

Environmental Monitoring Report For October-2025

Project: Samleswari OCP
Area: Ib Valley
Coalfield: Ib Valley



MCL

Mahanadi Coalfields Limited



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मिनी रात्रा
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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 पर्यावरण
संरक्षण बोर्ड
CMPDI
मुंबई

Test Report

AMBIENT AIR QUALITY DATA

Area :

Ib Valley

(Compliance Station)

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

Project :

Samleswari OCP

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source	Distance from DGS
06-Oct-25	East of the Mine	251	113	54	16.73	19.16	Coal Transportation Road	About 500m
11-Oct-25	West of the Mine	268	141	62	12.57	38.15	Distance From 'y' Curve Railway Siding	About 450m
11-Oct-25	South of the Mine	247	114	61	15.09	25.30	Mine Haul Roads	About 400m
25-Oct-25	West of the Mine	256	151	63	18.02	25.27	Distance From 'y' Curve Railway Siding	About 450m
25-Oct-25	South of the Mine	233	136	55	17.29	13.43	Mine Haul Roads	About 400m
25-Oct-25	East of the Mine	283	175	69	15.28	19.34	Coal Transportation Road	About 500m

MoEF Standards Notification dated 25th
September, 2006

500

250

120

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CMPDI, RI-VII, LAB
MUMBAI

Jaswant



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CMPDI
RI-VII, LAB
BHUBANESWAR

Test Report

AMBIENT AIR QUALITY DATA

Area :

Ib Valley

(Reference Station)

Project :

Samleswari 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-Oct-25	Rampur Sub Area (Reported only)	214	81	36	19.00	34.63	Coal Stock And CT Road	About 1000m
03-Oct-25	Khokelmal (Reported Only)	187	70	31	15.72	37.90	Railway siding	About 1000m
04-Oct-25	Khokelmal (Reported Only)	161	49	25	13.89	29.89	Railway siding	About 1000m
04-Oct-25	Rampur Sub Area (Reported only)	165	63	27	15.97	20.97	Coal Stock And CT Road	About 1000m
06-Oct-25	Kudaloi Village	162	56	25	12.47	18.82		
07-Oct-25	Kudaloi Village	182	68	30	14.78	21.96		
09-Oct-25	Khokelmal (Reported Only)	177	62	28	12.37	41.22	Railway siding	About 1000m
09-Oct-25	Rampur Sub Area (Reported only)	195	75	32	17.51	27.49	Coal Stock And CT Road	About 1000m
10-Oct-25	Khokelmal (Reported Only)	210	78	36	11.32	35.55	Railway siding	About 1000m
10-Oct-25	Rampur Sub Area (Reported only)	209	77	35	17.15	33.39	Coal Stock And CT Road	About 1000m
13-Oct-25	Kudaloi Village	192	73	32	16.98	27.82		
14-Oct-25	Kudaloi Village	218	85	37	10.59	32.93		
16-Oct-25	Rampur Sub Area (Reported only)	192	78	34	17.81	15.07	Coal Stock And CT Road	About 1000m
16-Oct-25	Khokelmal (Reported Only)	175	87	34	9.82	22.27	Railway siding	About 1000m
17-Oct-25	Rampur Sub Area (Reported only)	210	95	43	10.31	14.28	Coal Stock And CT Road	About 1000m
17-Oct-25	Khokelmal (Reported Only)	206	93	38	15.30	16.66	Railway siding	About 1000m
20-Oct-25	Kudaloi Village	213	88	40	9.31	25.28	Mining Activities	About 1000m
22-Oct-25	Kudaloi Village	196	83	39	12.67	26.68	Mining Activities	About 1000m
23-Oct-25	Khokelmal (Reported Only)	173	63	28	18.04	21.89	Railway siding	About 1000m
23-Oct-25	Rampur Sub Area (Reported only)	203	88	40	19.15	16.38	Coal Stock And CT Road	About 1000m
24-Oct-25	Rampur Sub Area (Reported only)	177	71	31	18.71	16.66	Coal Stock And CT Road	About 1000m
24-Oct-25	Khokelmal (Reported Only)	214	87	40	8.43	21.33	Railway siding	About 1000m

*N.I.Q.S, 2009

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Signature

Project :

Samleswari 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
27-Oct-25	Kudaloi Village	162	73	35	8.84	20.99	Mining Activities	About 1000m
28-Oct-25	Kudaloi Village	155	67	34	12.65	15.03	Mining Activities	About 1000m
29-Oct-25	Rampur Sub Area (Reported only)	149	59	27	14.70	26.91	Coal Stock And CT Road	About 1000m
29-Oct-25	Khokelmal (Reported Only)	156	81	33	11.92	25.78	Railway siding	About 1000m
30-Oct-25	Rampur Sub Area (Reported only)	186	80	35	12.26	22.52	Coal Stock And CT Road	About 1000m
30-Oct-25	Khokelmal (Reported Only)	177	83	39	18.78	12.98	Railway siding	About 1000m

Jatanaik
Authorized Signatory
CMPDI, RI-VII, LAB
BHUBANESWAR

Jasrat

*N.I.QS.2009

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: IB Valley

Project		Samleswari OCP						
Monitoring Station		Kudaloi Village						
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) Pyrene	Benzene
	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	(ng/m^3)	(ng/m^3)	(mg/m^3)	(ng/m^3)	($\mu\text{g}/\text{m}^3$)
06-Oct-2025	<20.0	13.90	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
07-Oct-2025	<20.0	18.72	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
13-Oct-2025	<20.0	25.67	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
14-Oct-2025	<20.0	13.37	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
20-Oct-2025	<20.0	20.58	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
22-Oct-2025	<20.0	17.12	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
27-Oct-2025	<20.0	17.92	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
28-Oct-2025	<20.0	25.67	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
Standard	400 (24hours)	180 (hour)	1.0 (24hours)	6.0 (Annual)	20 (Annual)	02 (8 hours)	01(annual)	05(annual)

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

Jaisankar



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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)
Area: IB Valley

Samleswari OCP								
Project	Rampur Sub Area (Reported Only)							
Monitoring Station	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (a) Pyrene	Benzene
Date of sampling	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	(ng/m^3)	(ng/m^3)	(mg/m^3)	(ng/m^3)	($\mu\text{g}/\text{m}^3$)
03-Oct-2025	<20.0	18.98	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
04-Oct-2025	<20.0	13.10	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
09-Oct-2025	<20.0	19.78	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
10-Oct-2025	<20.0	25.67	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
16-Oct-2025	<20.0	13.37	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
17-Oct-2025	<20.0	24.07	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
23-Oct-2025	<20.0	15.23	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
24-Oct-2025	<20.0	18.98	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
29-Oct-2025	<20.0	21.65	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
30-Oct-2025	<20.0	16.57	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
Standard	400 (24hours)	180 (hour)	1.0 (24hours)	6.0 (Annual)	20 (Annual)	02 (8 hours)	01(annual)	05(annual)

Tattanaik
Authorized Signatory
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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: IB Valley

Samaleswari OCP

Khokelmal (Reported Only)

Project	Samaleswari OCP							
Monitoring Station	Khokelmal (Reported Only)							
Date of sampling	Ammونيا (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) Pyrene	Benzene
	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	(ng/m^3)	(ng/m^3)	(mg/m^3)	(ng/m^3)	($\mu\text{g}/\text{m}^3$)
03-Oct-2025	<20.0	19.78	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
04-Oct-2025	<20.0	21.12	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
09-Oct-2025	<20.0	13.10	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
10-Oct-2025	<20.0	15.50	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
16-Oct-2025	<20.0	19.25	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
17-Oct-2025	<20.0	23.80	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
23-Oct-2025	<20.0	23.25	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
24-Oct-2025	<20.0	19.78	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
29-Oct-2025	<20.0	25.67	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
30-Oct-2025	<20.0	18.45	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
Standard	400 (24hours)	180 (1 hour)	1.0 (24hours)	6.0 (Annual)	20 (Annual)	02 (8 hours)	01(annual)	05(annual)

K. Pattanai
Authorized Signatory
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TABLE--

NOISE LEVEL MONITORING DATA

AREA:

Ib Valley

PROJECT:

Samleswari OCP

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
11-Oct-25	South of the Mine	53.2	46.9
11-Oct-25	Rampur Sub Area	50.4	40.6
11-Oct-25	West of the Mine	50.6	42.8
11-Oct-25	Khokelmal (Reported Only)	51.6	41.2
11-Oct-25	Kudaloi Village	49.3	42.8
11-Oct-25	East of the Mine	54.1	44.4
31-Oct-25	Khokelmal (Reported Only)	49.1	40.4
31-Oct-25	West of the Mine	50.8	40.2
31-Oct-25	Rampur Sub Area	51.9	42.2
31-Oct-25	Kudaloi Village	49.3	40.7
31-Oct-25	East of the Mine	54.6	42.8
31-Oct-25	South of the Mine	60.3	59.4

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)

Pratima
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TABLE--

EFFLUENT QUALITY DATA

Area :

IB Valley

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

Project :

Samaleswari OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	TDS	DO	Remarks
15-Oct-25	Inlet of ETP	6.60	<4.0	52	48	-	-	-	
15-Oct-25	Outlet of ETP	6.67	<4.0	40	44	-	-	-	
15-Oct-25	Mine Sump Water	6.03	<4.0	42	36	-	-	-	
31-Oct-25	Inlet of ETP	6.54	<4.0	42	36	-	-	-	
31-Oct-25	Outlet of ETP	6.92	<4.0	30	32	-	-	-	

T. Jitavali
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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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TABLE-

EFFLUENT QUALITY DATA

Area :

IB Valley

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

Project :

Samaleswari OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	TDS	DO	MPN/100mL
15-Oct-25	STP Inlet	-	-	-	-	-	-	-	Under maintenance
15-Oct-25	STP Outlet	-	-	-	-	-	-	-	Under maintenance
31-Oct-25	STP Outlet	-	-	-	-	-	-	-	Under maintenance
31-Oct-25	STP Inlet	-	-	-	-	-	-	-	Under maintenance


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G.S.R. 126 5(E) Effluent discharge standards (applicable to all mode of disposal), Sewage Treatment Plants (STPs)

6.5-9.5	-	<100	-	30	-	<1000
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Drinking Water Quality Data IB Valley Area

Project / OCP	Samaleswari OCP		Indian Drinking Standards (IS-10500):2012	
	Well Water From Kudopali	Tap Water From Samaleswari OCP Colony	Acceptable	Permissible
Monitoring Station				
Date of Sampling	11-Oct-2025	15-Oct-2025		
Colour (Hazen)	3	2	5	15
Turbidity (NTU)	4	2	1	5
pH	6.53	6.67	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	63.03	138.66	200	600
Chloride(mg/L)	85.49	34.97	250	1000
Sulphate(mg/L)	40.25	47.26	200	400
Nitrate(mg/L)	12.56	15.36	45	No relaxation
Total Hardness (Ca CO ₃) (mg/L)	145.11	98.05	200	600
Calcium(mg/L)	50.30	23.58	75	200
Fluoride(mg/L)	0.49	0.68	1	1.5
Total Dissolve Solid(mg/L)	272	227	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	No relaxation
Zinc(mg/L)	0.04	0.13	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 IB Valley Area

Project / OCP	Samaleswari OCP		Indian Drinking Standards (IS-10500):2012	
	Well Water From Kudopali	Tap Water From Samaleswari OCP Colony	Acceptable	Permissible
Monitoring Station				
Date of Sampling	11-Oct-2025	15-Oct-2025		
Selenium(mg/L)	<0.005	<0.005	0.01	No relaxation
Sodium(mg/L)	13.36	7.4	-	-
Potassium(mg/L)	1.68	4.68	-	-
Phenolics(mg/L)	<0.001	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	<0.2	0.2	1
MPN (Index/100 ml)	Not Detected	Not Detected	-	-

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Drinking Water Quality Data IB Valley Area

Project / OCP	Samleswari OCP			Indian Drinking Standards (IS-10500):2012	
	Inlet Water from IWSS, IB Valley Area	Outlet Water from IWSS, IB Valley Area	Well Water From Lajkura	Acceptable	Permissible
Date of Sampling	15-Oct-2025	15-Oct-2025	15-Oct-2025	5	15
Colour(Hazen)	1	3	4	1	5
Turbidity(NTU)	3	2	1	1	5
pH	6.65	6.70	6.72	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	16.80	37.81	50.42	200	600
Chloride(mg/L)	15.54	19.43	77.72	250	1000
Sulphate(mg/L)	41.56	33.56	72.56	200	400
Nitrate(mg/L)	<0.5	<0.5	10.06	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	47.06	58.83	149.03	200	600
Calcium(mg/L)	14.14	14.14	45.58	75	200
Fluoride(mg/L)	0.37	0.35	0.64	1	1.5
Total Dissolve Solid(mg/L)	100	114	317	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	No relaxation
Zinc(mg/L)	0.06	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

T. Hanish
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Drinking Water Quality Data IB Valley Area

Project / OCP	Samleswari OCP			Indian Drinking Standards (IS-10500):2012	
	Monitoring Station	Inlet Water from IWSS, IB Valley Area	Outlet Water from IWSS, IB Valley Area		
Date of Sampling	15-Oct-2025	15-Oct-2025	15-Oct-2025	Acceptable	Permissible
Selenium(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Sodium(mg/L)	6.25	6.39	16.23		
Potassium(mg/L)	2.36	1.43	2.67		
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
MPN (Index/100 ml)	Not Detected	Not Detected	Not Detected	-	-

K. Tanak
Authorized Signatory
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Samleswari OCP

Legend
Monitoring Station

Khokelmaj

Rampur Sub Area

West of the Mine

South of the Mine

Kudaloi Village

Google Earth

2 km



Environmental Monitoring Report For October-2025

Project: Lajkura OCP
Area: Ib Valley
Coalfield: Ib Valley



Mahanadi Coalfields Limited



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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 :

Ib Valley

(Compliance Station)

Project :

Lajkura OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source	Distance from DGS
15-Oct-25	Near South Coal Stock	249	120	53	13.94	37.64	Mining Activities, Coal Transportation	About 500m
15-Oct-25	Near Project Office	251	129	55	17.47	40.78	Domestic, OCP, Transportation	About 500m
31-Oct-25	Near South Coal Stock	278	175	64	14.18	25.96	Mining Activities, Coal Transportation	About 500m
31-Oct-25	Near Project Office	244	164	59	11.48	22.72	Domestic, OCP, Transportation	About 500m

MoEF Standards Notification dated 25th
September, 2009

500

250

120

120

Authorised Signatory
CMPDI, RI-VII, LAB

Janmat

AMBIENT AIR QUALITY DATA

Area : Ib Valley

(Reference Station)

Project :

