patharmunda Village**

DATE	DAY	NIGHT	LeqDN(dB)
27-Apr-20	60.1	59.6	59.9
08-May-20	64.8	64.1	64.5
30-May-20	61.6	56.2	59.7
08-Jun-20	60.2	56.2	58.6
19-Jun-20	61	56.5	59.3
08-Jul-20	59.2	57.5	58.4
18-Jul-20	63.9	57.2	61.7
06-Aug-20	60.4	57.4	59.2
25-Aug-20	62.3	59.8	61.2
11-Sep-20	58.4	54.8	57.0
28-Sep-20	61.2	58.1	59.9
07-Oct-20	66.1	63.5	65.0
17-Oct-20	67.6	64.6	66.4
03-Nov-20	68.7	65.3	67.3
19-Nov-20	66.3	60.7	64.3
02-Dec-20	73.4	70.8	72.3
28-Jan-21	68.1	61.4	65.9
04-Feb-21	65.2	62.7	64.1
13-Feb-21	71.4	65.6	69.4
12-Mar-21	72.9	69.8	71.6
28-Mar-21	71.4	69.3	70.5
<b>Minimum</b>	58.4	54.8	57.0
<b>Maximum</b>	73.4	70.8	72.3
<b>Mean</b>	65.0	61.5	63.6
<b>Standard</b>	<b>70</b>	<b>75</b>	

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**JOB NO.750001**

**Table:80**  
**Area: Kaniha**  
**Project: Kaniha OCP**  
**Monitoring Station: Site Office**

DATE	DAY	NIGHT	LeqDN(dB)
27-Apr-20	63.7	61.5	62.7
08-May-20	62.4	61.3	61.9
30-May-20	67.2	67	67.1
08-Jun-20	67	60.7	64.9
19-Jun-20	58.6	56.2	57.6
08-Jul-20	67.6	59.5	65.2
18-Jul-20	68.9	61.5	66.6
07-Aug-20	60.9	57.1	59.4
25-Aug-20	59.09	56.3	57.9
11-Sep-20	62.4	60.1	61.4
28-Sep-20	59.2	58.3	58.8
07-Oct-20	61.3	57.5	59.8
17-Oct-20	60.6	56.2	58.9
03-Nov-20	66.9	60.1	64.7
19-Nov-20	62.9	58.4	61.2
02-Dec-20	66.7	63.4	65.4
28-Jan-21	60.3	56.8	58.9
04-Feb-21	64.3	59.7	62.6
13-Feb-21	67.4	59.9	65.1
12-Mar-21	59.6	55.3	58.0
28-Mar-21	65.6	57.4	63.2
<b>Minimum</b>	58.6	55.3	57.6
<b>Maximum</b>	68.9	67.0	67.1
<b>Mean</b>	63.5	59.2	62.0
<b>Standard</b>	<b>70</b>	<b>75</b>	

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**Table:81**  
**Area: Kaniha**  
**Project: Kaniha OCP**  
**Monitoring Station: Telisingha Village**

DATE	DAY	NIGHT	LeqDN(dB)
27-Apr-20	64.8	64.1	64.5
08-May-20	60.7	61.3	61.0
30-May-20	58.7	58.2	58.5
08-Jun-20	61.6	53.5	59.2
19-Jun-20	66.6	65.9	66.3
08-Jul-20	62.2	52.2	59.6
18-Jul-20	62.5	59	61.1
07-Aug-20	59.7	58	58.9
25-Aug-20	61.4	59.02	60.4
11-Sep-20	59.6	56.2	58.2
28-Sep-20	61.1	56.9	59.5
07-Oct-20	64.7	61.3	63.3
17-Oct-20	63.1	60.3	61.9
03-Nov-20	63.3	60.4	62.1
19-Nov-20	64	59.3	62.3
02-Dec-20	70.6	68.4	69.6
28-Jan-21	65.2	56.4	62.7
04-Feb-21	66.7	62.8	65.2
13-Feb-21	69.8	66.3	68.4
12-Mar-21	68.1	65.3	66.9
28-Mar-21	65.6	59.8	63.6
<b>Minimum</b>	58.7	52.2	58.2
<b>Maximum</b>	70.6	68.4	69.6
<b>Mean</b>	63.8	60.2	62.5
<b>Standard</b>	<b>70</b>	<b>75</b>	

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**JOB NO.750001**

Table:82  
**Area:** Hingula  
**Project:** Balram OCP  
**Monitoring Station:** On Backfilled Area near Dozer shed

DATE	DAY	NIGHT	LeqDN(dB)
27-Apr-20	65.6	65	65.3
06-May-20	59.7	57.4	58.7
30-May-20	69	67.5	68.3
09-Jun-20	7.6	69.5	66.5
24-Jun-20	62.6	59.5	61.3
09-Jul-20	62.6	61	61.9
24-Jul-20	66.6	61.5	64.8
07-Aug-20	63.1	59.3	61.6
26-Aug-20	67.03	62.02	65.2
03-Sep-20	67.1	61.3	65.1
26-Sep-20	63.2	56.2	61.0
15-Oct-20	71.4	66.2	69.5
28-Oct-20	69.2	65.6	67.8
06-Nov-20	69.3	63.4	67.3
19-Nov-20	63.4	59.3	61.8
07-Dec-20	75.6	73.1	74.5
28-Jan-21	70.8	67.5	69.5
04-Feb-21	70.4	64.1	68.3
13-Feb-21	73.6	70	72.2
12-Mar-21	72.4	70.1	71.4
28-Mar-21	65.4	59.8	63.4
<b>Minimum</b>	7.6	56.2	58.7
<b>Maximum</b>	75.6	73.1	74.5
<b>Mean</b>	64.6	63.8	66.0
<b>Standard</b>	<b>70</b>	<b>75</b>	

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**JOB NO.750001**

Table:83  
**Area: Hingula**  
**Project: Balram OCP**  
**Monitoring Station: Project Office Balram OCP**

DATE	DAY	NIGHT	LeqDN(dB)
27-Apr-20	66	62.5	64.6
06-May-20	63.6	62.7	63.2
30-May-20	67.9	66.2	67.1
09-Jun-20	69	61.6	66.7
24-Jun-20	66.9	65.9	66.4
09-Jul-20	70	61.2	67.5
24-Jul-20	69.5	61.6	67.1
07-Aug-20	59.9	55	58.1
26-Aug-20	61.8	57.03	60.0
03-Sep-20	61.9	60.1	61.1
26-Sep-20	61.4	56.4	59.6
15-Oct-20	69.9	64.6	68.0
28-Oct-20	58.9	54.4	57.2
06-Nov-20	66.8	60.3	64.7
19-Nov-20	65.1	60.4	63.4
07-Dec-20	73.1	70.8	72.1
28-Jan-21	66.5	58.2	64.1
04-Feb-21	70.9	62.9	68.5
13-Feb-21	70.4	66.3	68.8
12-Mar-21	70.9	68.4	69.8
28-Mar-21	69.8	60.4	67.3
<b>Minimum</b>	58.9	54.4	57.2
<b>Maximum</b>	73.1	70.8	72.1
<b>Mean</b>	66.7	61.8	65.0
<b>Standard</b>	<b>70</b>	<b>75</b>	

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**JOB NO.750001**

Table:84  
**Area:** Hingula  
**Project:** Balram OCP  
**Monitoring Station:** Pump House near Outsoureing Working

DATE	DAY	NIGHT	LeqDN(dB)
27-Apr-20	65.6	62.2	64.2
06-May-20	64.9	62.9	64.0
30-May-20	66.6	65.9	66.3
09-Jun-20	65.8	62.5	64.5
24-Jun-20	65.5	61	63.8
09-Jul-20	69	60	66.5
24-Jul-20	69.8	61.6	67.4
07-Aug-20	63.4	59.3	61.8
26-Aug-20	69.2	61.03	66.8
03-Sep-20	69.8	62.4	67.5
26-Sep-20	64.1	62.1	63.2
15-Oct-20	71.3	67.3	69.7
28-Oct-20	61.3	55.8	59.4
06-Nov-20	71.3	68.3	70.1
19-Nov-20	68.4	59.4	65.9
07-Dec-20	71.3	65.8	69.4
28-Jan-21	69.8	60.4	67.3
04-Feb-21	70.3	65.8	68.6
13-Feb-21	69.8	65.6	68.2
12-Mar-21	69.8	56.4	67.0
28-Mar-21	70.4	58.4	67.7
<b>Minimum</b>	61.3	55.8	59.4
<b>Maximum</b>	71.3	68.3	70.1
<b>Mean</b>	68.0	62.1	66.2
<b>Standard</b>	<b>70</b>	<b>75</b>	

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**Table:85**  
**Area: Hingula**  
**Project: Balram OCP**  
**Monitoring Station: South West of the Mine**

DATE	DAY	NIGHT	LeqDN(dB)
27-Apr-20	69.6	62.5	67.4
06-May-20	60.3	58.2	59.4
30-May-20	61.6	59.2	60.6
09-Jun-20	63.6	57.5	61.5
24-Jun-20	61.2	54.6	59.0
09-Jul-20	63.3	58.9	61.6
24-Jul-20	64.3	59.5	62.5
07-Aug-20	64.5	59.8	62.8
26-Aug-20	66.02	60.7	64.1
03-Sep-20	66.4	60.2	64.3
26-Sep-20	61.4	60.2	60.8
15-Oct-20	59.8	56.7	58.5
28-Oct-20	66	63.9	65.1
06-Nov-20	70.4	67.3	69.1
19-Nov-20	69.3	56.3	66.5
07-Dec-20	70.5	69.7	70.1
28-Jan-21	67.3	61.5	65.3
04-Feb-21	58.9	57.8	58.4
13-Feb-21	72.4	68.9	71.0
12-Mar-21	68.3	65.6	67.2
28-Mar-21	59.8	56.7	58.5
<b>Minimum</b>	58.9	54.6	58.4
<b>Maximum</b>	72.4	69.7	71.0
<b>Mean</b>	65.0	60.7	63.5
<b>Standard</b>	<b>70</b>	<b>75</b>	

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**JOB NO.750001**

**Table:86**  
**Area: Hingula**  
**Project: Hingula OCP**  
**Monitoring Station: North East of the Mine, Solda Village**

DATE	DAY	NIGHT	LeqDN(dB)
27-Apr-20	65.6	65	65.3
06-May-20	67.2	67	67.1
30-May-20	60.2	59.5	59.9
09-Jun-20	61.6	56.2	59.7
24-Jun-20	61	57.6	59.6
09-Jul-20	62.6	59.5	61.3
24-Jul-20	67.6	59.5	65.2
07-Aug-20	56.4	54.3	55.5
26-Aug-20	57.04	51.07	55.0
11-Sep-20	60.3	60.1	60.2
26-Sep-20	59.9	58.2	59.1
15-Oct-20	55.7	52.2	54.3
28-Oct-20	63.7	58.4	61.8
06-Nov-20	63.4	59.6	61.9
18-Nov-20	60.4	57.6	59.2
11-Dec-20	63.4	58.4	61.6
28-Jan-21	63.2	57.1	61.1
04-Feb-21	54.7	50.9	53.2
13-Feb-21	57.4	55.9	56.7
12-Mar-21	56.8	53.9	55.6
28-Mar-21	66.3	56.4	63.7
<b>Minimum</b>	54.7	50.9	53.2
<b>Maximum</b>	67.6	67.0	67.1
<b>Mean</b>	61.2	57.5	59.9
<b>Standard</b>	<b>70</b>	<b>75</b>	

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**JOB NO.750001**

**Table:87**  
**Area: Hingula**  
**Project: Hingula OCP**  
**Monitoring Station: North of the Mine, Purnapi Kumunda Village**

DATE	DAY	NIGHT	LeqDN(dB)
27-Apr-20	61.9	60.6	61.3
06-May-20	61.2	58.9	60.2
30-May-20	58.6	56.2	57.6
09-Jun-20	62.5	57.5	60.7
24-Jun-20	60.2	59	59.6
09-Jul-20	65.8	62.5	64.5
24-Jul-20	62.6	61	61.9
07-Aug-20	57.4	55.6	56.6
26-Aug-20	56.03	52.07	54.5
11-Sep-20	58.4	54.9	57.0
26-Sep-20	59.3	57.9	58.7
15-Oct-20	56.1	50.3	54.1
28-Oct-20	64.6	60.4	63.0
06-Nov-20	60.6	58.4	59.6
18-Nov-20	59.3	55.6	57.8
11-Dec-20	66.8	60.3	64.7
28-Jan-21	56.1	60.8	59.1
04-Feb-21	55.1	52	53.8
13-Feb-21	59.4	56.3	58.1
12-Mar-21	58.4	54.3	56.8
28-Mar-21	68.7	65.6	67.4
<b>Minimum</b>	55.1	50.3	53.8
<b>Maximum</b>	68.7	65.6	67.4
<b>Mean</b>	60.4	57.6	59.4
<b>Standard</b>	<b>70</b>	<b>75</b>	

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**Table:88**  
**Area: Hingula**  
**Project: Hingula OCP**  
**Monitoring Station: South West Side of the Mine**

DATE	DAY	NIGHT	LeqDN(dB)
27-Apr-20	60.2	57.4	59.0
06-May-20	60.2	57.4	59.0
30-May-20	66.6	65.2	66.0
09-Jun-20	71	63.2	68.7
24-Jun-20	61.2	54.6	59.0
09-Jul-20	66.6	61.5	64.8
24-Jul-20	68.2	59.5	65.7
07-Aug-20	59.3	57.3	58.4
26-Aug-20	59.03	56.01	57.8
11-Sep-20	59.4	56.2	58.1
28-Sep-20	62.1	58.6	60.7
15-Oct-20	64.2	61	62.9
28-Oct-20	63.7	59.1	62.0
06-Nov-20	65.1	60.3	63.3
18-Nov-20	66	60.4	64.0
11-Dec-20	73.8	70.6	72.5
28-Jan-21	70.9	67.2	69.4
04-Feb-21	67.2	63.5	65.7
13-Feb-21	68.4	65.6	67.2
12-Mar-21	67.6	63.8	66.1
28-Mar-21	70.4	69	69.8
<b>Minimum</b>	59.0	54.6	57.8
<b>Maximum</b>	73.8	70.6	72.5
<b>Mean</b>	65.3	61.3	63.8
<b>Standard</b>	<b>70</b>	<b>75</b>	

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Table: 89  
**Area:** Hingula  
**Project:** Hingula OCP  
**Monitoring Station:** Time Office

DATE	DAY	NIGHT	LeqDN(dB)
27-Apr-20	60.5	58.9	59.8
06-May-20	59.8	57.4	58.8
30-May-20	65.7	62.6	64.4
09-Jun-20	69.6	62.5	67.4
24-Jun-20	65.7	62.6	64.4
09-Jul-20	67	60.7	64.9
24-Jul-20	66.6	60.4	64.5
07-Aug-20	62.4	59.4	61.2
26-Aug-20	63.04	60.01	61.8
11-Sep-20	61.8	56	59.8
28-Sep-20	60.2	57.2	59.0
15-Oct-20	65.7	62.9	64.5
28-Oct-20	65.8	60.4	63.9
06-Nov-20	59.7	65.6	63.6
18-Nov-20	68.4	63.7	66.7
11-Dec-20	73.4	71.9	72.7
28-Jan-21	67.5	68.2	67.9
04-Feb-21	69.7	63.9	67.7
13-Feb-21	63.3	57.4	61.3
12-Mar-21	71.7	68.4	70.4
28-Mar-21	69.8	66.3	68.4
<b>Minimum</b>	59.7	56.0	58.8
<b>Maximum</b>	73.4	71.9	72.7
<b>Mean</b>	65.6	62.2	64.4
<b>Standard</b>	<b>70</b>	<b>75</b>	

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**JOB NO.750001**

**Table:90**  
**Area: Talcher**  
**Project: Talcher Colliery**  
**Monitoring Station: GM Office**

DATE	DAY	NIGHT	LeqDN(dB)
28-Apr-20	60.1	57	58.8
09-May-20	59.6	57.6	58.7
29-May-20	59	56.2	57.8
12-Jun-20	60.6	56.5	59.0
22-Jun-20	59.2	53.6	57.2
13-Jul-20	61.2	57.6	59.8
22-Jul-20	60.9	56.5	59.2
06-Aug-20	55.7	53.2	54.6
25-Aug-20	58.07	52.01	56.0
04-Sep-20	55.2	53.3	54.4
17-Sep-20	56.9	55.3	56.2
07-Oct-20	63.1	60.3	61.9
17-Oct-20	60.3	56.3	58.7
11-Nov-20	59.6	54.3	57.7
23-Nov-20	58.4	55.2	57.1
10-Dec-20	60.5	53.8	58.3
27-Jan-21	62.5	60.7	61.7
03-Feb-21	65.1	62.3	63.9
15-Feb-21	58.9	55.9	57.7
10-Mar-21	58.4	54.5	56.9
27-Mar-21	59.8	55.3	58.1
<b>Minimum</b>	55.2	52.0	54.4
<b>Maximum</b>	65.1	62.3	63.9
<b>Mean</b>	59.7	56.1	58.3
<b>Standard</b>	<b>70</b>	<b>75</b>	

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**Table:91**  
**Area: Talcher**  
**Project: Talcher Colliery**  
**Monitoring Station: Near Canteen, Talcher Colliery**

DATE	DAY	NIGHT	LeqDN(dB)
28-Apr-20	59.2	53.6	57.2
09-May-20	67.2	66.3	66.8
29-May-20	59.2	53.6	57.2
12-Jun-20	61.2	57.6	59.8
22-Jun-20	60.6	57.2	59.2
13-Jul-20	61.6	55.5	59.5
22-Jul-20	61.2	57.6	59.8
06-Aug-20	56.4	53.3	55.1
25-Aug-20	57.03	51.07	55.0
04-Sep-20	55.6	52.4	54.3
17-Sep-20	55.8	52.1	54.3
07-Oct-20	64.3	61.1	63.0
17-Oct-20	63.9	60.4	62.5
11-Nov-20	58.4	53.9	56.7
20-Nov-20	60.4	54.3	58.3
10-Dec-20	58.4	55.3	57.1
27-Jan-21	67.2	63.2	65.6
03-Feb-21	65.7	64.2	65.0
15-Feb-21	57.4	53	55.7
10-Mar-21	55.6	53.8	54.8
27-Mar-21	58.4	53.5	56.6
<b>Minimum</b>	55.6	51.1	54.3
<b>Maximum</b>	67.2	66.3	66.8
<b>Mean</b>	60.2	56.3	58.8
<b>Standard</b>	<b>70</b>	<b>75</b>	

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**Table:92**  
**Area: Talcher**  
**Project: Mandpal OCP**  
**Monitoring Station: Near Gopinathpur Village**

DATE	DAY	NIGHT	LeqDN(dB)
28-Apr-20	59.3	51.6	57.0
09-May-20	60.1	57	58.8
29-May-20	59.2	56.5	58.1
12-Jun-20	60.9	52.5	58.5
22-Jun-20	61.2	57.6	59.8
13-Jul-20	60.6	53.5	58.4
22-Jul-20	59.2	57.6	58.5
07-Aug-20	58.4	54.7	56.9
25-Aug-20	56.4	52.3	54.8
04-Sep-20	55.2	55	55.1
17-Sep-20	58.3	54.2	56.7
07-Oct-20	58.1	53.7	56.4
17-Oct-20	58.7	54.8	57.2
11-Nov-20	56.3	52.4	54.8
24-Nov-20	56.7	55.6	56.2
10-Dec-20	56.9	53.9	55.7
27-Jan-21	59.3	51.4	56.9
03-Feb-21	57.3	51.2	55.2
13-Feb-21	56.9	52.4	55.2
12-Mar-21	57.9	51.3	55.7
28-Mar-21	56.3	52.8	54.9
<b>Minimum</b>	55.2	51.2	54.8
<b>Maximum</b>	61.2	57.6	59.8
<b>Mean</b>	58.2	53.9	56.7
<b>Standard</b>	<b>70</b>	<b>75</b>	

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**Table:93**  
**Area: Talcher**  
**Project: Nandira Colliery**  
**Monitoring Station: Sub Station**

DATE	DAY	NIGHT	LeqDN(dB)
28-Apr-20	62	60.3	61.2
09-May-20	59	56.8	58.0
29-May-20	66.2	61.5	64.5
12-Jun-20	61	53.9	58.8
22-Jun-20	61.2	60	60.6
13-Jul-20	63.5	60.1	62.1
22-Jul-20	59.2	56.5	58.1
06-Aug-20	59.8	56.7	58.5
25-Aug-20	59.07	56.02	57.8
04-Sep-20	58.6	58.4	58.5
17-Sep-20	57.1	54.8	56.1
07-Oct-20	70.5	67.9	69.4
17-Oct-20	62.3	56.8	60.4
11-Nov-20	67.3	63.4	65.8
23-Nov-20	65.6	63.9	64.8
11-Dec-20	68.9	66.3	67.8
27-Jan-21	68.4	69.5	69.0
04-Feb-21	71.7	66.8	69.9
15-Feb-21	70.5	68.4	69.6
10-Mar-21	68.4	63.4	66.6
27-Mar-21	68.7	66.2	67.6
<b>Minimum</b>	57.1	53.9	56.1
<b>Maximum</b>	71.7	69.5	69.9
<b>Mean</b>	64.2	61.3	63.1
<b>Standard</b>	<b>70</b>	<b>75</b>	

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**Table:94**  
**Area: Talcher**  
**Project: Nandira OCP**  
**Monitoring Station: Project Office**

DATE	DAY	NIGHT	LeqDN(dB)
28-Apr-20	59	56.8	58.0
09-May-20	62	61.6	61.8
29-May-20	63.3	60	62.0
12-Jun-20	62.2	57.5	60.5
22-Jun-20	59.2	56.5	58.1
13-Jul-20	60.9	56.5	59.2
22-Jul-20	60.6	57.2	59.2
06-Aug-20	60.4	59.4	59.9
25-Aug-20	58.09	55.07	56.8
04-Sep-20	60.6	58.9	59.8
17-Sep-20	58.2	53.1	56.4
07-Oct-20	63.8	59.8	62.2
17-Oct-20	63.7	58.9	61.9
11-Nov-20	65.6	60.9	63.9
23-Nov-20	63.2	58.4	61.4
11-Dec-20	65.8	63.7	64.9
27-Jan-21	66.3	56.1	63.7
04-Feb-21	64.9	58.6	62.8
15-Feb-21	65.8	60.4	63.9
10-Mar-21	68.6	66	67.5
27-Mar-21	65.8	60.4	63.9
<b>Minimum</b>	58.1	53.1	56.4
<b>Maximum</b>	68.6	66.0	67.5
<b>Mean</b>	62.8	58.8	61.3
<b>Standard</b>	<b>70</b>	<b>75</b>	

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**Table:95**  
**Area: Talcher**  
**Project: Deulbara OCP**  
**Monitoring Station: Manager's Office**

DATE	DAY	NIGHT	LeqDN(dB)
28-Apr-20	67.5	65.2	66.5
09-May-20	56.2	55.2	55.7
29-May-20	61.2	60	60.6
12-Jun-20	62.6	51	59.9
22-Jun-20	63.5	60	62.1
13-Jul-20	59.2	53.6	57.2
22-Jul-20	66	60.1	64.0
07-Aug-20	57.4	55.3	56.5
25-Aug-20	55.01	50.07	53.2
04-Sep-20	57.3	57.1	57.2
17-Sep-20	55.2	52.7	54.1
07-Oct-20	59.9	57.8	59.0
17-Oct-20	56.7	52.4	55.1
11-Nov-20	59.4	56.7	58.3
24-Nov-20	58.3	57.3	57.8
10-Dec-20	56.8	52.4	55.1
27-Jan-21	63.7	54.9	61.2
03-Feb-21	63.8	58.9	62.0
15-Feb-21	58.4	53.8	56.7
12-Mar-21	56.4	53.6	55.2
27-Mar-21	58.4	53.4	56.6
<b>Minimum</b>	55.0	50.1	53.2
<b>Maximum</b>	67.5	65.2	66.5
<b>Mean</b>	59.7	55.8	58.3
<b>Standard</b>	<b>70</b>	<b>75</b>	

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**Table:96**  
**Area: Talcher**  
**Project: Kakudi & Kishoripal Sand Mine**  
**Monitoring Station: Near Kishoripal Village**

DATE	DAY	NIGHT	LeqDN(dB)
28-Apr-20	61.2	57.5	59.7
09-May-20	59.2	53.6	57.2
29-May-20	60.6	57.2	59.2
12-Jun-20	61.6	55.5	59.5
22-Jun-20	60.9	56.5	59.2
13-Jul-20	61.2	57.6	59.8
22-Jul-20	61.5	58.2	60.2
07-Aug-20	57.8	55.4	56.8
25-Aug-20	57.04	51.03	55.0
04-Sep-20	56.4	52.2	54.8
17-Sep-20	56.1	53.4	55.0
07-Oct-20	58.3	54.4	56.8
17-Oct-20	60.1	56.4	58.6
11-Nov-20	57.6	53.3	56.0
24-Nov-20	55.6	53.4	54.6
10-Dec-20	56.8	53.3	55.4
27-Jan-21	60.6	53.8	58.4
03-Feb-21	55.4	53.2	54.4
13-Feb-21	56.4	51.9	54.7
12-Mar-21	56.4	52.4	54.8
28-Mar-21	57.4	53.4	55.8
<b>Minimum</b>	55.4	51.0	54.4
<b>Maximum</b>	61.6	58.2	60.2
<b>Mean</b>	58.5	54.5	57.0
<b>Standard</b>	<b>70</b>	<b>75</b>	

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# EFFLUENT QUALITY

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### 3.3 TABLES FOR EFFLUENT QUALITY DATA

Table:97

Area: Jagannath

Project: Jagannath OCP

Monitoring Station: O &amp; G Trap Inlet

All dimensions are in mg/l unless otherwise stated except pH

Date of Sampling	pH	Oil & Grease	TSS	COD	BOD	Remarks
21-May-20	Maintenance					
04-Aug-20	7	<4.0	52	64		
14-Nov-20	Maintenance					
12-Feb-21	Maintenance					
27-Feb-21	6.6	4.2	26	60		

Table:98

Area: Jagannath

Project: Jagannath OCP

Monitoring Station: O &amp; G Trap Outlet

All dimensions are in mg/l unless otherwise stated except pH

Date of Sampling	pH	Oil & Grease	TSS	COD	BOD	Remarks
04-Aug-20	7.46	<4.0	30	36		
12-Feb-21	Maintenance					
22-May-20						
14-Nov-20						
27-Feb-21	7.34	<4.0	14	36		

MoEF&CC Standard Notification dated 25th September, 2000 and MoEF Schedule VI, General standard for discharge of Environmental Pollutants Part A: Effluents	<b>pH</b>	<b>Oil &amp; Grease</b>	<b>TSS</b>	<b>COD</b>	<b>BOD</b>
	5.5-9.0	10	100	250	30

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**Table:99**  
**Area: Jagannath**  
**Project: Jagannath OCP**  
**Monitoring Station: DETP Inlet**

All dimensions are in mg/l unless otherwise stated except pH

Date of Sampling	pH	Oil & Grease	TSS	COD	BOD	Remarks
04-May-20	7.45		34		2.9	
14-Aug-20	6.86		68		3.2	
28-Nov-20	7.6		78		<2.0	
12-Feb-21	Maintenance					

**Table:100**  
**Area: Jagannath**  
**Project: Jagannath OCP**  
**Monitoring Station: DETP Outlet**

All dimensions are in mg/l unless otherwise stated except pH

Date of Sampling	pH	Oil & Grease	TSS	COD	BOD
24-Apr-20	7.4		24		<2.0
04-May-20	7.83		22		<2.0
25-May-20	7.86		28		<2.0
10-Jun-20	7.02		20		<2.0
29-Jun-20	7.5		24		<2.0
15-Jul-20	7.06		52		2.2
30-Jul-20	7.39		62		<2.0
14-Aug-20	6.97		54		2.4
31-Aug-20	6.52		40		<2.0
14-Sep-20	6.65		36		<2.0
30-Sep-20	Maintenance				
14-Oct-20	Maintenance				
28-Nov-20	7.77		60		<2.0
31-Dec-20	No Discharge				
16-Jan-21	No Discharge				
30-Jan-21	No Discharge				
12-Feb-21	Maintenance				
26-Feb-21	7.38		28		<2.0
13-Mar-21	7.12		24		<2.0
30-Mar-21	No Discharge				

MoEF&CC Standard Notification dated 25th September, 2000 and MoEF Schedule VI, General standard for discharge of Environmental Pollutants Part A: Effluents	pH	Oil & Grease	TSS	COD	BOD
	5.5-9.0	10	100	250	30

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Table:101

**Area:** Jagannath**Project:** Ananta OCP**Monitoring Station:** O & G Trap Inlet

All dimensions are in mg/l unless otherwise stated except pH

Date of Sampling	pH	Oil & Grease	TSS	COD
10-Jun-20	6.12	<4.0	32	40
03-Sep-20	7.45	<4.0	32	24
14-Dec-20	7.23	<4.0	66	52
13-Mar-21	7.65	<4.0	46	76
30-Mar-21	6.92	5.4	38	72

Table:102

**Area:** Jagannath**Project:** Ananta OCP**Monitoring Station:** O & G Trap Outlet

All dimensions are in mg/l unless otherwise stated except pH

Date of Sampling	pH	Oil & Grease	TSS	COD
10-Jun-20	7.45	<4.0	30	36
03-Sep-20	7.52	<4.0	28	16
14-Dec-20	7.42	<4.0	38	32
13-Mar-21	7.34	<4.0	28	48
30-Mar-21	6.56	<4.0	24	40

MoEF&CC Standard Notification dated 25th September, 2000 and MoEF Schedule VI, General standard for discharge of Environmental Pollutants Part A: Effluents	<b>pH</b>	<b>Oil &amp; Grease</b>	<b>TSS</b>	<b>COD</b>	<b>BOD</b>
	5.5-9.0	10	100	250	30

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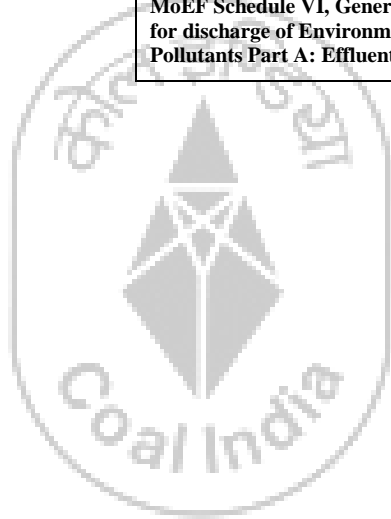
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Table:103  
**Area:** Jagannath  
**Project:** Ananta OCP  
**Monitoring Station:** DETP Inlet

All dimensions are in mg/l unless otherwise stated except pH

Date of Sampling	pH	TSS	BOD
10-Jun-20	6.32	32	4.8
14-Sep-20	6.8	48	2.2
12-Dec-20	6.23	46	<2.0
13-Mar-21	7.24	26	<2.0

MoEF&CC Standard Notification dated 25th September, 2000 and MoEF Schedule VI, General standard for discharge of Environmental Pollutants Part A: Effluents	pH	Oil & Grease	TSS	COD	BOD
	5.5-9.0	10	100	250	30



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**Table:104**  
**Area: Jagannath**  
**Project: Ananta OCP**  
**Monitoring Station: DETP Outlet**

All dimensions are in mg/l unless otherwise stated except pH

Date of Sampling	pH	TSS	BOD
04-May-20	7.7	38	<2.0
24-Apr-20	7.08	24	<2.0
25-May-20	7.36	18	<2.0
29-Jun-20	7.86	30	<2.0
15-Jul-20	7.41	64	3.2
30-Jul-20	7.47	46	<2.0
14-Aug-20	7.42	64	2.6
31-Aug-20	6.56	32	<2.0
14-Sep-20	6.77	28	<2.0
30-Sep-20	6.98	46	<2.0
14-Oct-20	8.01	40	<2.0
31-Oct-20	5.67	62	<2.0
13-Nov-20	7.49	78	2.4
28-Nov-20	7.95	48	<2.0
12-Dec-20	6.31	24	<2.0
31-Dec-20	6.97	34	<2.0
16-Jan-21	6.83	46	<2.0
30-Jan-21	6.81	46	<2.0
15-Feb-21	6.22	22	<2.0
26-Feb-21	7.16	20	<2.0
13-Mar-21	7.19	18	<2.0
26-Mar-21	6.77	46	<2.0

MoEF&CC Standard Notification dated 25th September, 2000 and MoEF Schedule VI, General standard for discharge of Environmental Pollutants Part A: Effluents	pH	Oil & Grease	TSS	COD	BOD
	5.5-9.0	10	100	250	30

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Table:105

**Area:** Jagannath**Project:** Ananta OCP**Monitoring Station:** Mine Sump

All dimensions are in mg/l unless otherwise stated except pH

Date of Sampling	pH	Oil & Grease	TSS	COD
04-May-20	7.76			
31-Aug-20	6.32	<4.0	20	12
28-Nov-20	7.84	<4.0	46	32
27-Feb-21	7.58			

Table:106

**Area:** Bharatpur**Project:** Bharatpur OCP**Monitoring Station:** O & G Trap Inlet

All dimensions are in mg/l unless otherwise stated except pH

Date of Sampling	pH	Oil & Grease	TSS	COD
07-May-20	5.13	<4.0	58	128
05-Aug-20	6.86	<4.0	40	52
28-Nov-20	7.8	<4.0	86	128
13-Feb-21	7.53	<4.0	28	56

MoEF&CC Standard Notification dated 25th September, 2000 and MoEF Schedule VI, General standard for discharge of Environmental Pollutants Part A: Effluents	pH	Oil & Grease	TSS	COD	BOD
	5.5-9.0	10	100	250	30

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Table:107

**Area:** Bharatpur**Project:** Bharatpur OCP**Monitoring Station:** O & G Trap Outlet

All dimensions are in mg/l unless otherwise stated except pH

Date of Sampling	pH	Oil & Grease	TSS	COD
07-May-20	7.08	<4.0	22	60
05-Aug-20	7.11	<4.0	20	32
28-Nov-20	7.99	<4.0	56	44
13-Feb-21	7.36	<4.0	48	44

Table:108

**Area:** Bharatpur**Project:** Bharatpur OCP**Monitoring Station:** DETP Inlet

All dimensions are in mg/l unless otherwise stated except pH

Date of Sampling	pH	TSS	BOD
10-Jun-20	6.14	38	4.6
14-Sep-20	Maintenance		
14-Dec-20	6.78	52	<2.0
13-Mar-21	7.3	28	<2.0

