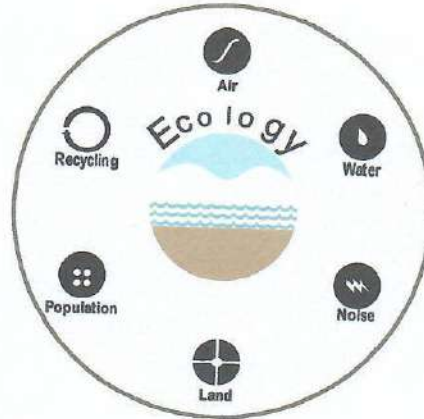


**Environmental Monitoring Report
Of
Jagannath Area
For
June-2025**

Talcher Coalfield



Mahanadi Coalfields Limited



सीएमपीडीआई
मिनी रत्न
cmpdi
Mini Ratna

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

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

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



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 Ministry of Environment & Forests

Test Report

AMBIENT AIR QUALITY DATA

Area :

Jagannath

(Compliance Station)

Project :

Jagannath OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
07-Jun-25	Near MDTP	171	76	37	9.42	21.41	Railway Siding CHP	About 800m
07-Jun-25	Near NBVL Station	167	72	34	17.46	23.99	CHP, CT Road	About 600m
20-Jun-25	Near MDTP	208	92	44	14.09	30.38	Railway Siding CHP	About 800m
20-Jun-25	Near NBVL Station	191	85	38	17.82	22.79	CHP, CT Road	About 600m

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 BHUBANESWAR

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MoEF Standards Notification dated 25th
 September, 2000

500	250		120	120
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 AIR AND WATER

Test Report

AMBIENT AIR QUALITY DATA

Area :

Jagannath

(Compliance Station)

Project :

Ananta OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
07-Jun-25	North East of Mine	171	67	33	13.68	25.06	Open-Cast Mine	Less than 500m
07-Jun-25	Near NBVL Station (Reported)	167	72	34	17.46	12.99	CHP, CT Road	About 600m
20-Jun-25	North East of Mine	202	89	41	17.02	30.38	Open-Cast Mine	Less than 500m
20-Jun-25	Near NBVL Station (Reported)	191	85	38	17.82	22.79	CHP, CT Road	About 600m

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 Authorised Signatory
 CMPDI, RI-VII, LAB
 BHUBANESWAR

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MoEF Standards Notification dated 25th September, 2000	500	250		120	120
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Test Report

AMBIENT AIR QUALITY DATA

Area :

Jagannath

(Reference Station)

Project :

Jagannath OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
02-Jun-25	Kurihan Village	125	41	22	15.71	23.99		
02-Jun-25	CWS Colony, Meeti	136	55	27	14.51	26.58	Mining Activity	About 1500 m
03-Jun-25	CWS Colony, Meeti	117	41	23	13.57	24.17	Mining Activity	About 1500 m
03-Jun-25	Kurihan Village	155	59	30	10.78	21.27		
09-Jun-25	CWS Colony, Meeti	134	50	25	11.85	26.76	Mining Activity	About 1500 m
09-Jun-25	Kurihan Village	131	48	25	12.02	28.10		
10-Jun-25	CWS Colony, Meeti	137	52	26	14.32	28.31	Mining Activity	About 1500 m
10-Jun-25	Kurihan Village	140	55	27	13.53	24.78		
16-Jun-25	CWS Colony, Meeti	148	65	30	10.93	28.31	Mining Activity	About 1500 m
16-Jun-25	Kurihan Village	124	44	19	18.32	16.79		
17-Jun-25	CWS Colony, Meeti	137	53	26	14.41	27.98	Mining Activity	About 1500 m
17-Jun-25	Kurihan Village	142	59	25	17.45	20.79		
23-Jun-25	Kurihan Village	108	43	19	11.60	15.95		
23-Jun-25	CWS Colony, Meeti	114	45	20	12.02	25.82	Mining Activity	About 1500 m
24-Jun-25	CWS Colony, Meeti	129	49	25	12.89	40.51	Mining Activity	About 1500 m
24-Jun-25	Kurihan Village	135	53	24	12.22	19.19		
27-Jun-25	CWS Colony, Meeti	118	44	23	15.66	23.63	Mining Activity	About 1500 m
27-Jun-25	Kurihan Village	105	35	16	13.82	23.63		
28-Jun-25	Kurihan Village	151	50	27	16.14	43.97		
28-Jun-25	CWS Colony, Meeti	152	56	29	17.41	36.46	Mining Activity	About 1500 m

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*NAAQS, 2009		100	60	80	80
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Test Report

AMBIENT AIR QUALITY DATA

Area :

Jagannath

(Reference Station)

Project :

Ananta OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
04-Jun-25	Guthasahi Village	146	52	27	12.02	27.34	Mining Activities	About 3km
04-Jun-25	Asanabahali Village	141	55	27	14.93	24.31	Domestic and Mining Activities	About 4km
04-Jun-25	Sibarampur Village	126	43	23	15.27	21.59	Domestic and Mining Activities	About 4km
04-Jun-25	Central Nursery	118	45	24	11.85	22.42	Open-Cast Mine	Less than 500m
05-Jun-25	Sibarampur Village	140	47	26	14.74	30.38	Domestic and Mining Activities	About 4km
05-Jun-25	Guthasahi Village	115	44	22	15.75	30.38	Mining Activities	About 3km
05-Jun-25	Central Nursery	131	50	26	15.40	19.53	Open-Cast Mine	Less than 500m
05-Jun-25	Asanabahali Village	118	46	24	15.27	23.19	Domestic and Mining Activities	About 4km
11-Jun-25	Central Nursery	117	43	23	14.32	18.64	Open-Cast Mine	Less than 500m
11-Jun-25	Sibarampur Village	107	40	19	15.75	22.03	Domestic and Mining Activities	About 4km
11-Jun-25	Guthasahi Village	135	50	26	11.78	27.18	Mining Activities	About 3km
11-Jun-25	Asanabahali Village	153	64	29	12.44	28.69	Domestic and Mining Activities	About 4km
12-Jun-25	Sibarampur Village	93	46	24	13.27	21.27	Domestic and Mining Activities	About 4km
12-Jun-25	Guthasahi Village	146	53	28	16.58	28.78	Mining Activities	About 3km
12-Jun-25	Asanabahali Village	149	50	28	14.74	29.54	Domestic and Mining Activities	About 4km
12-Jun-25	Central Nursery	152	57	29	11.06	26.76	Open-Cast Mine	Less than 500m
18-Jun-25	Guthasahi Village	135	47	25	12.43	12.91	Mining Activities	About 3km
18-Jun-25	Sibarampur Village	138	53	25	13.26	24.31	Domestic and Mining Activities	About 4km
18-Jun-25	Asanabahali Village	118	50	24	13.27	28.10	Domestic and Mining Activities	About 4km
18-Jun-25	Central Nursery	153	65	31	16.21	31.07	Open-Cast Mine	Less than 500m
19-Jun-25	Sibarampur Village	127	47	22	15.71	29.58	Domestic and Mining Activities	About 4km
19-Jun-25	Guthasahi Village	155	63	29	13.26	20.51	Mining Activities	About 3km
19-Jun-25	Central Nursery	123	43	24	16.16	19.75	Open-Cast Mine	Less than 500m

*NAAQS, 2009

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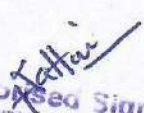
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CMPDI, RI-VII, LAB
BHUBANESWAR

Project :

Ananta OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
19-Jun-25	Asanabahali Village	138	57	28	13.10	25.58	Domestic and Mining Activities	About 4km
25-Jun-25	Central Nursery	133	54	26	11.61	20.51	Open-Cast Mine	Less than 500m
25-Jun-25	Guthasahi Village	114	45	21	13.68	26.58	Mining Activities	About 3km
25-Jun-25	Asanabahali Village	114	48	23	17.90	33.58	Domestic and Mining Activities	About 4km
25-Jun-25	Sibarampur Village	146	61	28	13.82	31.23	Domestic and Mining Activities	About 4km
26-Jun-25	Sibarampur Village	123	40	21	16.58	34.85	Domestic and Mining Activities	About 4km
26-Jun-25	Asanabahali Village	108	38	17	12.44	29.62	Domestic and Mining Activities	About 4km
26-Jun-25	Guthasahi Village	146	51	28	13.82	27.01	Mining Activities	About 3km
26-Jun-25	Central Nursery	110	38	18	16.18	21.70	Open-Cast Mine	Less than 500m


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*NAAQS, 2009

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Jagannath

Project	Jagannath OCP							
Monitoring Station	CWS Colony, Meeti							
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 ($\mu\text{g}/\text{m}^3$)
02-Jun-2025	<20.0	25.53	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
03-Jun-2025	<20.0	19.83	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
09-Jun-2025	<20.0	25.28	<0.1	<1.0	<1.0	0.4	BQL(QL=0.7)	BQL
10-Jun-2025	<20.0	26.53	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL
16-Jun-2025	<20.0	16.12	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
17-Jun-2025	<20.0	20.83	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
23-Jun-2025	<20.0	17.10	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL
24-Jun-2025	<20.0	22.57	<0.1	<1.0	<1.0	0.4	BQL(QL=0.7)	BQL
27-Jun-2025	<20.0	20.33	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
28-Jun-2025	<20.0	26.28	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL
Standard	400(24h ours)	180(hou r)	1.0(24h ours)	6.0(Ann ual)	20(Ann ual)	02(8hou rs)	01(annual)	05(annu al)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Jagannath