Lajkura 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-Oct-25	Khokelmal	187	70	31	15.72	37.90	Railway siding	About 1000m
03-Oct-25	Chuakani	197	75	33	14.00	33.26	Transportation	About 300m
04-Oct-25	Chuakani	205	79	35	12.07	32.99	Transportation	About 300m
04-Oct-25	Khokelmal	161	49	25	13.89	29.89	Railway siding	About 1000m
06-Oct-25	VIP Guest House IB Valley	203	92	39	14.27	18.91	Coal Stock Yard, Surface Bunker, Coal	About 800m
07-Oct-25	VIP Guest House IB Valley	192	85	37	17.15	21.05	Coal Stock Yard, Surface Bunker, Coal	About 800m
09-Oct-25	Chuakani	165	59	26	11.45	36.88	Transportation	About 300m
09-Oct-25	Khokelmal	177	62	28	12.37	41.22	Railway siding	About 1000m
10-Oct-25	Chuakani	179	66	29	15.12	24.70	Transportation	About 300m
10-Oct-25	Khokelmal	210	78	36	11.32	35.55	Railway siding	About 1000m
13-Oct-25	VIP Guest House IB Valley	201	78	33	10.35	20.65	Coal Stock Yard, Surface Bunker, Coal	About 800m
14-Oct-25	VIP Guest House IB Valley	210	88	36	12.74	32.64	Coal Stock Yard, Surface Bunker, Coal	About 800m
16-Oct-25	Chuakani	168	59	26	12.65	23.91	Transportation	About 300m
16-Oct-25	Khokelmal	175	87	34	9.82	22.27	Railway siding	About 1000m
17-Oct-25	Chuakani	194	74	32	8.41	23.54	Transportation	About 300m
17-Oct-25	Khokelmal	206	93	38	15.30	16.66	Railway siding	About 1000m
20-Oct-25	VIP Guest House IB Valley	178	69	30	12.50	23.06	Coal Stock Yard, Surface Bunker, Coal	About 800m
22-Oct-25	VIP Guest House IB Valley	206	80	35	14.51	23.13	Coal Stock Yard, Surface Bunker, Coal	About 800m
23-Oct-25	Khokelmal	173	63	28	18.04	21.89	Railway siding	About 1000m
23-Oct-25	Chuakani	206	89	40	9.60	19.15	Transportation	About 300m
24-Oct-25	Chuakani	189	71	35	12.86	27.65	Transportation	About 300m
24-Oct-25	Khokelmal	214	87	40	8.43	21.33	Railway siding	About 1000m

*N.L.Q.S, 2009

100 60 80 80

Project :

Lajkura 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
27-Oct-25	VIP Guest House IB Valley	193	76	34	19.70	22.92	Coal Stock Yard, Surface Bunker, Coal	About 800m
28-Oct-25	VIP Guest House IB Valley	184	72	31	11.16	20.64	Coal Stock Yard, Surface Bunker, Coal	About 800m
29-Oct-25	Chuakani	156	68	27	16.59	19.17	Transportation	About 300m
29-Oct-25	Khokelmal	156	81	33	11.92	25.78	Railway siding	About 1000m
30-Oct-25	Chuakani	151	60	26	16.51	27.98	Transportation	About 300m
30-Oct-25	Khokelmal	177	83	39	18.78	12.98	Railway siding	About 1000m


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BHUBANESWAR



IS: 4425, 2009		100	60	80	80
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Water Testing

AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: IB Valley

Project	Lajkura OCP							
Monitoring Station	VIP Guest House, IB Valley							
Date of sampling	Ammonia (NH ₃) (µg/m ³)	Ozone (O ₃) (µg/m ³)	Lead (Pb) (µg/m ³)	Arsenic (As) (ng/m ³)	Nickel (Ni) (ng/m ³)	CO (mg/m ³)	Benzo (a) Pyrene (ng/m ³)	Benzene (µg/m ³)
06-Oct-2025	<20.0	18.18	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
07-Oct-2025	<20.0	12.30	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
13-Oct-2025	<20.0	13.37	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
14-Oct-2025	<20.0	24.07	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
20-Oct-2025	<20.0	25.93	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
22-Oct-2025	<20.0	14.43	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
27-Oct-2025	<20.0	15.50	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
28-Oct-2025	<20.0	17.65	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
Standard	400 (24hours)	180 (hour)	1.0 (24hours)	6.0 (Annual)	20 (Annual)	02 (8 hours)	01(annual)	05(annual)

Tattanaik
Authorized Signatory
CMPDI, RI-VII, LAB
BHUBANESWAR

Janaki



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मिनि वल
cmpdi
Mini Valley

AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: IB Valley

Project	Lajkura OCP							
Monitoring Station	Chukani							
Date of sampling	Ammonia (NH ₃) ($\mu\text{g}/\text{m}^3$)	Ozone (O ₃) ($\mu\text{g}/\text{m}^3$)	Lead (Pb) ($\mu\text{g}/\text{m}^3$)	Arsenic (As) (ng/m^3)	Nickel (Ni) (ng/m^3)	CO (mg/m^3)	Benzo (a) Pyrene (ng/m^3)	Benzene ($\mu\text{g}/\text{m}^3$)
03-Oct-2025	<20.0	15.23	<0.1	<1.0	<1.0	1.5	BQL(QL=0.7)	BQL
04-Oct-2025	<20.0	12.57	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
19-Oct-2025	<20.0	24.87	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
10-Oct-2025	<20.0	16.57	<0.1	<1.0	<1.0	1.6	BQL(QL=0.7)	BQL
16-Oct-2025	<20.0	12.83	<0.1	<1.0	<1.0	1.5	BQL(QL=0.7)	BQL
17-Oct-2025	<20.0	12.57	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
23-Oct-2025	<20.0	13.10	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
24-Oct-2025	<20.0	20.85	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
29-Oct-2025	<20.0	24.87	<0.1	<1.0	<1.0	1.5	BQL(QL=0.7)	BQL
30-Oct-2025	<20.0	14.97	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
Standard	400 (24hours)	180 (hour)	1.0 (24hours)	6.0 (Annual)	20 (Annual)	02 (8 hours)	01(annual)	05(annual)

J. Hanu
Authorised Signatory
CMPDI, RI-VII, LAE
BHUBANESWAR

Jasmat



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निजी एन
cmpdi
नवी कर्मदा

AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: IB Valley

Project	Lajkura OCP							
Monitoring Station	Khokelmal							
Date of sampling	Ammonia (NH ₃) ($\mu\text{g}/\text{m}^3$)	Ozone (O ₃) ($\mu\text{g}/\text{m}^3$)	Lead (Pb) ($\mu\text{g}/\text{m}^3$)	Arsenic (As) (ng/m^3)	Nickel (Ni) (ng/m^3)	CO (mg/m^3)	Benzo (α) Pyrene (ng/m^3)	Benzene ($\mu\text{g}/\text{m}^3$)
03-Oct-2025	<20.0	19.78	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
04-Oct-2025	<20.0	21.12	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
09-Oct-2025	<20.0	13.10	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
10-Oct-2025	<20.0	15.50	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
16-Oct-2025	<20.0	19.25	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
17-Oct-2025	<20.0	23.80	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
23-Oct-2025	<20.0	23.25	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
24-Oct-2025	<20.0	19.78	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
29-Oct-2025	<20.0	25.67	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
30-Oct-2025	<20.0	18.45	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
Standard	400 (24hours)	180 (1 hour)	1.0 (24hours)	6.0 (Annual)	20 (Annual)	02 (8 hours)	01(annual)	05(annual)

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

J. S. S.



राजमपीडी
CMPDI
भुवनेश्वर

TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Ib Valley

PROJECT :

Lajkura OCP

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
11-Oct-25	Near Project Office	62.5	56.7
11-Oct-25	Near South Coal Stock	60.2	54.4
11-Oct-25	Chuakani	49.9	42.7
11-Oct-25	VIP Guest House, IB Valley	49.1	42.6
11-Oct-25	Khokelmal	51.6	41.2
31-Oct-25	Khokelmal	49.1	40.4
31-Oct-25	Chuakani	52.2	39.7
31-Oct-25	VIP Guest House, IB Valley	52.3	41.7
31-Oct-25	Near Project Office	62.4	58.6
31-Oct-25	Near South Coal Stock	60.2	54.4

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)

T. Hananik
Authorised Signatory
CMPDI, KI-VII, LAB
BHUBANESWAR

J. Prasad

EFFLUENT QUALITY DATA

Area :

1B Valley

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

Project :

Lajkura OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	TDS	DO	Remarks
15-Oct-25	Lajkura Railway Siding	3.98	<4.0	66	72	-	-	-	
15-Oct-25	Mine Sump Water	3.34	<4.0	42	28	-	-	-	
15-Oct-25	Outlet of ETP	6.95	<4.0	30	44	-	-	-	
15-Oct-25	Inlet of ETP	6.04	<4.0	43	64	-	-	-	
31-Oct-25	Outlet of ETP	6.84	<4.0	34	32	-	-	-	
31-Oct-25	Inlet of ETP	6.92	<4.0	42	64	-	-	-	
31-Oct-25	Lajkura Railway Siding	4.13	<4.0	54	68	-	-	-	

T. Pattanaiik
Authorized Signatory
CMPDI, RI-VII, LAB
BHUBANESWAR

Jasmati

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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भारत सरकार
भारत

TABLE--

EFFLUENT QUALITY DATA

Area :

IB Valley

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

Project :

Lajkura OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	TDS	DO	MPN/100mL
15-Oct-25	STP Inlet	-	-	-	-	-	-	-	Under maintenance
15-Oct-25	STP Outlet	-	-	-	-	-	-	-	Under maintenance
31-Oct-25	STP Outlet	-	-	-	-	-	-	-	Under maintenance
31-Oct-25	STP Inlet	-	-	-	-	-	-	-	Under maintenance

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

Jasmati

G.S.R. 126 5(E) Effluent discharge standards (applicable to all mode of disposal), Sewage Treatment Plants (STPs)	6.5-9.5	-	<100	-	30	-	<1000
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विश्वे चक्षुः
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NRI Ratna

Drinking Water Quality Data IB Valley Area

Project / OCP	Lajkura OCP		Indian Drinking Standards (IS-10500):2012	
	Madhuban Nagar Well Water	Adarsh Nagar Colony Well Water	Acceptable	Permissible
Monitoring Station				
Date of Sampling	15-Oct-2025	15-Oct-2025		
Colour (Hazen)	5	3	5	15
Turbidity (NTU)	4	5	1	5
pH	6.53	6.72	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	8.40	163.87	200	600
Chloride(mg/L)	21.37	64.11	250	1000
Sulphate(mg/L)	36.52	85.36	200	400
Nitrate(mg/L)	3.50	12.39	45	No relaxation
Total Hardness (Ca CO ₃) (mg/L)	19.61	152.95	200	600
Calcium(mg/L)	4.71	42.44	75	200
Fluoride(mg/L)	0.40	0.73	1	1.5
Total Dissolve Solid(mg/L)	95	338	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	No relaxation
Zinc(mg/L)	0.09	0.12	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. Patra
Authorised Signatory
CMPDI, RI-VII, LAB
BHUBANESWAR

J. Prasad



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Drinking Water Quality Data IB Valley Area

Project / OCP	Lajkura OCP		Indian Drinking Standards (IS-10500):2012	
	Madhuban Nagar Well Water	Adarsh Nagar Colony Well Water		
Monitoring Station				
Date of Sampling	15-Oct-2025	15-Oct-2025	Acceptable	Permissible
Selenium(mg/L)	<0.005	<0.005	0.01	No relaxation
Sodium(mg/L)	18.96	16.87		
Potassium(mg/L)	2.9	5.49		
Phenolics(mg/L)	<0.001	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	<0.2	0.2	1
MPN (Index/100 ml)	Not Detected	Not Detected	-	-

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Jatanaik



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Drinking Water Quality Data IB Valley Area

Project / OCP	Lajkura OCP		Indian Drinking Standards (IS-10500):2012	
	Chhualibera Village Well Water	VIP Guest House Tap Water		
Date of Sampling	15-Oct-2025	15-Oct-2025	Acceptable	Permissible
Colour(Hazen)	2	1	5	15
Turbidity(NTU)	3	2	1	5
pH	6.73	7.05	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	33.61	58.82	200	600
Chloride(mg/L)	17.48	15.54	250	1000
Sulphate(mg/L)	25.26	45.26	200	400
Nitrate(mg/L)	<0.5	<0.5	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	47.06	54.90	200	600
Calcium(mg/L)	14.14	14.14	75	200
Fluoride(mg/L)	0.32	0.39	1	1.5
Total Dissolve Solid(mg/L)	97	128	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	No relaxation
Zinc(mg/L)	<0.04	0.06	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

Jatanaik
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Jatanaik



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Drinking Water Quality Data IB Valley Area

Project / OCP	Lajkura OCP		Indian Drinking Standards (IS-10500):2012	
	Chhualiberna Village Well Water	VIP Guest House Tap Water		
Monitoring Station				
Date of Sampling	15-Oct-2025	15-Oct-2025	Acceptable	Permissible
Selenium(mg/L)	<0.005	<0.005	0.01	No relaxation
Sodium(mg/L)	6.12	10.49	-	-
Potassium(mg/L)	0.89	1.28	-	-
Phenolics(mg/L)	<0.001	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	<0.2	0.2	1
MPN (Index/100 ml)	Not Detected	Not Detected	-	-

Antarvaidik
Authorised Signatory
CMPDI, RI-VII, LAB
BHUBANESWAR

Jamali

Lajkura OCP

Chuakam

MP Guest House (B Valley)

Kookemal

Near Project Office

Near South Coal Stack

Legend



Monitoring Station

Google Earth



**Environmental Monitoring Report
For
October-2025**

**Project: Central Hospital
Area: Ib Valley
Coalfield: Ib Valley**



Mahanadi Coalfields Limited



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मिनी रत्न
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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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सर्वोच्च
प्रदूषण नियंत्रण बोर्ड
CMPDI
भुवनेश्वर

TABLE--

EFFLUENT QUALITY DATA

Area :

IB Valley

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

Project :

Central Hospital

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	TDS	DO	Remarks
15-Oct-25	Discharge of Hospital	6.69	<4.0	58	44	6	-	-	

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

Janak

**Environmental Monitoring Report
For
October-2025**

**Project: Integrated LBL OCP
Area: Lakhanpur
Coalfield: Ib Valley**



Mahanadi Coalfields Limited



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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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AMBIENT AIR QUALITY DATA

Area : **Lakhanpur**

(Compliance Station)

Project :