MoEF&CC Standard Notification dated 25th September, 2000 and MoEF Schedule VI, General standard for discharge of Environmental Pollutants Part A: Effluents	pH	Oil & Grease	TSS	COD	BOD
	5.5-9.0	10	100	250	30

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Table:109

**Area: Bharatpur**  
**Project: Bharatpur OCP**  
**Monitoring Station: DETP Outlet**

All dimensions are in mg/l unless otherwise stated except pH

Date of Sampling	pH	TSS	BOD
25-Apr-20	7.36	28	<2.0
12-May-20	7.53	28	<2.0
30-May-20	7.53	40	<2.0
10-Jun-20	7.08	22	<2.0
29-Jun-20	7.25	24	<2.0
15-Jul-20	7.33	28	<2.0
30-Jul-20	7.4	44	<2.0
05-Aug-20	Not Working		
31-Aug-20	Not Working		
14-Sep-20	Maintenance		
30-Sep-20	Maintenance		
14-Oct-20	Maintenance		
31-Oct-20	6.96	44	<2.0
13-Nov-20	7.29	36	<2.0
28-Nov-20	8.35	46	<2.0
14-Dec-20	6.89	44	<2.0
31-Dec-20	6.72	44	<2.0
16-Jan-21	6.73	64	2.1
30-Jan-21	6.61	62	2.1
15-Feb-21	6.04	34	<2.0
26-Feb-21	7.52	22	<2.0
13-Mar-21	7.28	16	<2.0
26-Mar-21	6.81	28	<2.0

MoEF&CC Standard Notification dated 25th September, 2000 and MoEF Schedule VI, General standard for discharge of Environmental Pollutants Part A: Effluents	<b>pH</b>	<b>Oil &amp; Grease</b>	<b>TSS</b>	<b>COD</b>	<b>BOD</b>
	5.5-9.0	10	100	250	30

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Table:110

**Area:** Bharatpur**Project:** Bharatpur OCP**Monitoring Station:** Mine Sump Water -Main Sump

All dimensions are in mg/l unless otherwise stated except pH

Sampling Station	Date of Sampling	pH
Mine Sump Water - Main Sump	12-May-20	7.76
Mine Sump Water - Main Sump	30-Sep-20	6.32
Mine Sump Water - Main Sump	27-Nov-20	7.83
Mine Sump Water - Main Sump	27-Feb-21	6.32

Table:111

**Area:** Bharatpur**Project:** Bharatpur OCP**Monitoring Station:** Mine Sump Water-South Quarry Sump

All dimensions are in mg/l unless otherwise stated except pH

Sampling Station	Date of Sampling	pH
Mine Sump Water - South Quarry Sump	12-May-20	7.81
Mine Sump Water - South Quarry Sump	30-Sep-20	6.01
Mine Sump Water - South Quarry Sump	27-Nov-20	7.61
Mine Sump Water - South Quarry Sump	27-Feb-21	6.75

MoEF&CC Standard Notification dated 25th September, 2000 and MoEF Schedule VI, General standard for discharge of Environmental Pollutants Part A: Effluents	pH	Oil & Grease	TSS	COD	BOD
	5.5-9.0	10	100	250	30

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Table:112

**Area:** Bharatpur**Project:** Bharatpur OCP**Monitoring Station:** Mine Sump Water-North Quarry Sump

All dimensions are in mg/l unless otherwise stated except pH

Date of Sampling	pH
12-May-20	7.78
30-Sep-20	5.97
27-Nov-20	7.54
27-Feb-21	6.58

Table:113

**Area:** Bharatpur**Project:** Bharatpur OCP**Monitoring Station:** Mine Sump Water-Old Quarry Sump

All dimensions are in mg/l unless otherwise stated except pH

Date of Sampling	pH
12-May-20	7.83
30-Sep-20	6.12
27-Nov-20	7.59
27-Feb-21	6.81

MoEF&CC Standard Notification dated 25th September, 2000 and MoEF Schedule VI, General standard for discharge of Environmental Pollutants Part A: Effluents	pH	Oil & Grease	TSS	COD	BOD
	5.5-9.0	10	100	250	30

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**Table:114**  
**Area: Lingraj**  
**Project: Lingraj OCP**

All dimensions are in mg/l unless otherwise stated except pH

Sampling Station	Date of Sampling	pH	Oil & Grease	TSS	COD
Inlet of Workshop ETP	07-May-20	7.6	<4.0	26	84
Inlet of MDTP Near Stock No. 17	06-Aug-20	6.56	<4.0	38	20
Clear Water Tank of MDTP Near Stock No. 17	06-Aug-20	6.55	<4.0	28	16
Inlet of Sedimentaion Pond Complex Near Deulbera Siding	13-Feb-21	7.55	<4.0	18	32
Clear Water Tank of Sedimentation Pond Complex Near Deulbera Siding	12-Feb-21	7.52	<4.0	24	40
Inlet of Sedimentation Pond Complex near Lingraj Siding	28-Nov-20	7.8	<4.0	28	20
Inlet of Sedimentation Pond Complex near Project Office	28-Nov-20	7.96	<4.0	32	24
Inlet of Workshop ETP	07-May-20	7.6	<4.0	26	84
Clear Water Tank of Sedimentation Pond Complex Near Lingraj Siding	28-Nov-20	7.57	<4.0	24	16

MoEF&CC Standard Notification dated 25th September, 2000 and MoEF Schedule VI, General standard for discharge of Environmental Pollutants Part A: Effluents	pH	Oil & Grease	TSS	COD	BOD
	5.5-9.0	10	100	250	30

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**Table:115**  
**Area: Lingraj**  
**Project: Lingraj OCP**  
**Monitoring Station: Clear Water Reservoir of Workshop ETP**

All dimensions are in mg/l unless otherwise stated except pH

Date of Sampling	pH	Oil & Grease	TSS	COD
25-Apr-20	7.56	<4.0	20	64
07-May-20	7.73	<4.0	22	72
21-May-20	7.93	<4.0	24	40
10-Jun-20	7.42	<4.0	18	36
29-Jun-20	7.85	<4.0	20	52
10-Jul-20	7.46	<4.0	68	48
29-Jul-20	7.21	<4.0	36	32
06-Aug-20	6.66	<4.0	36	32
31-Aug-20	7.14	<4.0	26	16
03-Sep-20	7.52	<4.0	34	24
23-Sep-20	7.28	<4.0	32	16
14-Oct-20	7.76	<4.0	38	28
31-Oct-20	7.03	<4.0	58	40
13-Nov-20	7.65	<4.0	52	32
28-Nov-20	8.14	<4.0	52	48
14-Dec-20	6.43	<4.0	48	56
29-Dec-20	7.29	<4.0	58	48
16-Jan-21	7.14	<4.0	32	44
30-Jan-21	7.31	<4.0	24	32
12-Feb-21	7.5	<4.0	22	36
26-Feb-21	7.49	<4.0	22	48
12-Mar-21	7.38	<4.0	14	36
26-Mar-21	7.55	<4.0	22	56

MoEF&CC Standard Notification dated 25th September, 2000 and MoEF Schedule VI, General standard for discharge of Environmental Pollutants Part A: Effluents	pH	Oil & Grease	TSS	COD	BOD
	5.5-9.0	10	100	250	30

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**Table:116**  
**Area: Kaniha**  
**Project: Kaniha OCP**  
**Monitoring Station: Pre-Sedimentation Pond-I**

All dimensions are in mg/l unless otherwise stated except pH

Date of Sampling	pH	Oil & Grease	TSS	COD
27-Apr-20	6.96	<4.0	32	72
08-May-20	7.03	<4.0	20	64
20-May-20	7.68	<4.0	24	52
10-Jun-20	7.36	<4.0	20	44
29-Jun-20	7.15	<4.0	26	48
11-Jul-20	6.38	<4.0	34	20
29-Jul-20	7.06	<4.0	64	48
11-Aug-20	6.7	<4.0	38	44
29-Aug-20	7.25	<4.0	56	32
03-Sep-20	6.98	<4.0	42	48
23-Sep-20	6.77	<4.0	66	52
13-Oct-20	7.68	<4.0	46	32
31-Oct-20	6.9	<4.0	34	16
11-Nov-20	7.91	<4.0	16	12
27-Nov-20	7.95	<4.0	40	48
12-Dec-20	7.15	<4.0	28	12
29-Dec-20	7.2	<4.0	36	28
15-Jan-21	6.85	<4.0	28	36
30-Jan-21	7.06	<4.0	26	44
13-Feb-21	7.54	<4.0	28	36
27-Feb-21	7.38	<4.0	28	44
13-Mar-21	7.21	<4.0	22	52
28-Mar-21	7.32	<4.0	26	48

MoEF&CC Standard Notification dated 25th September, 2000 and MoEF Schedule VI, General standard for discharge of Environmental Pollutants Part A: Effluents	<b>pH</b>	<b>Oil &amp; Grease</b>	<b>TSS</b>	<b>COD</b>	<b>BOD</b>
	5.5-9.0	10	100	250	30

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**Table:117**  
**Area: Kaniha**  
**Project: Kaniha OCP**  
**Monitoring Station: Clear Water Pond**

All dimensions are in mg/l unless otherwise stated except pH

Date of Sampling	pH	Oil & Grease	TSS	COD
27-Apr-20	6.74	<4.0	46	60
08-May-20	8.09	<4.0	32	92
20-May-20	7.52	<4.0	18	36
10-Jun-20	7.12	<4.0	22	32
29-Jun-20	7.85	<4.0	28	40
11-Jul-20	7.58	<4.0	18	12
29-Jul-20	7.13	<4.0	40	20
11-Aug-20	7.52	<4.0	22	28
29-Aug-20	7.17	<4.0	58	40
03-Sep-20	7.23	<4.0	24	36
23-Sep-20	6.69	<4.0	72	64
13-Oct-20	7.67	<4.0	36	32
31-Oct-20	7	<4.0	36	20
11-Nov-20	8.03	<4.0	20	16
27-Nov-20	7.21	<4.0	38	40
12-Dec-20	7.53	<4.0	42	32
29-Dec-20	7.25	<4.0	54	40
15-Jan-21	6.81	<4.0	26	40
30-Jan-21	7.09	<4.0	22	48
13-Feb-21	7.61	<4.0	20	32
27-Feb-21	7.62	<4.0	22	36
13-Mar-21	7.53	<4.0	20	44
28-Mar-21	7.27	<4.0	24	52

MoEF&CC Standard Notification dated 25th September, 2000 and MoEF Schedule VI, General standard for discharge of Environmental Pollutants Part A: Effluents	<b>pH</b>	<b>Oil &amp; Grease</b>	<b>TSS</b>	<b>COD</b>	<b>BOD</b>
	5.5-9.0	10	100	250	30

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**Table:118**  
**Area: Kaniha**  
**Project: Kaniha OCP**  
**Monitoring Station: Kansamunda Sump**

All dimensions are in mg/l unless otherwise stated except pH

Date of Sampling	pH	Oil & Grease	TSS	COD
27-Apr-20	7.9	<4.0	22	84
08-May-20	7.8	<4.0	28	84
20-May-20	7.7	<4.0	16	44
09-Jun-20	7.4	<4.0	18	36
15-Jun-20	7.1	<4.0	28	36
24-Jun-20	7.6	<4.0	30	60
29-Jun-20	7.7	<4.0	34	52
01-Jul-20	7.8	<4.0	52	32
11-Jul-20	7.7	<4.0	48	28
20-Jul-20	7.2	<4.0	68	40
29-Jul-20	7.2	<4.0	66	40
05-Aug-20	7.6	<4.0	52	60
10-Aug-20	7.2	<4.0	44	52
17-Aug-20	7.1	<4.0	42	32
24-Aug-20	7	<4.0	40	28
03-Sep-20	7.9	<4.0	48	52
10-Sep-20	7	<4.0	36	44
17-Sep-20	7.4	<4.0	38	20
24-Sep-20	6.9	<4.0	34	16
06-Oct-20	8.1	<4.0	44	28
13-Oct-20	7.6	<4.0	52	28
21-Oct-20	7.4	<4.0	48	32
31-Oct-20	7.2	<4.0	24	38
05-Nov-20	8	<4.0	26	20
11-Nov-20	7.9	<4.0	24	16
19-Nov-20	7.8	<4.0	32	24
25-Nov-20	7.7	<4.0	34	32
09-Dec-20	7.4	<4.0	48	32
12-Dec-20	7.1	<4.0	42	28
22-Dec-20	7.3	<4.0	64	52
29-Dec-20	7.3	<4.0	60	52
06-Jan-21	7	<4.0	38	56
15-Jan-21	7	<4.0	42	68
21-Jan-21	7.3	<4.0	20	60
30-Jan-21	7.2	<4.0	22	48
08-Feb-21	7.5	<4.0	32	44
13-Feb-21	7.6	<4.0	22	48
18-Feb-21	7.6	<4.0	24	40
27-Feb-21	7.7	<4.0	18	44
06-Mar-21	7.7	<4.0	22	56
13-Mar-21	7.4	<4.0	18	48
18-Mar-21	7.4	<4.0	20	40
28-Mar-21	5.7	<4.0	28	36

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MoEF&CC Standard Notification dated 25th September, 2000 and MoEF Schedule VI, General standard for discharge of Environmental Pollutants Part A: Effluents	pH	Oil & Grease	TSS	COD	BOD
	5.5-9.0	10	100	250	30



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**Table:119**  
**Area: Kaniha**  
**Project: Kaniha OCP**  
**Monitoring Station: Kansamunda Sump**

All dimensions are in mg/l unless otherwise stated except pH

Date of Sampling	pH	Oil & Grease	TSS	COD
27-Apr-20	7.18	<4.0	30	92
08-May-20	7.89	<4.0	46	112
20-May-20	7.78	<4.0	22	36
09-Jun-20	7.05	<4.0	26	44
15-Jun-20	6.96	<4.0	32	44
24-Jun-20	7.14	<4.0	20	36
29-Jun-20	7.36	<4.0	26	44
01-Jul-20	7.26	<4.0	32	24
11-Jul-20	7.29	<4.0	28	20
20-Jul-20	7.25	<4.0	78	40
29-Jul-20	7.19	<4.0	70	44
05-Aug-20	6.74	<4.0	36	40
10-Aug-20	7.08	<4.0	30	36
17-Aug-20	7.2	<4.0	32	16
24-Aug-20	7.25	<4.0	36	20
03-Sep-20	6.96	<4.0	28	32
10-Sep-20	7.14	<4.0	26	36
17-Sep-20	7.42	<4.0	48	24
24-Sep-20	7.12	<4.0	38	16
06-Oct-20	7.73	<4.0	42	20
13-Oct-20	7.74	<4.0	48	28
21-Oct-20	7.33	<4.0	46	28
31-Oct-20	7.16	<4.0	28	12
05-Nov-20	6.79	<4.0	44	28
11-Nov-20	6.76	<4.0	42	24
19-Nov-20	7.99	<4.0	54	60
25-Nov-20	8.08	<4.0	58	48
09-Dec-20	7.05	<4.0	36	20
12-Dec-20	7.09	<4.0	32	16
22-Dec-20	7.17	<4.0	56	68
29-Dec-20	7.1	<4.0	38	28
06-Jan-21	6.83	<4.0	28	32
15-Jan-21	7.14	<4.0	32	52
21-Jan-21	7.1	<4.0	28	44
30-Jan-21	7.68	<4.0	24	40
08-Feb-21	7.27	<4.0	24	52
13-Feb-21	7.68	<4.0	26	36
18-Feb-21	7.41	<4.0	16	36
27-Feb-21	7.29	<4.0	48	64
06-Mar-21	7.12	<4.0	36	76
13-Mar-21	7.34	<4.0	20	44
18-Mar-21	7.46	<4.0	26	56
28-Mar-21	7.51	<4.0	24	60

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MoEF&CC Standard Notification dated 25th September, 2000 and MoEF Schedule VI, General standard for discharge of Environmental Pollutants Part A: Effluents	pH	Oil & Grease	TSS	COD	BOD
	5.5-9.0	10	100	250	30



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Table:120

**Area:** Hingula**Project:** Balram OCP**Monitoring Station:** Inlet of O & G Trap

All dimensions are in mg/l unless otherwise stated except pH

Date of Sampling	pH	Oil & Grease	TSS	COD
10-Jun-20	7.52	<4.0	28	32
04-Sep-20	5.6	<4.0	42	28
14-Dec-20	7.15	<4.0	58	48
27-Mar-21	6.9	<4.0	36	80

Table:121

**Area:** Hingula**Project:** Balram OCP**Monitoring Station:** Outlet of O & G Trap

All dimensions are in mg/l unless otherwise stated except pH

Date of Sampling	pH	Oil & Grease	TSS	COD
10-Jun-20	7.22	<4.0	20	28
04-Sep-20	6.25	<4.0	26	16
14-Dec-20	7.19	<4.0	40	36
27-Mar-21	6.6	<4.0	22	36

MoEF&CC Standard Notification dated 25th September, 2000 and MoEF Schedule VI, General standard for discharge of Environmental Pollutants Part A: Effluents	pH	Oil & Grease	TSS	COD	BOD
	5.5-9.0	10	100	250	30

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Table:122

**Area:** Hingula**Project:** Balram OCP**Monitoring Station:** DETP Inlet of Balram Colony

All dimensions are in mg/l unless otherwise stated except pH

Date of Sampling	pH	TSS	BOD
25-Apr-20	7.12	38	3.2
15-Jul-20	7.39	58	2.6
14-Oct-20	7.75	58	2.8
13-Jan-21	7.31	32	<2.0
30-Jan-21	7.2	30	<2.0

Table:123

**Area:** Hingula**Project:** Balram OCP**Monitoring Station:** DETP Outlet of Balram Colony

All dimensions are in mg/l unless otherwise stated except pH

Date of Sampling	pH	TSS	BOD
25-Apr-20	6.61	32	<2.0
06-May-20	7.81	22	<2.0
18-May-20	7.48	22	<2.0
10-Jun-20	7.36	38	<2.0
29-Jun-20	7.65	18	<2.0
15-Jul-20	7.21	28	<2.0
30-Jul-20	7.3	18	<2.0
10-Aug-20	Under Maintenance		
31-Aug-20	7.21	30	<2.0
14-Sep-20	6.71	42	<2.0
30-Sep-20	7.3	40	<2.0
14-Oct-20	8.05	40	<2.0
31-Oct-20	7.13	32	<2.0
13-Nov-20	6.83	84	2.8
27-Nov-20	7.92	28	<2.0
14-Dec-20	7.69	38	<2.0
31-Dec-20	7.28	32	<2.0
13-Jan-21	7.37	26	<2.0
15-Feb-21	6.31	24	<2.0
26-Feb-21	7.66	24	<2.0
13-Mar-21	7.34	18	<2.0
26-Mar-21	7.26	24	<2.0

MoEF&CC Standard Notification dated 25th September, 2000 and MoEF Schedule VI, General standard for discharge of Environmental Pollutants Part A: Effluents	pH	Oil & Grease	TSS	COD	BOD
	5.5-9.0	10	100	250	30

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**Table:124**  
**Area: Talcher**  
**Project: Talcher**  
**Monitoring Station: Talcher Colliery Sedimentation Tank Discharge**

All dimensions are in mg/l unless otherwise stated except pH

Date of Sampling	pH	Oil & Grease	TSS	COD
28-Apr-20	7.19	<4.0	16	52
11-May-20	7.52	<4.0	32	56
21-May-20	7.78	<4.0	34	52
11-Jun-20	7.56	<4.0	30	36
29-Jun-20	7.12	<4.0	28	36
13-Jul-20	7.36	<4.0	20	16
22-Jul-20	7.31	<4.0	40	28
14-Aug-20	6.92	<4.0	34	28
24-Aug-20	7.4	<4.0	46	36
04-Sep-20	7.14	<4.0	48	32
24-Sep-20	7.42	<4.0	24	36
14-Oct-20	7.55	<4.0	34	20
31-Oct-20	7.34	<4.0	24	12
13-Nov-20	7.26	<4.0	28	16
28-Nov-20	7.81	<4.0	34	40
14-Dec-20	7.34	<4.0	26	12
29-Dec-20	6.8	<4.0	42	32
16-Jan-21	6.53	<4.0	36	56
30-Jan-21	7.43	<4.0	26	36
15-Feb-21	7.56	<4.0	28	52
26-Feb-21	7.48	<4.0	20	44
12-Mar-21	7.43	<4.0	12	40
26-Mar-21	7.41	<4.0	26	56

MoEF&CC Standard Notification dated 25th September, 2000 and MoEF Schedule VI, General standard for discharge of Environmental Pollutants Part A: Effluents	<b>pH</b>	<b>Oil &amp; Grease</b>	<b>TSS</b>	<b>COD</b>	<b>BOD</b>
	5.5-9.0	10	100	250	30

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**Table:125**  
**Area: Talcher**  
**Project: Nandira**  
**Monitoring Station: Nandira Colliery Sedimentation Tank Discharge**

All dimensions are in mg/l unless otherwise stated except pH

Date of Sampling	pH	Oil & Grease	TSS	COD
28-Apr-20	7.91	<4.0	24	80
11-May-20	7.77	<4.0	24	64
21-May-20	7.71	<4.0	22	32
11-Jun-20	7.02	<4.0	20	52
29-Jun-20	7.52	<4.0	20	44
13-Jul-20	7.49	<4.0	48	28
22-Jul-20	7.6	<4.0	82	56
14-Aug-20	7.03	<4.0	20	12
24-Aug-20	7.51	<4.0	36	28
14-Sep-20	6.65	<4.0	34	20
24-Sep-20	7.86	<4.0	26	32
14-Oct-20	7.6	<4.0	38	24
31-Oct-20	6.96	<4.0	20	8
13-Nov-20	7.19	<4.0	30	20
28-Nov-20	7.67	<4.0	38	44
14-Dec-20	7.05	<4.0	32	24
29-Dec-20	6.89	<4.0	28	20
13-Jan-21	7.31	<4.0	30	48
20-Jan-21	7.35	<4.0	20	40
15-Feb-21	7.69	<4.0	20	32
26-Feb-21	6.68	<4.0	18	40
12-Mar-21	7.05	<4.0	14	36
26-Mar-21	6.09	<4.0	22	48

MoEF&CC Standard Notification dated 25th September, 2000 and MoEF Schedule VI, General standard for discharge of Environmental Pollutants Part A: Effluents	<b>pH</b>	<b>Oil &amp; Grease</b>	<b>TSS</b>	<b>COD</b>	<b>BOD</b>
	5.5-9.0	10	100	250	30

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**Table:126**  
**Area: Talcher**  
**Project: Duelbera colliery**  
**Monitoring Station: Deulbera Colliery Mine Discharge at Pit Top**

All dimensions are in mg/l unless otherwise stated except pH

Date of Sampling	pH	Oil & Grease	TSS	COD
28-Apr-20	7.67	<4.0	20	44
11-May-20	7.81	<4.0	20	52
21-May-20	7.87	<4.0	18	48
11-Jun-20	7.63	<4.0	22	36
29-Jun-20	7.64	<4.0	18	36
13-Jul-20	7.41	<4.0	64	40
22-Jul-20	7.66	<4.0	22	16
14-Aug-20	7.67	<4.0	26	16
24-Aug-20	7.36	<4.0	32	24
14-Sep-20	7.06	<4.0	42	32
24-Sep-20	7.05	<4.0	24	12
14-Oct-20	7.61	<4.0	28	16
31-Oct-20	6.54	<4.0	24	12
13-Nov-20	6.22	<4.0	32	16
28-Nov-20	8.17	<4.0	30	24
14-Dec-20	6.86	<4.0	26	28
29-Dec-20	6.63	<4.0	24	16
16-Jan-21	6.57	<4.0	26	56
20-Jan-21	7.44	<4.0	24	48
15-Feb-21	7.57	<4.0	18	36
26-Feb-21	6.57	<4.0	16	36
13-Mar-21	6.73	<4.0	12	32
26-Mar-21	6.65	<4.0	24	60

MoEF&CC Standard Notification dated 25th September, 2000 and MoEF Schedule VI, General standard for discharge of Environmental Pollutants Part A: Effluents	<b>pH</b>	<b>Oil &amp; Grease</b>	<b>TSS</b>	<b>COD</b>	<b>BOD</b>
	5.5-9.0	10	100	250	30

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**JOB NO.750001**

**Table:127**  
**Area: Talcher**  
**Project: Duelbera colliery**  
**Monitoring Station: Ranipark Dubmersible Pump**

All dimensions are in mg/l unless otherwise stated except pH

Date of Sampling	pH	Oil & Grease	TSS	COD
28-Apr-20	7.6	<4.0	32	48
11-May-20	7.17	<4.0	30	48
21-May-20	7.66	<4.0	28	36
11-Jun-20	7.42	<4.0	20	44
29-Jun-20	7.07	<4.0	28	44
13-Jul-20	7.24	<4.0	28	20
22-Jul-20	6.53	<4.0	58	40
14-Aug-20	6.98	<4.0	24	32
24-Aug-20	7.54	<4.0	74	64
14-Sep-20	7.1	<4.0	28	16
24-Sep-20	6.98	<4.0	36	20
14-Oct-20	7.78	<4.0	44	32
31-Oct-20	6.49	<4.0	28	16
13-Nov-20	7.86	<4.0	34	20
28-Nov-20	7.82	<4.0	40	20
12-Dec-20	7.24	<4.0	30	20
29-Dec-20	6.5	<4.0	26	16
16-Jan-21	7.3	<4.0	34	64
28-Jan-21	7.34	<4.0	22	32
15-Feb-21	7.52	<4.0	24	40
26-Feb-21	7.53	<4.0	20	48
12-Mar-21	6.61	<4.0	18	40
26-Mar-21	7.35	<4.0	20	36

MoEF&CC Standard Notification dated 25th September, 2000 and MoEF Schedule VI, General standard for discharge of Environmental Pollutants Part A: Effluents	<b>pH</b>	<b>Oil &amp; Grease</b>	<b>TSS</b>	<b>COD</b>	<b>BOD</b>
	5.5-9.0	10	100	250	30

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**JOB NO.750001**

**Table:128**  
**Area: Talcher**  
**Project: Handhidhua Colliery**  
**Monitoring Station: Handhidhua Colliery Mine Discharge**

All dimensions are in mg/l unless otherwise stated except pH

Date of Sampling	pH	Oil & Grease	TSS	COD
28-Apr-20	7.86	<4.0	28	56
11-May-20	7.46	<4.0	26	56
21-May-20	7.73	<4.0	20	48
11-Jun-20	7.63	<4.0	28	52
29-Jun-20	7.32	<4.0	20	36
13-Jul-20	7.1	<4.0	32	20
22-Jul-20	7.4	<4.0	28	16
13-Aug-20	7.66	<4.0	22	16
22-Aug-20	7.32	<4.0	36	28
14-Sep-20	7.27	<4.0	36	20
24-Sep-20	7.24	<4.0	32	16
14-Oct-20	7.63	<4.0	26	16
31-Oct-20	7.27	<4.0	22	12
13-Nov-20	7.62	<4.0	38	20
28-Nov-20	7.92	<4.0	34	24
12-Dec-20	7.69	<4.0	20	12
29-Dec-20	7.37	<4.0	18	12
16-Jan-21	7.26	<4.0	22	32
30-Jan-21	7.48	<4.0	28	48
15-Feb-21	7.64	<4.0	22	32
26-Feb-21	7.47	<4.0	24	36
12-Mar-21	7.48	<4.0	20	44
26-Mar-21	6.49	<4.0	22	48

MoEF&CC Standard Notification dated 25th September, 2000 and MoEF Schedule VI, General standard for discharge of Environmental Pollutants Part A: Effluents	<b>pH</b>	<b>Oil &amp; Grease</b>	<b>TSS</b>	<b>COD</b>	<b>BOD</b>
	5.5-9.0	10	100	250	30

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**JOB NO.750001**

**Table:129**  
**Area: Talcher**  
**Project: Mandalpal Sand Mine**  
**Monitoring Station: Upstream - At 200 m before Leasehold Area**

All dimensions are in mg/l unless otherwise stated except pH

Date of Sampling	pH	Oil & Grease	TSS	COD
28-Apr-20	7.89	<4.0	34	44
11-May-20	7.82	<4.0	22	40
21-May-20	7.74	<4.0	18	28
11-Jun-20	7.36	<4.0	22	36
29-Jun-20	7.56	<4.0	26	32
13-Jul-20	6.57	<4.0	32	20
22-Jul-20	7.32	<4.0	58	32
13-Aug-20	7.34	<4.0	64	40
22-Aug-20	7.33	<4.0	40	28
14-Sep-20	7.54	<4.0	30	20
24-Sep-20	7.01	<4.0	28	16
14-Oct-20	7.68	<4.0	42	20
29-Oct-20	7.28	<4.0	32	16
13-Nov-20	7.41	<4.0	36	24
28-Nov-20	7.99	<4.0	48	32
14-Dec-20	7.24	<4.0	36	20
29-Dec-20	7.4	<4.0	24	16
16-Jan-21	7.62	<4.0	22	32
28-Jan-21	7.33	<4.0	20	36
15-Feb-21	7.7	<4.0	18	44
26-Feb-21	7.58	<4.0	18	40
12-Mar-21	7.63	<4.0	16	32
26-Mar-21	7.51	<4.0	24	56

MoEF&CC Standard Notification dated 25th September, 2000 and MoEF Schedule VI, General standard for discharge of Environmental Pollutants Part A: Effluents	pH	Oil & Grease	TSS	COD	BOD
	5.5-9.0	10	100	250	30

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**JOB NO.750001**

**Table:130**  
**Area: Talcher**  
**Project: Mandalpal Sand Mine**  
**Monitoring Station: Downstream -At 200 m after Leasehold Area**

All dimensions are in mg/l unless otherwise stated except pH

Date of Sampling	pH	Oil & Grease	TSS	COD
28-Apr-20	7.96	<4.0	42	52
11-May-20	7.64	<4.0	32	64
21-May-20	6.95	<4.0	22	44
11-Jun-20	6.82	<4.0	32	40
29-Jun-20	7.34	<4.0	18	44
13-Jul-20	7.27	<4.0	38	28
22-Jul-20	6.99	<4.0	64	36
13-Aug-20	7.4	<4.0	76	48
22-Aug-20	7.18	<4.0	48	36
14-Sep-20	7.18	<4.0	34	24
24-Sep-20	6.97	<4.0	34	20
14-Oct-20	7.56	<4.0	48	28
29-Oct-20	7.26	<4.0	46	28
13-Nov-20	7.27	<4.0	48	32
28-Nov-20	7.9	<4.0	58	40
14-Dec-20	7.2	<4.0	48	32
29-Dec-20	7.3	<4.0	48	28
16-Jan-21	7.48	<4.0	38	52
28-Jan-21	7.51	<4.0	26	48
15-Feb-21	7.56	<4.0	26	60
26-Feb-21	7.44	<4.0	32	56
12-Mar-21	7.66	<4.0	28	56
26-Mar-21	7.42	<4.0	36	84

MoEF&CC Standard Notification dated 25th September, 2000 and MoEF Schedule VI, General standard for discharge of Environmental Pollutants Part A: Effluents	pH	Oil & Grease	TSS	COD	BOD
	5.5-9.0	10	100	250	30

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**JOB NO.750001**

Table:131

Area: Talcher

Project: Kakudi &amp; Kishoripal Sand mine

Monitoring Station: Upstream - At 200 m before Leasehold Area

All dimensions are in mg/l unless otherwise stated except pH

Date of Sampling	pH	Oil & Grease	TSS	COD
28-Apr-20	8.08	<4.0	38	60
11-May-20	7.36	<4.0	20	32
21-May-20	7.74	<4.0	20	28
11-Jun-20	7.36	<4.0	24	32
29-Jun-20	7.02	<4.0	16	28
13-Jul-20	7.8	<4.0	38	20
22-Jul-20	7.52	<4.0	22	16
13-Aug-20	7.22	<4.0	56	36
22-Aug-20	6.94	<4.0	34	28
14-Sep-20	7.54	<4.0	26	16
24-Sep-20	6.95	<4.0	26	16
14-Oct-20	7.55	<4.0	52	28
29-Oct-20	7.27	<4.0	38	24
13-Nov-20	7.21	<4.0	34	24
28-Nov-20	7.54	<4.0	34	20
14-Dec-20	7.17	<4.0	30	16
29-Dec-20	7.35	<4.0	38	20
16-Jan-21	7.32	<4.0	24	36
28-Jan-21	7.42	<4.0	20	44
15-Feb-21	7.4	<4.0	20	48
26-Feb-21	7.32	<4.0	16	44
12-Mar-21	7.49	<4.0	22	28
26-Mar-21	7.39	<4.0	20	44

MoEF&CC Standard Notification dated 25th September, 2000 and MoEF Schedule VI, General standard for discharge of Environmental Pollutants Part A: Effluents	pH	Oil & Grease	TSS	COD	BOD
	5.5-9.0	10	100	250	30

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Table:132

Area: Talcher

Project: Kakudi &amp; Kishoripal Sand mine

Monitoring Station: Downstream - At 200 m after Leasehold Area

All dimensions are in mg/l unless otherwise stated except pH

Date of Sampling	pH	Oil & Grease	TSS	COD
28-Apr-20	7.81	<4.0	36	68
11-May-20	6.9	<4.0	28	56
21-May-20	7.8	<4.0	26	36
11-Jun-20	7.63	<4.0	34	44
29-Jun-20	6.72	<4.0	32	44
13-Jul-20	7.39	<4.0	44	28
22-Jul-20	7.83	<4.0	28	24
13-Aug-20	7.33	<4.0	68	44
22-Aug-20	6.83	<4.0	44	40
14-Sep-20	7.46	<4.0	38	24
24-Sep-20	6.92	<4.0	38	24
14-Oct-20	7.18	<4.0	58	36
29-Oct-20	7.29	<4.0	46	32
13-Nov-20	7.4	<4.0	46	32
28-Nov-20	7.29	<4.0	42	24
14-Dec-20	7.09	<4.0	40	28
29-Dec-20	7.25	<4.0	46	28
16-Jan-21	7.24	<4.0	36	60
28-Jan-21	7.5	<4.0	24	48
15-Feb-21	6.01	<4.0	28	64
26-Feb-21	7.47	<4.0	28	52
12-Mar-21	7.58	<4.0	34	52
26-Mar-21	7.54	<4.0	32	76

MoEF&CC Standard Notification dated 25th September, 2000 and MoEF Schedule VI, General standard for discharge of Environmental Pollutants Part A: Effluents	pH	Oil & Grease	TSS	COD	BOD
	5.5-9.0	10	100	250	30