Project	Jagannath OCP							
Monitoring Station	Kurihan Village							
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)
02-Jun-2025	<20.0	20.33	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL
03-Jun-2025	<20.0	20.83	<0.1	<1.0	<1.0	0.4	BQL(QL=0.7)	BQL
09-Jun-2025	<20.0	18.10	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
10-Jun-2025	<20.0	26.28	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL
16-Jun-2025	<20.0	14.63	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
17-Jun-2025	<20.0	15.12	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL
23-Jun-2025	<20.0	17.10	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
24-Jun-2025	<20.0	23.30	<0.1	<1.0	<1.0	0.4	BQL(QL=0.7)	BQL
27-Jun-2025	<20.0	16.12	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
28-Jun-2025	<20.0	22.57	<0.1	<1.0	<1.0	0.8	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: Jagannath

Project	Ananta OCP							
Monitoring Station	Central Nursery							
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)
04-Jun-2025	<20.0	24.55	<0.1	<1.0	<1.0	0.3	BQL(QL=0.7)	BQL
05-Jun-2025	<20.0	26.78	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL
11-Jun-2025	<20.0	20.83	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
12-Jun-2025	<20.0	22.57	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
18-Jun-2025	<20.0	23.30	<0.1	<1.0	<1.0	0.4	BQL(QL=0.7)	BQL
19-Jun-2025	<20.0	19.08	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
25-Jun-2025	<20.0	18.10	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
26-Jun-2025	<20.0	27.27	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
Standard	400(24h ours)	180(hou r)	1.0(24h ours)	6.0(Ann ual)	20(Ann ual)	02(8hou rs)	01(annual)	05(annu al)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Jagannath

Project	Ananta OCP							
Monitoring Station	Guthasahi Village							
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)
04-Jun-2025	<20.0	14.13	<0.1	<1.0	<1.0	0.4	BQL(Q L=0.7)	BQL
05-Jun-2025	<20.0	24.05	<0.1	<1.0	<1.0	0.6	BQL(Q L=0.7)	BQL
11-Jun-2025	<20.0	21.57	<0.1	<1.0	<1.0	0.5	BQL(Q L=0.7)	BQL
12-Jun-2025	<20.0	24.55	<0.1	<1.0	<1.0	0.4	BQL(Q L=0.7)	BQL
18-Jun-2025	<20.0	12.40	<0.1	<1.0	<1.0	0.3	BQL(Q L=0.7)	BQL
19-Jun-2025	<20.0	18.35	<0.1	<1.0	<1.0	0.4	BQL(Q L=0.7)	BQL
25-Jun-2025	<20.0	19.08	<0.1	<1.0	<1.0	0.5	BQL(Q L=0.7)	BQL
26-Jun-2025	<20.0	23.05	<0.1	<1.0	<1.0	0.4	BQL(Q L=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: Jagannath

Project	Ananta OCP							
Monitoring Station	Sibarampur Village							
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)
04-Jun-2025	<20.0	15.37	<0.1	<1.0	<1.0	0.3	BQL(QL=0.7)	BQL
05-Jun-2025	<20.0	20.33	<0.1	<1.0	<1.0	0.4	BQL(QL=0.7)	BQL
11-Jun-2025	<20.0	21.07	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL
12-Jun-2025	<20.0	20.83	<0.1	<1.0	<1.0	0.3	BQL(QL=0.7)	BQL
18-Jun-2025	<20.0	18.10	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
19-Jun-2025	<20.0	13.38	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
25-Jun-2025	<20.0	12.90	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
26-Jun-2025	<20.0	20.58	<0.1	<1.0	<1.0	0.6	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: Jagannath

Project	Ananta OCP							
Monitoring Station	Asanabahali 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)	($\mu\text{g}/\text{m}^3$)
04-Jun-2025	<20.0	13.13	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
05-Jun-2025	<20.0	26.78	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
11-Jun-2025	<20.0	20.33	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
12-Jun-2025	<20.0	24.55	<0.1	<1.0	<1.0	0.4	BQL(QL=0.7)	BQL
18-Jun-2025	<20.0	13.88	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL
19-Jun-2025	<20.0	22.57	<0.1	<1.0	<1.0	0.3	BQL(QL=0.7)	BQL
25-Jun-2025	<20.0	27.27	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
26-Jun-2025	<20.0	23.80	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
Standard	400(24h ours)	180(hour)	1.0(24h ours)	6.0(Annual)	20(Annual)	02(8hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA

Area: Jagannath

Project	Ananta OCP
Monitoring Station	North-East of the Mine
Date of sampling	Carbon Monoxide (CO)
	mg/m³
07-Jun-2025	1.1
20-Jun-2025	1.3
Standard	02(8 Hours)

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विश्व स्तर पर
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Mini Ratna

TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Jagannath

PROJECT :

Jagannath OCP

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
09-Jun-25	Near NBVL Station	67.3	56.2
09-Jun-25	Near MDTP	63.6	58.3
09-Jun-25	CWS Colony, MEETI	49.5	39.9
09-Jun-25	Central Nursery (Reported only)	63.2	45.6
23-Jun-25	Near NBVL Station	70.1	58.5
23-Jun-25	Near MDTP	66.3	60.4
23-Jun-25	CWS Colony, MEETI	51.9	35.6
23-Jun-25	Central Nursery (Reported only)	65.8	47.5

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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Jathu



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TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Jagannath

PROJECT :

Ananta OCP

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
09-Jun-25	North East of the Mine	59.9	40.4
09-Jun-25	Guthasahi Village	51.8	40.7
09-Jun-25	Central Nursery	63.2	45.6
23-Jun-25	North East of the Mine	62.4	42.1
23-Jun-25	Guthasahi Village	50.2	41.3
23-Jun-25	Central Nursery	65.8	47.5

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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TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Jagannath

PROJECT :

Balanda OCP

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
09-Jun-25	Near NBVL Station (Reported only)	67.3	56.2
23-Jun-25	Near NBVL Station (Reported only)	70.1	58.5

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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TABLE--

EFFLUENT QUALITY DATA

Area :

Jagannath

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

Project :

Ananta OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	Remarks
13-Jun-25	Mine Sump Water	7.40	<4.0	18	12	-	
13-Jun-25	O & G Trap Intlet	7.28	<4.0	27	24	-	
13-Jun-25	O & G Trap Outlet	8.04	<4.0	23	16	-	
27-Jun-25	O & G Trap Intlet	6.72	<4.0	37	28	-	
27-Jun-25	O & G Trap Outlet	7.16	<4.0	30	20	-	

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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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Water Research

TABLE--

EFFLUENT QUALITY DATA

Area :

Jagannath

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

Project :

Ananta OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	MPN/100mL
13-Jun-25	STP INLET	7.03	-	51	-	<2	110
13-Jun-25	STP OUTLET	7.37	-	38	-	<2	58
27-Jun-25	STP INLET	6.79	-	43	-	<2	94
27-Jun-25	STP OUTLET	6.81	-	34	-	<2	46

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G.S.R. 1265(E) Effluent discharge standards (applicable to all mode of disposal), Sewage Treatment Plants (STPs)	6.5-9.0	-	<100	-	30	<1000
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Drinking Water Quality Data Jagannath Area

Project / OCP	Jagannath OCP			Indian Drinking Standards (IS-10500):2012	
	Monitoring Station	Balanda Colony	Jagannath Colony	Rakas Village Well Water	
Date of Sampling	12-Jun-2025	12-Jun-2025	12-Jun-2025	Acceptable	Permissible
Colour(Hazen)	1	2	1	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	2	2	1	1	5
pH	7.39	7.01	7.61	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	58.83	214.30	58.83	200	600
Chloride(mg/L)	11.67	27.23	11.67	250	1000
Sulphate(mg/L)	78.32	21.32	33.95	200	400
Nitrate(mg/L)	<0.5	1.03	<0.5	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	155.38	223.10	103.58	200	600
Calcium(mg/L)	43.12	68.67	28.75	75	200
Fluoride(mg/L)	0.86	0.90	0.62	1	1.5
Total Dissolve Solid(mg/L)	242	354	168	500	2000
Copper(mg/L)	<0.03	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	<0.04	<0.04	0.1	0.3
Iron(mg/L)	<0.1	<0.1	<0.1	1.0	No relaxation
Zinc(mg/L)	<0.04	<0.04	<0.04	5	15
Lead(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.001	<0.001	<0.001	0.003	No relaxation
Total Chromium (mg/L)	<0.01	<0.01	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	<0.2	<0.2	0.5	2.4

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Drinking Water Quality Data Jagannath Area