LBL OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source	Distance from DGS
15-Oct-25	West of Lakhanpur Quarry Near Solada	251	128	56	11.19	29.52	Mining Activities	About 500m
15-Oct-25	Kirulbal Village	258	134	62	12.10	24.20	Mining Activities	About 500m
15-Oct-25	BOCM Workshop	237	106	48	19.43	21.07	Mining Activities	About 500m
15-Oct-25	Lilari Magazine House	240	105	47	10.75	24.47	Coal Transportation	About 500m
31-Oct-25	West of Lakhanpur Quarry Near Solada	246	163	55	11.50	27.32	Mining Activities	About 500m
31-Oct-25	Kirulbal Village	237	133	58	13.60	20.45	Mining Activities	About 500m
31-Oct-25	BOCM Workshop	270	174	62	13.94	37.64	Mining Activities	About 500m
31-Oct-25	Lilari Magazine House	265	153	60	8.40	23.13	Coal Transportation	About 500m

MoEF Standards Notification dated 25th September, 2009

500 250 120 120

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
10-Oct-25	Ramada Village South of Mine	208	81	35	15.82	21.14	Domestic Anthropogenic Source	
10-Oct-25	Kadam Rehab Centre East of Mine	200	76	34	19.87	36.24	Mining Activities	About 2km
10-Oct-25	Gumadera Village North of Mine	172	64	29	18.86	19.53	Domestic Source and Mining Activities	About 3km
10-Oct-25	Bartap Village North West of Mine	175	59	28	18.40	22.63	Domestic Anthropogenic Source	
10-Oct-25	Barihapali Village South West of Mine	185	74	33	12.64	40.04	Domestic Anthropogenic Source	
10-Oct-25	Ardhapara Village South East of Mine	204	82	35	14.05	32.08		
16-Oct-25	Gumadera Village North of Mine	198	87	42	11.09	18.82	Domestic Source and Mining Activities	About 3km
16-Oct-25	Barihapali Village South West of Mine	208	92	40	16.98	27.82	Domestic Anthropogenic Source	About 1.6km
16-Oct-25	Lakhanpur Police Station West of Mine	192	75	34	19.98	31.06	Mining Activities	About 1.6km
16-Oct-25	Bartap Village North West of Mine	203	81	38	11.00	33.88	Domestic Anthropogenic Source	About 2km
16-Oct-25	Ramada Village South of Mine	162	74	29	8.05	19.37	Domestic Anthropogenic Source	About 2Km
16-Oct-25	Ardhapara Village South East of Mine	196	88	40	13.89	29.89	Transportation	About 1000m
16-Oct-25	Kadam Rehab Centre East of Mine	196	78	37	20.11	30.25	Mining Activities	About 2km
17-Oct-25	Ardhapara Village South East of Mine	178	77	34	12.37	41.22	Transportation	About 1000m
17-Oct-25	Kadam Rehab Centre East of Mine	163	72	30	16.87	22.54	Mining Activities	About 2km
17-Oct-25	Lakhanpur Police Station West of Mine	204	84	38	12.22	25.17	Mining Activities	About 1.6km
17-Oct-25	Ramada Village South of Mine	194	88	39	21.83	25.41	Domestic Anthropogenic Source	About 2Km
17-Oct-25	Bartap Village North West of Mine	145	57	26	12.73	38.58	Domestic Anthropogenic Source	About 2km
17-Oct-25	Barihapali Village South West of Mine	188	71	33	10.59	32.93	Domestic Anthropogenic Source	About 1.6km
17-Oct-25	Gumadera Village North of Mine	177	74	35	12.22	29.25	Domestic Source and Mining Activities	About 3km
23-Oct-25	Bartap Village North West of Mine	171	63	29	10.75	24.47	Domestic Anthropogenic Source	About 2km
23-Oct-25	Kadam Rehab Centre East of Mine	189	96	44	11.48	25.75	Mining Activities	About 2km
23-Oct-25	Ardhapara Village South East of Mine	171	68	30	11.32	35.55	Transportation	About 1000m
23-Oct-25	Barihapali Village South West of Mine	218	96	42	11.69	21.51	Domestic Anthropogenic Source	About 1.6km
23-Oct-25	Lakhanpur Police Station West of Mine	215	93	41	16.49	16.48	Mining Activities	About 1.6km

*NAAQS, 2009

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Project :

LBL 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
23-Oct-25	Ramada Village South of Mine	186	80	36	13.84	23.06	Domestic Anthropogenic Source	About 2Km
23-Oct-25	Gumadera Village North of Mine	170	67	33	11.90	31.80	Domestic Source and Mining Activities	About 3km
24-Oct-25	Lakhanpur Police Station West of Mine	150	61	27	8.82	30.74	Mining Activities	About 1.6km
24-Oct-25	Kadam Rehab Centre East of Mine	172	78	33	21.00	27.86	Mining Activities	About 2km
24-Oct-25	Bartap Village North West of Mine	186	76	34	12.99	33.16	Domestic Anthropogenic Source	About 2km
24-Oct-25	Gumadera Village North of Mine	191	85	39	8.43	13.66	Domestic Source and Mining Activities	About 3km
24-Oct-25	Barihapali Village South West of Mine	190	77	35	12.99	38.68	Domestic Anthropogenic Source	About 1.6km
24-Oct-25	Ramada Village South of Mine	175	75	34	8.79	20.88	Domestic Anthropogenic Source	About 2Km
24-Oct-25	Ardhapara Village South East of Mine	187	84	38	12.10	24.20	Transportation	About 1000m
29-Oct-25	Ramada Village South of Mine	163	67	30	15.74	23.94	Domestic Anthropogenic Source	About 2Km
29-Oct-25	Lakhanpur Police Station West of Mine	180	77	36	14.03	31.81	Mining Activities	About 1.6km
29-Oct-25	Kadam Rehab Centre East of Mine	188	84	39	15.15	18.26	Mining Activities	About 2km
29-Oct-25	Gumadera Village North of Mine	214	98	46	12.67	13.00	Domestic Source and Mining Activities	About 3km
29-Oct-25	Bartap Village North West of Mine	177	68	31	17.47	40.78	Domestic Anthropogenic Source	About 2km
29-Oct-25	Barihapali Village South West of Mine	165	61	28	12.45	22.09	Domestic Anthropogenic Source	About 1.6km
29-Oct-25	Ardhapara Village South East of Mine	149	55	27	12.47	18.82	Transportation	About 1000m
30-Oct-25	Kadam Rehab Centre East of Mine	181	87	34	14.50	20.40	Mining Activities	About 2km
30-Oct-25	Ardhapara Village South East of Mine	186	87	36	14.78	21.96	Transportation	About 1000m
30-Oct-25	Bartap Village North West of Mine	195	79	37	12.54	25.41	Domestic Anthropogenic Source	About 2km
30-Oct-25	Lakhanpur Police Station West of Mine	207	92	39	15.75	16.97	Mining Activities	About 1.6km
30-Oct-25	Barihapali Village South West of Mine	186	75	32	13.44	39.28	Domestic Anthropogenic Source	About 1.6km
30-Oct-25	Ramada Village South of Mine	180	83	37	8.06	17.10	Domestic Anthropogenic Source	About 2Km
30-Oct-25	Gumadera Village North of Mine	185	69	33	17.27	27.36	Domestic Source and Mining Activities	About 3km

*N.A.Q.S, 2009

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Lakhanpur

Project	LBL OCP							
Monitoring Station	Kadam Rehab Centre East of Mine							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) 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-Oct-2025	<20.0	25.40	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
04-Oct-2025	<20.0	22.45	<0.1	<1.0	<1.0	1.5	BQL(QL=0.7)	BQL
09-Oct-2025	<20.0	14.70	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
10-Oct-2025	<20.0	22.18	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
16-Oct-2025	<20.0	25.93	<0.1	<1.0	<1.0	1.6	BQL(QL=0.7)	BQL
17-Oct-2025	<20.0	16.57	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
23-Oct-2025	<20.0	14.17	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
24-Oct-2025	<20.0	21.92	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
29-Oct-2025	<20.0	18.98	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
30-Oct-2025	<20.0	24.33	<0.1	<1.0	<1.0	1.5	BQL(QL=0.7)	BQL
Standard	400 (24hours)	180 (hour)	1.0 (24hours)	6.0 (Annual)	20 (Annual)	02 8 hours	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Lakhanpur

Project	LBL OCP							
Monitoring Station	Lakhanpur Police Station West of Mine							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) Pyrene	Benzene
	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	(ng/m^3)	(ng/m^3)	(mg/m^3)	(ng/m^3)	($\mu\text{g}/\text{m}^3$)
03-Oct-2025	<20.0	12.30	<0.1	<1.0	<1.0	1.8	BQL(QL=0.7)	BQL
04-Oct-2025	<20.0	18.72	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
09-Oct-2025	<20.0	17.65	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
10-Oct-2025	<20.0	23.80	<0.1	<1.0	<1.0	1.5	BQL(QL=0.7)	BQL
16-Oct-2025	<20.0	16.30	<0.1	<1.0	<1.0	1.7	BQL(QL=0.7)	BQL
17-Oct-2025	<20.0	20.32	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
23-Oct-2025	<20.0	22.45	<0.1	<1.0	<1.0	1.5	BQL(QL=0.7)	BQL
24-Oct-2025	<20.0	21.38	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
29-Oct-2025	<20.0	20.32	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
30-Oct-2025	<20.0	14.70	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
Standard	400 (24hours)	180 (hour)	1.0 (24hours)	6.0 (Annual)	20 (Annual)	02 (8 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Lakhanpur

Project	LBL OCP							
Monitoring Station	Gumadera Village North of Mine							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) Pyrene	Benzen e
	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	(ng/m^3)	(ng/m^3)	(mg/m^3)	(ng/m^3)	($\mu\text{g}/\text{m}^3$)
03-Oct-2025	<20.0	12.03	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
04-Oct-2025	<20.0	20.58	<0.1	<1.0	<1.0	1.5	BQL(QL=0.7)	BQL
09-Oct-2025	<20.0	20.32	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
10-Oct-2025	<20.0	12.03	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
16-Oct-2025	<20.0	13.90	<0.1	<1.0	<1.0	1.5	BQL(QL=0.7)	BQL
17-Oct-2025	<20.0	22.45	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
23-Oct-2025	<20.0	18.18	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
24-Oct-2025	<20.0	23.25	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
29-Oct-2025	<20.0	20.85	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
30-Oct-2025	<20.0	18.18	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
Standard	400 (24hours)	180 (hour)	1.0 (24hours)	6.0 (Annual)	20 (Annual)	02 (8 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Lakhanpur

Project	LBL OCP							
Monitoring Station	Ramada Village South of Mine							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (a) Pyrene	Benzene
	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	(ng/m^3)	(ng/m^3)	(mg/m^3)	(ng/m^3)	($\mu\text{g}/\text{m}^3$)
03-Oct-2025	<20.0	21.92	<0.1	<1.0	<1.0	1.5	BQL(QL=0.7)	BQL
04-Oct-2025	<20.0	25.93	<0.1	<1.0	<1.0	1.6	BQL(QL=0.7)	BQL
09-Oct-2025	<20.0	15.77	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
10-Oct-2025	<20.0	23.80	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
16-Oct-2025	<20.0	22.18	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
17-Oct-2025	<20.0	15.23	<0.1	<1.0	<1.0	1.5	BQL(QL=0.7)	BQL
23-Oct-2025	<20.0	16.03	<0.1	<1.0	<1.0	1.6	BQL(QL=0.7)	BQL
24-Oct-2025	<20.0	24.33	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
29-Oct-2025	<20.0	22.72	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
30-Oct-2025	<20.0	22.98	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
Standard	400 (24hours)	180 (hour)	1.0 (24hour s)	6.0 (Annual)	20 Annual)	02 (8 hours)	01(annual)	05(annual l)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Lakhapur

Project	LBL OCP							
Monitoring Station	Barihapali Village South West of Mine							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) Pyrene	Benzene
	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	(ng/m^3)	(ng/m^3)	(mg/m^3)	(ng/m^3)	($\mu\text{g}/\text{m}^3$)
03-Oct-2025	<20.0	21.38	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
04-Oct-2025	<20.0	14.17	<0.1	<1.0	<1.0	1.6	BQL(QL=0.7)	BQL
09-Oct-2025	<20.0	13.63	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
10-Oct-2025	<20.0	13.10	<0.1	<1.0	<1.0	1.7	BQL(QL=0.7)	BQL
16-Oct-2025	<20.0	13.10	<0.1	<1.0	<1.0	1.5	BQL(QL=0.7)	BQL
17-Oct-2025	<20.0	14.97	<0.1	<1.0	<1.0	1.6	BQL(QL=0.7)	BQL
23-Oct-2025	<20.0	22.98	<0.1	<1.0	<1.0	1.7	BQL(QL=0.7)	BQL
24-Oct-2025	<20.0	13.90	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
29-Oct-2025	<20.0	20.85	<0.1	<1.0	<1.0	1.6	BQL(QL=0.7)	BQL
30-Oct-2025	<20.0	26.20	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
Standard	400 (24hours)	180 (hour)	1.0 (24hours)	6.0 (Annual)	20 Annual)	02 (8 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Lakhanpur

Project	LBL OCP							
Monitoring Station	Bartap Village North West of Mine							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) 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-Oct-2025	<20.0	15.50	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
04-Oct-2025	<20.0	26.20	<0.1	<1.0	<1.0	1.5	BQL(QL=0.7)	BQL
09-Oct-2025	<20.0	23.52	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
10-Oct-2025	<20.0	16.30	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
16-Oct-2025	<20.0	25.40	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
17-Oct-2025	<20.0	18.18	<0.1	<1.0	<1.0	1.5	BQL(QL=0.7)	BQL
23-Oct-2025	<20.0	21.92	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
24-Oct-2025	<20.0	18.18	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
29-Oct-2025	<20.0	21.92	<0.1	<1.0	<1.0	1.5	BQL(QL=0.7)	BQL
30-Oct-2025	<20.0	18.98	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
Standard	400 (24hours)	180 (hour)	1.0 (24hours)	6.0 (Annual)	20 (Annual)	02 (8 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Lakhanpur

Project	LBL OCP							
Monitoring Station	Ardhapara Village South East of Mine							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) 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-Oct-2025	<20.0	16.03	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
04-Oct-2025	<20.0	25.67	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
09-Oct-2025	<20.0	15.77	<0.1	<1.0	<1.0	1.5	BQL(QL=0.7)	BQL
10-Oct-2025	<20.0	14.17	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
16-Oct-2025	<20.0	16.83	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
17-Oct-2025	<20.0	13.37	<0.1	<1.0	<1.0	1.5	BQL(QL=0.7)	BQL
23-Oct-2025	<20.0	14.17	<0.1	<1.0	<1.0	1.7	BQL(QL=0.7)	BQL
24-Oct-2025	<20.0	22.72	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
29-Oct-2025	<20.0	19.78	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
30-Oct-2025	<20.0	12.83	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
Standard	400 (24hours)	180 (hour)	1.0 (24hour s)	6.0 (Annual)	20 Annual)	02 (8 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA

Area: *Lakhanpur*

<i>Project</i>	LBL OCP
<i>Monitoring Station</i>	Kirulbal Village
<i>Date of sampling</i>	Carbon Monoxide (CO)
	mg/m³
15-Oct-2025	1.5
31-Oct-2025	1.1
Standard	02(8 Hours)

<i>Project</i>	LBL OCP
<i>Monitoring Station</i>	Lilari Magazine House
<i>Date of sampling</i>	Carbon Monoxide (CO)
	mg/m³
15-Oct-2025	1.0
31-Oct-2025	1.3
Standard	02(8 Hours)

<i>Project</i>	LBL OCP
<i>Monitoring Station</i>	BOCM Workshop
<i>Date of sampling</i>	Carbon Monoxide (CO)
	mg/m³
15-Oct-2025	1.5
31-Oct-2025	0.9
Standard	02(8 Hours)

<i>Project</i>	LBL OCP
<i>Monitoring Station</i>	West of Lakhanpur Quarry Near Solada
<i>Date of sampling</i>	Carbon Monoxide (CO)
	mg/m³
15-Oct-2025	1.3
31-Oct-2025	1.5
Standard	02(8 Hours)

Kantanaik
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GHUGANESWAR

Jasmati



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भारत सरकार

TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Lakhanpur

PROJECT :

LBL OCP

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
10-Oct-25	BOCM Workshop	54.6	42.5
10-Oct-25	Ardhapara Village South East of Mine	52.7	41.4
10-Oct-25	Barihapali Village South West of Mine	50.8	41.2
10-Oct-25	Gumadera Village North of Mine	50.8	41.2
10-Oct-25	Kirulbal Village	52.4	39.3
10-Oct-25	Kadam Rehab Centre East of Mine	49.1	40.5
10-Oct-25	Bartap Village North West of Mine	49.4	40.7
10-Oct-25	Lakhanpur Police Station West of Mine	52.4	42.6
10-Oct-25	Ramada Village South of Mine	52.6	39.4
10-Oct-25	West of Lakhanpur Quarry Near Solada	50.8	41.7
10-Oct-25	Near Lilari Magazine House	61.2	56.4
30-Oct-25	Near Lilari Magazine House	58.4	53.7
30-Oct-25	Bartap Village North West of Mine	51.6	40.3
30-Oct-25	Gumadera Village North of Mine	50.5	41.6
30-Oct-25	Barihapali Village South West of Mine	49.2	42.8
30-Oct-25	West of Lakhanpur Quarry Near Solada	50.3	42.6
30-Oct-25	Lakhanpur Police Station West of Mine	52.6	42.4
30-Oct-25	Kirulbal Village	50.6	41.9
30-Oct-25	Ramada Village South of Mine	52.9	40.3
30-Oct-25	Ardhapara Village South East of Mine	52.3	41.2
30-Oct-25	BOCM Workshop	60.5	54.2
30-Oct-25	Kadam Rehab Centre East of Mine	49.7	40.5

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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Jaswant

EFFLUENT QUALITY DATA

Area :

Lakhanpur

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

Project :

LBL OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	TDS	DO	Remarks
15-Oct-25	Inlet of ETP, Lakhanpur	6.77	<4.0	46	52	-	-	-	
15-Oct-25	Outlet of ETP, Lakhanpur	7.23	<4.0	34	40	-	-	-	
15-Oct-25	Outlet of ETP, Belpahar	7.24	<4.0	22	12	-	-	-	
15-Oct-25	Mine Sump Water, Lilari	7.06	<4.0	26	32	-	-	-	
15-Oct-25	Inlet of ETP, Belpahar	6.80	<4.0	30	28	-	-	-	
15-Oct-25	Mine Sump Water, Lakhanpur	6.49	<4.0	42	32	-	-	-	
15-Oct-25	Mine Sump Water, Belpahar	6.65	<4.0	23	12	-	-	-	
31-Oct-25	Outlet of ETP, Lakhanpur	7.56	<4.0	38	36	-	-	-	
31-Oct-25	Inlet of ETP, Lakhanpur	6.86	<4.0	42	48	-	-	-	
31-Oct-25	Outlet of ETP, Belpahar	7.15	<4.0	34	32	-	-	-	
31-Oct-25	Inlet of ETP, Belpahar	6.92	<4.0	42	40	-	-	-	

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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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EFFLUENT QUALITY DATA

Area :

Lakhunpur

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

Project :

LBL OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	TDS	DO	MPN/100mL
15-Oct-25	STP Inlet	6.87	-	39	-	4.3	-	-	280
15-Oct-25	Clear Water Tank of Sewage Treatment Plant	7.30	-	32	-	3.6	-	-	210
31-Oct-25	STP Inlet	7.06	-	34	-	6	-	-	220
31-Oct-25	Clear Water Tank of Sewage Treatment Plant	7.20	-	26	-	8	-	-	170

Jatank
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GHUBANESWAR

Jaswal

G.S.R. 126 5(E) Effluent discharge standards (applicable to all mode of disposal), Sewage Treatment Plants (STPs)	6.5-9.5	-	<100	-	30	-	<1000
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Drinking Water Quality Data Lakhanpur Area

Project / OCP	Integrated LBL OCP			Indian Drinking Standards (IS-10500):2012		
	Monitoring Station	LKP Project Office	IWSS Inlet-BIT	IWSS Outlet-BIT	Acceptable	Permissible
Date of Sampling	15-Oct-2025	15-Oct-2025	15-Oct-2025			
Colour (Hazen)	3	1	2	5	15	
Turbidity (NTU)	1	2	3	1	5	
pH	7.46	7.14	7.57	6.5-8.5	No relaxation	
Total Alkalinity(mg/L)	58.82	63.03	21.01	200	600	
Chloride(mg/L)	19.43	17.48	15.54	250	1000	
Sulphate(mg/L)	65.76	45.3	33.56	200	400	
Nitrate(mg/L)	3.6	10.52	12.12	45	No relaxation	
Total Hardness (Ca CO ₃)(mg/L)	43.14	70.59	35.29	200	600	
Calcium(mg/L)	14.14	15.72	15.72	75	200	
Fluoride(mg/L)	0.47	0.36	0.44	1	1.5	
Total Dissolve Solid(mg/L)	163	149	131	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	No relaxation	
Zinc(mg/L)	0.04	<0.04	0.05	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 Lakhanpur Area

Project / OCP	Integrated LBL OCP			Indian Drinking Standards (IS-10500):2012	
	Monitoring Station	LKP Project Office	IWSS Inlet-BIT		
Date of Sampling	15-Oct-2025	15-Oct-2025	15-Oct-2025	Acceptable	Permissible
Selenium(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Sodium(mg/L)	16.09	10.88	15.22	-	-
Potassium(mg/L)	6.02	2.56	1.24	-	-
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
MPN (Index/100 ml)	Not Detected	Not Detected	Not Detected	-	-

Katanaik
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BHUBANESWAR

Jamali

Integrated LBL OCP



Legend
Monitoring Station

Google Earth
7.3.0.1000

**Environmental Monitoring Report
For
October-2025**

**Project: Basundhara(W) OCP
Area: Mahalaxmi Area
Coalfield: Ib Valley**



Mahanadi Coalfields Limited



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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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MAHARASHTRA

AMBIENT AIR QUALITY DATA

Area :

Mahalaxmi

(Compliance Station)

Project :

Basundhara (w) OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source	Distance from DGS
08-Oct-25	North of the Sardega Railway Siding, Kulapada	241	123	57	8.66	27.01	Mining Activities, OCP, Coal Transportation	About 500m
08-Oct-25	Body Workshop Basundhara	252	114	53	18.38	25.63		
18-Oct-25	North of the Sardega Railway Siding, Kulapada	258	146	58	13.46	33.74	Mining Activities, OCP, Coal Transportation	About 500m
18-Oct-25	Body Workshop Basundhara	239	127	53	9.68	32.24	Mining Activities	About 100m

MoEF Standards Notification dated 25th September, 2009

500

250

120

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ENHARANSWAR

J. Patil

Test Report



AMBIENT AIR QUALITY DATA

Area :

Mahalaxmi

(Reference Station)

Project :

Basundhara (w) OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
06-Oct-25	Ratansara Village	175	53	27	12.62	26.99	Transportation	About 100m
06-Oct-25	Sarangijharia Village	181	60	29	13.58	24.19	Domestic	About 500m
06-Oct-25	West of Coal Stock, Near Golf Course	167	70	29	13.02	28.45	Mining Activities, OCP, Transportation	About 500m
06-Oct-25	Khamarpara Village	219	86	38	16.19	27.97		
07-Oct-25	Khamarpara Village	205	77	34	15.21	31.46		
07-Oct-25	Ratansara Village	203	72	34	19.83	20.41	Transportation	About 100m
07-Oct-25	Sarangijharia Village	223	89	38	18.51	23.55	Domestic	About 500m
07-Oct-25	West of Coal Stock, Near Golf Course	188	89	37	19.04	30.31	Mining Activities, OCP, Transportation	About 500m
13-Oct-25	West of Coal Stock, Near Golf Course	195	79	33	16.38	18.70	Mining Activities, OCP, Transportation	About 500m
13-Oct-25	Khamarpara Village	169	53	26	11.91	41.55		
13-Oct-25	Sarangijharia Village	210	74	35	18.26	26.69	Domestic	About 500m
14-Oct-25	Khamarpara Village	216	80	37	18.16	33.18		
14-Oct-25	Ratansara Village	217	85	36	11.17	25.59	Transportation	About 100m
14-Oct-25	Sarangijharia Village	224	91	40	12.46	21.40	Domestic	About 500m
14-Oct-25	West of Coal Stock, Near Golf Course	186	74	30	12.46	34.37	Mining Activities, OCP, Transportation	About 500m
15-Oct-25	Ratansara Village	219	84	35	14.37	24.61	Transportation	About 100m
20-Oct-25	Sarangijharia Village	158	63	27	14.89	23.81	Domestic	About 500m
20-Oct-25	West of Coal Stock, Near Golf Course	201	84	38	19.28	22.36	Mining Activities, OCP, Transportation	About 500m
20-Oct-25	Ratansara Village	209	83	38	12.48	13.63	Transportation	About 100m
20-Oct-25	Khamarpara Village	177	81	32	10.76	31.15	Mining Activities, Coal Transportation	About 500m
22-Oct-25	West of Coal Stock, Near Golf Course	156	60	27	14.93	26.59	Mining Activities, OCP, Transportation	About 500m
22-Oct-25	Sarangijharia Village	173	70	29	21.26	18.94	Domestic	About 500m

*NAAQS, 2009

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BHUBANESWAR

Signature

Project :

Basundhara (w) 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
22-Oct-25	Ratansara Village	196	77	34	14.87	28.77	Transportation	About 100m
22-Oct-25	Khamarpara Village	216	94	41	14.82	18.10	Mining Activities, Coal Transportation	About 500m
27-Oct-25	Ratansara Village	173	65	29	10.35	19.12	Transportation	About 100m
27-Oct-25	Sarangijharia Village	178	72	31	19.12	32.55	Domestic	About 500m
27-Oct-25	Khamarpara Village	165	76	29	12.59	15.64	Mining Activities, Coal Transportation	About 500m
27-Oct-25	West of Coal Stock, Near Golf Course	175	70	31	14.28	21.47	Mining Activities, OCP, Transportation	About 500m
28-Oct-25	West of Coal Stock, Near Golf Course	205	84	37	11.49	19.79	Mining Activities, OCP, Transportation	About 500m
28-Oct-25	Khamarpara Village	180	84	33	18.63	15.84	Mining Activities, Coal Transportation	About 500m
28-Oct-25	Sarangijharia Village	160	66	28	13.80	13.48	Domestic	About 500m
28-Oct-25	Ratansara Village	214	86	40	18.27	29.38	Transportation	About 100m

*NAAQS, 2009

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SHUBANESWAR

Signature



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निली रत्न
cmpdi
निली रत्न

AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Mahalaxmi

Project	Basundhara (W) OCP							
Monitoring Station	West of Coal Stock, Near Golf Course							
Date of sampling	Ammonia (NH ₃) (µg/m ³)	Ozone (O ₃) (µg/m ³)	Lead (Pb) (µg/m ³)	Arsenic (As) (ng/m ³)	Nickel (Ni) (ng/m ³)	CO (mg/m ³)	Benzo (α) Pyrene (ng/m ³)	Benzene (µg/m ³)
06-Oct-2025	<20.0	18.18	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
07-Oct-2025	<20.0	12.30	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
13-Oct-2025	<20.0	13.37	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
14-Oct-2025	<20.0	24.07	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
20-Oct-2025	<20.0	18.18	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
22-Oct-2025	<20.0	17.12	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
27-Oct-2025	<20.0	20.32	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
28-Oct-2025	<20.0	17.92	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
Standard	400 (24hours)	180 (hour)	1.0 (24hours)	6.0 (Annual)	20 (Annual)	02 (8 hours)	01(annual)	05(annual)

Authorised Signatory
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BHUBANESWAR

Januati



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रिपो रल
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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Mahalaxmi

Project	Basundhara (W) OCP							
Monitoring Station	Sarangjharja Village							
Date of sampling	Ammonia (NH ₃) ($\mu\text{g}/\text{m}^3$)	Ozone (O ₃) ($\mu\text{g}/\text{m}^3$)	Lead (Pb) ($\mu\text{g}/\text{m}^3$)	Arsenic (As) (ng/m^3)	Nickel (Ni) (ng/m^3)	CO (mg/m^3)	Benzo (a) Pyrene (ng/m^3)	Benzene ($\mu\text{g}/\text{m}^3$)
06-Oct-2025	<20.0	17.12	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
07-Oct-2025	<20.0	14.97	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
13-Oct-2025	<20.0	12.30	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
14-Oct-2025	<20.0	12.57	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
20-Oct-2025	<20.0	17.92	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
22-Oct-2025	<20.0	22.72	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
27-Oct-2025	<20.0	18.45	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
28-Oct-2025	<20.0	13.37	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
Standard	400 (24hours)	180 (hour)	1.0 (24hours)	6.0 (Annual)	20 (Annual)	02 (0.98 hours)	01(annual)	05(annual)

T. H. H. H.
Authorized Signatory
CMPDI, RI-VII, LAB
BHUBANESWAR

J. J. J.



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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Mahalaxmi

