

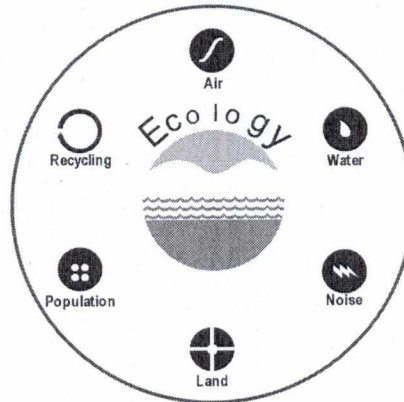
Job No.750001

**Environmental Monitoring Report  
Of  
Jagannath Area  
For  
April- 2021**

**Talcher Coalfield**



**Mahanadi Coalfields Limited**



***cmpdi***

*A Mini Ratna Company*

**Central Mine Planning & Design Institute Ltd.**  
(A Subsidiary of Coal India Ltd.)

**Regional Institute-VII, Samantpuri, P.O : RRL, Bhubaneswar-751013 (Odisha)**  
[Assistance from Environment Division, CMPDI(HQs), Ranchi ]

*The test report shall not be reproduced in part or full without written approval of the competent authority*



**cmpdi**

*A Mine Safety Company*

**Test Report**

**AMBIENT AIR QUALITY DATA**

**Area :**

**Jagannath**

**(Compliance Station)**

**Project :**

**Ananta OCP**

**(conc. in µg/cu.m.)**

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
07-Apr-21	Near NBVL Station (Reported only)	Strike	Strike	Strike	Strike	Strike	CHP, CT Road	About 600m
07-Apr-21	Central Nursery	Strike	Strike	Strike	Strike	Strike	Open-Cast Mine	Less than 500m
07-Apr-21	North-East of Mine	Strike	Strike	Strike	Strike	Strike	Open-Cast Mine	Less than 500m
21-Apr-21	Near NBVL Station (Reported only)	268	165	63	18.41	35.72	CHP, CT Road	About 600m
22-Apr-21	Central Nursery	181	105	42	16.52	32.49	Open-Cast Mine	Less than 500m
22-Apr-21	North-East of Mine	325	188	57	18.27	35.16	Open-Cast Mine	Less than 500m

**Project :**

**Jagannath OCP**

**(conc. in µg/cu.m.)**

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
07-Apr-21	Central Nursery (Reported Only)	Strike	Strike	Strike	Strike	Strike	Open-cast	Less than 500m
07-Apr-21	Near NBVL Station	Strike	Strike	Strike	Strike	Strike	CHP, CT Road	About 600m
07-Apr-21	Near MDTP	Strike	Strike	Strike	Strike	Strike	Railway Siding CHP	About 800m
21-Apr-21	Near NBVL Station	268	165	63	18.41	35.72	CHP, CT Road	About 600m
21-Apr-21	Near MDTP	383	229	79	19.69	36.54	Railway Siding CHP	About 800m
22-Apr-21	Central Nursery (Reported Only)	181	105	42	16.52	32.49	Open-cast	Less than 500m

*Signature*  
**O. I. C.**  
**Env. Lab**  
**CMPDI, RI-VII**  
**Bhubaneswar**

*Signature*  
**Authorised Signatory**  
**CMPDI, RI-VII, LAB**  
**BHUBANESWAR**

MoEF Standards Notification dated 25th September 2000	600	300		120	120
---	-----	-----	--	-----	-----



**cmpdi**

*A Mini Katar Company*

Test Report

**AMBIENT AIR QUALITY DATA**

Area :

**Jagannath**

**(Reference Station)**

Project :

**Jagannath OCP**

(conc. in µg/cu.m.)

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
05-Apr-21	CWS Colony, Meeti	192	78	48	24.81	42.38	Mining Activity	About 1500 m
06-Apr-21	CWS Colony, Meeti	204	89	51	26.34	43.65	Mining Activity	About 1500 m
12-Apr-21	CWS Colony, Meeti	173	73	45	22.67	41.43	Mining Activity	About 1500 m
13-Apr-21	CWS Colony, Meeti	203	86	47	25.68	42.91	Mining Activity	About 1500 m
19-Apr-21	CWS Colony, Meeti	175	69	40	22.75	40.91	Mining Activity	About 1500 m
20-Apr-21	CWS Colony, Meeti	204	83	48	22.16	40.58	Mining Activity	About 1500 m

*Signature*

O. I. C.  
Env. Lab  
CMPDI, RI-VII  
Bhubaneswar

*Signature*  
Authorised Signatory  
CMPDI, RI-VII, LAB  
BHUBANESWAR



**cmpdi**

*A Mini Kataria Company*

Test Report

**AMBIENT AIR QUALITY DATA**

Area :

**Jagannath**

**(Reference Station)**

Project :

**Ananta OCP**

(conc. in  $\mu\text{g}/\text{cu.m.}$ )

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
09-Apr-21	Guthasahi Village	219	92	53	27.69	44.27	Active Mining, Ananta OCP	About 3000m
10-Apr-21	Guthasahi Village	204	90	48	26.46	43.14	Active Mining, Ananta OCP	About 3000m
16-Apr-21	Guthasahi Village	135	59	39	22.81	41.27	Active Mining, Ananta OCP	About 3000m
17-Apr-21	Guthasahi Village	153	71	46	22.97	41.81	Active Mining, Ananta OCP	About 3000m
22-Apr-21	Guthasahi Village	144	76	42	21.49	42.16	Active Mining, Ananta OCP	About 3000m
24-Apr-21	Guthasahi Village	168	89	48	23.64	42.53	Active Mining, Ananta OCP	About 3000m
30-Apr-21	Guthasahi Village	167	80	40	23.38	42.79	Active Mining, Ananta OCP	About 3000m

Signature

O.P.S.  
Env. Lab  
CMPDI, RI-VII  
Bhubaneswar

Signature  
Authorised Signatory  
CMPDI, RI-VII, LAB  
BHUBANESWAR



**cmpdi**

*A Mini Ratna Company*

**AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)**

**Area: Jagannath**

<b>Project</b>	<b>Jagannath OCP</b>			
<b>Monitoring Station</b>	<b>CWS Colony, Meeti</b>			
<b>Date of sampling</b>	Ozone (O <sub>3</sub> )	Lead (Pb)	Arsenic (As)	Nickel (Ni)
	( $\mu\text{g}/\text{m}^3$ )	( $\mu\text{g}/\text{m}^3$ )	( $\text{ng}/\text{m}^3$ )	( $\text{ng}/\text{m}^3$ )
05-Apr-21	4.01	<0.1	<1.0	<1.0
06-Apr-21	4.12	<0.1	<1.0	<1.0
12-Apr-21	4.16	<0.1	<1.0	<1.0
13-Apr-21	3.98	<0.1	<1.0	<1.0
19-Apr-21	2.79	<0.1	<1.0	<1.0
20-Apr-21	2.74	<0.1	<1.0	<1.0
<b>Standard</b>	<b>180(hour)</b>	<b>1.0(24hours)</b>	<b>6.0(Annual)</b>	<b>20(Annual)</b>

*[Handwritten Signature]*

O. I. C.  
Env. Lab  
CMPDI, RI-VII  
Bhubaneswar

*[Handwritten Signature]*

Authorised Signatory  
CMPDI, RI-VII, LAB  
BHUBANESWAR



**cmpdi**

*A Mini Ratna Company*

**AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)**

**Area: Jagannath**

<b>Project</b>	<b>Ananta OCP</b>			
<b>Monitoring Station</b>	<b>Guthasahi Village</b>			
<b>Date of sampling</b>	Ozone (O <sub>3</sub> )	Lead (Pb)	Arsenic (As)	Nickel (Ni)
	( $\mu\text{g}/\text{m}^3$ )	( $\mu\text{g}/\text{m}^3$ )	( $\text{ng}/\text{m}^3$ )	( $\text{ng}/\text{m}^3$ )
09-Apr-21	2.98	<0.1	<1.0	<1.0
10-Apr-21	2.88	<0.1	<1.0	<1.0
16-Apr-21	2.81	<0.1	<1.0	<1.0
17-Apr-21	2.79	<0.1	<1.0	<1.0
22-Apr-21	2.89	<0.1	<1.0	<1.0
24-Apr-21	2.83	<0.1	<1.0	<1.0
30-Apr-21	2.86	<0.1	<1.0	<1.0
<b>Standard</b>	<b>180(hour)</b>	<b>1.0(24hours)</b>	<b>6.0(Annual)</b>	<b>20(Annual)</b>

*Signature*

O. I. S.  
Env. Lab  
CMPDI, RI-VII  
Bhubaneswar

*Signature*

Authorised Signatory  
CMPDI, RI-VII, LAB  
BHUBANESWAR



**cmpdi**

*A Mine Rules Company*

**TABLE--**

**NOISE LEVEL MONITORING DATA**

AREA :

**Jagannath**

PROJECT :

**Ananta OCP**

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
02-Apr-21	North East of the Mine	65.6	60.4
02-Apr-21	Guthasahi Village	58.4	52.6
02-Apr-21	Central Nursery	59.4	54.8
02-Apr-21	Near NBVL Station (Reported only)	60.4	56.7
29-Apr-21	Near NBVL Station (Reported only)	56.5	53.4
29-Apr-21	Central Nursery	58.6	54.5
29-Apr-21	Guthasahi Village	57.4	52.4
29-Apr-21	North East of the Mine	62.8	60.1

PROJECT :

**Jagannath OCP**

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
02-Apr-21	Near NBVL Station	60.4	56.7
02-Apr-21	Near MDTP	58.4	55.8
02-Apr-21	Central Nursery (Reported only)	59.4	54.8
02-Apr-21	CWS Colony, MEETI	60.8	53.7
29-Apr-21	CWS Colony, Meeti	60.2	58.4
29-Apr-21	Central Nursery (Repeated Only)	58.6	54.5
29-Apr-21	Near MDTP	59.8	56.2
29-Apr-21	Near NBVL Station	56.5	53.4

MoEF Standard Notification dated 25th September, 2000

6.00 AM -10.00 PM Leq 75dB(A)

10.00 PM -6.00 AM Leq 70dB(A)

*[Signature]*

**Env. Lab  
CMPDI, RI-VII  
Bhubaneswar**

*[Signature]*  
**Authorised Signatory  
CMPDI, RI-VII, LAB  
BHUBANESWAR**



**cmpdi**

*A Miniratna Company*

TABLE--

**EFFLUENT QUALITY DATA**

Area :

Jagannath

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

Project :

Ananta OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	Remarks
16-Apr-21	Mine Sump Water	5.05					
16-Apr-21	STP OUTLET	7.55		32		<2.0	
30-Apr-21	STP OUTLET	7.61		38		<2.0	

Project :

Jagannath OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	Remarks
16-Apr-21	Central Sump	7.41					
16-Apr-21	Near MDTP	7.22	<4.0	24	32		
16-Apr-21	STP OUTLET	7.51		30		<2.0	
16-Apr-21	West Sump	7.33					
30-Apr-21	Near MDTP	7.29	<4.0	30	28		
30-Apr-21	STP OUTLET	-		-		-	No Discharge

*DA/SW*  
**O. I. C.**  
**Env. Lab**  
**CMPDI, RI-VII**  
**Bhubaneswar**

*Jatanaik*  
**Authorised Signatory**  
**CMPDI, RI-VII, LAB**  
**BHUBANESWAR**

MoEF Standard Notification dated 25th September, 2000 and MoEF Schedule VI, General standard for discharge of Environmental Pollutants Part A: Effluents	5.5-9.0	10	100	250	30
--	---------	----	-----	-----	----





**cmpdi**

*A Mini Ratna Company*

## Drinking Water Quality Data Jagannath Area

Project / OCP	Jagannath OCP		Indian Drinking Standards (IS-10500):2012	
	Balanda Colony Tap Water	Jagannath Colony Tap Water		
Monitoring Station				
Date of Sampling	16-Apr-2021	16-Apr-2021	Acceptable	Permissible
Colour(Hazen)	2	1	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	1	2	1	5
pH	7.41	7.63	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	56	108	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	252	324	200	600
Iron(mg/L)	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	18	82	250	1000
Total Dissolve Solid(mg/L)	404	506	500	2000
Calcium(mg/L)	72.14	76.95	75	200
Copper(mg/L)	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	<0.04	0.1	0.3
Sulphate(mg/L)	114.03	76.25	200	400
Nitrate(mg/L)	<0.5	16.34	45	No relaxation
Fluoride(mg/L)	<0.30	<0.30	1	1.5
Arsenic(mg/L)	<0.005	<0.005	0.01	0.05
Lead(mg/L)	<0.005	<0.005	0.01	No relaxation
Zinc(mg/L)	<0.04	<0.04	5	15
Total Chromium (mg/L)	<0.01	<0.01	0.05	No relaxation
Boron(mg/L)	<0.1	<0.1	0.5	1.0
Cadmium(mg/L)	<0.001	<0.001	0.003	No relaxation
MPN (Index/100 ml)	9.3	12		

