

**Environmental Monitoring Report
For
December -2025**

**Project: Balanda OCP
Area: Jagannath
Coalfield: Talcher**



Mahanadi Coalfields Limited



सीएमपीडीआई
विश्व स्तर
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Mini Ratna

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]

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Test Report

AMBIENT AIR QUALITY DATA

Area :

Jagannath

(Compliance Station)

Project :

Balanda OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	CO (mg/m^3)	Dust Generating Source(DGS)	Distance from DGS
05-Dec-25	Near NBVL Station (Reported)	293	164	77	9.52	16.55	-	CHP, CT Road	About 600m
20-Dec-25	Near NBVL Station (Reported)	321	180	87	10.98	20.87	-	CHP, CT Road	About 600m

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MoEF Standards Notification dated 25th
September, 2000

600	300		120	120	02/8 Hours
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NOISE LEVEL MONITORING DATA

AREA :

Jagannath

PROJECT :

Balanda OCP

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
12-Dec-25	Near NBVL Station (Reported only)	63.8	48.2
29-Dec-25	Near NBVL Station (Reported only)	62.4	51.2

MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 75dB(A) (Industrial)	10.00 PM -6.00 AM Leq 70dB(A) (Industrial)
MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 55dB(A) (Residential)	10.00 PM -6.00 AM Leq 45dB(A) (Residential)
MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 65dB(A) (Commercial)	10.00 PM -6.00 AM Leq 55dB(A) (Commercial)
MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 50dB(A) (Silence Zone)	10.00 PM -6.00 AM Leq 40dB(A) (Silence Zone)

K. Hottanik

J. J. J.



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Surface Water Quality Data Jagannath Area

Project/OCP	Balanda		IS:2296-1982 Tolerance for inland Surface water (Class C)
	Main Sump near Quarry II	Main Sump near Quarry III	
NAME OF STATIONS	15-Nov-25	15-Nov-25	
Date of sampling	15-Nov-25	15-Nov-25	
pH	6.70	7.26	6.5-8.5
Color (Hazen unit)	1	3	300
Dissolved Oxygen(mg/L)	7.2	7.1	4
BOD (3 days 27°C)(mg/L)	2.3	2.2	3
Chlorides(mg/L)	13.59	27.18	600
Sulphate(mg/L)	117.97	83.24	400
Nitrate(mg/L)	<0.50	21.59	50
Fluoride(mg/L)	0.36	1.13	1.5
Total Hardness(mg/L)	278.98	376.01	-
Total dissolved solids (mg/L)	452	568	1500
TSS(mg/L)	42	53	-
Copper(mg/L)	<0.03	<0.03	1.5
Iron(mg/L)	<0.1	<0.1	50
Zinc(mg/L)	<0.04	<0.04	15
Lead(mg/L)	<0.005	<0.005	0.1
Cadmium(mg/L)	<0.001	<0.001	0.01
Hexavalent Chromium(as Cr ⁶⁺)(mg/L)	<0.05	<0.05	0.05
Arsenic(mg/L)	<0.005	<0.005	0.2
Selenium(mg/L)	<0.005	<0.005	0.05
Phenolics(mg/L)	<0.001	<0.001	0.005
Oil & Grease (mg/L)	<4.0	<4.0	0.1
Residual Free Chlorine(mg/L)	<0.2	<0.2	0.2
MPN (Index/100 ml)	48	41	-

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Drinking Water Quality Data Jagannath Area

Project / OCP	Balanda OCP	Indian Drinking Standards (IS-10500):2012	
Monitoring Station	Balanda Colony (Reported Only)	Acceptable	Permissible
Date of Sampling	15-Dec-2025		
Colour(Hazen)	3	5	15
Odour	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	3	1	5
pH	6.70	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	70.72	200	600
Chloride(mg/L)	19.43	250	1000
Sulphate(mg/L)	102.56	200	400
Nitrate(mg/L)	9.56	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	185.47	200	600
Calcium(mg/L)	59.79	75	200
Fluoride(mg/L)	0.67	1	1.5
Total Dissolve Solid(mg/L)	260	500	2000
Copper(mg/L)	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	0.1	0.3
Iron(mg/L)	<0.1	1.0	No relaxation
Zinc(mg/L)	<0.04	5	15
Lead(mg/L)	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.001	0.003	No relaxation
Total Chromium (mg/L)	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	0.5	2.4

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Drinking Water Quality Data Jagannath Area

Project / OCP	Balanda OCP	Indian Drinking Standards (IS-10500):2012	
		Acceptable	Permissible
Monitoring Station	Balanda Colony (Reported Only)		
Date of Sampling	15-Dec-2025		
Selenium(mg/L)	<0.005	0.01	No relaxation
Sodium(mg/L)	10.66		
Potassium(mg/L)	5.52		
Phenolics(mg/L)	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	0.2	1.0
MPN (Index/100 ml)	Not Detected	-	-

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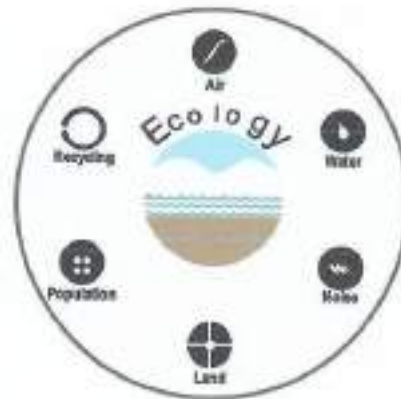
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**Environmental Monitoring Report
For
December -2025**

**Project: Jagannath OCP
Area: Jagannath
Coalfield: Talcher**



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AMBIENT AIR QUALITY DATA

Area :

Jagannath

(Compliance Station)

Project :

Jagannath OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	CO (ng/m3)	Dust Generating Source(DGS)	Distance from DGS
05-Dec-25	Near MDTP	314	175	81	12.27	24.88	-	Railway Siding CHP	About 800m
05-Dec-25	Near NBVL Station	293	164	77	9.52	16.55	-	CHP, CT Road	About 600m
20-Dec-25	Near MDTP	273	175	79	20.93	30.08	-	Railway Siding CHP	About 800m
20-Dec-25	Near NBVL Station	321	180	87	10.98	20.87	-	CHP, CT Road	About 600m

MOEF Standards Notification dated 23rd September, 2000

000	200		120	120	02(0 Hours)
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Jagannath

AMBIENT AIR QUALITY DATA

Area :

Jagannath

(Reference Station)

Project :

Jagannath 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
01-Dec-25	Central Nursery (Reported Only)	217	86	45	10.98	28.78	Open-Cast Mine	Less than 500m
01-Dec-25	CWS Colony, Meeti	215	90	47	15.72	32.41	Mining Activity	About 1500 m
01-Dec-25	Kurihan Village	214	90	46	20.49	27.34	Mining Activities	About 500m
02-Dec-25	Central Nursery (Reported Only)	203	77	42	19.94	24.88	Open-Cast Mine	Less than 500m
02-Dec-25	CWS Colony, Meeti	233	94	53	13.29	19.00	Mining Activity	About 1500 m
02-Dec-25	Kurihan Village	234	80	39	10.35	24.12	Mining Activities	About 500m
08-Dec-25	CWS Colony, Meeti	217	83	48	10.87	19.79	Mining Activity	About 1500 m
08-Dec-25	Central Nursery (Reported Only)	190	72	39	12.81	33.10	Open-Cast Mine	Less than 500m
08-Dec-25	Kurihan Village	247	77	41	9.59	14.32	Mining Activities	About 500m
09-Dec-25	Kurihan Village	196	80	43	17.31	18.20	Mining Activities	About 500m
09-Dec-25	CWS Colony, Meeti	192	77	39	19.92	10.83	Mining Activity	About 1500 m
09-Dec-25	Central Nursery (Reported Only)	201	87	44	16.47	38.85	Open-Cast Mine	Less than 500m
16-Dec-25	Central Nursery (Reported Only)	247	93	56	12.08	24.62	Open-Cast Mine	Less than 500m
16-Dec-25	CWS Colony, Meeti	248	94	55	17.37	37.49	Mining Activity	About 1500 m
16-Dec-25	Kurihan Village	195	81	43	8.05	28.33	Mining Activities	About 500m
17-Dec-25	Central Nursery (Reported Only)	236	87	50	21.85	15.08	Open-Cast Mine	Less than 500m
17-Dec-25	Kurihan Village	234	95	52	14.95	33.92	Mining Activities	About 500m
17-Dec-25	CWS Colony, Meeti	227	88	51	17.57	22.31	Mining Activity	About 1500 m
22-Dec-25	Central Nursery (Reported Only)	214	81	45	8.05	32.41	Open-Cast Mine	Less than 500m
22-Dec-25	CWS Colony, Meeti	216	90	49	17.37	37.49	Mining Activity	About 1500 m
22-Dec-25	Kurihan Village	183	77	41	20.13	18.20	Mining Activities	About 500m
23-Dec-25	CWS Colony, Meeti	243	94	57	15.34	37.69	Mining Activity	About 1500 m
23-Dec-25	Kurihan Village	243	93	56	7.67	36.94	Mining Activities	About 500m
23-Dec-25	Central Nursery (Reported Only)	223	83	48	21.74	28.49	Open-Cast Mine	Less than 500m
29-Dec-25	Central Nursery (Reported Only)	204	78	43	13.98	38.32	Open-Cast Mine	Less than 500m

Project :

Jagannath OCP

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

<i>Date of Sampling</i>	<i>Monitoring Station</i>	<i>SPM</i>	<i>PM10</i>	<i>PM2.5</i>	<i>SO2</i>	<i>NOx</i>	<i>Dust Generating Source(DGS)</i>	<i>Distance from DGS</i>
29-Dec-25	CWS Colony, Meeti	214	84	46	12.27	27.14	Mining Activity	About 1500 m
29-Dec-25	Kurihan Village	181	74	43	8.86	32.45	Mining Activities	About 500m
30-Dec-25	Kurihan Village	213	86	49	12.71	20.00	Mining Activities	About 500m
30-Dec-25	Central Nursery (Reported Only)	206	85	49	11.71	33.82	Open-Cast Mine	Less than 500m
30-Dec-25	CWS Colony, Meeti	217	77	43	22.95	38.78	Mining Activity	About 1500 m

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*N.A.QS,2009		100	60	60	80
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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area :

Jagannath

Project :

Jagannath OCP

Date of Sampling	Monitoring Station	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo(a)Pyrene	Benzene
		(µg/m ³)	(µg/m ³)	(µg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(µg/m ³)
01-Dec-25	Kurihan Village	<20.0	21.32	<0.1	<1.0	<1.0	1.4	BQL(QL)=0.7)	BQL
01-Dec-25	CWS Colony, Meeti	<20.0	11.87	<0.1	<1.0	<1.0	0.8	BQL(QL)=0.7)	BQL
01-Dec-25	Central Nursery (Reported Only)	<20.0	19.37	<0.1	<1.0	<1.0	1.2	BQL(QL)=0.7)	BQL
01-Dec-25	Kurihan Village	<20.0	21.32	<0.1	<1.0	<1.0	1.4	BQL(QL)=0.7)	BQL
02-Dec-25	Central Nursery (Reported Only)	<20.0	12.60	<0.1	<1.0	<1.0	1.2	BQL(QL)=0.7)	BQL
02-Dec-25	Kurihan Village	<20.0	21.07	<0.1	<1.0	<1.0	1.5	BQL(QL)=0.7)	BQL
02-Dec-25	Kurihan Village	<20.0	21.07	<0.1	<1.0	<1.0	1.5	BQL(QL)=0.7)	BQL
02-Dec-25	CWS Colony, Meeti	<20.0	12.35	<0.1	<1.0	<1.0	1.2	BQL(QL)=0.7)	BQL
08-Dec-25	Kurihan Village	<20.0	21.80	<0.1	<1.0	<1.0	1.2	BQL(QL)=0.7)	BQL
08-Dec-25	Kurihan Village	<20.0	21.80	<0.1	<1.0	<1.0	1.2	BQL(QL)=0.7)	BQL
08-Dec-25	CWS Colony, Meeti	<20.0	23.25	<0.1	<1.0	<1.0	1.1	BQL(QL)=0.7)	BQL
08-Dec-25	Central Nursery (Reported Only)	<20.0	24.47	<0.1	<1.0	<1.0	1.3	BQL(QL)=0.7)	BQL
09-Dec-25	Central Nursery (Reported Only)	<20.0	27.85	<0.1	<1.0	<1.0	1.3	BQL(QL)=0.7)	BQL
09-Dec-25	Kurihan Village	<20.0	19.87	<0.1	<1.0	<1.0	1.2	BQL(QL)=0.7)	BQL
09-Dec-25	CWS Colony, Meeti	<20.0	26.40	<0.1	<1.0	<1.0	1.3	BQL(QL)=0.7)	BQL
09-Dec-25	Kurihan Village	<20.0	19.87	<0.1	<1.0	<1.0	1.2	BQL(QL)=0.7)	BQL
16-Dec-25	CWS Colony, Meeti	<20.0	26.63	<0.1	<1.0	<1.0	1.5	BQL(QL)=0.7)	BQL
16-Dec-25	Kurihan Village	<20.0	11.38	<0.1	<1.0	<1.0	1.1	BQL(QL)=0.7)	BQL
16-Dec-25	Central Nursery (Reported Only)	<20.0	10.42	<0.1	<1.0	<1.0	1.5	BQL(QL)=0.7)	BQL
17-Dec-25	Central Nursery (Reported Only)	<20.0	12.83	<0.1	<1.0	<1.0	1.5	BQL(QL)=0.7)	BQL
17-Dec-25	Kurihan Village	<20.0	17.92	<0.1	<1.0	<1.0	0.9	BQL(QL)=0.7)	BQL
17-Dec-25	CWS Colony, Meeti	<20.0	18.88	<0.1	<1.0	<1.0	0.9	BQL(QL)=0.7)	BQL
22-Dec-25	Kurihan Village	<20.0	17.68	<0.1	<1.0	<1.0	0.9	BQL(QL)=0.7)	BQL
22-Dec-25	CWS Colony, Meeti	<20.0	12.12	<0.1	<1.0	<1.0	1.3	BQL(QL)=0.7)	BQL

Standard	400(24 hours)	180(hours)	1.0(24 hours)	6.0(Annual)	20(Annual)	02(8hours)	01(annual)	05(annual)
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Jagannath

Jagannath

Project :**Jagannath OCP**

Date of Sampling	Monitoring Station	Ammonia(NH ₃)	Ozone(O ₃)	Lead(Pb)	Arsenic(As)	Nickel(Ni)	CO	Benzo(a)Pyrene	Benzene
		(µg/m ³)	(µg/m ³)	(µg/m ³)	(ng/m ³)	(ng/m ³)	(µg/m ³)	(ng/m ³)	(µg/m ³)
22-Dec-25	Central Nursery (Reported Only)	<20.0	17.20	<0.1	<1.0	<1.0	1.7	BQL(QL)=0.7)	BQL
23-Dec-25	Central Nursery (Reported Only)	<20.0	12.12	<0.1	<1.0	<1.0	1.2	BQL(QL)=0.7)	BQL
23-Dec-25	Kurihan Village	<20.0	15.02	<0.1	<1.0	<1.0	1.6	BQL(QL)=0.7)	BQL
23-Dec-25	CWS Colony, Meeti	<20.0	22.77	<0.1	<1.0	<1.0	1.4	BQL(QL)=0.7)	BQL
29-Dec-25	CWS Colony, Meeti	<20.0	18.40	<0.1	<1.0	<1.0	0.8	BQL(QL)=0.7)	BQL
29-Dec-25	Central Nursery (Reported Only)	<20.0	16.23	<0.1	<1.0	<1.0	1.0	BQL(QL)=0.7)	BQL
29-Dec-25	Kurihan Village	<20.0	12.83	<0.1	<1.0	<1.0	0.9	BQL(QL)=0.7)	BQL
30-Dec-25	Kurihan Village	<20.0	11.87	<0.1	<1.0	<1.0	0.9	BQL(QL)=0.7)	BQL
30-Dec-25	Central Nursery (Reported Only)	<20.0	18.88	<0.1	<1.0	<1.0	1.4	BQL(QL)=0.7)	BQL
30-Dec-25	CWS Colony, Meeti	<20.0	26.63	<0.1	<1.0	<1.0	1.6	BQL(QL)=0.7)	BQL

Jagannath

Standard	400(24 hours)	180(hours)	1.0(24 hours)	6.0(Annual)	20(Annual)	02(8 hours)	01(annual)	05(annual)
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Jagannath



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TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Jagannath

PROJECT :

Jagannath OCP

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
12-Dec-25	Near NBVL Station	63.8	48.2
12-Dec-25	Near MDTP	64.3	49.1
12-Dec-25	CWS Colony, MEETI	48.7	35.4
12-Dec-25	Central Nursery (Reported only)	61.4	47.5
29-Dec-25	Near NBVL Station	62.4	51.2
29-Dec-25	Near MDTP	61.7	54.3
29-Dec-25	CWS Colony, MEETI	47.7	38.1
29-Dec-25	Central Nursery (Reported only)	46.2	36.7

MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 75dB(A) (Industrial)	10.00 PM -6.00 AM Leq 70dB(A) (Industrial)
MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 55dB(A) (Residential)	10.00 PM -6.00 AM Leq 45dB(A) (Residential)
MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 65dB(A) (Commercial)	10.00 PM -6.00 AM Leq 55dB(A) (Commercial)
MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 50dB(A) (Silence Zone)	10.00 PM -6.00 AM Leq 40dB(A) (Silence Zone)

7/10/2025

Jagannath

TABLE--



EFFLUENT QUALITY DATA

Area :

Jagannath

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

Project :

Jagannath OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	Remarks
15-Dec-25	Face Sump	4.36	<4.0	26	28	-	
15-Dec-25	O & G Trap Inlet	7.39	<4.0	24	32	-	
15-Dec-25	O & G Trap Outlet	7.40	<4.0	18	24	-	
30-Dec-25	O & G Trap Inlet	7.23	<4.0	26	40	-	
30-Dec-25	O & G Trap Outlet	7.49	<4.0	22	36	-	

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

Jagannath

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 cmpdi
 Odisha

EFFLUENT QUALITY DATA

Area :

Jagannath

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

Project :

Jagannath OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	MPN/100mL
15-Dec-25	STP INLET	7.27	-	36	-	4.1	210
15-Dec-25	STP OUTLET	7.49	-	26	-	2.8	150
30-Dec-25	STP INLET	7.34	-	40	-	4.8	220
30-Dec-25	STP OUTLET	7.54	-	32	-	3.2	170

Jagannath

G.S.R. 1265(E) Effluent discharge standards (applicable to all mode of disposal), Sewage Treatment Plants (STPs)

6.5-9.0

-

<100

-

30

<1000

Jagannath



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Effluent Quality (all Parameter): Jagannath Area

Project (OCP / UG)	Jagannath			MoEF-Sch-VI Standards
	Central Sump at Quarry no. 8	Sump at Quarry no. 4	Face Sump	
NAME OF THE STATION	Central Sump at Quarry no. 8	Sump at Quarry no. 4	Face Sump	MoEF-Sch-VI Standards
Date of Sampling	15-Nov-25	15-Nov-25	15-Nov-25	
Odour	Unobjectionable	Unobjectionable	Unobjectionable	—
Colour(Hazen)	4	2	2	—
Temperature(oC)	24.0	24.7	23.9	Shall not exceed 5 °C above the receiving temperature
pH	8.12	8.19	3.70	5.5-9.0
Total Hardness (asCaCO ₃),mg/L	347.71	303.24	1067.40	—
Total Dissolved Solids, mg/L	554	486	1364	—
Nitrate Nitrogen(mg/L)(As N)	<0.11	0.43	9.60	10
Ammonical Nitrogen , mg/l (As N)	<0.20	<0.20	<0.20	50
Total Kjeldhal Nitrogen, mg/l (As N)	1.76	1.73	3.51	100
Sulphide (mg/L)	<0.10	<0.10	<0.10	2
BOD [3 days at 27°C] (mg/L)	3.2	3.1	3.3	30
Fluoride(mg/L)	1.43	1.10	0.69	2
Copper(mg/L)	<0.03	<0.03	<0.03	3
Manganese(mg/L)	<0.04	<0.04	0.99	2
Iron(mg/L)	<0.1	<0.1	0.3	3
Zinc(mg/L)	<0.04	<0.04	1.06	5
Lead, mg/l	<0.005	<0.005	<0.005	0.1
Cadmium, mg/l	<0.001	<0.001	<0.001	2.0
Total Chromium(mg/L)	<0.01	<0.01	<0.01	2.0
Hexavalent Chromium(mg/L)	<0.05	<0.05	<0.05	0.1
Nickel(mg/L)	0.07	0.07	0.07	3
Arsenic, mg/l	<0.005	<0.005	<0.005	0.2
Selenium (mg/L)	<0.005	<0.005	<0.005	0.05
Dissolved Phosphate(mg/L)	<4.0	<4.0	<4.0	5
Phenolics (mg/L)	<0.001	<0.001	<0.001	1

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Surface Water Quality Data Jagannath Area

Project/OCP	Jagannath				IS:2296-1982 Tolerance for inland Surface water (Class C)
	Downstream of Bangaru Jhor nalla	Downstream of Brahmani River where Bangaru Water meets	Upstream of Brahmani River where Bangaru Water meets	Upstream of Bangaru Jhor river near Joragarhia as downstream of Bharatpur OCP (Upstream for Jagannath) (Reported)	
Date of sampling	15-Nov-25	15-Nov-25	15-Nov-25	15-Nov-25	
pH	6.92	7.28	8.01	7.91	6.5-8.5
Color (Hazen unit)	3	4	3	3	300
Dissolved Oxygen(mg/L)	6.9	6.7	6.9	6.9	4
BOD (3 days 27°C(mg/L)	2.3	2.1	2.2	2.0	3
Chlorides(mg/L)	27.18	19.41	17.47	19.41	600
Sulphate(mg/L)	198.65	220.27	171.62	120.13	400
Nitrate(mg/L)	19.71	20.77	<0.5	<0.50	50
Fluoride(mg/L)	1.35	0.31	0.35	0.34	1.5
Total Hardness(mg/L)	343.67	505.40	331.54	319.41	-
Total dissolved solids (mg/L)	687	826	584	489	1500
TSS(mg/L)	44	56	48	46	-
Copper(mg/L)	<0.03	<0.03	<0.03	<0.03	1.5
Iron(mg/L)	<0.1	0.11	<0.1	0.1	50
Zinc(mg/L)	<0.04	<0.04	0.25	0.11	15
Lead(mg/L)	<0.005	<0.005	<0.005	<0.005	0.1
Cadmium(mg/L)	<0.001	<0.001	<0.001	<0.001	0.01
Hexavalent Chromium(as Cr ⁶⁺)(mg/L)	<0.05	<0.05	<0.05	<0.05	0.05
Arsenic(mg/L)	<0.005	<0.005	<0.005	<0.005	0.2
Selenium(mg/L)	<0.005	<0.005	<0.005	<0.005	0.05
Phenolics(mg/L)	<0.001	<0.001	<0.001	<0.001	0.005
Oil & Grease (mg/L)	<4.0	<4.0	<4.0	<4.0	0.1
Residual Free Chlorine(mg/L)	<0.2	<0.2	<0.2	<0.2	0.2
MPN (Index/100 ml)	220	210	140	280	-

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Drinking Water Quality Data Jagannath Area

Project / OCP	Jagannath OCP			Indian Drinking Standards (IS-10500):2012	
	Monitoring Station	Jagannath Colony	Rakas Village Well Water	Balanda Colony	
Date of Sampling	15-Dec-2025	15-Dec-2025	15-Dec-2025	Acceptable	Permissible
Colour(Hazen)	2	4	3	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	2	3	3	1	5
pH	7.10	7.35	6.70	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	66.56	99.84	70.72	200	600
Chloride(mg/L)	19.43	19.43	19.43	250	1000
Sulphate(mg/L)	103.38	67.70	102.56	200	400
Nitrate(mg/L)	6.68	0.64	9.56	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	193.53	153.21	185.47	200	600
Calcium(mg/L)	59.79	43.63	59.79	75	200
Fluoride(mg/L)	0.67	0.57	0.67	1	1.5
Total Dissolve Solid(mg/L)	251	216	260	500	2000
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
Iron(mg/L)	<0.1	<0.1	<0.1	1.0	No relaxation
Zinc(mg/L)	<0.04	<0.04	<0.04	5	15
Lead(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.001	<0.001	<0.001	0.003	No relaxation
Total Chromium (mg/L)	<0.01	<0.01	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	<0.2	<0.2	0.5	2.4

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Drinking Water Quality Data Jagannath Area

Project / OCP	Jagannath OCP			Indian Drinking Standards (IS-10500):2012	
	Monitoring Station	Jagannath Colony	Rakas Village Well Water	Balanda Colony	Acceptable
Date of Sampling	15-Dec-2025	15-Dec-2025	15-Dec-2025	Acceptable	Permissible
Selenium(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Sodium(mg/L)	7.73	9.30	10.66	-	-
Potassium(mg/L)	2.28	2.82	5.52	-	-
Phenolics(mg/L)	<0.001	<0.001	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	<0.2	<0.2	0.2	1.0
MPN (Index/100 ml)	Not Detected	Not Detected	Not Detected	-	-