Project / OCP	Ananta OCP		Indian Drinking Standards (IS-10500):2012	
	Ananta Colony	Dera Village Tube Well Water		
Monitoring Station				
Date of Sampling	12-Jun-2025	12-Jun-2025	Acceptable	Permissible
Colour(Hazen)	1	3	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	1	3	1	5
pH	7.60	6.34	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	54.63	71.43	200	600
Chloride(mg/L)	9.72	44.73	250	1000
Sulphate(mg/L)	10.31	54.68	200	400
Nitrate(mg/L)	<0.5	<0.5	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	59.76	159.36	200	600
Calcium(mg/L)	15.97	47.91	75	200
Fluoride(mg/L)	0.50	0.43	1	1.5
Total Dissolve Solid(mg/L)	108	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	1.0	No relaxation
Zinc(mg/L)	<0.04	<0.04	5	15
Lead(mg/L)	<0.005	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.001	<0.001	0.003	No relaxation
Total Chromium (mg/L)	<0.01	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	<0.2	0.5	2.4


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Drinking Water Quality Data Jagannath Area

Project / OCP	Jagannath OCP			Indian Drinking Standards (IS-10500):2012	
	Monitoring Station	Balanda Colony	Jagannath Colony	Rakas Village Well Water	
Date of Sampling	12-Jun-2025	12-Jun-2025	12-Jun-2025	Acceptable	Permissible
Selenium(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Sodium(mg/L)	13.67	14.72	13.05	-	-
Potassium(mg/L)	0.60	4.20	2.76	-	-
Phenolics(mg/L)	<0.001	<0.001	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	<0.2	<0.2	0.2	1.0
MPN (Index/100 ml)	Not Detected	Not Detected	Not Detected	-	-

Project / OCP	Ananta OCP		Indian Drinking Standards (IS-10500):2012	
	Monitoring Station	Ananta Colony	Dera Village Tube Well Water	
Date of Sampling	12-Jun-2025	12-Jun-2025	Acceptable	Permissible
Selenium(mg/L)	<0.005	<0.005	0.01	No relaxation
Sodium(mg/L)	12.41	20.34	-	-
Potassium(mg/L)	2.72	1.46	-	-
Phenolics(mg/L)	<0.001	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	<0.2	0.2	1.0
MPN (Index/100 ml)	Not Detected	Not Detected	-	-

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Surface Water Quality Data Jagannath Area

Project/OCP	Ananta				IS:2296-1982 Tolerance for inland Surface water (Class C)
	Upstream of Bangaru Jhor as downstream water point of Jagannath OCP (Reported)	Down stream of Bangaru Jhor (upstream of Bhubaneswari)	Dera Pond South	Brundabanpur Pond North	
Date of sampling	12-Jun-25	12-Jun-25	12-Jun-25	12-Jun-25	
pH	7.12	7.46	6.82	6.67	6.5-8.5
Color (Hazen unit)	3	3	4	3	300
Dissolved Oxygen(mg/L)	6.6	6.9	6.9	6.7	4
BOD (3 days 27°C(mg/L)	<2	<2	<2	<2	3
Chlorides(mg/L)	50.62	27.26	31.15	17.52	600
Sulphate(mg/L)	175.32	144.81	35.19	241.30	400
Nitrate(mg/L)	9.96	4.61	5.86	10.06	50
Fluoride(mg/L)	0.90	0.96	0.80	0.78	1.5
Total Hardness(mg/L)	298.41	266.58	59.68	541.12	-
Total dissolved solids (mg/L)	532	450	174	610	1500
TSS(mg/L)	34	46	28	26	-
Copper(mg/L)	<0.03	<0.03	<0.03	<0.03	1.5
Iron(mg/L)	<0.1	<0.1	<0.1	<0.1	50
Zinc(mg/L)	0.08	0.06	0.2	0.08	15
Lead(mg/L)	<0.005	<0.005	<0.005	<0.005	0.1
Cadmium(mg/L)	<0.001	<0.001	<0.001	<0.001	0.01
Total Chromium (mg/L)	<0.01	<0.01	<0.01	<0.01	-
Arsenic(mg/L)	<0.005	<0.005	<0.005	<0.005	0.2
Selenium(mg/L)	<0.005	<0.005	<0.005	<0.005	0.05
Chromium(as Cr ⁶⁺)(mg/L)	<0.05	<0.05	<0.05	<0.05	0.05
Phenolics(mg/L)	<0.001	<0.001	<0.001	<0.001	0.005
Oil & Grease (mg/L)	<4.0	<4.0	<4.0	<4.0	0.1
MPN (Index/100 ml)	140	110	110	170	-
Residual Free Chlorine(mg/L)	<0.2	<0.2	<0.2	<0.2	0.2

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Surface Water Quality Data Jagannath Area

Project/OCP	Jagannath				IS:2296-1982 Tolerance for inland Surface water (Class C)
	Downstream of Bangaru Jhor nalla	Downstream of Brahmani River where Bangaru Water meets	Upstream of Brahmani River where Bangaru Water meets	Upstream of Bangaru Jhor river near Joragarhia as downstream of Bharatpur OCP (Upstream for Jagannath) (Reported)	
Date of sampling	12-Jun-25	12-Jun-25	12-Jun-25	13-Jun-25	
pH	7.12	7.27	7.74	7.64	6.5-8.5
Color (Hazen unit)	3	5	4	5	300
Dissolved Oxygen(mg/L)	6.6	6.3	6.8	6.1	4
BOD (3 days 27°C(mg/L)	<2	<2	<2	<2	3
Chlorides(mg/L)	50.62	33.10	27.26	21.42	600
Sulphate(mg/L)	175.32	188.31	127.27	131.56	400
Nitrate(mg/L)	9.96	4.32	0.51	1.21	50
Fluoride(mg/L)	0.90	0.96	0.74	0.87	1.5
Total Hardness(mg/L)	298.41	370.03	190.98	286.47	-
Total dissolved solids (mg/L)	532	597	350	340	1500
TSS(mg/L)	34	52	36	48	-
Copper(mg/L)	<0.03	<0.03	<0.03	<0.03	1.5
Iron(mg/L)	<0.1	<0.1	<0.1	<0.1	50
Zinc(mg/L)	0.08	0.08	0.06	<0.07	15
Lead(mg/L)	<0.005	<0.005	<0.005	<0.005	0.1
Cadmium(mg/L)	<0.001	<0.001	<0.001	<0.001	0.01
Total Chromium (mg/L)	<0.01	<0.01	<0.01	<0.01	-
Arsenic(mg/L)	<0.005	<0.005	<0.005	<0.005	0.2
Selenium(mg/L)	<0.005	<0.005	<0.005	<0.005	0.05
Chromium(as Cr ⁶⁺)(mg/L)	<0.05	<0.05	<0.05	<0.05	0.05
Phenolics(mg/L)	<0.001	<0.001	<0.001	<0.001	0.005
Oil & Grease (mg/L)	<4.0	<4.0	<4.0	<4.0	0.1
MPN (Index/100 ml)	140	140	120	130	-
Residual Free Chlorine(mg/L)	<0.2	<0.2	<0.2	<0.2	0.2

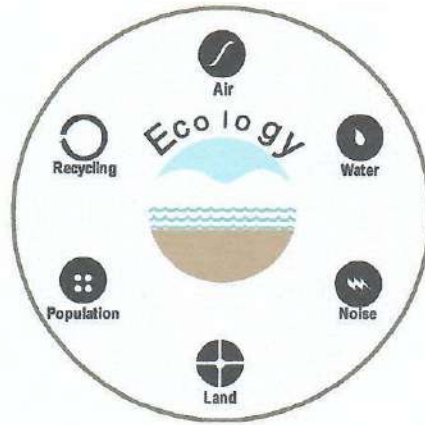
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BHUBANESWAR

**Environmental Monitoring Report
Of
Bhubaneswari
For
June-2025**

IB Valley Coalfield



Mahanadi Coalfields Limited



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

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

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Test Report

AMBIENT AIR QUALITY DATA

Area :

Bhubaneswari

(Compliance Station)

Project :

Bhubaneswari OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
07-Jun-25	B.C.M.L. Workshop	187	78	36	13.82	25.32	Mining activities, O.B Dump yard	About 400 to 500m
07-Jun-25	Silo Substation Office	171	73	34	14.51	22.03		
20-Jun-25	B.C.M.L. Workshop	185	80	39	14.21	20.25	Mining activities, O.B Dump yard	About 400 to 500m
20-Jun-25	Silo Substation Office	192	86	39	17.50	28.69		

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BHUBANESWAR

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MoEF Standards Notification dated 25th
September, 2000

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Test Report

AMBIENT AIR QUALITY DATA

Area :

Bhubaneswari

(Reference Station)

Project :