  
Env. Lab  
CMPDI, RI-VII  
Bhubaneswar

  
Authorised Signatory  
CMPDI, RI-VII, LAB  
BHUBANESWAR



**cmpdi**

*A Miniratna Company*

## Drinking Water Quality Data Jagannath Area

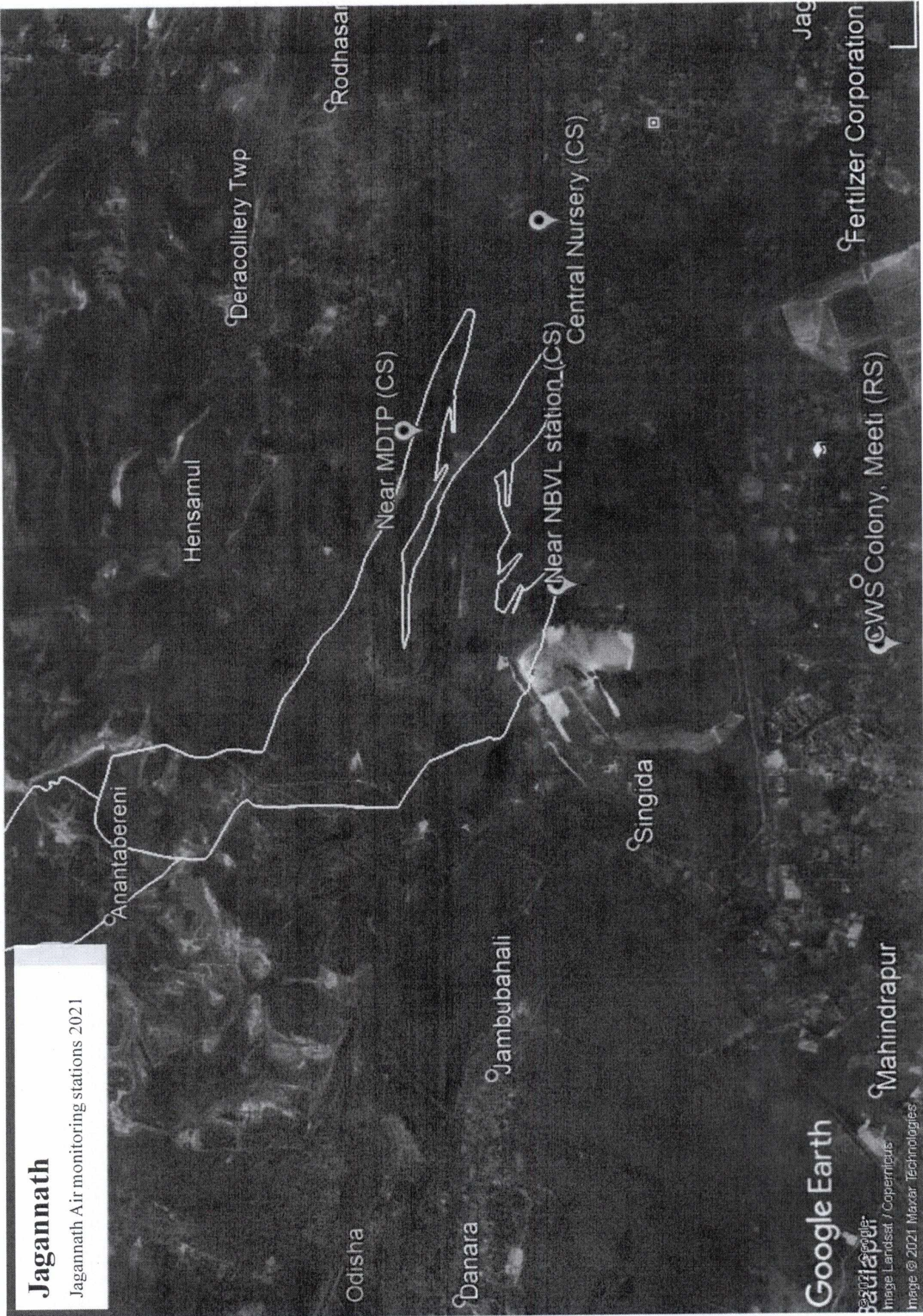
Project / OCP	Ananta OCP		Indian Drinking Standards (IS-10500):2012	
	Ananta Colony Tap Water	Dera Village Tube Well Water	Acceptable	Permissible
Monitoring Station				
Date of Sampling	16-Apr-2021	16-Apr-2021	Acceptable	Permissible
Colour(Hazen)	2	3	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	1	4	1	5
pH	7.53	6.64	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	48	172	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	196	228	200	600
Iron(mg/L)	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	20	46	250	1000
Total Dissolve Solid(mg/L)	288	332	500	2000
Calcium(mg/L)	41.68	72.14	75	200
Copper(mg/L)	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	<0.04	0.1	0.3
Sulphate(mg/L)	88.61	5.83	200	400
Nitrate(mg/L)	<0.5	<0.5	45	No relaxation
Fluoride(mg/L)	<0.30	<0.30	1	1.5
Arsenic(mg/L)	<0.005	<0.005	0.01	0.05
Lead(mg/L)	<0.005	<0.005	0.01	No relaxation
Zinc(mg/L)	<0.04	0.63	5	15
Total Chromium (mg/L)	<0.01	<0.01	0.05	No relaxation
Boron(mg/L)	<0.1	<0.1	0.5	1.0
Cadmium(mg/L)	<0.001	<0.001	0.003	No relaxation
MPN (Index/100 ml)	170	13		

*DA/SW*  
O. I. C.  
Env. Lab  
CMPDI, RI-VII  
Bhubaneswar

*Kattancik*  
Authorised Signatory  
CMPDI, RI-VII, LAB  
BHUBANESWAR

# Jagannath

Jagannath Air monitoring stations 2021

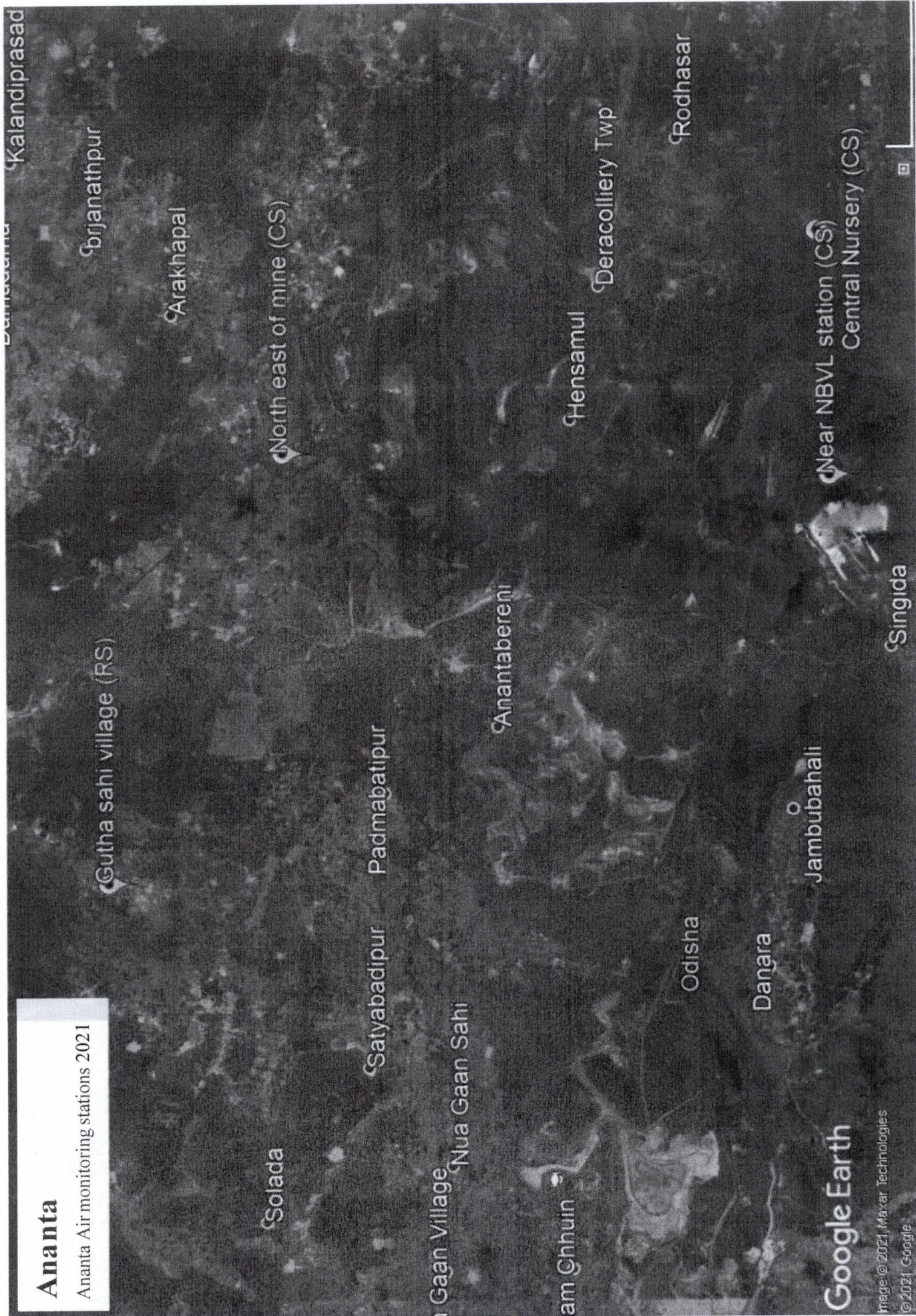


Google Earth

© 2021 Google  
Image Landsat / Copernicus  
Image © 2021 Maxar Technologies

# Ananta

Ananta Air monitoring stations 2021



Job No.750001

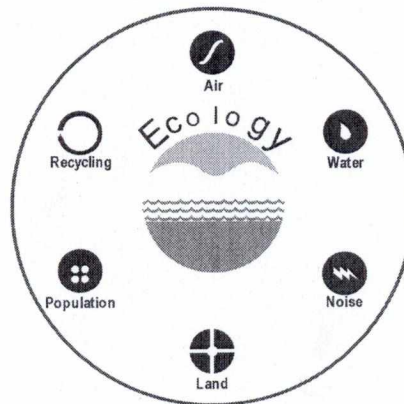
**Environmental Monitoring Report  
Of  
Bharatpur Area  
For  
April- 2021**

**Talcher Coalfield**



**MCL**

**Mahanadi Coalfields Limited**



***cmpdi***

*A Mini Ratna Company*

**Central Mine Planning & Design Institute Ltd.**  
(A Subsidiary of Coal India Ltd.)

**Regional Institute-VII, Samantpuri, P.O : RRL, Bhubaneswar-751013 (Odisha)**  
[Assistance from Environment Division, CMPDI(HQs), Ranchi ]

*The test report shall not be reproduced in part or full without written approval of the competent authority*



**cmpdi**

*A Min. Rehab. Company*

Test Report

**AMBIENT AIR QUALITY DATA**

Area :

**Bharatpur**

**(Compliance Station)**

Project :

**Bharatpur OCP**

(conc. in  $\mu\text{g}/\text{cu.m.}$ )

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
12-Apr-21	Near MGR-RLS of Bharatpur	490	254	73	20.79	40.75	Railway Siding	About 500m
12-Apr-21	Near ETP/Workshop	486	264	63	20.57	41.86	Mining Activities & Coal Stock	Above 500m
12-Apr-21	Near Regional Store	515	276	77	22.64	43.27	Mining Activities	About 500m
12-Apr-21	North-West Point of the Mine	410	233	52	21.46	39.28	Domestic & Mining Activities	About 500m
27-Apr-21	Near MGR-RLS of Bharatpur	429	194	57	20.61	39.84	Railway Siding	About 500m
27-Apr-21	Near ETP/Workshop	416	198	58	20.37	39.62	Mining Activities & Coal Stock	Above 500m
27-Apr-21	Near Regional Store	455	285	66	23.15	41.97	Mining Activities	About 500m
27-Apr-21	North-West Point of the Mine	426	281	64	22.58	40.51	Domestic & Mining Activities	About 500m

*D/SW*  
 Env. Lab  
 CMPDI, RI-VII  
 Bhubaneswar

*Kattanaik*  
 Authorised Signatory  
 CMPDI, RI-VII, LAB  
 BHUBANESWAR



**cmpdi**

*A Mini Ratna Company*

Test Report

**AMBIENT AIR QUALITY DATA**

Area :

**Bharatpur**

(Reference Station)

Project :

**Bharatpur OCP**

(conc. in  $\mu\text{g}/\text{cu.m.}$ )

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
09-Apr-21	Near Joragdia Village	227	81	50	22.68	40.84	Transportation, Domestic Kooking	About 1000m
09-Apr-21	Natedi Village (Reported Only)	164	81	53	16.84	30.41	Coal Transportation Road	About 2km
10-Apr-21	Near Joragdia Village	191	70	46	21.54	38.47	Transportation, Domestic Kooking	About 1000m
10-Apr-21	Natedi Village (Reported Only)	184	77	46	16.27	29.76	Coal Transportation Road	About 2km
16-Apr-21	Near Joragdia Village	142	74	42	16.89	33.70	Transportation, Domestic Kooking	About 1000m
16-Apr-21	Natedi Village (Reported Only)	170	59	39	14.38	26.87	Coal Transportation Road	About 2km
17-Apr-21	Near Joragdia Village	157	73	48	17.57	34.16	Transportation, Domestic Kooking	About 1000m
17-Apr-21	Natedi Village (Reported Only)	148	65	41	13.51	25.73	Coal Transportation Road	About 2km
23-Apr-21	Near Joragdia Village	183	82	44	18.62	35.74	Transportation, Domestic Kooking	About 1000m
23-Apr-21	Natedi Village (Reported Only)	188	85	48	14.50	27.06	Coal Transportation Road	About 2km
24-Apr-21	Near Joragdia Village	154	90	38	17.84	34.39	Transportation, Domestic Kooking	About 1000m
24-Apr-21	Natedi Village (Reported Only)	191	87	44	14.73	27.29	Coal Transportation Road	About 2km
30-Apr-21	Near Joragdia Village	174	92	49	18.37	35.51	Transportation, Domestic Kooking	About 1000m
30-Apr-21	Natedi Village (Reported Only)	187	90	53	14.61	27.15	Coal Transportation Road	About 2km

*Signature*  
O.T.C.  
Env. Lab  
CMPDI, RI-VII  
Bhubaneswar

*Signature*  
Authorised Signatory  
CMPDI, RI-VII, LAB  
BHUBANESWAR



**cmpdi**

*A Miniratna Company*

Test Report

**AMBIENT AIR QUALITY DATA**

Area :

**Bharatpur**

(Reference Station)

Project :

**Chhendipada OCP**

(conc. in  $\mu\text{g}/\text{cu.m.}$ )

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
06-Apr-21	Security Post of Chhendipada OCP	No	Power	Conne tion			Mining Activities	About 500m
07-Apr-21	Security Post of Chhendipada OCP	Strike	Strike	Strike	Strike	Strike	Mining Activities	About 500m
13-Apr-21	Security Post of Chhendipada OCP	213	92	53	21.42	39.32	Mining Activities	About 500m
14-Apr-21	Security Post of Chhendipada OCP	Strike	Strike	Strike	Strike	Strike	Mining Activities	About 500m
19-Apr-21	Security Post of Chhendipada OCP	181	76	41	19.63	38.46	Mining Activities	About 500m
20-Apr-21	Security Post of Chhendipada OCP	214	87	54	20.83	39.57	Mining Activities	About 500m
26-Apr-21	Security Post of Chhendipada OCP	175	86	51	19.23	37.94	Mining Activities	About 500m
27-Apr-21	Security Post of Chhendipada OCP	203	90	52	20.41	39.28	Mining Activities	About 500m

*[Signature]*  
 G. T. C.  
 Env. Lab  
 CMPDI, RI-VII  
 Bhubaneswar

*[Signature]*  
 Authorised Signatory  
 CMPDI, RI-VII, LAB  
 BHUBANESWAR



**cmpdi**

*A Mini Ratna Company*

**AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)**

**Area: Bharatpur**

<b>Project</b>	<b>Bharatpur OCP</b>			
<b>Monitoring Station</b>	<b>Near Joragadia Village</b>			
<b>Date of sampling</b>	Ozone (O <sub>3</sub> )	Lead (Pb)	Arsenic (As)	Nickel (Ni)
	( $\mu\text{g}/\text{m}^3$ )	( $\mu\text{g}/\text{m}^3$ )	( $\text{ng}/\text{m}^3$ )	( $\text{ng}/\text{m}^3$ )
09-Apr-21	2.56	<0.1	<1.0	<1.0
10-Apr-21	2.48	<0.1	<1.0	<1.0
16-Apr-21	3.24	<0.1	<1.0	<1.0
17-Apr-21	3.27	<0.1	<1.0	<1.0
23-Apr-21	3.21	<0.1	<1.0	<1.0
24-Apr-21	3.29	<0.1	<1.0	<1.0
30-Apr-21	3.25	<0.1	<1.0	<1.0
<b>Standard</b>	<b>180(hour)</b>	<b>1.0(24hours)</b>	<b>6.0(Annual)</b>	<b>20(Annual)</b>