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Jagannath OCP

Kurihan village

Legend
● Monitoring Station

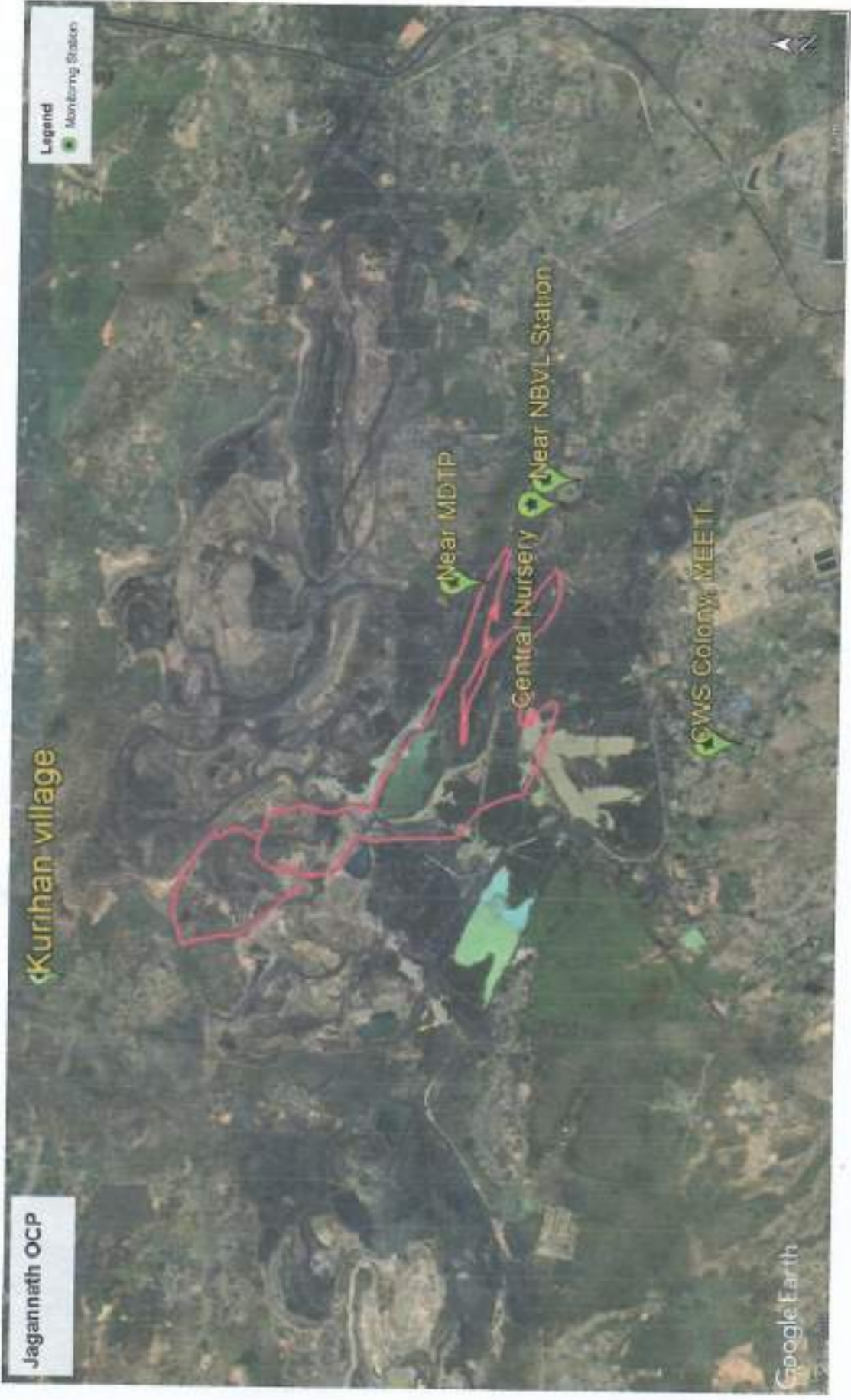
Near MDTP

Central Nursery

Near NBVL Station

GWS Colony, MEETI

Google Earth



**Environmental Monitoring Report
For
December -2025**

**Project: Ananta OCP
Area: Jagannath
Coalfield: Talcher**



Mahanadi Coalfields Limited



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]

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CPCB
AMBIENT AIR QUALITY DATA

Test Report

AMBIENT AIR QUALITY DATA

Area :

Jagannath

(Compliance Station)

Project :

Ananta OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO ₂	NO _x	CO (mg/m ³)	Dust Generating Source(DGS)	Distance from DGS
05-Dec-25	North East of Mine	316	192	85	22.14	34.83	1.2	Open-Cast Mine	Less than 500m
05-Dec-25	Near NBVL Station (Reported)	293	164	77	9.52	16.55	-	CHP, CT Road	About 600m
20-Dec-25	North East of Mine	341	195	89	6.59	34.54	1.3	Open-Cast Mine	Less than 500m
20-Dec-25	Near NBVL Station (Reported)	321	180	87	10.98	20.87	-	CHP, CT Road	About 600m

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MoEF Standards Notification dated 25th September, 2000

500	260		120	120	02(8 Hours)
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Jagannath

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
01-Dec-25	Guthasahi Village	203	82	40	12.65	30.15	Mining Activities	About 3km
01-Dec-25	Asanabahali Village	186	77	38	15.68	29.16	Domestic and Mining Activities	About 4km
01-Dec-25	Sibarampur Village	215	79	43	18.22	34.99	Domestic and Mining Activities	About 4km
01-Dec-25	Central Nursery	217	86	45	10.98	28.78	Open-Cast Mine	Less than 500m
02-Dec-25	Sibarampur Village	196	84	41	11.27	33.24	Domestic and Mining Activities	About 4km
02-Dec-25	Guthasahi Village	224	85	47	15.68	18.33	Mining Activities	About 3km
02-Dec-25	Central Nursery	203	77	42	19.94	24.88	Open-Cast Mine	Less than 500m
02-Dec-25	Asanabahali Village	199	81	41	17.71	23.74	Domestic and Mining Activities	About 4km
08-Dec-25	Guthasahi Village	240	81	43	16.55	14.07	Mining Activities	About 3km
08-Dec-25	Central Nursery	190	72	39	12.81	33.10	Open-Cast Mine	Less than 500m
08-Dec-25	Sibarampur Village	204	86	46	16.10	34.99	Domestic and Mining Activities	About 4km
08-Dec-25	Asanabahali Village	219	82	46	15.26	33.33	Domestic and Mining Activities	About 4km
09-Dec-25	Sibarampur Village	187	81	40	22.04	34.99	Domestic and Mining Activities	About 4km
09-Dec-25	Central Nursery	201	87	44	16.47	38.85	Open-Cast Mine	Less than 500m
09-Dec-25	Asanabahali Village	198	76	42	13.29	29.28	Domestic and Mining Activities	About 4km
09-Dec-25	Guthasahi Village	236	90	54	18.40	24.88	Mining Activities	About 3km
16-Dec-25	Asanabahali Village	189	76	40	19.94	21.86	Domestic and Mining Activities	About 4km
16-Dec-25	Sibarampur Village	202	80	43	13.69	22.16	Domestic and Mining Activities	About 4km
16-Dec-25	Central Nursery	247	93	56	12.08	24.62	Open-Cast Mine	Less than 500m
16-Dec-25	Guthasahi Village	227	89	51	9.32	20.83	Mining Activities	About 3km
17-Dec-25	Sibarampur Village	248	91	55	13.42	23.37	Domestic and Mining Activities	About 4km
17-Dec-25	Asanabahali Village	203	82	45	15.34	21.86	Domestic and Mining Activities	About 4km
17-Dec-25	Guthasahi Village	236	94	55	14.76	41.33	Mining Activities	About 3km
17-Dec-25	Central Nursery	236	87	50	21.85	15.08	Open-Cast Mine	Less than 500m
22-Dec-25	Central Nursery	214	81	45	8.05	32.41	Open-Cast Mine	Less than 500m

Project :**Ananta OCP****(conc. in µg/cu.m.)**

<i>Date of Sampling</i>	<i>Monitoring Station</i>	<i>SPM</i>	<i>PM10</i>	<i>PM2.5</i>	<i>SO2</i>	<i>NOx</i>	<i>Dust Generating Source(DGS)</i>	<i>Distance from DGS</i>
22-Dec-25	Sibarampur Village	214	85	51	16.91	26.12	Domestic and Mining Activities	About 4km
22-Dec-25	Asanabahali Village	196	83	46	14.95	22.61	Domestic and Mining Activities	About 4km
22-Dec-25	Guthasahi Village	215	90	53	22.95	34.83	Mining Activities	About 3km
23-Dec-25	Asanabahali Village	195	81	41	11.50	31.66	Domestic and Mining Activities	About 4km
23-Dec-25	Central Nursery	223	83	48	21.74	28.49	Open-Cast Mine	Less than 500m
23-Dec-25	Guthasahi Village	198	83	45	9.59	36.94	Mining Activities	About 3km
23-Dec-25	Sibarampur Village	236	90	53	11.87	25.83	Domestic and Mining Activities	About 4km
29-Dec-25	Central Nursery	204	78	43	13.98	38.32	Open-Cast Mine	Less than 500m
29-Dec-25	Guthasahi Village	223	87	49	10.47	30.08	Mining Activities	About 3km
29-Dec-25	Sibarampur Village	253	96	59	19.07	20.83	Domestic and Mining Activities	About 4km
29-Dec-25	Asanabahali Village	208	79	42	22.54	20.58	Domestic and Mining Activities	About 4km
30-Dec-25	Asanabahali Village	202	78	44	13.80	21.86	Domestic and Mining Activities	About 4km
30-Dec-25	Central Nursery	206	85	49	11.71	33.82	Open-Cast Mine	Less than 500m
30-Dec-25	Guthasahi Village	199	77	42	10.25	35.26	Mining Activities	About 3km
30-Dec-25	Sibarampur Village	224	83	47	23.31	18.33	Domestic and Mining Activities	About 4km

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area :

Jagannath

Project :

Ananta OCP

Date of Sampling	Monitoring Station	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo(a)Pyrene	Benzene
		(µg/m ³)	(µg/m ³)	(µg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(µg/m ³)
01-Dec-25	Sibarampur Village	<20.0	27.85	<0.1	<1.0	<1.0	1.3	BQL(QL)=0.7	BQL
01-Dec-25	Central Nursery	<20.0	19.37	<0.1	<1.0	<1.0	1.2	BQL(QL)=0.7	BQL
01-Dec-25	Guthasahi Village	<20.0	19.87	<0.1	<1.0	<1.0	1.1	BQL(QL)=0.7	BQL
01-Dec-25	Asanabahali Village	<20.0	21.55	<0.1	<1.0	<1.0	1.7	BQL(QL)=0.7	BQL
02-Dec-25	Central Nursery	<20.0	12.60	<0.1	<1.0	<1.0	1.2	BQL(QL)=0.7	BQL
02-Dec-25	Asanabahali Village	<20.0	15.02	<0.1	<1.0	<1.0	1.3	BQL(QL)=0.7	BQL
02-Dec-25	Guthasahi Village	<20.0	21.55	<0.1	<1.0	<1.0	1.2	BQL(QL)=0.7	BQL
02-Dec-25	Sibarampur Village	<20.0	10.42	<0.1	<1.0	<1.0	1.3	BQL(QL)=0.7	BQL
08-Dec-25	Central Nursery	<20.0	24.47	<0.1	<1.0	<1.0	1.3	BQL(QL)=0.7	BQL
08-Dec-25	Asanabahali Village	<20.0	16.47	<0.1	<1.0	<1.0	1.2	BQL(QL)=0.7	BQL
08-Dec-25	Sibarampur Village	<20.0	13.08	<0.1	<1.0	<1.0	1.4	BQL(QL)=0.7	BQL
08-Dec-25	Guthasahi Village	<20.0	16.23	<0.1	<1.0	<1.0	1.3	BQL(QL)=0.7	BQL
09-Dec-25	Asanabahali Village	<20.0	15.98	<0.1	<1.0	<1.0	1.5	BQL(QL)=0.7	BQL
09-Dec-25	Sibarampur Village	<20.0	15.25	<0.1	<1.0	<1.0	1.4	BQL(QL)=0.7	BQL
09-Dec-25	Guthasahi Village	<20.0	11.87	<0.1	<1.0	<1.0	1.5	BQL(QL)=0.7	BQL
09-Dec-25	Central Nursery	<20.0	27.85	<0.1	<1.0	<1.0	1.3	BQL(QL)=0.7	BQL
16-Dec-25	Guthasahi Village	<20.0	16.95	<0.1	<1.0	<1.0	0.9	BQL(QL)=0.7	BQL
16-Dec-25	Sibarampur Village	<20.0	13.57	<0.1	<1.0	<1.0	1.4	BQL(QL)=0.7	BQL
16-Dec-25	Central Nursery	<20.0	10.42	<0.1	<1.0	<1.0	1.5	BQL(QL)=0.7	BQL
16-Dec-25	Asanabahali Village	<20.0	14.28	<0.1	<1.0	<1.0	1.1	BQL(QL)=0.7	BQL
17-Dec-25	Guthasahi Village	<20.0	27.85	<0.1	<1.0	<1.0	1.0	BQL(QL)=0.7	BQL
17-Dec-25	Sibarampur Village	<20.0	18.88	<0.1	<1.0	<1.0	1.5	BQL(QL)=0.7	BQL
17-Dec-25	Central Nursery	<20.0	12.83	<0.1	<1.0	<1.0	1.5	BQL(QL)=0.7	BQL
17-Dec-25	Asanabahali Village	<20.0	13.57	<0.1	<1.0	<1.0	1.4	BQL(QL)=0.7	BQL

Standard

400(24 hours)

180(hours)

1.0(24 hours)

6.0(Annual)

20(Annual)

02(8 hours)

01(annual)

05(annual)

Jagannath

Project :**Ananta OCP**

Date of Sampling	Monitoring Station	Ammonia(NH3)	Ozone(O3)	Lead(Pb)	Arsenic(As)	Nickel(Ni)	CO	Benzo(a)Pyrene	Benzene
		(µg/m3)	(µg/m3)	(µg/m3)	(ng/m3)	(ng/m3)	(ng/m3)	(ng/m3)	(µg/m3)
22-Dec-25	Central Nursery	<20.0	17.20	<0.1	<1.0	<1.0	1.7	BQL(QL)=0.7	BQL
22-Dec-25	Sibarampur Village	<20.0	21.07	<0.1	<1.0	<1.0	1.0	BQL(QL)=0.7	BQL
22-Dec-25	Asanabahali Village	<20.0	17.92	<0.1	<1.0	<1.0	1.1	BQL(QL)=0.7	BQL
22-Dec-25	Guthasahi Village	<20.0	15.73	<0.1	<1.0	<1.0	0.9	BQL(QL)=0.7	BQL
23-Dec-25	Central Nursery	<20.0	12.12	<0.1	<1.0	<1.0	1.2	BQL(QL)=0.7	BQL
23-Dec-25	Guthasahi Village	<20.0	16.47	<0.1	<1.0	<1.0	1.1	BQL(QL)=0.7	BQL
23-Dec-25	Sibarampur Village	<20.0	21.32	<0.1	<1.0	<1.0	1.0	BQL(QL)=0.7	BQL
23-Dec-25	Asanabahali Village	<20.0	16.23	<0.1	<1.0	<1.0	1.0	BQL(QL)=0.7	BQL
29-Dec-25	Guthasahi Village	<20.0	10.65	<0.1	<1.0	<1.0	1.0	BQL(QL)=0.7	BQL
29-Dec-25	Sibarampur Village	<20.0	25.18	<0.1	<1.0	<1.0	1.3	BQL(QL)=0.7	BQL
29-Dec-25	Asanabahali Village	<20.0	11.62	<0.1	<1.0	<1.0	1.5	BQL(QL)=0.7	BQL
29-Dec-25	Central Nursery	<20.0	16.23	<0.1	<1.0	<1.0	1.0	BQL(QL)=0.7	BQL
30-Dec-25	Asanabahali Village	<20.0	22.03	<0.1	<1.0	<1.0	1.2	BQL(QL)=0.7	BQL
30-Dec-25	Central Nursery	<20.0	18.88	<0.1	<1.0	<1.0	1.4	BQL(QL)=0.7	BQL
30-Dec-25	Guthasahi Village	<20.0	27.85	<0.1	<1.0	<1.0	0.9	BQL(QL)=0.7	BQL
30-Dec-25	Sibarampur Village	<20.0	17.92	<0.1	<1.0	<1.0	1.3	BQL(QL)=0.7	BQL

Standard	400(24hours)	180(hours)	1.0(24hours)	6.0(Annual)	20(Annual)	02(8hours)	01(annual)	05(annual)
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NOISE LEVEL MONITORING DATA

AREA :

Jagannath

PROJECT :

Ananta OCP

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
12-Dec-25	Near NBVL Station (Reported only)	63.8	48.2
12-Dec-25	North East of the Mine	65.6	51.9
12-Dec-25	Guthasahi Village	49.1	36.6
12-Dec-25	Central Nursery	61.4	17.5
29-Dec-25	Near NBVL Station (Reported only)	62.4	51.2
29-Dec-25	North East of the Mine	66.7	51.3
29-Dec-25	Guthasahi Village	48.4	38.9
29-Dec-25	Central Nursery	46.2	36.7

MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 75dB(A) (Industrial)	10.00 PM -6.00 AM Leq 70dB(A) (Industrial)
MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 55dB(A) (Residential)	10.00 PM -6.00 AM Leq 45dB(A) (Residential)
MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 65dB(A) (Commercial)	10.00 PM -6.00 AM Leq 55dB(A) (Commercial)
MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 50dB(A) (Silence Zone)	10.00 PM -6.00 AM Leq 40dB(A) (Silence Zone)

H. Hanuik

Jagannath

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
15-Dec-25	Mine Sump Water	7.07	<4.0	28	36	-	
15-Dec-25	O & G Trap Inlet	7.70	<4.0	34	24	-	
15-Dec-25	O & G Trap Outlet	7.11	<4.0	22	20	-	
30-Dec-25	O & G Trap Inlet	7.54	<4.0	30	28	-	
30-Dec-25	O & G Trap Outlet	7.05	<4.0	20	16	-	

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

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Jagannath

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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	MPN/100mL
15-Dec-25	STP INLET	7.42	-	34	-	3.6	170
15-Dec-25	STP OUTLET	7.24	-	28	-	2.3	140
30-Dec-25	STP INLET	7.53	-	28	-	3.4	210
30-Dec-25	STP OUTLET	7.36	-	24	-	2.2	110

G.S.R. 1265(E) Effluent discharge standards (applicable to all mode of disposal), Sewage Treatment Plants (STPs)

6.5-9.0

-

<100

-

30

<1000

Jagannath



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Effluent Quality (all Parameter): Jagannath Area

Project (OCP / UG)	Ananta	MoEF-Sch-VI Standards
NAME OF THE STATION	Mine Sump Water	
Date of Sampling	15-Nov-25	
Odour	Unobjectionable	-
Colour(Hazen)	2	-
Temperature($^{\circ}$ C)	24.4	Shall not exceed 5 $^{\circ}$ C above the receiving temperature
pH	7.67	5.5-9.0
Total Hardness (asCaCO ₃),mg/L	594.35	-
Total Dissolved Solids, mg/L	769	-
Nitrate Nitrogen(mg/L)(As N)	4.29	10
Ammonical Nitrogen , mg/l (As N)	<0.20	50
Total Kjeldhal Nitrogen, mg/l (As N)	3.51	100
Sulphide (mg/L)	<0.10	2
BOD [3 days at 27 $^{\circ}$ C] (mg/L)	3.3	30
Fluoride(mg/L)	0.98	2
Copper(mg/L)	<0.03	3
Manganese(mg/L)	<0.04	2
Iron(mg/L)	<0.1	3
Zinc(mg/L)	0.06	5
Lead, mg/l	<0.005	0.1
Cadmium, mg/l	<0.001	2.0
Total Chromium(mg/L)	<0.01	2.0
Hexavalent Chromium(mg/L)	<0.05	0.1
Nickel(mg/L)	0.07	3
Arsenic, mg/l	<0.005	0.2
Selenium (mg/L)	<0.005	0.05
Dissolved Phosphate(mg/L)	<4.0	5
Phenolics (mg/L)	<0.001	1

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Surface Water Quality Data Jagannath Area

Project/OCP	Ananta				IS:2296-1982 Tolerance for inland Surface water (Class C)
	Upstream of Bangaru Jhor as downstream water point of Jagannath OCP (Reported)	Down stream of Bangaru Jhor (upstream of Bhubaneswari)	Dera Pond South	Brundabanpur Pond North	
NAME OF STATIONS					
Date of sampling	15-Nov-25	15-Nov-25	15-Nov-25	15-Nov-25	
pH	6.92	7.02	6.79	7.43	6.5-8.5
Color (Hazen unit)	3	3	2	2	300
Dissolved Oxygen(mg/L)	6.9	6.8	6.8	6.9	4
BOD (3 days 27°C(mg/L)	2.3	2.2	<2.0	<2.0	3
Chlorides(mg/L)	27.18	27.18	13.59	54.35	600
Sulphate(mg/L)	198.65	22.02	106.76	30.54	400
Nitrate(mg/L)	19.71	20.39	7.84	0.89	50
Fluoride(mg/L)	1.35	1.31	<0.30	0.33	1.5
Total Hardness(mg/L)	343.67	327.49	80.86	149.59	-
Total dissolved solids (mg/L)	687	464	287	286	1500
TSS(mg/L)	44	43	43	40	-
Copper(mg/L)	<0.03	<0.03	<0.03	<0.03	1.5
Iron(mg/L)	<0.1	<0.1	0.18	<0.1	50
Zinc(mg/L)	<0.04	0.04	<0.04	<0.04	15
Lead(mg/L)	<0.005	<0.005	<0.005	<0.005	0.1
Cadmium(mg/L)	<0.001	<0.001	<0.001	<0.001	0.01
Hexavalent Chromium(as Cr ⁶⁺)(mg/L)	<0.05	<0.05	<0.05	<0.05	0.05
Arsenic(mg/L)	<0.005	<0.005	<0.005	<0.005	0.2
Selenium(mg/L)	<0.005	<0.005	<0.005	<0.005	0.05
Phenolics(mg/L)	<0.001	<0.001	<0.001	<0.001	0.005
Oil & Grease (mg/L)	<4.0	<4.0	<4.0	<4.0	0.1
Residual Free Chlorine(mg/L)	<0.2	<0.2	<0.2	<0.2	0.2
MPN (Index/100 ml)	220	170	120	110	-

Jagannath
Authorised Signatory
CMPDI, RI-VII, LAB
BHUBANESWAR

Jagannath



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Drinking Water Quality Data Jagannath Area

Project / OCP	Ananta OCP		Indian Drinking Standards (IS-10500):2012	
	Monitoring Station	Ananta Colony		
Date of Sampling	15-Dec-2025	16-Dec-2025	Acceptable	Permissible
Colour(Hazen)	3	2	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	2	1	1	5
pH	7.75	6.59	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	33.61	49.92	200	600
Chloride(mg/L)	13.60	36.91	250	1000
Sulphate(mg/L)	34.56	48.79	200	400
Nitrate(mg/L)	<0.5	22.80	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	68.54	137.08	200	600
Calcium(mg/L)	17.77	42.01	75	200
Fluoride(mg/L)	0.39	0.38	1	1.5
Total Dissolve Solid(mg/L)	101	228	500	2000
Copper(mg/L)	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	<0.04	0.1	0.3
Iron(mg/L)	<0.1	<0.1	1.0	No relaxation
Zinc(mg/L)	<0.04	<0.04	5	15
Lead(mg/L)	<0.005	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.001	<0.001	0.003	No relaxation
Total Chromium (mg/L)	<0.01	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	<0.2	0.5	2.4

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Drinking Water Quality Data Jagannath Area

Project / OCP	Ananta OCP		Indian Drinking Standards (IS-10500):2012	
	Monitoring Station	Ananta Colony	Dera Village Tube Well Water	
Date of Sampling	15-Dec-2025	16-Dec-2025	Acceptable	Permissible
Selenium(mg/L)	<0.005	<0.005	0.01	No relaxation
Sodium(mg/L)	6.21	12.65		
Potassium(mg/L)	1.35	5.01		
Phenolics(mg/L)	<0.001	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	<0.2	0.2	1.0
MPN (Index/100 ml)	Not Detected	Not Detected	-	-

Jagannath

Jamali

Ananta OCP

Sibairampur Village

Asanabanali Village

Guthasahi Village

North East of Mine

Central Nursery Near NBVL Station

Legend
Monitoring Station

Google Earth



**Environmental Monitoring Report
For
December -2025**

**Project: Bharatpur OCP
Area: Bharatpur
Coalfield: Talcher**



Mahanadi Coalfields Limited



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मिनी रत्न
cmpdi
Mini Ratna

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]

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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	CO (ng/m ³)	Dust Generating Source(DGS)	Distance from DGS
05-Dec-25	Near Regional Store	214	106	59	19.07	21.66	-	Mining Activities	About 500m
05-Dec-25	North-West Point of the Mine	324	178	87	15.74	25.18	-	Domestic & Mining Activities	About 500m
05-Dec-25	Near ETP/Workshop	288	174	75	22.14	32.45	-	Mining Activities & Coal Stock	Above 500m
20-Dec-25	Near Regional Store	196	108	61	6.22	14.39	-	Mining Activities	About 500m
20-Dec-25	North-West Point of the Mine	325	174	81	10.17	38.32	-	Domestic & Mining Activities	About 500m
20-Dec-25	Near ETP/Workshop	295	181	86	19.49	25.83	-	Mining Activities & Coal Stock	Above 500m

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Central Pollution Control Board
 Laboratory
 Bhubaneswar

Adopted Standards Notification dated 25th September, 2000

600	300		120	120	0200 Hours
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Test Report



संयुक्त प्रदूषण नियंत्रण बोर्ड
CMPDI
भारत सरकार

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
01-Dec-25	Khajuria Village	203	89	54	11.02	13.33	Mining Activities	About 1 KM
01-Dec-25	Karnapur Village	237	96	53	13.29	16.62	Anthropogenic Activities, Local	About 2km
01-Dec-25	Near Joragdia Village	238	91	51	14.95	15.08	Transportation, Domestic Cooking	About 1km
01-Dec-25	Kalinga Colony	196	74	43	16.91	35.62	Mining allied activities	About 500m
02-Dec-25	Near Joragdia Village	207	83	48	17.89	21.11	Transportation, Domestic Cooking	About 1km
02-Dec-25	Khajuria Village	207	85	46	21.47	20.23	Mining Activities	About 1 KM
02-Dec-25	Karnapur Village	223	90	49	13.14	21.66	Anthropogenic Activities, Local	About 2km
02-Dec-25	Kalinga Colony	198	83	48	14.41	20.83	Mining allied activities	About 500m
03-Dec-25	East of the Mine, Natedi Village (Reported Only)	180	74	36	24.15	34.30	Coal Transportation Road	About 2km
04-Dec-25	East of the Mine, Natedi Village (Reported Only)	195	82	43	16.47	23.74	Coal Transportation Road	About 2km
08-Dec-25	Karnapur Village	242	83	44	20.13	28.06	Anthropogenic Activities, Local	About 2km
08-Dec-25	Near Joragdia Village	195	75	43	19.17	18.09	Transportation, Domestic Cooking	About 1km
08-Dec-25	Kalinga Colony	221	71	42	9.66	26.12	Mining allied activities	About 500m
08-Dec-25	Khajuria Village	229	83	40	16.10	31.66	Mining Activities	About 1 KM
09-Dec-25	Kalinga Colony	234	80	46	12.81	15.83	Mining allied activities	About 500m
09-Dec-25	Khajuria Village	240	93	51	18.92	36.41	Mining Activities	About 1 KM
09-Dec-25	Karnapur Village	219	78	42	19.73	27.70	Anthropogenic Activities, Local	About 2km
09-Dec-25	Near Joragdia Village	186	84	42	19.17	18.84	Transportation, Domestic Cooking	About 1km
10-Dec-25	East of the Mine, Natedi Village (Reported Only)	229	88	47	9.66	25.33	Coal Transportation Road	About 2km
11-Dec-25	East of the Mine, Natedi Village (Reported Only)	234	94	52	20.76	38.32	Coal Transportation Road	About 2km
16-Dec-25	Karnapur Village	195	77	43	11.27	15.83	Anthropogenic Activities, Local	About 2km
16-Dec-25	Near Joragdia Village	216	87	51	7.69	25.18	Transportation, Domestic Cooking	About 1km
16-Dec-25	Khajuria Village	207	81	46	14.90	25.33	Mining Activities	About 1 KM
16-Dec-25	Kalinga Colony	176	69	39	11.63	19.35	Mining allied activities	About 500m
17-Dec-25	Khajuria Village	227	90	52	9.20	30.15	Mining Activities	About 1 KM