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## EFFLUENT (22 PARAMETER) QUALITY MONITORING

Table:133

Area: Jagannath

Project: Jagannath OCP

Project (OCP / UG)	Jagannath		MoEF-Sch-VI Standards
NAME OF THE STATION	O&G Trap Outlet	STP Outlet	
Date	03-Nov-20	03-Nov-20	
Colour (Hazen)	Maintenance		-
Nitrate Nitrogen(mg/L)(As N)			10
Ammonical Nitrogen , mg/l (As N)			50
Total Kjeldhal Nitrogen, mg/l (As N)			100
Zinc(mg/L)			5
Nickel(mg/L)			3
Manganese(mg/L)			2

Table:134

Area: Bharatpur

Project: Bharatpur OCP

Project (OCP / UG)	Bharatpur			MoEF-Sch-VI Standards
NAME OF THE STATION	Workshop ETP Clear Water Tank Outlet	STP Outlet	Water Loading Point at South Quarry Sump	
Date	03-Nov-20	03-Nov-20	03-Nov-20	
Colour (Hazen)	2	1	2	-
Nitrate Nitrogen(mg/L)(As N)	<0.5	0.87	<0.5	10
Ammonical Nitrogen , mg/l (As N)	<0.5	<0.5	<0.5	50
Total Kjeldhal Nitrogen, mg/l (As N)	<1.0	<1.0	<1.0	100
Zinc(mg/L)	<0.04	0.06	0.21	5
Nickel(mg/L)	<0.10	<0.10	0.44	3
Manganese(mg/L)	0.18	<0.04	1.14	2

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Table:135  
**Area: Bharatpur**  
**Project: Chhendipada OCP**

Project (OCP / UG)	Chhendipada	MoEF-Sch-VI Standards
NAME OF THE STATION	Mine Sump Water	
Date	03-Nov-20	
Colour(Hazen)	Mine not working	–
Nitrate Nitrogen(mg/L)(As N)		10
Ammonical Nitrogen , mg/l (As N)		50
Total Kjeldhal Nitrogen, mg/l (As N)		100
Zinc(mg/L)		5
Nickel(mg/L)		3
Manganese(mg/L)		2

Table:136  
**Area: Lingaraj**  
**Project: Lingaraj OCP**

Project (OCP / UG)	Lingaraj				MoEF-Sch-VI Standards
NAME OF THE STATION	Inlet of Sedimentation Pond Complex Near Lingraj Siding	Clear Water Tank of Sedimentation on Pond Complex Near Lingraj Siding	Inlet of Sedimentation on Pond Complex Near Project Office	Clear Water Reservoir of Sedimentation on Pond Complex Near Project Office	
Date	03-Nov-20				
Colour(Hazen)	2	1	2	3	–
Nitrate Nitrogen(mg/L)(As N)	<0.5	4.61	4.48	<0.50	10
Ammonical Nitrogen , mg/l (As N)	<0.5	0.6	0.78	<0.5	50
Total Kjeldhal Nitrogen, mg/l (As N)	<1.0	1.78	1.88	<1.0	100
Zinc(mg/L)	<0.04	<0.04	<0.04	<0.04	5
Nickel(mg/L)	<0.10	<0.10	<0.10	<0.10	3
Manganese(mg/L)	<0.04	<0.04	<0.04	<0.04	2

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Table:137  
**Area: Talcher**  
**Project: Talcher Colliery**

Project (OCP / UG)	Talcher Colliery	MoEF-Sch-VI Standards
NAME OF THE STATION	Talcher Colliery Sedimentation Tank Discharge	
Date	03-Nov-20	
Colour(Hazen)	2	—
Nitrate Nitrogen(mg/L)(As N)	<0.50	10
Ammonical Nitrogen , mg/l (As N)	<0.5	50
Total Kjeldhal Nitrogen, mg/l (As N)	<1.0	100
Zinc(mg/L)	<0.04	5
Nickel(mg/L)	<0.10	3
Manganese(mg/L)	<0.04	2

Table:138  
**Area: Talcher**  
**Project: Nandira Colliery**

Project (OCP / UG)	Nandira Colliery	MoEF-Sch-VI Standards
NAME OF THE STATION	Nandira Colliery Sedimentation Tank Discharge	
Date	03-Nov-20	
Colour(Hazen)	1	—
Nitrate Nitrogen(mg/L)(As N)	<0.50	10
Ammonical Nitrogen , mg/l (As N)	0.6	50
Total Kjeldhal Nitrogen, mg/l (As N)	1.99	100
Zinc(mg/L)	<0.04	5
Nickel(mg/L)	<0.10	3
Manganese(mg/L)	<0.04	2

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Table:139  
Area: Talcher  
Project: Deulbera Colliery

Project (OCP / UG)	Deulbera Colliery		MoEF-Sch-VI Standards
NAME OF THE STATION	Deulbera Colliery Mine Discharge at Pit Top	Rani Park Submersible Pump	
Date	03-Nov-20	03-Nov-20	
Colour(Hazen)	1	2	—
Nitrate Nitrogen(mg/L)As Nitrogen	1.29	0.64	10
Ammonical Nitrogen , mg/l As Nitrogen	0.69	<0.50	50
Total Kjeldhal Nitrogen, mg/l As Nitrogen	2.21	<1.0	100
Zinc(mg/L)	<0.04	<0.04	5
Nickel(mg/L)	<0.10	<0.10	3
Manganese(mg/L)	<0.04	0.14	2

Table:140  
Area: Talcher  
Project: Handhidhua Colliery

Project (OCP / UG)	Handhidhua Colliery		MoEF-Sch-VI Standards
NAME OF THE STATION	Handhidhua Colliery Mine Discharge		
Date	03-Nov-20		
Colour(Hazen)	1		—
Nitrate Nitrogen(mg/L)(As N)	3.01		10
Ammonical Nitrogen , mg/l (As N)	<0.50		50
Total Kjeldhal Nitrogen, mg/l (As N)	<1.0		100
Zinc(mg/L)	<0.04		5
Nickel(mg/L)	<0.10		3
Manganese(mg/L)	<0.04		2

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Table:141  
**Area:** Talcher  
**Project:** Mandapal Sand Mine

Project (OCP / UG)	Mandapal Sand Mine		MoEF- Sch-VI Standards
NAME OF THE STATION	Up Stream -At 200 m Before Leasehold Area	Down Stream -At 200 m Before Leasehold Area	
Date	03-Nov-20	03-Nov-20	
Colour(Hazen)	2	1	—
Nitrate Nitrogen(mg/L)(As N)	<0.5	<0.5	10
Ammonical Nitrogen , mg/l (As N)	<0.50	<0.50	50
Total Kjeldhal Nitrogen, mg/l (As N)	<1.0	<1.0	100
Zinc(mg/L)	<0.04	<0.04	5
Nickel(mg/L)	<0.10	<0.10	3
Manganese(mg/L)	<0.04	<0.04	2

Table:142  
**Area:** Talcher  
**Project:** Kakudi & Kishoripal Sand Mine

Project (OCP / UG)	Kakudi & Kishoripal Sand Mine		MoEF- Sch-VI Standards
NAME OF THE STATION	Up Stream -At 200 m Before Leasehold Area	Down Stream -At 200 m Before Leasehold Area	
Date	03-Nov-20	03-Nov-20	
Colour(Hazen)	2	2	—
Nitrate Nitrogen(mg/L)(As N)	<0.5	<0.5	10
Ammonical Nitrogen , mg/l (As N)	<0.50	<0.50	50
Total Kjeldhal Nitrogen, mg/l (As N)	<1.0	<1.0	100
Zinc(mg/L)	<0.04	<0.04	5
Nickel(mg/L)	<0.10	<0.10	3
Manganese(mg/L)	<0.04	<0.04	2

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## Observations:

1. Fluoride, Phosphate, Arsenic, Lead, Total Chromium, Hexavalent Chromium, Cadmium, Iron, Copper & BOD (3 day at 27°C) & Sulphide were below detectable limits in the sample collected
2. The Odour was found to be agreeable in all the samples received.



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# **SURFACE WATER QUALITY**

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### 3.4 TABLES FOR SURFACEWATER QUALITY DATA

Table:143  
Area: Jagannath  
Project: Jagannath OCP

Project/OCP	Jagannath			
	West sump water	West Sump Water	Central sump water	Central Sump Water
<b>NAME OF STATIONS</b>				
<b>Date of sampling</b>	<b>30-Aug-2020</b>	<b>29-Jan-2021</b>	<b>30-Aug-2020</b>	<b>29-Jan-2021</b>
<b>pH</b>	6.58	6.63	6.80	7.19
<b>Dissolved Oxygen(mg/L)</b>	7.2	4.2	7.3	4.2
<b>Color (Hazen unit)</b>	2	3	2	2
<b>Total dissolved solids (mg/L)</b>	98	630	100	344
<b>TSS(mg/L)</b>	38	32	32	28
<b>Total Hardness(mg/L)</b>	56.45	525.3	60.48	207.8
<b>Chlorides(mg/L)</b>	10	14	8	26
<b>Sulphate(mg/L)</b>	24.41	243.48	30.93	82.42
<b>Nitrate(mg/L)</b>	<0.5	4.44	<0.5	<0.5
<b>Fluoride(mg/L)</b>	<0.3	0.43	<0.3	0.49
<b>Zinc(mg/L)</b>	<0.04	0.34	<0.04	<0.04

Observations:

1. Cadmium, Arsenic, Lead, Chromium as Cr(VI), Oil & Grease, BOD (3 days at 27°C) Copper, Iron were found to be below detectable limits.

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**JOB NO.750001**

Table:144  
**Area: Bharatpur**  
**Project: BharatpurOCP**

Project/OCP	Bharatpur			
NAME OF STATIONS	Bangaru Jhor river near Joragarhia	Bangaru Jhor River Near Joragarhia	Jambubahali Village Pond	Jambubahali Village Pond
Date of sampling	30-Aug-2020	29-Jan-2021	30-Aug-2020	1-Jan-2021
pH	6.65	8.13	7.10	7.55
Dissolved Oxygen(mg/L)	7.0	4.4	6.8	4.0
Color (Hazen unit)	1	2	3	2
Total dissolved solids (mg/L)	236	398	652	262
TSS(mg/L)	30	30	34	26
Total Hardness(mg/L)	104.83	164.6	483.84	149
Chlorides(mg/L)	32	46	16	26
Sulphate(mg/L)	9.85	53.35	261.85	42.01
Nitrate(mg/L)	2.86	11.73	4.83	2.22
Fluoride(mg/L)	<0.3	0.55	<0.3	0.45

Observations:

1. Cadmium, Arsenic, Lead, Zinc, Chromium Cr(VI), Oil & Grease, BOD (3 days at 27°C) Copper, Iron were found to be below detectable limits.

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**Table:145**  
**Area: Kaniha**  
**Project: Kaniha OCP**

Project/OCP	Kaniha			
	Singada jhor stream Nearer to Village Khairnali as u/s Water for Kaniha OCP	Singada jhor Stream Nearer to Village Khairnali as u/s Water for Kaniha OCP	Before Junction Point of Singadajhor & Brahmani River at Balangi Village as d/s for Kaniha OCP	Before Junction Point of Singadajhor & Brahmani River at Balangi Village as d/s for Kaniha OCP
Date of sampling	27-Aug-2020	30-Jan-2021	27-Aug-2020	30-Jan-2021
pH	7.83	7.93	7.93	7.61
Dissolved Oxygen(mg/L)	6.7	4.7	6.8	5.6
Color (Hazen unit)	5	3	4	1
Total dissolved solids (mg/L)	212	304	206	174
TSS(mg/L)	56	34	48	38
Total Hardness(mg/L)	137.10	192.1	145.15	109.8
Chlorides(mg/L)	16	22	14	10
Sulphate(mg/L)	18.03	4.94	17.47	28.05
Nitrate(mg/L)	<0.5	<0.5	<0.5	2.71



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**JOB NO.750001**

**Table:146**  
**Area: Kaniha**  
**Project: Kaniha OCP**

Project/OCP	Kaniha			
	Tikra Nadi Near Kanih Village as u/s Water for Kanih OCP	Tikra Nadi Near Kanih Village as u/s Water for Kanih OCP	Tikra Nadi Near Shagarhi Pala Village as d/s Water for Kanih OCP	Tikra Nadi Near Shagarhi Pala Village as d/s Water for Kanih OCP
<b>Date of sampling</b>	<b>27-Aug-2020</b>	<b>30-Jan-2021</b>	<b>27-Aug-2020</b>	<b>30-Jan-2021</b>
<b>pH</b>	7.74	7.54	7.66	8.44
<b>Dissolved Oxygen(mg/L)</b>	6.9	5.3	7.1	4.4
<b>Color (Hazen unit)</b>	6	3	4	2
<b>Total dissolved solids (mg/L)</b>	126	322	110	192
<b>TSS(mg/L)</b>	58	52	46	26
<b>Total Hardness(mg/L)</b>	72.58	207.8	68.54	117.61
<b>Chlorides(mg/L)</b>	10	26	12	16
<b>Sulphate(mg/L)</b>	16.37	69.05	11.93	43.17
<b>Nitrate(mg/L)</b>	0.78	<0.5	0.78	<0.5

Observations:

1. Cadmium, Arsenic, Lead, Zinc, Chromium Cr(VI), Oil & Grease, BOD (3 days at 27°C) Copper, Iron were found to be below detectable limits.

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Table:147  
**Area: Hingula**  
**Project: Balram OCP**

Project/OCP	Balram		Balram	
	Derjenga reservoir as a part of Impact Study	Derjenga Reservoir as a part of Impact Study	Pond water of Ambapal village	Pond water of Ambapal Village
<b>Date of sampling</b>	<b>31-Aug-2020</b>	<b>27-Jan-2021</b>	<b>27-Aug-2020</b>	<b>27-Jan-2021</b>
<b>pH</b>	6.82	7.51	7.65	7.03
<b>Dissolved Oxygen(mg/L)</b>	6.9	4.2	6.7	5.2
<b>BOD (3 days 27°C(mg/L)</b>	<2.0	2.5	2.2	<2.0
<b>Color (Hazen unit)</b>	2	2	5	1
<b>Total dissolved solids (mg/L)</b>	304	270	192	252
<b>TSS(mg/L)</b>	26	24	56	42
<b>Total Hardness(mg/L)</b>	189.5	156.8	96.77	98
<b>Chlorides(mg/L)</b>	16	16	24	40
<b>Sulphate(mg/L)</b>	112.75	18.32	30.93	31.83
<b>Nitrate(mg/L)</b>	<0.5	<5	0.89	1.5

Observations:

1. Cadmium, Arsenic, Lead, Zinc, Chromium Cr(VI), Oil & Grease, Copper, Iron were found to be below detectable limits.

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**Table:148**  
**Area: Hingula**  
**Project: Hingula OCP**

Project/OCP	Hingula			
	Singadhajhor Stream Near HOCP	Singadhajhor Stream Near HOCP	Pond Water of Kankarei Village	Pond Water of Kankarei Village
<b>NAME OF STATIONS</b>				
<b>Date of sampling</b>	<b>31-Aug-2020</b>	<b>29-Jan-2021</b>	<b>31-Aug-2020</b>	<b>27-Jan-2021</b>
<b>pH</b>	6.75	7.80	6.28	6.91
<b>Dissolved Oxygen(mg/L)</b>	6.7	5.9	7.2	6.1
<b>Color (Hazen unit)</b>	4	3	1	2
<b>Total dissolved solids (mg/L)</b>	270	272	374	158
<b>TSS(mg/L)</b>	46	32	18	44
<b>Total Hardness(mg/L)</b>	120.96	172.5	189.5	101.9
<b>Iron(mg/L)</b>	<0.1	<0.1	<0.1	0.23
<b>Chlorides(mg/L)</b>	46	20	44	14
<b>Sulphate(mg/L)</b>	28.85	21.66	53.67	36.34
<b>Nitrate(mg/L)</b>	9.55	<0.5	40.1	<0.5

**Observations:**

1. Cadmium, Arsenic, Lead, Zinc, Chromium Cr(VI), Oil & Grease, BOD (3 days at 27°C) Copper, were found to be below detectable limits.

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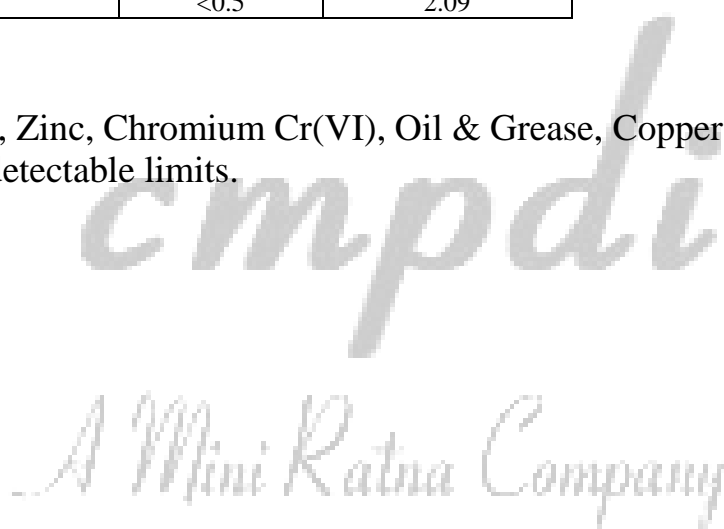
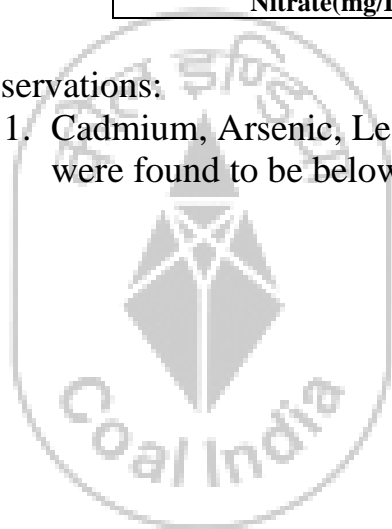
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Table:149  
**Area: Talcher**  
**Project: Talcher**

Project/OCP	Talcher	
NAME OF STATIONS	Pond water of Dera village	Pond Water of Dera Village
Date of sampling	30-Aug-2020	29-Jan-2021
pH	7.26	6.86
Dissolved Oxygen(mg/L)	6.8	4.5
BOD (3 days 27°C)(mg/L)	<2.0	2.2
Color (Hazen unit)	3	1
Total dissolved solids (mg/L)	202	188
TSS(mg/L)	38	34
Total Hardness(mg/L)	129.02	82.3
Iron(mg/L)	<0.1	<0.1
Chlorides(mg/L)	18	20
Sulphate(mg/L)	13.87	45.93
Nitrate(mg/L)	<0.5	2.09

Observations:

1. Cadmium, Arsenic, Lead, Zinc, Chromium Cr(VI), Oil & Grease, Copper were found to be below detectable limits.



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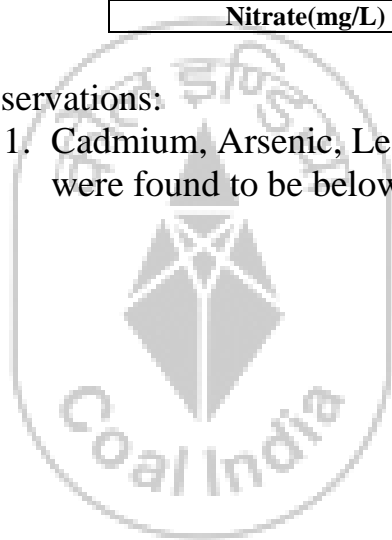
**JOB NO.750001**

Table:150  
**Area:** Talcher  
**Project:** Deulbera

Project/OCP	Deulbera	
NAME OF STATIONS	Pond Water of Gopinathpur Village	Pond Water of Gopinathpur Village
Date of sampling	30-Aug-2020	28-Jan-2021
pH	7.29	7.41
Dissolved Oxygen(mg/L)	6.9	4.6
BOD (3 days 27°C)(mg/L)	<2.0	<2.0
Color (Hazen unit)	2	2
Total dissolved solids (mg/L)	282	196
TSS (mg/L)	34	32
Total Hardness(mg/L)	177.41	113.7
Iron(mg/L)	<0.1	<0.10
Chlorides(mg/L)	26	14
Sulphate(mg/L)	30.23	40.56
Nitrate(mg/L)	20.5	<0.5

Observations:

1. Cadmium, Arsenic, Lead, Zinc, Chromium Cr(VI), Oil & Grease, Copper were found to be below detectable limits.



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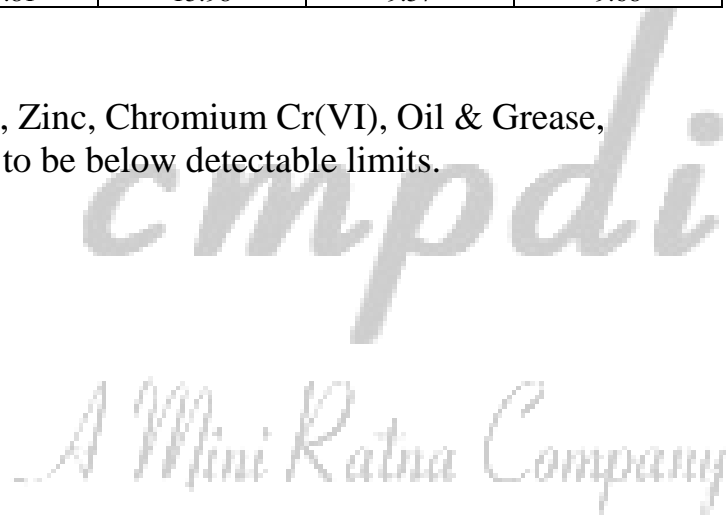
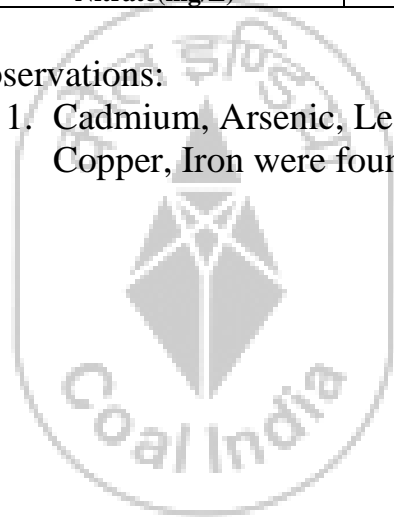
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**Table:151**  
**Area: Talcher**  
**Project: Nandira**

Project/OCP	Nandira			
NAME OF STATIONS	Nandira Jhor Near Karnapur Village	Nandira Jhor Near Sakasingha Village	Nandira Jhor Near Tentolei Village Mine	Nandira Jhor Near Pengua Village Mine
<b>Date of sampling</b>	<b>30-Aug-2020</b>	<b>27-Jan-2021</b>	<b>30-Aug-2020</b>	<b>27-Jan-2021</b>
<b>pH</b>	6.57	7.95	7.16	8.33
<b>Dissolved Oxygen(mg/L)</b>	7.1	6.1	6.7	5.8
<b>BOD (3 days 27°C(mg/L)</b>	<2.0	2.7	<2.0	<2.0
<b>Color (Hazen unit)</b>	1	3	3	2
<b>Total dissolved solids (mg/L)</b>	374	432	278	390
<b>TSS(mg/L)</b>	24	26	46	22
<b>Total Hardness(mg/L)</b>	193.54	149	84.67	168.6
<b>Chlorides(mg/L)</b>	44	56	44	42
<b>Sulphate(mg/L)</b>	51.59	68.03	28.02	70.94
<b>Nitrate(mg/L)</b>	39.81	15.98	9.57	9.68

Observations:

1. Cadmium, Arsenic, Lead, Zinc, Chromium Cr(VI), Oil & Grease, Copper, Iron were found to be below detectable limits.



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# WELL WATER QUALITY

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### 3.5 TABLES FOR WELL WATER QUALITY DATA

Table:152

**Area:** Jagannath

**Project:** Ananta OCP

**Monitoring Station:** Dera village well

Date of Sampling	Water level (m bgl)
19-May-20	4.5
14-Aug-20	4
24-Nov-20	4.15
29-Jan-21	4.55

Table:153

**Area:** Bhaartpur

**Project:** Bhaartpur OCP

**Monitoring Station:** Badasinghada village open well

Date of Sampling	Water level (m bgl)
18-May-20	4
14-Aug-20	2.8
21-Nov-20	2.2
29-Jan-21	4.2

Table:154

**Area:** Bhaartpur

**Project:** Bhaartpur OCP

**Monitoring Station:** Teleipasi village open well

Date of Sampling	Water level (m bgl)
18-May-20	8
14-Aug-20	4
21-Nov-20	3.15
29-Jan-21	3.27

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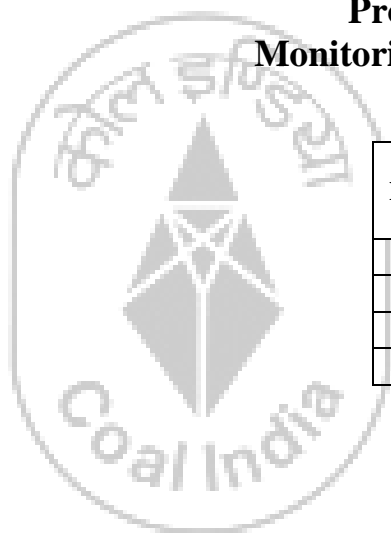
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Table:155  
**Area Lingaraj**  
**Project Lingaraj OCP OCP**  
**Monitoring Station: Balunga Khamar village well**

<b>Date of Sampling</b>	<b>Water level (m bgl)</b>
18-May-20	9.30
14-Aug-20	3.00
19-Nov-20	1.75
28-Jan-21	1.65

Table:156  
**Area Lingaraj**  
**Project Lingaraj OCP OCP**  
**Monitoring Station: Deulbera village well**

<b>Date of Sampling</b>	<b>Water level (m bgl)</b>
18-May-20	3.30
14-Aug-20	2.50
19-Nov-20	2.05
28-Jan-21	1.77



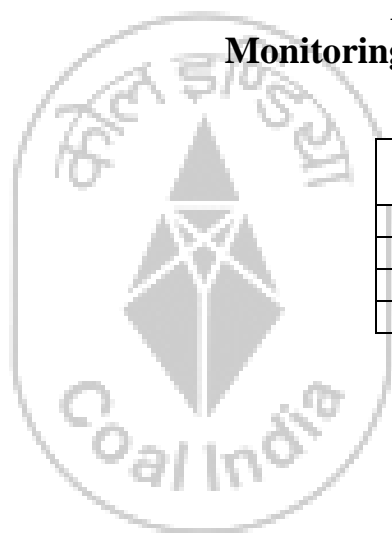
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Table:157  
**Area Lingaraj**  
**Project Lingaraj OCP OCP**  
**Monitoring Station: Talabera village well**

Date of Sampling	Water level (m bgl)
18-May-20	4.15
14-Aug-20	3.10
19-Nov-20	1.50
28-Jan-21	1.81

Table:158  
**Area Hingula**  
**Project Balaram OCP**  
**Monitoring Station: Nakeiposi village well**

Date of Sampling	Water level (m bgl)
20-May-20	11
14-Aug-20	2
20-Nov-20	4.35
29-Jan-21	5.5



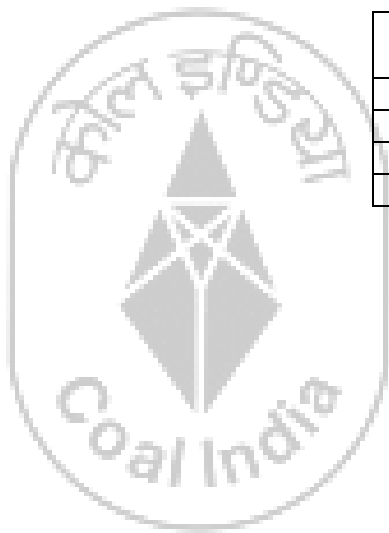
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Table:159  
**Area Hingula**  
**Project Balaram OCP**  
**Monitoring Station: Danara village well**

Date of Sampling	Water level (m bgl)
20-May-20	12.0
14-Aug-20	5.5
20-Nov-20	5.05
29-Jan-21	4.47

Table:160  
**Area Hingula**  
**Project Hingula OCP**  
**Monitoring Station: Gopalprasad village well water**

Date of Sampling	Water level (m bgl)
20-May-20	11
14-Aug-20	4.5
23-Nov-20	4.35
29-Jan-21	1.12



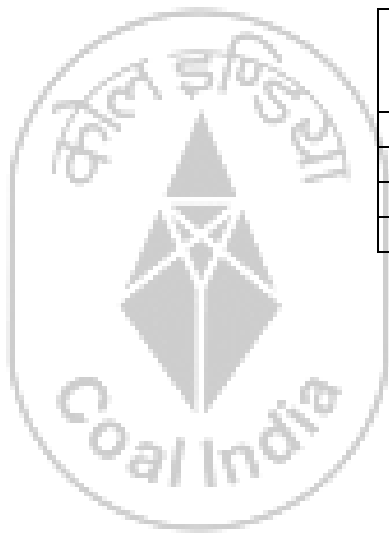
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Table:161  
**Area Hingula**  
**Project Hingula OCP**  
**Monitoring Station: Kusumpal village well**

Date of Sampling	Water level (m bgl)
20-May-20	10.3
14-Aug-20	3.2
23-Nov-20	3.55
29-Jan-21	2.69

Table:162  
**Area Talcher**  
**Project Nandira Colliery**  
**Monitoring Station: Natedi village well**

Date of Sampling	Water level (m bgl)
19-May-20	8.3
14-Aug-20	6.3
20-Nov-20	2.35
29-Jan-21	7.42



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Table:163  
Area Talcher  
Project Deulbera Colliery  
Monitoring Station: Deulbera village well

Date of Sampling	Water level (m bgl)
19-May-20	4.3
14-Aug-20	3
19-Nov-20	2.05
28-Jan-21	1.77

Observations:

1. Rakas village has been uprooted due to mining activities thus no functional well was found in the premises
2. Narharipur villge well was not found



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Figure 1 Ground Mounted Solar panels in MCL



Figure 2 Ananta Medicinal Garden

Ananta medicinal garden has been developed by Mahanadi Coalfields Limited on the backfilled area of Ananta Open Cast Project

Source: EGS Report 2019-2020, CIL

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# DRINKING WATER QUALITY

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### 3.6 TABLES FOR DRINKING WATER QUALITY DATA

Table:164  
Area: Jagannath  
Project: Jagannath OCP

Project / OCP Monitoring Station	Jagannath OCP			Indian Drinking Standards (IS-10500):2012	
	Balanda Colony Tap Water				
Date of Sampling	24-Apr-2020	25-May-2020	10-Jun-2020	Acceptable	Permissible
Colour(Hazen)	2	6	4	5	15
Turbidity(NTU)	1	1	2	1	5
pH	7.79	7.55	7.32	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	276	196	176	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	244	220	204	200	600
Chloride(mg/L)	203	26	18	250	1000
Total Dissolve Solid(mg/L)	857	330	208	500	2000
Calcium(mg/L)	70.4	68.8	56	75	200
Manganese(mg/L)	<0.04	<0.04	<0.04	0.1	0.3
Sulphate(mg/L)	111.25	19.03	18.36	200	400
Nitrate(mg/L)	39.85	0.81	<0.5	45	No relaxation

Table:165

Project / OCP Monitoring Station	Jagannath OCP			Indian Drinking Standards (IS-10500):2012	
	Balanda Colony Tap Water				
Date of Sampling	10-Jul-2020	14-Aug-2020	14-Sep-2020	Acceptable	Permissible
Colour(Hazen)	4	2	4	5	15
Turbidity(NTU)	2	1	2	1	5
pH	7.21	7.38	7.29	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	56	36	28	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	169.34	193.54	153.52	200	600
Chloride(mg/L)	12	14	10	250	1000
Total Dissolve Solid(mg/L)	270	288	224	500	2000
Calcium(mg/L)	48.48	54.94	41.6	75	200
Manganese(mg/L)	<0.04	<0.04	<0.04	0.1	0.3
Sulphate(mg/L)	110	125.24	119.16	200	400
Nitrate(mg/L)	<0.5	<0.5	<0.5	45	No relaxation

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Table:166

Project / OCP Monitoring Station	Jagannath OCP Balanda Colony Tap Water			Indian Drinking Standards (IS-10500):2012	
	Date of Sampling	1-Oct-2020	13-Nov-2020	2-Dec-2020	Acceptable
Colour(Hazen)	2	1	2	5	15
Turbidity(NTU)	1	2	1	1	5
pH	6.79	7.02	6.72	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	40	52	56	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	235.2	229.7	237	200	600
Chloride(mg/L)	20	10	14	250	1000
Total Dissolve Solid(mg/L)	368	312	352	500	2000
Calcium(mg/L)	67.5	61.89	66.53	75	200
Manganese(mg/L)	0.10	<0.04	<0.04	0.1	0.3
Sulphate(mg/L)	251.62	132.46	154.79	200	400
Nitrate(mg/L)	<0.5	<0.5	<0.5	45	No relaxation

Table:167

Project / OCP Monitoring Station	Jagannath OCP Balanda Colony Tap Water			Indian Drinking Standards (IS-10500):2012	
	Date of Sampling	2-Jan-2021	1-Feb-2021	12-Mar-2021	Acceptable
Colour(Hazen)	4	1	3	5	15
Turbidity(NTU)	2	1	2	1	5
pH	7.10	7.34	6.94	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	68	296	56	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	282.2	254.1	361.3	200	600
Chloride(mg/L)	16	149	20	250	1000
Total Dissolve Solid(mg/L)	408	868	498	500	2000
Calcium(mg/L)	80.12	77.96	106.6	75	200
Manganese(mg/L)	<0.04	<0.04	<0.04	0.1	0.3
Sulphate(mg/L)	136.71	103.55	213.12	200	400
Nitrate(mg/L)	<0.5	31.24	0.56	45	No relaxation

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Table:168

Project / OCP Monitoring Station	Jagannath OCP			Indian Drinking Standards (IS-10500):2012	
	Jagannath Colony Tap Water				
Date of Sampling	24-Apr-2020	25-May-2020	10-Jun-2020	Acceptable	Permissible
Colour(Hazen)	2	7	3	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	1	3	3	1	5
pH	8.03	7.88	7.44	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	48	168	148	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	204	224	212	200	600
Chloride(mg/L)	8	44	20	250	1000
Total Dissolve Solid(mg/L)	181	340	318	500	2000
Calcium(mg/L)	54.4	78.4	67.2	75	200
Manganese(mg/L)	<0.04	<0.04	<0.04	0.1	0.3
Sulphate(mg/L)	23.06	5.8	6.3	200	400
Nitrate(mg/L)	<0.5	<0.5	<0.5	45	No relaxation