*SA/SW*  
O. I. C.  
Env. Lab  
CMPDI, RI-VII  
Bhubaneswar

*Kattaveik*  
Authorised Signatory  
CMPDI, RI-VII, LAB  
BHUBANESWAR



**cmpdi**

*A Mini Ratna Company*

**AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)**

**Area: Bharatpur**

<b>Project</b>	<b>Bharatpur OCP</b>			
<b>Monitoring Station</b>	<b>Natedi Village (Reported Only)</b>			
<b>Date of sampling</b>	Ozone (O <sub>3</sub> )	Lead (Pb)	Arsenic (As)	Nickel (Ni)
	( $\mu\text{g}/\text{m}^3$ )	( $\mu\text{g}/\text{m}^3$ )	( $\text{ng}/\text{m}^3$ )	( $\text{ng}/\text{m}^3$ )
09-Apr-21	3.12	<0.1	<1.0	<1.0
10-Apr-21	3.17	<0.1	<1.0	<1.0
16-Apr-21	3.73	<0.1	<1.0	<1.0
17-Apr-21	3.78	<0.1	<1.0	<1.0
23-Apr-21	3.75	<0.1	<1.0	<1.0
24-Apr-21	3.71	<0.1	<1.0	<1.0
30-Apr-21	3.83	<0.1	<1.0	<1.0
<b>Standard</b>	<b>180(hour)</b>	<b>1.0(24hours)</b>	<b>6.0(Annual)</b>	<b>20(Annual)</b>

*DAI/SW*

**O. I. C.  
Env. Lab  
CMPDI, RI-VII  
Bhubaneswar**

*Kattanaik*

**Authorised Signatory  
CMPDI, RI-VII, LAB  
BHUBANESWAR**



**cmpdi**

*A Mini Ratna Company*

**AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)**

**Area: Bharatpur**

<b>Project</b>	<b>Chhendipada OCP</b>			
<b>Monitoring Station</b>	<b>Security Post of Chhendipada OCP</b>			
<b>Date of sampling</b>	Ozone (O <sub>3</sub> )	Lead (Pb)	Arsenic (As)	Nickel (Ni)
	( $\mu\text{g}/\text{m}^3$ )	( $\mu\text{g}/\text{m}^3$ )	( $\text{ng}/\text{m}^3$ )	( $\text{ng}/\text{m}^3$ )
06-Apr-21	No Power Connection			
07-Apr-21	Strike			
13-Apr-21	3.65	<0.1	<1.0	<1.0
14-Apr-21	Strike			
19-Apr-21	3.60	<0.1	<1.0	<1.0
20-Apr-21	3.64	<0.1	<1.0	<1.0
26-Apr-21	6.62	<0.1	<1.0	<1.0
27-Apr-21	3.66	<0.1	<1.0	<1.0
<b>Standard</b>	<b>180(hour)</b>	<b>1.0(24hours)</b>	<b>6.0(Annual)</b>	<b>20(Annual)</b>

*O.I.C.*

**O.I.C.  
Env. Lab  
CMPDI, RI-VII  
Bhubaneswar**

*Kattanaick*

**Authorised Signatory  
CMPDI, RI-VII, LAB  
BHUBANESWAR**



**cmpdi**

*A Miniratna Company*

**TABLE--**

**NOISE LEVEL MONITORING DATA**

**AREA :**

**Bharatpur**

**PROJECT :**

**Bharatpur OCP**

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
02-Apr-21	Near MGR-RLS of Bharatpur	72.8	69.4
02-Apr-21	North West Point of Mine	70.4	68.3
02-Apr-21	Near Regional Store	61.7	55.3
02-Apr-21	Near Wokshop	68.4	66.7
28-Apr-21	Near MGR-RLS of Bharatpur	68.9	67.6
28-Apr-21	North West Point of Mine	66.7	65.6
28-Apr-21	Near Regional Store	59.6	55.4
28-Apr-21	Near Wokshop	64.8	60.9

MoEF Standard Notification dated 25th September, 2000

6.00 AM -10.00 PM Leq 75dB(A)

10.00 PM -6.00 AM Leq 70dB(A)

*[Signature]*  
 O.I.C.  
 Env. Lab  
 CMPDI, RI-VII  
 Bhubaneswar

*[Signature]*  
 Authorised Signatory  
 CMPDI, RI-VII, LAB  
 BHUBANESWAR



**cmpdi**

*A Mittal Group Company*

TABLE--

**EFFLUENT QUALITY DATA**

Area :

Bharatpur

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

Project :

Bharatpur OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	Remarks
15-Apr-21	Mine Sump Water - Main Sump	7.26					
15-Apr-21	Mine Sump Water - Old Quarry Sump	7.38					
15-Apr-21	Mine Sump Water - South Quarry Sump	5.33					
15-Apr-21	STP Outlet (pH, TSS, Faecal Coliform, BOD)	7.29		36		<2.0	
15-Apr-21	Workshop ETP Clear Water Tank	7.24	<4.0	34	24		
30-Apr-21	STP Outlet (pH, TSS, Faecal Coliform, BOD)	7.20		42		<2.0	
30-Apr-21	Workshop ETP Clear Water Tank	7.29	<4.0	38	28		

*Saloni*

O. I. C.  
Env. Lab  
CMPDI, RI-VII  
Bhubaneswar

*Kattanaik*  
Authorised Signatory  
CMPDI, RI-VII, LAB  
BHUBANESWAR

MoEF Standard Notification dated 25th September, 2000 and MoEF Schedule VI, General standard for discharge of Environmental Pollutants Part A: Effluents

5.5-9.0	10	100	250	30
---------	----	-----	-----	----



**cmpdi**

*A Mini Ratna Company*

## Drinking Water Quality Data Bharatpur Area

Project / OCP	Bharatpur OCP	Indian Drinking Standards (IS-10500):2012	
Monitoring Station	Time Office, BOCP		
Date of Sampling	15-Apr-2021	Acceptable	Permissible
Colour(Hazen)	1	5	15
Odour	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	2	1	5
pH	6.94	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	112	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	152	200	600
Iron(mg/L)	<0.1	0.3	No relaxation
Chloride(mg/L)	22	250	1000
Total Dissolve Solid(mg/L)	224	500	2000
Calcium(mg/L)	44.89	75	200
Copper(mg/L)	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	0.1	0.3
Sulphate(mg/L)	21.11	200	400
Nitrate(mg/L)	<0.5	45	No relaxation
Fluoride(mg/L)	<0.30	1	1.5
Arsenic(mg/L)	<0.005	0.01	0.05
Lead(mg/L)	<0.005	0.01	No relaxation
Zinc(mg/L)	0.31	5	15
Total Chromium (mg/L)	<0.01	0.05	No relaxation
Boron(mg/L)	<0.1	0.5	1.0
Cadmium(mg/L)	<0.001	0.003	No relaxation
MPN (Index/100 ml)	8		

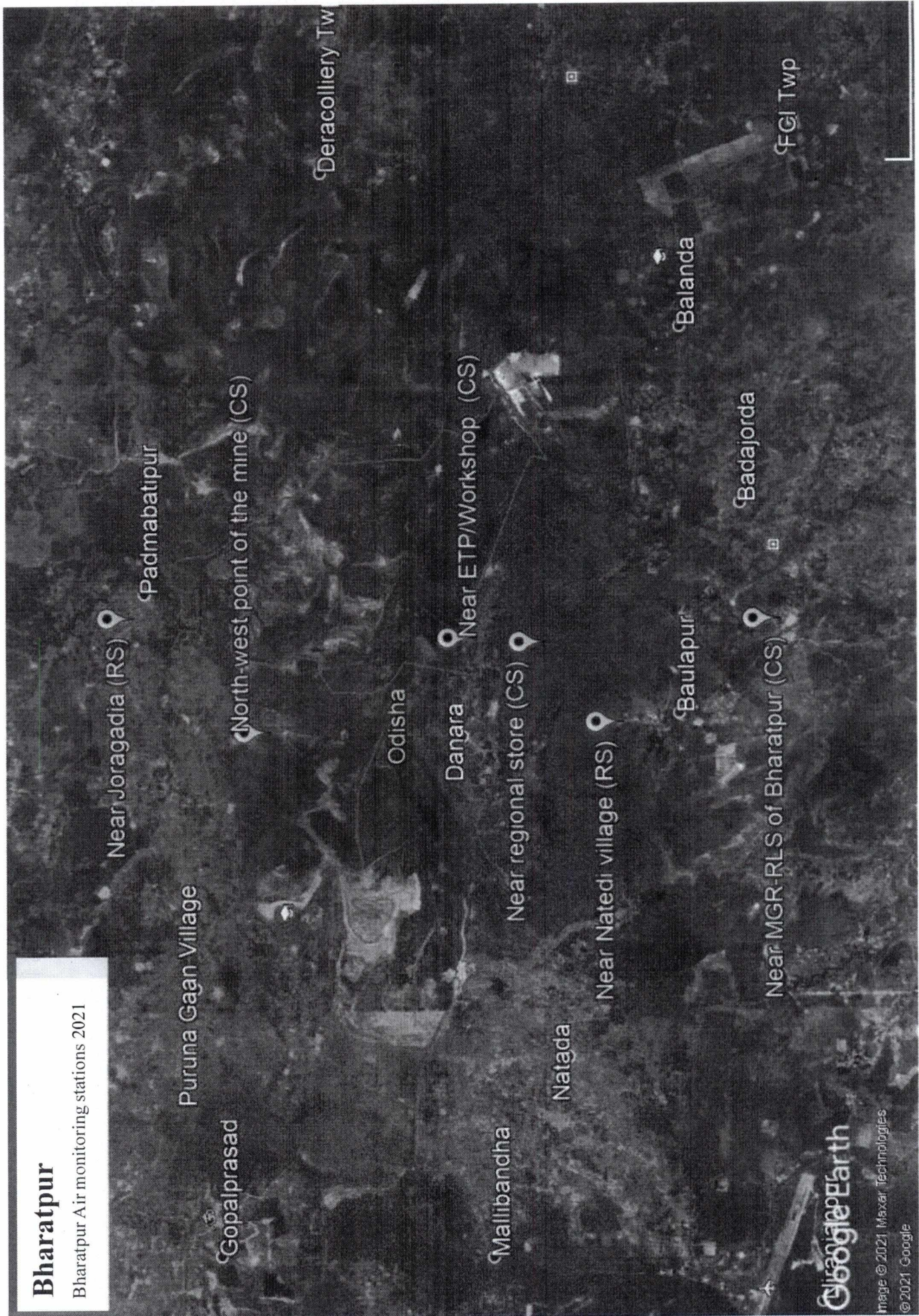
*Signature*

O. I. C.  
Env. Lab  
CMPDI, RI-VII  
Bhubaneswar

*Signature*  
Authorised Signatory  
CMPDI, RI-VII, LAB  
BHUBANESWAR

# Bharatpur

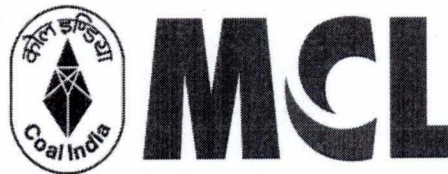
Bharatpur Air monitoring stations 2021



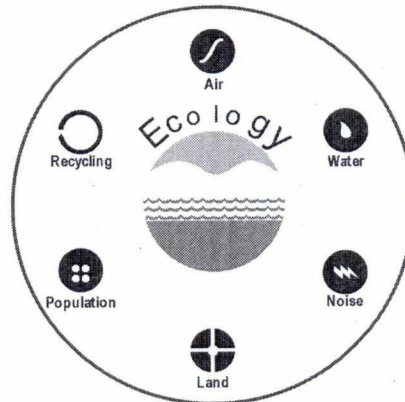
Job No.750001

**Environmental Monitoring Report  
Of  
Lingaraj Area  
For  
April- 2021**

**Talcher Coalfield**



**Mahanadi Coalfields Limited**



***cmpdi***

*A Mini Ratna Company*

**Central Mine Planning & Design Institute Ltd.**  
(A Subsidiary of Coal India Ltd.)

**Regional Institute-VII, Samantpuri, P.O : RRL, Bhubaneswar-751013 (Odisha)**  
[Assistance from Environment Division, CMPDI(HQs), Ranchi ]

*The test report shall not be reproduced in part or full without written approval of the competent authority*



**cmpdi**

*A Min. Rates Company*

Test Report

**AMBIENT AIR QUALITY DATA**

Area :

**Lingaraj**

**(Compliance Station)**

Project :

**Lingaraj OCP**

(conc. in µg/cu.m.)

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
06-Apr-21	Near OB Dump No. 10 (Near North Side of Mine)	329	178	69	20.63	38.89	Mining Activities, Coal Corridor	About 500m
06-Apr-21	Near Lingaraj to Dera Road	358	188	57	19.25	37.68	Coal Transportation Road	Less than 500m
06-Apr-21	IWSS	372	206	62	18.74	35.16	Coal Transportation Road, Railway Siding, Coal S.Y	About 500m
06-Apr-21	Near OB Dump No. 5 (South Side of the Mine)	449	218	64	19.47	36.51	Transportation Road, Mining Activities	About 500m
22-Apr-21	Near OB Dump No. 10 (Near North Side of Mine)	384	172	64	19.41	38.92	Mining Activities, Coal Corridor	About 500m
22-Apr-21	Near Lingaraj to Dera Road	354	202	63	17.18	34.63	Coal Transportation Road	Less than 500m
22-Apr-21	IWSS	292	155	55	17.65	35.47	Coal Transportation Road, Railway Siding, Coal S.Y	About 500m
23-Apr-21	Near OB Dump No. 5 (South Side of the Mine)	403	236	76	19.87	37.45	Transportation Road, Mining Activities	About 500m

*SAL SM*

**O. I. C.**  
**Env. Lab**  
**CMPDI, RI-VII**  
**Bhubaneswar**

*Kattamank*

**Authorised Signatory**  
**CMPDI, RI-VII, LAB**  
**BHUBANESWAR**



**cmpdi**

*A Tata Steel Company*

Test Report

**AMBIENT AIR QUALITY DATA**

Area :

**Lingaraj**

**(Reference Station)**

Project :

**Lingaraj OCP**

(conc. in µg/cu.m.)