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CMPDI, RI-VII, LAB
BHUBANESWAR

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Janaki

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
17-Dec-25	Karnapur Village	199	90	51	20.13	34.03	Anthropogenic Activities, Local	About 2km
17-Dec-25	Near Joragdia Village	198	79	46	10.74	28.64	Transportation, Domestic Cooking	About 1km
17-Dec-25	Kalinga Colony	184	68	37	7.20	23.33	Mining allied activities	About 500m
18-Dec-25	East of the Mine, Natedi Village (Reported Only)	243	92	54	17.80	16.66	Coal Transportation Road	About 2km
19-Dec-25	East of the Mine, Natedi Village (Reported Only)	228	83	45	10.61	15.11	Coal Transportation Road	About 2km
22-Dec-25	Karnapur Village	207	81	48	11.89	33.92	Anthropogenic Activities, Local	About 2km
22-Dec-25	Kalinga Colony	189	72	41	19.17	33.92	Mining allied activities	About 500m
22-Dec-25	Near Joragdia Village	236	91	54	9.52	20.15	Transportation, Domestic Cooking	About 1km
22-Dec-25	Khajuria Village	203	83	47	12.44	35.98	Mining Activities	About 1 KM
23-Dec-25	Kalinga Colony	171	78	42	13.42	15.83	Mining allied activities	About 500m
23-Dec-25	Khajuria Village	193	80	45	9.20	16.58	Mining Activities	About 1 KM
23-Dec-25	Karnapur Village	188	86	45	15.70	19.00	Anthropogenic Activities, Local	About 2km
23-Dec-25	Near Joragdia Village	213	86	49	14.95	31.66	Transportation, Domestic Cooking	About 1km
24-Dec-25	East of the Mine, Natedi Village (Reported Only)	238	89	50	12.65	21.11	Coal Transportation Road	About 2km
25-Dec-25	East of the Mine, Natedi Village (Reported Only)	194	95	56	6.22	17.27	Coal Transportation Road	About 2km
29-Dec-25	Kalinga Colony	182	71	40	9.39	34.30	Mining allied activities	About 500m
29-Dec-25	Karnapur Village	248	93	55	13.80	17.34	Anthropogenic Activities, Local	About 2km
29-Dec-25	Khajuria Village	179	76	42	14.09	16.62	Mining Activities	About 1 KM
29-Dec-25	Near Joragdia Village	198	78	45	9.84	30.78	Transportation, Domestic Cooking	About 1km
30-Dec-25	Near Joragdia Village	206	86	50	9.45	33.72	Transportation, Domestic Cooking	About 1km
30-Dec-25	Kalinga Colony	195	74	41	11.89	27.14	Mining allied activities	About 500m
30-Dec-25	Karnapur Village	236	87	50	16.53	29.99	Anthropogenic Activities, Local	About 2km
30-Dec-25	Khajuria Village	224	89	49	13.56	18.33	Mining Activities	About 1 KM


 Authorized Signatory
 C.M.P. & P.I.-VI, LAB
 BHUBANESWAR

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 Anand K. Singh



Test Report

AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area :

Bharatpur

Project :

Bharatpur OCP

Date of Sampling	Monitoring Station	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo(a)Pyrene	Benzene
		(µg/m ³)	(µg/m ³)	(µg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(µg/m ³)
01-Dec-25	Khajuria Village	<20.0	10.90	<0.1	<1.0	<1.0	1.5	BQL(QL)=0.7	BQL
01-Dec-25	Kalinga Colony	<20.0	27.37	<0.1	<1.0	<1.0	1.5	BQL(QL)=0.7	BQL
01-Dec-25	Karnapur Village	<20.0	24.47	<0.1	<1.0	<1.0	1.5	BQL(QL)=0.7	BQL
01-Dec-25	Near Joragdia Village	<20.0	16.23	<0.1	<1.0	<1.0	1.8	BQL(QL)=0.7	BQL
02-Dec-25	Karnapur Village	<20.0	17.20	<0.1	<1.0	<1.0	1.6	BQL(QL)=0.7	BQL
02-Dec-25	Khajuria Village	<20.0	18.40	<0.1	<1.0	<1.0	1.4	BQL(QL)=0.7	BQL
02-Dec-25	Near Joragdia Village	<20.0	10.42	<0.1	<1.0	<1.0	1.3	BQL(QL)=0.7	BQL
02-Dec-25	Kalinga Colony	<20.0	13.80	<0.1	<1.0	<1.0	1.6	BQL(QL)=0.7	BQL
03-Dec-25	East of the Mine, Natedi Village (Reported Only)	<20.0	22.28	<0.1	<1.0	<1.0	1.5	BQL(QL)=0.7	BQL
04-Dec-25	East of the Mine, Natedi Village (Reported Only)	<20.0	17.92	<0.1	<1.0	<1.0	1.3	BQL(QL)=0.7	BQL
08-Dec-25	Kalinga Colony	<20.0	16.72	<0.1	<1.0	<1.0	1.4	BQL(QL)=0.7	BQL
08-Dec-25	Near Joragdia Village	<20.0	16.95	<0.1	<1.0	<1.0	1.3	BQL(QL)=0.7	BQL
08-Dec-25	Khajuria Village	<20.0	22.77	<0.1	<1.0	<1.0	1.5	BQL(QL)=0.7	BQL
08-Dec-25	Karnapur Village	<20.0	19.13	<0.1	<1.0	<1.0	1.4	BQL(QL)=0.7	BQL
09-Dec-25	Karnapur Village	<20.0	16.72	<0.1	<1.0	<1.0	1.8	BQL(QL)=0.7	BQL
09-Dec-25	Khajuria Village	<20.0	15.73	<0.1	<1.0	<1.0	1.6	BQL(QL)=0.7	BQL
09-Dec-25	Kalinga Colony	<20.0	26.40	<0.1	<1.0	<1.0	1.4	BQL(QL)=0.7	BQL
09-Dec-25	Near Joragdia Village	<20.0	25.92	<0.1	<1.0	<1.0	1.5	BQL(QL)=0.7	BQL
10-Dec-25	East of the Mine, Natedi Village (Reported Only)	<20.0	25.43	<0.1	<1.0	<1.0	1.3	BQL(QL)=0.7	BQL
11-Dec-25	East of the Mine, Natedi Village (Reported Only)	<20.0	14.28	<0.1	<1.0	<1.0	1.8	BQL(QL)=0.7	BQL
16-Dec-25	Kalinga Colony	<20.0	19.87	<0.1	<1.0	<1.0	1.8	BQL(QL)=0.7	BQL
16-Dec-25	Near Joragdia Village	<20.0	25.43	<0.1	<1.0	<1.0	1.9	BQL(QL)=0.7	BQL
16-Dec-25	Karnapur Village	<20.0	25.92	<0.1	<1.0	<1.0	1.2	BQL(QL)=0.7	BQL
16-Dec-25	Khajuria Village	<20.0	19.37	<0.1	<1.0	<1.0	1.6	BQL(QL)=0.7	BQL

Standard	400(24 hours)	180(hours)	1.0(24 hours)	6.0(Annual)	20(Annual)	02(8hours)	01(annual)	05(annual)
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Authorised Signatory
CMPDI, RI-VII, LAB
BHUBANESWAR

Signature

Project :

Bharatpur OCP

Date of Sampling	Monitoring Station	Ammonia(NH ₃)	Ozone(O ₃)	Lead(Pb)	Arsenic(As)	Nickel(Ni)	CO	Benzo(a)Pyrene	Benzene
		(µg/m ³)	(µg/m ³)	(µg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(µg/m ³)
17-Dec-25	Kalinga Colony	<20.0	23.25	<0.1	<1.0	<1.0	1.0	BQL(QL)=0.7	BQL
17-Dec-25	Near Joragdia Village	<20.0	20.83	<0.1	<1.0	<1.0	1.4	BQL(QL)=0.7	BQL
17-Dec-25	Khajuria Village	<20.0	26.15	<0.1	<1.0	<1.0	1.4	BQL(QL)=0.7	BQL
17-Dec-25	Karnapur Village	<20.0	25.18	<0.1	<1.0	<1.0	1.4	BQL(QL)=0.7	BQL
18-Dec-25	East of the Mine, Natedi Village (Reported Only)	<20.0	13.57	<0.1	<1.0	<1.0	1.8	BQL(QL)=0.7	BQL
19-Dec-25	East of the Mine, Natedi Village (Reported Only)	<20.0	26.40	<0.1	<1.0	<1.0	1.4	BQL(QL)=0.7	BQL
22-Dec-25	Karnapur Village	<20.0	21.07	<0.1	<1.0	<1.0	1.5	BQL(QL)=0.7	BQL
22-Dec-25	Kalinga Colony	<20.0	26.88	<0.1	<1.0	<1.0	1.1	BQL(QL)=0.7	BQL
22-Dec-25	Khajuria Village	<20.0	25.67	<0.1	<1.0	<1.0	1.3	BQL(QL)=0.7	BQL
22-Dec-25	Near Joragdia Village	<20.0	23.98	<0.1	<1.0	<1.0	1.0	BQL(QL)=0.7	BQL
23-Dec-25	Kalinga Colony	<20.0	27.12	<0.1	<1.0	<1.0	1.8	BQL(QL)=0.7	BQL
23-Dec-25	Near Joragdia Village	<20.0	21.55	<0.1	<1.0	<1.0	1.2	BQL(QL)=0.7	BQL
23-Dec-25	Khajuria Village	<20.0	23.98	<0.1	<1.0	<1.0	1.4	BQL(QL)=0.7	BQL
23-Dec-25	Karnapur Village	<20.0	10.42	<0.1	<1.0	<1.0	1.7	BQL(QL)=0.7	BQL
24-Dec-25	East of the Mine, Natedi Village (Reported Only)	<20.0	27.12	<0.1	<1.0	<1.0	1.7	BQL(QL)=0.7	BQL
25-Dec-25	East of the Mine, Natedi Village (Reported Only)	<20.0	17.43	<0.1	<1.0	<1.0	1.6	BQL(QL)=0.7	BQL
29-Dec-25	Near Joragdia Village	<20.0	27.85	<0.1	<1.0	<1.0	1.7	BQL(QL)=0.7	BQL
29-Dec-25	Khajuria Village	<20.0	22.03	<0.1	<1.0	<1.0	1.8	BQL(QL)=0.7	BQL
29-Dec-25	Karnapur Village	<20.0	14.05	<0.1	<1.0	<1.0	1.4	BQL(QL)=0.7	BQL
29-Dec-25	Kalinga Colony	<20.0	11.62	<0.1	<1.0	<1.0	1.8	BQL(QL)=0.7	BQL
30-Dec-25	Kalinga Colony	<20.0	25.92	<0.1	<1.0	<1.0	1.5	BQL(QL)=0.7	BQL
30-Dec-25	Near Joragdia Village	<20.0	27.12	<0.1	<1.0	<1.0	1.1	BQL(QL)=0.7	BQL
30-Dec-25	Khajuria Village	<20.0	11.62	<0.1	<1.0	<1.0	1.2	BQL(QL)=0.7	BQL
30-Dec-25	Karnapur Village	<20.0	14.77	<0.1	<1.0	<1.0	1.3	BQL(QL)=0.7	BQL


 Authorised Signatory
 C.M.P. No. 17, LAB
 BHUBANESWAR

400(24 hours)	180(hours)	1.0(24 hours)	6.0(Annual)	20(Annual)	02(8 hours)	01(annual)	05(annual)
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Jaisankar



राष्ट्रीय प्रदूषण नियंत्रण बोर्ड
 राष्ट्रीय प्रदूषण नियंत्रण बोर्ड
 राष्ट्रीय प्रदूषण नियंत्रण बोर्ड

TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Bharatpur

PROJECT :

Bharatpur OCP

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
12-Dec-25	North West Point of the Mine	64.6	53.1
12-Dec-25	Near Regional Store	65.3	49.7
12-Dec-25	Near Wokshop	66.4	52.8
12-Dec-25	Kalinga Colony	50.1	36.6
13-Dec-25	Natedi Village (Reported)	48.6	35.1
30-Dec-25	Natedi Village (Reported)	51.3	37.8
30-Dec-25	North West Point of the Mine	63.9	49.2
30-Dec-25	Near Regional Store	66.7	52.1
30-Dec-25	Near Wokshop	64.7	55.7
30-Dec-25	Kalinga Colony	49.7	36.9

Authorised Signatory
 CMPD RI-75
 BHU ANESWAR

MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 75dB(A) (Industrial)	10.00 PM -6.00 AM Leq 70dB(A) (Industrial)
MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 55dB(A) (Residential)	10.00 PM -6.00 AM Leq 45dB(A) (Residential)
MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 65dB(A) (Commercial)	10.00 PM -6.00 AM Leq 55dB(A) (Commercial)
MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 50dB(A) (Silence Zone)	10.00 PM -6.00 AM Leq 40dB(A) (Silence Zone)

Janaik


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	MPN/100mL
15-Dec-25	Mine Sump Water - Main Sump	5.51	<4.0	30	32	-	
15-Dec-25	Mine Sump Water - Old Quarry Sump	6.60	-	-	-	-	
15-Dec-25	Rakas Quarry Sump	4.00	-	-	-	-	
15-Dec-25	Workshop ETP Clear Water Tank	7.46	<4.0	34	40	-	
15-Dec-25	Workshop Inlet	7.55	<4.0	42	52	-	
30-Dec-25	Workshop ETP Clear Water Tank	7.36	<4.0	28	32	-	
30-Dec-25	Workshop Inlet	7.65	<4.0	44	40	-	

Hattarai
 Authorised Signatory
 CMPDI, RI-VII, LAB
 BHUBANESWAR

Jannati

G.S.R. 1203(E) Effluent discharge standards (applicable to all mode of disposal), Sewage Treatment Plants (STPs)

6.5-9.0

-

<100

-

30

<1000

TABLE--


 सार्वजनिक
 नगरपालिका
 काठमाडौं
 नगरपालिका
 काठमाडौं
 नगरपालिका
 काठमाडौं

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	MPN/100mL
15-Dec-25	STP INLET	8.30	-	32	-	4.4	220
15-Dec-25	STP Outlet (PH,TSS,MPN,BOD)	7.61	-	22	-	3.0	150
30-Dec-25	STP INLET	8.26	-	42	-	3.9	170
30-Dec-25	STP Outlet (PH,TSS,MPN,BOD)	7.84	-	30	-	2.7	140

1/11/2025

 Signature
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 BHUBAN

G.S.R. 1265(E) Effluent discharge standards (applicable to all mode of disposal), Sewage Treatment Plants (STPs)

6.5-9.0	-	<100	-	30	<1000
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Signature



सीएमपीडीआई
निर्मित १९९८
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Mini India

Effluent Quality (all Parameter): - Bharatpur Area

Project (OCP / UG)	Bharatpur		MoEF-Sch-VI Standards
NAME OF THE STATION	Mine Sump Water-Mine Sump	Mine Sump (Old Quarry Sump)	
Date of Sampling	15-Nov-25	15-Nov-25	
Odour	Unobjectionable	Unobjectionable	-
Colour(Hazen)	4	2	-
Temperature(oC)	24.3	24.5	Shall not exceed 5 ^{oC} above the receiving temperature
pH	6.31	7.53	5.5-9.0
Total Hardness (asCaCO3),mg/L	161.72	234.50	-
Total Dissolved Solids, mg/L	312	402	-
Nitrate Nitrogen(mg/L)(As N)	<0.11	<0.11	10
Ammonical Nitrogen , mg/l (As N)	<0.20	<0.20	50
Total Kjeldhal Nitrogen, mg/l (As N)	1.76	3.51	100
Sulphide (mg/L)	<0.10	<0.10	2
BOD [3 days at 27°C] (mg/L)	2.7	2.9	30
Fluoride(mg/L)	0.57	1.05	2
Copper(mg/L)	<0.03	<0.03	3
Manganese(mg/L)	<0.04	0.11	2
Iron(mg/L)	<0.1	<0.1	3
Zinc(mg/L)	0.05	0.06	5
Lead, mg/l	<0.005	<0.005	0.1
Cadmium, mg/l	<0.001	<0.001	2.0
Total Chromium(mg/L)	<0.01	<0.01	2.0
Hexavalent Chromium(mg/L)	<0.05	<0.05	0.1
Nickel(mg/L)	0.03	1.00	3
Arsenic, mg/l	<0.005	<0.005	0.2
Selenium (mg/L)	<0.005	<0.005	0.05
Dissolved Phosphate(mg/L)	<4.0	<4.0	5
Phenolics (mg/L)	<0.001	<0.001	1

Jatavali
Authorized Signatory
CMPDI, R-VII, LAB
BHUBANESWAR

Jamat



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Surface Water Quality Data Bharatpur Area

Project/OCP	Bharatpur		IS:2296-1982 Tolerance for inland Surface water (Class C)
	Bangaru Jhor river near Joragadia as downstream water point of Bharatpur OCP	Upstream of Bangaru Jhor river of Bharatpur OCP as downstream of Balram OCP (Reported)	
NAME OF STATIONS			
Date of sampling	15-Nov-25	15-Nov-25	
pH	7.91	7.22	6.5-8.5
Color (Hazen unit)	3	1	300
Dissolved Oxygen(mg/L)	6.9	6.5	4
BOD (3 days 27°C(mg/L)	2.0	<2.0	3
Chlorides(mg/L)	19.41	11.65	600
Sulphate(mg/L)	120.13	23.24	400
Nitrate(mg/L)	<0.50	<0.5	50
Fluoride(mg/L)	0.34	<0.30	1.5
Total Hardness(mg/L)	319.41	48.51	-
Total dissolved solids (mg/L)	489	112	1500
TSS(mg/L)	46	28	-
Copper(mg/L)	<0.03	<0.03	1.5
Iron(mg/L)	0.1	<0.1	50
Zinc(mg/L)	0.11	<0.04	15
Lead(mg/L)	<0.005	<0.005	0.1
Cadmium(mg/L)	<0.001	<0.001	0.01
Hexavalent Chromium(as Cr ⁶⁺ (mg/L)	<0.05	<0.05	0.05
Arsenic(mg/L)	<0.005	<0.005	0.2
Selenium(mg/L)	<0.005	<0.005	0.05
Phenolics(mg/L)	<0.001	<0.001	0.005
Oil & Grease (mg/L)	<4.0	<4.0	0.1
Residual Free Chlorine(mg/L)	<0.2	<0.2	0.2
MPN (Index/100 ml)	280	240	-

Signature
Authorised Signatory
C.M.P.D.I. RI-VII, LAB
BANSWARI

Signature



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Surface Water Quality Data Bharatpur Area

Project/OCP	Bharatpur		IS:2296-1982 Tolerance for inland Surface water (Class C)
	Pond Near N-W Point of the Mine	Jambubahali Village pond	
NAME OF STATIONS	15-Nov-25	15-Nov-25	
Date of sampling	15-Nov-25	15-Nov-25	
pH	7.40	7.21	6.5-8.5
Color (Hazen unit)	3	2	300
Dissolved Oxygen(mg/L)	6.7	7.2	4
BOD (3 days 27°C(mg/L)	2.1	2.2	3
Chlorides(mg/L)	23.29	31.06	600
Sulphate(mg/L)	220.27	43.78	400
Nitrate(mg/L)	<0.50	2.79	50
Fluoride(mg/L)	0.62	0.31	1.5
Total Hardness(mg/L)	469.01	157.68	-
Total dissolved solids (mg/L)	757	289	1500
TSS(mg/L)	56	42	-
Copper(mg/L)	<0.03	<0.03	1.5
Iron(mg/L)	<0.1	<0.1	50
Zinc(mg/L)	<0.04	<0.04	15
Lead(mg/L)	<0.005	<0.005	0.1
Cadmium(mg/L)	<0.001	<0.001	0.01
Hexavalent Chromium(as Cr ⁶⁺)(mg/L)	<0.05	<0.05	0.05
Arsenic(mg/L)	<0.005	<0.005	0.2
Selenium(mg/L)	<0.005	<0.005	0.05
Phenolics(mg/L)	<0.001	<0.001	0.005
Oil & Grease (mg/L)	<4.0	<4.0	0.1
Residual Free Chlorine(mg/L)	<0.2	<0.2	0.2
MPN (Index/100 ml)	79	94	-


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Drinking Water Quality Data Bharatpur Area

Project / OCP	Bharatpur OCP	Indian Drinking Standards (IS-10500):2012	
Monitoring Station	Time Office,BOCP	Acceptable	Permissible
Date of Sampling	15-Dec-2025		
Colour(Hazen)	3	5	15
Odour	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	3	1	5
pH	6.98	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	41.60	200	600
Chloride(mg/L)	21.37	250	1000
Sulphate(mg/L)	27.03	200	400
Nitrate(mg/L)	5.56	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	72.57	200	600
Calcium(mg/L)	24.24	75	200
Fluoride(mg/L)	<0.3	1	1.5
Total Dissolve Solid(mg/L)	120	500	2000
Copper(mg/L)	<0.03	0.05	1.5
Manganese(mg/L)	0.31	0.1	0.3
Iron(mg/L)	<0.1	1.0	No relaxation
Zinc(mg/L)	0.17	5	15
Lead(mg/L)	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.001	0.003	No relaxation
Total Chromium (mg/L)	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	0.5	2.4

K. K. K.
Authorised Signatory
CMPDI, RI-VII, LAB
BHUBANESWAR

Jaswant



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Drinking Water Quality Data Bharatpur Area

Project / OCP	Bharatpur OCP	Indian Drinking Standards (IS-10500):2012	
Monitoring Station	Time Office,BOCP	Acceptable	Permissible
Date of Sampling	15-Dec-2025		
Selenium(mg/L)	<0.005	0.01	No relaxation
Sodium(mg/L)	9.07		
Potassium(mg/L)	3.61		
Phenolics(mg/L)	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	0.2	1.0
MPN (Index/100 ml)	Not Detected	-	-

K. S. Sankar
Authorised Signatory
CMPDI, RI-VII, LAB
BHUBANESWAR

J. S. Sankar

Bharatpur OCP

Legend
● Monitoring Station

Khajuria Village Near Joragadia Village

North-West Point of the Mine

Near ETP Workshop

Near Regional Store

Natedi Village

Kalinga Colony

Google Earth

Karnapur Village



**Environmental Monitoring Report
For
December -2025**

**Project: Bhubaneswari OCP
Area: Bhubaneswari
Coalfield: Talcher**



MCL

Mahanadi Coalfields Limited



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मिनी प्लान
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Mini Ratna

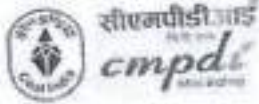
Central Mine Planning & Design Institute Ltd.
(A Subsidiary of Coal India Ltd.)