Project	Basundhara (W) OCP							
Monitoring Station	Ratansara Village							
Date of sampling	Ammonia (NH ₃) (µg/m ³)	Ozone (O ₃) (µg/m ³)	Lead (Pb) (µg/m ³)	Arsenic (As) (ng/m ³)	Nickel (Ni) (ng/m ³)	CO (mg/m ³)	Benzo (α) Pyrene (ng/m ³)	Benzene (µg/m ³)
06-Oct-2025	<20.0	13.37	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
07-Oct-2025	<20.0	20.85	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
14-Oct-2025	<20.0	19.78	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
15-Oct-2025	<20.0	23.52	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
20-Oct-2025	<20.0	14.17	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
22-Oct-2025	<20.0	12.30	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
27-Oct-2025	<20.0	21.38	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
28-Oct-2025	<20.0	13.37	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
Standard	400 (24hours)	180 (hour)	1.0 (24hours)	6.0 (Annual)	20 (Annual)	02 (8 hours)	01(annual)	05(annual)

J. Tanwaj
Authorized Signatory
CMPDI RI-VII, LAB
BHUBANESWAR

Jasmati



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नियंत्रण एवं
संरक्षण
cmpdi
मिनी लैब्स

AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Mahalaxmi

Project	Basundhara (W) OCP							
Monitoring Station	Khamarpara Village							
Date of sampling	Ammonia (NH ₃) (µg/m ³)	Ozone (O ₃) (µg/m ³)	Lead (Pb) (µg/m ³)	Arsenic (As) (ng/m ³)	Nickel (Ni) (ng/m ³)	CO (mg/m ³)	Benzo (a) Pyrene (ng/m ³)	Benzene (µg/m ³)
06-Oct-2025	<20.0	22.18	<0.1	<1.0	<1.0	1.8	BQL(QL=0.7)	BQL
07-Oct-2025	<20.0	15.77	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
13-Oct-2025	<20.0	21.65	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
14-Oct-2025	<20.0	21.38	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
20-Oct-2025	<20.0	22.18	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
22-Oct-2025	<20.0	22.18	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
27-Oct-2025	<20.0	13.37	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
28-Oct-2025	<20.0	26.20	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
Standard	400 (24hours)	180 (hour)	1.0 (24hours)	6.0 (Annual)	20 (Annual)	02 (8 hours)	01(annual)	05(annual)

Tattanaik
Authorized Signatory
CMPDI, RI-VII, LAB
BHUBANESWAR

Jaswal



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लिमीटेड
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AMBIENT AIR QUALITY DATA

Area: Mahalaxmi

Project	Basundhara(W)OCP
Monitoring Station	North of the Sardega Railway Siding, Kulapada
Date of sampling	Carbon Monoxide (CO)
	mg/m³
08-Oct-2025	0.9
18-Oct-2025	1.3
Standard	02(8Hours)

Project	Basundhara(W)OCP
Monitoring Station	Body WorkshpBasundhara
Date of sampling	Carbon Monoxide (CO)
	mg/m³
08-Oct-2025	1.2
18-Oct-2025	0.8
Standard	02(8Hours)

J. J. J. J.
Authorized Signatory
CMPDI RI-VII, LAB
BHUBANESWAR

Jasmati



TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Mahalaxmi

PROJECT :

Basundhara (W) OCP

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
08-Oct-25	North of the Sardega Railway Siding ,Kulapada	52.9	41.6
08-Oct-25	West of Coal Stock , Near Golf Course	49.3	40.8
08-Oct-25	Ratansara Village	54.3	44.8
08-Oct-25	South-West of Working Face -Gopalpur Village,Near CMPDIL Camp	54.4	44.3
08-Oct-25	Sarangijharia Community Centre	49.1	41.6
25-Oct-25	South-West of Working Face -Gopalpur Village,Near CMPDIL Camp	60.5	54.8
25-Oct-25	Ratansara Village	52.4	40.7
25-Oct-25	North of the Sardega Railway Siding ,Kulapada	50.6	40.3
28-Oct-25	West of Coal Stock , Near Golf Course	52.4	39.6
28-Oct-25	Sarangijharia Community Centre	49.2	41.5

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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और
घरेलू
अपशिष्ट
नियंत्रण
बोर्ड
CPCB
CMPDI
राज्य-स्तरीय

TABLE--

EFFLUENT QUALITY DATA

Area :

Mahalaxmi

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

Project :

Basundhara (W) OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	TDS	DO	Remarks
11-Oct-25	Basundhara (W) OCP Mine Sump	4.44	<4.0	33	28	-	-	-	
11-Oct-25	Outlet of Excavation Workshop, B(W) OCP	-	-	-	-	-	-	-	Dry
11-Oct-25	Inlet of Excavation Workshop, B(W) OCP	-	-	-	-	-	-	-	Dry
11-Oct-25	Sardega Railway Siding Sedimentation Pond	6.59	<4.0	25	20	-	-	-	
25-Oct-25	Inlet to ETP at Excavation Workshop, B(W)OCP	-	-	-	-	-	-	-	Dry
25-Oct-25	Outlet of ETP at Excavation Workshop, B(W)OCP	-	-	-	-	-	-	-	Dry

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BHUBANESWAR

Handwritten Signature

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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Drinking Water Quality Data Mahalaxmi Area

Project / OCP	Basundhara (W)	Indian Drinking Standards (IS-10500):2012	
Monitoring Station	Water Treatment Plant Clear Water Reservoir	Acceptable	Permissible
Date of Sampling	15-Oct-2025		
Colour (Hazen)	3	5	15
Turbidity (NTU)	2	1	5
pH	6.88	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	21.01	200	600
Chloride(mg/L)	19.43	250	1000
Sulphate(mg/L)	85.46	200	400
Nitrate(mg/L)	7.56	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	117.66	200	600
Calcium(mg/L)	22.00	75	200
Fluoride(mg/L)	0.53	1	1.5
Total Dissolve Solid(mg/L)	177	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	No relaxation
Zinc(mg/L)	1.26	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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Jasrath



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Drinking Water Quality Data Mahalaxmi Area

Project / OCP	Basundhara (W)	Indian Drinking Standards (IS-10500):2012	
Monitoring Station	Water Treatment Plant Clear Water Reservoir	Acceptable	Permissible
Date of Sampling	15-Oct-2025		
Selenium(mg/L)	<0.005	0.01	No relaxation
Sodium(mg/L)	14.09		
Potassium(mg/L)	5.35		
Phenolics(mg/L)	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	0.2	1
MPN (Index/100 ml)	Not Detected	-	-

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Jannati

**Environmental Monitoring Report
For
October-2025**

**Project: Basundhara(E) OCP
Area: Mahalaxmi Area
Coalfield: Ib Valley**



Mahanadi Coalfields Limited



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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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AIR QUALITY

Test Report

AMBIENT AIR QUALITY DATA

Area :

Mahalaxmi

(Reference Station)

Project :

Basundhara (E) OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
06-Oct-25	Khamarpara Village (Reported Only)	219	86	38	16.19	27.97	Mining Activities, Coal Transportation	About 500m
07-Oct-25	Khamarpara Village (Reported Only)	205	77	34	15.21	31.46	Mining Activities, Coal Transportation	About 500m
13-Oct-25	Khamarpara Village (Reported Only)	169	53	26	11.91	41.55	Mining Activities, Coal Transportation	About 500m
14-Oct-25	Khamarpara Village (Reported Only)	216	80	37	18.16	33.18	Mining Activities, Coal Transportation	About 500m
20-Oct-25	Khamarpara Village (Reported Only)	177	81	32	10.76	31.15	Mining Activities, Coal Transportation	About 500m
22-Oct-25	Khamarpara Village (Reported Only)	216	94	41	14.82	18.10	Mining Activities, Coal Transportation	About 500m
27-Oct-25	Khamarpara Village (Reported Only)	165	76	29	12.59	15.64	Mining Activities, Coal Transportation	About 500m
28-Oct-25	Khamarpara Village (Reported Only)	180	84	33	18.63	15.84	Mining Activities, Coal Transportation	About 500m

Hattarick
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Jaswant

*NAAQS, 2009

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Mahalaxmi

Project	Basundhara (E) OCP							
Monitoring Station	Khamarpara Village (Reported)							
Date of sampling	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)
06-Oct-2025	<20.0	22.18	<0.1	<1.0	<1.0	1.8	BQL(QL=0.7)	BQL
07-Oct-2025	<20.0	15.77	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
13-Oct-2025	<20.0	21.65	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
14-Oct-2025	<20.0	21.38	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
20-Oct-2025	<20.0	22.18	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
22-Oct-2025	<20.0	22.18	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
27-Oct-2025	<20.0	13.37	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
28-Oct-2025	<20.0	26.20	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
Standard	400 (24hours)	180 (hour)	1.0 (24hours)	6.0 (Annual)	20 (Annual)	02 (8 hours)	01(annual)	05(annual)

J. J. Thanoik
Authorized Signatory
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BHUBANESWAR

J. J. Thanoik



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TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Mahalaxmi

PROJECT :

Basundhara (E) OCP

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
08-Oct-25	Quary Sump of Basundhara East OCP/ Near CHP of Basundhara East OCP	52.7	41.9
25-Oct-25	Quary Sump of Basundhara East OCP/ Near CHP of Basundhara East OCP	54.6	44.2

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Janaki

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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Drinking Water Quality Data Mahalaxmi Area

Project / OCP	Basundhara (E)	Indian Drinking Standards (IS-10500):2012	
Monitoring Station	Basundhar East Sump Quarry OCP	Acceptable	Permissible
Date of Sampling	15-Oct-2025		
Colour (Hazen)	2	5	15
Turbidity (NTU)	1	1	5
pH	6.63	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	29.41	200	600
Chloride(mg/L)	23.31	250	1000
Sulphate(mg/L)	92.56	200	400
Nitrate(mg/L)	8.96	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	129.42	200	600
Calcium(mg/L)	34.58	75	200
Fluoride(mg/L)	0.44	1	1.5
Total Dissolve Solid(mg/L)	201	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	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 Mahalaxmi Area

Project / OCP	Basundhara (E)	Indian Drinking Standards (IS-10500):2012	
Monitoring Station	Basundhar East Sump Quarry OCP	Acceptable	Permissible
Date of Sampling	15-Oct-2025		
Selenium(mg/L)	<0.005	0.01	No relaxation
Sodium(mg/L)	14.76		
Potassium(mg/L)	4.28		
Phenolics(mg/L)	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	0.2	1
MPN (Index/100 ml)	Not Detected	-	-

[Signature]
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[Signature]

Basundhara (W) OCP

Barangijharia Village

Legend

Air Monitoring Locations

North of the Sardega Railway Siding, Kulapada

10.3

Khamarpara, East Side of Sardega Railway Siding

West of Coal Stock, Near Golf Course

Ratansara Village

Google Earth

March 2012-15:54

3 km



Environmental Monitoring Report For October-2025

**Project: Kulda OCP
Area: Basundhara
Coalfield: Ib Valley**



Mahanadi Coalfields Limited



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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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राजस्थान

Test Report

AMBIENT AIR QUALITY DATA

Area :

Basundhara

(Compliance Station)

Project :

Kulda OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source	Distance from DGS
08-Oct-25	Laikera Railway Siding	244	124	56	12.99	38.68		
08-Oct-25	Kulda PO Office	230	104	47	11.69	21.51		
25-Oct-25	Laikera Railway Siding	225	135	60	8.93	24.24	Coal Transportation	About 100m
25-Oct-25	Kulda PO Office	207	123	53	14.57	19.81	Mining Activities, Coal Transportation	About 100m

MoEF Standards Notification dated 25th
September, 2009

500

250

120

120

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Jatavank

Test Report



AMBIENT AIR QUALITY DATA

Area :

Basundhara

(Reference Station)

Project :

Kulda OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
06-Oct-25	North of CHP, Teleimal	211	82	36	11.09	18.82	Domestic, OCP, Transportation	About 500m
06-Oct-25	Bilaimunda Village	181	68	30	17.48	35.82	Village Road	About 500m
06-Oct-25	South West of Working Face, Chakarpur	171	59	28	17.77	25.00	Village Road	About 500m
06-Oct-25	External CT Road, Barpali	190	72	32	15.96	35.13	Mining Activities, Coal Transportation	About 500m
07-Oct-25	South West of Working Face, Chakarpur	213	76	35	21.66	31.20	Village Road	About 500m
07-Oct-25	North of CHP, Teleimal	198	75	33	10.39	17.09	Domestic, OCP, Transportation	About 500m
07-Oct-25	External CT Road, Barpali	201	77	34	20.60	30.45	Mining Activities, Coal Transportation	About 500m
07-Oct-25	Bilaimunda Village	189	71	32	11.70	23.82	Village Road	About 500m
13-Oct-25	External CT Road, Barpali	176	60	28	13.68	27.73	Mining Activities, Coal Transportation	About 500m
13-Oct-25	South West of Working Face, Chakarpur	188	66	31	22.63	33.31	Village Road	About 500m
13-Oct-25	North of CHP, Teleimal	184	68	30	14.53	35.31	Domestic, OCP, Transportation	About 500m
13-Oct-25	Bilaimunda Village	164	58	26	13.77	30.68	Village Road	About 500m
14-Oct-25	South West of Working Face, Chakarpur	157	49	26	20.21	22.71	Village Road	About 500m
14-Oct-25	North of CHP, Teleimal	173	55	27	11.35	21.72	Domestic, OCP, Transportation	About 500m
14-Oct-25	Bilaimunda Village	170	61	27	16.01	37.75	Village Road	About 500m
14-Oct-25	External CT Road, Barpali	162	53	25	19.87	24.39	Mining Activities, Coal Transportation	About 500m
20-Oct-25	North of CHP, Teleimal	145	57	26	12.99	23.95	Domestic, OCP, Transportation	About 500m
20-Oct-25	South West of Working Face, Chakarpur	146	63	26	20.41	28.78	Village Road	About 500m
20-Oct-25	Bilaimunda Village	183	80	35	9.16	9.52	Village Road	About 500m
20-Oct-25	External CT Road, Barpali	191	68	37	9.54	17.00	Mining Activities, Coal Transportation	About 500m
22-Oct-25	South West of Working Face, Chakarpur	185	76	35	8.83	18.47	Village Road	About 500m
22-Oct-25	North of CHP, Teleimal	177	78	33	9.82	33.40	Domestic, OCP, Transportation	About 500m

*NAAQS, 2009

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Project :