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
01-Apr-21	Near Kankili Community Centre	170	84	48	17.03	35.18	Mining Activity	Within 10km
02-Apr-21	Near Kankili Community Centre	189	77	43	17.86	35.72	Mining Activity	Within 10km
08-Apr-21	Near Kankili Community Centre	205	90	49	18.05	36.89	Mining Activity	Within 10km
09-Apr-21	Near Kankili Community Centre	214	87	51	18.56	37.64	Mining Activity	Within 10km
15-Apr-21	Near Kankili Community Centre	207	77	46	17.47	35.26	Mining Activity	Within 10km
16-Apr-21	Near Kankili Community Centre	194	82	52	16.57	31.26	Mining Activity	Within 10km
22-Apr-21	Near Kankili Community Centre	159	80	46	15.51	30.45	Mining Activity	Within 10km
23-Apr-21	Near Kankili Community Centre	174	84	48	15.73	30.89	Mining Activity	Within 10km
29-Apr-21	Near Kankili Community Centre	155	78	47	15.42	30.28	Mining Activity	Within 10km
30-Apr-21	Near Kankili Community Centre	143	69	39	14.79	29.71	Mining Activity	Within 10km

*Q.I.C.*

**Q.I.C.  
Env. Lab  
CMPDI, RI-VII  
Bhubaneswar**

*Katanaik*

**Authorised Signatory  
CMPDI, RI-VII, LAB  
BHUBANESWAR**



**cmpdi**

*A Mini Ratna Company*

**AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)**

**Area: Lingaraj**

<b>Project</b>	<b>Lingaraj OCP</b>			
<b>Monitoring Station</b>	<b>Near Kankili Community Centre</b>			
<b>Date of sampling</b>	Ozone (O <sub>3</sub> )	Lead (Pb)	Arsenic (As)	Nickel (Ni)
	( $\mu\text{g}/\text{m}^3$ )	( $\mu\text{g}/\text{m}^3$ )	( $\text{ng}/\text{m}^3$ )	( $\text{ng}/\text{m}^3$ )
01-Apr-21	3.46	<0.1	<1.0	<1.0
02-Apr-21	3.21	<0.1	<1.0	<1.0
08-Apr-21	3.36	<0.1	<1.0	<1.0
09-Apr-21	3.38	<0.1	<1.0	<1.0
15-Apr-21	3.46	<0.1	<1.0	<1.0
16-Apr-21	2.63	<0.1	<1.0	<1.0
22-Apr-21	2.65	<0.1	<1.0	<1.0
23-Apr-21	2.69	<0.1	<1.0	<1.0
29-Apr-21	2.66	<0.1	<1.0	<1.0
30-Apr-21	2.61	<0.1	<1.0	<1.0
<b>Standard</b>	<b>180(hour)</b>	<b>1.0(24hours)</b>	<b>6.0(Annual)</b>	<b>20(Annual)</b>

*DA/SW*

**O. I. C.  
Env. Lab  
CMPDI, RI-VII  
Bhubaneswar**

*Kattanaach*  
Authorized Signatory  
CMPDI, RI-VII, LAB  
BHUBANESWAR



**cmpdi**

*A Ministry Company*

**TABLE--**

**NOISE LEVEL MONITORING DATA**

AREA :

Lingaraj

PROJECT :

Lingaraj OCP

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
02-Apr-21	Near Lingaraj to Dera Road	57.8	54.9
02-Apr-21	IWSS	58.4	55.3
02-Apr-21	Near OB Dump No.5 (South Side of the Mine)	63.4	58.4
02-Apr-21	Near OB Dump No.10 (North Side of the Mine)	63.1	58.6
28-Apr-21	Near Lingaraj to Dera Road	59.4	56.7
28-Apr-21	IWSS	63.4	58.6
28-Apr-21	Near OB Dump No.5 (South Side of the Mine)	62.6	58.5
28-Apr-21	Near OB Dump No.10 (North Side of the Mine)	65.7	63.4

MoEF Standard Notification dated 25th September, 2000

6.00 AM -10.00 PM Leq 75dB(A)

10.00 PM -6.00 AM Leq 70dB(A)

*Signature*  
O.L.C.  
Env. Lab  
CMPDI, RI-VII  
Bhubaneswar

*Signature*  
Authorised Signatory  
CMPDI, RI-VII, LAB  
BHUBANESWAR



**cmpdi**

*A Miniratna Company*

TABLE--

**EFFLUENT QUALITY DATA**

Area :

Lingaraj

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

Project :

Lingaraj OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	Remarks
15-Apr-21	Mine Sump Water	5.19					
16-Apr-21	Clear Water Reservoir of Workshop ETP	7.50	<4.0	24	16		
30-Apr-21	Clear Water Reservoir of Workshop ETP	7.57	<4.0	32	20		

*Q.L.C.*

**Q. L. C.  
Env. Lab  
CMPDI, RI-VII  
Bhubaneswar**

*Kattamark*  
**Authorised Signatory  
CMPDI, RI-VII, LAB  
BHUBANESWAR**

MoEF Standard Notification dated 25th September, 2000 and MoEF Schedule VI, General standard for discharge of Environmental Pollutants Part A: Effluents

5.5-9.0	10	100	250	30
---------	----	-----	-----	----



**cmpdi**

*A Mini Ratna Company*

## Drinking Water Quality Data Lingraj Area

Project / OCP	Lingraj OCP	Indian Drinking Standards (IS-10500):2012	
Monitoring Station	GM Office, Lingraj Area Tap Water		
Date of Sampling	16-Apr-2021	Acceptable	Permissible
Colour(Hazen)	2	5	15
Odour	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	1	1	5
pH	7.49	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	96	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	156	200	600
Iron(mg/L)	<0.1	0.3	No relaxation
Chloride(mg/L)	28	250	1000
Total Dissolve Solid(mg/L)	278	500	2000
Calcium(mg/L)	38.48	75	200
Copper(mg/L)	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	0.1	0.3
Sulphate(mg/L)	46.25	200	400
Nitrate(mg/L)	3.09	45	No relaxation
Fluoride(mg/L)	<0.30	1	1.5
Arsenic(mg/L)	<0.005	0.01	0.05
Lead(mg/L)	<0.005	0.01	No relaxation
Zinc(mg/L)	0.07	5	15
Total Chromium (mg/L)	<0.01	0.05	No relaxation
Boron(mg/L)	<0.1	0.5	1.0
Cadmium(mg/L)	<0.001	0.003	No relaxation
MPN (Index/100 ml)	130	-	-

*S. L. S. M.*  
O. L. C.  
Env. Lab  
CMPDI, RI-VII  
Bhubaneswar

*H. P. S. M.*  
CMPDI, RI-VII, LAB  
BHUBANESWAR

# Lingraj

Lingraj Air monitoring station 2021



Google Earth

Image © 2021 Maxar Technologies  
© 2021 Google

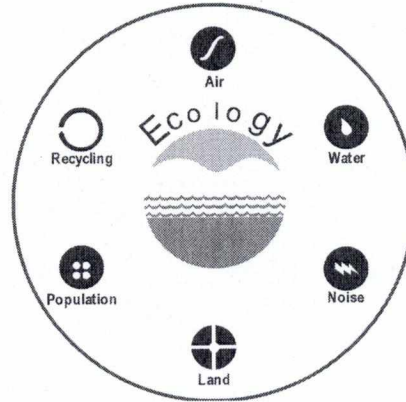
Job No.750001

**Environmental Monitoring Report  
Of  
Kaniha Area  
For  
April- 2021**

**Talcher Coalfield**



**Mahanadi Coalfields Limited**



***cmpdi***  
*A Mini Ratna Company*

**Central Mine Planning & Design Institute Ltd.**  
(A Subsidiary of Coal India Ltd.)

**Regional Institute-VII, Samantpuri, P.O : RRL, Bhubaneswar-751013 (Odisha)**  
[Assistance from Environment Division, CMPDI(HQs), Ranchi ]

*The test report shall not be reproduced in part or full without written approval of the competent authority*



**cmpdi**

A Mine Rules Company

Test Report

**AMBIENT AIR QUALITY DATA**

Area :

**Kaniha**

**(Compliance Station)**

Project :

**Kaniha OCP**

(conc. in µg/cu.m.)

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
03-Apr-21	Near External OB Dump Jamania	348	190	58	18.69	37.14	Mining Activities	About 500m
03-Apr-21	West Of Mine Quarry	409	225	66	19.71	38.59	Mining Activities	About 500m
03-Apr-21	Near Jatra Padia Jarda	343	177	62	18.07	36.89	Mining Activities	About 500m
05-Apr-21	North East Side of Project Office	255	153	53	16.43	31.65	Mining Activities	About 500m
05-Apr-21	New Time Office-Near Z-patch	403	247	68	18.38	35.18	Mining Activities	About 500m
05-Apr-21	Project Office	283	152	56	16.41	34.59	Mining Activities	About 500m
05-Apr-21	Old Site Office	389	211	64	17.62	34.17	Mining Activities	About 500m
20-Apr-21	North East Side of Project Office	319	205	63	18.57	35.24	Mining Activities	About 500m
20-Apr-21	West Of Mine Quarry	363	195	70	17.62	33.51	Mining Activities	About 500m
21-Apr-21	New Time Office-Near Z-patch	365	204	61	14.29	27.56	Mining Activities	About 500m
21-Apr-21	Project Office	301	183	51	16.20	33.62	Mining Activities	About 500m
21-Apr-21	Old Site Office	312	178	53	13.51	26.41	Mining Activities	About 500m
21-Apr-21	Near External OB Dump Jamania	289	161	54	14.18	27.23	Mining Activities	About 500m
22-Apr-21	Near Jatra Padia Jarda	273	148	55	15.71	30.68	Mining Activities	About 500m

*Signature*

Env. Lab  
CMPDI, RI-VII  
Bhubaneswar

*Signature*  
Authorised Signatory  
CMPDI, RI-VII, LAB  
BHUBANESWAR



**cmpdi**

*A Mini Ratna Company*

Test Report

**AMBIENT AIR QUALITY DATA**

Area :

**Kaniha**

**(Reference Station)**

Project :

**Kaniha OCP**

(conc. in µg/cu.m.)

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
02-Apr-21	South Of Proposed Quarry Limit of KOCP	204	83	53	19.23	40.82	Mining Activities	About 500m
03-Apr-21	South Of Proposed Quarry Limit of KOCP	177	75	49	18.27	39.45	Mining Activities	About 500m
07-Apr-21	South Of Proposed Quarry Limit of KOCP	Strike	Strike	Strike	Strike	Strike	Mining Activities	About 500m
08-Apr-21	South Of Proposed Quarry Limit of KOCP	Strike	Strike	Strike	Strike	Strike	Mining Activities	About 500m
14-Apr-21	South Of Proposed Quarry Limit of KOCP	207	93	51	19.58	40.36	Mining Activities	About 500m
15-Apr-21	South Of Proposed Quarry Limit of KOCP	216	80	50	20.16	41.37	Mining Activities	About 500m
20-Apr-21	South Of Proposed Quarry Limit of KOCP	205	83	47	17.32	33.27	Mining Activities	About 500m
21-Apr-21	South Of Proposed Quarry Limit of KOCP	219	91	53	17.51	33.49	Mining Activities	About 500m
28-Apr-21	South Of Proposed Quarry Limit of KOCP	195	76	45	16.75	32.58	Mining Activities	About 500m
29-Apr-21	South Of Proposed Quarry Limit of KOCP	183	81	48	16.48	32.36	Mining Activities	About 500m

*[Signature]*

**O. I. C.  
Env. Lab  
CMPDI, RI-VII  
Bhubaneswar**

*[Signature]*  
**Authorised Signatory  
CMPDI, RI-VII, LAB  
BHUBANESWAR**



**cmpdi**

*A Mini Ratna Company*

**AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)**

**Area: Kaniha**

<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> )	Lead (Pb)	Arsenic (As)	Nickel (Ni)
	( $\mu\text{g}/\text{m}^3$ )	( $\mu\text{g}/\text{m}^3$ )	( $\text{ng}/\text{m}^3$ )	( $\text{ng}/\text{m}^3$ )
02-Apr-21	2.86	<0.1	<1.0	<1.0
03-Apr-21	2.76	<0.1	<1.0	<1.0
07-Apr-21	Strike			
08-Apr-21	Strike			
14-Apr-21	2.79	<0.1	<1.0	<1.0
15-Apr-21	2.88	<0.1	<1.0	<1.0
20-Apr-21	4.12	<0.1	<1.0	<1.0
21-Apr-21	4.18	<0.1	<1.0	<1.0
28-Apr-21	4.09	<0.1	<1.0	<1.0
29-Apr-21	4.15	<0.1	<1.0	<1.0
<b>Standard</b>	<b>180(hour)</b>	<b>1.0(24hours)</b>	<b>6.0(Annual)</b>	<b>20(Annual)</b>

*[Handwritten Signature]*

**O. L. C.  
Env. Lab  
CMPDI, RI-VII  
Bhubaneswar**

*[Handwritten Signature]*  
**Authorised Signatory  
CMPDI, RI-VII, LAB  
BHUBANESWAR**



**cmpdi**

*A Tata Group Company*

**TABLE--**

**NOISE LEVEL MONITORING DATA**

AREA :

**Kaniha**

PROJECT :

**Kaniha OCP**

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
03-Apr-21	Telisingha Village	68.3	65.6
03-Apr-21	Near Jarda Village	65.4	60.8
03-Apr-21	Site Office	65.4	63.7
03-Apr-21	Patharmunda Village	70.4	68.3
30-Apr-21	Telisingha Village	65.8	60.6
30-Apr-21	Near Jarda Village	67.6	65.6
30-Apr-21	Site Office	60.6	56.4
30-Apr-21	Patharmunda Village	66.7	63.4

MoEF Standard Notification dated 25th September, 2000

6.00 AM -10.00  
PM Leq 75dB(A)

10.00 PM -6.00  
AM Leq 70dB(A)

*[Signature]*  
**O.I.C.**  
**Env. Lab**  
**CMPDI, RI-VII**  
**Bhubaneswar**

*[Signature]*  
**Authorised Signatory**  
**CMPDI, RI-VII, LAB**  
**BHUBANESWAR**



**cmpdi**

A Mini-Rajan Company

TABLE--

**EFFLUENT QUALITY DATA**

Area :

Kaniha

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

Project :

Kaniha OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	Remarks
07-Apr-21	Clear Water Pond	7.70	<4.0	26	12		
07-Apr-21	Kansamunda Sump	7.63	<4.0	38	20		
07-Apr-21	Pre Sedimentation Pond	7.36	<4.0	14	8		
07-Apr-21	Z-Patch Sump	6.88	<4.0	28	16		
14-Apr-21	Clear Water Pond	7.65	<4.0	20	16		
14-Apr-21	Kansamunda Sump	7.69	<4.0	32	24		
14-Apr-21	Pre Sedimentation Pond	7.30	<4.0	18	8		
14-Apr-21	Z-Patch Sump	6.81	<4.0	34	20		
22-Apr-21	Clear Water Pond	7.79	<4.0	34	20		
22-Apr-21	Kansamunda Sump	7.72	<4.0	44	28		
22-Apr-21	Pre Sedimentation Pond	7.30	<4.0	20	12		
22-Apr-21	Z-Patch Sump	-	-	-	-		In Accessible
30-Apr-21	Clear Water Pond	7.86	<4.0	38	24		
30-Apr-21	Kansamunda Sump	7.77	<4.0	40	24		
30-Apr-21	Pre Sedimentation Pond	7.39	<4.0	24	16		
30-Apr-21	Z-Patch Sump	-	-	-	-		In Accessible

*24/5/21*  
**O. I. C.**  
**Env. Lab**  
**CMPDI, RI-VII**  
**Bhubaneswar**

*Katunak*  
**Authorised Signatory**  
**CMPDI, RI-VII, LAB**  
**BHUBANESWAR**

MoEF Standard Notification dated 25th September, 2000 and MoEF Schedule VI, General standard for discharge of Environmental Pollutants Part A: Effluents	5.5-9.0	10	100	250	30
--	---------	----	-----	-----	----