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

Test Report

AMBIENT AIR QUALITY DATA



Area :

Bhubaneswari

(Compliance Station)

Project :

Bhubaneswari OCP

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

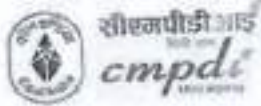
Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	CO (mg/m3)	Dust Generating Source(DGS)	Distance from DGS
05-Dec-25	B.C.M.L. Workshop	226	126	61	15.30	20.58	-	Mining activities, O.B Dump yard	About 400 to 500m
05-Dec-25	Silo Substation Office	327	177	84	11.89	31.66	-	Mining Activities	About 200m
20-Dec-25	B.C.M.L. Workshop	285	168	73	18.92	26.91	-	Mining activities, O.B Dump yard	About 400 to 500m
20-Dec-25	Silo Substation Office	323	193	88	9.52	27.34	-	Mining Activities	About 200m


 Authorized Signatory
 C.M.P.D.I. LAB
 BHUBANESWAR

000	300		120	120	07/8 Hours
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Januar

Test Report



AMBIENT AIR QUALITY DATA

Area :

Bhubaneswari

(Reference Station)

Project :

Bhubaneswari 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
01-Dec-25	Naraharipur Village	218	83	43	13.87	38.69	Mining Activity	About 1km
01-Dec-25	Kandhal Village (Reported Only)	186	76	41	10.17	27.49	Transportation	About 1500m
02-Dec-25	Kandhal Village (Reported Only)	196	78	43	20.93	18.20	Transportation	About 1500m
02-Dec-25	Naraharipur Village	194	81	37	22.46	29.16	Mining Activity	About 1km
08-Dec-25	Kandhal Village (Reported Only)	198	79	46	20.58	15.83	Transportation	About 1500m
08-Dec-25	Naraharipur Village	198	78	41	19.73	29.28	Mining Activity	About 1km
09-Dec-25	Kandhal Village (Reported Only)	184	81	48	13.42	11.31	Transportation	About 1500m
09-Dec-25	Naraharipur Village	189	76	38	16.49	12.06	Mining Activity	About 1km
16-Dec-25	Kandhal Village (Reported Only)	181	72	42	20.53	15.83	Transportation	About 1500m
16-Dec-25	Naraharipur Village	189	81	41	21.61	32.49	Mining Activity	About 1km
17-Dec-25	Kandhal Village (Reported Only)	176	67	44	10.74	24.12	Transportation	About 1500m
17-Dec-25	Naraharipur Village	185	78	42	8.86	25.33	Mining Activity	About 1km
22-Dec-25	Naraharipur Village	188	78	45	13.36	23.31	Mining Activity	About 1km
22-Dec-25	Kandhal Village (Reported Only)	178	64	43	7.60	41.33	Transportation	About 1500m
23-Dec-25	Kandhal Village (Reported Only)	182	69	44	7.69	22.31	Transportation	About 1500m
23-Dec-25	Naraharipur Village	186	79	43	12.25	21.34	Mining Activity	About 1km
29-Dec-25	Kandhal Village (Reported Only)	176	72	47	11.44	37.49	Transportation	About 1500m
29-Dec-25	Naraharipur Village	198	78	44	15.68	22.49	Mining Activity	About 1km
30-Dec-25	Naraharipur Village	194	76	46	12.08	27.26	Mining Activity	About 1km
30-Dec-25	Kandhal Village (Reported Only)	179	74	46	11.87	22.49	Transportation	About 1500m

Handwritten Signature
 Authorised Signatory
 CMPDI, Ki-VII, LAB
 BHUBANESWAR

*NAAQS,2009

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Handwritten Signature

Test Report



AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area :

Bhubaneswari

Project :

Bhubaneswari OCP

Date of Sampling	Monitoring Station	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo(a)Pyrene	Benzene
		(µg/m ³)	(µg/m ³)	(µg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(µg/m ³)
01-Dec-25	Kandhal Village (Reported Only)	<20.0	17.68	<0.1	<1.0	<1.0	1.0	BQL(QL)=0.7	BQL
01-Dec-25	Naraharipur Village	<20.0	14.53	<0.1	<1.0	<1.0	1.2	BQL(QL)=0.7	BQL
02-Dec-25	Naraharipur Village	<20.0	17.20	<0.1	<1.0	<1.0	1.2	BQL(QL)=0.7	BQL
02-Dec-25	Kandhal Village (Reported Only)	<20.0	23.00	<0.1	<1.0	<1.0	1.3	BQL(QL)=0.7	BQL
08-Dec-25	Naraharipur Village	<20.0	14.77	<0.1	<1.0	<1.0	1.7	BQL(QL)=0.7	BQL
08-Dec-25	Kandhal Village (Reported Only)	<20.0	14.05	<0.1	<1.0	<1.0	0.8	BQL(QL)=0.7	BQL
09-Dec-25	Naraharipur Village	<20.0	13.32	<0.1	<1.0	<1.0	1.6	BQL(QL)=0.7	BQL
09-Dec-25	Kandhal Village (Reported Only)	<20.0	18.17	<0.1	<1.0	<1.0	0.9	BQL(QL)=0.7	BQL
16-Dec-25	Naraharipur Village	<20.0	20.58	<0.1	<1.0	<1.0	1.1	BQL(QL)=0.7	BQL
16-Dec-25	Kandhal Village (Reported Only)	<20.0	16.47	<0.1	<1.0	<1.0	1.1	BQL(QL)=0.7	BQL
17-Dec-25	Naraharipur Village	<20.0	25.43	<0.1	<1.0	<1.0	1.7	BQL(QL)=0.7	BQL
17-Dec-25	Kandhal Village (Reported Only)	<20.0	16.23	<0.1	<1.0	<1.0	0.7	BQL(QL)=0.7	BQL
22-Dec-25	Kandhal Village (Reported Only)	<20.0	18.65	<0.1	<1.0	<1.0	1.4	BQL(QL)=0.7	BQL
22-Dec-25	Naraharipur Village	<20.0	18.47	<0.1	<1.0	<1.0	1.2	BQL(QL)=0.7	BQL
23-Dec-25	Naraharipur Village	<20.0	27.37	<0.1	<1.0	<1.0	1.3	BQL(QL)=0.7	BQL
23-Dec-25	Kandhal Village (Reported Only)	<20.0	27.12	<0.1	<1.0	<1.0	1.0	BQL(QL)=0.7	BQL
29-Dec-25	Naraharipur Village	<20.0	27.85	<0.1	<1.0	<1.0	1.3	BQL(QL)=0.7	BQL
29-Dec-25	Kandhal Village (Reported Only)	<20.0	22.28	<0.1	<1.0	<1.0	1.0	BQL(QL)=0.7	BQL
30-Dec-25	Kandhal Village (Reported Only)	<20.0	12.60	<0.1	<1.0	<1.0	0.9	BQL(QL)=0.7	BQL
30-Dec-25	Naraharipur Village	<20.0	17.92	<0.1	<1.0	<1.0	1.4	BQL(QL)=0.7	BQL

Authorised Signatory
CMPDI, RI-VII, LAB
BHUBANESWAR

Standard	400(24 hours)	180(hours)	1.0(24 hours)	6.0(Annual)	20(Annual)	02(8 hours)	01(annual)	05(annual)
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Janaki



सीएमपीडीआई
CMPDI
CENTRAL POLLUTION CONTROL BOARD

TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Bhubaneswari

PROJECT :

Bhubaneswari OCP

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
12-Dec-25	Kandhal Village (Reported)	48.4	36.5
12-Dec-25	Naraharipur Village	49.8	36.2
12-Dec-25	Silo Substaion Office	68.3	55.1
12-Dec-25	BCML Workshop	67.8	54.6
29-Dec-25	Naraharipur Village	46.7	37.9
29-Dec-25	Silo Substaion Office	65.9	52.9
29-Dec-25	BCML Workshop	66.7	52.3
30-Dec-25	Kandhal Village (Reported)	48.1	38.1

MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 75dB(A) (Industrial)	10.00 PM -6.00 AM Leq 70dB(A) (Industrial)
MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 55dB(A) (Residential)	10.00 PM -6.00 AM Leq 45dB(A) (Residential)
MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 65dB(A) (Commercial)	10.00 PM -6.00 AM Leq 55dB(A) (Commercial)
MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 50dB(A) (Silence Zone)	10.00 PM -6.00 AM Leq 40dB(A) (Silence Zone)

H. H. H. H.
Authorised Signatory
CMPDI, RI-VII, LAB
BHUBANESWAR

Janak

TABLE-



सीएमपीडी आई
 cmpdi
 AND ASSOCIATES

EFFLUENT QUALITY DATA

Area :

Bhubaneswari

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

Project :

Bhubaneswari OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	Remarks
15-Dec-25	Mine Sump Water	7.08	<4.0	20	12	-	
15-Dec-25	O & G Trap Inlet	7.97	<4.0	36	48	-	
15-Dec-25	O & G Trap Outlet	6.71	<4.0	30	32	-	
30-Dec-25	O & G Trap Inlet	7.79	<4.0	40	44	-	
30-Dec-25	O & G Trap Outlet	7.63	<4.0	34	36	-	

Authorised Signatory
 C.P.C.B. Bhubaneswar
 Lab

Effluent Standard Certification dated 25th September, 2000
 with MATS Schedule VI, General standard for discharge
 of Environmental Pollutants Part A: Effluents

5.5-9.0	10	100	250	30
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J. S. S. S.



सीएमपीडीआई
मिनी प्ल
cmpdi
Mini kotna

Effluent Quality (all Parameter): - Bhubaneswari Area

Project (OCP / UG)	Bhubaneswari	MoEF-Sch-VI Standards
NAME OF THE STATION	Mine Sump Water	
Date of Sampling	15-Nov-25	
Odour	Unobjectionable	-
Colour(Hazen)	2	-
Temperature(°C)	24.5	Shall not exceed 5 °C above the receiving temperature
pH	6.00	5.5-9.0
Total Hardness (asCaCO ₃),mg/L	283.02	-
Total Dissolved Solids, mg/L	442	-
Nitrate Nitrogen(mg/L)(As N)	<0.11	10
Ammonical Nitrogen , mg/l (As N)	0.67	50
Total Kjeldhal Nitrogen, mg/l (As N)	3.51	100
Sulphide (mg/L)	<0.10	2
BOD [3 days at 27°C] (mg/L)	2.9	30
Fluoride(mg/L)	0.95	2
Copper(mg/L)	<0.03	3
Manganese(mg/L)	<0.04	2
Iron(mg/L)	<0.1	3
Zinc(mg/L)	<0.04	5
Lead, mg/l	<0.005	0.1
Cadmium, mg/l	<0.001	2.0
Total Chromium(mg/L)	<0.01	2.0
Hexavalent Chromium(mg/L)	<0.05	0.1
Nickel(mg/L)	0.03	3
Arsenic, mg/l	<0.005	0.2
Selenium (mg/L)	<0.005	0.05
Dissolved Phosphate(mg/L)	<4.0	5
Phenolics (mg/L)	<0.001	1

Authorised Signatory
CMPDI, RI-VII, LAB
BHUBANESWAR

Jamali



सीएमपीडीआई
मिनी लैब
cmpdi
Mini Lab

Surface Water Quality Data Bhubaneswari Area

Project/OCP	Bhubaneswari		IS:2296-1982 Tolerance for inland Surface water (Class C)
	Upstream of Bangaru Jhor as downstream water point of Ananta OCP (Reported)	Down stream of Bangaru Jhor- Khaisa Pala Village	
NAME OF STATIONS			
Date of sampling	15-Nov-25	15-Nov-25	
pH	7.02	7.16	6.5-8.5
Color (Hazen unit)	3	3	300
Dissolved Oxygen(mg/L)	6.8	7.1	4
BOD (3 days 27°C(mg/L)	2.2	<2.0	3
Chlorides(mg/L)	27.18	9.71	600
Sulphate(mg/L)	22.02	76.08	400
Nitrate(mg/L)	20.39	<0.50	50
Fluoride(mg/L)	1.31	0.42	1.5
Total Hardness(mg/L)	327.49	137.46	-
Total dissolved solids (mg/L)	464	316	1500
TSS(mg/L)	43	45	-
Copper(mg/L)	<0.03	<0.03	1.5
Iron(mg/L)	<0.1	<0.1	50
Zinc(mg/L)	0.04	0.08	15
Lead(mg/L)	<0.005	<0.005	0.1
Cadmium(mg/L)	<0.001	<0.001	0.01
Hexavalent Chromium(as Cr ⁶⁺)(mg/L)	<0.05	<0.05	0.05
Arsenic(mg/L)	<0.005	<0.005	0.2
Selenium(mg/L)	<0.005	<0.005	0.05
Phenolics(mg/L)	<0.001	<0.001	0.005
Oil & Grease (mg/L)	<4.0	<4.0	0.1
Residual Free Chlorine(mg/L)	<0.2	<0.2	0.2
MPN (Index/100 ml)	170	350	-

Jefferwick
Authorised Signatory
CMPDI, RI-VII, LAB
BHUBANESWAR

Jefferwick

Bhubaneswar OCP

Legend
Air Monitoring Locations



**Environmental Monitoring Report
For
December -2025**

**Project: Kaniha OCP
Area: Kaniha
Coalfield: Talcher**



Mahanadi Coalfields Limited



सीएमपीडीआई
मिनी प्लान
cmpdi
Mini Ratna

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]

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Test Report



सीएनपीसीबी
 THE CPCB
 cpcb
 CENTRAL POLLUTION CONTROL BOARD

AMBIENT AIR QUALITY DATA

Area :

Kaniha

(Compliance Station)

Project :

Kaniha OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	CO (mg/m3)	Dust Generating Source(DGS)	Distance from DGS
06-Dec-25	Near External OB Dump, Jamania	312	189	78	15.01	27.34	1.3	Mining Activities	About 500m
06-Dec-25	New Time Office (Near Z-Patch)	279	163	70	9.66	34.83	0.8	Mining Activities	About 500m
06-Dec-25	Near Project Office	286	180	73	9.59	19.60	0.9	Mining Activities	About 500m
26-Dec-25	Near External OB Dump, Jamania	288	174	80	22.46	29.16	1.1	Mining Activities	About 500m
26-Dec-25	New Time Office (Near Z-Patch)	293	167	76	21.02	36.06	1.1	Mining Activities	About 500m
26-Dec-25	Near Project Office	303	195	83	18.12	30.08	1.1	Mining Activities	About 500m

Kanhaiya
 Authorised Signatory
 Civil, LAB
 MoEF Standards Notification dated 25th
 November, 2000

600	300		120	120	62/8 Hours)
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Janak

Test Report



AMBIENT AIR QUALITY DATA

Area :

Kaniha

(Reference Station)

Project :

Kaniha 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
01-Dec-25	Near Harichandanpur	197	78	43	18.12	15.83	Mining Activities	About 2km
01-Dec-25	Kaniha (North of the Mine)	198	79	43	21.09	18.84	Mining Activities	About 500m
02-Dec-25	Near Harichandanpur	182	72	37	16.87	13.57	Mining Activities	About 2km
02-Dec-25	Kaniha (North of the Mine)	203	93	51	13.04	24.88	Mining Activities	About 500m
03-Dec-25	Kansamunda Village (West of the mine)	200	75	39	12.88	30.87	Mining Activities	About 500m
03-Dec-25	Gandaberna	196	79	39	19.07	21.66	Coal Transportation Road	About 500m
03-Dec-25	Guiland, South West of Mine	226	93	51	13.29	10.29	Mining Activities	About 750m
03-Dec-25	South Of Proposed Quarry Limit of KOCP	193	72	39	19.49	34.99	Mining Activities	About 500m
04-Dec-25	South Of Proposed Quarry Limit of KOCP	224	82	45	16.87	31.66	Mining Activities	About 500m
04-Dec-25	Kansamunda Village (West of the mine)	206	84	45	18.22	21.66	Mining Activities	About 500m
04-Dec-25	Gandaberna	218	86	47	23.73	38.32	Coal Transportation Road	About 500m
04-Dec-25	Guiland, South West of Mine	198	77	43	21.34	20.58	Mining Activities	About 750m
08-Dec-25	Kaniha (North of the Mine)	224	82	40	19.76	21.59	Mining Activities	About 500m
08-Dec-25	Guiland, South West of Mine	210	83	48	16.10	32.38	Mining Activities	About 750m
08-Dec-25	Near Harichandanpur	191	74	41	13.29	32.45	Mining Activities	About 2km
09-Dec-25	Near Harichandanpur	196	76	42	10.98	20.87	Mining Activities	About 2km
09-Dec-25	Guiland, South West of Mine	233	93	53	13.18	34.54	Mining Activities	About 750m
09-Dec-25	Kaniha (North of the Mine)	236	85	46	13.42	33.92	Mining Activities	About 500m
10-Dec-25	Kansamunda Village (West of the mine)	226	93	51	16.51	11.87	Mining Activities	About 500m
10-Dec-25	South Of Proposed Quarry Limit of KOCP	209	77	43	13.18	30.22	Mining Activities	About 500m
10-Dec-25	Gandaberna	236	92	54	21.92	16.71	Coal Transportation Road	About 500m
11-Dec-25	South Of Proposed Quarry Limit of KOCP	234	83	47	14.57	31.66	Mining Activities	About 500m
11-Dec-25	Kansamunda Village (West of the mine)	211	78	42	19.73	20.12	Mining Activities	About 500m
11-Dec-25	Gandaberna	205	85	44	12.27	24.88	Coal Transportation Road	About 500m
16-Dec-25	Kaniha (North of the Mine)	185	80	44	19.17	36.94	Mining Activities	About 500m

Authorised Signatory
CMPDI, B-VII, LAB
BHUVANESWAR

100 60 80 80

Janaki

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
16-Dec-25	Near Harichandanpur	176	69	36	11.12	36.94	Mining Activities	About 2km
17-Dec-25	Kaniha (North of the Mine)	235	93	57	8.05	34.30	Mining Activities	About 500m
17-Dec-25	Near Harichandanpur	179	68	37	11.67	33.24	Mining Activities	About 2km
18-Dec-25	Guiland, South West of Mine	227	89	50	21.74	17.41	Mining Activities	About 750m
18-Dec-25	South Of Proposed Quarry Limit of KOCP	219	88	49	15.01	26.62	Mining Activities	About 500m
18-Dec-25	Gandaberna	217	76	42	12.81	16.55	Coal Transportation Road	About 500m
18-Dec-25	Kansamunda Village (West of the mine)	245	95	58	10.87	37.20	Mining Activities	About 500m
19-Dec-25	Kansamunda Village (West of the mine)	215	88	51	6.90	21.86	Mining Activities	About 500m
19-Dec-25	South Of Proposed Quarry Limit of KOCP	198	82	47	8.05	30.94	Mining Activities	About 500m
19-Dec-25	Guiland, South West of Mine	204	75	44	10.61	30.22	Mining Activities	About 750m
19-Dec-25	Gandaberna	196	85	49	15.70	39.57	Coal Transportation Road	About 500m
22-Dec-25	Near Harichandanpur	181	74	42	8.86	30.87	Mining Activities	About 2km
22-Dec-25	Kaniha (North of the Mine)	202	89	48	12.08	32.38	Mining Activities	About 500m
23-Dec-25	Near Harichandanpur	185	73	41	8.78	30.94	Mining Activities	About 2km
23-Dec-25	Kaniha (North of the Mine)	189	75	42	9.97	36.18	Mining Activities	About 500m
24-Dec-25	South Of Proposed Quarry Limit of KOCP	247	92	53	14.83	39.99	Mining Activities	About 500m
24-Dec-25	Gandaberna	188	80	45	13.18	32.38	Coal Transportation Road	About 500m
24-Dec-25	Kansamunda Village (West of the mine)	215	83	49	17.25	29.40	Mining Activities	About 500m
24-Dec-25	Guiland, South West of Mine	213	84	48	10.35	16.58	Mining Activities	About 750m
25-Dec-25	Kansamunda Village (West of the mine)	237	93	55	20.32	30.15	Mining Activities	About 500m
25-Dec-25	Guiland, South West of Mine	211	86	45	8.42	19.43	Mining Activities	About 750m
25-Dec-25	Gandaberna	231	95	53	8.43	18.09	Coal Transportation Road	About 500m
25-Dec-25	South Of Proposed Quarry Limit of KOCP	203	82	48	10.25	25.18	Mining Activities	About 500m
29-Dec-25	Kaniha (North of the Mine)	238	90	54	12.81	27.34	Mining Activities	About 500m
29-Dec-25	Near Harichandanpur	186	76	43	17.37	32.49	Mining Activities	About 2km
30-Dec-25	Near Harichandanpur	189	78	44	19.55	21.11	Mining Activities	About 2km
30-Dec-25	Kaniha (North of the Mine)	210	83	48	18.66	22.31	Mining Activities	About 500m

Jattar
 Authorised Signatory
 CMPDI, RI-VII, LAG
 BANGALORE

100	60	60	60
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Jattar

Test Report



AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area :

Kaniha

Project :

Kaniha OCP

Date of Sampling	Monitoring Station	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo(a)Pyrene	Benzene
		(µg/m ³)	(µg/m ³)	(µg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(µg/m ³)
01-Dec-25	Kaniha (North of the Mine)	<20.0	27.12	<0.1	<1.0	<1.0	1.1	BQL(QL)=0.7)	BQL
01-Dec-25	Near Harichandanpur	<20.0	20.83	<0.1	<1.0	<1.0	1.7	BQL(QL)=0.7)	BQL
02-Dec-25	Near Harichandanpur	<20.0	13.08	<0.1	<1.0	<1.0	0.9	BQL(QL)=0.7)	BQL
02-Dec-25	Kaniha (North of the Mine)	<20.0	22.77	<0.1	<1.0	<1.0	0.9	BQL(QL)=0.7)	BQL
03-Dec-25	South Of Proposed Quarry Limit of KOCP	<20.0	18.88	<0.1	<1.0	<1.0	1.5	BQL(QL)=0.7)	BQL
03-Dec-25	Gandaberna	<20.0	13.32	<0.1	<1.0	<1.0	1.0	BQL(QL)=0.7)	BQL
03-Dec-25	Guiland, South West of Mine	<20.0	22.28	<0.1	<1.0	<1.0	1.4	BQL(QL)=0.7)	BQL
03-Dec-25	Kansamunda Village (West of the mine)	<20.0	22.52	<0.1	<1.0	<1.0	1.8	BQL(QL)=0.7)	BQL
04-Dec-25	Gandaberna	<20.0	25.92	<0.1	<1.0	<1.0	1.6	BQL(QL)=0.7)	BQL
04-Dec-25	Guiland, South West of Mine	<20.0	13.80	<0.1	<1.0	<1.0	1.1	BQL(QL)=0.7)	BQL
04-Dec-25	South Of Proposed Quarry Limit of KOCP	<20.0	24.95	<0.1	<1.0	<1.0	1.1	BQL(QL)=0.7)	BQL
04-Dec-25	Kansamunda Village (West of the mine)	<20.0	26.15	<0.1	<1.0	<1.0	1.3	BQL(QL)=0.7)	BQL
08-Dec-25	Kaniha (North of the Mine)	<20.0	18.17	<0.1	<1.0	<1.0	1.6	BQL(QL)=0.7)	BQL
08-Dec-25	Guiland, South West of Mine	<20.0	10.90	<0.1	<1.0	<1.0	1.6	BQL(QL)=0.7)	BQL
08-Dec-25	Near Harichandanpur	<20.0	22.03	<0.1	<1.0	<1.0	1.2	BQL(QL)=0.7)	BQL
09-Dec-25	Kaniha (North of the Mine)	<20.0	27.37	<0.1	<1.0	<1.0	0.9	BQL(QL)=0.7)	BQL
09-Dec-25	Guiland, South West of Mine	<20.0	23.00	<0.1	<1.0	<1.0	1.1	BQL(QL)=0.7)	BQL
09-Dec-25	Near Harichandanpur	<20.0	10.65	<0.1	<1.0	<1.0	1.2	BQL(QL)=0.7)	BQL
10-Dec-25	Kansamunda Village (West of the mine)	<20.0	18.17	<0.1	<1.0	<1.0	1.4	BQL(QL)=0.7)	BQL
10-Dec-25	Gandaberna	<20.0	19.37	<0.1	<1.0	<1.0	0.9	BQL(QL)=0.7)	BQL
10-Dec-25	South Of Proposed Quarry Limit of KOCP	<20.0	24.47	<0.1	<1.0	<1.0	1.4	BQL(QL)=0.7)	BQL
11-Dec-25	Kansamunda Village (West of the mine)	<20.0	18.88	<0.1	<1.0	<1.0	1.5	BQL(QL)=0.7)	BQL
11-Dec-25	South Of Proposed Quarry Limit of KOCP	<20.0	18.40	<0.1	<1.0	<1.0	1.7	BQL(QL)=0.7)	BQL
11-Dec-25	Gandaberna	<20.0	15.73	<0.1	<1.0	<1.0	1.6	BQL(QL)=0.7)	BQL

Authorised Signatory
 Chandro RI-VII, LAB
 BHUBANESWAR

400(24 hours)	180(hours)	1.0(24 hours)	6.0(Annual)	20(Annual)	02(8hours)	01(annual)	05(annual)
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[Handwritten Signature]

Project :

Kaniha OCP

Date of Sampling	Monitoring Station	Ammonia(NH ₃)	Ozone(O ₃)	Lead(Pb)	Arsenic(As)	Nickel(Ni)	CO	Benzo(a)Pyrene	Benzene
		(µg/m ³)	(µg/m ³)	(µg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(µg/m ³)
16-Dec-25	Near Harichandanpur	<20.0	18.88	<0.1	<1.0	<1.0	1.6	BQL(QL)=0.7)	BQL
16-Dec-25	Kaniha (North of the Mine)	<20.0	21.32	<0.1	<1.0	<1.0	1.6	BQL(QL)=0.7)	BQL
17-Dec-25	Kaniha (North of the Mine)	<20.0	23.48	<0.1	<1.0	<1.0	1.6	BQL(QL)=0.7)	BQL
17-Dec-25	Near Harichandanpur	<20.0	27.12	<0.1	<1.0	<1.0	1.7	BQL(QL)=0.7)	BQL
18-Dec-25	Guiland, South West of Mine	<20.0	23.25	<0.1	<1.0	<1.0	0.8	BQL(QL)=0.7)	BQL
18-Dec-25	Gandaberna	<20.0	23.25	<0.1	<1.0	<1.0	1.0	BQL(QL)=0.7)	BQL
18-Dec-25	South Of Proposed Quarry Limit of KOCP	<20.0	17.92	<0.1	<1.0	<1.0	0.8	BQL(QL)=0.7)	BQL
18-Dec-25	Kansamunda Village (West of the mine)	<20.0	23.00	<0.1	<1.0	<1.0	1.1	BQL(QL)=0.7)	BQL
19-Dec-25	Guiland, South West of Mine	<20.0	17.43	<0.1	<1.0	<1.0	1.4	BQL(QL)=0.7)	BQL
19-Dec-25	Gandaberna	<20.0	12.83	<0.1	<1.0	<1.0	1.2	BQL(QL)=0.7)	BQL
19-Dec-25	South Of Proposed Quarry Limit of KOCP	<20.0	14.53	<0.1	<1.0	<1.0	1.4	BQL(QL)=0.7)	BQL
19-Dec-25	Kansamunda Village (West of the mine)	<20.0	12.83	<0.1	<1.0	<1.0	1.7	BQL(QL)=0.7)	BQL
22-Dec-25	Near Harichandanpur	<20.0	11.13	<0.1	<1.0	<1.0	1.7	BQL(QL)=0.7)	BQL
22-Dec-25	Kaniha (North of the Mine)	<20.0	27.37	<0.1	<1.0	<1.0	1.2	BQL(QL)=0.7)	BQL
23-Dec-25	Kaniha (North of the Mine)	<20.0	15.25	<0.1	<1.0	<1.0	1.7	BQL(QL)=0.7)	BQL
23-Dec-25	Near Harichandanpur	<20.0	25.92	<0.1	<1.0	<1.0	1.4	BQL(QL)=0.7)	BQL
24-Dec-25	Gandaberna	<20.0	18.88	<0.1	<1.0	<1.0	1.8	BQL(QL)=0.7)	BQL
24-Dec-25	Guiland, South West of Mine	<20.0	22.03	<0.1	<1.0	<1.0	1.5	BQL(QL)=0.7)	BQL
24-Dec-25	South Of Proposed Quarry Limit of KOCP	<20.0	27.37	<0.1	<1.0	<1.0	1.7	BQL(QL)=0.7)	BQL
24-Dec-25	Kansamunda Village (West of the mine)	<20.0	26.63	<0.1	<1.0	<1.0	1.2	BQL(QL)=0.7)	BQL
25-Dec-25	South Of Proposed Quarry Limit of KOCP	<20.0	23.25	<0.1	<1.0	<1.0	0.8	BQL(QL)=0.7)	BQL
25-Dec-25	Guiland, South West of Mine	<20.0	15.25	<0.1	<1.0	<1.0	1.7	BQL(QL)=0.7)	BQL
25-Dec-25	Gandaberna	<20.0	21.32	<0.1	<1.0	<1.0	1.5	BQL(QL)=0.7)	BQL
25-Dec-25	Kansamunda Village (West of the mine)	<20.0	25.67	<0.1	<1.0	<1.0	1.7	BQL(QL)=0.7)	BQL
29-Dec-25	Kaniha (North of the Mine)	<20.0	27.85	<0.1	<1.0	<1.0	0.9	BQL(QL)=0.7)	BQL
29-Dec-25	Near Harichandanpur	<20.0	18.40	<0.1	<1.0	<1.0	1.0	BQL(QL)=0.7)	BQL
30-Dec-25	Kaniha (North of the Mine)	<20.0	13.80	<0.1	<1.0	<1.0	1.8	BQL(QL)=0.7)	BQL
30-Dec-25	Near Harichandanpur	<20.0	18.88	<0.1	<1.0	<1.0	1.5	BQL(QL)=0.7)	BQL

Standard	400(24 hours)	180(hours)	1.0(24 hours)	6.0(Annual)	20(Annual)	02(8 hours)	01(annual)	05(annual)
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Authorised Signatory
 CMPDI, RI-VII, I, A, B
 11/11/25

Janak

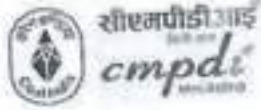


TABLE--

NOISE LEVEL MONITORING DATA

AREA : **Kaniha**

PROJECT : **Kaniha OCP**

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
13-Dec-25	Kansamunda Village (West of the Mine)	49.8	37.6
13-Dec-25	Near External OB Dump, Jamania	64.9	48.1
13-Dec-25	Near Time Office (Near Z-Patch)	65.8	49.2
13-Dec-25	Near Project Office	64.4	48.8
30-Dec-25	Kansamunda Village (West of the Mine)	49.4	39.1
30-Dec-25	Near External OB Dump, Jamania	64.3	50.2
30-Dec-25	Near Time Office (Near Z-Patch)	67.9	53.9
30-Dec-25	Near Project Office	67.2	53.2

MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 75dB(A) (Industrial)	10.00 PM -6.00 AM Leq 70dB(A) (Industrial)
MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 55dB(A) (Residential)	10.00 PM -6.00 AM Leq 45dB(A) (Residential)
MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 65dB(A) (Commercial)	10.00 PM -6.00 AM Leq 55dB(A) (Commercial)
MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 50dB(A) (Silence Zone)	10.00 PM -6.00 AM Leq 40dB(A) (Silence Zone)

K. Hanak
 Authorised Signatory
 CMPDI, RI-VII, LAB
 BHUBANESWAR

Janaki



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विनि रत्न
cmpdi
Mini Ratna

Effluent Quality (all Parameter): Kaniha Area

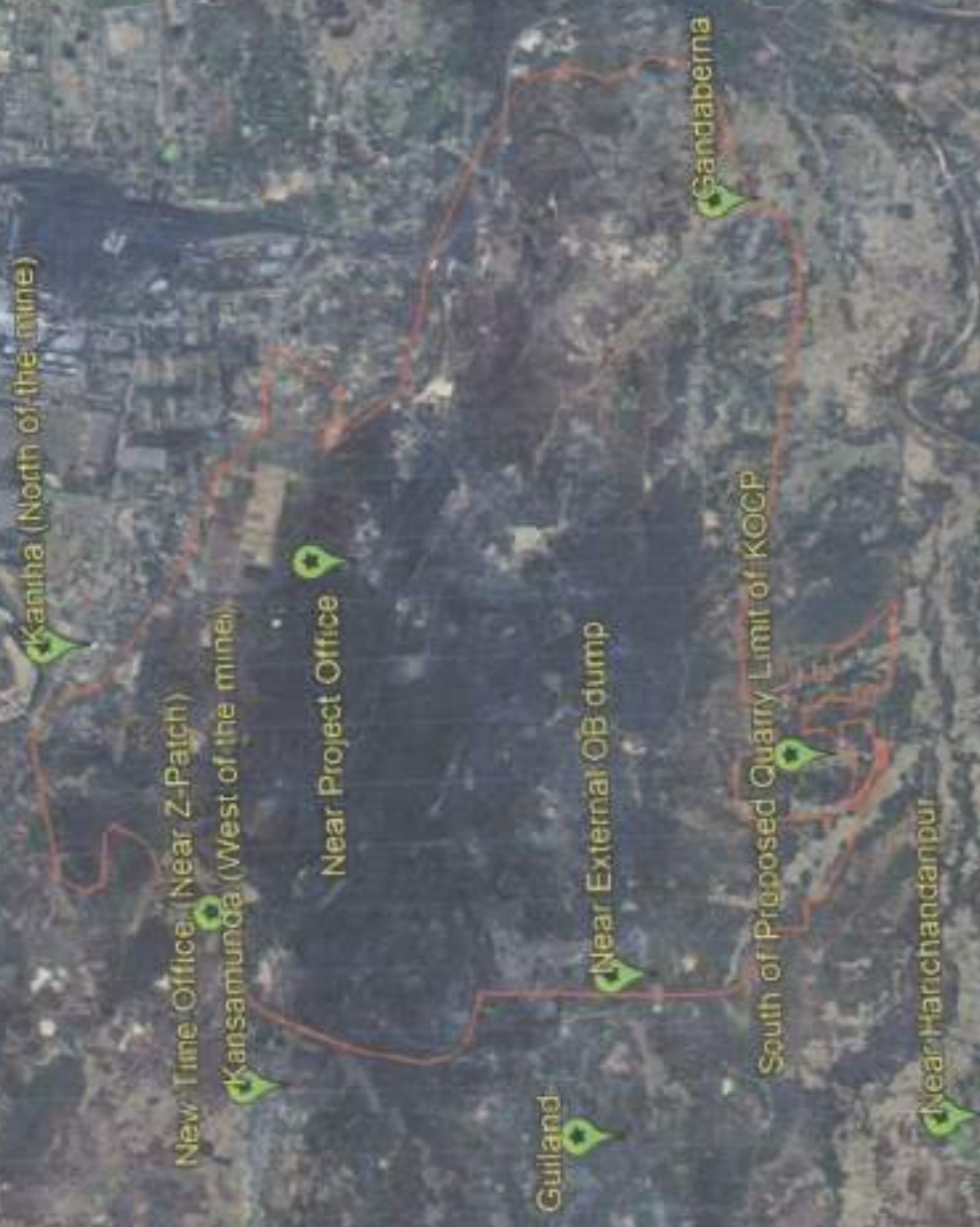
Project (OCP / UG)	Kaniha		MoEF-Sch-VI Standards
	Clear Water Pond (Inflow)	Z-Patch Sump	
NAME OF THE STATION	15-Nov-25	15-Nov-25	
Date of Sampling	15-Nov-25	15-Nov-25	
Odour	Unobjectionable	Unobjectionable	-
Colour(Hazen)	4	3	-
Temperature(oC)	24.5	24.5	Shall not exceed 5 °C above the receiving temperature
pH	8.30	8.35	5.5-9.0
Total Hardness (asCaCO ₃),mg/L	295.15	274.93	-
Total Dissolved Solids, mg/L	469	412	-
Nitrate Nitrogen(mg/L)(As N)	1.52	1.36	10
Ammonical Nitrogen , mg/l (As N)	<0.20	<0.20	50
Total Kjeldhal Nitrogen, mg/l (As N)	1.76	3.51	100
Sulphide (mg/L)	<0.10	<0.10	2
BOD [3 days at 27°C] (mg/L)	2.8	2.9	30
Fluoride(mg/L)	0.74	0.80	2
Copper(mg/L)	<0.03	<0.03	3
Manganese(mg/L)	<0.04	<0.04	2
Iron(mg/L)	<0.1	<0.1	3
Zinc(mg/L)	<0.04	<0.04	5
Lead, mg/l	<0.005	<0.005	0.1
Cadmium, mg/l	<0.001	<0.001	2.0
Total Chromium(mg/L)	<0.01	<0.01	2.0
Hexavalent Chromium(mg/L)	<0.05	<0.05	0.1
Nickel(mg/L)	0.03	0.06	3
Arsenic, mg/l	<0.005	<0.005	0.2
Selenium (mg/L)	<0.0005	<0.005	0.05
Dissolved Phosphate(mg/L)	<4.0	<4.0	5
Phenolics (mg/L)	<0.001	<0.001	1

K. Pattnaik
Authorised Signatory
CMPDI, RI-VII, LAB
BHUBANESWAR

J. S. Jena

Kaniha OCP

Legend
Mining Station



**Environmental Monitoring Report
For
December -2025**

**Project: Lingaraj OCP
Area: Lingaraj
Coalfield: Talcher**



Mahanadi Coalfields Limited



सीएमपीडीआई
लिमीटेड
cmpdi
Mini Ratna

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]

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सीएमपीडी.आई
CMRDI
RI-VII, LAB
Bhubaneswar

Test Report

AMBIENT AIR QUALITY DATA

Area :

Lingaraj

(Compliance Station)

Project :

Lingaraj OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	CO ($\mu\text{g}/\text{m}^3$)	Dust Generating Source(DGS)	Distance from DGS
06-Dec-25	GM Office Lingraj	296	166	75	16.51	20.58	1.0	Transportation	About 500m
06-Dec-25	Near Silo Conveyor Belt	306	186	78	10.61	25.90	0.8	Mining Operations	About 200m
26-Dec-25	GM Office Lingraj	293	179	84	14.19	25.63	0.9	Transportation	About 500m
26-Dec-25	Near Silo Conveyor Belt	321	172	79	21.61	20.00	1.0	Mining Operations	About 200m

K. S. Sankar
Authorised Signatory
CMRDI, RI-VII, LAB
Bhubaneswar

ISIRI Standards Notification dated 25th
September, 2000

900	250		120	1.0	
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Sankar

Test Report



AMBIENT AIR QUALITY DATA

Area :

Lingaraj

(Reference Station)

Project :

Lingaraj 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
01-Dec-25	Balunga Khamar Village	199	76	42	16.10	36.94	Mining Activities, Transportation	About 500m
01-Dec-25	Kandhal Village	186	76	41	10.17	27.49	Transportation	About 1500m
01-Dec-25	Lingaraj Township	206	86	45	12.88	19.79	Mining Activities, Transportation	About 500m
02-Dec-25	Balunga Khamar Village	193	89	41	18.12	37.99	Mining Activities, Transportation	About 500m
02-Dec-25	Kandhal Village	196	78	43	20.93	18.20	Transportation	About 1500m
02-Dec-25	Lingaraj Township	209	90	54	10.74	24.88	Mining Activities, Transportation	About 500m
08-Dec-25	Kandhal Village	198	79	46	20.58	15.83	Transportation	About 1500m
08-Dec-25	Balunga Khamar Village	185	75	37	22.46	32.49	Mining Activities, Transportation	About 500m
08-Dec-25	Lingaraj Township	233	84	49	15.01	28.06	Mining Activities, Transportation	About 500m
09-Dec-25	Lingaraj Township	230	81	47	9.52	27.34	Mining Activities, Transportation	About 500m
09-Dec-25	Kandhal Village	184	81	48	13.42	11.31	Transportation	About 1500m
09-Dec-25	Balunga Khamar Village	195	74	41	9.97	14.32	Mining Activities, Transportation	About 500m
16-Dec-25	Balunga Khamar Village	193	75	39	8.05	27.70	Mining Activities, Transportation	About 500m
16-Dec-25	Kandhal Village	181	72	42	20.53	15.83	Transportation	About 1500m
16-Dec-25	Lingaraj Township	227	90	53	8.50	25.50	Mining Activities, Transportation	About 500m
17-Dec-25	Balunga Khamar Village	232	78	43	22.46	32.49	Mining Activities, Transportation	About 500m
17-Dec-25	Lingaraj Township	237	92	54	22.04	19.16	Mining Activities, Transportation	About 500m
17-Dec-25	Kandhal Village	176	67	44	10.74	24.12	Transportation	About 1500m
22-Dec-25	Balunga Khamar Village	226	86	47	8.05	27.34	Mining Activities, Transportation	About 500m
22-Dec-25	Kandhal Village	178	64	43	7.60	41.33	Transportation	About 1500m
22-Dec-25	Lingaraj Township	206	83	48	8.05	16.66	Mining Activities, Transportation	About 500m
23-Dec-25	Kandhal Village	182	69	44	7.69	22.31	Transportation	About 1500m
23-Dec-25	Lingaraj Township	214	79	45	11.27	32.45	Mining Activities, Transportation	About 500m
23-Dec-25	Balunga Khamar Village	212	82	45	18.66	35.26	Mining Activities, Transportation	About 500m
29-Dec-25	Balunga Khamar Village	233	87	49	25.05	36.06	Mining Activities, Transportation	About 500m

Authorized Signatory
C.M.P.D.I. LAB
BHUBANESWAR

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Jamuna

Project :

Lingaraj OCP

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

<i>Date of Sampling</i>	<i>Monitoring Station</i>	<i>SPM</i>	<i>PM10</i>	<i>PM2.5</i>	<i>SO2</i>	<i>NOx</i>	<i>Dust Generating Source(DGS)</i>	<i>Distance from DGS</i>
29-Dec-25	Kandhal Village	176	72	47	11.44	37.49	Transportation	About 1500m
29-Dec-25	Lingaraj Township	196	77	44	13.42	19.60	Mining Activities, Transportation	About 500m
30-Dec-25	Lingaraj Township	226	86	49	11.35	19.43	Mining Activities, Transportation	About 300m
30-Dec-25	Balunga Khamar Village	248	93	53	16.95	34.99	Mining Activities, Transportation	About 500m
30-Dec-25	Kandhal Village	179	74	46	11.87	22.49	Transportation	About 1500m

K. Prasad
Authorized Signatory
C.M.P.L. VI-VII, LAB
BHUBANESWAR

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Janak

AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area :

Lingaraj

Project :

Lingaraj OCP

Date of Sampling	Monitoring Station	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo(a)Pyrene	Benzene
		(µg/m ³)	(µg/m ³)	(µg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(µg/m ³)
01-Dec-25	Kandhal Village	<20.0	17.68	<0.1	<1.0	<1.0	1.0	BQL(QL)=0.7	BQL
01-Dec-25	Lingaraj Township	<20.0	24.70	<0.1	<1.0	<1.0	0.8	BQL(QL)=0.7	BQL
01-Dec-25	Balunga Khamar Village	<20.0	27.60	<0.1	<1.0	<1.0	1.1	BQL(QL)=0.7	BQL
02-Dec-25	Kandhal Village	<20.0	23.00	<0.1	<1.0	<1.0	1.3	BQL(QL)=0.7	BQL
02-Dec-25	Lingaraj Township	<20.0	21.55	<0.1	<1.0	<1.0	0.8	BQL(QL)=0.7	BQL
02-Dec-25	Balunga Khamar Village	<20.0	13.80	<0.1	<1.0	<1.0	0.8	BQL(QL)=0.7	BQL
08-Dec-25	Lingaraj Township	<20.0	14.77	<0.1	<1.0	<1.0	0.9	BQL(QL)=0.7	BQL
08-Dec-25	Kandhal Village	<20.0	14.05	<0.1	<1.0	<1.0	0.8	BQL(QL)=0.7	BQL
08-Dec-25	Balunga Khamar Village	<20.0	24.70	<0.1	<1.0	<1.0	0.9	BQL(QL)=0.7	BQL
09-Dec-25	Balunga Khamar Village	<20.0	21.07	<0.1	<1.0	<1.0	1.4	BQL(QL)=0.7	BQL
09-Dec-25	Lingaraj Township	<20.0	12.60	<0.1	<1.0	<1.0	1.2	BQL(QL)=0.7	BQL
09-Dec-25	Kandhal Village	<20.0	18.17	<0.1	<1.0	<1.0	0.9	BQL(QL)=0.7	BQL
16-Dec-25	Kandhal Village	<20.0	16.47	<0.1	<1.0	<1.0	1.1	BQL(QL)=0.7	BQL
16-Dec-25	Lingaraj Township	<20.0	23.00	<0.1	<1.0	<1.0	0.7	BQL(QL)=0.7	BQL
16-Dec-25	Balunga Khamar Village	<20.0	16.47	<0.1	<1.0	<1.0	1.3	BQL(QL)=0.7	BQL
17-Dec-25	Kandhal Village	<20.0	16.23	<0.1	<1.0	<1.0	0.7	BQL(QL)=0.7	BQL
17-Dec-25	Balunga Khamar Village	<20.0	22.03	<0.1	<1.0	<1.0	0.9	BQL(QL)=0.7	BQL
17-Dec-25	Lingaraj Township	<20.0	13.57	<0.1	<1.0	<1.0	0.9	BQL(QL)=0.7	BQL
22-Dec-25	Kandhal Village	<20.0	18.65	<0.1	<1.0	<1.0	1.4	BQL(QL)=0.7	BQL
22-Dec-25	Lingaraj Township	<20.0	27.85	<0.1	<1.0	<1.0	0.8	BQL(QL)=0.7	BQL
22-Dec-25	Balunga Khamar Village	<20.0	22.03	<0.1	<1.0	<1.0	1.0	BQL(QL)=0.7	BQL
23-Dec-25	Lingaraj Township	<20.0	17.92	<0.1	<1.0	<1.0	1.1	BQL(QL)=0.7	BQL
23-Dec-25	Balunga Khamar Village	<20.0	17.92	<0.1	<1.0	<1.0	1.3	BQL(QL)=0.7	BQL
23-Dec-25	Kandhal Village	<20.0	27.12	<0.1	<1.0	<1.0	1.0	BQL(QL)=0.7	BQL

Signature
Standard
C.M.P.D.I. LAB
BHUBANESWAR

400(24hrs)	180(hour)	1.0(24hrs)	6.0(Annual)	20(Annual)	02(8hrs)	01(annual)	05(annual)
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Signature

Project :

Lingaraj OCP

Date of Sampling	Monitoring Station	Ammonia(NH3)	Ozone(O3)	Lead(Pb)	Arsenic(As)	Nickel(Ni)	CO	Benzo(a)Pyrene	Benzene
		(µg/m3)	(µg/m3)	(µg/m3)	(ng/m3)	(ng/m3)	(ng/m3)	(ng/m3)	(µg/m3)
29-Dec-25	Kandhal Village	<20.0	22.28	<0.1	<1.0	<1.0	1.0	BQL(QL)=0.7)	BQL
29-Dec-25	Lingaraj Township	<20.0	24.47	<0.1	<1.0	<1.0	1.1	BQL(QL)=0.7)	BQL
29-Dec-25	Balunga Khamar Village	<20.0	22.52	<0.1	<1.0	<1.0	0.7	BQL(QL)=0.7)	BQL
30-Dec-25	Balunga Khamar Village	<20.0	27.12	<0.1	<1.0	<1.0	0.9	BQL(QL)=0.7)	BQL
30-Dec-25	Kandhal Village	<20.0	12.60	<0.1	<1.0	<1.0	0.9	BQL(QL)=0.7)	BQL
30-Dec-25	Lingaraj Township	<20.0	27.12	<0.1	<1.0	<1.0	1.2	BQL(QL)=0.7)	BQL


 Authorized Signatory
 Standard, LAB
 BHUBANESWAR

400(24 hours)	180(hours)	1.0(24 hours)	6.0(Annual)	20(Annual)	02(8 hours)	01(annual)	05(annual)
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Janaki

**TABLE--****NOISE LEVEL MONITORING DATA**

AREA :

Lingaraj

PROJECT :

Lingaraj OCP

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
12-Dec-25	Lingaraj Township	47.9	34.1
12-Dec-25	Balunga Khamar Village	50.7	36.7
12-Dec-25	Kandhal Village	48.4	36.5
12-Dec-25	Near Silo Conveyor Belt	67.2	53.6
30-Dec-25	Lingaraj Township	49.9	36.9
30-Dec-25	Balunga Khamar Village	49.7	36.8
30-Dec-25	Kandhal Village	48.1	38.1
30-Dec-25	Near Silo Conveyor Belt	67.2	52.1

MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 75dB(A) (Industrial)	10.00 PM -6.00 AM Leq 70dB(A) (Industrial)
MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 55dB(A) (Residential)	10.00 PM -6.00 AM Leq 45dB(A) (Residential)
MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 65dB(A) (Commercial)	10.00 PM -6.00 AM Leq 55dB(A) (Commercial)
MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 50dB(A) (Silence Zone)	10.00 PM -6.00 AM Leq 40dB(A) (Silence Zone)

H. K. S. S. S.
Authorised Signatory
C.M.P.O.I, RI-VII, LAB
BHUBANESWAR

J. S. S.

TABLE--



सीएनपीसीआई
भारत सरकार
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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-Dec-25	Clear Water Reservoir of ETP Near Dumper Parking	6.98	<4.0	30	40	-	
15-Dec-25	Filter Outlet of Workshop ETP	6.69	<4.0	30	20	-	
15-Dec-25	Inlet of ETP Near Dumper Parking	7.30	<4.0	22	44	-	
15-Dec-25	Inlet of Workshop ETP	6.70	<4.0	38	24	-	
15-Dec-25	Mine Sump Water	8.14	<4.0	26	32	-	
30-Dec-25	Clear Water Reservoir of ETP Near Dumper Parking	6.84	<4.0	38	48	-	
30-Dec-25	Filter Outlet of Workshop ETP	6.63	<4.0	26	28	-	
30-Dec-25	Inlet of ETP Near Dumper Parking	7.37	<4.0	30	36	-	
30-Dec-25	Inlet of Workshop ETP	6.74	<4.0	30	32	-	

Handwritten signature
Authorized signatory
CPCB, LAB

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
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TABLE--



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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	MPN/100mL
15-Dec-25	STP Inlet at Lingaraj Township	7.43	-	38	-	2.9	150
15-Dec-25	STP Outlet at Lingaraj Township	7.14	-	26	-	2.2	120
30-Dec-25	STP Inlet at Lingaraj Township	7.36	-	28	-	3.6	210
30-Dec-25	STP Outlet at Lingaraj Township	7.03	-	20	-	2.9	130

Authorized Signatory
 K. R. P. D. Y. U. LAB
 BHOJANWAR

6.5-9.0	-	<100	-	30	<1000
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Signature



सीएमपीडीआई
रिची प्लान
cmpdi
Mini Ratna

Effluent Quality (all Parameter): Lingaraj Area

Project (OCP / UG)	Lingaraj			MoEF-Sch-VI Standards
	Inlet of Sedimentation Pond Complex near Lingaraj Siding	Clear water Tank of Sedimentation Pond Complex near Lingaraj Siding	Inlet of sedimentation pond complex near Project office	
NAME OF THE STATION				
Date of Sampling	15-Nov-25	15-Nov-25	15-Nov-25	
Odour	Unobjectionable	Unobjectionable	Unobjectionable	—
Colour(Hazen)	2	2	2	—
Temperature(oC)	24.8	24.2	24.2	Shall not exceed 5 °C above the receiving temperature
pH	8.52	8.25	8.54	5.5-9.0
Total Hardness (asCaCO ₃),mg/L	723.73	117.25	869.28	—
Total Dissolved Solids, mg/L	922	227	1068	—
Nitrate Nitrogen(mg/L)(As N)	4.93	1.29	4.07	10
Ammonical Nitrogen , mg/l (As N)	<0.20	<0.20	<0.20	50
Total Kjeldhal Nitrogen, mg/l (As N)	1.76	1.76	3.51	100
Sulphide (mg/L)	<0.10	<0.10	<0.10	2
BOD [3 days at 27°C] (mg/L)	3.3	3.4	3.4	30
Fluoride(mg/L)	1.33	1.35	<0.30	2
Copper(mg/L)	<0.03	<0.03	<0.03	3
Manganese(mg/L)	0.05	<0.04	0.23	2
Iron(mg/L)	<0.1	<0.1	0.05	3
Zinc(mg/L)	<0.04	<0.04	<0.04	5
Lead, mg/l	<0.005	<0.005	<0.005	0.1
Cadmium, mg/l	<0.001	<0.001	<0.001	2.0
Total Chromium(mg/L)	<0.01	<0.01	<0.01	2.0
Hexavalent Chromium(mg/L)	<0.05	<0.05	<0.005	0.1
Nickel(mg/L)	0.05	0.03	0.03	3
Arsenic, mg/l	<0.005	<0.005	<0.005	0.2
Selenium (mg/L)	<0.005	<0.005	<0.005	0.05
Dissolved Phosphate(mg/L)	<4.0	<4.0	<4.0	5
Phenolics (mg/L)	<0.001	<0.001	<0.001	1

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

Authorised Signatory



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Mini Ratna

Effluent Quality (all Parameter): Lingaraj Area

Project (OCP / UG)	Lingaraj		MoEF-Sch-VI Standards
	Clear water reservoir of sedimentation pond complex near Project office	Mine Sump Water	
NAME OF THE STATION			
Date of Sampling	15-Nov-25	15-Nov-25	
Odour	Unobjectionable	Unobjectionable	
Colour(Hazen)	3	3	
Temperature(oC)	24.3	24.1	Shall not exceed 5 °C above the receiving temperature
pH	8.53	8.57	5.5-9.0
Total Hardness (asCaCO ₃),mg/L	849.07	885.46	-
Total Dissolved Solids, mg/L	1056	1106	-
Nitrate Nitrogen(mg/L)(As N)	3.96	9.44	10
Ammonical Nitrogen , mg/l (As N)	<0.20	<0.20	50
Total Kjeldhal Nitrogen, mg/l (As N)	1.76	1.76	100
Sulphide (mg/L)	<0.10	<0.10	2
BOD [3 days at 27°C] (mg/L)	3.4	3.5	30
Fluoride(mg/L)	0.82	1.32	2
Copper(mg/L)	<0.03	<0.03	3
Manganese(mg/L)	<0.04	<0.04	2
Iron(mg/L)	<0.1	<0.1	3
Zinc(mg/L)	<0.09	0.04	5
Lead, mg/l	<0.005	<0.005	0.1
Cadmium, mg/l	<0.001	<0.001	2.0
Total Chromium(mg/L)	<0.01	<0.01	2.0
Hexavalent Chromium(mg/L)	<0.05	<0.05	0.1
Nickel(mg/L)	0.04	0.03	3
Arsenic, mg/l	<0.005	<0.005	0.2
Selenium (mg/L)	<0.005	<0.005	0.05
Dissolved Phosphate(mg/L)	<4.0	<4.0	5
Phenolics (mg/L)	<0.001	<0.001	1

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Surface Water Quality Data Lingraj Area

Project/OCP	Lingraj	IS:2296-1982 Tolerance for inland Surface water (Class C)
NAME OF STATIONS	Village Pond near Deulbera Siding	
Date of sampling	15-Nov-25	
pH	8.23	6.5-8.5
Color (Hazen unit)	3	300
Dissolved Oxygen(mg/L)	6.8	4
BOD (3 days 27°c(mg/L)	2.0	3
Chlorides(mg/L)	31.06	600
Sulphate(mg/L)	241.90	400
Nitrate(mg/L)	19.50	50
Fluoride(mg/L)	0.46	1.5
Total Hardness(mg/L)	691.38	-
Total dissolved solids (mg/L)	996	1500
TSS(mg/L)	63	-
Copper(mg/L)	<0.03	1.5
Iron(mg/L)	<0.1	50
Zinc(mg/L)	<0.04	15
Lead(mg/L)	<0.005	0.1
Cadmium(mg/L)	<0.001	0.01
Hexavalent Chromium(as Cr ⁶⁺)(mg/L)	<0.05	0.05
Arsenic(mg/L)	<0.005	0.2
Selenium(mg/L)	<0.005	0.05
Phenolics(mg/L)	<0.001	0.005
Oil & Grease (mg/L)	<4.0	0.1
Residual Free Chlorine(mg/L)	<0.2	0.2
MPN (Index/100 ml)	70	-

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Drinking Water Quality Data Lingraj Area

Project / OCP	Lingraj OCP	Indian Drinking Standards (IS-10500):2012	
Monitoring Station	GM Office, Lingraj Area	Acceptable	Permissible
Date of Sampling	15-Dec-2025		
Colour(Hazen)	2	5	15
Odour	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	2	1	5
pH	7.30	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	49.92	200	600
Chloride(mg/L)	9.71	250	1000
Sulphate(mg/L)	22.46	200	400
Nitrate(mg/L)	6.26	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	60.48	200	600
Calcium(mg/L)	16.16	75	200
Fluoride(mg/L)	<0.3	1	1.5
Total Dissolve Solid(mg/L)	100	500	2000
Copper(mg/L)	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	0.1	0.3
Iron(mg/L)	<0.1	1.0	No relaxation
Zinc(mg/L)	<0.04	5	15
Lead(mg/L)	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.001	0.003	No relaxation
Total Chromium (mg/L)	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	0.5	2.4

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Drinking Water Quality Data Lingraj Area