Bhubaneswari OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
04-Jun-25	Naraharipur Village	126	49	24	17.97	28.69		
04-Jun-25	Kandhal Village (Reported Only)	150	54	29	15.20	26.16		
05-Jun-25	Kandhal Village (Reported Only)	129	47	23	12.66	26.38		
05-Jun-25	Naraharipur Village	146	54	28	13.53	27.18		
11-Jun-25	Naraharipur Village	134	49	26	16.58	27.18		
11-Jun-25	Kandhal Village (Reported Only)	138	53	27	12.44	29.54		
12-Jun-25	Kandhal Village (Reported Only)	157	65	30	15.20	26.16		
12-Jun-25	Naraharipur Village	114	50	23	14.40	29.58		
18-Jun-25	Naraharipur Village	171	64	30	17.82	13.67		
18-Jun-25	Kandhal Village (Reported Only)	162	66	30	14.09	22.79		
19-Jun-25	Kandhal Village (Reported Only)	117	41	21	16.16	31.14		
19-Jun-25	Naraharipur Village	140	44	24	16.16	33.42		
25-Jun-25	Kandhal Village (Reported Only)	158	65	31	12.24	20.25		
25-Jun-25	Naraharipur Village	161	59	28	15.00	34.72		
26-Jun-25	Naraharipur Village	133	42	23	14.92	19.75		
26-Jun-25	Kandhal Village (Reported Only)	129	51	24	15.45	23.48		

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*NAAQS, 2009

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Bhubaneswari

Project	Bhubaneswari OCP							
Monitoring Station	Naraharipur 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)	($\mu\text{g}/\text{m}^3$)
04-Jun-2025	<20.0	19.92	<0.1	<1.0	<1.0	0.9	BQL(Q L=0.7)	BQL
05-Jun-2025	<20.0	17.03	<0.1	<1.0	<1.0	0.8	BQL(Q L=0.7)	BQL
11-Jun-2025	<20.0	18.87	<0.1	<1.0	<1.0	0.6	BQL(Q L=0.7)	BQL
12-Jun-2025	<20.0	21.75	<0.1	<1.0	<1.0	0.8	BQL(Q L=0.7)	BQL
18-Jun-2025	<20.0	20.43	<0.1	<1.0	<1.0	0.7	BQL(Q L=0.7)	BQL
19-Jun-2025	<20.0	12.05	<0.1	<1.0	<1.0	0.6	BQL(Q L=0.7)	BQL
25-Jun-2025	<20.0	17.03	<0.1	<1.0	<1.0	0.5	BQL(Q L=0.7)	BQL
26-Jun-2025	<20.0	18.35	<0.1	<1.0	<1.0	0.9	BQL(Q L=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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TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Bhubaneswari

PROJECT :

Bhubaneswari OCP

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
09-Jun-25	Naraharipur Village	51.6	41.3
09-Jun-25	Silo Substaion Office	61.2	43.8
09-Jun-25	BCML Workshop	69.5	53.7
10-Jun-25	Kandhal Village (Reported)	50.9	41.5
23-Jun-25	Naraharipur Village	49.4	40.1
23-Jun-25	Silo Substaion Office	62.7	45.6
23-Jun-25	BCML Workshop	72.4	58.3
24-Jun-25	Kandhal Village (Reported)	51.4	42.1

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

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BHUBANESWAR

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विशेषज्ञ
CMPDI
भारत सरकार

TABLE--

EFFLUENT QUALITY DATA

Area :

Bhubaneswari

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

Project :

Bhubaneswari OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	Remarks
13-Jun-25	Mine Sump Water	7.45	<4.0	19	12	-	
13-Jun-25	O & G Trap Intlet	6.16	<4.0	39	32	-	
13-Jun-25	O & G Trap Outlet	7.71	<4.0	31	24	-	
27-Jun-25	O & G Trap Intlet	6.79	<4.0	41	32	-	
27-Jun-25	O & G Trap Outlet	7.15	<4.0	30	20	-	

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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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Surface Water Quality Data Bhubaneswari Area

Project/OCP	Bhubaneswari		IS:2296-1982 Tolerance for inland Surface water (Class C)
NAME OF STATIONS	Upstream of Bangaru Jhor as downstream water point of Ananta OCP (Reported)	Down stream of Bangaru Jhor- Khaisa Pala Village	
Date of sampling	12-Jun-25	12-Jun-25	
pH	7.46	7.46	6.5-8.5
Color (Hazen unit)	3	4	300
Dissolved Oxygen(mg/L)	6.9	6.3	4
BOD (3 days 27°C)(mg/L)	<2	<2	3
Chlorides(mg/L)	27.26	15.58	600
Sulphate(mg/L)	144.81	153.25	400
Nitrate(mg/L)	4.61	0.80	50
Fluoride(mg/L)	0.96	0.89	1.5
Total Hardness(mg/L)	266.58	370.03	-
Total dissolved solids (mg/L)	450	378	1500
TSS(mg/L)	46	45	-
Copper(mg/L)	<0.03	<0.03	1.5
Iron(mg/L)	<0.1	0.12	50
Zinc(mg/L)	0.06	0.09	15
Lead(mg/L)	<0.005	<0.005	0.1
Cadmium(mg/L)	<0.001	<0.001	0.01
Total Chromium (mg/L)	<0.01	<0.01	-
Arsenic(mg/L)	<0.005	<0.005	0.2
Selenium(mg/L)	<0.005	<0.005	0.05
Chromium(as Cr ⁶⁺)(mg/L)	<0.05	<0.05	0.05
Phenolics(mg/L)	<0.001	<0.001	0.005
Oil & Grease (mg/L)	<4.0	<4.0	0.1
MPN (Index/100 ml)	110	150	-
Residual Free Chlorine(mg/L)	<0.2	<0.2	0.2

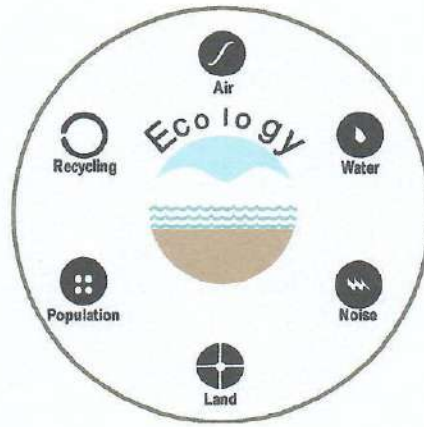
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Authorised Signatory
CMPDI, RI-VII, LAB
BHUBANESWAR

**Environmental Monitoring Report
Of
Bharatpur Area
For
June-2025**

Talcher Coalfield



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]

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



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Test Lab
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MINI LABS

Test Report

AMBIENT AIR QUALITY DATA

Area :

Bharatpur

(Compliance Station)

Project :

Bharatpur OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
06-Jun-25	Near Regional Store	175	71	34	13.03	23.87	Mining Activities	About 500m
06-Jun-25	North-West Point of the Mine	156	60	32	13.95	18.64	Domestic & Mining Activities	About 500m
06-Jun-25	Near ETP/Workshop	195	86	41	11.06	22.42	Mining Activities & Coal Stock	Above 500m
20-Jun-25	Near Regional Store	179	75	36	11.89	24.44	Mining Activities	About 500m
20-Jun-25	North-West Point of the Mine	175	73	34	15.34	27.34	Domestic & Mining Activities	About 500m
20-Jun-25	Near ETP/Workshop	186	83	38	12.22	22.39	Mining Activities & Coal Stock	Above 500m

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BHUBANESWAR

MoEF Standards Notification dated 25th September, 2000	600	300		120	120
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C.M.P.D.I.
भारत सरकार
भारत

Test Report

AMBIENT AIR QUALITY DATA

Area :

Bharatpur

(Reference Station)

Project :

Bharatpur OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
02-Jun-25	East of the Mine, Natedi Village (Reported Only)	128	48	25	14.10	27.34	Coal Transportation Road	About 2km
03-Jun-25	East of the Mine, Natedi Village (Reported Only)	119	46	24	15.79	30.38	Coal Transportation Road	About 2km
04-Jun-25	Kalinga Colony	121	46	22	10.66	24.59		
04-Jun-25	Karnapur Village	127	46	24	11.98	34.60		
04-Jun-25	Near Joragdia Village	121	43	24	14.93	21.27	Transportation, Domestic Cooking	About 1km
04-Jun-25	Khajuria Village	135	50	26	12.66	29.58		
05-Jun-25	Karnapur Village	131	53	25	16.12	34.60		
05-Jun-25	Kalinga Colony	133	50	25	15.34	25.82		
05-Jun-25	Near Joragdia Village	148	57	29	15.79	21.70	Transportation, Domestic Cooking	About 1km
05-Jun-25	Khajuria Village	114	65	30	12.02	20.51		
09-Jun-25	East of the Mine, Natedi Village (Reported Only)	110	42	21	10.66	23.87	Coal Transportation Road	About 2km
10-Jun-25	East of the Mine, Natedi Village (Reported Only)	135	51	27	17.04	26.16	Coal Transportation Road	About 2km
11-Jun-25	Near Joragdia Village	153	64	31	15.34	27.34	Transportation, Domestic Cooking	About 1km
11-Jun-25	Khajuria Village	145	56	29	15.71	24.78		
11-Jun-25	Karnapur Village	148	55	29	13.27	22.79		
11-Jun-25	Kalinga Colony	141	53	27	11.45	20.98		
12-Jun-25	Khajuria Village	167	67	32	12.90	24.47		
12-Jun-25	Near Joragdia Village	138	53	27	13.27	31.14	Transportation, Domestic Cooking	About 1km
12-Jun-25	Kalinga Colony	125	51	24	25.57	43.04		
12-Jun-25	Karnapur Village	154	63	30	17.46	22.39		
16-Jun-25	East of the Mine, Natedi Village (Reported Only)	142	51	28	14.09	15.95	Coal Transportation Road	About 2km
17-Jun-25	East of the Mine, Natedi Village (Reported Only)	138	47	26	16.99	26.58	Coal Transportation Road	About 2km
18-Jun-25	Karnapur Village	140	55	25	17.04	21.94		