**cmpdi**

*A Mini Ratna Company*

## Drinking Water Quality Data Kaniha Area

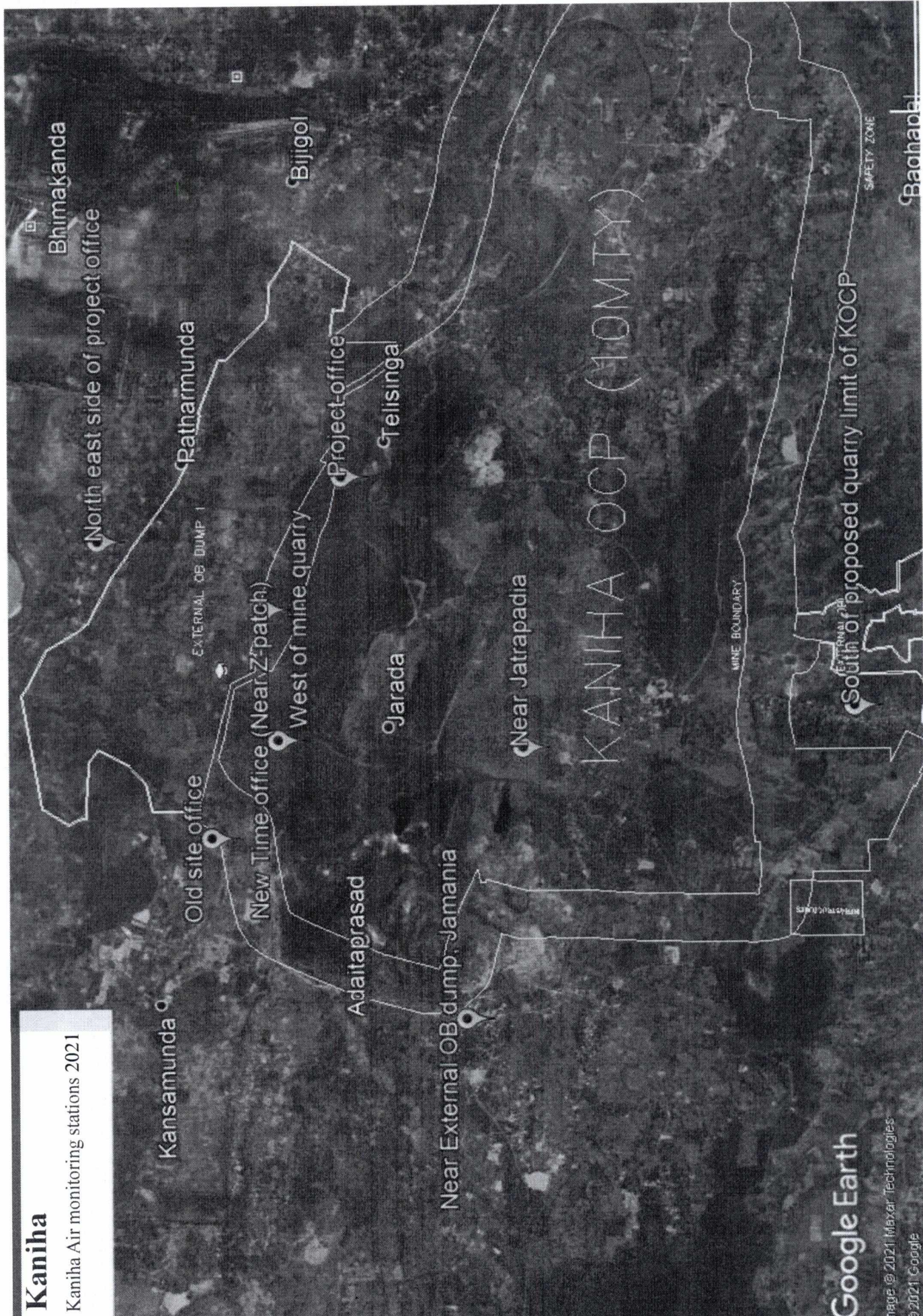
Project / OCP	Kaniha		Indian Drinking Standards (IS-10500):2012	
	Tube Well at Coal Analysis Lab	Jarda Village Well Water		
Date of Sampling	16-Apr-2021	16-Apr-2021	Acceptable	Permissible
Colour(Hazen)	1	2	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	1	2	1	5
pH	5.86	5.62	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	24	28	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	72	64	200	600
Iron(mg/L)	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	32	60	250	1000
Total Dissolve Solid(mg/L)	138	174	500	2000
Calcium(mg/L)	22.44	33.67	75	200
Copper(mg/L)	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	<0.04	0.1	0.3
Sulphate(mg/L)	6.54	8.49	200	400
Nitrate(mg/L)	35.42	42.27	45	No relaxation
Fluoride(mg/L)	<0.30	<0.30	1	1.5
Arsenic(mg/L)	<0.005	<0.005	0.01	0.05
Lead(mg/L)	<0.005	<0.005	0.01	No relaxation
Zinc(mg/L)	0.95	0.84	5	15
Total Chromium (mg/L)	<0.01	<0.01	0.05	No relaxation
Boron(mg/L)	<0.1	<0.1	0.5	1.0
Cadmium(mg/L)	<0.001	<0.001	0.003	No relaxation
MPN (Index/100 ml)	17	7	-	-

*O.L.C.*  
Env. Lab  
CMPDI, RI-VII  
Bhubaneswar

*Kattanaik*  
Authorised Signatory  
CMPDI, RI-VII, LAB  
BHUBANESWAR

# Kaniha

Kaniha Air monitoring stations 2021



Job No.750001

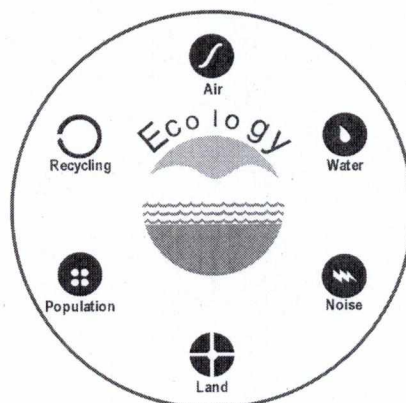
**Environmental Monitoring Report  
Of  
Hingula Area  
For  
April- 2021**

**Talcher Coalfield**



**MCL**

**Mahanadi Coalfields Limited**



***cmpdi***

*A Mini Ratra Company*

**Central Mine Planning & Design Institute Ltd.**  
(A Subsidiary of Coal India Ltd.)

**Regional Institute-VII, Samantpuri, P.O : RRL, Bhubaneswar-751013 (Odisha)**  
[Assistance from Environment Division, CMPDI(HQs), Ranchi ]

*The test report shall not be reproduced in part or full without written approval of the competent authority*



**cmpdi**

*A Mini Ratna Company*

Test Report

**AMBIENT AIR QUALITY DATA**

Area :

**Hingula**

**(Compliance Station)**

Project :

**Balram OCP**

(conc. in µg/cu.m.)

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
02-Apr-21	South West of the Mine	365	209	66	19.68	37.21	Mining Operations And Coal Corridor	About 350m
02-Apr-21	Pump House Near Outsourcing Working Pach & Coal TR	482	279	73	21.35	40.59	Mining Operation And Coal Transportation Road	About 200m
19-Apr-21	South West of the Mine	414	259	79	20.73	40.15	Mining Operations And Coal Corridor	About 350m
19-Apr-21	Pump House Near Outsourcing Working Pach & Coal TR	451	263	69	21.57	40.52	Mining Operation And Coal Transportation Road	About 200m

Project :

**Hingula OCP**

(conc. in µg/cu.m.)

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
01-Apr-21	Time Office	307	203	62	15.73	29.57	Mining Operations and Haul Road	About 200m
01-Apr-21	South-West Side of Mine	495	232	66	18.69	39.25	Mining Operations	About 300m

*[Signature]*  
**O.I.C.**  
**Env. Lab**  
**CMPDI, RI-VII**  
**Bhubaneswar**

*[Signature]*  
**Authorised Signatory**  
**CMPDI, RI-VII, LAB**  
**BHUBANESWAR**



**cmpdi**

*A Miniratna Company*

Test Report

**AMBIENT AIR QUALITY DATA**

Area :

**Hingula**

(Reference Station)

Project :

**Hingula OCP**

(conc. in µg/cu.m.)

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
01-Apr-21	North of the Mine,Purnapi,Kumunda Village	161	77	47	18.25	35.41	Mining Operations	About 3km
01-Apr-21	North East of the Mine, Solda Village	206	81	44	16.79	31.18	Coal Transportation Road	About 2km
02-Apr-21	North of the Mine,Purnapi,Kumunda Village	190	82	50	19.06	37.14	Mining Operations	About 3km
02-Apr-21	North East of the Mine, Solda Village	219	86	53	17.46	32.91	Coal Transportation Road	About 2km
08-Apr-21	North of the Mine,Purnapi,Kumunda Village	201	91	53	19.47	37.52	Mining Operations	About 3km
09-Apr-21	North East of the Mine, Solda Village	203	78	47	16.54	30.75	Coal Transportation Road	About 2km
09-Apr-21	North of the Mine,Purnapi,Kumunda Village	187	80	45	18.94	36.47	Mining Operations	About 3km
10-Apr-21	North East of the Mine, Solda Village	217	91	51	17.13	31.46	Coal Transportation Road	About 2km
15-Apr-21	North of the Mine,Purnapi,Kumunda Village	179	95	50	18.13	35.94	Mining Operations	About 3km
16-Apr-21	North of the Mine,Purnapi,Kumunda Village	143	69	39	15.25	30.14	Mining Operations	About 3km
16-Apr-21	North East of the Mine, Solda Village	186	84	49	14.62	27.61	Coal Transportation Road	About 2km
17-Apr-21	North East of the Mine, Solda Village	169	86	53	14.15	27.08	Coal Transportation Road	About 2km
22-Apr-21	North of the Mine,Purnapi,Kumunda Village	160	74	43	15.49	30.67	Mining Operations	About 3km
23-Apr-21	North of the Mine,Purnapi,Kumunda Village	182	83	49	16.27	31.48	Mining Operations	About 3km
23-Apr-21	North East of the Mine, Solda Village	141	64	44	13.30	26.49	Coal Transportation Road	About 2km
24-Apr-21	North East of the Mine, Solda Village	176	89	54	14.38	27.26	Coal Transportation Road	About 2km
29-Apr-21	North of the Mine,Purnapi,Kumunda Village	223	94	54	17.31	32.49	Mining Operations	About 3km



**cmpdi**

*A Miniratna Company*

Test Report


**AMBIENT AIR QUALITY DATA**


Area :

**Hingula**

**(Reference Station)**

30-Apr-21	North East of the Mine, Solda Village	151	71	41	13.17	26.28	Coal Transportation Road	About 2km
30-Apr-21	North of the Mine, Purnapi, Kumunda Village	193	91	50	16.58	31.64	Mining Operations	About 3km

  
O. I. C.  
Env. Lab  
CMPDI, RI-VII  
Bhubaneswar

  
Authorised Signatory  
CMPDI, RI-VII, LAB  
BHUBANESWAR



**cmpdi**

*A Mini Ratna Company*

Test Report

**AMBIENT AIR QUALITY DATA**

Area :

**Hingula**

**(Reference Station)**

Project :

**Balram OCP**

(conc. in µg/cu.m.)

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
01-Apr-21	North West of the Mine, Solda Village (Reported Only)	206	81	44	16.79	31.18	Coal Transportation Road	About 2km
02-Apr-21	North West of the Mine, Solda Village (Reported Only)	219	86	53	17.46	32.91	Coal Transportation Road	About 2km
09-Apr-21	North West of the Mine, Solda Village (Reported Only)	203	78	47	16.54	30.75	Coal Transportation Road	About 2km
09-Apr-21	East of the Mine, Natedi Village	164	81	53	16.84	30.41	Coal Transportation Road	About 2km
10-Apr-21	North West of the Mine, Solda Village (Reported Only)	217	91	51	17.13	31.46	Coal Transportation Road	About 2km
10-Apr-21	East of the Mine, Natedi Village	184	77	46	16.27	29.76	Coal Transportation Road	About 2km
16-Apr-21	North West of the Mine, Solda Village (Reported Only)	186	84	49	14.62	27.61	Coal Transportation Road	About 2km
16-Apr-21	East of the Mine, Natedi Village	170	59	39	14.38	26.87	Coal Transportation Road	About 2km
17-Apr-21	North West of the Mine, Solda Village (Reported Only)	169	86	53	14.15	27.08	Coal Transportation Road	About 2km
17-Apr-21	East of the Mine, Natedi Village	148	65	41	13.51	25.73	Coal Transportation Road	About 2km
23-Apr-21	East of the Mine, Natedi Village	188	85	48	14.50	27.06	Coal Transportation Road	About 2km
23-Apr-21	North West of the Mine, Solda Village (Reported Only)	141	64	44	13.30	26.49	Coal Transportation Road	About 2km
24-Apr-21	North West of the Mine, Solda Village (Reported Only)	176	89	54	14.38	27.26	Coal Transportation Road	About 2km
24-Apr-21	East of the Mine, Natedi Village	191	87	44	14.73	27.29	Coal Transportation Road	About 2km
30-Apr-21	East of the Mine, Natedi Village	187	90	53	14.61	27.15	Coal Transportation Road	About 2km
30-Apr-21	North West of the Mine, Solda Village (Reported Only)	151	71	41	13.17	26.28	Coal Transportation Road	About 2km

*24/5/21*

**O.I.C.**

**Env. Lab**

**CMPDI, RI-VII**

*Kattanaiik*  
**Authorised Signatory  
CMPDI, RI-VII, LAB  
BHUBANESWAR**

\*NAAQS, 2009

100    60    80    80



**cmpdi**

*A Mini Ratna Company*

**AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)**

**Area:Hingula**

<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> )	Lead (Pb)	Arsenic (As)	Nickel (Ni)
	( $\mu\text{g}/\text{m}^3$ )	( $\mu\text{g}/\text{m}^3$ )	( $\text{ng}/\text{m}^3$ )	( $\text{ng}/\text{m}^3$ )
01-Apr-21	3.90	<0.1	<1.0	<1.0
02-Apr-21	3.84	<0.1	<1.0	<1.0
08-Apr-21	3.99	<0.1	<1.0	<1.0
09-Apr-21	4.01	<0.1	<1.0	<1.0
15-Apr-21	4.12	<0.1	<1.0	<1.0
16-Apr-21	3.42	<0.1	<1.0	<1.0
22-Apr-21	3.49	<0.1	<1.0	<1.0
23-Apr-21	3.39	<0.1	<1.0	<1.0
29-Apr-21	3.41	<0.1	<1.0	<1.0
30-Apr-21	3.46	<0.1	<1.0	<1.0
<b>Standard</b>	<b>180(hour)</b>	<b>1.0(24hours)</b>	<b>6.0(Annual)</b>	<b>20(Annual)</b>

*[Signature]*  
**O. I. C.**  
**Env. Lab**  
**CMPDI, RI-VII**  
**Bhubaneswar**