Table:169

Project / OCP Monitoring Station	Jagannath OCP			Indian Drinking Standards (IS-10500):2012	
	Jagannath Colony Tap Water				
Date of Sampling	10-Jul-2020	14-Aug-2020	14-Sep-2020	Acceptable	Permissible
Colour(Hazen)	6	4	2	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	1	3	1	1	5
pH	7.11	7.47	7.35	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	48	40	36	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	92.74	193.54	149.48	200	600
Chloride(mg/L)	8	16	12	250	1000
Total Dissolve Solid(mg/L)	160	292	222	500	2000
Calcium(mg/L)	25.86	51.71	38.4	75	200
Manganese(mg/L)	<0.04	<0.04	<0.04	0.1	0.3
Sulphate(mg/L)	50.84	126.62	91.2	200	400
Nitrate(mg/L)	<0.5	<0.5	<0.5	45	No relaxation

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Table:170

Project / OCP Monitoring Station	Jagannath OCP			Indian Drinking Standards (IS-10500):2012	
	Jagannath Colony Tap Water				
Date of Sampling	1-Oct-2020	13-Nov-2020	2-Dec-2020	Acceptable	Permissible
Colour(Hazen)	1	2	3	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	2	1	2	1	5
pH	6.75	6.73	6.78	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	40	52	48	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	290.1	304.9	284.4	200	600
Chloride(mg/L)	14	14	18	250	1000
Total Dissolve Solid(mg/L)	426	416	418	500	2000
Calcium(mg/L)	75.4	90.46	82.37	75	200
Manganese(mg/L)	<0.04	<0.04	<0.04	0.1	0.3
Sulphate(mg/L)	188.16	175.51	188.18	200	400
Nitrate(mg/L)	<0.5	<0.5	<0.5	45	No relaxation

Table:171

Project / OCP Monitoring Station	Jagannath OCP				Indian Drinking Standards (IS-10500):2012	
	Jagannath Colony Tap Water					
Date of Sampling	2-Jan-2021	1-Feb-2021	12-Mar-2021	12-Mar-2021	Acceptable	Permissible
Colour(Hazen)	2	4	2	3	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	1	2	1	2	1	5
pH	7.22	7.15	7.34	6.94	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	72	272	52	56	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	58.8	297.8	365.2	361.3	200	600
Chloride(mg/L)	6	14	18	20	250	1000
Total Dissolve Solid(mg/L)	108	398	506	498	500	2000
Calcium(mg/L)	17.28	85.91	105.01	106.6	75	200
Manganese(mg/L)	<0.04	0.09	<0.04	<0.04	0.1	0.3
Sulphate(mg/L)	16.43	5.78	217.21	213.12	200	400
Nitrate(mg/L)	<0.5	<0.5	<0.5	0.56	45	No relaxation

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Table:172  
**Area: Ananta**  
**Project: Ananta OCP**

Project / OCP	Ananta OCP			Indian Drinking Standards (IS-10500):2012	
Monitoring Station	Ananta Colony Tap Water			Acceptable	Permissible
Date of Sampling	24-Apr-2020	25-May-2020	10-Jun-2020		
Colour(Hazen)	2	8	5	5	15
Turbidity(NTU)	2	2	1	1	5
pH	7.94	7.70	7.68	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	48	76	92	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	80	156	172	200	600
Chloride(mg/L)	10	12	30	250	1000
Total Dissolve Solid(mg/L)	94	248	278	500	2000
Calcium(mg/L)	28.8	40	48	75	200
Manganese(mg/L)	<0.04	<0.04	<0.04	0.1	0.3
Sulphate(mg/L)	9.95	75.37	72.69	200	400
Nitrate(mg/L)	<0.5	<0.5	<0.5	45	No relaxation

Table:173

Project / OCP	Ananta OCP			Indian Drinking Standards (IS-10500):2012	
Monitoring Station	Ananta Colony Tap Water			Acceptable	Permissible
Date of Sampling	10-Jul-2020	14-Aug-2020	14-Sep-2020		
Colour(Hazen)	3	3	3	5	15
Turbidity(NTU)	3	2	2	1	5
pH	7.26	7.48	7.21	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	52	36	36	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	68.54	189.5	157.56	200	600
Chloride(mg/L)	8	14	10	250	1000
Total Dissolve Solid(mg/L)	124	288	224	500	2000
Calcium(mg/L)	19.39	54.94	40	75	200
Manganese(mg/L)	<0.04	<0.04	<0.04	0.1	0.3
Sulphate(mg/L)	25.77	119	107.64	200	400
Nitrate(mg/L)	<0.5	<0.5	<0.5	45	No relaxation

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Table:174

Project / OCP Monitoring Station	Ananta OCP Ananta Colony Tap Water			Indian Drinking Standards (IS-10500):2012	
	1-Oct-2020	13-Nov-2020	2-Dec-2020	Acceptable	Permissible
Date of Sampling					
Colour(Hazen)	2	1	3	5	15
Turbidity(NTU)	1	1	2	1	5
pH	7.18	7.42	7.07	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	48	56	56	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	82.3	63.4	90.8	200	600
Chloride(mg/L)	12	12	10	250	1000
Total Dissolve Solid(mg/L)	132	94	108	500	2000
Calcium(mg/L)	20.4	15.87	19.01	75	200
Manganese(mg/L)	<0.04	<0.04	<0.04	0.1	0.3
Sulphate(mg/L)	36.36	10.55	9.44	200	400
Nitrate(mg/L)	<0.5	<0.5	<0.5	45	No relaxation

Table:175

Project / OCP Monitoring Station	Ananta OCP Ananta Colony Tap Water			Indian Drinking Standards (IS-10500):2012	
	14-Jan-2021	13-Feb-2021	12-Mar-2021	Acceptable	Permissible
Date of Sampling					
Colour(Hazen)	2	3	1	5	15
Turbidity(NTU)	1	2	2	1	5
pH	7.34	7.43	7.31	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	64	52	56	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	70.6	309.7	242.2	200	600
Chloride(mg/L)	10	24	14	250	1000
Total Dissolve Solid(mg/L)	112	452	358	500	2000
Calcium(mg/L)	17.28	90.69	70	75	200
Manganese(mg/L)	<0.04	<0.04	<0.04	0.1	0.3
Sulphate(mg/L)	13.86	159.66	143.54	200	400
Nitrate(mg/L)	<0.5	<0.5	<0.5	45	No relaxation

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Table:176

Project / OCP Monitoring Station	Ananta OCP			Indian Drinking Standards (IS-10500):2012	
	Dera Village Tube Well Water				
Date of Sampling	24-Apr- 2020	25-May- 2020	10-Jun- 2020	Acceptable	Permissible
Colour(Hazen)	2	3	2	5	15
Turbidity(NTU)	1	2	2	1	5
pH	8.02	7.93	7.23	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	288	276	252	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	556	536	512	200	600
Chloride(mg/L)	108	90	84	250	1000
Total Dissolve Solid(mg/L)	782	768	748	500	2000
Calcium(mg/L)	139.6	128	118.4	75	200
Manganese(mg/L)	<0.04	<0.04	<0.04	0.1	0.3
Sulphate(mg/L)	140.65	106.14	98.56	200	400
Nitrate(mg/L)	24.17	<0.5	<0.5	45	No relaxation

Table:177

Project / OCP Monitoring Station	Ananta OCP			Indian Drinking Standards (IS-10500):2012	
	Dera Village Tube Well Water				
Date of Sampling	10-Jul- 2020	14-Aug- 2020	14-Sep- 2020	Acceptable	Permissible
Colour(Hazen)	6	2	4	5	15
Turbidity(NTU)	4	1	1	1	5
pH	7.27	7.08	6.69	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	56	48	32	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	181.44	178.11	193.92	200	600
Chloride(mg/L)	14	16	8	250	1000
Total Dissolve Solid(mg/L)	290	298	282	500	2000
Calcium(mg/L)	48.48	43.63	52.8	75	200
Manganese(mg/L)	<0.04	<0.04	<0.04	0.1	0.3
Sulphate(mg/L)	115.91	98.23	129.84	200	400
Nitrate(mg/L)	<0.5	<0.5	<0.5	45	No relaxation

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Table:178

Project / OCP Monitoring Station	Ananta OCP			Indian Drinking Standards (IS- 10500):2012	
	Dera Village Tube Well Water			Acceptable	Permissible
Date of Sampling	1-Oct- 2020	13-Nov- 2020	2-Dec- 2020		
Colour(Hazen)	2	2	2	5	15
Turbidity(NTU)	2	2	1	1	5
pH	6.89	6.68	7.70	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	520	36	480	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	541	63.4	454.2	200	600
Chloride(mg/L)	14	18	46	250	1000
Total Dissolve Solid(mg/L)	1166	138	641	500	2000
Calcium(mg/L)	97.4	20.63	44.35	75	200
Manganese(mg/L)	0.18	<0.04	<0.04	0.1	0.3
Sulphate(mg/L)	4.98	18.19	18.59	200	400
Nitrate(mg/L)	<0.5	20.37	<0.5	45	No relaxation

Table:179

Project / OCP Monitoring Station	Ananta OCP			Indian Drinking Standards (IS- 10500):2012	
	Dera Village Tube Well Water			Acceptable	Permissible
Date of Sampling	2-Jan- 2021	13-Feb- 2021	12-Mar- 2021		
Colour(Hazen)	1	2	2	5	15
Turbidity(NTU)	2	1	1	1	5
pH	6.13	7.40	7.46	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	44	48	48	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	133.3	305.7	246.1	200	600
Chloride(mg/L)	50	6	14	250	1000
Total Dissolve Solid(mg/L)	318	454	356	500	2000
Calcium(mg/L)	39.28	90.69	70	75	200
Manganese(mg/L)	<0.04	<0.04	<0.04	0.1	0.3
Sulphate(mg/L)	55.43	171.23	145.93	200	400
Nitrate(mg/L)	31.87	<0.5	0.89	45	No relaxation

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**Table:180**  
**Area: Bharatpur**  
**Project: Bharatpur OCP**

Project / OCP Monitoring Station	Bharatpur OCP				Indian Drinking Standards (IS-10500):2012	
	Tap water in Nehru Satabdi Nagar A Type Quarters				Acceptable	Permissible
Date of Sampling	12-May-2020	14-Aug-2020	13-Nov-2020	15-Feb-2021		
Colour(Hazen)	12	2	1	1	5	15
Turbidity(NTU)	2	1	2	2	1	5
pH	7.52	7.46	6.74	6.74	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	188	56	168	140	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	232	88.70	150.5	146.9	200	600
Chloride(mg/L)	44	12	16	16	250	1000
Total Dissolve Solid(mg/L)	336	150	238	246	500	2000
Calcium(mg/L)	75.2	25.86	41.26	36.59	75	200
Manganese(mg/L)	0.23	<0.04	0.20	<0.04	0.1	0.3
Sulphate(mg/L)	4.31	39.25	5.55	9.11	200	400
Nitrate(mg/L)	<0.5	<0.5	<0.5	<0.5	45	No relaxation

**Table:181**

Project / OCP Monitoring Station	Bharatpur OCP				Indian Drinking Standards (IS-10500):2012	
	Tap water in Nehru Satabdi Nagar B Type Quarters				Acceptable	Permissible
Date of Sampling	12-May-2020	14-Aug-2020	13-Nov-2020	15-Feb-2021		
Colour(Hazen)	5	1	2	2	5	15
Turbidity(NTU)	1	2	2	1	1	5
pH	7.32	7.45	6.82	6.70	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	68	60	168	132	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	148	84.67	154.4	150.9	200	600
Chloride(mg/L)	14	12	16	14	250	1000
Total Dissolve Solid(mg/L)	238	148	242	248	500	2000
Calcium(mg/L)	38.4	27.47	39.68	35	75	200
Manganese(mg/L)	<0.04	<0.04	0.28	<0.04	0.1	0.3
Sulphate(mg/L)	82.65	42.72	5.97	8.82	200	400
Nitrate(mg/L)	<0.5	<0.5	<0.5	<0.5	45	No relaxation

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Table:182

Project / OCP Monitoring Station	Bharatpur OCP				Indian Drinking Standards (IS-10500):2012	
	Tap water in Nehru Satabdi Nagar C Type Quarters				Acceptable	Permissible
Date of Sampling	12-May-2020	14-Aug-2020	13-Nov-2020	15-Feb-2021		
Colour(Hazen)	5	1	2	1	5	15
Turbidity(NTU)	2	1	1	2	1	5
pH	7.11	7.07	6.80	6.85	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	64	52	172	148	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	144	80.64	150.5	154.8	200	600
Chloride(mg/L)	8	10	14	16	250	1000
Total Dissolve Solid(mg/L)	234	152	240	252	500	2000
Calcium(mg/L)	38.4	24.24	39.68	36.59	75	200
Manganese(mg/L)	<0.04	<0.04	0.20	<0.04	0.1	0.3
Sulphate(mg/L)	81.31	37.86	4.44	7.38	200	400
Nitrate(mg/L)	<0.5	<0.5	<0.5	<0.5	45	No relaxation

Table:183

Project / OCP Monitoring Station	Bharatpur OCP				Indian Drinking Standards (IS-10500):2012	
	Tap water in Nehru Satabdi Nagar Transit House				Acceptable	Permissible
Date of Sampling	12-May-2020	14-Aug-2020	13-Nov-2020	15-Feb-2021		
Colour(Hazen)	4	1	1	2	5	15
Turbidity(NTU)	1	2	2	1	1	5
pH	7.36	6.99	6.61	7.01	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	140	60	164	64	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	152	88.70	154.4	83.4	200	600
Chloride(mg/L)	22	12	16	20	250	1000
Total Dissolve Solid(mg/L)	312	154	244	178	500	2000
Calcium(mg/L)	44.8	27.47	38.09	22.27	75	200
Manganese(mg/L)	0.08	<0.04	0.18	<0.04	0.1	0.3
Sulphate(mg/L)	75.51	39.39	5.69	9.4	200	400
Nitrate(mg/L)	<0.5	<0.5	<0.5	16.76	45	No relaxation

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Table:184

Project / OCP Monitoring Station	Bharatpur OCP				Indian Drinking Standards (IS-10500):2012	
	Singhada Pump House					
Date of Sampling	12-May-2020	14-Aug-2020	13-Nov-2020	15-Feb-2021	Acceptable	Permissible
Colour(Hazen)	2	2	3	3	5	15
Turbidity(NTU)	<1.0	1	2	2	1	5
pH	7.58	7.02	6.97	6.77	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	184	56	128	140	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	220	84.67	154.4	158.8	200	600
Chloride(mg/L)	28	12	24	14	250	1000
Total Dissolve Solid(mg/L)	328	150	228	244	500	2000
Calcium(mg/L)	68.8	25.86	39.68	36.59	75	200
Manganese(mg/L)	<0.04	<0.04	<0.04	<0.04	0.1	0.3
Sulphate(mg/L)	17.84	85.99	26.10	7.66	200	400
Nitrate(mg/L)	1.41	1.68	<0.5	<0.5	45	No relaxation

Table:185

Project / OCP Monitoring Station	Bharatpur OCP			Indian Drinking Standards (IS-10500):2012	
	Time Office, BOCP				
Date of Sampling	25-Apr-2020	12-May-2020	10-Jul-2020	Acceptable	Permissible
Colour(Hazen)	4	2	4	5	15
Turbidity(NTU)	3	<1.0	3	1	5
pH	7.95	6.96	7.26	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	120	196	48	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	96	224	100.8	200	600
Chloride(mg/L)	22	28	10	250	1000
Total Dissolve Solid(mg/L)	294	338	160	500	2000
Calcium(mg/L)	32	54.4	24.24	75	200
Manganese(mg/L)	<0.04	<0.04	<0.04	0.1	0.3
Sulphate(mg/L)	66.48	18.73	51.97	200	400
Nitrate(mg/L)	<0.5	1.12	<0.5	45	No relaxation

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Table:186

Project / OCP Monitoring Station	Bharatpur OCP Time Office, BOCP			Indian Drinking Standards (IS-10500):2012	
	14-Aug-2020	14-Sep-2020	1-Oct-2020	Acceptable	Permissible
Date of Sampling					
Colour(Hazen)	4	2	3	5	15
Turbidity(NTU)	2	1	1	1	5
pH	7.55	7.14	7.04	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	132	20	52	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	157.25	424.20	176.4	200	600
Chloride(mg/L)	20	20	34	250	1000
Total Dissolve Solid(mg/L)	278	550	294	500	2000
Calcium(mg/L)	51.71	99.2	50.3	75	200
Manganese(mg/L)	<0.04	<0.04	<0.04	0.1	0.3
Sulphate(mg/L)	48.4	229.05	117.51	200	400
Nitrate(mg/L)	<0.5	1.06	1.05	45	No relaxation

Table:187

Project / OCP Monitoring Station	Bharatpur OCP Time Office, BOCP					Indian Drinking Standards (IS-10500):2012	
	13-Nov-2020	1-Dec-2020	12-Jan-2021	13-Feb-2021	12-Mar-2021	Acceptable	Permissible
Date of Sampling							
Colour(Hazen)	1	2	4	2	3	5	15
Turbidity(NTU)	2	1	2	2	2	1	5
pH	7.07	7.27	6.65	6.71	6.67	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	68	204	64	132	132	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	87.1	225.1	380.2	142.9	226.3	200	600
Chloride(mg/L)	10	28	18	14	36	250	1000
Total Dissolve Solid(mg/L)	132	338	536	240	336	500	2000
Calcium(mg/L)	23.81	66.53	110	36.59	79.55	75	200
Manganese(mg/L)	<0.04	<0.04	<0.04	<0.04	0.22	0.1	0.3
Sulphate(mg/L)	16.38	17.18	202.99	9.83	67.33	200	400
Nitrate(mg/L)	<0.5	1.69	<0.5	<0.5	<0.5	45	No relaxation

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Table:188

Project / OCP Monitoring Station	Bharatpur OCP			Indian Drinking Standards (IS-10500):2012	
	Badasinga Village Open Well				
Date of Sampling	25-Apr- 2020	12-May- 2020	10-Jun- 2020	Acceptable	Permissible
Colour(Hazen)	3	5	4	5	15
Turbidity(NTU)	2	2.0	1	1	5
pH	8.07	6.99	7.10	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	208	192	96	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	112	212	224	200	600
Chloride(mg/L)	119	28	24	250	1000
Total Dissolve Solid(mg/L)	586	332	340	500	2000
Calcium(mg/L)	59.2	65.6	68.8	75	200
Manganese(mg/L)	<0.04	<0.04	<0.04	0.1	0.3
Sulphate(mg/L)	145.02	22.74	24.87	200	400
Nitrate(mg/L)	23	1.19	<0.5	45	No relaxation

Table:189

Project / OCP Monitoring Station	Bharatpur OCP			Indian Drinking Standards (IS-10500):2012	
	Badasinga Village Open Well				
Date of Sampling	10-Jul- 2020	14-Aug- 2020	14-Sep- 2020	Acceptable	Permissible
Colour(Hazen)	3	5	4	5	15
Turbidity(NTU)	2	3	1	1	5
pH	7.14	7.96	7.50	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	60	268	260	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	173.38	407.23	258.56	200	600
Chloride(mg/L)	16	149	135	250	1000
Total Dissolve Solid(mg/L)	286	872	802	500	2000
Calcium(mg/L)	43.63	135.74	83.2	75	200
Manganese(mg/L)	<0.04	<0.04	<0.04	0.1	0.3
Sulphate(mg/L)	116.33	78.91	82.91	200	400
Nitrate(mg/L)	<0.5	39.03	39.77	45	No relaxation

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Table:190

Project / OCP Monitoring Station	Bharatpur OCP			Indian Drinking Standards (IS-10500):2012	
	Badasinga Village Open Well				
Date of Sampling	1-Oct-2020	13-Nov- 2020	1-Dec-2020	Acceptable	Permissible
Colour(Hazen)	1	1	3	5	15
Turbidity(NTU)	3	2	2	1	5
pH	6.88	6.95	7.57	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	356	272	232	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	266.6	261.4	225.1	200	600
Chloride(mg/L)	42	159	139	250	1000
Total Dissolve Solid(mg/L)	428	880	816	500	2000
Calcium(mg/L)	56.6	76.18	61.78	75	200
Manganese(mg/L)	<0.04	<0.04	<0.04	0.1	0.3
Sulphate(mg/L)	13.96	88.03	70.43	200	400
Nitrate(mg/L)	<0.5	32.29	31.88	45	No relaxation

Table:191

Project / OCP Monitoring Station	Bharatpur OCP			Indian Drinking Standards (IS-10500):2012	
	Badasinga Village Open Well				
Date of Sampling	12-Jan- 2021	3-Feb-2021	12-Mar- 2021	Acceptable	Permissible
Colour(Hazen)	4	2	2	5	15
Turbidity(NTU)	2	1	1	1	5
pH	6.79	6.60	7.04	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	232	124	212	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	227.4	206.4	222.3	200	600
Chloride(mg/L)	141	36	113	250	1000
Total Dissolve Solid(mg/L)	820	304	870	500	2000
Calcium(mg/L)	69.12	71.60	50.91	75	200
Manganese(mg/L)	<0.04	<0.04	<0.04	0.1	0.3
Sulphate(mg/L)	81.42	3.18	118.6	200	400
Nitrate(mg/L)	32.71	<0.5	37.7	45	No relaxation

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Table:192

Project / OCP Monitoring Station	Bharatpur OCP			Indian Drinking Standards (IS-10500):2012	
	Telepasi Village Open Well				
Date of Sampling	25-Apr- 2020	12-May- 2020	10-Jun- 2020	Acceptable	Permissible
Colour(Hazen)	2	6	3	5	15
Turbidity(NTU)	1	2.0	3	1	5
pH	8.24	6.72	6.83	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	280	136	144	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	532	156	168	200	600
Chloride(mg/L)	96	20	28	250	1000
Total Dissolve Solid(mg/L)	657	328	348	500	2000
Calcium(mg/L)	124.8	44.8	49.6	75	200
Manganese(mg/L)	0.04	0.20	<0.04	0.1	0.3
Sulphate(mg/L)	54.27	69.42	64.77	200	400
Nitrate(mg/L)	20.87	<0.5	<0.5	45	No relaxation

Table:193

Project / OCP Monitoring Station	Bharatpur OCP			Indian Drinking Standards (IS-10500):2012	
	Telepasi Village Open Well				
Date of Sampling	10-Jul- 2020	14-Aug- 2020	14-Sep- 2020	Acceptable	Permissible
Colour(Hazen)	1	6	1	5	15
Turbidity(NTU)	3	1	1	1	5
pH	7.53	8.00	8.00	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	76	276	264	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	56.45	407.23	274.72	200	600
Chloride(mg/L)	6	151	135	250	1000
Total Dissolve Solid(mg/L)	114	878	804	500	2000
Calcium(mg/L)	16.16	135.74	80	75	200
Manganese(mg/L)	<0.04	<0.04	<0.04	0.1	0.3
Sulphate(mg/L)	29.29	78.22	78.41	200	400
Nitrate(mg/L)	<0.5	38.64	39.45	45	No relaxation

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Table:194

Project / OCP Monitoring Station	Bharatpur OCP			Indian Drinking Standards (IS-10500):2012	
	Telepasi Village Open Well				
Date of Sampling	1-Oct-2020	13-Nov- 2020	1-Dec-2020	Acceptable	Permissible
Colour(Hazen)	1	2	3	5	15
Turbidity(NTU)	2	3	2	1	5
pH	6.79	7.76	7.65	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	252	76	292	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	227.4	162.4	284.4	200	600
Chloride(mg/L)	36	16	110	250	1000
Total Dissolve Solid(mg/L)	774	248	67.4	500	2000
Calcium(mg/L)	73.8	44.44	56.52	75	200
Manganese(mg/L)	<0.04	<0.04	<0.04	0.1	0.3
Sulphate(mg/L)	83.78	57.21	60.28	200	400
Nitrate(mg/L)	36.19	<0.5	8.9	45	No relaxation

Table:195

Project / OCP Monitoring Station	Bharatpur OCP			Indian Drinking Standards (IS-10500):2012	
	Telepasi Village Open Well				
Date of Sampling	1-Jan-2021	3-Feb-2021	12-Mar- 2021	Acceptable	Permissible
Colour(Hazen)	3	3	2	5	15
Turbidity(NTU)	1	2	1	1	5
pH	6.98	7.41	6.65	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	60	248	172	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	368.5	365.2	246.1	200	600
Chloride(mg/L)	18	225	46	250	1000
Total Dissolve Solid(mg/L)	534	940	338	500	2000
Calcium(mg/L)	106.83	79.44	79.55	75	200
Manganese(mg/L)	<0.04	<0.04	0.28	0.1	0.3
Sulphate(mg/L)	205.28	140.14	5.78	200	400
Nitrate(mg/L)	0.58	<0.5	<0.5	45	No relaxation

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Table:196  
Area: Chhendipada  
Project: Chhendipada OCP

Project / OCP Monitoring Station	Chhendipada			Indian Drinking Standards (IS-10500):2012	
	Bore Well Water at Site Office			Acceptable	Permissible
Date of Sampling	25-Apr-2020	18-05-020	10-Jun-2020		
Colour(Hazen)	1	5	2	5	15
Turbidity(NTU)	1	1.0	2	1	5
pH	7.92	7.18	6.98	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	200	60	72	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	280	340	352	200	600
Chloride(mg/L)	245	18	22	250	1000
Total Dissolve Solid(mg/L)	758	480	492	500	2000
Calcium(mg/L)	64	91.2	94.4	75	200
Manganese(mg/L)	<0.04	<0.04	<0.04	0.1	0.3
Sulphate(mg/L)	119.7	203.2	192.09	200	400
Nitrate(mg/L)	32.14	<0.5	<0.5	45	No relaxation

Table:197

Project / OCP Monitoring Station	Chhendipada			Indian Drinking Standards (IS-10500):2012	
	Bore Well Water at Site Office			Acceptable	Permissible
Date of Sampling	1-Oct-2020	11-Nov-2020	1-Dec-2020		
Colour(Hazen)	1	2	3	5	15
Turbidity(NTU)	1	1	2	1	5
pH	6.86	6.68	7.41	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	168	20	396	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	199.9	67.3	312	200	600
Chloride(mg/L)	12	32	111	250	1000
Total Dissolve Solid(mg/L)	326	128	688	500	2000
Calcium(mg/L)	75.4	17.46	31.68	75	200
Manganese(mg/L)	<0.04	<0.04	<0.04	0.1	0.3
Sulphate(mg/L)	16.04	2.64	11.97	200	400
Nitrate(mg/L)	<0.5	21.11	2.4	45	No relaxation

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Table:198

Project / OCP Monitoring Station	Chhendipada			Indian Drinking Standards (IS- 10500):2012	
	Bore Well Water at Site Office			Acceptable	Permissible
Date of Sampling	1-Jan-2021	2-Feb-2021	10-Mar-2021	Acceptable	Permissible
Colour(Hazen)	2	2	1	5	15
Turbidity(NTU)	1	1	1	1	5
pH	6.52	7.12	6.53	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	124	132	24	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	192.1	202.5	63.5	200	600
Chloride(mg/L)	52	36	26	250	1000
Total Dissolve Solid(mg/L)	296	354	134	500	2000
Calcium(mg/L)	73.84	49.32	15.91	75	200
Manganese(mg/L)	0.32	<0.04	0.05	0.1	0.3
Sulphate(mg/L)	2.43	64.21	3.24	200	400
Nitrate(mg/L)	<0.5	<0.5	23.5	45	No relaxation



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**Table:199**  
**Area: Lingraj**  
**Project: Lingraj OCP**

Project / OCP Monitoring Station	Lingraj OCP GM Office, Lingraj Area Tap Water			Indian Drinking Standards (IS-10500):2012	
	Date of Sampling 27-Apr-2020	19-May-2020	10-Jun-2020	Acceptable	Permissible
Colour(Hazen)	1	2	1	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	1	<1.0	1	1	5
pH	8.23	6.44	6.95	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	80	88	92	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	276	112	120	200	600
Iron(mg/L)	<0.1	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	14	28	28	250	1000
Total Dissolve Solid(mg/L)	223	234	244	500	2000
Calcium(mg/L)	60.8	32	28.8	75	200
Copper(mg/L)	<0.03	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	<0.04	<0.04	0.1	0.3
Sulphate(mg/L)	33.47	20.37	24.56	200	400
Nitrate(mg/L)	<0.5	19.73	16.33	45	No relaxation

**Table:200**

Project / OCP Monitoring Station	Lingraj OCP GM Office, Lingraj Area Tap Water			Indian Drinking Standards (IS-10500):2012	
	Date of Sampling 10-Jul-2020	14-Aug-2020	14-Sep-2020	Acceptable	Permissible
Colour(Hazen)	3	2	1	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	1	2	1	1	5
pH	8.04	7.99	7.36	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	36	96	48	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	60.48	129.02	206.04	200	600
Iron(mg/L)	<0.10	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	8	18	12	250	1000
Total Dissolve Solid(mg/L)	112	220	292	500	2000
Calcium(mg/L)	17.78	32.32	56	75	200
Copper(mg/L)	<0.03	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	<0.04	<0.04	0.1	0.3
Sulphate(mg/L)	32.39	39.25	104	200	400
Nitrate(mg/L)	<0.5	2.14	<0.5	45	No relaxation

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Table:201

Project / OCP Monitoring Station	Lingraj OCP			Indian Drinking Standards (IS-10500):2012	
	GM Office, Lingraj Area Tap Water				
Date of Sampling	5-Oct-2020	12-Nov-2020	1-Dec-2020	Acceptable	Permissible
Colour(Hazen)	1	1	2	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	1	1	1	1	5
pH	6.81	7.57	7.20	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	252	108	112	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	227.4	154.4	161.9	200	600
Iron(mg/L)	<0.1	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	14	22	24	250	1000
Total Dissolve Solid(mg/L)	772	226	252	500	2000
Calcium(mg/L)	70.7	33.33	41.18	75	200
Copper(mg/L)	<0.03	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	<0.04	<0.09	0.1	0.3
Sulphate(mg/L)	80.32	33.05	35.64	200	400
Nitrate(mg/L)	34.42	1.24	2.83	45	No relaxation

Table:202

Project / OCP Monitoring Station	Lingraj OCP	Lingraj OCP	Lingraj OCP	Indian Drinking Standards (IS-10500):2012	
	GM Office, Lingraj Area Tap Water				
Date of Sampling	14-Jan-2021	15-Feb-2021	12-Mar-2021	Acceptable	Permissible
Colour(Hazen)	3	1	1	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	2	1	2	1	5
pH	7.25	7.73	7.47	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	112	52	84	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	172.5	309.7	142.9	200	600
Iron(mg/L)	<0.1	<0.1	<0.10	0.3	No relaxation
Chloride(mg/L)	30	18	22	250	1000
Total Dissolve Solid(mg/L)	310	446	246	500	2000
Calcium(mg/L)	40.85	95.46	36.59	75	200
Copper(mg/L)	<0.03	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	<0.04	<0.04	0.1	0.3
Sulphate(mg/L)	57	157.35	52.26	200	400
Nitrate(mg/L)	4.91	<0.5	2.85	45	No relaxation

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Table:203

Project / OCP	Lingraj OCP			Indian Drinking Standards (IS-10500):2012	
	Balunga Khamar Village Well Water	Balunga Khamar Village Well	Balunga Khamar Village Well		
Date of Sampling	27-Apr-2020	19-May-2020	10-Jun-2020	Acceptable	Permissible
Colour(Hazen)	4	1	4	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	2	<1.0	4	1	5
pH	8.03	7.53	7.21	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	64	80	72	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	168	112	104	200	600
Iron(mg/L)	<0.1	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	24	34	30	250	1000
Total Dissolve Solid(mg/L)	325	2.30	216	500	2000
Calcium(mg/L)	28.8	32	27.2	75	200
Copper(mg/L)	<0.03	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	<0.04	<0.04	0.1	0.3
Sulphate(mg/L)	155.88	16.2	18.45	200	400
Nitrate(mg/L)	<0.5	19.47	18.42	45	No relaxation

Table:204

Project / OCP	Lingraj OCP			Indian Drinking Standards (IS-10500):2012	
	Balunga Khamar Village Well	Balunga Khamar Village Well	Balunga Khamar Village Well		
Date of Sampling	10-Jul-2020	14-Aug-2020	14-Sep-2020	Acceptable	Permissible
Colour(Hazen)	2	1	1	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	1	1	3	1	5
pH	6.79	7.50	7.33	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	140	288	40	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	141.12	229.82	246.44	200	600
Iron(mg/L)	<0.10	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	20	94	10	250	1000
Total Dissolve Solid(mg/L)	296	690	340	500	2000
Calcium(mg/L)	43.63	40.4	60.8	75	200
Copper(mg/L)	<0.03	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	<0.04	<0.04	0.1	0.3
Sulphate(mg/L)	56.9	74.34	21.64	200	400
Nitrate(mg/L)	<0.5	20.31	<0.5	45	No relaxation

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Table:205

Project / OCP	Lingraj OCP			Indian Drinking Standards (IS-10500):2012	
	Monitoring Station	Balunga Khamar Village Well	Balunga Khamar Village Well		
Date of Sampling	5-Oct-2020	12-Nov-2020	1-Dec-2020	Acceptable	Permissible
Colour(Hazen)	3	3	2	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	1	2	1	1	5
pH	7.16	7.30	7.14	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	88	292	312	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	117.6	324.7	280.4	200	600
Iron(mg/L)	<0.1	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	10	72	108	250	1000
Total Dissolve Solid(mg/L)	212	628	708	500	2000
Calcium(mg/L)	34.6	63.48	49.10	75	200
Copper(mg/L)	<0.03	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	<0.04	<0.04	0.1	0.3
Sulphate(mg/L)	21.71	95.39	66.48	200	400
Nitrate(mg/L)	2.92	<0.5	7.54	45	No relaxation