Project / OCP	Lingraj OCP	Indian Drinking Standards (IS-10500):2012	
Monitoring Station	GM Office, Lingraj Area	Acceptable	Permissible
Date of Sampling	15-Dec-2025	0.01	No relaxation
Selenium(mg/L)	<0.005		
Sodium(mg/L)	5.99		
Potassium(mg/L)	3.63		
Phenolics(mg/L)	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	0.2	1.0
MPN (Index/100 ml)	Not Detected	-	-

K. K. Kishore
Authorised Signatory
CMPDI, RI-VII, LAB
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Jamali

Lingraj OCP

Kandhal Village

Balunga village

GM Office Lingraj

Near Conveyor belt

Lingraj Township

Legend
Air Monitoring Location

Google Earth



**Environmental Monitoring Report
For
December -2025**

**Project: Hingula OCP
Area: Hingula
Coalfield: Talcher**



Mahanadi Coalfields Limited



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



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Make Pollution

Test Report

AMBIENT AIR QUALITY DATA

Area :

Hingula

(Compliance Station)

Project :

Hingula OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	CO (mg/m3)	Dust Generating Source(DGS)	Distance from DGS
06-Dec-25	Time Office	311	163	75	20.32	31.66	1.1	Mining Operations and Haul Road	About 200m
06-Dec-25	South West Side of the Mine	302	169	79	12.08	30.22	1.2	Mining Operations	About 300m
26-Dec-25	Time Office	287	173	79	19.55	20.35	1.3	Mining Operations and Haul Road	About 200m
26-Dec-25	South West Side of the Mine	304	178	82	17.37	39.99	1.4	Mining Operations	About 300m

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BHUBANESWAR

Janaik

<i>MoEF Standards Notification dated 25th September, 2000</i>	600	250		120	120	02/8 <i>Hours</i>
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AMBIENT AIR QUALITY DATA

Area :

Hingula

(Reference Station)

Project :

Hingula 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
03-Dec-25	Balichandrapur Village	196	78	39	18.79	24.12	Mining Activities	About 1 KM
03-Dec-25	Banabaspur Village	181	71	35	13.04	18.09	Mining Activities	About 1500 m
03-Dec-25	Solda Village	192	81	46	10.47	33.24	Coal Transportation Road	About 2km
03-Dec-25	Kankarei Village	209	82	44	14.19	26.38	Mining Activities	About 1500 m
03-Dec-25	Sanamahitala Village	196	78	41	11.67	33.24	Transportation road	About 1 KM
04-Dec-25	Kankarei Village	229	85	48	16.10	18.20	Mining Activities	About 1500 m
04-Dec-25	Balichandrapur Village	189	74	43	15.68	19.16	Mining Activities	About 1 KM
04-Dec-25	Solda Village	186	76	41	15.72	31.66	Coal Transportation Road	About 2km
04-Dec-25	Banabaspur Village	206	78	43	10.87	12.66	Mining Activities	About 1500 m
04-Dec-25	Sanamahitala Village	187	77	39	14.19	31.66	Transportation road	About 1 KM
10-Dec-25	Sanamahitala Village	212	81	42	23.73	34.99	Transportation road	About 1 KM
10-Dec-25	Kankarei Village	241	91	53	10.17	29.99	Mining Activities	About 1500 m
10-Dec-25	Solda Village	168	70	37	20.93	33.24	Coal Transportation Road	About 2km
10-Dec-25	Banabaspur Village	221	89	47	21.74	34.83	Mining Activities	About 1500 m
10-Dec-25	Balichandrapur Village	184	72	38	12.27	18.09	Mining Activities	About 1 KM
11-Dec-25	Solda Village	178	72	40	18.79	31.66	Coal Transportation Road	About 2km
11-Dec-25	Banabaspur Village	236	94	51	11.35	17.99	Mining Activities	About 1500 m
11-Dec-25	Sanamahitala Village	194	76	41	9.66	33.24	Transportation road	About 1 KM
11-Dec-25	Balichandrapur Village	186	76	41	14.57	31.66	Mining Activities	About 1 KM
11-Dec-25	Kankarei Village	217	88	50	12.44	20.15	Mining Activities	About 1500 m
18-Dec-25	Banabaspur Village	235	85	47	11.50	20.35	Mining Activities	About 1500 m
18-Dec-25	Solda Village	185	68	36	8.05	24.88	Coal Transportation Road	About 2km
18-Dec-25	Kankarei Village	172	75	41	14.27	17.27	Mining Activities	About 1500 m
18-Dec-25	Sanamahitala Village	196	78	46	14.49	36.41	Transportation road	About 1 KM
18-Dec-25	Balichandrapur Village	186	74	39	20.70	30.91	Mining Activities	About 1 KM

Signature
 Authorized Signatory
 CHEMISTRY-VII, LAB
 BHUBANESWAR

	100	60	80	80
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Signature

Project :**Hingula 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
19-Dec-25	Kankarei Village	177	77	43	23.71	23.74	Mining Activities	About 1500 m
19-Dec-25	Balichandrapur Village	178	72	38	16.55	19.35	Mining Activities	About 1 KM
19-Dec-25	Solda Village	176	75	39	17.31	39.57	Coal Transportation Road	About 2km
19-Dec-25	Banabaspur Village	222	81	44	8.82	29.40	Mining Activities	About 1500 m
19-Dec-25	Sanamahitala Village	187	76	43	19.40	18.71	Transportation road	About 1 KM
24-Dec-25	Solda Village	184	76	41	8.78	19.43	Coal Transportation Road	About 2km
24-Dec-25	Sanamahitala Village	189	74	42	8.82	32.41	Transportation road	About 1 KM
24-Dec-25	Kankarei Village	190	80	46	17.64	15.83	Mining Activities	About 1500 m
24-Dec-25	Banabaspur Village	224	76	41	20.13	28.49	Mining Activities	About 1500 m
24-Dec-25	Balichandrapur Village	167	64	37	23.31	39.16	Mining Activities	About 1 KM
25-Dec-25	Solda Village	183	74	45	22.95	38.78	Coal Transportation Road	About 2km
25-Dec-25	Banabaspur Village	210	85	46	14.41	31.66	Mining Activities	About 1500 m
25-Dec-25	Sanamahitala Village	189	73	41	17.20	34.54	Transportation road	About 1 KM
25-Dec-25	Balichandrapur Village	171	67	36	8.45	20.58	Mining Activities	About 1 KM
25-Dec-25	Kankarei Village	203	90	47	8.05	24.54	Mining Activities	About 1500 m

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 BHUBANESWAR

*NAAQS,2009

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)
Area :
Hingula
Project :
Hingula OCP

Date of Sampling	Monitoring Station	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo(a)Pyrene	Benzene
		(µg/m ³)	(µg/m ³)	(µg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(µg/m ³)
03-Dec-25	Kankarei Village	<20.0	14.77	<0.1	<1.0	<1.0	1.3	BQL(QL)=0.7	BQL
03-Dec-25	Solda Village	<20.0	19.13	<0.1	<1.0	<1.0	1.5	BQL(QL)=0.7	BQL
03-Dec-25	Balichandrapur Village	<20.0	21.55	<0.1	<1.0	<1.0	1.1	BQL(QL)=0.7	BQL
03-Dec-25	Banabaspur Village	<20.0	16.47	<0.1	<1.0	<1.0	1.1	BQL(QL)=0.7	BQL
03-Dec-25	Sanamahitula Village	<20.0	18.40	<0.1	<1.0	<1.0	1.1	BQL(QL)=0.7	BQL
04-Dec-25	Banabaspur Village	<20.0	24.95	<0.1	<1.0	<1.0	1.5	BQL(QL)=0.7	BQL
04-Dec-25	Kankarei Village	<20.0	12.60	<0.1	<1.0	<1.0	1.8	BQL(QL)=0.7	BQL
04-Dec-25	Balichandrapur Village	<20.0	24.22	<0.1	<1.0	<1.0	1.6	BQL(QL)=0.7	BQL
04-Dec-25	Solda Village	<20.0	18.17	<0.1	<1.0	<1.0	1.5	BQL(QL)=0.7	BQL
04-Dec-25	Sanamahitula Village	<20.0	18.88	<0.1	<1.0	<1.0	1.4	BQL(QL)=0.7	BQL
10-Dec-25	Sanamahitula Village	<20.0	14.53	<0.1	<1.0	<1.0	1.3	BQL(QL)=0.7	BQL
10-Dec-25	Banabaspur Village	<20.0	27.12	<0.1	<1.0	<1.0	1.7	BQL(QL)=0.7	BQL
10-Dec-25	Balichandrapur Village	<20.0	22.28	<0.1	<1.0	<1.0	1.6	BQL(QL)=0.7	BQL
10-Dec-25	Solda Village	<20.0	17.20	<0.1	<1.0	<1.0	1.5	BQL(QL)=0.7	BQL
10-Dec-25	Kankarei Village	<20.0	17.43	<0.1	<1.0	<1.0	1.7	BQL(QL)=0.7	BQL
11-Dec-25	Balichandrapur Village	<20.0	22.52	<0.1	<1.0	<1.0	1.3	BQL(QL)=0.7	BQL
11-Dec-25	Solda Village	<20.0	18.65	<0.1	<1.0	<1.0	1.9	BQL(QL)=0.7	BQL
11-Dec-25	Sanamahitula Village	<20.0	20.58	<0.1	<1.0	<1.0	1.7	BQL(QL)=0.7	BQL
11-Dec-25	Kankarei Village	<20.0	22.28	<0.1	<1.0	<1.0	1.6	BQL(QL)=0.7	BQL
11-Dec-25	Banabaspur Village	<20.0	20.10	<0.1	<1.0	<1.0	1.1	BQL(QL)=0.7	BQL
18-Dec-25	Solda Village	<20.0	27.12	<0.1	<1.0	<1.0	1.7	BQL(QL)=0.7	BQL
18-Dec-25	Balichandrapur Village	<20.0	19.62	<0.1	<1.0	<1.0	1.5	BQL(QL)=0.7	BQL
18-Dec-25	Banabaspur Village	<20.0	21.55	<0.1	<1.0	<1.0	1.9	BQL(QL)=0.7	BQL
18-Dec-25	Sanamahitula Village	<20.0	17.43	<0.1	<1.0	<1.0	1.8	BQL(QL)=0.7	BQL

Standard	400(24hrs)	180(hour)	1.0(24hrs)	6.0(Annual)	20(Annual)	02(8hrs)	01(annual)	05(annual)
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Project :

Hingula OCP

Date of Sampling	Monitoring Station	Ammonia(NH ₃)	Ozone(O ₃)	Lead(Pb)	Arsenic(As)	Nickel(Ni)	CO	Benzo(a)Pyrene	Benzene
		(µg/m ³)	(µg/m ³)	(µg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(µg/m ³)
18-Dec-25	Kankarei Village	<20.0	19.87	<0.1	<1.0	<1.0	1.6	BQL(QL)=0.7)	BQL
19-Dec-25	Banabaspur Village	<20.0	15.25	<0.1	<1.0	<1.0	1.8	BQL(QL)=0.7)	BQL
19-Dec-25	Kankarei Village	<20.0	13.32	<0.1	<1.0	<1.0	1.9	BQL(QL)=0.7)	BQL
19-Dec-25	Balichandrapur Village	<20.0	26.40	<0.1	<1.0	<1.0	1.1	BQL(QL)=0.7)	BQL
19-Dec-25	Solda Village	<20.0	27.12	<0.1	<1.0	<1.0	1.6	BQL(QL)=0.7)	BQL
19-Dec-25	Sanamahitala Village	<20.0	21.55	<0.1	<1.0	<1.0	1.8	BQL(QL)=0.7)	BQL
24-Dec-25	Balichandrapur Village	<20.0	11.87	<0.1	<1.0	<1.0	1.3	BQL(QL)=0.7)	BQL
24-Dec-25	Sanamahitala Village	<20.0	13.32	<0.1	<1.0	<1.0	1.7	BQL(QL)=0.7)	BQL
24-Dec-25	Banabaspur Village	<20.0	21.80	<0.1	<1.0	<1.0	1.5	BQL(QL)=0.7)	BQL
24-Dec-25	Solda Village	<20.0	21.32	<0.1	<1.0	<1.0	1.8	BQL(QL)=0.7)	BQL
24-Dec-25	Kankarei Village	<20.0	20.10	<0.1	<1.0	<1.0	1.2	BQL(QL)=0.7)	BQL
25-Dec-25	Balichandrapur Village	<20.0	13.57	<0.1	<1.0	<1.0	1.3	BQL(QL)=0.7)	BQL
25-Dec-25	Solda Village	<20.0	11.87	<0.1	<1.0	<1.0	1.7	BQL(QL)=0.7)	BQL
25-Dec-25	Sanamahitala Village	<20.0	18.17	<0.1	<1.0	<1.0	1.6	BQL(QL)=0.7)	BQL
25-Dec-25	Kankarei Village	<20.0	11.13	<0.1	<1.0	<1.0	1.2	BQL(QL)=0.7)	BQL
25-Dec-25	Banabaspur Village	<20.0	16.23	<0.1	<1.0	<1.0	1.7	BQL(QL)=0.7)	BQL

T. Prasad
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Standard	400(24 hours)	180(hour)	1.0(24 hours)	6.0(Annual)	20(Annual)	02(8 hours)	01(annual)	05(annual)
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Janaki



राष्ट्रीय प्रदूषण नियंत्रण बोर्ड
 Ministry of Environment, Forest and Climate Change
 C.M.P.D.I.
 Bhubaneswar

TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Hingula

PROJECT :

Hingula OCP

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
13-Dec-25	South West Side of the Mine	65.1	49.2
13-Dec-25	Solda Village	50.2	36.8
13-Dec-25	Kankarei Village	49.4	37.4
13-Dec-25	Time Office	66.3	52.8
30-Dec-25	South West Side of the Mine	65.7	52.7
30-Dec-25	Solda Village	50.3	37.2
30-Dec-25	Kankarei Village	49.8	39.1
30-Dec-25	Time Office	67.2	54.2

H. K. Patra
 Authorised Signatory
 C.M.P.D.I. LAB
 BHUBANESWAR

MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 75dB(A) (Industrial)	10.00 PM -6.00 AM Leq 70dB(A) (Industrial)
MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 55dB(A) (Residential)	10.00 PM -6.00 AM Leq 45dB(A) (Residential)
MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 65dB(A) (Commercial)	10.00 PM -6.00 AM Leq 55dB(A) (Commercial)
MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 50dB(A) (Silence Zone)	10.00 PM -6.00 AM Leq 40dB(A) (Silence Zone)

J. S. Patra

TABLE-



सीएनपीडीआई
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 Bhubaneswar

EFFLUENT QUALITY DATA

Area :

Hingula

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

Project :

Hingula OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	Remarks
15-Dec-25	Inlet of O & G Trap	8.57	<4.0	24	16	-	
15-Dec-25	Mine Sump Water	7.72	<4.0	28	32	-	
15-Dec-25	Outlet of O & G Trap	7.92	<4.0	20	12	-	
30-Dec-25	Inlet of O & G Trap	8.46	<4.0	38	36	-	
30-Dec-25	Outlet of O & G Trap	7.82	<4.0	26	20	-	

Hattarick
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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
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Jasrat



सीएमपीडीआई
रिसेच लैब
cmpdi
Mini Kotra

Effluent Quality (all Parameter): Hingula Area

Project (OCP / UG)	Hingula	MoEF-Sch-VI Standards
NAME OF THE STATION	Mine Sump Water	
Date of Sampling	15-Nov-25	
Odour	Unobjectionable	-
Colour(Hazen)	2	-
Temperature(°C)	23.4	Shall not exceed 5 °C above the receiving temperature
pH	8.60	5.5-9.0
Total Hardness (asCaCO ₃),mg/L	873.33	-
Total Dissolved Solids, mg/L	1051	-
Nitrate Nitrogen(mg/L)(As N)	0.47	10
Ammonical Nitrogen , mg/l (As N)	<0.20	50
Total Kjeldhal Nitrogen, mg/l (As N)	5.27	100
Sulphide (mg/L)	<0.10	2
BOD [3 days at 27°C] (mg/L)	2.7	30
Fluoride(mg/L)	1.07	2
Copper(mg/L)	<0.03	3
Manganese(mg/L)	<0.04	2
Iron(mg/L)	<0.1	3
Zinc(mg/L)	<0.04	5
Lead, mg/l	<0.005	0.1
Cadmium, mg/l	<0.001	2.0
Total Chromium(mg/L)	<0.01	2.0
Hexavalent Chromium(mg/L)	<0.05	0.1
Nickel(mg/L)	0.04	3
Arsenic, mg/l	<0.005	0.2
Selenium (mg/L)	<0.005	0.05
Dissolved Phosphate(mg/L)	<4.0	5
Phenolics (mg/L)	<0.001	1

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Surface Water Quality Data Hingula Area

Project/OCP	Hingula				IS:2296-1982 Tolerance for inland Surface water (Class C)
	Singadhajhor stream near Kumunda Village	Singadhajhor stream near Baghabaspur Village	Sinia Jhor near meeting Singhada Jhor	Pond water of Kankarei village	
NAME OF STATIONS					
Date of sampling	15-Nov-25	15-Nov-25	15-Nov-25	15-Nov-25	
pH	8.30	8.22	7.88	7.44	6.5-8.5
Color (Hazen unit)	2	3	3	3	300
Dissolved Oxygen(mg/L)	6.5	6.7	6.8	6.6	4
BOD (3 days 27°C(mg/L)	<2.0	<2.0	2.1	<2.0	3
Chlorides(mg/L)	15.53	19.41	19.41	19.41	600
Sulphate(mg/L)	36.48	35.40	264.87	212.16	400
Nitrate(mg/L)	6.01	6.44	1.66	2.04	50
Fluoride(mg/L)	0.44	0.42	0.85	0.59	1.5
Total Hardness(mg/L)	214.28	234.50	667.12	456.88	-
Total dissolved solids (mg/L)	324	328	984	752	1500
TSS(mg/L)	40	46	66	57	-
Copper(mg/L)	0.03	<0.03	<0.03	<0.03	1.5
Iron(mg/L)	<0.1	<0.1	<0.1	<0.1	50
Zinc(mg/L)	0.04	<0.04	0.04	<0.04	15
Lead(mg/L)	<0.005	<0.005	<0.005	<0.005	0.1
Cadmium(mg/L)	<0.001	<0.001	<0.001	<0.001	0.01
Hexavalent Chromium(as Cr ⁶⁺)(mg/L)	<0.05	<0.05	<0.05	<0.05	0.05
Arsenic(mg/L)	<0.005	<0.005	<0.005	<0.005	0.2
Selenium(mg/L)	<0.005	<0.005	<0.005	<0.005	0.05
Phenolics(mg/L)	<0.001	<0.001	<0.001	<0.001	0.005
Oil & Grease (mg/L)	<4.0	<4.0	<4.0	<4.0	0.1
Residual Free Chlorine(mg/L)	<0.2	<0.2	<0.2	<0.2	0.2
MPN (Index/100 ml)	240	350	430	170	-

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Drinking Water Quality Data Hingula Area

Project / OCP	Balaram OCP	Indian Drinking Standards (IS-10500):2012	
		Acceptable	Permissible
Monitoring Station	Gandhi Sagar		
Date of Sampling	19-Dec-2025	Acceptable	Permissible
Odour	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable
Colour(Hazen)	3	5	15
Turbidity(NTU)	2	1	5
pH	7.52	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	50.08	200	600
Chloride(mg/L)	19.55	250	1000
Sulphate(mg/L)	534.3	200	400
Nitrate(mg/L)	2.60	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	533.7	200	600
Calcium(mg/L)	110.34	75	200
Fluoride(mg/L)	1.03	1	1.5
Total Dissolve Solid(mg/L)	834	500	2000
Copper(mg/L)	<0.03	0.05	1.5
Manganese(mg/L)	0.44	0.1	0.3
Iron(mg/L)	<0.1	1.0	No relaxation
Zinc(mg/L)	<0.04	5	15
Lead(mg/L)	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.001	0.003	No relaxation
Total Chromium (mg/L)	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	0.01	No relaxation
Selenium(mg/L)	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	0.5	2.4
Sodium(mg/L)	12.82		
Potassium(mg/L)	3.74		
Phenolics(mg/L)	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	0.2	1.0
MPN (Index/100 ml)	Not Detected	-	-

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Drinking Water Quality Data Hingula Area

Project / OCP	Hingula OCP			Indian Drinking Standards (IS-10500):2012	
	Time Office Water	Gopalprasad Village Bore Well Water	Kumunda Village Bore Well Water	Acceptable	Permissible
Date of Sampling	15-Dec-2025	15-Dec-2025	15-Dec-2025	Acceptable	Permissible
Colour(Hazen)	1	3	2	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	3	4	3	1	5
pH	6.75	7.50	7.04	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	108.16	262.08	37.44	200	600
Chloride(mg/L)	34.97	46.63	27.20	250	1000
Sulphate(mg/L)	71.76	11.89	62.27	200	400
Nitrate(mg/L)	<0.5	<0.5	3.56	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	189.50	181.44	137.08	200	600
Calcium(mg/L)	56.65	40.40	38.78	75	200
Fluoride(mg/L)	0.48	0.88	<0.3	1	1.5
Total Dissolve Solid(mg/L)	282	317	190	500	2000
Copper(mg/L)	<0.03	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	<0.04	0.11	0.1	0.3
Iron(mg/L)	<0.1	<0.1	<0.1	1.0	No relaxation
Zinc(mg/L)	0.14	0.44	0.73	5	15
Lead(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.001	<0.001	<0.001	0.003	No relaxation
Total Chromium (mg/L)	<0.01	<0.01	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	<0.2	<0.2	0.5	2.4

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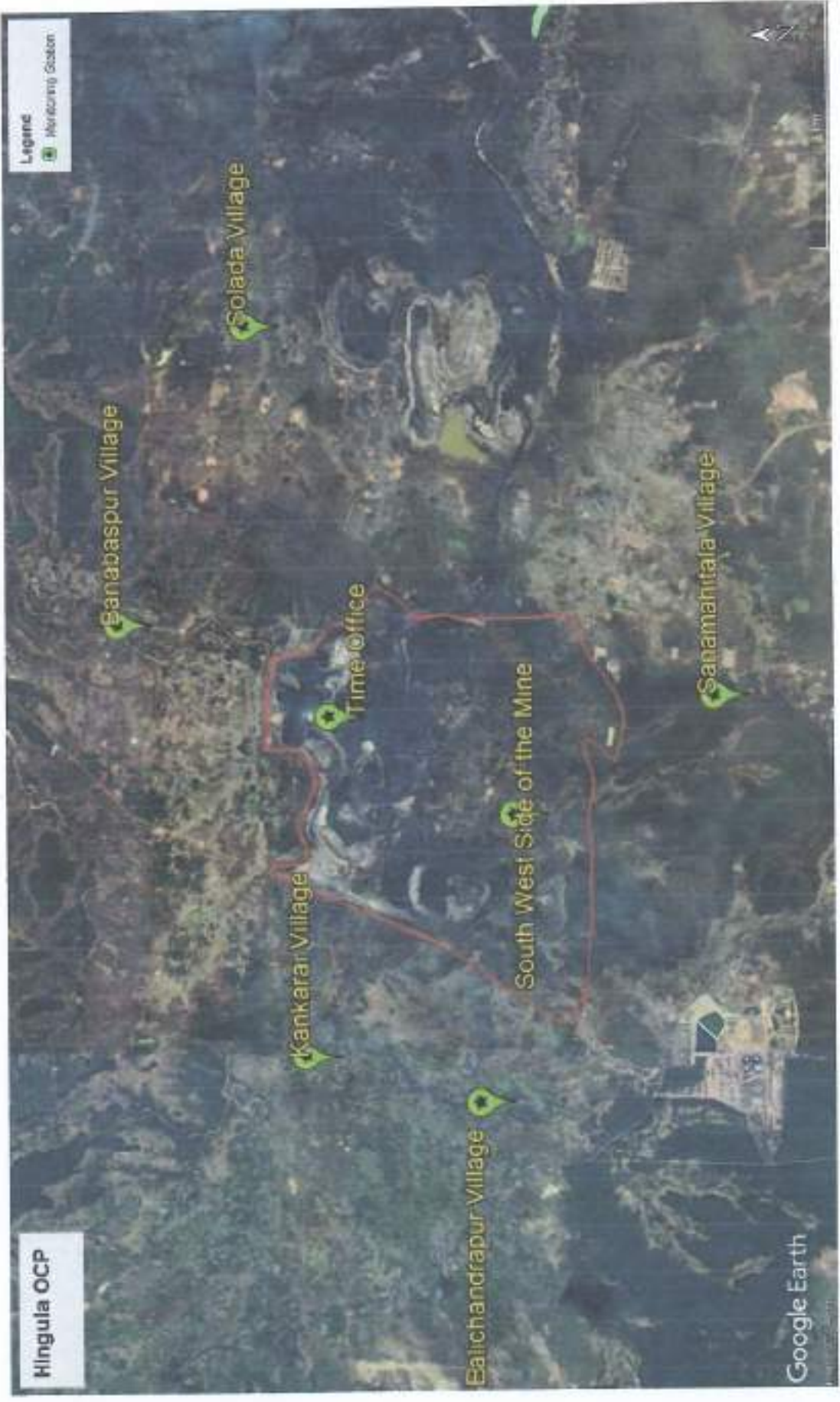
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Drinking Water Quality Data Hingula Area

Project / OCP	Hingula OCP			Indian Drinking Standards (IS-10500):2012	
	Time Office Water	Gopalprasad Village Bore Well Water	Kumunda Village Bore Well Water		
Monitoring Station					
Date of Sampling	15-Dec-2025	15-Dec-2025	15-Dec-2025	Acceptable	Permissible
Selenium(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Sodium(mg/L)	12.06	6.89	5.18		
Potassium(mg/L)	2.66	2.21	1.73		
Phenolics(mg/L)	<0.001	<0.001	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	<0.2	<0.2	0.2	1.0
MPN (Index/100 ml)	Not Detected	Not Detected	Not Detected	-	-

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Hingula OCP

Legende
Monitoring Station

Banabaspur Village

Solada Village

Kankara Village

Time Office

Batichandrapur Village

South West Side of the Mine

Sanamahitata Village

Google Earth

**Environmental Monitoring Report
For
December -2025**

**Project: Balaram OCP
Area: Hingula
Coalfield: Talcher**



Mahanadi Coalfields Limited



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]

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 सार्वजनिक प्रयोगशाळा
 cmpdi

Test Report

AMBIENT AIR QUALITY DATA

Area :

Hingula

(Compliance Station)

Project :

Balaram OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	CO (mg/m ³)	Dust Generating Source(DGS)	Distance from DGS
06-Dec-25	Pump House near Outsourcing Working Patch	273	159	68	21.47	31.66	-	Mining Operation And Coal Transportation	About 200m
06-Dec-25	Near Project Office	255	155	67	19.94	31.66	-	Mining Activities	About 500m
26-Dec-25	Pump House near Outsourcing Working Patch	308	195	87	15.74	33.82	-	Mining Operation And Coal Transportation	About 200m
26-Dec-25	Near Project Office	268	165	74	21.19	39.99	-	Mining Activities	About 500m