*[Signature]*  
**CMPDI, RI-VII, LAB**  
**BHUBANESWAR**




**cmpdi**

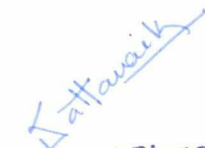
*A Mini Ratna Company*

**AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)**

**Area: Hingula**

<b>Project</b>	<b>Hingula OCP</b>			
<b>Monitoring Station</b>	<b>North East of the Mine, Solada Village</b>			
<b>Date of sampling</b>	Ozone (O <sub>3</sub> )	Lead (Pb)	Arsenic (As)	Nickel (Ni)
	( $\mu\text{g}/\text{m}^3$ )	( $\mu\text{g}/\text{m}^3$ )	( $\text{ng}/\text{m}^3$ )	( $\text{ng}/\text{m}^3$ )
01-Apr-21	3.36	<0.1	<1.0	<1.0
02-Apr-21	3.40	<0.1	<1.0	<1.0
09-Apr-21	3.44	<0.1	<1.0	<1.0
10-Apr-21	3.32	<0.1	<1.0	<1.0
16-Apr-21	3.59	<0.1	<1.0	<1.0
17-Apr-21	3.52	<0.1	<1.0	<1.0
23-Apr-21	3.55	<0.1	<1.0	<1.0
24-Apr-21	3.50	<0.1	<1.0	<1.0
30-Apr-21	3.46	<0.1	<1.0	<1.0
<b>Standard</b>	<b>180(hour)</b>	<b>1.0(24hours)</b>	<b>6.0(Annual)</b>	<b>20(Annual)</b>

  
O. T. S.  
Env. Lab  
CMPDI, RI-VII  
Bhubaneswar

  
Authorised Signatory  
CMPDI, RI-VII, LAB  
BHUBANESWAR



**cmpdi**

*A Mini Ratna Company*

**AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)**

**Area: Hingula**

<b>Project</b>	<b>Balram OCP</b>			
<b>Monitoring Station</b>	<b>East of the Mine, Natedi Village</b>			
<b>Date of sampling</b>	Ozone (O <sub>3</sub> )	Lead (Pb)	Arsenic (As)	Nickel (Ni)
	( $\mu\text{g}/\text{m}^3$ )	( $\mu\text{g}/\text{m}^3$ )	( $\text{ng}/\text{m}^3$ )	( $\text{ng}/\text{m}^3$ )
09-Apr-21	3.12	<0.1	<1.0	<1.0
10-Apr-21	3.17	<0.1	<1.0	<1.0
16-Apr-21	3.73	<0.1	<1.0	<1.0
17-Apr-21	3.78	<0.1	<1.0	<1.0
23-Apr-21	3.75	<0.1	<1.0	<1.0
24-Apr-21	3.71	<0.1	<1.0	<1.0
30-Apr-21	3.83	<0.1	<1.0	<1.0
<b>Standard</b>	<b>180(hour)</b>	<b>1.0(24hours)</b>	<b>6.0(Annual)</b>	<b>20(Annual)</b>

O. I. C.  
Env. Lab  
CMPDI, RI-VII  
Bhubaneswar

P. Pattanayak  
Authorised Signatory  
CMPDI, RI-VII, LAB  
BHUBANESWAR



**cmpdi**

*A Mini Ratna Company*

**AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)**

**Area:Hingula**

<b>Project</b>	<b>Balram OCP</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> )	Lead (Pb)	Arsenic (As)	Nickel (Ni)
	( $\mu\text{g}/\text{m}^3$ )	( $\mu\text{g}/\text{m}^3$ )	( $\text{ng}/\text{m}^3$ )	( $\text{ng}/\text{m}^3$ )
01-Apr-21	3.36	<0.1	<1.0	<1.0
02-Apr-21	3.40	<0.1	<1.0	<1.0
09-Apr-21	3.44	<0.1	<1.0	<1.0
10-Apr-21	3.32	<0.1	<1.0	<1.0
16-Apr-21	3.59	<0.1	<1.0	<1.0
17-Apr-21	3.52	<0.1	<1.0	<1.0
23-Apr-21	3.55	<0.1	<1.0	<1.0
24-Apr-21	3.50	<0.1	<1.0	<1.0
30-Apr-21	3.46	<0.1	<1.0	<1.0
<b>Standard</b>	<b>180(hour)</b>	<b>1.0(24hours)</b>	<b>6.0(Annual)</b>	<b>20(Annual)</b>

*[Signature]*  
**O.I.C.**  
**Env. Lab**  
**CMPDI, RI-VII**  
**Bhubaneswar**

*[Signature]*  
**Authorized Signatory**  
**CMPDI, RI-VII, LAB**  
**BHUBANESWAR**



**cmpdi**

*A Mini Khatas Company*

**TABLE--**

**NOISE LEVEL MONITORING DATA**

AREA :

*Hingula*

PROJECT :

*Balaram OCP*

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
03-Apr-21	Backfilled Area Near Dozer Shed	68.4	65.7
03-Apr-21	Pump House Near Outsourcing Working Patch&Coal TR	68.9	66.3
03-Apr-21	Near Project Office Balram OCP	65.6	60.7
03-Apr-21	South West of the Mine	70.1	66.5
30-Apr-21	Backfilled Area Near Dozer Shed	66.3	63.4
30-Apr-21	Pump House Near Outsourcing Working Patch&Coal TR	70.1	66.5
30-Apr-21	Near Project Office Balram OCP	69.4	65.6
30-Apr-21	South West of the Mine	68.4	65.7

MoEF Standard Notification dated 25th September, 2000

6.00 AM -10.00 PM Leq 75dB(A)

10.00 PM -6.00 AM Leq 70dB(A)

*[Signature]*  
 Env. Lab  
 CMPDI, RI-VII  
 Bhubaneswar

*[Signature]*  
 Authorised Signatory  
 CMPDI, RI-VII, LAB  
 BHUBANESWAR



**cmpdi**

*A Minors Company*

**TABLE--**

**NOISE LEVEL MONITORING DATA**

AREA :

*Hingula*

PROJECT :

*Hingula OCP*

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
03-Apr-21	South West Side of the Mine	70.4	66.9
03-Apr-21	North East of the Mine, Solda Village	57.4	55.1
03-Apr-21	North of the Mine, Purnapi Kumunda Village	59.4	56.3
03-Apr-21	Time Office	68.4	65.3
30-Apr-21	South West Side of the Mine	67.1	66.3
30-Apr-21	North East of the Mine, Solda Village	58.6	56.3
30-Apr-21	North of the Mine, Purnapi Kumunda Village	60.6	58.4
30-Apr-21	Time Office	68.6	65.8

MoEF Standard Notification dated 25th September, 2000

6.00 AM -10.00 PM Leq 75dB(A)

10.00 PM -6.00 AM Leq 70dB(A)

*Sd/- SM*

**Q.L.C.  
Env. Lab  
CMPDI, RI-VII  
Bhubaneswar**

*Kattawalk*  
**Authorised Signatory  
CMPDI, RI-VII, LAB  
BHUBANESWAR**



**cmpdi**

*A Mini Ratna Company*

TABLE--

**EFFLUENT QUALITY DATA**

Area :

Hingula

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

Project :

Balram OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	Remarks
15-Apr-21	Inlet of O & G Trap	7.46	<4.0	56	40		
15-Apr-21	Outlet of O & G Trap	8.52	<4.0	50	36		
15-Apr-21	STP Inlet of Balram Colony	7.07		46		<2.0	
15-Apr-21	STP Outlet of Balram Colony	7.61		36		<2.0	
30-Apr-21	STP Outlet of Balram Colony	7.69		30		<2.0	

Project :

Hingula OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	Remarks
15-Apr-21	Inlet of O & G Trap	7.26	<4.0	44	32		
15-Apr-21	Outlet of O & G Trap	8.43	<4.0	38	28		

*MS/SM*  
O. I. C.  
Env. Lab  
CMPDI, RI-VII  
Bhubaneswar

Env. Lab.  
CMPDI, RI-VII  
Bhubaneswar

*Hattarank*  
Authorised Signatory  
CMPDI, RI-VII, LAB  
BHUBANESWAR

MoEF Standard Notification dated 25th September, 2000 and MoEF Schedule VI, General standard for discharge of Environmental Pollutants Part A: Effluents

5.5-9.0	10	100	250	30
---------	----	-----	-----	----



**cmpdi**

*A Mini Ratna Company*

## Drinking Water Quality Data Hingula Area

Project / OCP	Hingula OCP			Indian Drinking Standards (IS-10500):2012	
	Monitoring Station	Time Office Water	Gopalprasad Village Bore Well Water		
Date of Sampling	15-Apr-2021	15-Apr-2021	15-Apr-2021	Acceptable	Permissible
Colour(Hazen)	1	2	1	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	2	1	1	1	5
pH	7.45	7.20	6.96	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	48	284	228	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	312	220	156	200	600
Iron(mg/L)	<0.1	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	22	44	64	250	1000
Total Dissolve Solid(mg/L)	448	452	434	500	2000
Calcium(mg/L)	81.76	56.11	32.06	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)	168.61	10.63	8.34	200	400
Nitrate(mg/L)	<0.5	<0.5	<0.5	45	No relaxation
Fluoride(mg/L)	<0.30	<0.30	<0.30	1	1.5
Arsenic(mg/L)	<0.005	<0.005	<0.005	0.01	0.05
Lead(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Zinc(mg/L)	<0.04	0.25	0.05	5	15
Total Chromium (mg/L)	<0.01	<0.01	<0.01	0.05	No relaxation
Boron(mg/L)	<0.1	<0.1	<0.1	0.5	1.0
Cadmium(mg/L)	<0.001	<0.001	<0.001	0.003	No relaxation
MPN (Index/100 ml)	26	3	-	-	-

*24/5/21*  
**Q. I. C.**  
**Env. Lab**  
**CMPDI, RI-VII**  
**Bhubaneswar**

*J. J. J. J.*  
**CMPDI, RI-VII, LAB**  
**BHUBANESWAR**



**cmpdi**

*A Mini Ratna Company*

## Drinking Water Quality Data Hingula Area

Project / OCP	Balaram OCP			Indian Drinking Standards (IS-10500):2012	
	Danara Village Borewell Water	Balaram Colony Tap Water	Nakeipasi Village Bore Well Water		
Monitoring Station					
Date of Sampling	15-Apr-2021	15-Apr-2021	15-Apr-2021	Acceptable	Permissible
Colour(Hazen)	2	3	1	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	3	1	2	1	5
pH	7.55	7.73	6.64	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	292	64	20	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	168	376	64	200	600
Iron(mg/L)	<0.1	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	44	26	32	250	1000
Total Dissolve Solid(mg/L)	454	576	138	500	2000
Calcium(mg/L)	38.48	88.18	22.44	75	200
Copper(mg/L)	<0.03	<0.3	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	<0.4	<0.04	0.1	0.3
Sulphate(mg/L)	5.32	176.81	10.64	200	400
Nitrate(mg/L)	<0.5	2.36	34.34	45	No relaxation
Fluoride(mg/L)	<0.30	<0.30	<0.30	1	1.5
Arsenic(mg/L)	<0.005	<0.005	<0.005	0.01	0.05
Lead(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Zinc(mg/L)	0.31	0.4	0.71	5	15
Total Chromium (mg/L)	<0.01	<0.01	<0.01	0.05	No relaxation
Boron(mg/L)	<0.1	<0.1	<0.1	0.5	1.0
Cadmium(mg/L)	<0.001	<0.001	<0.001	0.003	No relaxation
MPN (Index/100 ml)	22	-	-	-	-

*Q.L.C.*  
Env. Lab  
CMPDI, RI-VII  
Bhubaneswar

*Tattouaik*  
Authorised Signatory  
CMPDI, RI-VII, LAB  
BHUBANESWAR

# Hingula

Hingula Air monitoring station 2021

Legend

Maradahaniharpur

North of the mine, Purnapni, Kumunda village (RS)

Kumunda

Gopalprasad

Bhalugadia

Time office (CS)  $85^{\circ}01'31.22''$  E  $20^{\circ}57'29.2''$  N

Balichandrapur

Solada

North east of the mine, Solada village (RS)

Satyabadipur

Puruna Gaan Village

Nua Gaan Sahi

Kalam Chhuim

Odisha



3 km

Ambapal

Google Earth

Image © 2021 Maxar Technologies

© 2021 Google

# Balram

Bairam Air monitoring stations 2021



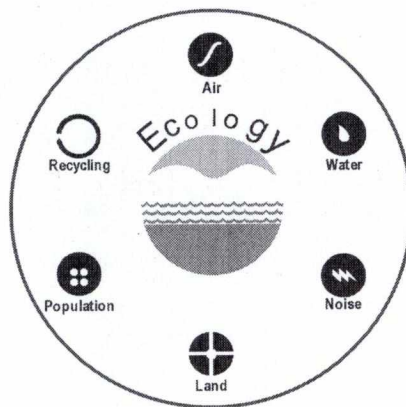
Google Earth

Image © 2021 Maxar Technologies  
© 2021 Google

**Environmental Monitoring Report  
Of  
Talcher Area  
For  
April- 2021  
Talcher Coalfield**



**Mahanadi Coalfields Limited**



***cmpdi***

*A Mini Ratna Company*

**Central Mine Planning & Design Institute Ltd.**  
(A Subsidiary of Coal India Ltd.)

**Regional Institute-VII, Samantpuri, P.O : RRL, Bhubaneswar-751013 (Odisha)**  
[Assistance from Environment Division, CMPDI(HQs), Ranchi ]

*The test report shall not be reproduced in part or full without written approval of the competent authority*



**cmpdi**

*A Miniratna Company*

Test Report

**AMBIENT AIR QUALITY DATA**

Area :

**Talcher**

**(Compliance Station)**

Project :

**Talcher Colliery**

(conc. in µg/cu.m.)

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
08-Apr-21	Near Canteen Talcher Colliery	Strike	Strike	Strike	Strike	Strike	Locl Transportation	About 500m
08-Apr-21	Officer Club, Talcher Area	Strike	Strike	Strike	Strike	Strike	Mining Activities, Ananta, Lingaraj &Bharatpur OCP	About 1000m
27-Apr-21	Near Canteen Talcher Colliery	412	196	44	17.43	34.52	Locl Transportation	About 500m
27-Apr-21	Officer Club, Talcher Area	202	128	37	15.46	26.91	Mining Activities, Ananta, Lingaraj &Bharatpur OCP	About 1000m

*[Signature]*  
 O.T.C.  
 Env. Lab  
 CMPDI, RI-VII  
 Bhubaneswar

*[Signature]*  
 Kallanaik  
 CMPDI, RI-VII, LAB  
 BHUBANESWAR

MoEF Standards Notification dated 25th September, 2000	600	300		120	120
--	-----	-----	--	-----	-----



**cmpdi**

*A Ministry Company*

Test Report

**AMBIENT AIR QUALITY DATA**

Area :

**Talcher**

**(Compliance Station)**

Project :

**Nandira Colliery**

(conc. in µg/cu.m.)