Kulda 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
22-Oct-25	External CT Road, Barpali	179	72	34	10.05	27.22	Mining Activities, Coal Transportation	About 500m
22-Oct-25	Bilaimunda Village	157	75	29	16.42	27.21	Village Road	About 500m
27-Oct-25	External CT Road, Barpali	163	73	28	20.02	21.40	Mining Activities, Coal Transportation	About 500m
27-Oct-25	North of CHP, Teleimal	193	71	35	14.34	24.75	Domestic, OCP, Transportation	About 500m
27-Oct-25	Bilaimunda Village	170	71	32	8.04	15.01	Village Road	About 500m
27-Oct-25	South West of Working Face, Chakarpur	200	80	39	15.59	9.92	Village Road	About 500m
28-Oct-25	South West of Working Face, Chakarpur	162	75	30	14.57	30.28	Village Road	About 500m
28-Oct-25	Bilaimunda Village	174	72	33	15.72	22.71	Village Road	About 500m
28-Oct-25	North of CHP, Teleimal	160	76	29	7.67	27.32	Domestic, OCP, Transportation	About 500m
28-Oct-25	External CT Road, Barpali	173	78	33	16.31	23.71	Mining Activities, Coal Transportation	About 500m

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Jyoti

*NAAQS, 2009		100	60	80	80
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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Basundhara

Project	Kulda OCP							
Monitoring Station	Bilaimunda Village							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (a) Pyrene	Benzen e
	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	(ng/m^3)	(ng/m^3)	(mg/m^3)	(ng/m^3)	($\mu\text{g}/\text{m}^3$)
06-Oct-2025	<20.0	24.87	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
07-Oct-2025	<20.0	20.05	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
13-Oct-2025	<20.0	13.37	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
14-Oct-2025	<20.0	15.23	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
20-Oct-2025	<20.0	24.87	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
22-Oct-2025	<20.0	24.87	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
27-Oct-2025	<20.0	13.10	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
28-Oct-2025	<20.0	25.13	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
Standard	400 (24hours)	180 (hour)	1.0 (24hours)	6.0 (Annual)	20(Annual)	02 (8 hours)	01(annual)	05(annual)

J. Tanwaj
Authorized Signatory
CMPDI, RI-VII, LAB
CHHISWAR

J. Tanwaj



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रिसेच लैब
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Mini Bazar

AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Basundhara

Project	Kulda OCP							
Monitoring Station	South West of Working Face, Chakarpur							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) 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)
06-Oct-2025	<20.0	21.38	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
07-Oct-2025	<20.0	14.70	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
13-Oct-2025	<20.0	13.10	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
14-Oct-2025	<20.0	19.25	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
20-Oct-2025	<20.0	23.25	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
22-Oct-2025	<20.0	16.30	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
27-Oct-2025	<20.0	13.10	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
28-Oct-2025	<20.0	20.05	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
Standard	400 (24hours)	180 (hour)	1.0 (24hours)	6.0 (Annual)	20 (Annual)	02 (8 hours)	01(annual)	05(annual)

Auth. Signatory
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BHUBANESWAR

Signature



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Mini Ratna

AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Basundhara

Project	Kulda OCP							
Monitoring Station	North of CHP, Teleimal							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) 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)
06-Oct-2025	<20.0	22.18	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
07-Oct-2025	<20.0	22.18	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
13-Oct-2025	<20.0	18.18	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
14-Oct-2025	<20.0	13.10	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
20-Oct-2025	<20.0	18.98	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
22-Oct-2025	<20.0	21.38	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
27-Oct-2025	<20.0	25.13	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
28-Oct-2025	<20.0	25.93	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
Standard	400 (24hours)	180 (hour)	1.0 (24hours)	6.0 (Annual)	20 (Annual)	02 (8 hours)	01(annual)	05(annual)

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Jatanaik



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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Basundhara

Project	Kulda OCP							
Monitoring Station	External CT Road, Barpali							
Date of sampling	Ammonia (NH ₃) ($\mu\text{g}/\text{m}^3$)	Ozone (O ₃) ($\mu\text{g}/\text{m}^3$)	Lead (Pb) ($\mu\text{g}/\text{m}^3$)	Arsenic (As) (ng/m^3)	Nickel (Ni) (ng/m^3)	CO (mg/m^3)	Benzo (a) Pyrene (ng/m^3)	Benzene ($\mu\text{g}/\text{m}^3$)
06-Oct-2025	<20.0	18.18	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
07-Oct-2025	<20.0	12.30	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
13-Oct-2025	<20.0	13.37	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
14-Oct-2025	<20.0	24.07	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
20-Oct-2025	<20.0	18.18	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
22-Oct-2025	<20.0	24.33	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
27-Oct-2025	<20.0	21.12	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
28-Oct-2025	<20.0	12.30	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
Standard	400 (24hours)	13.37	1.0 (24hours)	6.0 (Annual)	20(Annual)	02 (8 hours)	01(annual)	05(annual)

Jattanaik
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BHUBANESWAR

Jattanaik



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MUMBAI

TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Basundhara

PROJECT :

Kulda OCP

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
08-Oct-25	Kulda PO Office	54.1	44.6
08-Oct-25	South West of Working Face Chakarpur	49.2	42.7
08-Oct-25	Laikera Railway Siding	52.8	40.3
25-Oct-25	Kulda PO Office	62.4	56.9
25-Oct-25	Laikera Railway Siding	50.8	42.6
25-Oct-25	South West of Working Face Chakarpur	49.3	40.7

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)

J. Pattnaik
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J. Pattnaik

EFFLUENT QUALITY DATA

Area :

Basundhara

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

Project :

Kulda OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	TDS	DO	Remarks
11-Oct-25	Final Outlet Of ETP	7.61	<4.0	37	32	-	312	6.3	
11-Oct-25	Inlet of ETP	7.40	4.6	42	40	-	356	6.2	
11-Oct-25	Misc Sump Water Near Kulda Nursery	6.96	<4.0	28	36	-	394	6.0	
25-Oct-25	Inlet of ETP	7.48	<4.0	45	32	-	364	6.4	
31-Oct-25	Final Outlet Of ETP	7.73	<4.0	38	24	-	324	6.4	

Lattanaik
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fermat

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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Kulda OCP

Legend
Air Monitoring Locations

North of CHP, Telemal
Bilaimunde Village
South West of Working Face, Chakarapur
PO Office, Kulda OCP
External CT Road, Barpali
Laikera Railway Siding



7 km

Google Earth



**Environmental Monitoring Report
For
October-2025**

**Project: Garjanbahal OCP
Area: Basundhara
Coalfield: Ib Valley**



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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AMBIENT AIR QUALITY DATA

Area :

Basundhara

(Compliance Station)

Project :

Garjanbahal OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source	Distance from DGS
11-Oct-25	Karlikachar Village	252	123	58	15.07	37.75	External Coal Transportation Road	About 500m
11-Oct-25	KAN-I Near Coal Sampling Lab	239	115	52	13.06	27.51	Railway Siding, Transportation	About 500m
11-Oct-25	Garjanbahal Village	245	110	49	12.40	28.40	External Coal Transportation Road	About 500m
25-Oct-25	Karlikachar Village	273	143	57	16.42	23.13	External Coal Transportation Road	About 500m
25-Oct-25	KAN-I Near Coal Sampling Lab	236	113	48	11.89	25.73	Railway Siding, Transportation	About 500m
25-Oct-25	Garjanbahal Village	261	134	51	11.13	34.12	External Coal Transportation Road	About 500m

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Test Report

AMBIENT AIR QUALITY DATA

Area :

Basundhara

(Reference Station)

Project :

Garjanbahal OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
06-Oct-25	West of working face, Bihaimunda	191	75	33	21.78	28.69	South-West of Working Face	About 500m
06-Oct-25	South-East of Wokring Face, Kutabaga Village	208	83	36	13.52	27.85	South-East of Working Face	About 1000m
07-Oct-25	South-East of Wokring Face, Kutabaga Village	177	65	29	15.22	32.11	South-East of Working Face	About 1000m
07-Oct-25	West of working face, Bihaimunda	206	86	37	19.04	35.50	South-West of Working Face	About 500m
13-Oct-25	West of working face, Bihaimunda	173	63	27	14.94	23.49	South-West of Working Face	About 500m
13-Oct-25	South-East of Wokring Face, Kutabaga Village	195	79	34	16.59	28.74	South-East of Working Face	About 1000m
14-Oct-25	South-East of Wokring Face, Kutabaga Village	170	62	28	13.52	35.38	South-East of Working Face	About 1000m
14-Oct-25	West of working face, Bihaimunda	189	71	30	14.92	33.23	South-West of Working Face	About 500m
20-Oct-25	West of working face, Bihaimunda	182	76	32	18.78	12.29	South-West of Working Face	About 500m
20-Oct-25	South-East of Wokring Face, Kutabaga Village	203	83	39	18.28	18.18	South-East of Working Face	About 1000m
22-Oct-25	South-East of Wokring Face, Kutabaga Village	171	69	30	13.44	11.63	South-East of Working Face	About 1000m
22-Oct-25	West of working face, Bihaimunda	154	62	27	9.01	28.29	South-West of Working Face	About 500m
26-Oct-25	South-East of Wokring Face, Kutabaga Village	210	83	41	13.21	25.03	South-East of Working Face	About 1000m
27-Oct-25	South-East of Wokring Face, Kutabaga Village	183	81	36	12.67	33.49	South-East of Working Face	About 1000m
27-Oct-25	West of working face, Bihaimunda	194	82	36	14.07	14.33	South-West of Working Face	About 500m
28-Oct-25	West of working face, Bihaimunda	179	73	30	11.12	28.00	South-West of Working Face	About 500m

*NAAQS,2009

100	60	80	80
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CMPDI, RI-VII, LAB
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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Basundhara

Project	Garjanbahal OCP							
Monitoring Station	Bihaimunda Village							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (a) Pyrene	Benzene
	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	(ng/m^3)	(ng/m^3)	(mg/m^3)	(ng/m^3)	($\mu\text{g}/\text{m}^3$)
06-Oct-2025	<20.0	24.60	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
07-Oct-2025	<20.0	16.57	<0.1	<1.0	<1.0	1.5	BQL(QL=0.7)	BQL
13-Oct-2025	<20.0	17.65	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
14-Oct-2025	<20.0	17.38	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
20-Oct-2025	<20.0	15.50	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
22-Oct-2025	<20.0	20.58	<0.1	<1.0	<1.0	1.5	BQL(QL=0.7)	BQL
27-Oct-2025	<20.0	19.78	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
28-Oct-2025	<20.0	12.03	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
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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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Basundhara

Project	Garjanbahal OCP							
Monitoring Station	South-East of Working Face, Kutabaga							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) 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)
06-Oct-2025	<20.0	12.30	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
07-Oct-2025	<20.0	21.12	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
13-Oct-2025	<20.0	20.58	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
14-Oct-2025	<20.0	23.52	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
20-Oct-2025	<20.0	13.63	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
22-Oct-2025	<20.0	22.18	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
26-Oct-2025	<20.0	23.52	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
27-Oct-2025	<20.0	13.10	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
Standard	400(24 hours)	180(hour)	1.0(24 hours)	6.0(Annual)	20(Annual)	02 (8 hours)	01(annual)	05(annual)

Author: *Jatanaik*
Signatory
CMPDI, RI-VII, LAB
BHUBANESWAR

Jatanaik



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TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Basundhara

PROJECT :

Garjanbahal OCP

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
08-Oct-25	Garjanbahal Village	52.3	40.7
08-Oct-25	Karlikachar Village	50.6	41.8
25-Oct-25	Garjanbahal Village	49.7	41.4
28-Oct-25	Karlikachar Village	52.6	42.3

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. Banik
Authorised Signatory
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J. Banik

EFFLUENT QUALITY DATA

Area :

Basundhara

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

Project :

Garjanbahal OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	TDS	DO	Remarks
11-Oct-25	Mine Sump Water	6.81	<4.0	41	68	-	-	-	
11-Oct-25	Inlet of Settling Tank (Kanika Siding)	6.80	<4.0	49	52	-	-	-	
15-Oct-25	Outlet of Settling Tank (Kanika Siding)	6.72	<4.0	43	48	-	-	-	
25-Oct-25	Inlet of Settling Tank (Kanika Siding)	6.72	<4.0	30	40	-	-	-	
25-Oct-25	Outlet of Settling Tank (Kanika Siding)	6.84	<4.0	26	28	-	-	-	
25-Oct-25	Mine Sump Water	6.96	<4.0	46	48	-	-	-	

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

J. S. S.

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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Garjanbahal OCP

Legend
Monitoring Station



Google Earth
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Environmental Monitoring Report For October-2025

Project: Orient Mine no. 1&2
Area: Orient
Coalfield: Ib Valley



Mahanadi Coalfields Limited



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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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AMBIENT AIR QUALITY DATA

Area :

Orient

(Compliance Station)

Project :

Orient Mine No. 1 & 2

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source	Distance from DGS
08-Oct-25	Orient Mine No. 1 & 2	255	136	58	15.59	34.12	Coal Stock Yard, Surface Bunker, Coal	About 250m
18-Oct-25	Orient Mine No. 1 & 2	243	134	56	16.11	20.81	Coal Stock Yard, Surface Bunker, Coal	About 250m

Hattanaik
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BHUBANESWAR

Jenabati

MoEF Standards Notification dated 25th September, 2000	500	250		120	120
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AMBIENT AIR QUALITY DATA

Area :

Orient

(Reference Station)

Project :

Orient Mine No.1 & 2

(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-Oct-25	Orient GM Office	194	80	32	9.60	32.07	Domestic and other Anthropogenic Activities	
04-Oct-25	Orient GM Office	198	90	37	9.11	23.66	Domestic and other Anthropogenic Activities	
09-Oct-25	Orient GM Office	208	95	42	15.52	21.98	Domestic and other Anthropogenic Activities	
10-Oct-25	Orient GM Office	200	78	33	16.56	35.56	Domestic and other Anthropogenic Activities	
16-Oct-25	Orient GM Office	164	71	30	7.67	9.56	Domestic and other Anthropogenic Activities	About 1000m
17-Oct-25	Orient GM Office	196	82	37	18.70	16.66	Domestic and other Anthropogenic Activities	About 1000m
23-Oct-25	Orient GM Office	173	79	33	18.43	10.94	Domestic and other Anthropogenic Activities	About 1000m
24-Oct-25	Orient GM Office	168	74	31	16.06	18.83	Domestic and other Anthropogenic Activities	About 1000m
29-Oct-25	Orient GM Office	197	87	39	17.73	24.41	Domestic and other Anthropogenic Activities	About 1000m
30-Oct-25	Orient GM Office	178	88	35	20.40	26.07	Domestic and other Anthropogenic Activities	About 1000m