*NAAQS,2009

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Project :**Bharatpur OCP****(conc. in $\mu\text{g}/\text{cu.m.}$)**

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
18-Jun-25	Near Joragdia Village	157	52	28	12.89	30.38	Transportation, Domestic Cooking	About 1km
18-Jun-25	Khajuria Village	133	56	24	11.45	33.27		
18-Jun-25	Kalinga Colony	110	40	18	17.04	39.66		
19-Jun-25	Near Joragdia Village	138	48	23	15.75	27.34	Transportation, Domestic Cooking	About 1km
19-Jun-25	Khajuria Village	163	57	28	13.56	25.55		
19-Jun-25	Karnapur Village	127	53	23	17.41	21.27		
19-Jun-25	Kalinga Colony	145	55	27	17.04	31.23		
23-Jun-25	East of the Mine, Natedi Village (Reported Only)	118	39	19	13.68	21.27	Coal Transportation Road	About 2km
24-Jun-25	East of the Mine, Natedi Village (Reported Only)	133	44	25	15.34	28.10	Coal Transportation Road	About 2km
25-Jun-25	Kalinga Colony	127	51	24	16.58	18.99		
25-Jun-25	Khajuria Village	129	40	23	12.43	29.62		
25-Jun-25	Near Joragdia Village	153	53	26	16.99	28.86	Transportation, Domestic Cooking	About 1km
25-Jun-25	Karnapur Village	124	45	20	15.45	21.41		
26-Jun-25	Kalinga Colony	148	60	28	15.39	27.49		
26-Jun-25	Near Joragdia Village	128	42	22	17.82	28.86	Transportation, Domestic Cooking	About 1km
26-Jun-25	Karnapur Village	115	37	18	11.68	15.19		
26-Jun-25	Khajuria Village	144	55	26	18.88	15.19		
27-Jun-25	East of the Mine, Natedi Village (Reported Only)	121	40	22	15.75	21.27	Coal Transportation Road	About 2km
28-Jun-25	East of the Mine, Natedi Village (Reported Only)	106	37	19	15.04	34.00	Coal Transportation Road	About 2km

*NAAQS,2009

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Bharatpur

Project	Bharatpur OCP							
Monitoring Station	Kalinga Colony							
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)	($\mu\text{g}/\text{m}^3$)
04-Jun-2025	<20.0	17.10	<0.1	<1.0	<1.0	0.3	BQL(QL=0.7)	BQL
05-Jun-2025	<20.0	21.82	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL
11-Jun-2025	<20.0	21.57	<0.1	<1.0	<1.0	0.4	BQL(QL=0.7)	BQL
12-Jun-2025	<20.0	23.30	<0.1	<1.0	<1.0	0.3	BQL(QL=0.7)	BQL
18-Jun-2025	<20.0	16.12	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
19-Jun-2025	<20.0	23.30	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL
25-Jun-2025	<20.0	17.60	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
26-Jun-2025	<20.0	24.55	<0.1	<1.0	<1.0	0.4	BQL(QL=0.7)	BQL
Standard	400(24hours)	180(hour)	1.0(24hours)	6.0(Annual)	20(Annual)	02(8hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Bharatpur

Project	Bharatpur OCP							
Monitoring Station	Near Joragadia 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)	Benzen e ($\mu\text{g}/\text{m}^3$)
04-Jun-2025	<20.0	19.33	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
05-Jun-2025	<20.0	20.33	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
11-Jun-2025	<20.0	17.10	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
12-Jun-2025	<20.0	24.55	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
18-Jun-2025	<20.0	21.82	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
19-Jun-2025	<20.0	21.57	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
25-Jun-2025	<20.0	23.30	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
26-Jun-2025	<20.0	17.60	<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(8hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Bharatpur

Project	Bharatpur OCP							
Monitoring Station	Khajuria Village							
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)
04-Jun-2025	<20.0	15.87	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
05-Jun-2025	<20.0	25.53	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL
11-Jun-2025	<20.0	15.12	<0.1	<1.0	<1.0	0.3	BQL(QL=0.7)	BQL
12-Jun-2025	<20.0	18.10	<0.1	<1.0	<1.0	0.4	BQL(QL=0.7)	BQL
18-Jun-2025	<20.0	21.32	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL
19-Jun-2025	<20.0	15.37	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
25-Jun-2025	<20.0	18.60	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
26-Jun-2025	<20.0	24.30	<0.1	<1.0	<1.0	0.3	BQL(QL=0.7)	BQL
Standard	400(24hours)	180(hour)	1.0(24hours)	6.0(Annual)	20(Annual)	02(8hours)	01(annual)	05(annual)

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1/10/25



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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Bharatpur

Project	Bharatpur OCP							
Monitoring Station	Karanpur Village							
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)
04-Jun-2025	<20.0	16.12	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL
05-Jun-2025	<20.0	25.53	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
11-Jun-2025	<20.0	26.03	<0.1	<1.0	<1.0	0.3	BQL(QL=0.7)	BQL
12-Jun-2025	<20.0	25.28	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
18-Jun-2025	<20.0	14.38	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
19-Jun-2025	<20.0	18.10	<0.1	<1.0	<1.0	0.4	BQL(QL=0.7)	BQL
25-Jun-2025	<20.0	24.80	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
26-Jun-2025	<20.0	15.12	<0.1	<1.0	<1.0	0.5	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)

Jattawati
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Jattawati



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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Bharatpur

Project	Bharatpur OCP							
Monitoring Station	Near Natedi Village(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)
02-Jun-2025	<20.0	21.32	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
03-Jun-2025	<20.0	13.88	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
09-Jun-2025	<20.0	26.78	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
10-Jun-2025	<20.0	22.07	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
16-Jun-2025	<20.0	20.33	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
17-Jun-2025	<20.0	25.03	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
23-Jun-2025	<20.0	20.83	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
24-Jun-2025	<20.0	26.53	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
27-Jun-2025	<20.0	15.87	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
28-Jun-2025	<20.0	23.30	<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)

Authorised Signatory
CMPDI, RI-VII, LAB
SHUBANESWAR



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TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Bharatpur

PROJECT :

Bharatpur OCP

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
10-Jun-25	North West Point of the Mine	65.8	43.3
10-Jun-25	Near Regional Store	68.9	47.2
10-Jun-25	Near Wokshop	67.5	54.1
10-Jun-25	Kalinga Colony	50.4	41.9
11-Jun-25	Natedi Village (Reported)	52.3	43.5
24-Jun-25	North West Point of the Mine	68.5	45.9
24-Jun-25	Near Regional Store	71.8	49.2
24-Jun-25	Near Wokshop	70.3	56.4
24-Jun-25	Kalinga Colony	50.2	41.6
25-Jun-25	Natedi Village (Reported)	48.8	40.3

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)

Tattamach
Authorised Signatory
CMPDI, KI-VII, LAB
BHUBANESWAR

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TABLE--



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EFFLUENT QUALITY DATA

Area :

Bharatpur

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

Project :

Bharatpur OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	Remarks
13-Jun-25	Mine Sump Water - Old Quarry Sump	6.51	-	-	-	-	
13-Jun-25	Rakas Quarry Sump	7.31	-	-	-	-	
13-Jun-25	Workshop ETP Clear Water Tank	7.58	<4.0	61	52	-	
27-Jun-25	Workshop ETP Clear Water Tank	7.24	<4.0	56	64	-	

Shubanshu
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edit

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 :

Bharatpur

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

Project :

Bharatpur OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	MPN/100mL
13-Jun-25	STP INLET	7.80	-	37	-	<2	120
13-Jun-25	STP Outlet (PH,TSS,MPN,BOD)	8.12	-	24	-	<2	63
27-Jun-25	STP INLET	7.53	-	43	-	<2	94
27-Jun-25	STP Outlet (PH,TSS,MPN,BOD)	7.60	-	29	-	<2	58

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G.S.R. 1265(E) Effluent discharge standards (applicable to all mode of disposal), Sewage Treatment Plants (STPs)	6.5-9.0	-	<100	-	30	<1000
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Effluent Quality (all Parameter): - Bharatpur Area