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
05-Apr-21	Project Office	284	160	56	15.49	29.31	Local Transportation, CHP	About 500m
05-Apr-21	Sub Station	363	243	62	18.68	30.57	Transportation & Railway Sidings of BOCP	About 500m
19-Apr-21	Project Office	348	215	72	16.69	32.83	Local Transportation, CHP	About 500m
19-Apr-21	Sub Station	329	208	55	15.32	27.61	Transportation & Railway Sidings of BOCP	About 500m

*[Signature]*  
**O. I. C.**  
**Env. Lab**  
**CMPDI, RI-VII**  
**Bhubaneswar**

*[Signature]*  
**Authorised Signatory**  
**CMPDI, RI-VII, LAB**  
**BHUBANESWAR**

MoEF Standards Notification dated 25th September, 2000

600	300		120	120
-----	-----	--	-----	-----



**cmpdi**

*A Miniratna Company*

Test Report

**AMBIENT AIR QUALITY DATA**

Area :

**Talcher**

**(Compliance Station)**

Project :

**Deulbera Colliery**

(conc. in  $\mu\text{g}/\text{cu.m.}$ )

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
06-Apr-21	IWSS (Reported Only)	372	206	62	18.74	35.16	Coal Transportation Road, Railway Siding, Coal S.Y	About 500m
22-Apr-21	IWSS (Reported Only)	292	155	55	17.65	35.47	Coal Transportation Road, Railway Siding, Coal S.Y	About 500m

*SA/SW*  
**O. I. C.**  
**Env. Lab**  
**CMPDI, RI-VII**  
**Bhubaneswar**

*Tatanaik*  
**Authorised Signatory**  
**CMPDI, RI-VII, LAB**  
**BHUBANESWAR**

MoEF Standards Notification dated 25th September, 2000

600	300		120	120
-----	-----	--	-----	-----



**cmpdi**

A Miniratna Company

Test Report

**AMBIENT AIR QUALITY DATA**

Area :

**Talcher**

**(Compliance Station)**

Project :

**Handidhua Colliery**

(conc. in µg/cu.m.)

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
14-Apr-21	Manager's Office	232	154	51	15.61	28.67	Local Transportation, CHP	About 500m
28-Apr-21	Manager's Office	184	104	48	11.28	22.61	Local Transportation, CHP	About 500m

*[Signature]*  
**O. L. C.**  
**Env. Lab**  
**CMPDI, RI-VII**  
**Bhubaneswar**

*[Signature]*  
**Authorised Signatory**  
**CMPDI, RI-VII, LAB**  
**BHUBANESWAR**

MoEF Standards Notification dated 25th September, 2000

600

300

120

120



**cmpdi**

*A Miniratna Company*

Test Report

**AMBIENT AIR QUALITY DATA**

Area :

**Talcher**

**(Compliance Station)**

Project :

**Mandapal Sand Mine**

(conc. in µg/cu.m.)

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
13-Apr-21	Near Pachismeshwar Temple	-	-	-	-	-	Mining Activity	Less than 500m
13-Apr-21	Near Mandapal Chowk	263	179	54	17.35	33.48	Mining Activity	Less than 500m
26-Apr-21	Near Mandapal Chowk	294	155	56	12.69	23.47	Mining Activity	Less than 500m
28-Apr-21	Near Pachismeshwar Temple	284	138	63	11.72	22.19	Mining Activity	Less than 500m

*Q.L.C.*

**Q.L.C.  
Env. Lab  
CMPDI, RI-VII  
Bhubaneswar**

*T. Jaisankar*  
**Authorised Signatory  
CMPDI, RI-VII, LAB  
BHUBANESWAR**

MoEF Standards Notification dated 25th September, 2000

600	300		120	120
-----	-----	--	-----	-----



**cmpdi**

*A Mini Katar Company*

Test Report

**AMBIENT AIR QUALITY DATA**

Area :

**Talcher**

**(Compliance Station)**

Project :

**Kakudi & kishoripal sand mine**

(conc. in µg/cu.m.)

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
13-Apr-21	Near Kishoripal Village	289	161	57	15.46	29.79	Domestic Cooking, Transportation Road	About 500m
28-Apr-21	Near Kishoripal Village	273	142	54	11.53	22.46	Domestic Cooking, Transportation Road	About 500m

*SAI SM*

**O. I. C.  
Env. Lab  
CMPDI, RI-VII  
Bhubaneswar**

*Kattanaik*  
Authorized signatory  
CMPDI, RI-VII, LAB  
BHUBANESWAR

MoEF Standards Notification dated 25th September, 2000

600	300		120	120
-----	-----	--	-----	-----



A Coal India Company

# AMBIENT AIR QUALITY DATA

Area :

Talcher

(Reference Station)

Project :

Nandira Colliery

(conc. in µg/cu.m.)

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
01-Apr-21	Nandira Colony	183	86	49	18.57	37.48	Local Transportation, Mining Activities etc.	About 500m
02-Apr-21	Nandira Colony	192	91	46	18.41	38.76	Local Transportation, Mining Activities etc.	About 500m
08-Apr-21	Nandira Colony	209	87	51	19.24	39.95	Local Transportation, Mining Activities etc.	About 500m
09-Apr-21	Nandira Colony	190	79	49	18.73	39.81	Local Transportation, Mining Activities etc.	About 500m
09-Apr-21	Near Natedi Village (Reported Only)	164	81	53	16.84	30.41	Coal Transportation Road	About 2km
10-Apr-21	Near Natedi Village (Reported Only)	184	77	46	16.27	29.76	Coal Transportation Road	About 2km
15-Apr-21	Nandira Colony	216	94	53	19.59	40.36	Local Transportation, Mining Activities etc.	About 500m
16-Apr-21	Nandira Colony	183	77	40	13.24	25.16	Local Transportation, Mining Activities etc.	About 500m
17-Apr-21	Near Natedi Village (Reported Only)	148	65	41	13.51	25.73	Coal Transportation Road	About 2km
22-Apr-21	Nandira Colony	147	85	47	12.36	24.73	Local Transportation, Mining Activities etc.	About 500m
23-Apr-21	Nandira Colony	157	69	39	12.51	24.95	Local Transportation, Mining Activities etc.	About 500m
23-Apr-21	Near Natedi Village (Reported Only)	188	85	48	14.50	27.06	Coal Transportation Road	About 2km
24-Apr-21	Near Natedi Village (Reported Only)	191	87	44	14.73	27.29	Coal Transportation Road	About 2km
29-Apr-21	Nandira Colony	174	78	44	13.12	25.04	Local Transportation, Mining Activities etc.	About 500m
30-Apr-21	Nandira Colony	197	87	49	13.58	25.49	Local Transportation, Mining Activities etc.	About 500m
30-Apr-21	Near Natedi Village (Reported Only)	187	90	53	14.61	27.15	Coal Transportation Road	About 2km

\*NAAQS, 2009

Env. Lab  
GMPDI, N-VII  
Bhubaneswar

100 60 80 80

Kattarank  
Authorised Signatory  
GMPDI, RI-VII, LAB  
BHUBANESWAR




**cmpdi**


*A Mini Ratna Company*

**AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)**

**Area: Talcher**

<b>Project</b>	<b>Nandira</b>			
<b>Monitoring Station</b>	<b>Nandira Colony</b>			
<b>Date of sampling</b>	Ozone (O <sub>3</sub> )	Lead (Pb)	Arsenic (As)	Nickel (Ni)
	( $\mu\text{g}/\text{m}^3$ )	( $\mu\text{g}/\text{m}^3$ )	( $\text{ng}/\text{m}^3$ )	( $\text{ng}/\text{m}^3$ )
01-Apr-21	3.86	<0.1	<1.0	<1.0
02-Apr-21	3.74	<0.1	<1.0	<1.0
08-Apr-21	3.64	<0.1	<1.0	<1.0
09-Apr-21	3.70	<0.1	<1.0	<1.0
15-Apr-21	3.59	<0.1	<1.0	<1.0
16-Apr-21	2.56	<0.1	<1.0	<1.0
22-Apr-21	2.51	<0.1	<1.0	<1.0
23-Apr-21	2.59	<0.1	<1.0	<1.0
29-Apr-21	2.54	<0.1	<1.0	<1.0
30-Apr-21	2.50	<0.1	<1.0	<1.0
<b>Standard</b>	<b>180(hour)</b>	<b>1.0(24hours)</b>	<b>6.0(Annual)</b>	<b>20(Annual)</b>

  
O. I. C.  
Env. Lab  
CMPDI, RI-VII  
Bhubaneswar

  
Authorised Signatory  
CMPDI, RI-VII, LAB  
BHUBANESWAR



**cmpdi**

*A Miniratna Company*

**TABLE--**

**NOISE LEVEL MONITORING DATA**

**AREA :**

**Talcher**

**PROJECT :**

**Talcher Colliery**

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
02-Apr-21	GM Office, Talcher Area	56.3	54.7
02-Apr-21	Near Canteen, Talcher Colliery	58.6	55.0
29-Apr-21	GM Office, Talcher Area	58.3	53.6
29-Apr-21	Near Canteen, Talcher Colliery	59.4	54.3

MoEF Standard Notification dated 25th September, 2000

6.00 AM -10.00 PM Leq 75dB(A)

10.00 PM -6.00 AM Leq 70dB(A)

*[Signature]*  
**O.L.C.**  
 Env. Lab  
 CMPDI, RI-VII  
 Bhubaneswar

*[Signature]*  
 Authorised Signatory  
 CMPDI, RI-VII, LAB  
 BHUBANESWAR



**cmpdi**

*A Miniratna Company*

**TABLE--**

**NOISE LEVEL MONITORING DATA**

**AREA :**

*Talcher*

**PROJECT :**

*Nandira Colliery*

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
02-Apr-21	Sub Station, Nandira Colliery	70.4	68.3
02-Apr-21	Project Office	65.6	63.1
29-Apr-21	Sub Station, Nandira Colliery	59.4	67.3
29-Apr-21	Project Office	65.7	60.4

MoEF Standard Notification dated 25th September, 2000

6.00 AM -10.00 PM Leq 75dB(A)

10.00 PM -6.00 AM Leq 70dB(A)

*Q.L.C.*  
**Q.L.C.**  
**Env. Lab**  
**CMPDI, RI-VII**  
**Bhubaneswar**

*Katanaik*  
**Authorised Signatory**  
**CMPDI, RI-VII, LAB**  
**BHUBANESWAR**



**cmpdi**

*A Miniratna Company*

**TABLE--**

**NOISE LEVEL MONITORING DATA**

**AREA :**

*Talcher*

**PROJECT :**

*Deulbera Colliery*

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
02-Apr-21	Manager's Office	56.4	55.0
29-Apr-21	Manager's Office	56.4	55.8

MoEF Standard Notification dated 25th September, 2000

6.00 AM -10.00 PM Leq 75dB(A)

10.00 PM -6.00 AM Leq 70dB(A)

*Q.I.C.*  
**Q. I. C.**  
**Env. Lab**  
**CMPDI, RI-VII**  
**Bhubaneswar**

*Kattamur*  
**Authorised Signatory**  
**CMPDI, RI-VII, LAB**  
**BHUBANESWAR**



**cmpdi**

*A Mine Safety Company*

**TABLE--**

**NOISE LEVEL MONITORING DATA**

**AREA :**

*Talcher*

**PROJECT :**

*Mandapal Sand Mine*

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
03-Apr-21	Near Gopinathpur Village	57.4	52.4
29-Apr-21	Near Gopinathpur Village	57.4	53.4

MoEF Standard Notification dated 25th September, 2000

6.00 AM -10.00  
PM Leq 75dB(A)

10.00 PM -6.00  
AM Leq 70dB(A)

*[Signature]*  
O.I.C.  
Env. Lab  
CMPDI, RI-VII  
Bhubaneswar

*[Signature]*  
Authorised Signatory  
CMPDI, RI-VII, LAB  
BHUBANESWAR



**cmpdi**

*A Mini Ratna Company*

**TABLE--**

**NOISE LEVEL MONITORING DATA**

**AREA :**

*Talcher*

**PROJECT :**

*Kakudi & Kishoripal Sand Mine*

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
03-Apr-21	Near Kishoripal Village	58.4	55.3
29-Apr-21	Near Kishoripal Village	56.3	55.1

MoEF Standard Notification dated 25th September, 2000

6.00 AM -10.00 PM Leq 75dB(A)

10.00 PM -6.00 AM Leq 70dB(A)

*O.L.C.*  
**O.L.C.**  
**Env. Lab**  
**CMPDI, RI-VII**  
**Bhubaneswar**

*Kattawalk*  
**Authorised Signatory**  
**CMPDI, RI-VII, LAB**  
**BHUBANESWAR**

**EFFLUENT QUALITY DATA**

Area :

Talcher

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

Project :

Talcher Colliery

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	Remarks
14-Apr-21	Talcher Colliery Sedimentation Tank Discharge	7.28	<4.0	26	16		
30-Apr-21	Talcher Colliery Sedimentation Tank Discharge	7.39	<4.0	38	24		

*Signature*

**O. I. C.**  
**Env. Lab**  
**CMPDI, RI-VII**  
**Bhubaneswar**

*Signature*

**Authorised Signatory**  
**CMPDI, RI-VII, LAB**  
**BHUBANESWAR**

MoEF Standard Notification dated 25th September, 2000 and MoEF Schedule VI, General standard for discharge of Environmental Pollutants Part A: Effluents	5.5-9.0	10	100	250	30
--	---------	----	-----	-----	----



# EFFLUENT QUALITY DATA

Area :

Talcher

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

Project :

Nandira Colliery

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	Remarks
14-Apr-21	Nandira Colliery Sedimentation Tank Discharge	7.03	<4.0	30	28		
29-Apr-21	Nandira Colliery Sedimentation Tank Discharge	7.12	<4.0	38	32		

*[Signature]*

O. I. C.  
Env. Lab  
CMPDI, RI-VII  
Bhubaneswar

*[Signature]*

Authorised Signatory  
CMPDI, RI-VII, LAB  
BHUBANESWAR

MoEF Standard Notification dated 25th September, 2000 and MoEF Schedule VI, General standard for discharge of Environmental Pollutants Part A: Effluents	5.5-9.0	10	100	250	30
--	---------	----	-----	-----	----



**EFFLUENT QUALITY DATA**

Area :

Talcher

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

Project :

Deulbera Colliery

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	Remarks
14-Apr-21	Deulbera Colliery Mine Discharge at Pit Top	6.51	<4.0	22	12		
14-Apr-21	Ranipark Submersible Pump	6.50	<4.0	16	8		
30-Apr-21	Deulbera Colliery Mine Discharge at Pit Top	6.43	<4.0	32	20		
30-Apr-21	Ranipark Submersible Pump	6.54	<4.0	28	16		

*[Signature]*  
O. P. S.  
Env. Lab  
CMPDI, RI-VII  
Bhubaneswar

*[Signature]*  
Authorised Signatory  
CMPDI, RI-VII, LAB  
BHUBANESWAR

MoEF Standard Notification dated 25th September, 2000 and MoEF Schedule VI, General standard for discharge of Environmental Pollutants Part A: Effluents	5.5-9.0	10	100	250	30
--	---------	----	-----	-----	----

# EFFLUENT QUALITY DATA

Area :

Talcher

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

Project :

Handidhwa Colliery

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	Remarks
14-Apr-21	Handidhwa Colliery Mine Discharge	7.42	<4.0	20	12		
29-Apr-21	19X Cut Road Bore Hole Point	6.35	<4.0	18	12		
29-Apr-21	Handidhwa Colliery Mine Discharge	7.49	<4.0	32	20		