Katwala
Authorised Signatory
CMPDI, RI-VII, LAB
BHUBANESWAR

Jena

*NAAQS,2009

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Orient

Project	Orient Mine No.2							
Monitoring Station	Orient GM Office							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) Pyrene	Benzen e
	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	(ng/m^3)	(ng/m^3)	(mg/m^3)	(ng/m^3)	($\mu\text{g}/\text{m}^3$)
03-Oct-2025	<20.0	23.25	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
04-Oct-2025	<20.0	13.10	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
09-Oct-2025	<20.0	20.32	<0.1	<1.0	<1.0	0.9	1.4BQL(QL=0.7)	BQL
10-Oct-2025	<20.0	25.93	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
16-Oct-2025	<20.0	13.90	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
17-Oct-2025	<20.0	16.83	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
23-Oct-2025	<20.0	12.03	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
24-Oct-2025	<20.0	18.98	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
29-Oct-2025	<20.0	16.30	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
30-Oct-2025	<20.0	25.13	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
Standard	400 (24hours)	180 (hour)	1.0 (24hours)	6.0 Annual	20 (Annual)	02 (8 hours)	01(annual)	05(annual)

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Signature



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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Orient

Project	Orient Mine No.2							
Monitoring Station	VIP Guest House, IB Valley (Reported Only)							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) Pyrene	Benzen e
	(μg/m ³)	(μg/m ³)	(μg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(μg/m ³)
06-Oct-2025	<20.0	18.18	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
07-Oct-2025	<20.0	12.30	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
13-Oct-2025	<20.0	13.37	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
14-Oct-2025	<20.0	24.07	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
20-Oct-2025	<20.0	25.93	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
22-Oct-2025	<20.0	14.43	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
27-Oct-2025	<20.0	15.50	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
28-Oct-2025	<20.0	17.65	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
Standard	400 (24hours)	180 (hour)	1.0 (24hours)	6.0 Annual)	20 (Annual)	02 (8 hours)	01(annual)	05(annual)

Katwar
Authorised Signatory
CMPDI, RI-VII, LAB
BHUBANESWAR

Jaswal



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TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Orient

PROJECT :

Orient Mine No. 1 & 2

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
11-Oct-25	Orient Mine No. 1 & 2	49.7	42.2
11-Oct-25	VIP Guest House, IB Valley (Reported Only)	49.1	42.6
31-Oct-25	Orient Mine No. 1 & 2	52.2	39.8
31-Oct-25	VIP Guest House, IB Valley (Reported Only)	52.3	41.7

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)

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BHUBANESWAR

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TABLE--

EFFLUENT QUALITY DATA

Area :

Orient

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

Project :

Orient Mine No. 1 & 2

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	TDS	DO	Remarks
15-Oct-25	Mine Sump of Mine No. 2	6.91	<4.0	35	32	-	-	-	

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Signature

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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Drinking Water Quality Data Orient Area

Project / OCP	Orient Mine No. 1 & 2		Indian Drinking Standards (IS-10500):2012	
	Budhijaam Colony	Mine no 1 & 2 Filter Plant		
Date of Sampling	15-Oct-2025	15-Oct-2025	Acceptable	Permissible
Colour (Hazen)	2	1	5	15
Turbidity (NTU)	2	3	1	5
pH	7.44	6.96	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	96.64	130.26	200	600
Chloride(mg/L)	31.08	42.74	250	1000
Sulphate(mg/L)	44.56	70.50	200	400
Nitrate(mg/L)	10.56	18.56	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	86.28	105.89	200	600
Calcium(mg/L)	17.29	20.43	75	200
Fluoride(mg/L)	0.38	0.54	1	1.5
Total Dissolve Solid(mg/L)	185	265	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	No relaxation
Zinc(mg/L)	1.29	0.09	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 Orient Area

Project / OCP	Orient Mine No. 1 & 2		Indian Drinking Standards (IS-10500):2012	
	Budhijaam Colony	Mine no 1 & 2 Filter Plant		
Monitoring Station			Acceptable	Permissible
Date of Sampling	15-Oct-2025	15-Oct-2025		
Selenium(mg/L)	<0.005	<0.005	0.01	No relaxation
Sodium(mg/L)	8.96	16.15		
Potassium(mg/L)	2.32	3.51		
Phenolics(mg/L)	<0.001	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	<0.2	0.2	1
MPN (Index/100 ml)	Not Detected	Not Detected	-	-

Fatanah
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BHUBANESWAR

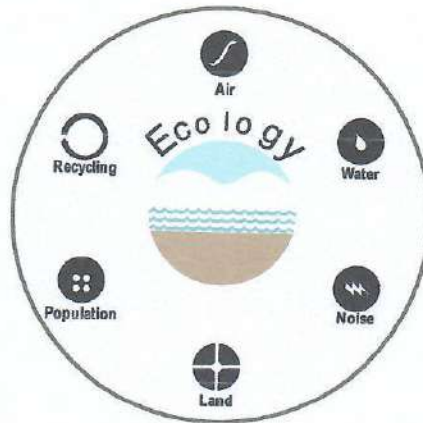
Fatanah

**Environmental Monitoring Report
For
October-2025**

**Project: Orient Mine no. 3
Area: Orient
Coalfield: Ib Valley**



Mahanadi Coalfields Limited



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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 : **Orient** (Compliance Station)

Project : **Orient Mine No. 3** (conc. in $\mu\text{g}/\text{cu.m.}$)

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source	Distance from DGS
08-Oct-25	Orient Mine No. 3	243	128	55	15.71	27.24	Coal Stockyard, Surface Bunker, Coal	About 200m
18-Oct-25	Orient Mine No. 3	258	149	62	20.83	26.51	Coal Stockyard, Surface Bunker, Coal	About 200m

Tattansath
Authorized Signatory
CMPDI, RI-VII, LAB
BHUBANESWAR

Jasmati

MoEF Standards Notification dated 25th September, 2000	500	250		120	120
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CMPDI
LAB

TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Orient

PROJECT :

Orient Mine No.3

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
11-Oct-25	Orient Mine No.3	50.4	41.6
31-Oct-25	Orient Mine No.3	52.9	43.4

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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Janak



TABLE--

EFFLUENT QUALITY DATA

Area :

Orient

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

Project :

Orient Mine No. 3

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	TDS	DO	Remarks
15-Oct-25	Mine Sump of Mine No. 3	6.69	<4.0	37	28	-	-	-	
31-Oct-25	Mine Sump of Mine No. 3	7.05	<4.0	34	20	-	-	-	

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BHUBANESWAR

Jatavasth

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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Drinking Water Quality Data Orient Area

Project / OCP	Orient Mine No. 3	Indian Drinking Standards (IS-10500):2012	
Monitoring Station	Mine no 3 Filter Plant	Acceptable	Permissible
Date of Sampling	15-Oct-2025		
Colour (Hazen)	1	5	15
Turbidity (NTU)	1	1	5
pH	6.96	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	67.23	200	600
Chloride(mg/L)	29.14	250	1000
Sulphate(mg/L)	66.3	200	400
Nitrate(mg/L)	12.56	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	86.28	200	600
Calcium(mg/L)	17.29	75	200
Fluoride(mg/L)	0.53	1	1.5
Total Dissolve Solid(mg/L)	194	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	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

Katana
Authorized Signatory
CMPDI, RI-VII, LAB
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Drinking Water Quality Data Orient Area

Project / OCP	Orient Mine No. 3	Indian Drinking Standards (IS-10500):2012	
Monitoring Station	Mine no 3 Filter Plant	Acceptable	Permissible
Date of Sampling	15-Oct-2025	Acceptable	Permissible
Selenium(mg/L)	<0.005	0.01	No relaxation
Sodium(mg/L)	14.47	—	—
Potassium(mg/L)	2.68	—	—
Phenolics(mg/L)	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	0.2	1
MPN (Index/100 ml)	Not Detected	—	—

K. Tanish
Authorized Signatory
CMPDI, RI-VII, LAB
BHUBANESWAR

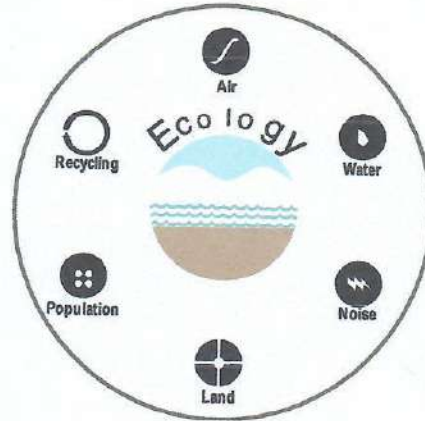
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**Environmental Monitoring Report
For
October-2025**

**Project: Orient Mine no. 4
Area: Orient
Coalfield: Ib Valley**



Mahanadi Coalfields Limited



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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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AMBIENT AIR QUALITY DATA

Area :

Orient

(Compliance Station)

Project :

Orient Mine No. 4

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source	Distance from DGS
08-Oct-25	Orient Mine No. 4	237	119	51	14.46	21.47	Coal Transportation Road	About 300m
18-Oct-25	Orient Mine No. 4	272	158	66	14.95	30.74	Coal Transportation Road	About 300m

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

J. Prasad



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CMPDI
MINI BORD

TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Orient

PROJECT :

Orient Mine No.4

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
11-Oct-25	Orient Mine No.4	52.6	40.8
31-Oct-25	Orient Mine No.4	61.4	52.8

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)

Hattowach
Authorized Signatory
CMPDI, RI-VII, LAB
BHUBANESWAR

Jasmat



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cmpdi
RAJIV BHANDARI

TABLE--

EFFLUENT QUALITY DATA

Area :

Orient

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

Project :

Orient Mine No. 4

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	TDS	DO	Remarks
15-Oct-25	Mine Sump of Mine No. 4	6.87	<4.0	47	44	-	-	-	

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Jasmat

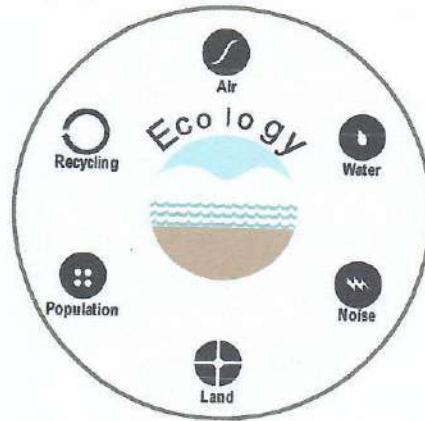
MoEF Standard Notification dated 25th September, 2000 and MoEF Schedule VI, General standard for discharge of Environmental Pollutants Part A: Effluents	5.5-9.0	10	100	250	30
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**Environmental Monitoring Report
For
October-2025**

**Project: Hirakhand Bundia Mine
Area: Orient
Coalfield: Ib Valley**



Mahanadi Coalfields Limited



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Central Mine Planning & Design Institute Ltd.
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[Assistance from Environment Division, CMPDI(HQs), Ranchi]

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Mini Bhatna

AMBIENT AIR QUALITY DATA

Area :

Orient

(Compliance Station)

Project :

HBI Mine

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source	Distance from DGS
08-Oct-25	HBI Mine	238	118	57	13.37	20.60	Coal Stockyard, Surface Bunker, Coal Transport	About 100m
08-Oct-25	Bundia Colony Pump House	263	125	58	11.74	26.15	Coal Stockyard, Surface Bunker, Coal Transport	About 150m
18-Oct-25	HBI Mine	261	148	58	13.55	23.49	Coal Stockyard, Surface Bunker, Coal Transport	About 100m
18-Oct-25	Bundia Colony Pump House	244	134	51	19.00	22.07	Coal Stockyard, Surface Bunker, Coal Transport	About 150m

F. K. Jaiswal
Authorized Signatory
CMPDI, RI-VII, LAB
BHUBANESWAR

Jaiswal

AMBIENT AIR QUALITY DATA

Area :

Orient

(Reference Station)

Project :

Hirakand Bundia Mine (HBM)

(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-Oct-25	Rampur Sub Area	214	81	36	19.00	34.63	Coal Stock And CT Road	About 1000m
03-Oct-25	Rampur Officers Guest House	180	67	29	19.33	23.49	Coal Stockyard, Surface Bunker, Coal Transport	About 1000m
04-Oct-25	Rampur Officers Guest House	171	62	26	14.79	33.12	Coal Stockyard, Surface Bunker, Coal Transport	About 1000m
04-Oct-25	Rampur Sub Area	165	63	27	15.97	20.97	Coal Stock And CT Road	About 1000m
09-Oct-25	Rampur Officers Guest House	200	77	33	18.89	22.17	Coal Stockyard, Surface Bunker, Coal Transport	About 1000m
09-Oct-25	Rampur Sub Area	195	75	32	17.51	27.49	Coal Stock And CT Road	About 1000m
10-Oct-25	Rampur Officers Guest House	179	66	28	13.21	32.95	Coal Stockyard, Surface Bunker, Coal Transport	About 1000m
10-Oct-25	Rampur Sub Area	209	77	35	17.15	33.39	Coal Stock And CT Road	About 1000m
16-Oct-25	Rampur Officers Guest House	184	75	31	15.57	17.99	Coal Stockyard, Surface Bunker, Coal Transport	About 1000m
16-Oct-25	Rampur Sub Area	192	78	34	17.81	15.07	Coal Stock And CT Road	About 1000m
17-Oct-25	Rampur Officers Guest House	152	61	27	16.51	28.04	Coal Stockyard, Surface Bunker, Coal Transport	About 1000m
17-Oct-25	Rampur Sub Area	210	95	43	10.31	14.28	Coal Stock And CT Road	About 1000m
23-Oct-25	Rampur Sub Area	203	88	40	19.15	16.38	Coal Stock And CT Road	About 1000m
23-Oct-25	Rampur Officers Guest House	194	79	35	8.90	25.38	Coal Stockyard, Surface Bunker, Coal Transport	About 1000m
24-Oct-25	Rampur Officers Guest House	211	85	38	16.12	18.27	Coal Stockyard, Surface Bunker, Coal Transport	About 1000m
24-Oct-25	Rampur Sub Area	177	71	31	18.71	16.66	Coal Stock And CT Road	About 1000m
29-Oct-25	Rampur Officers Guest House	173	70	30	9.26	28.70	Coal Stockyard, Surface Bunker, Coal Transport	About 1000m
29-Oct-25	Rampur Sub Area	149	59	27	14.70	26.91	Coal Stock And CT Road	About 1000m
30-Oct-25	Rampur Sub Area	186	80	35	12.26	22.52	Coal Stock And CT Road	About 1000m
30-Oct-25	Rampur Officers Guest House	150	59	27	18.03	35.19	Coal Stockyard, Surface Bunker, Coal Transport	About 1000m

*NAAQS,2009

100	60	80	80
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Signature



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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Orient