Project (OCP / UG)	Bharatpur		MoEF-Sch-VI Standards
NAME OF THE STATION	Workshop ETP Clear Water Tank Outlet	Mine Sump (Old Quarry Sump)	
Date of Sampling	13-May-25	13-May-25	
Odour	Unobjectionable	Unobjectionable	—
Colour(Hazen)	6	6	—
Temperature(°C)	25.7	25.6	Shall not exceed 5 °C above the receiving temperature
pH	7.48	7.28	
Total Hardness (asCaCO ₃),mg/L	171.31	215.14	4.0
Total Dissolved Solids, mg/L	246	320	10
Nitrate Nitrogen(mg/L)(As N)	<0.5	<0.5	10
Ammonical Nitrogen , mg/l (As N)	0.29	0.30	50
Total Kjeldhal Nitrogen, mg/l (As N)	2.21	2.21	100
Sulphide (mg/L)	<0.1	<0.1	2
BOD [3 days at 27°C] (mg/L)	<2.0	<2.0	30
Fluoride(mg/L)	0.84	1.04	2
Copper(mg/L)	<0.03	<0.03	3
Manganese(mg/L)	<0.04	<0.04	2
Iron(mg/L)	<0.1	<0.1	3
Zinc(mg/L)	<0.04	<0.04	5
Lead, mg/l	<0.005	<0.005	0.1
Cadmium, mg/l	<0.001	<0.001	2
Total Chromium(mg/L)	<0.01	<0.01	2
Hexavalent Chromium(mg/L)	<0.05	<0.05	0.1
Nickel(mg/L)	<0.02	<0.02	3
Arsenic, mg/l	<0.005	<0.005	0.2
Selenium (mg/L)	<0.005	<0.005	0.05
Dissolved Phosphate(mg/L)	<4.0	<4.0	5
Phenolics (mg/L)	<0.001	<0.001	1

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Drinking Water Quality Data Bharatpur Area

Project / OCP	Bharatpur OCP	Indian Drinking Standards (IS-10500):2012	
Monitoring Station	Time Office,BOCP	Acceptable	Permissible
Date of Sampling	12-Jun-2025		
Colour(Hazen)	3	5	15
Odour	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	2	1	5
pH	6.72	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	89.09	200	600
Chloride(mg/L)	25.28	250	1000
Sulphate(mg/L)	5.56	200	400
Nitrate(mg/L)	<0.5	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	187.25	200	600
Calcium(mg/L)	62.28	75	200
Fluoride(mg/L)	0.66	1	1.5
Total Dissolve Solid(mg/L)	258	500	2000
Copper(mg/L)	<0.03	0.05	1.5
Manganese(mg/L)	0.16	0.1	0.3
Iron(mg/L)	<0.1	1.0	No relaxation
Zinc(mg/L)	0.62	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 Bharatpur Area

Project / OCP	Bharatpur OCP	Indian Drinking Standards (IS-10500):2012	
Monitoring Station	Time Office,BOCP	Acceptable	Permissible
Date of Sampling	12-Jun-2025		
Selenium(mg/L)	<0.005	0.01	No relaxation
Sodium(mg/L)	13.39	—	—
Potassium(mg/L)	4.46	—	—
Phenolics(mg/L)	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	0.2	1.0
MPN (Index/100 ml)	Not Detected	—	—

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Surface Water Quality Data Bharatpur Area

Project/OCP	Bharatpur		IS:2296-1982 Tolerance for inland Surface water (Class C)
	Bangaru Jhor river near Joragadia as downstream water point of Bharatpur OCP	Upstream of Bangaru Jhor river of Bharatpur OCP as downstream of Balram OCP (Reported)	
NAME OF STATIONS			
Date of sampling	13-Jun-25	14-Jun-25	
pH	7.64	7.15	6.5-8.5
Color (Hazen unit)	5	6	300
Dissolved Oxygen(mg/L)	6.1	6.2	4
BOD (3 days 27°C)(mg/L)	<2	<2	3
Chlorides(mg/L)	21.42	27.26	600
Sulphate(mg/L)	131.56	261.04	400
Nitrate(mg/L)	1.21	5.04	50
Fluoride(mg/L)	0.87	0.98	1.5
Total Hardness(mg/L)	286.47	190.98	-
Total dissolved solids (mg/L)	340	642	1500
TSS(mg/L)	48	54	-
Copper(mg/L)	<0.03	<0.03	1.5
Iron(mg/L)	<0.1	<0.1	50
Zinc(mg/L)	<0.07	0.06	15
Lead(mg/L)	<0.005	<0.005	0.1
Cadmium(mg/L)	<0.001	<0.001	0.01
Total Chromium (mg/L)	<0.01	<0.01	-
Arsenic(mg/L)	<0.005	<0.005	0.2
Selenium(mg/L)	<0.005	<0.005	0.05
Chromium(as Cr ⁶⁺)(mg/L)	<0.05	<0.05	0.05
Phenolics(mg/L)	<0.001	<0.001	0.005
Oil & Grease (mg/L)	<4.0	<4.0	0.1
MPN (Index/100 ml)	130	120	-
Residual Free Chlorine(mg/L)	<0.2	<0.2	0.2

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Surface Water Quality Data Bharatpur Area

Project/OCP	Bharatpur		IS:2296-1982 Tolerance for inland Surface water (Class C)
	Pond Near N-W Point of the Mine	Jambubahali Village pond	
NAME OF STATIONS	13-Jun-25	13-Jun-25	
Date of sampling	13-Jun-25	13-Jun-25	
pH	7.15	7.04	6.5-8.5
Color (Hazen unit)	3	3	300
Dissolved Oxygen(mg/L)	6.4	6.3	4
BOD (3 days 27°C)(mg/L)	<2	<2	3
Chlorides(mg/L)	15.58	38.94	600
Sulphate(mg/L)	86.62	87.14	400
Nitrate(mg/L)	1.70	2.91	50
Fluoride(mg/L)	0.85	0.76	1.5
Total Hardness(mg/L)	226.47	171.09	-
Total dissolved solids (mg/L)	280	276	1500
TSS(mg/L)	27	32	-
Copper(mg/L)	<0.03	<0.03	1.5
Iron(mg/L)	<0.1	<0.1	50
Zinc(mg/L)	0.07	0.14	15
Lead(mg/L)	0.005	<0.005	0.1
Cadmium(mg/L)	<0.001	<0.001	0.01
Total Chromium (mg/L)	<0.01	<0.01	-
Arsenic(mg/L)	<0.005	<0.005	0.2
Selenium(mg/L)	<0.005	<0.005	0.05
Chromium(as Cr ⁶⁺)(mg/L)	<0.05	<0.05	0.05
Phenolics(mg/L)	<0.001	<0.001	0.005
Oil & Grease (mg/L)	<4.0	<4.0	0.1
MPN (Index/100 ml)	210	170	-
Residual Free Chlorine(mg/L)	<0.2	<0.2	0.2

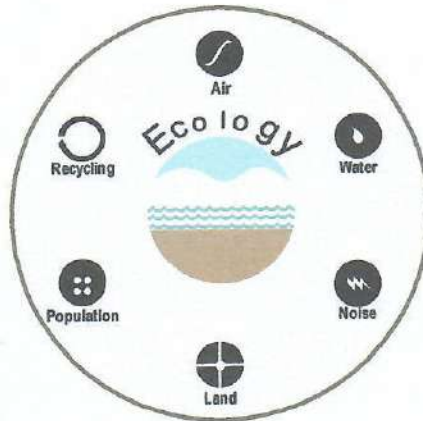
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**Environmental Monitoring Report
Of
Kaniha Area
For
June-2025**

Talcher Coalfield



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

Test Report

AMBIENT AIR QUALITY DATA

Area :

Kaniha

(Compliance Station)

Project :

Kaniha OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
13-Jun-25	Near External OB Dump, Jamania	179	76	37	11.61	26.58	Mining Activities	About 500m
13-Jun-25	New Time Office (Near Z-Patch)	193	84	40	15.00	20.98	Mining Activities	About 500m
13-Jun-25	Near Project Office	182	75	36	13.19	25.55	Mining Activities	About 500m
21-Jun-25	Near External OB Dump, Jamania	203	87	41	14.92	28.86	Mining Activities	About 500m
21-Jun-25	New Time Office (Near Z-Patch)	215	93	42	11.84	25.32	Mining Activities	About 500m
21-Jun-25	Near Project Office	184	80	37	10.81	23.78	Mining Activities	About 500m

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MoEF Standards Notification dated 25th
 September, 2000

600	300		120	120
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Project :**Kaniha OCP****(conc. in $\mu\text{g}/\text{cu.m.}$)**

<i>Date of Sampling</i>	<i>Monitoring Station</i>	<i>SPM</i>	<i>PM10</i>	<i>PM2.5</i>	<i>SO2</i>	<i>NOx</i>	<i>Dust Generating Source(DGS)</i>	<i>Distance from DGS</i>
27-Jun-25	Guiland, South West of Mine	116	48	23	15.20	21.10		
27-Jun-25	Kaniha (North of the Mine)	119	44	20	16.20	25.55	Mining Activities	About 500m
27-Jun-25	Kansamunda Village (West of the mine)	157	61	29	16.58	33.76		
27-Jun-25	Near Harichandanpur	116	42	20	10.45	24.44		
27-Jun-25	South Of Proposed Quarry Limit of KOCP	149	53	27	13.03	23.87	Mining Activities	About 500m
28-Jun-25	South Of Proposed Quarry Limit of KOCP	137	45	25	15.07	24.17	Mining Activities	About 500m
28-Jun-25	Guiland, South West of Mine	154	64	29	12.85	15.19		
28-Jun-25	Kaniha (North of the Mine)	131	51	27	12.63	13.02	Mining Activities	About 500m
28-Jun-25	Kansamunda Village (West of the mine)	106	43	21	17.45	37.58		
28-Jun-25	Near Harichandanpur	142	53	24	10.81	23.12		
28-Jun-25	Gandaberna	120	50	23	14.28	39.66		