Table:206

Project / OCP	Lingraj OCP			Indian Drinking Standards (IS-10500):2012	
	Monitoring Station	Balunga Khamar Village Well	Balunga Khamar Village Well		
Date of Sampling	1-Jan-2021	4-Feb-2021	12-Mar-2021	Acceptable	Permissible
Colour(Hazen)	4	1	1	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	2	1	2	1	5
pH	7.03	7.36	7.42	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	56	236	224	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	380.2	242.2	293.8	200	600
Iron(mg/L)	<0.1	<0.1	<0.10	0.3	No relaxation
Chloride(mg/L)	18	123	119	250	1000
Total Dissolve Solid(mg/L)	538	708	738	500	2000
Calcium(mg/L)	108.40	47.73	55.69	75	200
Copper(mg/L)	<0.03	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	<0.04	<0.04	0.1	0.3
Sulphate(mg/L)	167.42	84.31	78.88	200	400
Nitrate(mg/L)	<0.5	10.57	27.1	45	No relaxation

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Table:207

Project / OCP	Lingraj OCP			Indian Drinking Standards (IS-10500):2012	
	Deulbera Village Well Water	Deulbera Village Well	Deulbera Village Well		
Monitoring Station					
Date of Sampling	27-Apr-2020	19-May-2020	10-Jun-2020	Acceptable	Permissible
Colour(Hazen)	2	3	5	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	1	2.0	2	1	5
pH	8.11	7.56	7.44	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	228	84	88	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	152	136	144	200	600
Iron(mg/L)	<0.1	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	133	32	36	250	1000
Total Dissolve Solid(mg/L)	532	268	280	500	2000
Calcium(mg/L)	25.6	40	43.2	75	200
Copper(mg/L)	<0.03	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	<0.04	<0.04	0.1	0.3
Sulphate(mg/L)	106.13	53.95	48.25	200	400
Nitrate(mg/L)	35.22	10.99	8.29	45	No relaxation

Table:208

Project / OCP	Lingraj OCP			Indian Drinking Standards (IS-10500):2012	
	Deulbera Village Well	Deulbera Village Well	Deulbera Village Well		
Monitoring Station					
Date of Sampling	10-Jul-2020	14-Aug-2020	14-Sep-2020	Acceptable	Permissible
Colour(Hazen)	1	2	2	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	1	3	1	1	5
pH	7.36	7.97	6.90	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	64	536	32	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	177.41	362.9	157.56	200	600
Iron(mg/L)	<0.10	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	14	58	14	250	1000
Total Dissolve Solid(mg/L)	288	676	222	500	2000
Calcium(mg/L)	43.63	14.54	38.4	75	200
Copper(mg/L)	<0.03	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	<0.04	<0.04	0.1	0.3
Sulphate(mg/L)	116.47	9.85	103.56	200	400
Nitrate(mg/L)	<0.5	<0.5	<0.5	45	No relaxation

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Table:209

Project / OCP	Lingraj OCP			Indian Drinking Standards (IS-10500):2012	
	Deulbera Village Well	Deulbera Village Well	Deulbera Village Well		
Monitoring Station					
Date of Sampling	5-Oct-2020	12-Nov-2020	1-Dec-2020	Acceptable	Permissible
Colour(Hazen)	1	2	3	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	2	3	1	1	5
pH	6.72	7.63	7.42	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	188	104	156	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	235.2	142.6	205.4	200	600
Iron(mg/L)	<0.1	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	14	20	32	250	1000
Total Dissolve Solid(mg/L)	384	226	342	500	2000
Calcium(mg/L)	67.5	39.68	55.44	75	200
Copper(mg/L)	<0.03	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	<0.04	<0.04	0.1	0.3
Sulphate(mg/L)	26.27	32.49	47.04	200	400
Nitrate(mg/L)	6.35	1.03	<0.5	45	No relaxation

Table:210

Project / OCP	Lingraj OCP			Indian Drinking Standards (IS-10500):2012	
	Deulbera Village Well	Deulbera Village Well	Deulbera Village Well		
Monitoring Station					
Date of Sampling	12-Jan-2021	4-Feb-2021	12-Mar-2021	Acceptable	Permissible
Colour(Hazen)	3	2	2	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	1	1	1	1	5
pH	6.75	7.67	6.91	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	148	372	136	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	215.6	230.3	194.5	200	600
Iron(mg/L)	<0.1	<0.1	<0.10	0.3	No relaxation
Chloride(mg/L)	32	38	36	250	1000
Total Dissolve Solid(mg/L)	360	592	344	500	2000
Calcium(mg/L)	48.70	66.82	49.32	75	200
Copper(mg/L)	<0.03	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	<0.04	<0.04	0.1	0.3
Sulphate(mg/L)	58.14	41.51	59.87	200	400
Nitrate(mg/L)	3.33	2.34	<0.5	45	No relaxation

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Table:211

Project / OCP	Lingraj OCP			Indian Drinking Standards (IS-10500):2012	
	Talabera Village Well Water	Talabera Village Well	Talabera Village Well		
Monitoring Station					
Date of Sampling	27-Apr-2020	19-May-2020	10-Jun-2020	Acceptable	Permissible
Colour(Hazen)	7	2	2	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	3	1	1	1	5
pH	8.01	6.48	6.72	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	336	80	84	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	144	108	100	200	600
Iron(mg/L)	<0.1	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	187	34	30	250	1000
Total Dissolve Solid(mg/L)	632	248	232	500	2000
Calcium(mg/L)	27.3	35.2	32	75	200
Copper(mg/L)	<0.03	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	<0.04	<0.04	0.1	0.3
Sulphate(mg/L)	90.3	20.81	21.36	200	400
Nitrate(mg/L)	27.09	19.54	17.71	45	No relaxation

Table:212

Project / OCP	Lingraj OCP			Indian Drinking Standards (IS-10500):2012	
	Talabera Village Well	Talabera Village Well	Talabera Village Well		
Monitoring Station					
Date of Sampling	10-Jul-2020	14-Aug-2020	14-Sep-2020	Acceptable	Permissible
Colour(Hazen)	4	1	3	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	2	2	2	1	5
pH	7.52	7.53	7.27	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	36	296	28	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	64.51	213.7	60.60	200	600
Iron(mg/L)	<0.10	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	10	98	8	250	1000
Total Dissolve Solid(mg/L)	116	688	88	500	2000
Calcium(mg/L)	14.54	43.63	14.4	75	200
Copper(mg/L)	<0.03	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	<0.04	<0.04	0.1	0.3
Sulphate(mg/L)	31.41	67.4	24.17	200	400
Nitrate(mg/L)	<0.5	20.64	<0.5	45	No relaxation

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Table:213

Project / OCP Monitoring Station	Lingraj OCP Talabera Village Well			Indian Drinking Standards (IS-10500):2012	
	Date of Sampling 5-Oct-2020	12-Nov-2020	1-Dec-2020	Acceptable	Permissible
Colour(Hazen)	2	1	3	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	2	2	2	1	5
pH	7.19	7.21	7.04	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	88	304	316	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	121.5	293	300	200	600
Iron(mg/L)	<0.1	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	12	76	110	250	1000
Total Dissolve Solid(mg/L)	210	670	714	500	2000
Calcium(mg/L)	34.6	50.78	52.27	75	200
Copper(mg/L)	<0.03	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	<0.04	<0.04	0.1	0.3
Sulphate(mg/L)	32.49	66.93	71.83	200	400
Nitrate(mg/L)	2.41	4.03	8.02	45	No relaxation

Table:214

Project / OCP Monitoring Station	Lingraj OCP Talabera Village Well			Indian Drinking Standards (IS-10500):2012	
	Date of Sampling 1-Jan-2021	4-Feb-2021	12-Mar-2021	Acceptable	Permissible
Colour(Hazen)	2	1	3	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	3	2	2	1	5
pH	7.27	7.06	7.39	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	208	88	280	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	215.6	258.1	428.8	200	600
Iron(mg/L)	<0.1	<0.1	<0.10	0.3	No relaxation
Chloride(mg/L)	30	80	217	250	1000
Total Dissolve Solid(mg/L)	330	484	1022	500	2000
Calcium(mg/L)	47.13	76.37	92.28	75	200
Copper(mg/L)	<0.03	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	<0.04	<0.04	0.1	0.3
Sulphate(mg/L)	6.14	49.6	123.96	200	400
Nitrate(mg/L)	<0.5	31.89	<0.5	45	No relaxation

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**Table:215**  
**Area: Kaniha**  
**Project: Kaniha OCP**

Project / OCP Monitoring Station	Kaniha			Indian Drinking Standards (IS-10500):2012	
	Tube Well at Coal Analysis Lab			Acceptable	Permissible
Date of Sampling	27-Apr-2020	30-May-2020	11-Jun-2020		
Colour(Hazen)	6	4	6	5	15
Turbidity(NTU)	3	2	3	1	5
pH	7.95	7.82	7.62	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	240	84	92	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	528	136	148	200	600
Iron(mg/L)	<0.1	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	131	32	36	250	1000
Total Dissolve Solid(mg/L)	405	278	288	500	2000
Calcium(mg/L)	120	38.4	43.2	75	200
Sulphate(mg/L)	106.13	49.95	47.86	200	400
Nitrate(mg/L)	35.92	10.87	9.11	45	No relaxation

**Table:216**

Project / OCP Monitoring Station	Kaniha			Indian Drinking Standards (IS-10500):2012	
	Tube Well at Coal Analysis Lab			Acceptable	Permissible
Date of Sampling	11-Jul-2020	14-Aug-2020	14-Sep-2020		
Colour(Hazen)	5	2	4	5	15
Turbidity(NTU)	2	1	1	1	5
pH	7.51	8.12	8.06	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	92	544	524	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	120.96	358.84	339.36	200	600
Iron(mg/L)	<0.10	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	18	48	40	250	1000
Total Dissolve Solid(mg/L)	218	680	648	500	2000
Calcium(mg/L)	29.09	27.47	25.6	75	200
Sulphate(mg/L)	43.1	10.54	11.10	200	400
Nitrate(mg/L)	1.66	<0.5	<0.5	45	No relaxation

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Table:217

Project / OCP Monitoring Station	Kaniha			Indian Drinking Standards (IS-10500):2012	
	Tube Well at Coal Analysis Lab			Acceptable	Permissible
Date of Sampling	5-Oct-2020	11-Nov-2020	1-Dec-2020		
Colour(Hazen)	1	1	2	5	15
Turbidity(NTU)	3	2	2	1	5
pH	7.40	7.88	7.12	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	88	452	448	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	117.6	316.8	280.4	200	600
Iron(mg/L)	<0.1	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	10	38	38	250	1000
Total Dissolve Solid(mg/L)	214	630	630	500	2000
Calcium(mg/L)	31.4	23.81	23.76	75	200
Sulphate(mg/L)	15.48	39.16	39.16	200	400
Nitrate(mg/L)	2.44	2.68	3.14	45	No relaxation

Table:218

Project / OCP Monitoring Station	Kaniha		Indian Drinking Standards (IS-10500):2012	
	Tube Well at Coal Analysis Lab		Acceptable	Permissible
Date of Sampling	12-Jan-2021	2-Feb-2021		
Colour(Hazen)	4	2	5	15
Turbidity(NTU)	2	1	1	5
pH	7.49	7.17	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	324	292	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	348.9	281.9	200	600
Iron(mg/L)	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	36	48	250	1000
Total Dissolve Solid(mg/L)	626	492	500	2000
Calcium(mg/L)	29.85	33.41	75	200
Sulphate(mg/L)	39.57	1.01	200	400
Nitrate(mg/L)	2.52	<0.5	45	No relaxation

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Table:219

Project / OCP Monitoring Station	Kaniha			Indian Drinking Standards (IS-10500):2012	
	Jarda Village Well Water			Acceptable	Permissible
Date of Sampling	27-Apr-2020	30-May-2020	11-Jun-2020		
Colour(Hazen)	7	4	5	5	15
Turbidity(NTU)	3	2	1	1	5
pH	7.36	7.50	7.43	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	68	96	88	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	196	164	156	200	600
Iron(mg/L)	<0.1	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	10	32	28	250	1000
Total Dissolve Solid(mg/L)	201	270	268	500	2000
Calcium(mg/L)	56	38.4	40	75	200
Sulphate(mg/L)	51.26	49.65	46.57	200	400
Nitrate(mg/L)	<0.5	10.96	8.43	45	No relaxation

Table:220

Project / OCP Monitoring Station	Kaniha			Indian Drinking Standards (IS-10500):2012	
	Jarda Village Well Water			Acceptable	Permissible
Date of Sampling	11-Jul-2020	14-Aug-2020	14-Sep-2020		
Colour(Hazen)	2	1	2	5	15
Turbidity(NTU)	4	3	2	1	5
pH	6.66	8.02	7.91	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	248	80	68	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	411.26	258.05	246.44	200	600
Iron(mg/L)	<0.10	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	111	18	20	250	1000
Total Dissolve Solid(mg/L)	604	392	378	500	2000
Calcium(mg/L)	145.4	63.02	56	75	200
Sulphate(mg/L)	80.56	144.24	79.82	200	400
Nitrate(mg/L)	34.92	<0.5	<0.5	45	No relaxation

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Table:221

Project / OCP Monitoring Station	Kaniha			Indian Drinking Standards (IS-10500):2012	
	Jarda Village Well Water			Acceptable	Permissible
Date of Sampling	5-Oct-2020	11-Nov-2020	1-Dec-2020		
Colour(Hazen)	2	1	3	5	15
Turbidity(NTU)	1	2	2	1	5
pH	7.42	7.63	7.30	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	444	220	236	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	403.8	344.5	375.2	200	600
Iron(mg/L)	<0.1	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	16	40	181	250	1000
Total Dissolve Solid(mg/L)	656	724	806	500	2000
Calcium(mg/L)	66	99.98	98.21	75	200
Sulphate(mg/L)	5.53	64.01	78.17	200	400
Nitrate(mg/L)	1.1	25.1	27.39	45	No relaxation

Table:222

Project / OCP Monitoring Station	Kaniha		Indian Drinking Standards (IS-10500):2012	
	Jarda Village Well Water		Acceptable	Permissible
Date of Sampling	12-Jan-2021	2-Feb-2021		
Colour(Hazen)	5	3	5	15
Turbidity(NTU)	1	2	1	5
pH	7.85	7.54	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	188	56	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	380.2	214.4	200	600
Iron(mg/L)	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	189	12	250	1000
Total Dissolve Solid(mg/L)	838	336	500	2000
Calcium(mg/L)	97.40	60.46	75	200
Sulphate(mg/L)	64.85	125.24	200	400
Nitrate(mg/L)	27.77	<0.5	45	No relaxation

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Table:223  
**Area: Hingula OCP**  
**Project: Hingula OCP**

Project / OCP Monitoring Station	Hingula OCP Time Office Water			Indian Drinking Standards (IS-10500):2012	
	28-Apr-2020	21-May-2020	11-Jun-2020	Acceptable	Permissible
Date of Sampling					
Colour(Hazen)	1	1	4	5	15
Turbidity(NTU)	1	<1.0	2	1	5
pH	8.15	6.49	6.75	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	84	76	80	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	156	112	120	200	600
Iron(mg/L)	<0.1	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	20	34	30	250	1000
Total Dissolve Solid(mg/L)	392	248	262	500	2000
Calcium(mg/L)	46.4	33.6	36.8	75	200
Sulphate(mg/L)	160.4	16.65	20.25	200	400
Nitrate(mg/L)	<0.5	19.75	15.59	45	No relaxation

Table:224

Project / OCP Monitoring Station	Hingula OCP Time Office Water			Indian Drinking Standards (IS-10500):2012	
	11-Jul-2020	14-Aug-2020	14-Sep-2020	Acceptable	Permissible
Date of Sampling					
Colour(Hazen)	3	2	3	5	15
Turbidity(NTU)	2	1	2	1	5
pH	7.09	7.67	7.33	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	196	44	268	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	217.73	84.67	218.16	200	600
Iron(mg/L)	<0.10	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	26	24	48	250	1000
Total Dissolve Solid(mg/L)	338	182	396	500	2000
Calcium(mg/L)	67.87	22.62	44.8	75	200
Sulphate(mg/L)	15.91	32.73	2.95	200	400
Nitrate(mg/L)	0.91	10.52	<0.5	45	No relaxation

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Table:225

Project / OCP Monitoring Station	Hingula OCP Time Office Water			Indian Drinking Standards (IS-10500):2012	
	Date of Sampling	1-Oct-2020	12-Nov-2020	1-Dec-2020	Acceptable
Colour(Hazen)	3	1	2	5	15
Turbidity(NTU)	2	1	1	1	5
pH	7.17	7.92	7.20	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	60	260	172	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	196.4	221.8	260.7	200	600
Iron(mg/L)	<0.1	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	32	48	34	250	1000
Total Dissolve Solid(mg/L)	294	402	396	500	2000
Calcium(mg/L)	47.1	38.09	66.53	75	200
Sulphate(mg/L)	83.5	2.92	76.34	200	400
Nitrate(mg/L)	<0.5	<0.5	2.17	45	No relaxation

Table:226

Project / OCP Monitoring Station	Hingula OCP	Hingula OCP	Hingula OCP	Indian Drinking Standards (IS-10500):2012	
	Time Office Water			Acceptable	Permissible
Date of Sampling	1-Jan-2021	13-Feb-2021	#####		
Colour(Hazen)	1	2	2	5	15
Turbidity(NTU)	2	1	1	1	5
pH	7.79	7.78	8.12	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	56	172	188	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	94.08	194.5	186.6	200	600
Iron(mg/L)	<0.1	<0.1	<0.10	0.3	No relaxation
Chloride(mg/L)	12	26	50	250	1000
Total Dissolve Solid(mg/L)	108	340	386	500	2000
Calcium(mg/L)	15.71	42.96	25.46	75	200
Sulphate(mg/L)	8.86	18.51	3.94	200	400
Nitrate(mg/L)	<0.5	0.53	<0.5	45	No relaxation

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Table:227

Project / OCP Monitoring Station	Hingula OCP			Indian Drinking Standards (IS- 10500):2012	
	Gopalprasad Village Bore Well Water				
Date of Sampling	28-Apr- 2020	21-May- 2020	11-Jun- 2020	Acceptable	Permissible
Colour(Hazen)	10	2	2	5	15
Turbidity(NTU)	4	<1.0	1	1	5
pH	7.37	7.53	7.23	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	64	92	104	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	172	140	156	200	600
Iron(mg/L)	<0.1	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	48	32	34	250	1000
Total Dissolve Solid(mg/L)	420	288	308	500	2000
Calcium(mg/L)	51.2	40	44.8	75	200
Sulphate(mg/L)	150.75	49.2	51.23	200	400
Nitrate(mg/L)	<0.5	10.84	12.23	45	No relaxation

Table:228

Project / OCP Monitoring Station	Hingula OCP			Indian Drinking Standards (IS- 10500):2012	
	Gopalprasad Village Bore Well Water				
Date of Sampling	11-Jul- 2020	14-Aug- 2020	14-Sep- 2020	Acceptable	Permissible
Colour(Hazen)	2	4	4	5	15
Turbidity(NTU)	2	3	3	1	5
pH	7.73	7.74	7.91	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	44	64	376	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	68.54	72.58	266.64	200	600
Iron(mg/L)	<0.10	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	10	10	64	250	1000
Total Dissolve Solid(mg/L)	128	120	544	500	2000
Calcium(mg/L)	21.01	22.62	60.8	75	200
Sulphate(mg/L)	30.14	10.68	59	200	400
Nitrate(mg/L)	<0.5	<0.5	<0.5	45	No relaxation

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Table:229

Project / OCP	Hingula OCP			Indian Drinking Standards (IS-10500):2012	
	Gopalprasad Village Bore Well Water				
Monitoring Station	1-Oct-2020	12-Nov-2020	1-Dec-2020	Acceptable	Permissible
Date of Sampling					
Colour(Hazen)	1	2	3	5	15
Turbidity(NTU)	1	2	2	1	5
pH	7.47	7.78	7.17	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	444	160	340	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	407.7	237.6	126.4	200	600
Iron(mg/L)	<0.1	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	20	26	10	250	1000
Total Dissolve Solid(mg/L)	652	338	444	500	2000
Calcium(mg/L)	56.5	65.07	60.19	75	200
Sulphate(mg/L)	5.25	75.81	25.21	200	400
Nitrate(mg/L)	<0.5	<0.5	<0.5	45	No relaxation

Table:230

Project / OCP	Hingula OCP			Indian Drinking Standards (IS-10500):2012	
	Gopalprasad Village Bore Well Water				
Monitoring Station	1-Jan-2021	13-Feb-2021	12-Mar-2021	Acceptable	Permissible
Date of Sampling					
Colour(Hazen)	2	3	2	5	15
Turbidity(NTU)	1	2	1	1	5
pH	6.82	7.80	6.88	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	204	176	232	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	152.9	194.5	230.3	200	600
Iron(mg/L)	<0.1	<0.1	<0.10	0.3	No relaxation
Chloride(mg/L)	52	26	22	250	1000
Total Dissolve Solid(mg/L)	386	342	378	500	2000
Calcium(mg/L)	28.28	39.78	52.50	75	200
Sulphate(mg/L)	3.14	17.07	17.18	200	400
Nitrate(mg/L)	<0.5	0.53	<0.5	45	No relaxation

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Table:231

Project / OCP Monitoring Station	Hingula OCP			Indian Drinking Standards (IS-10500):2012	
	Kumunda Village Bore Well Water			Acceptable	Permissible
Date of Sampling	28-Apr-2020	18-May-2020	11-Jun-2020		
Colour(Hazen)	13	1	1	5	15
Turbidity(NTU)	5	<1.0	2	1	5
pH	7.48	7.18	7.12	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	64	104	116	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	164	124	136	200	600
Iron(mg/L)	<0.1	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	50	30	36	250	1000
Total Dissolve Solid(mg/L)	428	252	276	500	2000
Calcium(mg/L)	49.6	40	43.2	75	200
Sulphate(mg/L)	153.92	20.37	21.48	200	400
Nitrate(mg/L)	<0.5	19.9	18.47	45	No relaxation

Table:232

Project / OCP Monitoring Station	Hingula OCP			Indian Drinking Standards (IS-10500):2012	
	Kumunda Village Bore Well Water			Acceptable	Permissible
Date of Sampling	11-Jul-2020	14-Aug-2020	14-Sep-2020		
Colour(Hazen)	3	3	1	5	15
Turbidity(NTU)	1	1	2	1	5
pH	7.75	7.87	7.95	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	64	64	388	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	225.79	76.61	250.48	200	600
Iron(mg/L)	<0.10	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	20	8	64	250	1000
Total Dissolve Solid(mg/L)	364	122	546	500	2000
Calcium(mg/L)	56.56	19.39	65.6	75	200
Sulphate(mg/L)	134.08	14.7	3.93	200	400
Nitrate(mg/L)	<0.5	<0.5	<0.5	45	No relaxation

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Table:233

Project / OCP Monitoring Station	Hingula OCP			Indian Drinking Standards (IS- 10500):2012	
	Kumunda Village Bore Well Water			Acceptable	Permissible
Date of Sampling	1-Oct-2020	12-Nov- 2020	1-Dec-2020		
Colour(Hazen)	1	2	2	5	15
Turbidity(NTU)	2	2	1	1	5
pH	6.83	7.86	7.21	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	256	200	496	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	243	198	454.2	200	600
Iron(mg/L)	<0.1	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	28	20	50	250	1000
Total Dissolve Solid(mg/L)	326	304	672	500	2000
Calcium(mg/L)	62.8	65.07	64.94	75	200
Sulphate(mg/L)	13	75.4	12.39	200	400
Nitrate(mg/L)	<0.5	<0.5	<0.5	45	No relaxation

Table:234

Project / OCP Monitoring Station	Hingula OCP			Indian Drinking Standards (IS- 10500):2012	
	Kumunda Village Bore Well Water			Acceptable	Permissible
Date of Sampling	1-Jan-2021	5-Feb-2021	12-Mar- 2021		
Colour(Hazen)	4	2	4	5	15
Turbidity(NTU)	2	1	2	1	5
pH	6.85	7.51	6.98	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	240	36	216	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	552.7	186.6	214.4	200	600
Iron(mg/L)	<0.1	<0.1	<0.10	0.3	No relaxation
Chloride(mg/L)	143	14	24	250	1000
Total Dissolve Solid(mg/L)	894	308	366	500	2000
Calcium(mg/L)	73.84	50.91	44.55	75	200
Sulphate(mg/L)	80.71	125.67	1.83	200	400
Nitrate(mg/L)	31.87	<0.5	<0.5	45	No relaxation

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Table:235

Project / OCP Monitoring Station	Balaram OCP			Indian Drinking Standards (IS- 10500):2012	
	Danara Village Borewell Water			Acceptable	Permissible
Date of Sampling	28-Apr- 2020	21-May- 2020	11-Jun- 2020		
Colour(Hazen)	8	1	2	5	15
Turbidity(NTU)	4	<1.0	1	1	5
pH	7.86	6.52	6.83	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	268	84	80	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	212	108	104	200	600
Chloride(mg/L)	123	32	28	250	1000
Total Dissolve Solid(mg/L)	568	228	218	500	2000
Calcium(mg/L)	44.2	32	28.8	75	200
Sulphate(mg/L)	97.38	16.35	17.89	200	400
Nitrate(mg/L)	18.71	19.54	16.22	45	No relaxation

Table:236

Project / OCP Monitoring Station	Balaram OCP			Indian Drinking Standards (IS- 10500):2012	
	Danara Village Borewell Water			Acceptable	Permissible
Date of Sampling	11-Jul- 2020	14-Aug- 2020	14-Sep- 2020		
Colour(Hazen)	4	4	3	5	15
Turbidity(NTU)	2	2	1	1	5
pH	7.75	7.32	7.55	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	132	244	60	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	354.82	302.4	210.08	200	600
Chloride(mg/L)	22	76	16	250	1000
Total Dissolve Solid(mg/L)	918	482	298	500	2000
Calcium(mg/L)	88.88	92.11	48	75	200
Sulphate(mg/L)	95.21	28.29	128.01	200	400
Nitrate(mg/L)	37.44	<0.5	<0.5	45	No relaxation

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Table:237

Project / OCP Monitoring Station	Balaram OCP			Indian Drinking Standards (IS-10500):2012	
	Danara Village Borewell Water			Acceptable	Permissible
Date of Sampling	5-Oct-2020	12-Nov-2020	1-Dec-2020		
Colour(Hazen)	2	3	2	5	15
Turbidity(NTU)	1	1	1	1	5
pH	7.11	6.57	6.94	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	524	40	32	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	552.7	146.5	82.9	200	600
Chloride(mg/L)	26	76	42	250	1000
Total Dissolve Solid(mg/L)	1180	310	188	500	2000
Calcium(mg/L)	67.5	44.44	23.76	75	200
Sulphate(mg/L)	2.9	31.38	8.31	200	400
Nitrate(mg/L)	<0.5	25.01	28.41	45	No relaxation

Table:238

Project / OCP Monitoring Station	Balaram OCP			Indian Drinking Standards (IS-10500):2012	
	Danara Village Borewell Water			Acceptable	Permissible
Date of Sampling	1-Jan-2021	5-Feb-2021	28-Mar-2021		
Colour(Hazen)	3	2	3	5	15
Turbidity(NTU)	2	2	2	1	5
pH	7.01	7.48	8.04	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	276	44	180	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	291.4	190.1	198.5	200	600
Chloride(mg/L)	50	16	26	250	1000
Total Dissolve Solid(mg/L)	368	312	330	500	2000
Calcium(mg/L)	53.41	50.91	63.64	75	200
Sulphate(mg/L)	<1.0	129.43	16.62	200	400
Nitrate(mg/L)	<0.5	<0.5	<0.5	45	No relaxation

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Table:239

Project / OCP Monitoring Station	Balaram OCP			Indian Drinking Standards (IS-10500):2012	
	Balaram Colony Tap Water			Acceptable	Permissible
Date of Sampling	28-Apr-2020	21-May-2020	11-Jun-2020		
Colour(Hazen)	7	2	3	5	15
Turbidity(NTU)	4	<1.0	2	1	5
pH	8.08	7.92	7.75	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	60	92	84	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	492	144	136	200	600
Chloride(mg/L)	22	32	28	250	1000
Total Dissolve Solid(mg/L)	470	288	270	500	2000
Calcium(mg/L)	96	40	36.8	75	200
Sulphate(mg/L)	180.75	49.8	52.63	200	400
Nitrate(mg/L)	<0.5	10.73	12.06	45	No relaxation

Table:240

Project / OCP Monitoring Station	Balaram OCP			Indian Drinking Standards (IS-10500):2012	
	Balaram Colony Tap Water			Acceptable	Permissible
Date of Sampling	11-Jul-2020	14-Aug-2020	14-Sep-2020		
Colour(Hazen)	5	3	2	5	15
Turbidity(NTU)	3	2	1	1	5
pH	7.80	8.06	7.69	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	40	92	84	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	64.51	124.99	177.76	200	600
Chloride(mg/L)	12	20	14	250	1000
Total Dissolve Solid(mg/L)	116	218	264	500	2000
Calcium(mg/L)	17.78	32.32	43.2	75	200
Sulphate(mg/L)	31.55	31.9	81.64	200	400
Nitrate(mg/L)	<0.5	2.17	<0.5	45	No relaxation

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Table:241

Project / OCP Monitoring Station	Balaram OCP			Indian Drinking Standards (IS-10500):2012	
	Balaram Colony Tap Water			Acceptable	Permissible
Date of Sampling	1-Oct-2020	12-Nov-2020	1-Dec-2020		
Colour(Hazen)	3	4	3	5	15
Turbidity(NTU)	1	2	2	1	5
pH	7.59	7.60	7.25	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	84	56	60	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	180.3	388.1	391	200	600
Chloride(mg/L)	16	18	16	250	1000
Total Dissolve Solid(mg/L)	274	520	544	500	2000
Calcium(mg/L)	40.8	114.26	110.9	75	200
Sulphate(mg/L)	52.54	186.2	181.41	200	400
Nitrate(mg/L)	<0.5	<0.5	<0.5	45	No relaxation

Table:242

Project / OCP Monitoring Station	Balaram OCP	Balaram OCP	Balaram OCP	Indian Drinking Standards (IS-10500):2012	
	Balaram Colony Tap Water			Acceptable	Permissible
Date of Sampling	1-Jan-2021	15-Feb-2021	28-Mar-2021		
Colour(Hazen)	1	3	2	5	15
Turbidity(NTU)	2	2	1	1	5
pH	7.62	7.68	8.02	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	56	52	176	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	74.5	230.3	158.8	200	600
Chloride(mg/L)	10	14	32	250	1000
Total Dissolve Solid(mg/L)	108	346	332	500	2000
Calcium(mg/L)	20.42	73.19	42.96	75	200
Sulphate(mg/L)	9.00	133.63	17.33	200	400
Nitrate(mg/L)	<0.5	<0.5	<0.5	45	No relaxation

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Table:243

Project / OCP	Balaram OCP			Indian Drinking Standards (IS-10500):2012	
	Monitoring Station	Nakeipasi Village Bore Well Water	Nakeipasi Village Bore Well Water		
Date of Sampling	28-Apr-2020	21-May-2020	11-Jun-2020	Acceptable	Permissible
Colour(Hazen)	3	4	4	5	15
Turbidity(NTU)	2	1	3	1	5
pH	8.21	7.26	7.21	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	288	56	64	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	160	324	308	200	600
Chloride(mg/L)	127	16	20	250	1000
Total Dissolve Solid(mg/L)	567	468	452	500	2000
Calcium(mg/L)	56	91.2	86.4	75	200
Sulphate(mg/L)	91.2	190.87	182.72	200	400
Nitrate(mg/L)	18.19	<0.5	<0.5	45	No relaxation

Table:244

Project / OCP	Balaram OCP			Indian Drinking Standards (IS-10500):2012	
	Monitoring Station	Nakeipasi Village Bore Well Water			
Date of Sampling	11-Jul-2020	14-Aug-2020	14-Sep-2020	Acceptable	Permissible
Colour(Hazen)	2	5	2	5	15
Turbidity(NTU)	3	3	1	1	5
pH	7.39	8.16	6.95	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	56	168	28	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	221.76	270.14	60.60	200	600
Chloride(mg/L)	14	86	16	250	1000
Total Dissolve Solid(mg/L)	352	408	88	500	2000
Calcium(mg/L)	66.26	98.58	16	75	200
Sulphate(mg/L)	113.09	28.57	23.47	200	400
Nitrate(mg/L)	<0.5	<0.5	<0.5	45	No relaxation

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Table:245

Project / OCP Monitoring Station	Balaram OCP			Indian Drinking Standards (IS-10500):2012	
	Nakeipasi Village Bore Well Water			Acceptable	Permissible
Date of Sampling	1-Oct-2020	12-Nov-2020	1-Dec-2020		
Colour(Hazen)	2	1	2	5	15
Turbidity(NTU)	1	2	1	1	5
pH	6.99	7.42	7.13	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	156	76	116	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	278.3	162.4	181.7	200	600
Chloride(mg/L)	14	16	24	250	1000
Total Dissolve Solid(mg/L)	416	252	264	500	2000
Calcium(mg/L)	94.3	42.85	44.35	75	200
Sulphate(mg/L)	21.29	64.57	44.09	200	400
Nitrate(mg/L)	<0.5	4.83	2.54	45	No relaxation

Table:246

Project / OCP Monitoring Station	Balaram OCP	Balaram OCP	Balaram OCP	Indian Drinking Standards (IS-10500):2012	
	Nakeipasi Village Bore Well Water			Acceptable	Permissible
Date of Sampling	14-Jan-2021	13-Feb-2021	12-Mar-2021		
Colour(Hazen)	2	2	2	5	15
Turbidity(NTU)	1	1	2	1	5
pH	7.13	7.59	7.20	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	88	48	292	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	105.8	55.6	317.6	200	600
Chloride(mg/L)	14	8	80	250	1000
Total Dissolve Solid(mg/L)	182	102	590	500	2000
Calcium(mg/L)	34.56	15.91	44.55	75	200
Sulphate(mg/L)	24.43	8.82	2.51	200	400
Nitrate(mg/L)	<0.5	<0.5	12.27	45	No relaxation

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Table:247  
**Area: Talcher Area**  
**Project: Talcher U/G**

Project / OCP Monitoring Station	Talcher U/G			Indian Drinking Standards (IS-10500):2012	
	Tap-Water, GM Office			Acceptable	Permissible
Date of Sampling	29-Apr-2020	23-May-2020	11-Jun-2020		
Colour(Hazen)	11	4	5	5	15
Turbidity(NTU)	4	2	1	1	5
pH	7.95	7.84	7.70	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	280	76	68	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	204	140	124	200	600
Iron(mg/L)	<0.1	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	239	34	30	250	1000
Total Dissolve Solid(mg/L)	789	288	270	500	2000
Calcium(mg/L)	57.6	38.4	32	75	200
Sulphate(mg/L)	127.84	50.39	48.57	200	400
Nitrate(mg/L)	38.14	10.96	10.9	45	No relaxation