*Signature*  
O.L.C.  
Env. Lab  
CMPDI, RI-VII  
Bhubaneswar

*Signature*  
CMPDI, RI-VII, LAB  
BHUBANESWAR

MoEF Standard Notification dated 25th September, 2000 and MoEF Schedule VI, General standard for discharge of Environmental Pollutants Part A: Effluents	5.5-9.0	10	100	250	30
--	---------	----	-----	-----	----



**cmpdi**

*A Mini Ratna Company*

# Drinking Water Quality Data Talcher Area

Project / OCP	Talcher U/G		Indian Drinking Standards (IS-10500):2012	
	Tap-Water, GM Office	Canteen Tap- Water, Talcher Colliery		
Monitoring Station				
Date of Sampling	14-Apr-2021	14-Apr-2021	Acceptable	Permissible
Colour(Hazen)	2	1	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	2	1	1	5
pH	7.98	7.91	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	96	92	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	152	156	200	600
Iron(mg/L)	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	28	30	250	1000
Total Dissolve Solid(mg/L)	274	278	500	2000
Calcium(mg/L)	36.87	38.48	75	200
Copper(mg/L)	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	<0.04	0.1	0.3
Sulphate(mg/L)	57.36	56.53	200	400
Nitrate(mg/L)	1.81	1.68	45	No relaxation
Fluoride(mg/L)	<0.30	<0.30	1	1.5
Arsenic(mg/L)	<0.005	<0.005	0.01	0.05
Lead(mg/L)	<0.005	<0.005	0.01	No relaxation
Zinc(mg/L)	0.12	0.05	5	15
Total Chromium (mg/L)	<0.01	<0.01	0.05	No relaxation
Boron(mg/L)	<0.1	<0.1	0.5	1.0
Cadmium(mg/L)	<0.001	<0.001	0.003	No relaxation

*Q.L.C.*  
Q.L.C.  
Env. Lab  
CMPDI, RI-VII  
Bhubaneswar

*Kattamait*  
Authorised Signatory  
CMPDI, RI-VII, LAB  
BHUBANESWAR




**cmpdi**

*A Mini Ratna Company*

## Drinking Water Quality Data Talcher Area

Project / OCP	Nandira U/G		Indian Drinking Standards (IS-10500):2012	
	Canteen Tap- Water, Nandira Colliery	Pit Top Tap Water, Nandira Colliery		
Monitoring Station				
Date of Sampling	14-Apr-2021	14-Apr-2021	Acceptable	Permissible
Colour(Hazen)	2	2	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	2	1	1	5
pH	7.71	7.55	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	48	48	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	156	192	200	600
Iron(mg/L)	<0.1	<0.1	0.3	No relaxation
Chloride(mg/L)	20	18	250	1000
Total Dissolve Solid(mg/L)	288	294	500	2000
Calcium(mg/L)	44.89	41.68	75	200
Copper(mg/L)	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	<0.04	0.1	0.3
Sulphate(mg/L)	105.70	104.58	200	400
Nitrate(mg/L)	<0.5	<0.5	45	No relaxation
Fluoride(mg/L)	<0.30	<0.30	1	1.5
Arsenic(mg/L)	<0.005	<0.005	0.01	0.05
Lead(mg/L)	<0.005	<0.005	0.01	No relaxation
Zinc(mg/L)	<0.04	0.59	5	15
Total Chromium (mg/L)	<0.01	<0.01	0.05	No relaxation
Boron(mg/L)	<0.1	<0.01	0.5	1.0
Cadmium(mg/L)	<0.001	<0.001	0.003	No relaxation

  
O.T.C.  
Env. Lab  
CMPDI, RI-VII  
Bhubaneswar

  
Authorised Signatory  
CMPDI, RI-VII, LAB  
BHUBANESWAR



**cmpdi**

*A Mini Ratna Company*

# Drinking Water Quality Data Talcher Area

Project / OCP	Deulbera U/G	Indian Drinking Standards (IS-10500):2012	
Monitoring Station	Deulbera Manager Office Tap Water	Acceptable	Permissible
Date of Sampling	14-Apr-2021	Acceptable	Permissible
Colour(Hazen)	1	5	15
Odour	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	1	1	5
pH	8.01	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	100	200	600
Total Hardness (Ca CO <sub>3</sub> )(mg/L)	164	200	600
Iron(mg/L)	<0.1	0.3	No relaxation
Chloride(mg/L)	30	250	1000
Total Dissolve Solid(mg/L)	274	500	2000
Calcium(mg/L)	35.27	75	200
Copper(mg/L)	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	0.1	0.3
Sulphate(mg/L)	54.58	200	400
Nitrate(mg/L)	4.06	45	No relaxation
Fluoride(mg/L)	<0.30	1	1.5
Arsenic(mg/L)	<0.005	0.01	0.05
Lead(mg/L)	<0.005	0.01	No relaxation
Zinc(mg/L)	0.09	5	15
Total Chromium (mg/L)	<0.01	0.05	No relaxation
Boron(mg/L)	<0.1	0.5	1.0
Cadmium(mg/L)	<0.001	0.003	No relaxation

*[Signature]*  
Env. Lab  
CMPDI, RI-VII  
Bhubaneswar

*[Signature]*  
Authorised Signatory  
CMPDI, RI-VII, LAB  
BHUBANESWAR



**cmpdi**

*A Mini Ratna Company*

# Drinking Water Quality Data Talcher Area

Project / OCP	Handhidhua Colliery	Indian Drinking Standards (IS-10500):2012	
Monitoring Station	Pit Top Tap Water	Acceptable	Permissible
Date of Sampling	14-Apr-2021		
Colour(Hazen)	2	5	15
Odour	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	2	1	5
pH	7.93	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	76	200	600
Total Hardness (Ca CO3)(mg/L)	152	200	600
Iron(mg/L)	<0.1	0.3	No relaxation
Chloride(mg/L)	36	250	1000
Total Dissolve Solid(mg/L)	266	500	2000
Calcium(mg/L)	35.27	75	200
Copper(mg/L)	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	0.1	0.3
Sulphate(mg/L)	48.19	200	400
Nitrate(mg/L)	15.42	45	No relaxation
Fluoride(mg/L)	<0.30	1	1.5
Arsenic(mg/L)	<0.005	0.01	0.05
Lead(mg/L)	<0.005	0.01	No relaxation
Zinc(mg/L)	<0.04	5	15
Total Chromium (mg/L)	<0.01	0.05	No relaxation
Boron(mg/L)	<0.01	0.5	1.0
Cadmium(mg/L)	<0.001	0.003	No relaxation

*[Signature]*  
G.T.C.  
Env. Lab  
CMPDI, RI-VII  
Bhubaneswar

*[Signature]*  
Authorised Signatory  
CMPDI, RI-VII, LAB  
BHUBANESWAR

# Talcher

Talcher Air monitoring stations 2021

Rodhasar

Near canteen, TC

GIM office, TA

Pond

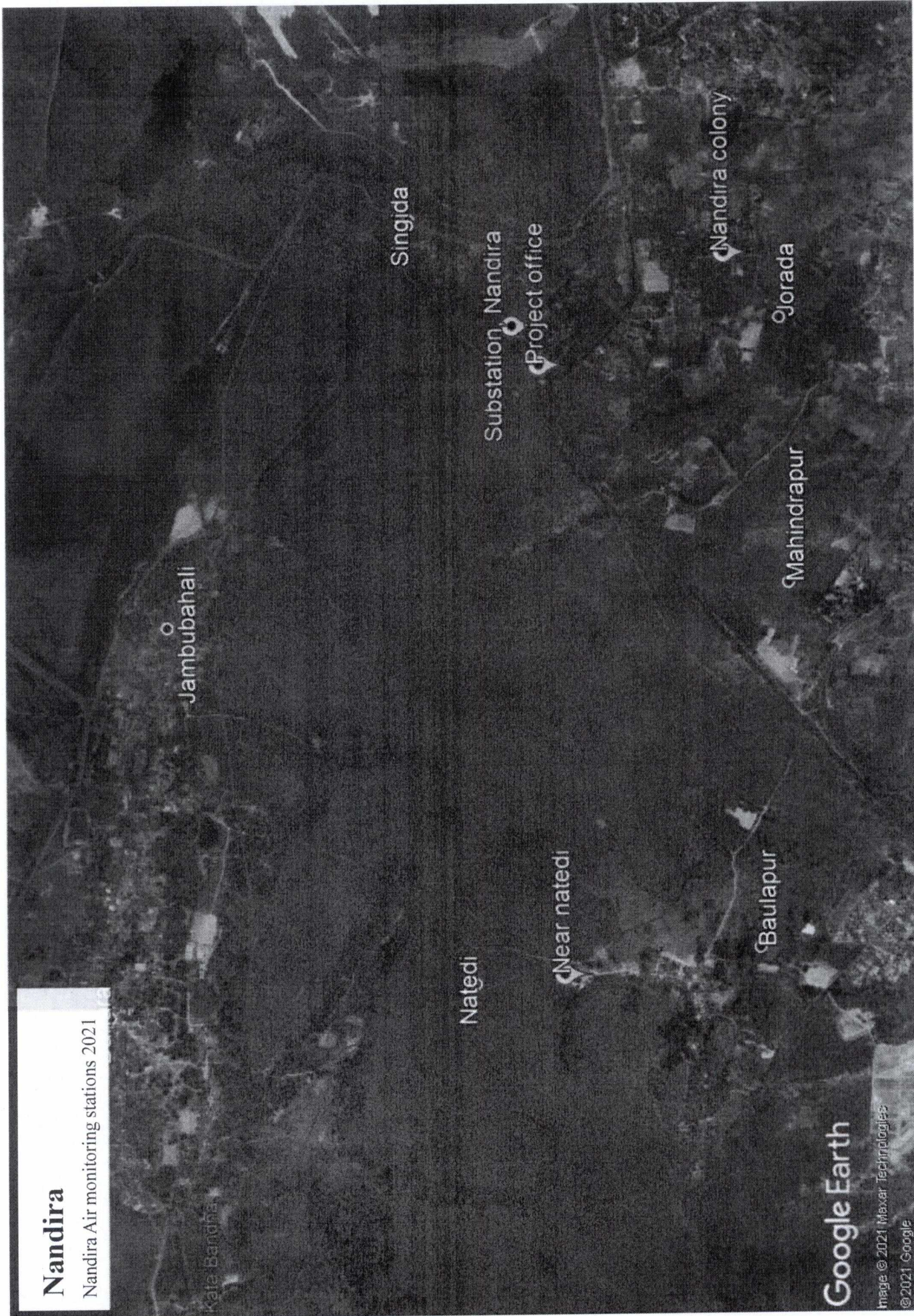
Google Earth

Image © 2021 Maxar Technologies

© 2021 Google

# Nandira

Nandira Air monitoring stations 2021



Google Earth

Image © 2021 Maxar Technologies  
© 2021 Google

# Deulbera

Deulbera Air monitoring stations 2021



Google Earth

Image © 2021 Maxar Technologies  
© 2021 Google

# Handidhwa

Handidhwa Air monitoring stations 2021



Colliery Colony

Handidhwa

Near project office

Google Earth

Image © 2021 Maxar Technologies  
© 2021 Google

# Kakudi & Kishoripal sand mine

Kakudi & Kishoripal sand mine Air monitoring stations 2021

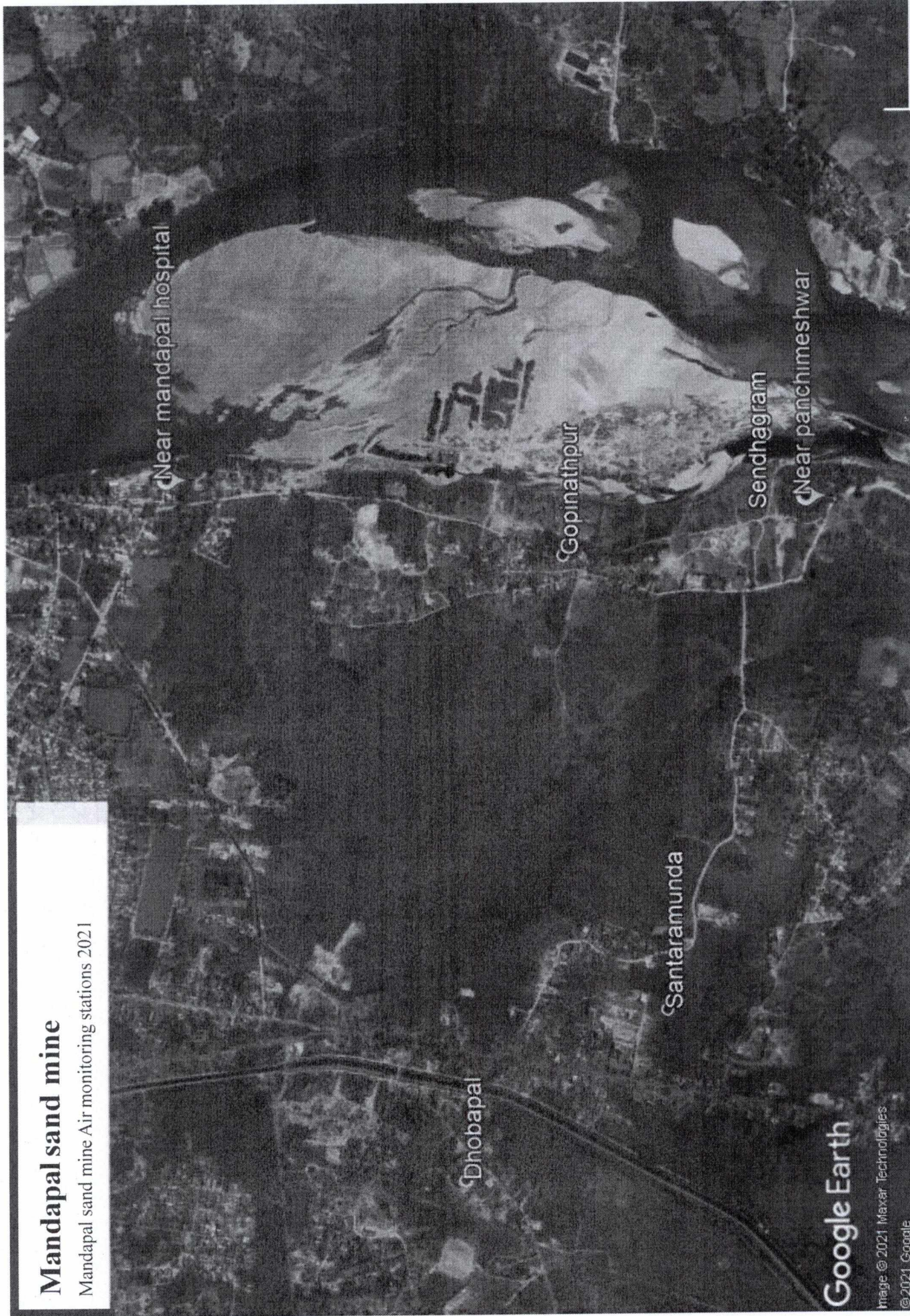
Near kishoripal village

Google Earth

Image © 2021 Maxar Technologies  
© 2021 Google

# Mandapal sand mine

Mandapal sand mine Air monitoring stations 2021



Google Earth

Image © 2021 Maxar Technologies  
© 2021 Google