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Test Report



AMBIENT AIR QUALITY DATA

Area :

Kaniha

(Reference Station)

Project :

Kaniha OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
02-Jun-25	Kaniha (North of the Mine)	132	47	25	13.82	21.70	Mining Activities	About 500m
02-Jun-25	Near Harichandanpur	131	47	25	18.43	32.07		
02-Jun-25	South Of Proposed Quarry Limit of KOCP	115	44	21	13.97	23.99	Mining Activities	About 500m
02-Jun-25	Gandaberna	129	47	24	11.35	31.18		
02-Jun-25	Kansamunda Village (West of the mine)	134	53	27	13.27	28.10		
02-Jun-25	Guiland, South West of Mine	127	49	25	10.55	27.62		
03-Jun-25	Kansamunda Village (West of the mine)	115	39	21	13.68	22.03		
03-Jun-25	Near Harichandanpur	163	63	30	10.91	33.58		
03-Jun-25	South Of Proposed Quarry Limit of KOCP	139	52	27	11.19	21.27	Mining Activities	About 500m
03-Jun-25	Kaniha (North of the Mine)	157	63	30	11.85	20.98	Mining Activities	About 500m
03-Jun-25	Guiland, South West of Mine	119	44	23	15.34	20.51		
03-Jun-25	Gandaberna	133	47	25	13.97	24.78		
09-Jun-25	Kaniha (North of the Mine)	147	55	28	14.84	24.78	Mining Activities	About 500m
09-Jun-25	Kansamunda Village (West of the mine)	128	54	26	15.34	26.58		
09-Jun-25	Near Harichandanpur	135	50	26	11.35	27.98		
09-Jun-25	South Of Proposed Quarry Limit of KOCP	118	43	20	11.06	27.49	Mining Activities	About 500m
09-Jun-25	Guiland, South West of Mine	128	51	24	13.57	22.10		
09-Jun-25	Gandaberna	143	56	27	13.36	29.54		
10-Jun-25	Kansamunda Village (West of the mine)	120	43	23	16.58	23.99		
10-Jun-25	Near Harichandanpur	144	53	28	11.19	26.58		
10-Jun-25	South Of Proposed Quarry Limit of KOCP	126	44	23	10.36	22.03	Mining Activities	About 500m
10-Jun-25	Kaniha (North of the Mine)	126	52	27	15.79	28.21	Mining Activities	About 500m
10-Jun-25	Gandaberna	118	40	22	17.04	23.63		

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Project :**Kaniha OCP****(conc. in $\mu\text{g}/\text{cu.m.}$)**

<i>Date of Sampling</i>	<i>Monitoring Station</i>	<i>SPM</i>	<i>PM10</i>	<i>PM2.5</i>	<i>SO2</i>	<i>NOx</i>	<i>Dust Generating Source(DGS)</i>	<i>Distance from DGS</i>
10-Jun-25	Guiland, South West of Mine	134	49	26	13.53	26.38		
16-Jun-25	South Of Proposed Quarry Limit of KOCP	143	53	26	16.12	32.07	Mining Activities	About 500m
16-Jun-25	Kansamunda Village (West of the mine)	125	44	23	16.14	19.99		
16-Jun-25	Gandaberna	140	53	27	13.35	42.20		
16-Jun-25	Guiland, South West of Mine	125	52	24	17.50	22.79		
16-Jun-25	Kaniha (North of the Mine)	114	42	19	13.96	27.98	Mining Activities	About 500m
16-Jun-25	Near Harichandanpur	153	53	27	11.05	33.27		
17-Jun-25	Kaniha (North of the Mine)	140	59	26	17.04	19.41	Mining Activities	About 500m
17-Jun-25	Near Harichandanpur	159	67	32	12.22	36.78		
17-Jun-25	Kansamunda Village (West of the mine)	118	40	19	14.41	20.51		
17-Jun-25	Gandaberna	146	56	29	16.58	30.38		
17-Jun-25	South Of Proposed Quarry Limit of KOCP	138	46	24	18.88	28.69	Mining Activities	About 500m
17-Jun-25	Guiland, South West of Mine	133	56	25	13.26	26.58		
23-Jun-25	Kaniha (North of the Mine)	151	63	28	17.50	23.63	Mining Activities	About 500m
23-Jun-25	Guiland, South West of Mine	142	59	27	14.51	18.23		
23-Jun-25	Gandaberna	117	40	22	16.69	18.23		
23-Jun-25	Kansamunda Village (West of the mine)	146	55	27	16.14	27.98		
23-Jun-25	South Of Proposed Quarry Limit of KOCP	130	41	23	17.96	33.76	Mining Activities	About 500m
23-Jun-25	Near Harichandanpur	151	53	26	12.43	28.10		
24-Jun-25	Guiland, South West of Mine	155	63	30	13.82	29.54		
24-Jun-25	Gandaberna	110	37	18	13.82	15.19		
24-Jun-25	South Of Proposed Quarry Limit of KOCP	163	59	29	12.25	23.78	Mining Activities	About 500m
24-Jun-25	Kansamunda Village (West of the mine)	115	46	22	13.68	31.14		
24-Jun-25	Kaniha (North of the Mine)	131	55	24	16.18	29.66	Mining Activities	About 500m
24-Jun-25	Near Harichandanpur	135	47	22	12.81	22.10		
27-Jun-25	Gandaberna	143	52	28	17.04	29.54		

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TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Kaniha

PROJECT :

Kaniha OCP

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
11-Jun-25	Kansamunda Village (West of the Mine)	50.4	39.6
11-Jun-25	Near External OB Dump, Jamania	60.3	43.8
11-Jun-25	Near Time Office (Near Z-Patch)	69.5	58.1
11-Jun-25	Near Project Office	67.3	56.9
25-Jun-25	Kansamunda Village (West of the Mine)	50.4	39.8
25-Jun-25	Near External OB Dump, Jamania	62.8	45.6
25-Jun-25	Near Time Office (Near Z-Patch)	72.4	60.5
25-Jun-25	Near Project Office	70.1	59.3

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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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Kaniha

Project	Kaniha OCP							
Monitoring Station	Kansamunda Village (West of the 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)	($\mu\text{g}/\text{m}^3$)
02-Jun-2025	<20.0	20.08	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
03-Jun-2025	<20.0	19.83	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
09-Jun-2025	<20.0	16.87	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
10-Jun-2025	<20.0	21.57	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
16-Jun-2025	<20.0	14.88	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
17-Jun-2025	<20.0	20.58	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
23-Jun-2025	<20.0	16.37	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
24-Jun-2025	<20.0	19.83	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
27-Jun-2025	<20.0	25.28	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
28-Jun-2025	<20.0	17.10	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
Standard	400(24h ours)	180(ho ur)	1.0(24h ours)	6.0(An nual)	20(Ann ual)	02(8hou rs)	01(annua l)	05(annu al)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Kaniha

Project	Kaniha OCP							
Monitoring Station	South of Proposed Quarry Limit of KOCP							
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)	($\mu\text{g}/\text{m}^3$)
02-Jun-2025	<20.0	25.78	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
03-Jun-2025	<20.0	17.35	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
09-Jun-2025	<20.0	24.55	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
10-Jun-2025	<20.0	21.57	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
16-Jun-2025	<20.0	22.57	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
17-Jun-2025	<20.0	17.10	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
23-Jun-2025	<20.0	23.30	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
24-Jun-2025	<20.0	16.62	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
27-Jun-2025	<20.0	15.87	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
28-Jun-2025	<20.0	26.28	<0.1	<1.0	<1.0	1.2	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: Kaniha

Project	Kaniha OCP							
Monitoring Station	Guiland, South West of the 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)	($\mu\text{g}/\text{m}^3$)
02-Jun-2025	<20.0	19.33	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
03-Jun-2025	<20.0	24.80	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
09-Jun-2025	<20.0	21.32	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
10-Jun-2025	<20.0	22.57	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
16-Jun-2025	<20.0	25.28	<0.1	<1.0	<1.0	1.5	BQL(QL=0.7)	BQL
17-Jun-2025	<20.0	15.87	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
23-Jun-2025	<20.0	18.10	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
24-Jun-2025	<20.0	20.58	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
27-Jun-2025	<20.0	20.33	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
28-Jun-2025	<20.0	26.28	<0.1	<1.0	<1.0	1.2	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: Kaniha