Table:248

Project / OCP Monitoring Station	Talcher U/G			Indian Drinking Standards (IS-10500):2012	
	Tap-Water, GM Office			Acceptable	Permissible
Date of Sampling	11-Jul-2020	14-Aug-2020	14-Sep-2020		
Colour(Hazen)	1	2	3	5	15
Turbidity(NTU)	1	1	2	1	5
pH	6.69	7.97	6.98	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	40	36	28	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	64.51	56.45	64.64	200	600
Iron(mg/L)	<0.10	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	36	10	10	250	1000
Total Dissolve Solid(mg/L)	112	96	88	500	2000
Calcium(mg/L)	19.39	16.16	17.6	75	200
Sulphate(mg/L)	27.6	24.55	22.34	200	400
Nitrate(mg/L)	<0.5	1.22	<0.5	45	No relaxation

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Table:249

Project / OCP Monitoring Station	Talcher U/G			Indian Drinking Standards (IS- 10500):2012	
	Tap-Water, GM Office				
Date of Sampling	5-Oct-2020	13-Nov-2020	2-Dec-2020	Acceptable	Permissible
Colour(Hazen)	2	2	3	5	15
Turbidity(NTU)	2	1	1	1	5
pH	6.69	7.50	7.53	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	48	52	56	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	54.9	55.4	94.8	200	600
Iron(mg/L)	<0.1	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	24	6	10	250	1000
Total Dissolve Solid(mg/L)	96	94	104	500	2000
Calcium(mg/L)	17.3	19.04	17.42	75	200
Sulphate(mg/L)	12.44	9.57	12.68	200	400
Nitrate(mg/L)	<0.5	1.98	<0.5	45	No relaxation

Table:250

Project / OCP Monitoring Station	Talcher U/G	Talcher U/G	Talcher U/G	Indian Drinking Standards (IS- 10500):2012	
	Tap-Water, GM Office				
Date of Sampling	2-Jan-2021	15-Feb-2021	28-Mar- 2021	Acceptable	Permissible
Colour(Hazen)	1	2	2	5	15
Turbidity(NTU)	2	2	1	1	5
pH	7.40	7.64	7.95	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	52	52	56	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	62.7	55.6	214.4	200	600
Iron(mg/L)	<0.1	<0.1	<0.10	0.3	No relaxation
Chloride(mg/L)	10	10	14	250	1000
Total Dissolve Solid(mg/L)	98	104	322	500	2000
Calcium(mg/L)	17.28	14.32	58.87	75	200
Sulphate(mg/L)	11.86	9.4	122.55	200	400
Nitrate(mg/L)	<0.5	<0.5	<0.5	45	No relaxation

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Table:251

Project / OCP Monitoring Station	Talcher U/G			Indian Drinking Standards (IS- 10500):2012	
	Canteen Tap-Water, Talcher Colliery			Acceptable	Permissible
Date of Sampling	29-Apr-2020	23-May- 2020	11-Jun-2020		
Colour(Hazen)	10	4	2	5	15
Turbidity(NTU)	4	1	2	1	5
pH	7.77	7.58	7.52	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	244	64	60	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	192	328	308	200	600
Iron(mg/L)	<0.1	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	201	16	20	250	1000
Total Dissolve Solid(mg/L)	650	472	448	500	2000
Calcium(mg/L)	54.4	84.8	78.4	75	200
Sulphate(mg/L)	109.29	196.52	178.61	200	400
Nitrate(mg/L)	39.44	<0.5	<0.5	45	No relaxation

Table:252

Project / OCP Monitoring Station	Talcher U/G			Indian Drinking Standards (IS- 10500):2012	
	Canteen Tap-Water, Talcher Colliery			Acceptable	Permissible
Date of Sampling	11-Jul-2020	14-Aug- 2020	14-Sep-2020		
Colour(Hazen)	3	1	2	5	15
Turbidity(NTU)	1	2	1	1	5
pH	7.05	7.77	7.39	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	52	32	28	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	60.48	60.48	56.56	200	600
Iron(mg/L)	<0.10	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	8	8	14	250	1000
Total Dissolve Solid(mg/L)	116	98	90	500	2000
Calcium(mg/L)	16.16	18.74	16	75	200
Sulphate(mg/L)	22.53	23.58	117.62	200	400
Nitrate(mg/L)	<05	<0.5	<0.5	45	No relaxation

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Table:253

Project / OCP Monitoring Station	Talcher U/G			Indian Drinking Standards (IS- 10500):2012	
	Canteen Tap-Water, Talcher Colliery			Acceptable	Permissible
Date of Sampling	5-Oct-2020	13-Nov-2020	2-Dec-2020		
Colour(Hazen)	2	1	2	5	15
Turbidity(NTU)	1	2	1	1	5
pH	6.87	7.46	7.48	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	48	104	108	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	62.7	150.5	146.1	200	600
Iron(mg/L)	<0.1	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	14	20	18	250	1000
Total Dissolve Solid(mg/L)	98	246	228	500	2000
Calcium(mg/L)	15.7	39.68	38.02	75	200
Sulphate(mg/L)	15.62	50.12	39.86	200	400
Nitrate(mg/L)	1.01	2.26	3.55	45	No relaxation

Table:254

Project / OCP Monitoring Station	Talcher U/G			Indian Drinking Standards (IS- 10500):2012	
	Canteen Tap-Water, Talcher Colliery			Acceptable	Permissible
Date of Sampling	2-Jan-2021	5-Feb-2021	28-Mar- 2021		
Colour(Hazen)	2	1	3	5	15
Turbidity(NTU)	1	1	2	1	5
pH	7.41	7.58	7.92	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	72	44	48	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	94.1	218.4	218.4	200	600
Iron(mg/L)	<0.1	<0.1	<0.10	0.3	No relaxation
Chloride(mg/L)	12	12	14	250	1000
Total Dissolve Solid(mg/L)	158	340	326	500	2000
Calcium(mg/L)	23.57	66.82	60.46	75	200
Sulphate(mg/L)	22.43	124.37	124.16	200	400
Nitrate(mg/L)	<0.5	<0.5	<0.5	45	No relaxation

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Table:255  
**Area: Talcher Area**  
**Project: Nandira U/G**

Project / OCP Monitoring Station	Nandira U/G			Indian Drinking Standards (IS-10500):2012	
	Canteen Tap-Water, Nandira Colliery			Acceptable	Permissible
Date of Sampling	29-Apr-2020	23-May-2020	11-Jun-2020		
Colour(Hazen)	9	5	3	5	15
Turbidity(NTU)	3	2	2	1	5
pH	7.99	7.31	7.42	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	56	60	64	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	112	340	324	200	600
Iron(mg/L)	<0.1	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	18	18	22	250	1000
Total Dissolve Solid(mg/L)	290	484	460	500	2000
Calcium(mg/L)	33.6	92.8	88	75	200
Sulphate(mg/L)	121.35	160.69	155.38	200	400
Nitrate(mg/L)	<0.5	<0.5	<0.5	45	No relaxation

Table:256

Project / OCP Monitoring Station	Nandira U/G			Indian Drinking Standards (IS-10500):2012	
	Canteen Tap-Water, Nandira Colliery			Acceptable	Permissible
Date of Sampling	11-Jul-2020	14-Aug-2020	14-Sep-2020		
Colour(Hazen)	2	4	1	5	15
Turbidity(NTU)	1	3	3	1	5
pH	6.82	7.81	7.48	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	48	68	60	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	112.90	197.57	210.08	200	600
Iron(mg/L)	<0.10	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	20	16	16	250	1000
Total Dissolve Solid(mg/L)	214	302	302	500	2000
Calcium(mg/L)	32.32	48.48	51.2	75	200
Sulphate(mg/L)	55.9	100.83	129.28	200	400
Nitrate(mg/L)	16.54	<0.5	<0.5	45	No relaxation

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Table:257

Project / OCP Monitoring Station	Nandira U/G			Indian Drinking Standards (IS-10500):2012	
	Canteen Tap-Water, Nandira Colliery			Acceptable	Permissible
Date of Sampling	5-Oct-2020	13-Nov-2020	2-Dec-2020		
Colour(Hazen)	1	1	2	5	15
Turbidity(NTU)	1	2	1	1	5
pH	6.84	7.35	7.75	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	56	60	56	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	180.3	186.1	189.6	200	600
Iron(mg/L)	<0.1	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	10	20	14	250	1000
Total Dissolve Solid(mg/L)	292	288	294	500	2000
Calcium(mg/L)	47.1	50.78	47.52	75	200
Sulphate(mg/L)	123.87	119.27	114.51	200	400
Nitrate(mg/L)	<0.5	1.56	<0.5	45	No relaxation

Table:258

Project / OCP Monitoring Station	Nandira U/G			Indian Drinking Standards (IS-10500):2012	
	Canteen Tap-Water, Nandira Colliery			Acceptable	Permissible
Date of Sampling	2-Jan-2021	4-Feb-2021	12-Mar-2021		
Colour(Hazen)	2	3	3	5	15
Turbidity(NTU)	1	2	2	1	5
pH	7.06	7.87	7.15	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	48	80	48	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	168.6	139	186.6	200	600
Iron(mg/L)	<0.1	<0.1	<0.10	0.3	No relaxation
Chloride(mg/L)	14	30	16	250	1000
Total Dissolve Solid(mg/L)	292	280	294	500	2000
Calcium(mg/L)	45.56	41.37	50.91	75	200
Sulphate(mg/L)	94.85	49.6	120.72	200	400
Nitrate(mg/L)	<0.5	10.5	<0.5	45	No relaxation

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Table:259

Project / OCP Monitoring Station	Nandira U/G			Indian Drinking Standards (IS- 10500):2012	
	Pit Top Tap Water. Nandira Colliery			Acceptable	Permissible
Date of Sampling	29-Apr- 2020	23-May- 2020	11-Jun- 2020		
Colour(Hazen)	8	8	5	5	15
Turbidity(NTU)	3	3	1	1	5
pH	7.93	7.76	7.68	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	56	52	60	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	92	340	348	200	600
Iron(mg/L)	<0.1	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	14	14	18	250	1000
Total Dissolve Solid(mg/L)	288	480	488	500	2000
Calcium(mg/L)	27.2	91.2	94.4	75	200
Sulphate(mg/L)	107.64	182.39	175.26	200	400
Nitrate(mg/L)	<0.5	<0.5	<0.5	45	No relaxation

Table:260

Project / OCP Monitoring Station	Nandira U/G			Indian Drinking Standards (IS- 10500):2012	
	Pit Top Tap Water. Nandira Colliery			Acceptable	Permissible
Date of Sampling	11-Jul-2020	14-Aug- 2020	14-Sep-2020		
Colour(Hazen)	2	2	3	5	15
Turbidity(NTU)	3	1	2	1	5
pH	7.37	7.83	7.09	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	56	68	56	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	173.38	197.57	202	200	600
Iron(mg/L)	<0.10	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	14	16	16	250	1000
Total Dissolve Solid(mg/L)	290	298	302	500	2000
Calcium(mg/L)	48.48	50.10	48	75	200
Sulphate(mg/L)	95.63	118.16	124.78	200	400
Nitrate(mg/L)	<0.5	<0.5	<0.5	45	No relaxation

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Table:261

Project / OCP Monitoring Station	Nandira U/G			Indian Drinking Standards (IS-10500):2012	
	Pit Top Tap Water. Nandira Colliery			Acceptable	Permissible
Date of Sampling	5-Oct-2020	13-Nov-2020	2-Dec-2020		
Colour(Hazen)	2	2	1	5	15
Turbidity(NTU)	1	1	2	1	5
pH	7.50	7.33	7.10	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	52	60	60	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	70.6	190.1	193.5	200	600
Iron(mg/L)	<0.1	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	12	14	18	250	1000
Total Dissolve Solid(mg/L)	106	292	298	500	2000
Calcium(mg/L)	20.4	52.07	50.69	75	200
Sulphate(mg/L)	12.86	114.27	113.67	200	400
Nitrate(mg/L)	1.31	1.75	<0.5	45	No relaxation

Table:262

Project / OCP Monitoring Station	Nandira U/G			Indian Drinking Standards (IS-10500):2012	
	Pit Top Tap Water. Nandira Colliery			Acceptable	Permissible
Date of Sampling	2-Jan-2021	4-Feb-2021	12-Mar-2021		
Colour(Hazen)	3	6	2	5	15
Turbidity(NTU)	2	3	1	1	5
pH	6.94	6.51	7.16	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	52	28	44	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	192.1	55.6	190.6	200	600
Iron(mg/L)	<0.1	<0.1	<0.10	0.3	No relaxation
Chloride(mg/L)	36	14	18	250	1000
Total Dissolve Solid(mg/L)	298	122	298	500	2000
Calcium(mg/L)	50.22	17.5	49.32	75	200
Sulphate(mg/L)	108.99	29.07	107.19	200	400
Nitrate(mg/L)	<0.5	<0.5	<0.5	45	No relaxation

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Table:263  
**Area: Talcher Area**  
**Project: Deulbera U/G**

Project / OCP Monitoring Station	Deulbera U/G			Indian Drinking Standards (IS-10500):2012	
	Deulbera Manager Office Tap Water			Acceptable	Permissible
Date of Sampling	29-Apr-2020	23-May-2020	11-Jun-2020		
Colour(Hazen)	7	6	6	5	15
Turbidity(NTU)	4	1	3	1	5
pH	7.98	7.83	6.84	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	268	64	68	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	136	352	344	200	600
Iron(mg/L)	<0.1	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	181	18	20	250	1000
Total Dissolve Solid(mg/L)	635	496	484	500	2000
Calcium(mg/L)	38.4	94.4	89.6	75	200
Sulphate(mg/L)	87.59	166.19	160.30	200	400
Nitrate(mg/L)	27	<0.5	<0.5	45	No relaxation

Table:264

Project / OCP Monitoring Station	Deulbera U/G			Indian Drinking Standards (IS-10500):2012	
	Deulbera Manager Office Tap Water			Acceptable	Permissible
Date of Sampling	11-Jul-2020	14-Aug-2020	14-Sep-2020		
Colour(Hazen)	4	2	4	5	15
Turbidity(NTU)	2	1	1	1	5
pH	7.36	8.11	6.66	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	52	96	28	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	68.54	141.12	60.60	200	600
Iron(mg/L)	<0.10	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	6	32	10	250	1000
Total Dissolve Solid(mg/L)	126	276	86	500	2000
Calcium(mg/L)	17.78	40.4	14.4	75	200
Sulphate(mg/L)	28.45	46.05	24.87	200	400
Nitrate(mg/L)	<0.5	12.4	<0.5	45	No relaxation

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Table:265

Project / OCP Monitoring Station	Deulbera U/G			Indian Drinking Standards (IS-10500):2012	
	Deulbera Manager Office Tap Water				
Date of Sampling	5-Oct-2020	13-Nov-2020	2-Dec-2020	Acceptable	Permissible
Colour(Hazen)	2	1	2	5	15
Turbidity(NTU)	3	2	1	1	5
pH	6.70	7.58	7.32	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	152	108	116	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	207.8	150.5	158.0	200	600
Iron(mg/L)	<0.1	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	30	22	22	250	1000
Total Dissolve Solid(mg/L)	348	236	254	500	2000
Calcium(mg/L)	47.1	34.91	41.18	75	200
Sulphate(mg/L)	56.96	37.07	47.04	200	400
Nitrate(mg/L)	7.28	4.53	2.35	45	No relaxation

Table:266

Project / OCP Monitoring Station	Deulbera U/G			Indian Drinking Standards (IS-10500):2012	
	Deulbera Manager Office Tap Water				
Date of Sampling	12-Jan-2021	15-Feb-2021	12-Mar-2021	Acceptable	Permissible
Colour(Hazen)	3	2	2	5	15
Turbidity(NTU)	2	1	1	1	5
pH	7.15	7.61	6.93	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	108	52	140	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	184.2	222.3	226.3	200	600
Iron(mg/L)	<0.1	<0.1	<0.10	0.3	No relaxation
Chloride(mg/L)	12	12	32	250	1000
Total Dissolve Solid(mg/L)	316	344	372	500	2000
Calcium(mg/L)	47.13	63.64	58.87	75	200
Sulphate(mg/L)	68.43	127.55	70.57	200	400
Nitrate(mg/L)	4.94	<0.5	5.37	45	No relaxation

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Table:267  
**Area: Talcher Area**  
**Project: Handhidhua Colliery**

Project / OCP	Handhidhua Colliery			Indian Drinking Standards (IS-10500):2012	
Monitoring Station	Pit Top Tap Water				
Date of Sampling	29-Apr-2020	23-May-2020	11-Jun-2020	Acceptable	Permissible
Colour(Hazen)	6	7	4	5	15
Turbidity(NTU)	3	2	1	1	5
pH	8.01	7.80	6.5	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	68	60	72	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	124	340	328	200	600
Iron(mg/L)	<0.1	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	34	20	26	250	1000
Total Dissolve Solid(mg/L)	268	482	468	500	2000
Calcium(mg/L)	35.2	96	91.2	75	200
Sulphate(mg/L)	56.38	127.84	125.89	200	400
Nitrate(mg/L)	12.8	<0.5	<0.5	45	No relaxation

Table:268

Project / OCP	Handhidhua Colliery			Indian Drinking Standards (IS-10500):2012	
Monitoring Station	Pit Top Tap Water				
Date of Sampling	11-Jul-2020	14-Aug-2020	14-Sep-2020	Acceptable	Permissible
Colour(Hazen)	2	4	1	5	15
Turbidity(NTU)	1	3	1	1	5
pH	7.05	7.52	6.86	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	184	96	28	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	217.73	145.15	60.60	200	600
Iron(mg/L)	<0.10	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	26	30	16	250	1000
Total Dissolve Solid(mg/L)	338	278	90	500	2000
Calcium(mg/L)	67.87	40.40	14.4	75	200
Sulphate(mg/L)	20	49.79	23.89	200	400
Nitrate(mg/L)	1.16	11.72	<0.5	45	No relaxation

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Table:269

Project / OCP Monitoring Station	Handhidhua Colliery			Indian Drinking Standards (IS- 10500):2012	
	Pit Top Tap Water			Acceptable	Permissible
Date of Sampling	5-Oct-2020	13-Nov- 2020	2-Dec-2020		
Colour(Hazen)	2	2	1	5	15
Turbidity(NTU)	2	1	2	1	5
pH	6.65	7.65	7.35	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	176	96	92	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	254.8	150.5	142.2	200	600
Iron(mg/L)	<0.1	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	28	32	30	250	1000
Total Dissolve Solid(mg/L)	402	276	274	500	2000
Calcium(mg/L)	64.4	47.61	39.60	75	200
Sulphate(mg/L)	85.99	46.65	52.40	200	400
Nitrate(mg/L)	4.87	10.76	12.44	45	No relaxation

Table:270

Project / OCP Monitoring Station	Handhidhua Colliery			Indian Drinking Standards (IS- 10500):2012	
	Pit Top Tap Water			Acceptable	Permissible
Date of Sampling	12-Jan-2021	4-Feb-2021	28-Mar- 2021		
Colour(Hazen)	2	2	4	5	15
Turbidity(NTU)	1	1	2	1	5
pH	7.35	7.30	7.89	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	56	48	48	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	58.8	135	281.9	200	600
Iron(mg/L)	<0.1	<0.1	<0.10	0.3	No relaxation
Chloride(mg/L)	4	10	14	250	1000
Total Dissolve Solid(mg/L)	104	224	412	500	2000
Calcium(mg/L)	15.71	39.78	79.55	75	200
Sulphate(mg/L)	9.14	70.57	163.26	200	400
Nitrate(mg/L)	<0.5	<0.5	<0.5	45	No relaxation

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## Observations:

3. Fluoride, Arsenic, Lead, Zinc, Total Chromium, Boron, Cadmium, Iron, Copper & Manganese were below detectable limits in the sample collected
4. The Odour & Taste were found to be agreeable in all the samples received.



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# **PIEZOMETER DEPTH ANALYSIS**

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### 3.7 TABLES FOR PIEZOMETER QUANTITY DATA

Table:271

Area	Project	Name of the Station	Date of Sampling	Ground Water level (below ground level in meters)
Jagannath	Ananta OCP	Piezometer no MTP 05; Outside Ananta OCP canteen	29-May-20	33
Jagannath	Ananta OCP	Piezometer no MTP 05; Outside Ananta OCP canteen	30-Nov-20	24.66
Jagannath	Ananta OCP	Piezometer no MTP 05; Outside Ananta OCP canteen	23-Jan-21	25.54
Jagannath	Jagannath OCP	Piezometer no MTP 04; Inside central nursery (beside golf hut), Jagannath area	29-May-20	7
Jagannath	Jagannath OCP	Piezometer no MTP 04; Inside central nursery (beside golf hut), Jagannath area	30-Nov-20	3.9
Jagannath	Jagannath OCP	Piezometer no MTP 04; Inside central nursery (beside golf hut), Jagannath area	23-Jan-21	3.55
Bharatpur	Bharatpur OCP	Piezometer no MTP 09; Inside the premises of Joragarhia Panchayat high school	29-May-20	7
Bharatpur	Bharatpur OCP	Piezometer no MTP 09; Inside the premises of Joragarhia Panchayat high school	30-Nov-20	4.55
Bharatpur	Bharatpur OCP	Piezometer no MTP 10; Inside the premises of Danara high school (reported)	23-Jan-21	15.29
Bharatpur	Bharatpur OCP	Piezometer no MTP 09; Inside the premises of Joragarhia Panchayat high school	23-Jan-21	4.35
Bharatpur	Chhendipada OCP	Piezometer no MTP 21; Between Chhendipada weigh bridge and coal stock yard	28-May-20	4
Bharatpur	Chhendipada OCP	Piezometer no MTP 23; Inside the premises of Veterinary hospital, Chhendipada	28-May-20	6
Bharatpur	Chhendipada OCP	Piezometer no MTP 21; Between Chhendipada weigh bridge and coal stock yard	02-Nov-20	3.66
Bharatpur	Chhendipada OCP	Piezometer no MTP 23; Inside the premises of Veterinary hospital, Chhendipada	02-Nov-20	2.8
Bharatpur	Chhendipada OCP	Piezometer no MTP 22 ; Inside the premises of the abundant office of Junior Engineer (MI Section, Chhendipada) (in the safety zone of Chhendipada OCP )	30-Nov-20	Not Accesible, Gate Locked
Bharatpur	Chhendipada OCP	Piezometer no MTP 22 ; Inside the premises of the abundant office of Junior Engineer (MI Section, Chhendipada) (in the safety zone of Chhendipada OCP )	23-Jan-21	Not Accesible, Gate Locked
Bharatpur	Chhendipada OCP	Piezometer no MTP 21; Between Chhendipada weigh bridge and coal stock yard	27-Jan-21	4.13
Bharatpur	Chhendipada OCP	Piezometer no MTP 23; Inside the premises of Veterinary hospital, Chhendipada	27-Jan-21	4.45
Lingaraj	Lingraj OCP	Piezometer no MTP 01; Inside the premises of Mandapal hospital	30-May-20	8
Lingaraj	Lingraj OCP	Piezometer no MTP 01; Inside the premises of Mandapal hospital	30-Nov-20	11.18
Lingaraj	Lingraj OCP	Piezometer no MTP 06 ; Inside the premises of Kandhal high school	30-Nov-20	Depth could not be measured as casing of piezometer jammed.
Lingaraj	Lingraj OCP	Piezometer no MTP 01; Inside the premises of Mandapal hospital	23-Jan-21	11.43
Lingaraj	Lingraj OCP	Piezometer no MTP 06 ; Inside the premises of Kandhal high school	23-Jan-21	Depth could not be measured as casing of piezometer jammed.
Kaniha	Kaniha OCP	Piezometer no MTP 19; Outside Golaghar sahi primary school, Bijigol (school constructed by NTPC)	28-May-20	5
Kaniha	Kaniha OCP	Piezometer no MTP 20; Inside the premises of Kansamunda village old site office, MCL	29-May-20	21
Kaniha	Kaniha OCP	Piezometer no MTP 18; Inside the premisses of Chellia Prathamiki school	29-May-20	7

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Kaniha	Kaniha OCP	Piezometer no MTP 19; Outside Golaghar sahi primary school, Bijigol (school constructed by NTPC)	30-Nov-20	3.55
Kaniha	Kaniha OCP	Piezometer no MTP 20; Inside the premises of Kansamunda village old site office, MCL	30-Nov-20	4.51
Kaniha	Kaniha OCP	Piezometer no MTP 18; Inside the premisses of Chellia Prathamiki school	30-Nov-20	5.01
Kaniha	Kaniha OCP	Piezometer no MTP 19; Outside Golaghar sahi primary school, Bijigol (school constructed by NTPC)	23-Jan-21	4.92
Kaniha	Kaniha OCP	Piezometer no MTP 20; Inside the premises of Kansamunda village old site office, MCL	23-Jan-21	21.43
Kaniha	Kaniha OCP	Piezometer no MTP 18; Inside the premisses of Chellia Prathamiki school	23-Jan-21	7.52
Hingula	Balram OCP	Piezometer no MTP 17; Inside the premises of market building (through gram in rojgar yojna), Kandhaberani village	30-Nov-20	Could not be accessed because of pump fitted by villagers.
Hingula	Balram OCP	Piezometer no MTP 10; Inside the premises of Danara high school	23-Jan-21	15.29
Hingula	Balram OCP	Piezometer no MTP 12; In Betianalli village, opposite to Sindhu deori's house	23-Jan-21	5.26
Hingula	Balram OCP	Piezometer no MTP 13 ; Inside the premises of Ambapal Natarha high school	23-Jan-21	11.58
Hingula	Balram OCP	Piezometer no MTP 17; Inside the premises of market building (through gram in rojgar yojna), Kandhaberani village	23-Jan-21	Could not be accessed because of pump fitted by villagers.
Hingula	Hingula OCP	Piezometer no MTP 14; Inside the premises of Pirakhamam village primary school	28-May-20	5
Hingula	Hingula OCP	Piezometer no MTP 16; Backside of Hingula Mandir VIP guest house	28-May-20	7
Hingula	Hingula OCP	Piezometer no MTP 15; Beside Sujan Pradhan's house in Chottaberani village, near nalla.	30-May-20	4
Hingula	Hingula OCP	Piezometer no MTP 16; Backside of Hingula Mandir VIP guest house	30-Nov-20	7.21
Hingula	Hingula OCP	Piezometer no MTP 15; Beside Sujan Pradhan's house in Chottaberani village, near nalla.	30-Nov-20	6
Hingula	Hingula OCP	Piezometer no MTP 14; Inside the premises of Pirakhamam village primary school	30-Nov-20	7.19
Hingula	Hingula OCP	Piezometer no MTP 16; Backside of Hingula Mandir VIP guest house	23-Jan-21	6.69
Hingula	Hingula OCP	Piezometer no MTP 15; Beside Sujan Pradhan's house in Chottaberani village, near nalla.	27-Jan-21	5.45
Hingula	Hingula OCP	Piezometer no MTP 14; Inside the premises of Pirakhamam village primary school	27-Jan-21	8.14
Talcher	Nandira Colliery	Piezometer no MTP 11; Inside the premises of Hingula area office	29-May-20	8
Talcher	Nandira Colliery	Piezometer no MTP 11; Inside the premises of Hingula area office	30-Nov-20	7.59
Talcher	Nandira Colliery	Piezometer no MTP 11; Inside the premises of Hingula area office	13-Jan-21	7.07
Talcher	Handhidhua Colliery	Piezometer no MTP 03; Near Handidua level crossing	30-May-20	4
Talcher	Handhidhua Colliery	Piezometer no MTP 03; Near Handidua level crossing	30-Nov-20	0.5
Talcher	Handhidhua Colliery	Piezometer no MTP 03; Near Handidua level crossing	23-Jan-21	0.7

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# HEAVY METAL QUANTITY IN AIR

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*A Mini Ratna Company*

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### 3.8 TABLES FOR HEAVY METAL QUANTITY DATA

August 2020

Table:272

<i>Project</i>	<b>Ananta OCP</b>	<b>Jagannath OCP</b>	<b>Ananta OCP</b>	<b>Jagannath OCP</b>
<i>Monitoring Station</i>	<b>Ananta Vihar Colony</b>	<b>Ananta Vihar Colony (Reported Only)</b>	<b>Guthasahi Village</b>	<b>Officers Club JNC</b>
<i>Date of sampling</i>	Ozone (O <sub>3</sub> )	Ozone (O <sub>3</sub> )	Ozone (O <sub>3</sub> )	Ozone (O <sub>3</sub> )
	( $\mu\text{g}/\text{m}^3$ )	( $\mu\text{g}/\text{m}^3$ )	( $\mu\text{g}/\text{m}^3$ )	( $\mu\text{g}/\text{m}^3$ )
03-Aug-20	3.71	3.71	<0.1	2.23
04-Aug-20	4.23	4.23	<0.1	1.47
10-Aug-20	3.11	3.11	<0.1	1.38
11-Aug-20	5.31	5.31	<0.1	2.49
18-Aug-20	0.68	0.68	0.35	6.23
19-Aug-20	2.56	2.56	2.41	4.58
25-Aug-20	3.23	3.23	0.53	7.32
26-Aug-20	0.78	0.78	3.82	8.89
<b>Standard</b>	<b>180(hour)</b>			

Table:273

<i>Project</i>	<b>Bharatpur OCP</b>	<b>Chhendipada OCP</b>	<i>Project</i>	<b>Bharatpur OCP</b>
<i>Monitoring Station</i>	<b>Near Joragadia</b>	<b>Near Fire Station</b>	<i>Monitoring Station</i>	<b>Natedi Village (Reported Only)</b>
<i>Date of sampling</i>	Ozone (O <sub>3</sub> )	Ozone (O <sub>3</sub> )	<i>Date of sampling</i>	Ozone (O <sub>3</sub> )
	( $\mu\text{g}/\text{m}^3$ )	( $\mu\text{g}/\text{m}^3$ )		( $\mu\text{g}/\text{m}^3$ )
04-Aug-20	3.28	1.28	06-Aug-20	<0.1
05-Aug-20	4.78	1.76	07-Aug-20	<0.1
10-Aug-20	4.29	1.03	11-Aug-20	<0.1
11-Aug-20	4.38	2.23	12-Aug-20	<0.1
19-Aug-20	0.38	1.9	21-Aug-20	7.32
20-Aug-20	0.92	0.63	22-Aug-20	6.37
25-Aug-20	1.11	0.57	25-Aug-20	6.32
26-Aug-20	3.78	<0.1	26-Aug-20	4.96
<b>Standard</b>	<b>180(hour)</b>			

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Table:274

<b>Project</b>	<b>Lingaraj OCP</b>
<b>Monitoring Station</b>	<b>Near Intake Complex</b>
<b>Date of sampling</b>	Ozone (O <sub>3</sub> ) ( $\mu\text{g}/\text{m}^3$ )
04-Aug-20	<0.1
05-Aug-20	<0.1
10-Aug-20	<0.1
11-Aug-20	<0.1
20-Aug-20	<0.1
25-Aug-20	<0.1
26-Aug-20	0.36
<b>Standard</b>	<b>180(hour)</b>

Table:275

<b>Project</b>	<b>Kaniha OCP</b>
<b>Monitoring Station</b>	<b>South of Proposed Quarry Limit of KOCP</b>
<b>Date of sampling</b>	Ozone (O <sub>3</sub> ) ( $\mu\text{g}/\text{m}^3$ )
06-Aug-20	2.38
07-Aug-20	3.01
12-Aug-20	2.94
13-Aug-20	2.81
21-Aug-20	0.67
22-Aug-20	2.28
27-Aug-20	<0.1
28-Aug-20	<0.1
<b>Standard</b>	<b>180(hour)</b>

Table:276

<b>Project</b>	<b>Hingula OCP</b>
<b>Monitoring Station</b>	<b>North of the Mine, Purnapi, Kumunda Village</b>
<b>Date of sampling</b>	Ozone (O <sub>3</sub> ) ( $\mu\text{g}/\text{m}^3$ )
06-Aug-20	2.76
07-Aug-20	3.21
10-Aug-20	3.43
11-Aug-20	3.01
21-Aug-20	12.16
22-Aug-20	9.08
25-Aug-20	5.78
26-Aug-20	2.45
<b>Standard</b>	<b>180(hour)</b>

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Table:277

<b>Project</b>	<b>Nandira</b>
<b>Monitoring Station</b>	<b>Nandira Colony</b>
<b>Date of sampling</b>	Ozone (O <sub>3</sub> ) ( $\mu\text{g}/\text{m}^3$ )
06-Aug-20	4.32
07-Aug-20	3.96
12-Aug-20	4.12
13-Aug-20	3.74
21-Aug-20	<0.1
22-Aug-20	<0.1
27-Aug-20	<0.1
28-Aug-20	<0.1
<b>Standard</b>	<b>180(hour)</b>

September 2020

Table:278

<b>Project</b>	<b>Jagannath OCP</b>	<b>Project</b>	<b>Jagannath OCP</b>	<b>Project</b>	<b>Ananta OCP</b>	<b>Project</b>	<b>Ananta OCP</b>
<b>Monitoring Station</b>	<b>Near NBVL Park</b>	<b>Monitoring Station</b>	<b>Near MDTP</b>	<b>Monitoring Station</b>	<b>Ananta Project Office</b>	<b>Monitoring Station</b>	<b>BCML Workshop</b>
<b>Date of sampling</b>	Nickel (Ni) ( $\text{ng}/\text{m}^3$ )	<b>Date of sampling</b>	Nickel (Ni) ( $\text{ng}/\text{m}^3$ )	<b>Date of sampling</b>	Nickel (Ni) ( $\text{ng}/\text{m}^3$ )	<b>Date of sampling</b>	Nickel (Ni) ( $\text{ng}/\text{m}^3$ )
05-Sep-2020	11.5	05-Sep-2020	<1.0	05-Sep-2020	7.42	05-Sep-2020	8.21
<b>Standard</b>	<b>20(Annual)</b>	<b>Standard</b>	<b>20(Annual)</b>	<b>Standard</b>	<b>20(Annual)</b>	<b>Standard</b>	<b>20(Annual)</b>