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 BHEL, BHUSAWAR
 Maharashtra
 Licence No. 2609
 Licence valid till 25th

	600	300		120	120	#2/8 (Hours)
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Test Report



AMBIENT AIR QUALITY DATA

Area :

Hingula

(Reference Station)

Project :

Balram 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
01-Dec-25	Khajuria Village (Reported Only)	203	89	54	11.02	13.33	Mining Activities	About 1 KM
01-Dec-25	Kurihan Village (Reported Only)	214	90	46	20.49	27.34	Mining Activities	About 500m
02-Dec-25	Kurihan Village (Reported Only)	234	80	39	10.35	24.12	Mining Activities	About 500m
02-Dec-25	Khajuria Village (Reported Only)	207	85	46	21.47	20.23	Mining Activities	About 1 KM
03-Dec-25	Purnasahi Village	197	80	43	22.14	33.24	Mining Activities, Transportation	About 500m
03-Dec-25	Solda Village (Reported Only)	192	81	46	10.47	33.24	Coal Transportation Road	About 2km
03-Dec-25	East of the Mine, Natedi Village	180	74	36	24.15	34.30	Coal Transportation Road	About 2km
03-Dec-25	Natada Village	192	79	42	10.17	15.83	Anthropogenic Activities, Local	About 2km
04-Dec-25	East of the Mine, Natedi Village	195	82	43	16.47	23.74	Coal Transportation Road	About 2km
04-Dec-25	Solda Village (Reported Only)	186	76	41	15.72	31.66	Coal Transportation Road	About 2km
04-Dec-25	Natada Village	186	78	41	11.12	10.55	Anthropogenic Activities, Local	About 2km
04-Dec-25	Purnasahi Village	223	85	48	13.87	36.94	Mining Activities, Transportation	About 500m
08-Dec-25	Kurihan Village (Reported Only)	247	77	41	9.59	14.32	Mining Activities	About 500m
08-Dec-25	Khajuria Village (Reported Only)	229	83	40	16.10	31.66	Mining Activities	About 1 KM
09-Dec-25	Khajuria Village (Reported Only)	240	93	51	18.92	36.41	Mining Activities	About 1 KM
09-Dec-25	Kurihan Village (Reported Only)	196	80	43	17.31	18.20	Mining Activities	About 500m
10-Dec-25	Solda Village (Reported Only)	168	70	37	20.93	33.24	Coal Transportation Road	About 2km
10-Dec-25	Natada Village	187	73	40	14.76	16.71	Anthropogenic Activities, Local	About 2km
10-Dec-25	East of the Mine, Natedi Village	229	88	47	9.66	25.33	Coal Transportation Road	About 2km
10-Dec-25	Purnasahi Village	246	80	51	12.71	34.99	Mining Activities, Transportation	About 500m
11-Dec-25	Purnasahi Village	219	82	45	15.72	31.66	Mining Activities, Transportation	About 500m
11-Dec-25	East of the Mine, Natedi Village	234	94	52	20.76	38.32	Coal Transportation Road	About 2km
11-Dec-25	Natada Village	196	81	47	22.14	17.41	Anthropogenic Activities, Local	About 2km
11-Dec-25	Solda Village (Reported Only)	178	72	40	18.79	31.66	Coal Transportation Road	About 2km
16-Dec-25	Khajuria Village (Reported Only)	207	81	46	14.90	25.33	Mining Activities	About 1 KM

Test Report
 Authorizing Signatory
 C.M.P.D.I., RI-VII, LAB
 BHUBANESWAR

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Project :**Balram 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
16-Dec-25	Kurihan Village (Reported Only)	195	81	43	8.05	28.33	Mining Activities	About 500m
17-Dec-25	Khajuria Village (Reported Only)	227	90	52	9.20	30.15	Mining Activities	About 1 KM
17-Dec-25	Kurihan Village (Reported Only)	234	95	52	14.95	33.92	Mining Activities	About 500m
18-Dec-25	East of the Mine, Natodi Village	243	92	54	17.80	16.66	Coal Transportation Road	About 2km
18-Dec-25	Natada Village	198	78	39	19.73	23.74	Anthropogenic Activities, Local	About 2km
18-Dec-25	Purunasahi Village	207	80	45	17.31	37.99	Mining Activities, Transportation	About 500m
18-Dec-25	Solda Village (Reported Only)	185	68	36	8.05	24.88	Coal Transportation Road	About 2km
19-Dec-25	East of the Mine, Natodi Village	228	83	45	10.61	15.11	Coal Transportation Road	About 2km
19-Dec-25	Purunasahi Village	221	84	49	22.54	33.24	Mining Activities, Transportation	About 500m
19-Dec-25	Natada Village	186	76	38	17.64	35.43	Anthropogenic Activities, Local	About 2km
19-Dec-25	Solda Village (Reported Only)	176	75	39	17.31	39.57	Coal Transportation Road	About 2km
22-Dec-25	Kurihan Village (Reported Only)	183	77	41	20.13	18.20	Mining Activities	About 500m
22-Dec-25	Khajuria Village (Reported Only)	203	83	47	12.44	35.98	Mining Activities	About 1 KM
23-Dec-25	Khajuria Village (Reported Only)	193	80	45	9.20	16.58	Mining Activities	About 1 KM
23-Dec-25	Kurihan Village (Reported Only)	243	93	56	7.67	36.94	Mining Activities	About 500m
24-Dec-25	Solda Village (Reported Only)	184	76	41	8.78	19.43	Coal Transportation Road	About 2km
24-Dec-25	Purunasahi Village	229	90	51	22.54	15.83	Mining Activities, Transportation	About 500m
24-Dec-25	East of the Mine, Natodi Village	238	89	50	12.65	21.11	Coal Transportation Road	About 2km
24-Dec-25	Natada Village	194	72	41	12.48	17.41	Anthropogenic Activities, Local	About 2km
25-Dec-25	East of the Mine, Natodi Village	194	95	56	6.22	17.27	Coal Transportation Road	About 2km
25-Dec-25	Purunasahi Village	243	94	53	17.31	20.58	Mining Activities, Transportation	About 500m
25-Dec-25	Natada Village	181	74	42	18.02	33.17	Anthropogenic Activities, Local	About 2km
25-Dec-25	Solda Village (Reported Only)	183	74	45	22.05	38.78	Coal Transportation Road	About 2km
29-Dec-25	Kurihan Village (Reported Only)	181	74	43	8.86	32.45	Mining Activities	About 500m
29-Dec-25	Khajuria Village (Reported Only)	179	76	42	14.09	16.62	Mining Activities	About 1 KM
30-Dec-25	Khajuria Village (Reported Only)	224	89	49	13.56	18.33	Mining Activities	About 1 KM
30-Dec-25	Kurihan Village (Reported Only)	213	86	49	12.71	20.00	Mining Activities	About 500m

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)
Area :
Hingula
Project :
Balram OCP

Date of Sampling	Monitoring Station	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo(a)Pyrene	Benzene
		(µg/m ³)	(µg/m ³)	(µg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(µg/m ³)
01-Dec-25	Khajuria Village (Reported Only)	<20.0	10.90	<0.1	<1.0	<1.0	1.5	BQL(QL)=0.7)	BQL
02-Dec-25	Khajuria Village (Reported Only)	<20.0	18.40	<0.1	<1.0	<1.0	1.4	BQL(QL)=0.7)	BQL
03-Dec-25	Solda Village (Reported Only)	<20.0	19.13	<0.1	<1.0	<1.0	1.5	BQL(QL)=0.7)	BQL
03-Dec-25	East of the Mine, Natedi Village	<20.0	22.28	<0.1	<1.0	<1.0	1.5	BQL(QL)=0.7)	BQL
03-Dec-25	Purunasahi Village	<20.0	12.12	<0.1	<1.0	<1.0	1.9	BQL(QL)=0.7)	BQL
03-Dec-25	Natada Village	<20.0	17.68	<0.1	<1.0	<1.0	1.6	BQL(QL)=0.7)	BQL
04-Dec-25	East of the Mine, Natedi Village	<20.0	17.92	<0.1	<1.0	<1.0	1.3	BQL(QL)=0.7)	BQL
04-Dec-25	Solda Village (Reported Only)	<20.0	18.17	<0.1	<1.0	<1.0	1.5	BQL(QL)=0.7)	BQL
04-Dec-25	Purunasahi Village	<20.0	17.20	<0.1	<1.0	<1.0	1.9	BQL(QL)=0.7)	BQL
04-Dec-25	Natada Village	<20.0	24.47	<0.1	<1.0	<1.0	1.8	BQL(QL)=0.7)	BQL
08-Dec-25	Khajuria Village (Reported Only)	<20.0	22.77	<0.1	<1.0	<1.0	1.5	BQL(QL)=0.7)	BQL
09-Dec-25	Khajuria Village (Reported Only)	<20.0	15.73	<0.1	<1.0	<1.0	1.6	BQL(QL)=0.7)	BQL
10-Dec-25	Purunasahi Village	<20.0	26.40	<0.1	<1.0	<1.0	1.4	BQL(QL)=0.7)	BQL
10-Dec-25	Natada Village	<20.0	15.73	<0.1	<1.0	<1.0	1.5	BQL(QL)=0.7)	BQL
10-Dec-25	East of the Mine, Natedi Village	<20.0	25.43	<0.1	<1.0	<1.0	1.3	BQL(QL)=0.7)	BQL
10-Dec-25	Solda Village (Reported Only)	<20.0	17.20	<0.1	<1.0	<1.0	1.5	BQL(QL)=0.7)	BQL
11-Dec-25	Natada Village	<20.0	18.65	<0.1	<1.0	<1.0	1.5	BQL(QL)=0.7)	BQL
11-Dec-25	Purunasahi Village	<20.0	10.42	<0.1	<1.0	<1.0	1.8	BQL(QL)=0.7)	BQL
11-Dec-25	Solda Village (Reported Only)	<20.0	18.65	<0.1	<1.0	<1.0	1.9	BQL(QL)=0.7)	BQL
11-Dec-25	East of the Mine, Natedi Village	<20.0	14.28	<0.1	<1.0	<1.0	1.8	BQL(QL)=0.7)	BQL
16-Dec-25	Khajuria Village (Reported Only)	<20.0	19.37	<0.1	<1.0	<1.0	1.6	BQL(QL)=0.7)	BQL
17-Dec-25	Khajuria Village (Reported Only)	<20.0	26.15	<0.1	<1.0	<1.0	1.4	BQL(QL)=0.7)	BQL
18-Dec-25	East of the Mine, Natedi Village	<20.0	13.57	<0.1	<1.0	<1.0	1.8	BQL(QL)=0.7)	BQL
18-Dec-25	Purunasahi Village	<20.0	23.48	<0.1	<1.0	<1.0	1.8	BQL(QL)=0.7)	BQL

Standard	400(24 hours)	180(hours)	1.0(24 hours)	6.0(Annual)	20(Annual)	02(8hours)	01(annual)	05(annual)
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Project :

Balram OCP

Date of Sampling	Monitoring Station	Ammonia(NH3)	Ozone(O3)	Lead(Pb)	Arsenic(As)	Nickel(Ni)	CO	Benzo(a)Pyrene	Benzene
		($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	(mg/m^3)	(ng/m^3)	($\mu\text{g}/\text{m}^3$)
18-Dec-25	Natada Village	<20.0	14.05	<0.1	<1.0	<1.0	1.4	BQL(QL)=0.7	BQL
18-Dec-25	Solda Village (Reported Only)	<20.0	27.12	<0.1	<1.0	<1.0	1.7	BQL(QL)=0.7	BQL
19-Dec-25	Purunasahi Village	<20.0	20.83	<0.1	<1.0	<1.0	1.9	BQL(QL)=0.7	BQL
19-Dec-25	Natada Village	<20.0	10.42	<0.1	<1.0	<1.0	1.5	BQL(QL)=0.7	BQL
19-Dec-25	East of the Mine, Natadi Village	<20.0	26.40	<0.1	<1.0	<1.0	1.4	BQL(QL)=0.7	BQL
19-Dec-25	Solda Village (Reported Only)	<20.0	27.12	<0.1	<1.0	<1.0	1.6	BQL(QL)=0.7	BQL
22-Dec-25	Khajuria Village (Reported Only)	<20.0	25.67	<0.1	<1.0	<1.0	1.3	BQL(QL)=0.7	BQL
23-Dec-25	Khajuria Village (Reported Only)	<20.0	23.98	<0.1	<1.0	<1.0	1.4	BQL(QL)=0.7	BQL
24-Dec-25	Solda Village (Reported Only)	<20.0	21.32	<0.1	<1.0	<1.0	1.8	BQL(QL)=0.7	BQL
24-Dec-25	Natada Village	<20.0	21.55	<0.1	<1.0	<1.0	1.9	BQL(QL)=0.7	BQL
24-Dec-25	Purunasahi Village	<20.0	24.47	<0.1	<1.0	<1.0	1.9	BQL(QL)=0.7	BQL
24-Dec-25	East of the Mine, Natadi Village	<20.0	27.12	<0.1	<1.0	<1.0	1.7	BQL(QL)=0.7	BQL
25-Dec-25	Solda Village (Reported Only)	<20.0	11.87	<0.1	<1.0	<1.0	1.7	BQL(QL)=0.7	BQL
25-Dec-25	Purunasahi Village	<20.0	24.70	<0.1	<1.0	<1.0	1.1	BQL(QL)=0.7	BQL
25-Dec-25	East of the Mine, Natadi Village	<20.0	17.43	<0.1	<1.0	<1.0	1.6	BQL(QL)=0.7	BQL
25-Dec-25	Natada Village	<20.0	25.92	<0.1	<1.0	<1.0	1.2	BQL(QL)=0.7	BQL
29-Dec-25	Khajuria Village (Reported Only)	<20.0	22.03	<0.1	<1.0	<1.0	1.8	BQL(QL)=0.7	BQL
30-Dec-25	Khajuria Village (Reported Only)	<20.0	11.62	<0.1	<1.0	<1.0	1.2	BQL(QL)=0.7	BQL

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Standard	400(24 hours)	180(hours)	1.0(24 hours)	6.0(Annual)	20(Annual)	02(8hours)	01(annual)	05(annual)
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Jasmati



सीएमपीओ
CMPOI
Central Monitoring and Pollution Control Organisation

TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Hingula

PROJECT :

Balaram OCP

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
13-Dec-25	Natada Village	47.2	34.8
13-Dec-25	Solada Village (Reported only)	50.2	36.8
13-Dec-25	Near Natedi Village	48.6	35.1
13-Dec-25	Pump House Near Outsourcing Working Patch	65.3	47.7
13-Dec-25	Near Project Office Balram OCP	66.8	48.6
30-Dec-25	Natada Village	50.6	38.1
30-Dec-25	Solada Village (Reported only)	50.3	37.2
30-Dec-25	Near Natedi Village	51.3	37.8
30-Dec-25	Pump House Near Outsourcing Working Patch	67.2	53.8
30-Dec-25	Near Project Office Balram OCP	64.7	51.7

MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 75dB(A) (Industrial)	10.00 PM -6.00 AM Leq 70dB(A) (Industrial)
MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 55dB(A) (Residential)	10.00 PM -6.00 AM Leq 45dB(A) (Residential)
MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 65dB(A) (Commercial)	10.00 PM -6.00 AM Leq 55dB(A) (Commercial)
MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 50dB(A) (Silence Zone)	10.00 PM -6.00 AM Leq 40dB(A) (Silence Zone)

A. J. Jotanaik
Authorised Signatory
CMPOI, RI-VII, LAB
BHUBANESWAR

J. J. Jotanaik

TABLE--



राष्ट्रीय प्रदूषण नियंत्रण बोर्ड
 Ministry of Environment & Forests
 New Delhi

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-Dec-25	Gandhisagar (Mine Sump)	7.28	<4.0	22	16	-	
15-Dec-25	Inlet of O & G Trap	8.02	<4.0	42	36	-	
15-Dec-25	Outlet of O & G Trap	7.44	<4.0	30	24	-	
30-Dec-25	Inlet of O & G Trap	8.10	<4.0	32	48	-	
30-Dec-25	Outlet of O & G Trap	7.49	<4.0	26	32	-	

T. J. Anand

Effluent Standard Notification dated 25th September, 2000
 and Table Schedule 1, General standard for discharge
 of Environmental Pollutants Part A: Effluents
 C. P. C. B. LAB
 BHUBANESWAR

5.5-9.0	10	100	250	30
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J. Anand

TABLE--



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 Odisha Government
cmpdc
 Odisha Pollution Control Board

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	MPN/100mL
15-Dec-25	STP Inlet of Balram Colony	7.36	-	42		3.9	210
15-Dec-25	STP Outlet of Balram Colony	7.63	-	22	-	2.7	110
30-Dec-25	STP Inlet of Balram Colony	7.40	-	38	-	4.3	280
30-Dec-25	STP Outlet of Balram Colony	7.70	-	24	-	3.4	140

Katanaik
 Authorised Signatory
 Odisha Pollution Control Board
 Bhubaneswar

6.5-9.0 - <100 - 30 <1000

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Effluent Quality (all Parameter): Hingula Area

Project (OCP / UG)	Balaram	MoEF-Sch-VI Standards
NAME OF THE STATION	Gandhisagar Mine Sump Water	
Date of Sampling	15-Nov-25	
Odour	Unobjectionable	-
Colour(Hazen)	2	-
Temperature(oC)	24.4	Shall not exceed 5 °C above the receiving temperature
pH	8.20	5.5-9.0
Total Hardness (asCaCO ₃),mg/L	460.92	-
Total Dissolved Solids, mg/L	597	-
Nitrate Nitrogen(mg/L)(As N)	0.65	10
Ammonical Nitrogen , mg/l (As N)	<0.20	50
Total Kjeldhal Nitrogen, mg/l (As N)	1.74	100
Sulphide (mg/L)	<0.10	2
BOD [3 days at 27°C] (mg/L)	2.9	30
Fluoride(mg/L)	0.78	2
Copper(mg/L)	<0.03	3
Manganese(mg/L)	0.23	2
Iron(mg/L)	<0.1	3
Zinc(mg/L)	<0.04	5
Lead, mg/l	<0.005	0.1
Cadmium, mg/l	<0.001	2.0
Total Chromium(mg/L)	<0.01	2.0
Hexavalent Chromium(mg/L)	<0.05	0.1
Nickel(mg/L)	0.04	3
Arsenic, mg/l	<0.005	0.2
Selenium (mg/L)	<0.005	0.05
Dissolved Phosphate(mg/L)	<4.0	5
Phenolics (mg/L)	<0.001	1

Hattanick
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Surface Water Quality Data Hingula Area

Project/OCP	Balram			IS:2296-1982 Tolerance for Inland Surface water (Class C)
	Upstream of Bangaru Jhor	Downstream Bangaru Jhor near Nakeipasi village	Pond water of Ambapal village	
NAME OF STATIONS				
Date of sampling	15-Nov-25	15-Nov-25	15-Nov-25	
pH	7.68	7.22	8.41	6.5-8.5
Color (Hazen unit)	3	1	2	300
Dissolved Oxygen(mg/L)	6.7	6.5	6.8	4
BOD (3 days 27°C)(mg/L)	2.1	<2.0	2.2	3
Chlorides(mg/L)	25.24	11.65	5.82	600
Sulphate(mg/L)	112.03	23.24	17.97	400
Nitrate(mg/L)	2.93	<0.5	<0.5	50
Fluoride(mg/L)	<0.30	<0.30	<0.30	1.5
Total Hardness(mg/L)	428.57	48.51	52.56	-
Total dissolved solids (mg/L)	597	112	116	1500
TSS(mg/L)	46	28	25	-
Copper(mg/L)	<0.03	<0.03	<0.03	1.5
Iron(mg/L)	<0.1	<0.1	0.12	50
Zinc(mg/L)	<0.04	<0.04	<0.04	15
Lead(mg/L)	<0.005	<0.005	<0.005	0.1
Cadmium(mg/L)	<0.001	<0.001	<0.001	0.01
Hexavalent Chromium(as Cr ⁶⁺)(mg/L)	<0.05	<0.05	<0.05	0.05
Arsenic(mg/L)	<0.005	<0.005	<0.005	0.2
Selenium(mg/L)	<0.005	<0.005	<0.005	0.05
Phenolics(mg/L)	<0.001	<0.001	<0.001	0.005
Oil & Grease (mg/L)	<4.0	<4.0	<4.0	0.1
Residual Free Chlorine(mg/L)	<0.2	<0.2	<0.2	0.2
MPN (Index/100 ml)	210	240	110	-

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Drinking Water Quality Data Hingula Area

Project / OCP	Balaram OCP			Indian Drinking Standards (IS-10500):2012	
	Danara Village Borewell Water	Balaram Colony	Nakeipasi Village Bore Well Water		
Monitoring Station					
Date of Sampling	15-Dec-2025	15-Dec-2025	15-Dec-2025	Acceptable	Permissible
Colour(Hazen)	3	4	3	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	3	4	3	1	5
pH	6.70	7.20	7.08	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	332.80	74.88	245.44	200	600
Chloride(mg/L)	19.43	23.31	68.00	250	1000
Sulphate(mg/L)	53.11	120.93	39.43	200	400
Nitrate(mg/L)	18.80	5.56	11.56	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	282.24	209.66	169.34	200	600
Calcium(mg/L)	67.87	63.02	48.48	75	200
Fluoride(mg/L)	0.56	0.71	0.75	1	1.5
Total Dissolve Solid(mg/L)	443	316	375	500	2000
Copper(mg/L)	<0.03	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	<0.04	0.06	0.1	0.3
Iron(mg/L)	<0.1	<0.1	<0.1	1.0	No relaxation
Zinc(mg/L)	<0.04	<0.04	1.79	5	15
Lead(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.001	<0.001	<0.001	0.003	No relaxation
Total Chromium (mg/L)	<0.01	<0.01	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	<0.2	<0.2	0.5	2.4

J. Jha
Authorised Signatory
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J. Jha



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Drinking Water Quality Data Hingula Area

Project / OCP	Balaram OCP			Indian Drinking Standards (IS-10500):2012	
	Danara Village Borewell Water	Balaram Colony	Nakeipasi Village Bore Well Water		
Monitoring Station					
Date of Sampling	15-Dec-2025	15-Dec-2025	15-Dec-2025	Acceptable	Permissible
Selenium(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Sodium(mg/L)	10.29	13.58	6.23		
Potassium(mg/L)	2.58	1.58	2.88		
Phenolics(mg/L)	<0.001	<0.001	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	<0.2	<0.2	0.2	1.0
MPN (Index/100 ml)	Not Detected	Not Detected	Not Detected	-	-

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BHUBANESWAR

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**Environmental Monitoring Report
For
December -2025**

**Project: Talcher Colliery
Area: Talcher
Coalfield: Talcher**



Mahanadi Coalfields Limited



सीएमपीडीआई
मिनी प्लान
cmpdi
Mini Plan

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]

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Test Report

AMBIENT AIR QUALITY DATA



Area :

Talcher

(Compliance Station)

Project :

Talcher Colliery

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	CO (mg/m ³)	Dust Generating Source(DGS)	Distance from DGS
05-Dec-25	Near Canteen Talcher Colliery	260	165	72	15.70	20.58	-	Local Transportation	About 500m
05-Dec-25	Officer Club, Talcher Area	303	166	76	10.74	22.61	-	Mining Activities, Ananta, Lingaraj	About 1000m
20-Dec-25	Near Canteen Talcher Colliery	314	190	89	13.54	21.59	-	Local Transportation	About 500m
20-Dec-25	Officer Club, Talcher Area	287	170	78	6.52	34.67	-	Mining Activities, Ananta, Lingaraj	About 1000m

Authorised Signatory
 BHOJWAR
 ISO/IEC Standards Certification dated 25th
 2007

600	300		120	120	62 (8 Hours)
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CENTRAL
CMPDI
BHUANESWAR

TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Talcher

PROJECT :

Talcher Colliery

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
12-Dec-25	Officers Club, Talcher Area	50.3	39.6
12-Dec-25	Near Canteen, Talcher Colliery	62.6	47.3
29-Dec-25	Officers Club, Talcher Area	56.7	45.1
29-Dec-25	Near Canteen, Talcher Colliery	57.9	44.9

MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 75dB(A) (Industrial)	10.00 PM -6.00 AM Leq 70dB(A) (Industrial)
MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 55dB(A) (Residential)	10.00 PM -6.00 AM Leq 45dB(A) (Residential)
MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 65dB(A) (Commercial)	10.00 PM -6.00 AM Leq 55dB(A) (Commercial)
MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 50dB(A) (Silence Zone)	10.00 PM -6.00 AM Leq 40dB(A) (Silence Zone)

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BHUBANESWAR

Authorised

TABLE--


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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
15-Dec-25	Talcher Colliery Sedimentation Tank Discharge	6.17	<4.0	26	20	-	
30-Dec-25	Talcher Colliery Sedimentation Tank Discharge	6.34	<4.0	38	24	-	

 A. K. Jaiswal
 Authorized Signatory
 C. P. S. R. V. LAB
 CSIR-CECRI, VISVESVARAYA
 Varanasi

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

5.5-9.0 10 100 250 30

Jaiswal



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मिनी रोड
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Drinking Water Quality Data Talcher Area

Project / OCP Monitoring Station	Talcher U/G		Indian Drinking Standards (IS-10500):2012	
	Canteen Water, GM Office	Canteen, Talcher Colliery	Acceptable	Permissible
Date of Sampling	15-Dec-2025	15-Dec-2025		
Colour(Hazen)	2	2	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	2	3	1	5
pH	7.59	6.86	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	54.08	62.40	200	600
Chloride(mg/L)	17.48	25.25	250	1000
Sulphate(mg/L)	22.56	73.79	200	400
Nitrate(mg/L)	7.26	9.46	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	76.60	149.18	200	600
Calcium(mg/L)	11.31	42.01	75	200
Fluoride(mg/L)	0.45	0.44	1	1.5
Total Dissolve Solid(mg/L)	117	240	500	2000
Copper(mg/L)	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	<0.04	0.1	0.3
Iron(mg/L)	<0.1	<0.1	1.0	No relaxation
Zinc(mg/L)	<0.04	<0.04	5	15
Lead(mg/L)	<0.005	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.001	<0.001	0.003	No relaxation
Total Chromium (mg/L)	<0.01	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	<0.2	0.5	2.4

H. K. Sahoo
Authorised Signatory
CMPDI, RI-VII, LAB
BHUBANESWAR

J. Sahoo



सीएमपीडीआई
मिनी एल
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Drinking Water Quality Data Talcher Area