Project	HBI Mine							
Monitoring Station	Rampur Officers Guest House							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (a) Pyrene	Benzene
	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	(ng/m^3)	(ng/m^3)	(mg/m^3)	(ng/m^3)	($\mu\text{g}/\text{m}^3$)
03-Oct-2025	<20.0	18.72	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
04-Oct-2025	<20.0	12.03	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
09-Oct-2025	<20.0	22.98	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
10-Oct-2025	<20.0	21.38	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
16-Oct-2025	<20.0	18.72	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
17-Oct-2025	<20.0	24.33	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
23-Oct-2025	<20.0	17.38	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
24-Oct-2025	<20.0	17.92	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
29-Oct-2025	<20.0	22.18	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
30-Oct-2025	<20.0	14.70	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
Standard	400 (24hours)	180 (hour)	1.0 (24hours)	6.0 (Annual)	20 (Annual)	02 (8 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Orient

Project	HBI Mine							
Monitoring Station	Rampur Sub Area							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) 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-Oct-2025	<20.0	18.98	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
04-Oct-2025	<20.0	13.10	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
09-Oct-2025	<20.0	19.78	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
10-Oct-2025	<20.0	25.67	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
16-Oct-2025	<20.0	13.37	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
17-Oct-2025	<20.0	24.07	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
23-Oct-2025	<20.0	15.23	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
24-Oct-2025	<20.0	18.98	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
29-Oct-2025	<20.0	21.65	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
30-Oct-2025	<20.0	16.57	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
Standard	400 (24hours)	180 (hour)	1.0 (24hours)	6.0 (Annual)	20 (Annual)	02 (8 hours)	01(annual)	05(annual)

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भुवनेश्वर

TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Orient

PROJECT :

HBI Mine

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
11-Oct-25	Bundia Colony Pump House	50.4	40.6
11-Oct-25	Rampur Sub Area (Reported)	50.4	40.6
11-Oct-25	HBI Mine	60.8	59.3
11-Oct-25	Rampur Officer's Guest House	49.1	42.0
31-Oct-25	Bundia Colony Pump House	52.8	40.2
31-Oct-25	Rampur Sub Area (Reported)	51.9	42.2
31-Oct-25	Rampur Officer's Guest House	49.3	42.7
31-Oct-25	HBI Mine	60.7	56.3

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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TABLE--

EFFLUENT QUALITY DATA

Area :

Orient

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

Project :

HBI Mine

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	TDS	DO	Remarks
15-Oct-25	Mine Sump of HBM	6.82	<4.0	33	36	-	-	-	

Hattanaik

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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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Drinking Water Quality Data Orient Area

Project / OCP	HBI Mine		Indian Drinking Standards (IS-10500):2012	
	Rampur Colony	HBI Water Filter Plant		
Monitoring Station				
Date of Sampling	15-Oct-2025	15-Oct-2025	Acceptable	Permissible
Colour (Hazen)	2	3	5	15
Turbidity (NTU)	2	3	1	5
pH	7.29	6.60	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	138.66	138.66	200	600
Chloride(mg/L)	38.86	48.57	250	1000
Sulphate(mg/L)	81.20	55.26	200	400
Nitrate(mg/L)	13.56	10.20	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	98.05	70.59	200	600
Calcium(mg/L)	22	20.43	75	200
Fluoride(mg/L)	0.68	0.54	1	1.5
Total Dissolve Solid(mg/L)	267	246	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	No relaxation
Zinc(mg/L)	0.04	0.12	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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Signature



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Drinking Water Quality Data Orient Area

Project / OCP	HBI Mine		Indian Drinking Standards (IS-10500):2012	
	Rampur Colony	HBI Water Filter Plant	Acceptable	Permissible
Monitoring Station				
Date of Sampling	15-Oct-2025	15-Oct-2025	Acceptable	Permissible
Selenium(mg/L)	<0.005	<0.005	0.01	No relaxation
Sodium(mg/L)	14.57	18.06	-	-
Potassium(mg/L)	1.5	4.19	-	-
Phenolics(mg/L)	<0.001	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	<0.2	0.2	1
MPN (Index/100 ml)	Not Detected	Not Detected	-	-

Satish
Authorised Signatory
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BHUBANESWAR

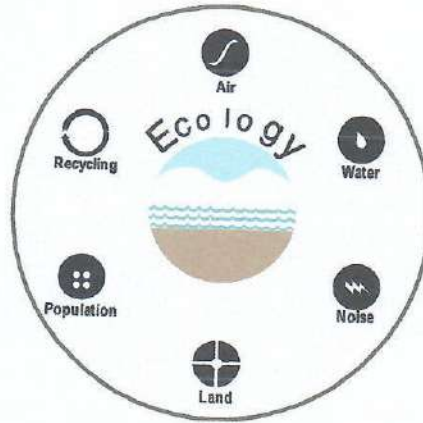
Jasmat

**Environmental Monitoring Report
For
October-2025**

**Project: Himgir Rampur Colliery
Area: Orient
Coalfield: Ib Valley**



Mahanadi Coalfields Limited



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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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AIR QUALITY MONITORING

AMBIENT AIR QUALITY DATA

Area :

Orient

(Compliance Station)

Project :

HRC

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source	Distance from DGS
08-Oct-25	Near Rampur Colliery Check Post	234	117	49	12.54	25.41		
08-Oct-25	Near CHP HRC	255	135	60	12.99	33.16		
18-Oct-25	Near Rampur Colliery Check Post	253	157	62	16.78	18.85	Mining allied activities	About 500m
18-Oct-25	Near CHP HRC	241	148	57	9.80	26.20	Mining allied activities	About 500m

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

J. S. Nayak



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Mini Bazar

Test Report

AMBIENT AIR QUALITY DATA

Area :

Orient

(Reference Station)

Project :

HRC

(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-Oct-25	Rampur Sub Area (Reported only)	214	81	36	19.00	34.63	Coal Stock And CT Road	About 1000m
03-Oct-25	Rampur Officers Guest House (Reported only)	180	67	29	19.33	23.49	Coal Stockyard, Surface Bunker, Coal Transport	About 1000m
04-Oct-25	Rampur Officers Guest House (Reported only)	171	62	26	14.79	33.12	Coal Stockyard, Surface Bunker, Coal Transport	About 1000m
04-Oct-25	Rampur Sub Area (Reported only)	165	63	27	15.97	20.97	Coal Stock And CT Road	About 1000m
09-Oct-25	Rampur Officers Guest House (Reported only)	200	77	33	18.89	22.17	Coal Stockyard, Surface Bunker, Coal Transport	About 1000m
09-Oct-25	Rampur Sub Area (Reported only)	195	75	32	17.51	27.49	Coal Stock And CT Road	About 1000m
10-Oct-25	Rampur Officers Guest House (Reported only)	179	66	28	13.21	32.95	Coal Stockyard, Surface Bunker, Coal Transport	About 1000m
10-Oct-25	Rampur Sub Area (Reported only)	209	77	35	17.15	33.39	Coal Stock And CT Road	About 1000m
16-Oct-25	Rampur Officers Guest House (Reported only)	184	75	31	15.57	17.99	Coal Stockyard, Surface Bunker, Coal Transport	About 1000m
16-Oct-25	Rampur Sub Area (Reported only)	192	78	34	17.81	15.07	Coal Stock And CT Road	About 1000m
17-Oct-25	Rampur Officers Guest House (Reported only)	152	61	27	16.51	28.04	Coal Stockyard, Surface Bunker, Coal Transport	About 1000m
17-Oct-25	Rampur Sub Area (Reported only)	210	95	43	10.31	14.28	Coal Stock And CT Road	About 1000m
23-Oct-25	Rampur Sub Area (Reported only)	203	88	40	19.15	16.38	Coal Stock And CT Road	About 1000m
23-Oct-25	Rampur Officers Guest House (Reported only)	194	79	35	8.90	25.38	Coal Stockyard, Surface Bunker, Coal Transport	About 1000m
24-Oct-25	Rampur Officers Guest House (Reported only)	211	85	38	16.12	18.27	Coal Stockyard, Surface Bunker, Coal Transport	About 1000m
24-Oct-25	Rampur Sub Area (Reported only)	177	71	31	18.71	16.66	Coal Stock And CT Road	About 1000m
29-Oct-25	Rampur Officers Guest House (Reported only)	173	70	30	9.26	28.70	Coal Stockyard, Surface Bunker, Coal Transport	About 1000m
29-Oct-25	Rampur Sub Area (Reported only)	149	59	27	14.70	26.91	Coal Stock And CT Road	About 1000m
30-Oct-25	Rampur Sub Area (Reported only)	186	80	35	12.26	22.52	Coal Stock And CT Road	About 1000m
30-Oct-25	Rampur Officers Guest House (Reported only)	150	59	27	18.03	35.19	Coal Stockyard, Surface Bunker, Coal Transport	About 1000m

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BHUBANESWAR

Janak

*NAAQS, 2009		100	60	80	80
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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Orient

Project	HRC Mine							
Monitoring Station	Rampur Sub Area (Reported only)							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) Pyrene	Benzene
	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	(ng/m^3)	(ng/m^3)	(mg/m^3)	(ng/m^3)	($\mu\text{g}/\text{m}^3$)
03-Oct-2025	<20.0	18.98	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
04-Oct-2025	<20.0	13.10	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
09-Oct-2025	<20.0	19.78	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
10-Oct-2025	<20.0	25.67	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
16-Oct-2025	<20.0	13.37	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
17-Oct-2025	<20.0	24.07	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
23-Oct-2025	<20.0	15.23	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
24-Oct-2025	<20.0	18.98	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
29-Oct-2025	<20.0	21.65	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
30-Oct-2025	<20.0	16.57	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
Standard	400 (24hours)	180 (hour)	1.0 (24hours)	6.0 (Annual)	20 (Annual)	02 (8 hours)	01(annual)	05(annual)

K. Nath
Authorised Signatory
CMPDI, RI-VII, LAB,
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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Orient

Project	HRC							
Monitoring Station	Rampur Officers Guest House (Reported Only)							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) 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-Oct-2025	<20.0	18.72	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
04-Oct-2025	<20.0	12.03	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
09-Oct-2025	<20.0	22.98	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
10-Oct-2025	<20.0	21.38	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
16-Oct-2025	<20.0	18.72	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
17-Oct-2025	<20.0	24.33	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
23-Oct-2025	<20.0	17.38	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
24-Oct-2025	<20.0	17.92	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
29-Oct-2025	<20.0	22.18	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
30-Oct-2025	<20.0	14.70	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
Standard	400 (24hours)	180 (hour)	1.0 (24hours)	6.0 (Annual)	20 (Annual)	02 (8 hours)	01(annual)	05(annual)

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TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Orient

PROJECT :

HRC

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
11-Oct-25	Near Rampur Colliery Check Post	52.6	42.4
11-Oct-25	Near CHP HRC	49.3	40.7
31-Oct-25	Near CHP HRC	52.1	40.6
31-Oct-25	Near Rampur Colliery Check Post	49.7	42.4

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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Signature

Orient UG Mines

- Orient Mine No. 1 & 2
- Orient Mine No. 3
- Orient Mine No. 4
- HBI Mine
- HRC UG Mine

Legend

-  Air Monitoring Locations

Orient Mine No. 4

Orient GM Office

Orient Mine No. 3

VIP Guest House, IB Valley

Orient Mine No. 1 & 2

Near Rampur Colliery Check Post
Near CHP HRC

Rampur Sub Area Rampur Officers Guest House

Bundia Colony Pump House

HBI Mine

Google Earth

img.google.com



3.4 KM

**Environmental Monitoring Report
For
October-2025**

Area: MCL HQ

Coalfield: Ib Valley



Mahanadi Coalfields Limited



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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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Drinking Water Quality Data MCL (HQ)

Project / OCP	MCL (HQ)		Indian Drinking Standards (IS-10500):2012	
	Monitoring Station	DAV School (Anand vihar)	Corporate Office (Jagrati Vihar)	
Date of Sampling	15-Oct-2025	15-Oct-2025	Acceptable	Permissible
Colour (Hazen)	2	2	5	15
Turbidity (NTU)	3	2	1	5
pH	7.76	7.83	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	84.04	75.63	200	600
Chloride(mg/L)	17.48	21.37	250	1000
Sulphate(mg/L)	55.26	72.56	200	400
Nitrate(mg/L)	14.32	16.26	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	78.44	117.66	200	600
Calcium(mg/L)	23.58	22.00	75	200
Fluoride(mg/L)	0.44	0.41	1	1.5
Total Dissolve Solid(mg/L)	178	206	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	No relaxation
Zinc(mg/L)	0.27	<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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Jamali



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Drinking Water Quality Data MCL (HQ)

Project / OCP	MCL (HQ)		Indian Drinking Standards (IS-10500):2012	
	Monitoring Station	DAV School (Anand vihar)	Corporate Office (Jagrati Vihar)	
Date of Sampling	15-Oct-2025	15-Oct-2025	Acceptable	Permissible
Selenium(mg/L)	<0.005	<0.005	0.01	No relaxation
Sodium(mg/L)	9.12	10.61	—	—
Potassium(mg/L)	1.89	1.46	—	—
Phenolics(mg/L)	<0.001	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	<0.2	0.2	1
MPN (Index/100 ml)	Not Detected	Not Detected	—	—

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Jaswal



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Drinking Water Quality Data MCL (HQ)

Project / OCP	MCL(HQ)		Indian Drinking Standards (IS-10500):2012	
	Inlet to Water Treatment Plant (Anand Vihar)	Outlet to Water Treatment Plant (Anand Vihar)		
Date of Sampling	15-Oct-2025	15-Oct-2025	Acceptable	Permissible
Colour (Hazen)	1	3	5	15
Turbidity (NTU)	2	3	1	5
pH	7.32	7.87	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	79.83	79.83	200	600
Chloride(mg/L)	19.43	38.86	250	1000
Sulphate(mg/L)	33.56	55.26	200	400
Nitrate(mg/L)	12.47	9.30	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	58.83	82.36	200	600
Calcium(mg/L)	18.86	28.29	75	200
Fluoride(mg/L)	0.38	0.53	1	1.5
Total Dissolve Solid(mg/L)	151	196	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	No relaxation
Zinc(mg/L)	0.04	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

Fattanesh
Authorised Signatory
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Jasmati



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Drinking Water Quality Data MCL (HQ)

Project / OCP	MCL(HQ)		Indian Drinking Standards (IS-10500):2012	
	Inlet to Water Treatment Plant (Anand Vihar)	Outlet to Water Treatment Plant (Anand Vihar)		
Date of Sampling	15-Oct-2025	15-Oct-2025	Acceptable	Permissible
Selenium(mg/L)	<0.005	<0.005	0.01	No relaxation
Sodium(mg/L)	11.59	7.56		
Potassium(mg/L)	3.32	5.04		
Phenolics(mg/L)	<0.001	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	<0.2	0.2	1
MPN (Index/100 ml)	Not Detected	Not Detected	-	-

Tattavade
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CMPDI, RI-VII, LAB
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