Table:279

<b>Project</b>	<b>Bharatpur OCP</b>	<b>Project</b>	<b>Bharatpur OCP</b>	<b>Project</b>	<b>Bharatpur OCP</b>	<b>Project</b>	<b>Bharatpur OCP</b>
<b>Monitoring Station</b>	<b>Near ETP/Workshop</b>	<b>Monitoring Station</b>	<b>North-West Point of the Mine</b>	<b>Monitoring Station</b>	<b>Near MGR-RLS of Bharatpur</b>	<b>Monitoring Station</b>	<b>Near Regional Store</b>
<b>Date of sampling</b>	Nickel (Ni) ( $\text{ng}/\text{m}^3$ )	<b>Date of sampling</b>	Nickel (Ni) ( $\text{ng}/\text{m}^3$ )	<b>Date of sampling</b>	Nickel (Ni) ( $\text{ng}/\text{m}^3$ )	<b>Date of sampling</b>	Nickel (Ni) ( $\text{ng}/\text{m}^3$ )
07-Sep-20	5.03	08-Sep-20	7.4	07-Sep-20	5.84	12-Sep-20	3.71
<b>Standard</b>	<b>20(Annual)</b>	<b>Standard</b>	<b>20(Annual)</b>	<b>Standard</b>	<b>20(Annual)</b>	<b>Standard</b>	<b>20(Annual)</b>

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Table:280

<i>Project</i>	<b>Chhendipada OCP</b>	<i>Project</i>	<b>Chhendipada OCP</b>	<i>Project</i>	<b>Chhendipada OCP</b>
<i>Monitoring Station</i>	<b>Near Site Office</b>	<i>Monitoring Station</i>	<b>Mamuraia Sahi</b>	<i>Monitoring Station</i>	<b>Dolamandap Chhak</b>
<i>Date of sampling</i>	Nickel (Ni)	<i>Date of sampling</i>	Nickel (Ni)	<i>Date of sampling</i>	Nickel (Ni)
	(ng/m <sup>3</sup> )		(ng/m <sup>3</sup> )		(ng/m <sup>3</sup> )
08-Sep-20	<1.0	07-Sep-20	<1.0	07-Sep-20	<1.0
<b>Standard</b>	<b>20(Annual)</b>	<b>Standard</b>	<b>20(Annual)</b>	<b>Standard</b>	<b>20(Annual)</b>

Table:281

<i>Project</i>	<b>Lingaraj OCP</b>	<i>Project</i>	<b>Lingaraj OCP</b>	<i>Project</i>	<b>Lingaraj OCP</b>	<i>Project</i>	<b>Lingaraj OCP</b>
<i>Monitoring Station</i>	<b>Near OB Dump no. 5 (South Side of the Mine)</b>	<i>Monitoring Station</i>	<b>Near OB Dump no. 10 (North Side of the Mine)</b>	<i>Monitoring Station</i>	<b>IWSS</b>	<i>Monitoring Station</i>	<b>Near CT Road (Lingaraj to Dera)</b>
<i>Date of sampling</i>	Nickel (Ni)	<i>Date of sampling</i>	Nickel (Ni)	<i>Date of sampling</i>	Nickel (Ni)	<i>Date of sampling</i>	Nickel (Ni)
	(ng/m <sup>3</sup> )		(ng/m <sup>3</sup> )		(ng/m <sup>3</sup> )		(ng/m <sup>3</sup> )
09-Sep-20	<1.0	09-Sep-20	<1.0	09-Sep-20	<1.0	09-Sep-20	<1.0
<b>Standard</b>	<b>20(Annual)</b>	<b>Standard</b>	<b>20(Annual)</b>	<b>Standard</b>	<b>20(Annual)</b>	<b>Standard</b>	<b>20(Annual)</b>

Table:282

<i>Project</i>	<b>Kaniha OCP</b>	<i>Project</i>	<b>Kaniha OCP</b>	<i>Project</i>	<b>Kaniha OCP</b>	<i>Project</i>	<b>Kaniha OCP</b>
<i>Monitoring Station</i>	<b>Project Office</b>	<i>Monitoring Station</i>	<b>New Time Office (Near Z-Patch)</b>	<i>Monitoring Station</i>	<b>Old Site Office</b>	<i>Monitoring Station</i>	<b>North East Side of Project Office</b>
<i>Date of sampling</i>	Nickel (Ni)	<i>Date of sampling</i>	Nickel (Ni)	<i>Date of sampling</i>	Nickel (Ni)	<i>Date of sampling</i>	Nickel (Ni)
	(ng/m <sup>3</sup> )		(ng/m <sup>3</sup> )		(ng/m <sup>3</sup> )		(ng/m <sup>3</sup> )
11-Sep-20	<1.0	11-Sep-20	<1.0	12-Sep-20	<1.0	12-Sep-20	<1.0
<b>Standard</b>	<b>20(Annual)</b>	<b>Standard</b>	<b>20(Annual)</b>	<b>Standard</b>	<b>20(Annual)</b>	<b>Standard</b>	<b>20(Annual)</b>

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Table:283

<i>Project</i>	<b>Kaniha OCP</b>	<i>Project</i>	<b>Kaniha OCP</b>	<i>Project</i>	<b>Kaniha OCP</b>
<i>Monitoring Station</i>	<b>Near Jatra Padia, Jarada</b>	<i>Monitoring Station</i>	<b>Near External OB Dump Jamania</b>	<i>Monitoring Station</i>	<b>West of Mine Quarry</b>
<i>Date of sampling</i>	Nickel (Ni)	<i>Date of sampling</i>	Nickel (Ni)	<i>Date of sampling</i>	Nickel (Ni)
	(ng/m <sup>3</sup> )		(ng/m <sup>3</sup> )		(ng/m <sup>3</sup> )
12-Sep-20	<1.0	12-Sep-20	<1.0	12-Sep-20	<1.0
<b>Standard</b>	<b>20(Annual)</b>	<b>Standard</b>	<b>20(Annual)</b>	<b>Standard</b>	<b>20(Annual)</b>

Table:284

<i>Project</i>	<b>Hingula OCP</b>	<i>Project</i>	<b>Hingula OCP</b>	<i>Project</i>	<b>Balram OCP</b>	<i>Project</i>	<b>Balram OCP</b>
<i>Monitoring Station</i>	<b>Time Office</b>	<i>Monitoring Station</i>	<b>South West Side of the Mine</b>	<i>Monitoring Station</i>	<b>South West of the Mine</b>	<i>Monitoring Station</i>	<b>Pump House near Outsourcing Working Patch &amp; Coal Transport Road</b>
<i>Date of sampling</i>	Nickel (Ni)	<i>Date of sampling</i>	Nickel (Ni)	<i>Date of sampling</i>	Nickel (Ni)	<i>Date of sampling</i>	Nickel (Ni)
	(ng/m <sup>3</sup> )		(ng/m <sup>3</sup> )		(ng/m <sup>3</sup> )		(ng/m <sup>3</sup> )
05-Sep-20	<1.0	10-Sep-20	<1.0	03-Sep-20	8.83	10-Sep-20	18.22
<b>Standard</b>	<b>20(Annual)</b>	<b>Standard</b>	<b>20(Annual)</b>	<b>Standard</b>	<b>20(Annual)</b>	<b>Standard</b>	<b>20(Annual)</b>

Table:285

<i>Project</i>	<b>Talcher</b>	<i>Project</i>	<b>Talcher</b>	<i>Project</i>	<b>Nandira</b>	<i>Project</i>	<b>Nandira</b>
<i>Monitoring Station</i>	<b>Near Canteen Talcher Colliery</b>	<i>Monitoring Station</i>	<b>Officer Club, Talcher Area</b>	<i>Monitoring Station</i>	<b>Project Office</b>	<i>Monitoring Station</i>	<b>Sub-station</b>
<i>Date of sampling</i>	Nickel (Ni)	<i>Date of sampling</i>	Nickel (Ni)	<i>Date of sampling</i>	Nickel (Ni)	<i>Date of sampling</i>	Nickel (Ni)
	(ng/m <sup>3</sup> )		(ng/m <sup>3</sup> )		(ng/m <sup>3</sup> )		(ng/m <sup>3</sup> )
03-Sep-20	<1.0	03-Sep-20	<1.0	04-Sep-20	<1.0	04-Sep-20	<1.0
<b>Standard</b>	<b>20(Annual)</b>	<b>Standard</b>	<b>20(Annual)</b>	<b>Standard</b>	<b>20(Annual)</b>	<b>Standard</b>	<b>20(Annual)</b>

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Table:286

<i>Project</i>	<b>Nandira</b>	<i>Project</i>	<b>Deulbera</b>	<i>Project</i>	<b>Mandapal Sand Mine</b>	<i>Project</i>	<b>Kakudi &amp; Kishoripal Sand Mine</b>	<i>Project</i>	<b>Handhidhua Colliery</b>
<i>Monitoring Station</i>	<b>HVDC Sub-station</b>	<i>Monitoring Station</i>	<b>Manager's Office</b>	<i>Monitoring Station</i>	<b>Near Mandapal Hospital</b>	<i>Monitoring Station</i>	<b>Near Kishoripal Village</b>	<i>Monitoring Station</i>	<b>Near Project Office</b>
<i>Date of sampling</i>	Nickel (Ni)	<i>Date of sampling</i>	Nickel (Ni)	<i>Date of sampling</i>	Nickel (Ni)	<i>Date of sampling</i>	Nickel (Ni)	<i>Date of sampling</i>	Nickel (Ni)
	(ng/m <sup>3</sup> )		(ng/m <sup>3</sup> )		(ng/m <sup>3</sup> )		(ng/m <sup>3</sup> )		(ng/m <sup>3</sup> )
05-Sep-20	<1.0	04-Sep-20	<1.0	04-Sep-20	<1.0	05-Sep-20	<1.0	04-Sep-20	<1.0
<b>Standard</b>	<b>20(Annual)</b>	<b>Standard</b>	<b>20(Annual)</b>	<b>Standard</b>	<b>20(Annual)</b>	<b>Standard</b>	<b>20(Annual)</b>	<b>Standard</b>	<b>20(Annual)</b>

October 2020

Table:287

<i>Project</i>	<b>Ananta OCP</b>	<i>Project</i>	<b>Jagannath OCP</b>	<i>Project</i>	<b>Ananta OCP</b>
<i>Monitoring Station</i>	<b>Ananta Vihar Colony</b>	<i>Monitoring Station</i>	<b>Ananta Vihar Colony (Reported Only)</b>	<i>Monitoring Station</i>	<b>Guthasahi Village</b>
<i>Date of sampling</i>	Ozone (O <sub>3</sub> )	<i>Date of sampling</i>	Ozone (O <sub>3</sub> )	<i>Date of sampling</i>	Ozone (O <sub>3</sub> )
	(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )
06-Oct-20	2.52	06-Oct-20	2.52	09-Oct-20	3.01
07-Oct-20	2.68	07-Oct-20	2.68	10-Oct-20	3.14
12-Oct-20	2.74	12-Oct-20	2.74	15-Oct-20	3.12
13-Oct-20	2.59	13-Oct-20	2.59	16-Oct-20	3.42
21-Oct-20	3.65	21-Oct-20	3.65	22-Oct-20	3.32
22-Oct-20	3.54	22-Oct-20	3.54	23-Oct-20	3.45
29-Oct-20	3.48	29-Oct-20	3.48	30-Oct-20	3.72
30-Oct-20	3.39	30-Oct-20	3.39	31-Oct-20	3.12
31-Oct-20	3.44	31-Oct-20	3.44		
<b>Standard</b>	<b>180(hour)</b>	<b>Standard</b>	<b>180(hour)</b>	<b>Standard</b>	<b>180(hour)</b>

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**JOB NO.750001**

Table:288

<i>Project</i>	<b>Bharatpur OCP</b>	<i>Project</i>	<b>Chhendipada OCP</b>	<i>Project</i>	<b>Bharatpur OCP</b>
<i>Monitoring Station</i>	<b>Near Joragadia</b>	<i>Monitoring Station</i>	<b>Near Fire Station</b>	<i>Monitoring Station</i>	<b>Natedi Village (Reported Only)</b>
<i>Date of sampling</i>	Ozone (O <sub>3</sub> )	<i>Date of sampling</i>	Ozone (O <sub>3</sub> )	<i>Date of sampling</i>	Ozone (O <sub>3</sub> )
	( $\mu\text{g}/\text{m}^3$ )		( $\mu\text{g}/\text{m}^3$ )		( $\mu\text{g}/\text{m}^3$ )
09-Oct-20	3.87	01-Oct-20	2.54	01-Oct-20	2.45
10-Oct-20	3.52	03-Oct-20	2.61	09-Oct-20	(Monitoring Station/Home was under Quarantine)
15-Oct-20	2.81	07-Oct-20	2.34	10-Oct-20	(Monitoring Station/Home was under Quarantine)
16-Oct-20	2.74	08-Oct-20	2.74	16-Oct-20	3.12
22-Oct-20	2.66	12-Oct-20	2.54	17-Oct-20	3.14
23-Oct-20	4.77	13-Oct-20	4.31	22-Oct-20	3.18
30-Oct-20	4.6	19-Oct-20	3.81	23-Oct-20	3.22
31-Oct-20	2.64	20-Oct-20	3.92	31-Oct-20	3.14
<b>Standard</b>	<b>180(hour)</b>	27-Oct-20	4.01	<b>Standard</b>	<b>180(hour)</b>
		28-Oct-20	3.76		
		31-Oct-20	3.54		
		<b>Standard</b>	<b>180(hour)</b>		

Table:289

<i>Project</i>	<b>Lingaraj OCP</b>
<i>Monitoring Station</i>	<b>Near Intake Complex</b>
<i>Date of sampling</i>	Ozone (O <sub>3</sub> )
	( $\mu\text{g}/\text{m}^3$ )
01-Oct-20	3.12
09-Oct-20	3.45
10-Oct-20	3.22
15-Oct-20	2.21
16-Oct-20	2.31
22-Oct-20	3.01
23-Oct-20	2.87
30-Oct-20	2.72
31-Oct-20	2.34
<b>Standard</b>	<b>180(hour)</b>

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**JOB NO.750001**

Table:290

<b>Project</b>	<b>Kaniha OCP</b>
<b>Monitoring Station</b>	<b>South of Proposed Quarry Limit of KOCP</b>
<b>Date of sampling</b>	Ozone (O <sub>3</sub> ) ( $\mu\text{g}/\text{m}^3$ )
05-Oct-20	4.01
06-Oct-20	4.21
12-Oct-20	4.32
13-Oct-20	4.28
19-Oct-20	3.12
20-Oct-20	3.34
27-Oct-20	3.27
<b>Standard</b>	<b>180(hour)</b>

Table:291

<b>Project</b>	<b>Hingula OCP</b>	<b>Project</b>	<b>Hingula OCP</b>	<b>Project</b>	<b>Balram OCP</b>	<b>Project</b>	<b>Balram OCP</b>
<b>Monitoring Station</b>	<b>North of the Mine, Purnapi, Kumunda Village</b>	<b>Monitoring Station</b>	<b>North East of the Mine, Solada Village</b>	<b>Monitoring Station</b>	<b>East of the Mine, Natedi Village</b>	<b>Monitoring Station</b>	<b>North West of the Mine, Solada Village (Reported Only)</b>
<b>Date of sampling</b>	Ozone (O <sub>3</sub> ) ( $\mu\text{g}/\text{m}^3$ )	<b>Date of sampling</b>	Ozone (O <sub>3</sub> ) ( $\mu\text{g}/\text{m}^3$ )	<b>Date of sampling</b>	Ozone (O <sub>3</sub> ) ( $\mu\text{g}/\text{m}^3$ )	<b>Date of sampling</b>	Ozone (O <sub>3</sub> ) ( $\mu\text{g}/\text{m}^3$ )
01-Oct-20	3.82	09-Oct-20	3.6	01-Oct-20	2.45	09-Oct-20	3.6
09-Oct-20	3.91	10-Oct-20	3.82	09-Oct-20	(Monitoring Station/Home was under Quarantine)	10-Oct-20	3.82
10-Oct-20	3.74	15-Oct-20	4.14	10-Oct-20	(Monitoring Station/Home was under Quarantine)	15-Oct-20	4.14
15-Oct-20	4.12	16-Oct-20	4.32	16-Oct-20	3.12	16-Oct-20	4.32
16-Oct-20	4.02	22-Oct-20	4.02	17-Oct-20	3.14	22-Oct-20	4.02
22-Oct-20	4.31	23-Oct-20	4.23	22-Oct-20	3.18	23-Oct-20	4.23
23-Oct-20	4.2	30-Oct-20	4.08	23-Oct-20	3.22	30-Oct-20	4.08
30-Oct-20	4.18	31-Oct-20	4.22	31-Oct-20	3.14	31-Oct-20	4.22
31-Oct-20	4.11	<b>Standard</b>	<b>180(hour)</b>	<b>Standard</b>	<b>180(hour)</b>	<b>Standard</b>	<b>180(hour)</b>
<b>Standard</b>	<b>180(hour)</b>						

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**JOB NO.750001**

Table:292

<b>Project</b>	<b>Nandira</b>
<b>Monitoring Station</b>	<b>Nandira Colony</b>
<b>Date of sampling</b>	Ozone (O <sub>3</sub> )
	( $\mu\text{g}/\text{m}^3$ )
06-Oct-20	3.45
07-Oct-20	3.61
14-Oct-20	3.74
15-Oct-20	2.18
19-Oct-20	2.42
20-Oct-20	2.3
27-Oct-20	2.37
28-Oct-20	2.4
<b>Standard</b>	<b>180(hour)</b>

November 2020

Table:293

<b>Project</b>	<b>Ananta OCP</b>	<b>Project</b>	<b>Jagannath OCP</b>	<b>Project</b>	<b>Ananta OCP</b>	<b>Project</b>	<b>Jagannath OCP</b>
<b>Monitoring Station</b>	<b>Ananta Vihar Colony</b>	<b>Monitoring Station</b>	<b>Ananta Vihar Colony (Reported Only)</b>	<b>Monitoring Station</b>	<b>Guthasahi Village</b>	<b>Monitoring Station</b>	<b>Officers Club JNC</b>
<b>Date of sampling</b>	Ozone (O <sub>3</sub> )	<b>Date of sampling</b>	Ozone (O <sub>3</sub> )	<b>Date of sampling</b>	Ozone (O <sub>3</sub> )	<b>Date of sampling</b>	Ozone (O <sub>3</sub> )
	( $\mu\text{g}/\text{m}^3$ )		( $\mu\text{g}/\text{m}^3$ )		( $\mu\text{g}/\text{m}^3$ )		( $\mu\text{g}/\text{m}^3$ )
05-Nov-20	4.01	05-Nov-20	4.01	06-Nov-20	2.01	07-Nov-20	2.31
06-Nov-20	4.08	06-Nov-20	4.08	07-Nov-20	3.12	08-Nov-20	2.38
11-Nov-20	4.27	11-Nov-20	4.27	12-Nov-20	3.24	13-Nov-20	2.4
12-Nov-20	4.2	12-Nov-20	4.2	13-Nov-20	3.29	14-Nov-20	2.45
19-Nov-20	2.82	19-Nov-20	2.82	20-Nov-20	2.72	21-Nov-20	3.21
20-Nov-20	2.89	20-Nov-20	2.89	21-Nov-20	2.51	22-Nov-20	3.42
25-Nov-20	2.74	25-Nov-20	2.74	26-Nov-20	2.34	27-Nov-20	3.5
26-Nov-20	2.89	26-Nov-20	2.89	27-Nov-20	2.14	28-Nov-20	3.22
<b>Standard</b>	<b>180(hour)</b>	<b>Standard</b>	<b>180(hour)</b>	<b>Standard</b>	<b>180(hour)</b>	<b>Standard</b>	<b>180(hour)</b>

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**JOB NO.750001**

Table:294

<i>Project</i>	<b>Bharatpur OCP</b>	<i>Project</i>	<b>Chhendipada OCP</b>	<i>Project</i>	<b>Bharatpur OCP</b>
<i>Monitoring Station</i>	<b>Near Joragadia</b>	<i>Monitoring Station</i>	<b>Near Fire Station</b>	<i>Monitoring Station</i>	<b>Natedi Village (Reported Only)</b>
<i>Date of sampling</i>	Ozone (O <sub>3</sub> )	<i>Date of sampling</i>	Ozone (O <sub>3</sub> )	<i>Date of sampling</i>	Ozone (O <sub>3</sub> )
	( $\mu\text{g}/\text{m}^3$ )		( $\mu\text{g}/\text{m}^3$ )		( $\mu\text{g}/\text{m}^3$ )
06-Nov-20	3.01	03-Nov-20	3.35	06-Nov-20	4.32
07-Nov-20	3.12	04-Nov-20	3.42	07-Nov-20	4.48
12-Nov-20	3.48	09-Nov-20	3.22	12-Nov-20	4.52
13-Nov-20	3.29	10-Nov-20	3.18	13-Nov-20	4.62
20-Nov-20	4.01	17-Nov-20	2.42	20-Nov-20	2.91
21-Nov-20	4.12	18-Nov-20	2.5	21-Nov-20	2.84
26-Nov-20	4.11	23-Nov-20	2.48	26-Nov-20	2.99
27-Nov-20	4.08	24-Nov-20	2.37	27-Nov-20	3.01
<b>Standard</b>	<b>180(hour)</b>	30-Nov-20	2.44	<b>Standard</b>	<b>180(hour)</b>
		<b>Standard</b>	<b>180(hour)</b>		

Table:295

<i>Project</i>	<b>Lingaraj OCP</b>
<i>Monitoring Station</i>	<b>Near Intake Complex</b>
<i>Date of sampling</i>	Ozone (O <sub>3</sub> )
	( $\mu\text{g}/\text{m}^3$ )
06-Nov-20	2.06
07-Nov-20	2.19
12-Nov-20	2.22
13-Nov-20	2.28
20-Nov-20	3.14
21-Nov-20	3.19
26-Nov-20	3.22
27-Nov-20	3.27
<b>Standard</b>	<b>180(hour)</b>

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**JOB NO.750001**

Table:296

<b>Project</b>	<b>Kaniha OCP</b>
<b>Monitoring Station</b>	<b>South of Proposed Quarry Limit of KOCP</b>
<b>Date of sampling</b>	Ozone (O <sub>3</sub> )
	( $\mu\text{g}/\text{m}^3$ )
03-Nov-20	4.01
04-Nov-20	4.27
09-Nov-20	4.38
10-Nov-20	4.44
17-Nov-20	2.02
18-Nov-20	2.11
23-Nov-20	2.21
24-Nov-20	2.4
30-Nov-20	2.37
<b>Standard</b>	<b>180(hour)</b>

Table:297

<b>Project</b>	<b>Hingula OCP</b>	<b>Project</b>	<b>Hingula OCP</b>	<b>Project</b>	<b>Balram OCP</b>	<b>Project</b>	<b>Balram OCP</b>
<b>Monitoring Station</b>	<b>North of the Mine, Purnapi, Kumunda Village</b>	<b>Monitoring Station</b>	<b>North East of the Mine, Solada Village</b>	<b>Monitoring Station</b>	<b>East of the Mine, Natedi Village</b>	<b>Monitoring Station</b>	<b>North West of the Mine, Solada Village (Reported Only)</b>
<b>Date of sampling</b>	Ozone (O <sub>3</sub> )	<b>Date of sampling</b>	Ozone (O <sub>3</sub> )	<b>Date of sampling</b>	Ozone (O <sub>3</sub> )	<b>Date of sampling</b>	Ozone (O <sub>3</sub> )
	( $\mu\text{g}/\text{m}^3$ )		( $\mu\text{g}/\text{m}^3$ )		( $\mu\text{g}/\text{m}^3$ )		( $\mu\text{g}/\text{m}^3$ )
06-Nov-20	3.82	06-Nov-20	2.22	06-Nov-20	4.32	06-Nov-20	2.22
07-Nov-20	3.79	07-Nov-20	2.08	07-Nov-20	4.48	07-Nov-20	2.08
12-Nov-20	3.88	12-Nov-20	2.01	12-Nov-20	4.52	12-Nov-20	2.01
13-Nov-20	3.79	13-Nov-20	2.11	13-Nov-20	4.62	13-Nov-20	2.11
20-Nov-20	4.08	20-Nov-20	3.87	20-Nov-20	2.91	20-Nov-20	3.87
21-Nov-20	4.14	21-Nov-20	3.7	21-Nov-20	2.84	21-Nov-20	3.7
26-Nov-20	4.17	26-Nov-20	3.58	26-Nov-20	2.99	26-Nov-20	3.58
27-Nov-20	4.08	27-Nov-20	3.8	27-Nov-20	3.01	27-Nov-20	3.8
28-Nov-20	4.21	<b>Standard</b>	<b>180(hour)</b>	<b>Standard</b>	<b>180(hour)</b>	<b>Standard</b>	<b>180(hour)</b>

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**JOB NO.750001**

Table:298

<b>Project</b>	<b>Nandira</b>
<b>Monitoring Station</b>	<b>Nandira Colony</b>
<b>Date of sampling</b>	Ozone (O <sub>3</sub> )
	( $\mu\text{g}/\text{m}^3$ )
03-Nov-20	3.87
04-Nov-20	3.8
09-Nov-20	3.78
10-Nov-20	3.82
17-Nov-20	4.01
18-Nov-20	4.12
23-Nov-20	4.32
24-Nov-20	4.28
30-Nov-20	4.52
<b>Standard</b>	<b>180(hour)</b>

December 2020

Table:299

<b>Project</b>	<b>Ananta OCP</b>	<b>Project</b>	<b>Jagannath OCP</b>	<b>Project</b>	<b>Ananta OCP</b>	<b>Project</b>	<b>Jagannath OCP</b>
<b>Monitoring Station</b>	<b>Ananta Vihar Colony</b>	<b>Monitoring Station</b>	<b>Ananta Vihar Colony (Reported Only)</b>	<b>Monitoring Station</b>	<b>Guthasahi Village</b>	<b>Monitoring Station</b>	<b>Officers Club JNC</b>
<b>Date of sampling</b>	Ozone (O <sub>3</sub> )	<b>Date of sampling</b>	Ozone (O <sub>3</sub> )	<b>Date of sampling</b>	Ozone (O <sub>3</sub> )	<b>Date of sampling</b>	Ozone (O <sub>3</sub> )
	( $\mu\text{g}/\text{m}^3$ )		( $\mu\text{g}/\text{m}^3$ )		( $\mu\text{g}/\text{m}^3$ )		( $\mu\text{g}/\text{m}^3$ )
01-Dec-20	4.28	01-Dec-20	4.28	05-Dec-20	2.74	04-Dec-20	3.48
02-Dec-20	4.12	02-Dec-20	4.12	06-Dec-20	2.82	05-Dec-20	3.64
10-Dec-20	4.14	10-Dec-20	4.14	11-Dec-20	2.89	12-Dec-20	3.55
11-Dec-20	4.22	11-Dec-20	4.22	12-Dec-20	2.78	13-Dec-20	3.68
15-Dec-20	4.01	15-Dec-20	4.01	18-Dec-20	2.01	19-Dec-20	3.81
16-Dec-20	4.14	16-Dec-20	4.14	19-Dec-20	2.12	20-Dec-20	3.94
24-Dec-20	4.22	24-Dec-20	4.22	25-Dec-20	2.24	26-Dec-20	4.01
25-Dec-20	4.13	25-Dec-20	4.13	26-Dec-20	2.18	27-Dec-20	3.78
28-Dec-20	4.01	28-Dec-20	4.01	30-Dec-20	2.29	<b>Standard</b>	<b>180(hour)</b>
<b>Standard</b>	<b>180(hour)</b>	<b>Standard</b>	<b>180(hour)</b>	<b>Standard</b>	<b>180(hour)</b>		

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**JOB NO.750001**

Table:300

<i>Project</i>	<b>Bharatpur OCP</b>	<i>Project</i>	<b>Chhendipada OCP</b>	<i>Project</i>	<b>Bharatpur OCP</b>
<i>Monitoring Station</i>	<b>Near Joragadia</b>	<i>Monitoring Station</i>	<b>Near Fire Station</b>	<i>Monitoring Station</i>	<b>Natedi Village (Reported Only)</b>
<i>Date of sampling</i>	Ozone (O <sub>3</sub> )	<i>Date of sampling</i>	Ozone (O <sub>3</sub> )	<i>Date of sampling</i>	Ozone (O <sub>3</sub> )
	(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )
05-Dec-20	3.89	01-Dec-20	2.89	04-Dec-20	4.01
06-Dec-20	3.91	09-Dec-20	2.91	05-Dec-20	4.12
11-Dec-20	3.74	10-Dec-20	2.99	11-Dec-20	4.2
12-Dec-20	3.84	14-Dec-20	2.08	12-Dec-20	4.17
18-Dec-20	3.86	15-Dec-20	2.12	18-Dec-20	2.38
19-Dec-20	3.8	22-Dec-20	2.19	19-Dec-20	2.41
25-Dec-20	3.91	23-Dec-20	2.21	25-Dec-20	2.46
26-Dec-20	3.78	28-Dec-20	2.17	26-Dec-20	2.5
30-Dec-20	3.86	29-Dec-20	2.17	30-Dec-20	2.44
<b>Standard</b>	<b>180(hour)</b>	<b>Standard</b>	<b>180(hour)</b>	<b>Standard</b>	<b>180(hour)</b>

Table:301

<i>Project</i>	<b>Lingaraj OCP</b>
<i>Monitoring Station</i>	<b>Near Intake Complex</b>
<i>Date of sampling</i>	Ozone (O <sub>3</sub> )
	(µg/m <sup>3</sup> )
05-Dec-20	3.42
06-Dec-20	3.53
11-Dec-20	3.62
12-Dec-20	3.72
18-Dec-20	3.74
19-Dec-20	3.6
25-Dec-20	3.59
26-Dec-20	3.81
30-Dec-20	3.89
31-Dec-20	3.66
<b>Standard</b>	<b>180(hour)</b>

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**JOB NO.750001**

Table:302

<b>Project</b>	<b>Kaniha OCP</b>
<b>Monitoring Station</b>	<b>South of Proposed Quarry Limit of KOCP</b>
<b>Date of sampling</b>	Ozone (O <sub>3</sub> )
	( $\mu\text{g}/\text{m}^3$ )
02-Dec-20	2.92
09-Dec-20	2.98
10-Dec-20	3.01
14-Dec-20	4.22
15-Dec-20	4.3
22-Dec-20	4.38
23-Dec-20	4.24
28-Dec-20	4.12
<b>Standard</b>	<b>180(hour)</b>

Table:303

<b>Project</b>	<b>Hingula OCP</b>	<b>Project</b>	<b>Hingula OCP</b>	<b>Project</b>	<b>Balram OCP</b>	<b>Project</b>	<b>Balram OCP</b>
<b>Monitoring Station</b>	<b>North of the Mine, Purnapi, Kumunda Village</b>	<b>Monitoring Station</b>	<b>North East of the Mine, Solada Village</b>	<b>Monitoring Station</b>	<b>East of the Mine, Natedi Village</b>	<b>Monitoring Station</b>	<b>North West of the Mine, Solada Village (Reported Only)</b>
<b>Date of sampling</b>	Ozone (O <sub>3</sub> )	<b>Date of sampling</b>	Ozone (O <sub>3</sub> )	<b>Date of sampling</b>	Ozone (O <sub>3</sub> )	<b>Date of sampling</b>	Ozone (O <sub>3</sub> )
	( $\mu\text{g}/\text{m}^3$ )		( $\mu\text{g}/\text{m}^3$ )		( $\mu\text{g}/\text{m}^3$ )		( $\mu\text{g}/\text{m}^3$ )
04-Dec-20	4.01	05-Dec-20	3.42	04-Dec-20	4.01	05-Dec-20	3.42
05-Dec-20	4.32	06-Dec-20	3.54	05-Dec-20	4.12	06-Dec-20	3.54
11-Dec-20	4.21	11-Dec-20	3.48	11-Dec-20	4.2	11-Dec-20	3.48
12-Dec-20	24.18	12-Dec-20	3.4	12-Dec-20	4.17	12-Dec-20	3.4
18-Dec-20	3.56	18-Dec-20	4.12	18-Dec-20	2.38	18-Dec-20	4.12
19-Dec-20	3.48	19-Dec-20	4.22	19-Dec-20	2.41	19-Dec-20	4.22
25-Dec-20	3.6	25-Dec-20	4.34	25-Dec-20	2.46	25-Dec-20	4.34
26-Dec-20	3.58	26-Dec-20	4.28	26-Dec-20	2.5	26-Dec-20	4.28
30-Dec-20	3.5	<b>Standard</b>	<b>180(hour)</b>	30-Dec-20	2.44	<b>Standard</b>	<b>180(hour)</b>
31-Dec-20	2.59			<b>Standard</b>	<b>180(hour)</b>		

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**JOB NO.750001**

Table:303

<b>Project</b>	<b>Nandira</b>
<b>Monitoring Station</b>	<b>Nandira Colony</b>
<b>Date of sampling</b>	Ozone (O <sub>3</sub> )
	( $\mu\text{g}/\text{m}^3$ )
01-Dec-20	3.86
08-Dec-20	3.94
09-Dec-20	3.74
14-Dec-20	3.86
15-Dec-20	3.78
22-Dec-20	3.8
23-Dec-20	3.88
28-Dec-20	3.68
29-Dec-20	4.36
<b>Standard</b>	<b>180(hour)</b>

February 2021

Table:304

<b>Project</b>	<b>Ananta OCP</b>	<b>Project</b>	<b>Jagannath OCP</b>	<b>Project</b>	<b>Ananta OCP</b>	<b>Project</b>	<b>Jagannath OCP</b>
<b>Monitoring Station</b>	<b>Ananta Vihar Colony</b>	<b>Monitoring Station</b>	<b>Ananta Vihar Colony (Reported Only)</b>	<b>Monitoring Station</b>	<b>Guthasahi Village</b>	<b>Monitoring Station</b>	<b>Officers Club JNC</b>
<b>Date of sampling</b>	Ozone (O <sub>3</sub> )	<b>Date of sampling</b>	Ozone (O <sub>3</sub> )	<b>Date of sampling</b>	Ozone (O <sub>3</sub> )	<b>Date of sampling</b>	Ozone (O <sub>3</sub> )
	( $\mu\text{g}/\text{m}^3$ )		( $\mu\text{g}/\text{m}^3$ )		( $\mu\text{g}/\text{m}^3$ )		( $\mu\text{g}/\text{m}^3$ )
01 February 2021	3.64	01 February 2021	3.64	05-Feb-21	Power failure	06-Feb-21	Power failure
02 February 2021	3.74	02 February 2021	3.74	06-Feb-21	4.01	07-Feb-21	
09 February 2021	3.86	09 February 2021	3.86	12-Feb-21	Power failure	12-Feb-21	3.49
10 February 2021	3.4	10 February 2021	3.4	13-Feb-21		13-Feb-21	3.72
16 February 2021	4.01	16 February 2021	4.01	20-Feb-21	3.86	20-Feb-21	2.48
17 February 2021	4.12	17 February 2021	4.12	21-Feb-21	3.8	21-Feb-21	2.56
23 February 2021	4.18	23 February 2021	4.18	25-Feb-21	3.78	27-Feb-21	2.6
24 February 2021	4.22	24 February 2021	4.22	26-Feb-21	3.89	28-Feb-21	2.64
<b>Standard</b>	<b>180(hour)</b>	<b>Standard</b>	<b>180(hour)</b>	<b>Standard</b>	<b>180(hour)</b>	<b>Standard</b>	<b>180(hour)</b>