Project / OCP	Talcher U/G		Indian Drinking Standards (IS-10500):2012	
	Canteen Water, GM Office	Canteen, Talcher Colliery		
Monitoring Station			Acceptable	Permissible
Date of Sampling	15-Dec-2025	15-Dec-2025	0.01	No relaxation
Selenium(mg/L)	<0.005	<0.005		
Sodium(mg/L)	9.05	14.27		
Potassium(mg/L)	3.60	3.69		
Phenolics(mg/L)	<0.001	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	<0.2	0.2	1.0
MPN (Index/100 ml)	Not Detected	Not Detected	-	-

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BHUBANESWAR

Jamali

Talcher Air Stations

Talcher Air monitoring stations



Google Earth

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**Environmental Monitoring Report
For
December -2025**

**Project: Nandira Colliery
Area: Talcher
Coalfield: Talcher**



Mahanadi Coalfields Limited



सीएमपीडीआई
मिनी रत्ना
cmpdi
Mini Ratna

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]

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Test Report

AMBIENT AIR QUALITY DATA



Area :

Talcher

(Compliance Station)

Project :

Nandira Colliery

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	CO ($\mu\text{g}/\text{m}^3$)	Dust Generating Source(DGS)	Distance from DGS
05-Dec-25	Project Office	301	174	82	16.91	33.24	-	Mining Activities, Transportation, CHP	About 500m
05-Dec-25	Sub-station	308	173	83	20.53	33.24	-	Transportation & Railway Sidings of	About 500m
20-Dec-25	Project Office	316	190	86	6.52	26.38	-	Mining Activities, Transportation, CHP	About 500m
20-Dec-25	Sub-station	323	191	86	19.23	30.78	-	Transportation & Railway Sidings of	About 500m

T. H. H. H. H. H.

Authorized Signatory
 Cmpdi
 BHUBANESHWAR

800	300		120	120	02/8 Hours
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Jamali

Test Report


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 Since 1986

AMBIENT AIR QUALITY DATA

Area :

Talcher

(Reference Station)

Project :

Nandira 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
03-Dec-25	Nandira Colony	217	86	44	12.27	18.09	Local Transportation,	About 500m
03-Dec-25	East of the Mine, Natedi Village (Reported Only)	180	74	36	24.15	34.30	Coal Transportation Road	About 2km
04-Dec-25	East of the Mine, Natedi Village (Reported Only)	195	82	43	16.47	23.74	Coal Transportation Road	About 2km
04-Dec-25	Nandira Colony	236	90	49	16.10	19.60	Local Transportation,	About 500m
10-Dec-25	Nandira Colony	188	73	39	16.10	22.95	Local Transportation,	About 500m
10-Dec-25	East of the Mine, Natedi Village (Reported Only)	229	88	47	9.66	25.33	Coal Transportation Road	About 2km
11-Dec-25	East of the Mine, Natedi Village (Reported Only)	234	94	52	20.76	38.32	Coal Transportation Road	About 2km
11-Dec-25	Nandira Colony	214	81	43	13.54	14.39	Local Transportation,	About 500m
18-Dec-25	Nandira Colony	261	95	54	18.65	41.66	Local Transportation,	About 500m
18-Dec-25	East of the Mine, Natedi Village (Reported Only)	243	92	54	17.80	16.66	Coal Transportation Road	About 2km
19-Dec-25	East of the Mine, Natedi Village (Reported Only)	228	83	45	10.61	15.11	Coal Transportation Road	About 2km
19-Dec-25	Nandira Colony	217	81	45	23.71	33.42	Local Transportation,	About 500m
24-Dec-25	East of the Mine, Natedi Village (Reported Only)	238	89	50	12.65	21.11	Coal Transportation Road	About 2km
24-Dec-25	Nandira Colony	255	86	49	16.84	19.43	Local Transportation,	About 500m
25-Dec-25	Nandira Colony	241	94	53	6.95	30.22	Local Transportation,	About 500m
25-Dec-25	East of the Mine, Natedi Village (Reported Only)	194	95	56	6.22	17.27	Coal Transportation Road	About 2km

 Hattanasik
 Authorised Signatory
 CMPDI, VII, LAB
 BHU, 2015, 2016
 SWAR

	100	60	60	80
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Jansat

Test Report



सीएमपीडी
cmpr
LABORATORY

AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area :

Talcher

Project :

Nandira Colliery

Date of Sampling	Monitoring Station	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo(a)Pyrene	Benzene
		(µg/m ³)	(µg/m ³)	(µg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(µg/m ³)
03-Dec-25	Nandira Colony	<20.0	17.20	<0.1	<1.0	<1.0	1.1	BQL(QL)=0.7	BQL
03-Dec-25	East of the Mine, Natedi Village (Reported Only)	<20.0	22.28	<0.1	<1.0	<1.0	2.0	BQL(QL)=0.7	BQL
04-Dec-25	East of the Mine, Natedi Village (Reported Only)	<20.0	17.92	<0.1	<1.0	<1.0	1.3	BQL(QL)=0.7	BQL
04-Dec-25	Nandira Colony	<20.0	15.98	<0.1	<1.0	<1.0	0.6	BQL(QL)=0.7	BQL
10-Dec-25	Nandira Colony	<20.0	24.70	<0.1	<1.0	<1.0	0.7	BQL(QL)=0.7	BQL
10-Dec-25	East of the Mine, Natedi Village (Reported Only)	<20.0	25.43	<0.1	<1.0	<1.0	1.3	BQL(QL)=0.7	BQL
11-Dec-25	East of the Mine, Natedi Village (Reported Only)	<20.0	14.28	<0.1	<1.0	<1.0	1.8	BQL(QL)=0.7	BQL
11-Dec-25	Nandira Colony	<20.0	15.73	<0.1	<1.0	<1.0	1.2	BQL(QL)=0.7	BQL
18-Dec-25	Nandira Colony	<20.0	10.90	<0.1	<1.0	<1.0	0.6	BQL(QL)=0.7	BQL
18-Dec-25	East of the Mine, Natedi Village (Reported Only)	<20.0	13.57	<0.1	<1.0	<1.0	1.8	BQL(QL)=0.7	BQL
19-Dec-25	East of the Mine, Natedi Village (Reported Only)	<20.0	26.40	<0.1	<1.0	<1.0	1.4	BQL(QL)=0.7	BQL
19-Dec-25	Nandira Colony	<20.0	18.65	<0.1	<1.0	<1.0	0.7	BQL(QL)=0.7	BQL
24-Dec-25	East of the Mine, Natedi Village (Reported Only)	<20.0	27.12	<0.1	<1.0	<1.0	1.7	BQL(QL)=0.7	BQL
24-Dec-25	Nandira Colony	<20.0	13.32	<0.1	<1.0	<1.0	1.2	BQL(QL)=0.7	BQL
25-Dec-25	Nandira Colony	<20.0	22.03	<0.1	<1.0	<1.0	1.2	BQL(QL)=0.7	BQL
25-Dec-25	East of the Mine, Natedi Village (Reported Only)	<20.0	17.43	<0.1	<1.0	<1.0	2.1	BQL(QL)=0.7	BQL

Authorized Signatory
STANDARD
BHULANESWAR

400(24hrs)	180(hour)	1.0(24hours)	6.0(Annual)	20(Annual)	02(8hours)	01(annual)	05(annual)
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Jaswant



सौरमपीडी आई
CMPDI
एन सी ई डी

TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Talcher

PROJECT :

Nandira Colliery

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
12-Dec-25	Project Office	61.8	48.1
12-Dec-25	Sub Station, Nandira Colliery	64.7	50.3
29-Dec-25	Project Office	62.1	52.1
29-Dec-25	Sub Station, Nandira Colliery	60.3	50.9

MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 75dB(A) (Industrial)	10.00 PM -6.00 AM Leq 70dB(A) (Industrial)
MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 55dB(A) (Residential)	10.00 PM -6.00 AM Leq 45dB(A) (Residential)
MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 65dB(A) (Commercial)	10.00 PM -6.00 AM Leq 55dB(A) (Commercial)
MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 50dB(A) (Silence Zone)	10.00 PM -6.00 AM Leq 40dB(A) (Silence Zone)

H. Anand
Authorised Signatory
CMPDI, RI-VII, LAB
BHUBANESWAR

J. Sankar



सीएमपीडीआई
मिनी प्लान
cmpdi
Mini Ratna

Drinking Water Quality Data Talcher Area

Project / OCP	Nandira U/G		Indian Drinking Standards (IS-10500):2012	
	Monitoring Station	Canteen , Nandira Colliery		
Date of Sampling	15-Dec-2025	15-Dec-2025	Acceptable	Permissible
Colour(Hazen)	3	3	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	2	2	1	5
pH	6.57	6.54	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	66.56	245.44	200	600
Chloride(mg/L)	23.31	68.00	250	1000
Sulphate(mg/L)	95.87	39.43	200	400
Nitrate(mg/L)	<0.5	6.26	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	185.47	169.34	200	600
Calcium(mg/L)	48.48	46.86	75	200
Fluoride(mg/L)	0.43	0.30	1	1.5
Total Dissolve Solid(mg/L)	256	267	500	2000
Copper(mg/L)	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	0.84	<0.04	0.1	0.3
Iron(mg/L)	<0.1	<0.1	1.0	No relaxation
Zinc(mg/L)	0.10	0.05	5	15
Lead(mg/L)	<0.005	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.001	<0.001	0.003	No relaxation
Total Chromium (mg/L)	<0.01	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	<0.2	0.5	2.4

Authorised
Authorised Signatory
CMPDI, RI-VII, LAB
BHUBANESWAR

Jasmati



सीएमपीडीआई
विनी रत्न
cmpdi
Mini Ratna

Drinking Water Quality Data Talcher Area

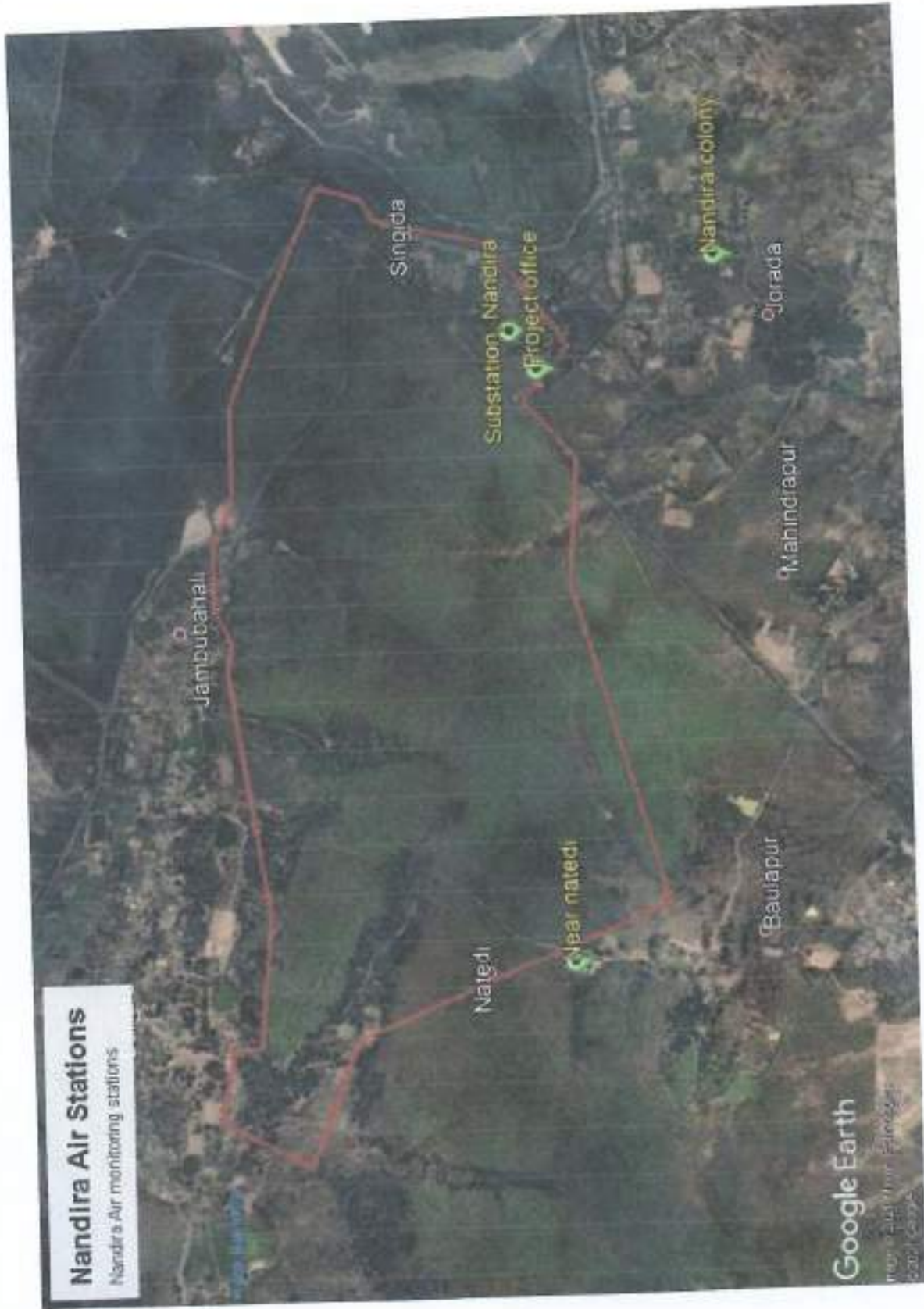
Project / OCP	Nandira U/G		Indian Drinking Standards (IS-10500):2012	
	Canteen , Nandira Colliery	Pit Top, Nandira Colliery	Acceptable	Permissible
Monitoring Station				
Date of Sampling	15-Dec-2025	15-Dec-2025		
Selenium(mg/L)	<0.005	<0.005	0.01	No relaxation
Sodium(mg/L)	5.32	6.83		
Potassium(mg/L)	3.14	3.70		
Phenolics(mg/L)	<0.001	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	<0.2	0.2	1.0
MPN (Index/100 ml)	Not Detected	Not Detected	-	-

A. Hanait
Authorised Signatory
CMPDI, RI-VII, LAB
BHUBANESWAR

Jasmati

Nandira Air Stations

Nandira Air monitoring stations



**Environmental Monitoring Report
For
December -2025**

**Project: Handhidhua Colliery
Area: Talcher
Coalfield: Talcher**



Mahanadi Coalfields Limited



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]

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Test Report



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CMPDI
Bhubaneswar

AMBIENT AIR QUALITY DATA

Area :

Talcher

(Compliance Station)

Project :

Handhidhua Colliery

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	CO ($\mu\text{g}/\text{m}^3$)	Dust Generating Source(DGS)	Distance from DGS
05-Dec-25	Manager's Office	278	185	73	11.50	33.92	-	Local Transportation, CHP	About 500m
20-Dec-25	Manager's Office	317	193	86	15.70	26.91	-	Local Transportation, CHP	About 500m

T. Patra
Authorised Signatory
CMPDI, II-VII, LAB
BHUBANESWAR

MoEF Standards Notification dated 25th
September, 2009

600	300		120	120	02/8 Hours
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Patra



सीएमपीडीआई
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Drinking Water Quality Data Talcher Area

Project / OCP	Handhidhua Colliery			Indian Drinking Standards (IS-10500):2012	
	Monitoring Station	19X Cut Road Bore Hole Point	Pit Top Water	RWSS (Pit Top Water)	Acceptable
Date of Sampling	15-Dec-2025	15-Dec-2025	15-Dec-2025	5	15
Colour(Hazen)	2	1	3	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	3	2	3	1	5
pH	6.56	6.51	6.65	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	62.40	70.72	54.08	200	600
Chloride(mg/L)	29.14	31.08	29.14	250	1000
Sulphate(mg/L)	97.44	100.95	93.38	200	400
Nitrate(mg/L)	3.12	3.24	3.30	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	185.47	205.63	173.37	200	600
Calcium(mg/L)	45.24	43.63	51.71	75	200
Fluoride(mg/L)	0.31	0.45	0.41	1	1.5
Total Dissolve Solid(mg/L)	270	285	277	500	2000
Copper(mg/L)	<0.03	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	0.41	0.28	<0.04	0.1	0.3
Iron(mg/L)	<0.1	<0.1	<0.1	1.0	No relaxation
Zinc(mg/L)	<0.04	<0.04	<0.04	5	15
Lead(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.001	<0.001	<0.001	0.003	No relaxation
Total Chromium (mg/L)	<0.01	<0.01	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	<0.2	<0.2	0.5	2.4

Hottanish
Authorized Signatory
CMPDI, III-VII, LAB
BHUBANESWAR

Janaki



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मिनी प्लान
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Drinking Water Quality Data Talcher Area

Project / OCP	Handhidhua Colliery			Indian Drinking Standards (IS-10500):2012	
	19X Cut Road Bore Hole Point	Pit Top Water	RWSS (Pit Top Water)	Acceptable	Permissible
Monitoring Station					
Date of Sampling	15-Dec-2025	15-Dec-2025	15-Dec-2025	Acceptable	Permissible
Selenium(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Sodium(mg/L)	8.15	8.43	6.39		
Potassium(mg/L)	5.61	4.44	2.44		
Phenolics(mg/L)	<0.001	<0.001	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	<0.2	<0.2	0.2	1.0
MPN (Index/100 ml)	Not Detected	Not Detected	Not Detected	-	-

Nathanaik
Authorised Signatory
CMPDI, RI-VII, LAB
BHUBANESWAR

Jamuna

**Environmental Monitoring Report
For
December -2025**

**Project: Deulbera Colliery
Area: Talcher
Coalfield: Talcher**



MCL

Mahanadi Coalfields Limited



सीएमपीडीआई
कोयला संशोधन
cmpdi
Mini Ratna

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]

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राष्ट्रीय प्रदूषण नियंत्रण बोर्ड
 with the
cmpdi
 AIR QUALITY

Test Report

AMBIENT AIR QUALITY DATA

Area :

Talcher

(Compliance Station)

Project :

Deulbera

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	CO (mg/m^3)	Dust Generating Source(DGS)	Distance from DGS
06-Dec-25	GM Office Lingraj (Reported Only)	296	166	75	16.51	20.58	1.0	Transportation	About 500m
26-Dec-25	GM Office Lingraj (Reported Only)	293	179	84	14.19	25.63	0.9	Transportation	About 500m

Authorised Signatory

Authorised Signatory
 Bhubaneswar, Odisha, India
 September, 2000

600	300		120	120	02/8 Hours
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Signature



सीएमपीडीआई
INDIA
cmpdi
ANALYTICAL

TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Talcher

PROJECT :

Deulbera Colliery

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
12-Dec-25	Manager's Office	61.4	47.8
29-Dec-25	Manager's Office	56.7	48.2

MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 75dB(A) (Industrial)	10.00 PM -6.00 AM Leq 70dB(A) (Industrial)
MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 55dB(A) (Residential)	10.00 PM -6.00 AM Leq 45dB(A) (Residential)
MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 65dB(A) (Commercial)	10.00 PM -6.00 AM Leq 55dB(A) (Commercial)
MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 50dB(A) (Silence Zone)	10.00 PM -6.00 AM Leq 40dB(A) (Silence Zone)

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Authorized Signatory
 CMPDI, RI-VII, LAB
 BHUBANESWAR

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मिनी रातना
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Drinking Water Quality Data Talcher Area

Project / OCP	Deulbera U/G			Indian Drinking Standards (IS-10500):2012	
	Deulbera Colliery Mine Discharge at Pit Top	Rani Park Submersible Pump	Deulbera Manager Office Tap Water		
Monitoring Station					
Date of Sampling	15-Dec-2025	15-Dec-2025	15-Dec-2025	Acceptable	Permissible
Colour(Hazen)	2	4	3	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	3	2	1	1	5
pH	7.05	6.70	7.25	6.5-8.5	No relaxation
Total Alkallinity(mg/L)	54.08	62.40	66.56	200	600
Chloride(mg/L)	17.48	25.25	23.31	250	1000
Sulphate(mg/L)	22.56	73.79	95.87	200	400
Nitrate(mg/L)	7.86	12.48	1.34	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	76.60	149.18	185.47	200	600
Calcium(mg/L)	88.88	14.54	14.54	75	200
Fluoride(mg/L)	0.61	<0.3	0.37	1	1.5
Total Dissolve Solid(mg/L)	459	120	109	500	2000
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
Iron(mg/L)	<0.1	<0.1	<0.1	1.0	No relaxation
Zinc(mg/L)	<0.04	<0.04	<0.04	5	15
Lead(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.001	<0.001	<0.001	0.003	No relaxation
Total Chromium (mg/L)	<0.01	<0.01	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	<0.2	<0.2	0.5	2.4

Lotharait
Authorised Signatory
CMPDI, RI-VII, LAB
LILJANESWAR

Janab



सीएमपीडीआई
मिनी प्लान
cmpdi
Mini Plan

Drinking Water Quality Data Talcher Area

Project / OCP	Deulbera U/G			Indian Drinking Standards (IS-10500):2012	
	Deulbera Colliery Mine Discharge at Pit Top	Rani Park Submersible Pump	Deulbera Manager Office Tap Water		
Monitoring Station					
Date of Sampling	15-Dec-2025	15-Dec-2025	15-Dec-2025	Acceptable	Permissible
Selenium(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Sodium(mg/L)	3.03	10.86	9.46		
Potassium(mg/L)	1.76	5.73	1.64		
Phenolics(mg/L)	<0.001	<0.001	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	<0.2	<0.2	0.2	1.0
MPN (Index/100 ml)	Not Detected	Not Detected	Not Detected	-	-

K. Patra
Authorised Signatory
CMPDI, RI-VII, LAB
BHUBANESWAR

J. Prasad

Deulbera Air Stations

Deulbera Air monitoring stations



Google Earth

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Imagery © 2008 Google

**Environmental Monitoring Report
For
December -2025**

**Project: Mandapal Sand Mine
Area: Talcher
Coalfield: Talcher**



Mahanadi Coalfields Limited



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]

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Test Report



AMBIENT AIR QUALITY DATA

Area :

Talcher

(Reference Station)

Project :

Mandapal Sand Mine

(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
03-Dec-25	Near Pachismeshwar Temple	236	87	49	14.90	18.20	Mining Activity	Less than 500m
03-Dec-25	Near Mandapal Chowk	176	71	37	10.17	13.33	Mining Activity	Less than 500m
04-Dec-25	Near Mandapal Chowk	215	83	46	17.31	33.24	Mining Activity	Less than 500m
04-Dec-25	Near Pachismeshwar Temple	206	84	46	15.70	20.58	Mining Activity	Less than 500m
10-Dec-25	Near Pachismeshwar Temple	244	88	51	21.47	26.38	Mining Activity	Less than 500m
10-Dec-25	Near Mandapal Chowk	224	90	52	12.65	34.67	Mining Activity	Less than 500m
11-Dec-25	Near Mandapal Chowk	199	81	43	17.89	21.11	Mining Activity	Less than 500m
11-Dec-25	Near Pachismeshwar Temple	202	78	42	22.37	13.19	Mining Activity	Less than 500m
18-Dec-25	Near Mandapal Chowk	178	76	43	10.74	30.78	Mining Activity	Less than 500m
18-Dec-25	Near Pachismeshwar Temple	212	80	45	7.28	36.94	Mining Activity	Less than 500m
19-Dec-25	Near Pachismeshwar Temple	239	92	53	16.10	38.78	Mining Activity	Less than 500m
19-Dec-25	Near Mandapal Chowk	206	82	48	7.63	16.66	Mining Activity	Less than 500m
24-Dec-25	Near Pachismeshwar Temple	224	86	47	19.68	42.21	Mining Activity	Less than 500m
24-Dec-25	Near Mandapal Chowk	190	79	42	19.49	20.83	Mining Activity	Less than 500m
25-Dec-25	Near Mandapal Chowk	243	93	55	19.23	22.86	Mining Activity	Less than 500m
25-Dec-25	Near Pachismeshwar Temple	243	95	56	10.59	24.99	Mining Activity	Less than 500m

A. Pattanayak
 Authorized Signatory
 CWPDI, RI-VII, LAB
 BHUBANESWAR

*N-11QS,2009		100	60	60	80
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Janaki



सीएमपीडीआई
CMPDI
CENTRAL POLLUTION CONTROL BOARD

TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Talcher

PROJECT :

Mandupal Sand Mine

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
12-Dec-25	Near Gopinathpur Village	48.5	34.9
29-Dec-25	Near Gopinathpur Village	49.9	36.2

MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 75dB(A) (Industrial)	10.00 PM -6.00 AM Leq 70dB(A) (Industrial)
MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 55dB(A) (Residential)	10.00 PM -6.00 AM Leq 45dB(A) (Residential)
MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 65dB(A) (Commercial)	10.00 PM -6.00 AM Leq 55dB(A) (Commercial)
MoEF Standard Notification dated 25th September, 2000	6.00 AM -10.00 PM Leq 50dB(A) (Silence Zone)	10.00 PM -6.00 AM Leq 40dB(A) (Silence Zone)

K. Pattanai
Authorised Signatory
CMPDI, R.VII, LAB
BHUBANESWAR

J. Prasad



सीएमपीडीआई
मिनि रत्ना
cmpdi
Mini Ratna

Surface Water Quality Data Talcher Area

Project/OCP	Mandapal Sand Mine		IS:2296-1982 Tolerance for inland Surface water (Class C)
NAME OF STATIONS	Upstream - At 200 m before leasehold area	Downstream - At 200 m after leasehold area	
Date of sampling	15-Nov-25	15-Nov-25	
pH	7.63	7.90	6.5-8.5
Color (Hazen unit)	2	1	300
Dissolved Oxygen(mg/L)	6.7	6.7	4
BOD (3 days 27°C)(mg/L)	<2.0	<2.0	3
Chlorides(mg/L)	7.76	11.65	600
Sulphate(mg/L)	15.54	19.32	400
Nitrate(mg/L)	<0.5	<0.5	50
Fluoride(mg/L)	<0.30	<0.30	1.5
Total Hardness(mg/L)	72.77	88.95	-
Total dissolved solids (mg/L)	126	134	1500
TSS(mg/L)	33	32	-
Copper(mg/L)	<0.03	<0.03	1.5
Iron(mg/L)	<0.1	<0.1	50
Zinc(mg/L)	<0.04	<0.04	15
Lead(mg/L)	<0.005	<0.005	0.1
Cadmium(mg/L)	<0.001	<0.001	0.01
Hexavalent Chromium(as Cr ⁶⁺)(mg/L)	<0.05	<0.05	0.05
Arsenic(mg/L)	<0.005	<0.005	0.2
Selenium(mg/L)	<0.005	<0.005	0.05
Phenolics(mg/L)	<0.001	<0.001	0.005
Oil & Grease (mg/L)	<4.0	<4.0	0.1
Residual Free Chlorine(mg/L)	<0.2	<0.2	0.2
MPN (Index/100 ml)	120	150	-

Jeevanika
Authorized Signatory
CMPDI, RI-VII, LAB
BHUBANESWAR

Jeevanika

Mandapal sand mine Air Stations

Mandapal sand mine Air monitoring stations



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