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Table:305

<i>Project</i>	<b>Bharatpur OCP</b>	<i>Project</i>	<b>Chhendipada OCP</b>	<i>Project</i>	<b>Bharatpur OCP</b>
<i>Monitoring Station</i>	<b>Near Joragadia</b>	<i>Monitoring Station</i>	<b>Near Fire Station</b>	<i>Monitoring Station</i>	<b>Natedi Village (Reported Only)</b>
<i>Date of sampling</i>	Ozone (O <sub>3</sub> ) ( $\mu\text{g}/\text{m}^3$ )	<i>Date of sampling</i>	Ozone (O <sub>3</sub> ) ( $\mu\text{g}/\text{m}^3$ )	<i>Date of sampling</i>	Ozone (O <sub>3</sub> ) ( $\mu\text{g}/\text{m}^3$ )
05-Feb-2021	3.59	02-Feb-2021	3.81	05-Feb-2021	3.54
06-Feb-2021	3.56	03-Feb-2021	Power Failure	06-Feb-2021	3.84
12-Feb-2021	3.54	08-Feb-2021	3.66	12-Feb-2021	3.58
13-Feb-2021	3.67	09-Feb-2021	4.12	13-Feb-2021	3.79
20-Feb-2021	3.44	17-Feb-2021	2.8	20-Feb-2021	3.42
21-Feb-2021	3.36	18-Feb-2021	2.8	21-Feb-2021	3.54
25-Feb-2021	3.3	22-Feb-2021	2.87	25-Feb-2021	3.48
26-Feb-2021	3.48	23-Feb-2021	2.79	26-Feb-2021	3.61
<b>Standard</b>	<b>180(hour)</b>	<b>Standard</b>	<b>180(hour)</b>	<b>Standard</b>	<b>180(hour)</b>

Table:306

<i>Project</i>	<b>Lingaraj OCP</b>
<i>Monitoring Station</i>	<b>Near Intake Complex</b>
<i>Date of sampling</i>	Ozone (O <sub>3</sub> ) ( $\mu\text{g}/\text{m}^3$ )
05-Feb-2021	3.79
06-Feb-2021	3.62
10-Feb-2021	3.71
11-Feb-2021	3.98
20-Feb-2021	4.12
21-Feb-2021	4.24
24-Feb-2021	4.18
25-Feb-2021	4.2
<b>Standard</b>	<b>180(hour)</b>

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Table:307

<b>Project</b>	<b>Kaniha OCP</b>
<b>Monitoring Station</b>	<b>South of Proposed Quarry Limit of KOCP</b>
<b>Date of sampling</b>	Ozone (O <sub>3</sub> )
	(µg/m <sup>3</sup> )
01-Feb-2021	3.48
02-Feb-2021	3.76
08-Feb-2021	3.45
09-Feb-2021	3.92
16-Feb-2021	3.48
17-Feb-2021	3.56
22-Feb-2021	3.5
23-Feb-2021	3.58
<b>Standard</b>	<b>180(hour)</b>

Table:308

<b>Project</b>	<b>Hingula OCP</b>	<b>Project</b>	<b>Hingula OCP</b>	<b>Project</b>	<b>Balram OCP</b>	<b>Project</b>	<b>Balram OCP</b>
<b>Monitoring Station</b>	<b>North of the Mine, Purnapi, Kumunda Village</b>	<b>Monitoring Station</b>	<b>North East of the Mine, Solada Village</b>	<b>Monitoring Station</b>	<b>East of the Mine, Natedi Village</b>	<b>Monitoring Station</b>	<b>North West of the Mine, Solada Village (Reported Only)</b>
<b>Date of sampling</b>	Ozone (O <sub>3</sub> )	<b>Date of sampling</b>	Ozone (O <sub>3</sub> )	<b>Date of sampling</b>	Ozone (O <sub>3</sub> )	<b>Date of sampling</b>	Ozone (O <sub>3</sub> )
	(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )		(µg/m <sup>3</sup> )
05-Feb-2021	3.68	04-Feb-2021	4.01	05-Feb-2021	3.54	04-Feb-2021	4.01
06-Feb-2021	3.71	05-Feb-2021	Power Failure	06-Feb-2021	3.84	05-Feb-	Power Failure
10-Feb-2021	3.88	06-Feb-2021	3.77	12-Feb-2021	3.58	06-Feb-2021	3.77
11-Feb-2021	4.12	12-Feb-2021	3.82	13-Feb-2021	3.79	12-Feb-	3.82
20-Feb-2021	2.12	13-Feb-2021	3.54	20-Feb-2021	3.42	13-Feb-2021	3.54
21-Feb-2021	2.19	20-Feb-2021	2.28	21-Feb-2021	3.54	20-Feb-2021	2.28
24-Feb-2021	2.24	21-Feb-2021	2.36	25-Feb-2021	3.48	21-Feb-2021	2.36
25-Feb-2021	2.3	25-Feb-2021	2.24	26-Feb-2021	3.61	25-Feb-2021	2.24
<b>Standard</b>	<b>180(hour)</b>	26-Feb-2021	2.18	<b>Standard</b>	<b>180(hour)</b>	26-Feb-2021	2.18
		<b>Standard</b>	<b>180(hour)</b>			<b>Standard</b>	<b>180(hour)</b>

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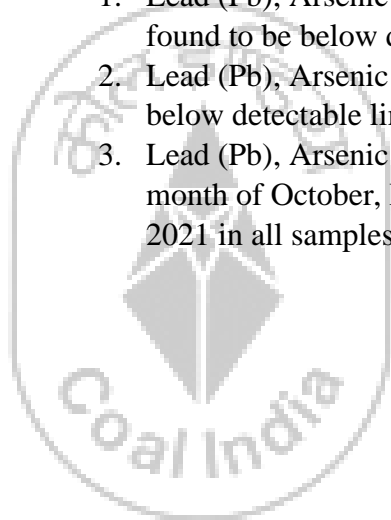
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Table:309

<b>Project</b>	<b>Nandira</b>
<b>Monitoring Station</b>	<b>Nandira Colony</b>
<b>Date of sampling</b>	Ozone (O <sub>3</sub> ) ( $\mu\text{g}/\text{m}^3$ )
03-Feb-2021	3.92
04-Feb-2021	3.98
10-Feb-2021	3.68
11-Feb-2021	3.89
18-Feb-2021	2.91
19-Feb-2021	2.86
24-Feb-2021	2.99
25-Feb-2021	3.02
<b>Standard</b>	<b>180(hour)</b>

## Observations:

1. Lead (Pb), Arsenic (As), Nickel (Ni), Chromium (Cr) & Cadmium (Cd) were found to be below detectable limits for month of June, July & August 2021
2. Lead (Pb), Arsenic (As), Chromium (Cr) & Cadmium (Cd) were found to be below detectable limits for month of September 2020
3. Lead (Pb), Arsenic (As), Nickel was found to be below detectable limits for month of October, November, December 2020, January, February & March 2021 in all samples



*empdi*  
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#### 4. RECOMENDATIONS

Even though the Air Quality has been observed to be close to the satisfactory limit, following is recommended to employ adequate pollution control measures to further improve the air quality in the region:

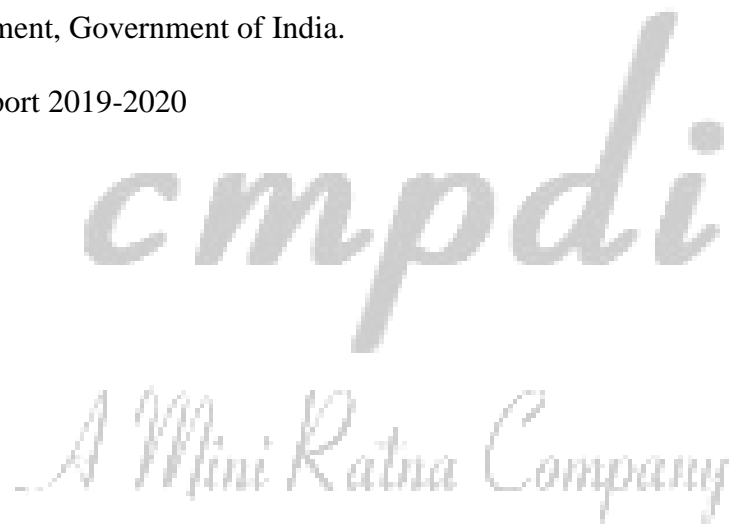
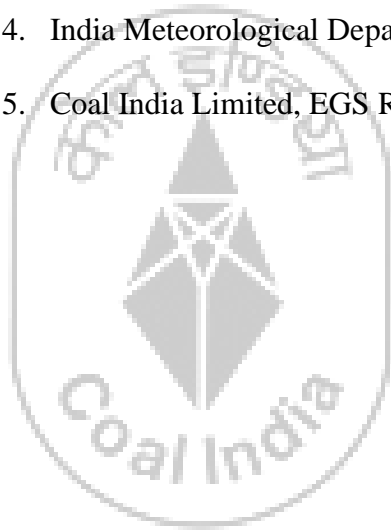
1. Increased use of blast-less mining technology, eliminating dust generating operations like drilling, blasting & crushing.
2. Major thrust should be on transportation of coal through development of Rail, Belt, & Rapid Loading System infrastructure.
3. Environmental Control Measures such as installation of Fixed Sprinkler at CT road and deployment of Fog Canon (both fixed and mobile) at various site must be increased.
4. Frequency of Mechanical Road sweeping in and around residential areas and office premises must be increased.
5. Water tanks with retrofitted kits for water sprinkling must be deployed in the haul roads for effective dust control, avoiding sludge & mud formation.
6. Vigorous plantation of draught tolerant fruit bearing trees such as Pomegranate, Figs, Guava must be undertaken to not only provide revival of biodiversity in the region but also help in aiding India's Food Security.
7. Vertical gardening near railway siding, office premises and workshop must be taken up to increases aesthetics of the area.
8. Sustainability of water resource & its source is at most important thus adding of lime wherever the source is acidic with necessary step for removal of precipitate and addition of Aluminium Sulphate as coagulant to aid in settling of suspended particulate matter.

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2. According to Geological Survey of India, the Talcher Coalfield has reserves of 51 billion tonnes, the highest in India. - "Coal Resources of India (As on 1.1.2004)" (PDF). *Coal Wing, Geological Survey of India, Kolkata. Archived from the original (PDF) on 27 March 2012. Retrieved 30 November 2012.*
3. Observed Rainfall Variability and Changes Over Odisha State Report 2020, IMD
4. India Meteorological Department, Government of India.
5. Coal India Limited, EGS Report 2019-2020



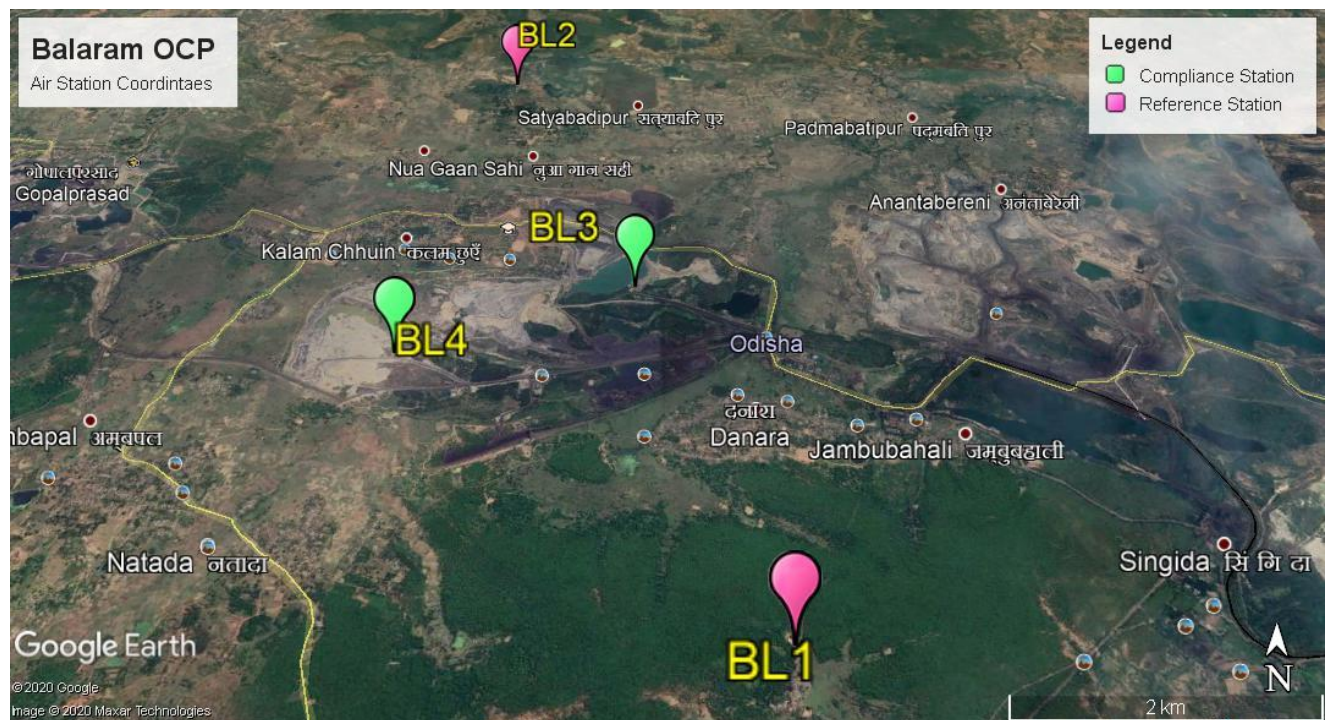
## 6 ANNEXURES



Name of the Project	Name of the stations	PID	Latitude	Longitude
Ananta OCP	Ananta Project Office (Compliance Station)	AN1	20.943872 N	85.164196 E
	Ananta Vihar Colony (Reference Station)	AN2	20.931340 N	85.182714 E
	BCML Workshop (Compliance Station)	AN3	20.985041 N	85.150723 E
	Guthasahi Village (Reference Station)	AN4	21.001613 N	85.10564 E

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Name of the Project	Name of the stations	PID	Latitude	Longitude
Balram OCP	East of the Mine Natedi Village(Reference Station)	BL1	20.926964 N	85.098970 E
	North West of the Mine, Solda Village(Reference Station)	BL2	20.984923 N	85.075409 E
	Pump House Near Outsourcing Working Pach & Coal TR (Compliance Station)	BL3	20.95797 N	85.087929 E
	South West of the Mine (Compliance Station)	BL4	20.95059 N	85.069176 E

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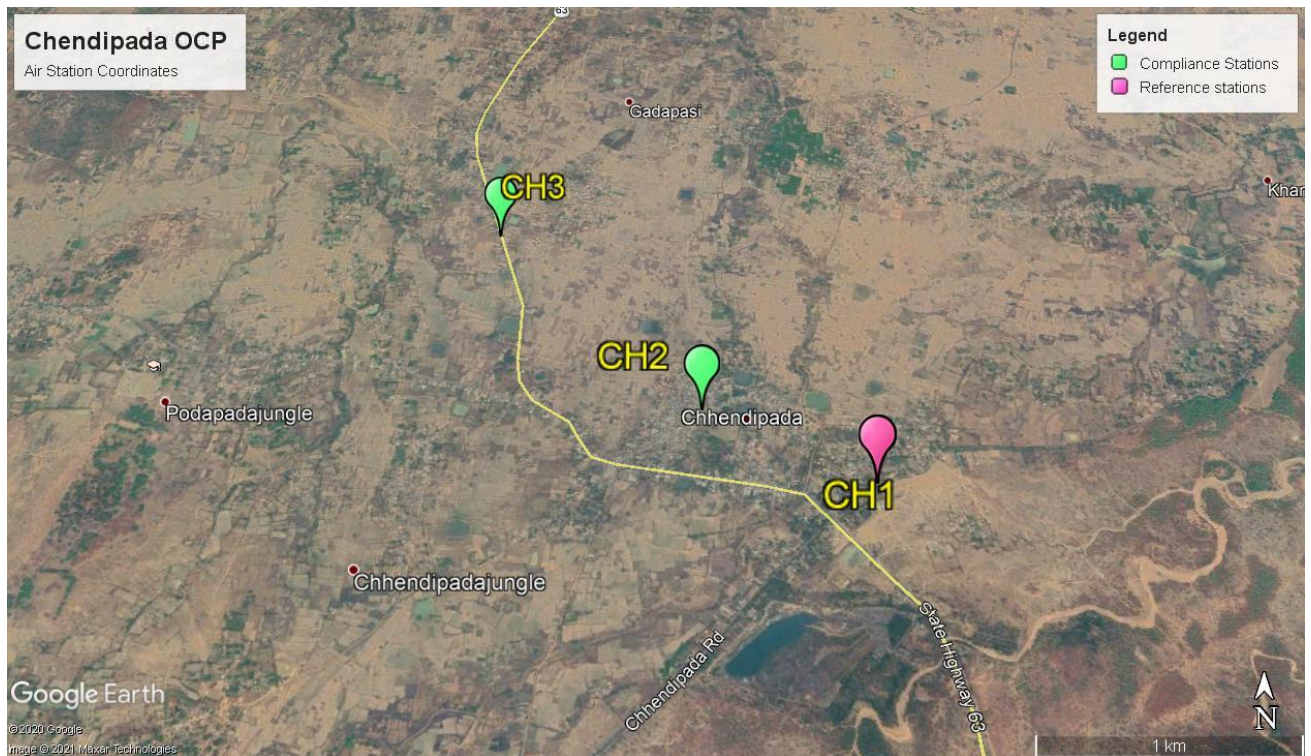
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Name of the Project	Name of the stations	PID	Latitude	Longitude
Bharatpur OCP	North-West Point of the Mine (Compliance Station)	BH1	20.965408 N	85.097906 E
	Near Joragdia Village (Reference Station)	BH2	20.980278 N	85.111389 E
	Near ETP/Workshop (Compliance Station)	BH3	20.944253 N	85.107819 E
	Near Near MGR-RLS of Bharatpur(Compliance Station)	BH4	20.909742 N	85.110967 E
	Near Regional Store (Compliance Station)	BH5	20.964811 N	85.131083 E

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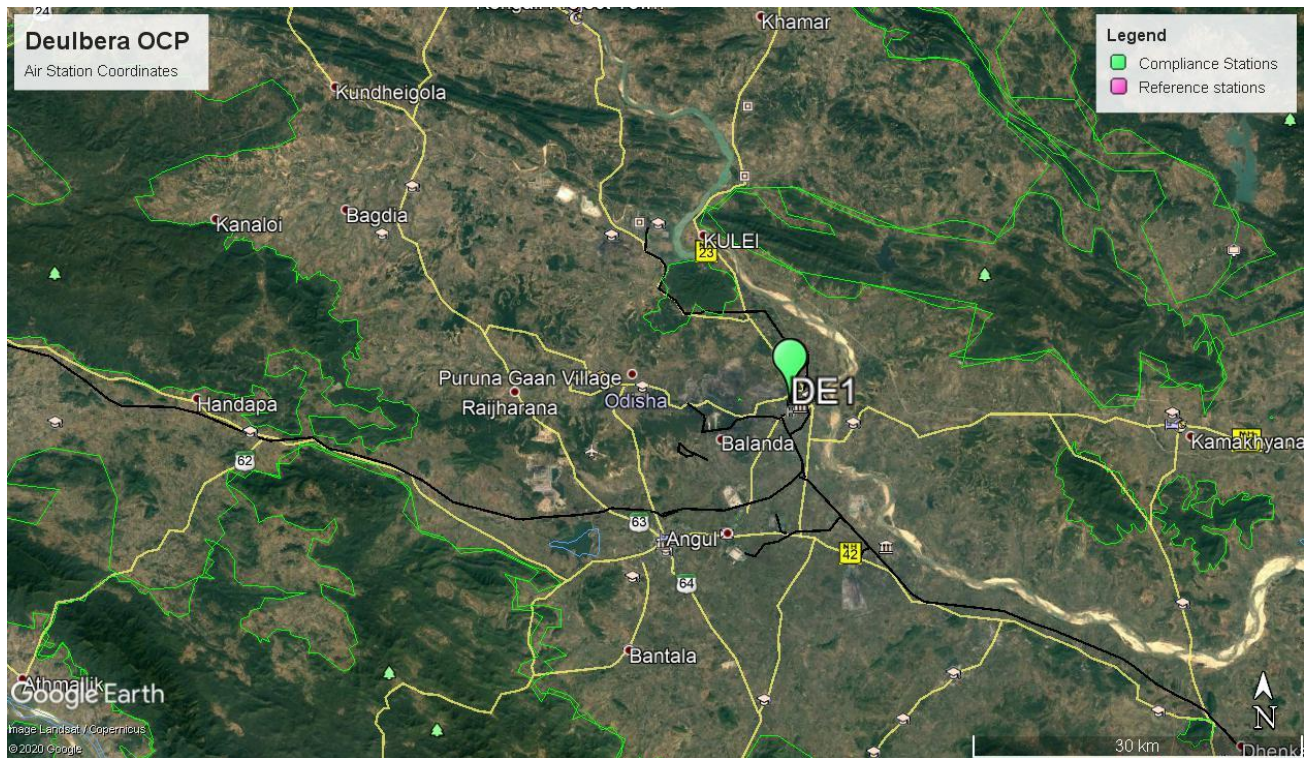
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Name of the Project	Name of the stations	PID	Latitude	Longitude
Chhendipada OCP	Near Site Office (Reference Station)	CH1	21.082474 N	84.880219 E
	Dolamandap Chhak (Compliance Station)	CH2	21.085759 N	84.873128 E
	Mamuraia Sahi (Compliance Station)	CH3	21.094714 N	84.863862 E

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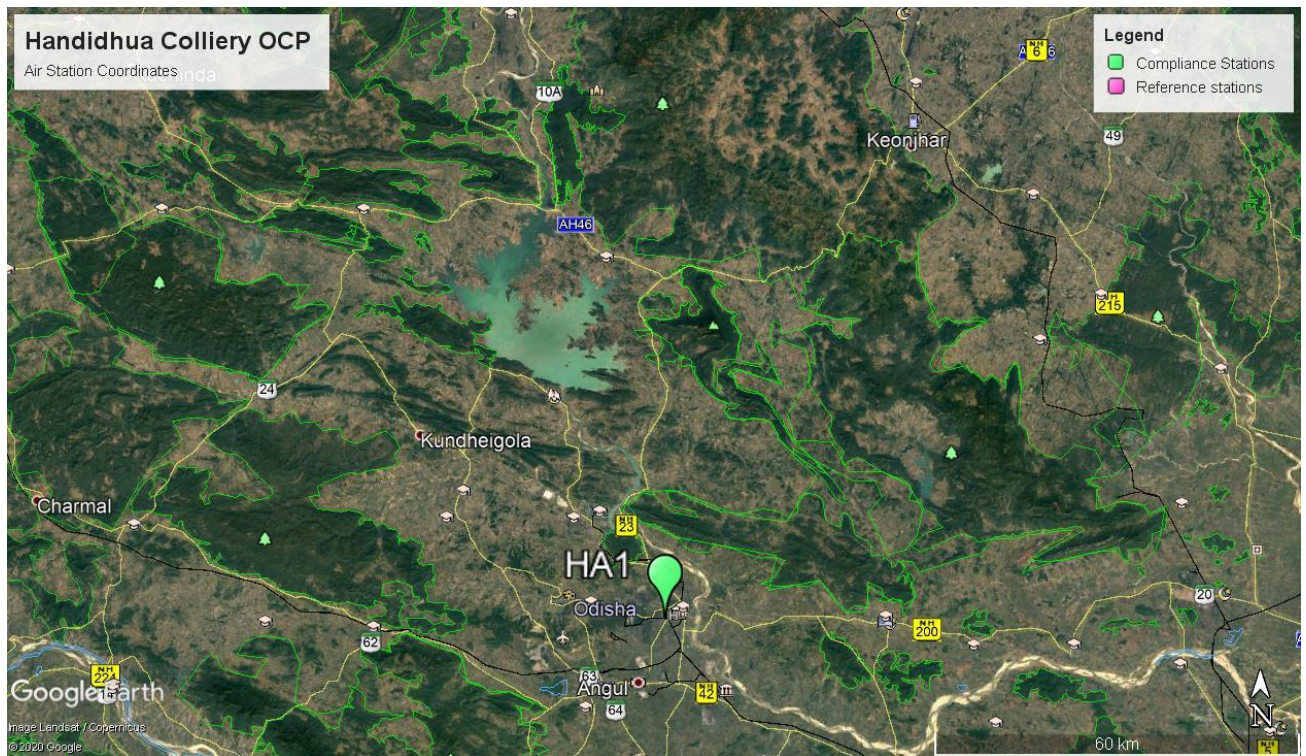
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Name of the Project	Name of the stations	PID	Latitude	Longitude
Deulbera Colliery U/G	Manager's Office (Compliance Station)	DE1	20.951201 N	85.205400 E

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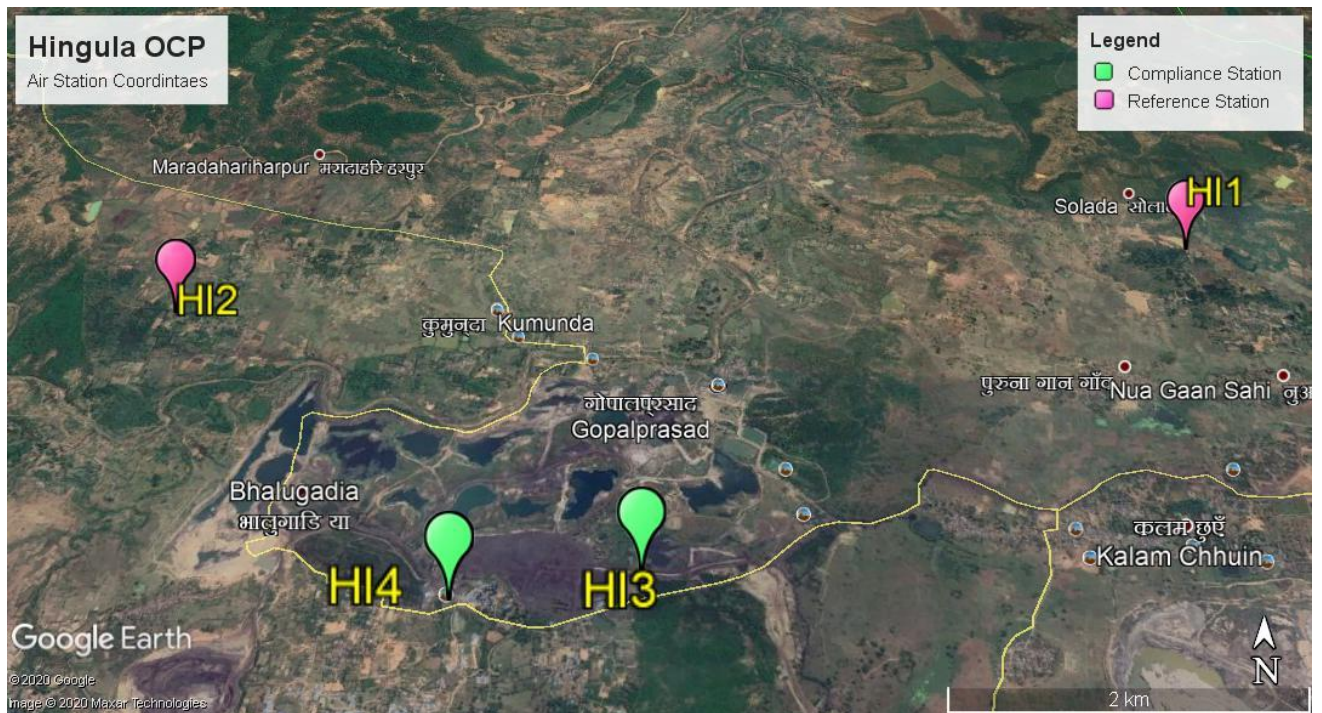
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Name of the Project	Name of the stations	PID	Latitude	Longitude
Handidhua Colliery	Near Project Office (Compliance Station)	HA1	20.939391 N	85.192826 E

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Name of the Project	Name of the stations	PID	Latitude	Longitude
Hingula OCP	North East of the Mine, Solda Village(Reference Station)	HI1	20.984923 N	85.075409 E
	North of the Mine,Purnapi,Kumunda Village(Reference Sta)	HI2	20.978775 N	85.003685 E
	South-West Side of Mine (Compliance Station)	HI3	20.959681 N	85.036171 E
	Time Office (Compliance Station)	HI4	20.958112 N	85.025339 E

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Name of the Project	Name of the stations	PID	Latitude	Longitude
Jagannath OCP	Near MDTP (Compliance Stasion)	JA1	20.946350 N	85.155350 E
	Near NBVL Park (Compliance Station)	JA2	20.936550 N	85.145083 E
	Office Club Jagannath Colony (Reference Station)	JA3	20.922871 N	85.141922 E

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Name of the Project	Name of the stations	PID	Latitude	Longitude
Kaniha OCP	Near External OB Dump Jamania (Compliance Station)	KA1	21.069166 N	85.039166 E
	Near Jatra Padia Jarada (Compliance Station)	KA2	21.083525 N	85.053058 E
	New Time Office-Near Z-patch (Compliance Station)	KA3	21.078197 N	85.023839 E
	North East Side of Project Office(Compliance S.)	KA4	21.088430 N	85.061766 E
	Old Site Office (Compliance Station)	KA5	21.087266 N	85.047004 E
	Project Office (Compliance Station)	KA6	20.143536 N	85.101694 E
	West Of Mine Quarry (Compliance Station)	KA7	21.083443 N	85.053058 E
	South Of Proposed Quarry Limit of KOCP(Reference S	KA8	21.064642 N	85.047524 E

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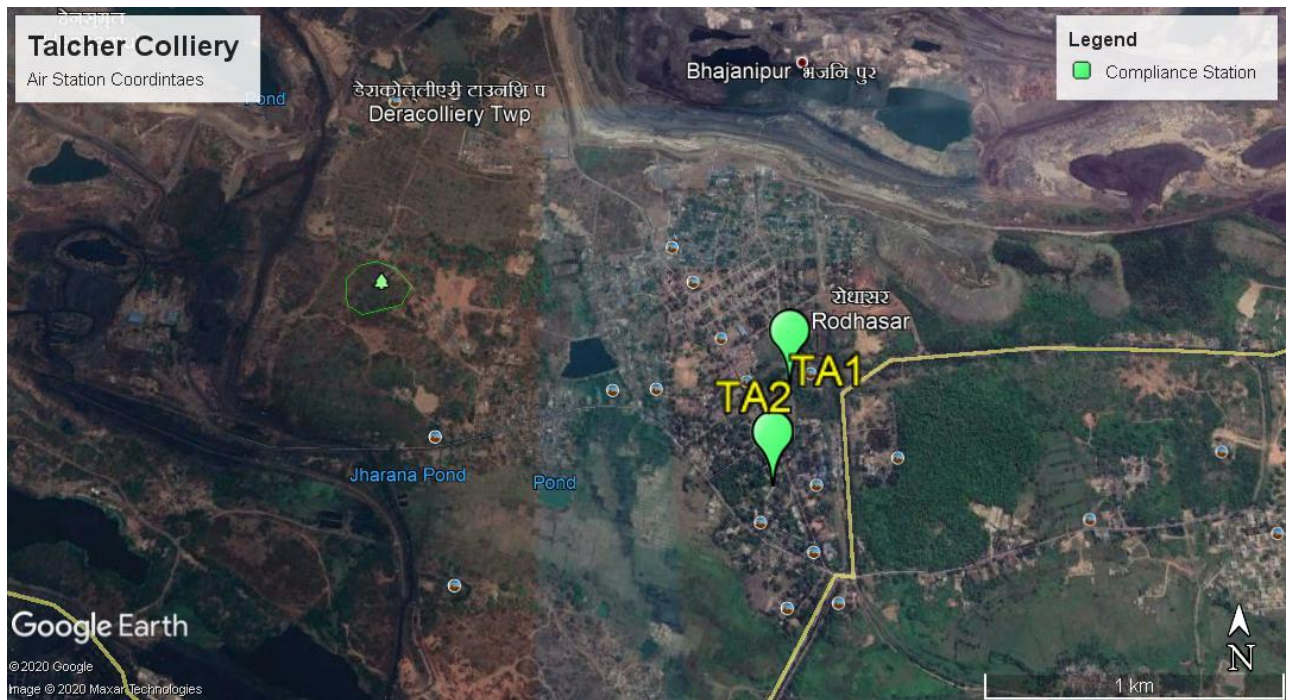
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Name of the Project	Name of the stations	PID	Latitude	Longitude
Nandira Colliery U/G	HVDC Sub- Station (Compliance Station)	NA1	20.929 N,	85.1266 E
	Project Office (Compliance Station)	NA2	20.927950 N,	85.122780 E
	Sub Station (Compliance Station)	NA3	20.927890 N	85.122640 E
	Nandira Colony (Reference Station)	NA4	20.923780 N	85.126240 E

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Name of the Project	Name of the stations	PID	Latitude	Longitude
Talcher Colliery OCP	Near Canteen Talcher Colliery (Compliance Station)	TA1	20.950174 N	85.175068 E
	Officers' Club, Talcher Area (Compliance Station)	TA2	20.946983 N	85.174428 E

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Name of the Project	Name of the stations	PID	Latitude	Longitude
Lingaraj OCP	Near Intake Complex (Reference Station)	LNG 1	20.96228 N	85.236176 E
	IWSS (Compliance Station)	LNG 2	20.955794 N	85.210071 E
	Near C.T. Road (Lingaraj to Dera)(Compliance S.)	LNG 3	20.94906 N	85.177543 E
	Near OB Dump No. 10 (Near North Side of Mine)	LNG 4	20.968183 N	85.196815 E
	Near OB Dump No. 5 (South Side of the Mine)(C.S.)	LNG 5	20.948635 N	85.189204 E

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