Project	Kaniha OCP							
Monitoring Station	Near Harichandanpur							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Be nzo (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)
02-Jun-2025	<20.0	15.37	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
03-Jun-2025	<20.0	18.35	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
09-Jun-2025	<20.0	19.08	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
10-Jun-2025	<20.0	27.27	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
16-Jun-2025	<20.0	20.58	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
17-Jun-2025	<20.0	14.13	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
23-Jun-2025	<20.0	27.27	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL
24-Jun-2025	<20.0	13.38	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
27-Jun-2025	<20.0	21.82	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
28-Jun-2025	<20.0	15.37	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
Standard	400(24h ours)	180(ho ur)	1.0(24h ours)	6.0 (Annual)	20(Annual)	02(8hou rs)	01(annu al)	05(annu al)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Kaniha

Project	Kaniha OCP							
Monitoring Station	Kaniha North of the Mine							
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)
02-Jun-2025	<20.0	14.38	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
03-Jun-2025	<20.0	14.38	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
09-Jun-2025	<20.0	21.82	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
10-Jun-2025	<20.0	15.12	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
16-Jun-2025	<20.0	24.30	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
17-Jun-2025	<20.0	19.08	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
23-Jun-2025	<20.0	19.33	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
24-Jun-2025	<20.0	16.12	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
27-Jun-2025	<20.0	21.57	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
28-Jun-2025	<20.0	26.78	<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)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Kaniha

Project	Kaniha OCP							
Monitoring Station	Gandaberana							
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)
02-Jun-2025	<20.0	18.35	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
03-Jun-2025	<20.0	13.38	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
09-Jun-2025	<20.0	14.13	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
10-Jun-2025	<20.0	12.90	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
16-Jun-2025	<20.0	26.28	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
17-Jun-2025	<20.0	21.82	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
23-Jun-2025	<20.0	19.83	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
24-Jun-2025	<20.0	14.38	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
27-Jun-2025	<20.0	17.35	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
28-Jun-2025	<20.0	22.57	<0.1	<1.0	<1.0	1.3	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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 सीएमपीडीआई मिनी रत्न cmpdi Mini Ratna	AMBIENT AIR QUALITY DATA Area: Kaniha
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Project	KanihaOCP
Monitoring Station	Near Project Office
Date of sampling	Carbon Monoxide (CO)
	mg/m³
13-Jun-2025	1.2
21-Jun-2025	1.1
Standard	02(8 Hours)

Project	KanihaOCP
Monitoring Station	New Time Office (Near Z-Patch)
Date of sampling	Carbon Monoxide (CO)
	mg/m³
13-Jun-2025	1.2
21-Jun-2025	1.3
Standard	02(8 Hours)

Project	KanihaOCP
Monitoring Station	Near External OB Dump, Jamania
Date of sampling	Carbon Monoxide (CO)
	mg/m³
13-Jun-2025	1.2
21-Jun-2025	1.3
Standard	02(8 Hours)


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EFFLUENT QUALITY DATA

Area :

Kaniha

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

Project :

Kaniha OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	Remarks
14-Jun-25	Clear Water Pond	7.84	<4.0	54	48	-	
14-Jun-25	Kansamunda Sump	7.86	<4.0	38	28	-	
14-Jun-25	Pre Sedimentation Pond	7.86	<4.0	42	36	-	
14-Jun-25	Z-Patch Sump	7.85	<4.0	29	40	-	
28-Jun-25	Clear Water Pond	6.98	<4.0	49	36	-	
28-Jun-25	Pre Sedimentation Pond	6.99	<4.0	33	24	-	

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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

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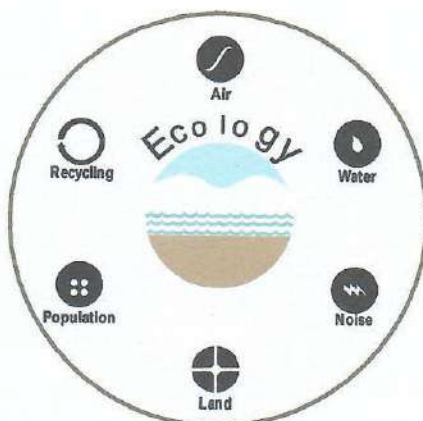
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**Environmental Monitoring Report
Of
Lingaraj Area
For
June-2025**

Talcher Coalfield



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 AND WATER

Test Report

AMBIENT AIR QUALITY DATA

Area :

Lingaraj

(Compliance Station)

Project :

Lingaraj OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
06-Jun-25	GM Office Lingraj	185	81	38	14.51	24.31		
06-Jun-25	Near Silo Conveyor Belt	179	73	35	11.85	27.49		
21-Jun-25	GM Office Lingraj	177	78	36	18.42	23.63		
21-Jun-25	Near Silo Conveyor Belt	195	88	39	15.07	24.86		

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MoEF Standards Notification dated 25th September, 2000	500	250		120	120
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Test Report

AMBIENT AIR QUALITY DATA

Area :

Lingaraj

(Reference Station)

Project :

Lingaraj OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
04-Jun-25	Kandhal Village	150	54	29	15.20	26.16		
04-Jun-25	Lingaraj Township	114	45	22	10.66	20.98		
04-Jun-25	Balunga Khamar Village	128	48	26	16.15	32.78		
05-Jun-25	Balunga Khamar Village	117	41	22	15.75	30.38		
05-Jun-25	Kandhal Village	129	47	23	12.66	26.38		
05-Jun-25	Lingaraj Township	127	49	25	15.40	26.04		
11-Jun-25	Lingaraj Township	147	56	29	13.42	29.66		
11-Jun-25	Balunga Khamar Village	121	53	27	13.27	22.03		
11-Jun-25	Kandhal Village	138	53	27	12.44	29.54		
12-Jun-25	Balunga Khamar Village	114	47	25	13.27	25.82		
12-Jun-25	Kandhal Village	157	65	30	15.20	26.16		
12-Jun-25	Lingaraj Township	154	57	30	12.64	22.42		
18-Jun-25	Kandhal Village	162	66	30	14.09	22.79		
18-Jun-25	Lingaraj Township	159	54	28	16.58	30.38		
18-Jun-25	Balunga Khamar Village	120	42	24	13.36	34.60		
19-Jun-25	Balunga Khamar Village	125	39	20	12.44	14.50		
19-Jun-25	Kandhal Village	117	41	21	16.16	31.14		
19-Jun-25	Lingaraj Township	131	42	23	14.09	16.71		
25-Jun-25	Balunga Khamar Village	111	36	19	12.24	18.81		
25-Jun-25	Kandhal Village	158	65	31	12.24	20.25		
25-Jun-25	Lingaraj Township	144	48	25	13.82	16.88		
26-Jun-25	Lingaraj Township	149	47	26	14.28	36.29		
26-Jun-25	Balunga Khamar Village	115	45	21	11.30	22.10		

*NAAQS, 2009

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Project :

Lingaraj OCP

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

<i>Date of Sampling</i>	<i>Monitoring Station</i>	<i>SPM</i>	<i>PM10</i>	<i>PM2.5</i>	<i>SO2</i>	<i>NOx</i>	<i>Dust Generating Source(DGS)</i>	<i>Distance from DGS</i>
26-Jun-25	Kandhal Village	129	51	24	15.45	23.48		

*NAAQS,2009

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F. Pattanaik
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A. Patra



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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Lingaraj

Project	Lingaraj OCP							
Monitoring Station	Kandhal Village							
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)
04-Jun-2025	<20.0	14.13	<0.1	<1.0	<1.0	0.3	BQL(Q L=0.7)	BQL
05-Jun-2025	<20.0	24.30	<0.1	<1.0	<1.0	0.5	BQL(Q L=0.7)	BQL
11-Jun-2025	<20.0	12.40	<0.1	<1.0	<1.0	0.4	BQL(Q L=0.7)	BQL
12-Jun-2025	<20.0	19.83	<0.1	<1.0	<1.0	0.6	BQL(Q L=0.7)	BQL
18-Jun-2025	<20.0	13.38	<0.1	<1.0	<1.0	0.5	BQL(Q L=0.7)	BQL
19-Jun-2025	<20.0	17.85	<0.1	<1.0	<1.0	0.3	BQL(Q L=0.7)	BQL
25-Jun-2025	<20.0	18.60	<0.1	<1.0	<1.0	0.4	BQL(Q L=0.7)	BQL
26-Jun-2025	<20.0	12.40	<0.1	<1.0	<1.0	0.8	BQL(Q L=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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Arts



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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Lingaraj

Project	Lingaraj OCP							
Monitoring Station	Lingaraj Township							
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)	($\mu\text{g}/\text{m}^3$)
04-Jun-2025	<20.0	16.62	<0.1	<1.0	<1.0	0.5	BQL(Q L=0.7)	BQL
05-Jun-2025	<20.0	26.78	<0.1	<1.0	<1.0	0.3	BQL(Q L=0.7)	BQL
11-Jun-2025	<20.0	14.63	<0.1	<1.0	<1.0	0.4	BQL(Q L=0.7)	BQL
12-Jun-2025	<20.0	16.37	<0.1	<1.0	<1.0	0.3	BQL(Q L=0.7)	BQL
18-Jun-2025	<20.0	21.07	<0.1	<1.0	<1.0	0.6	BQL(Q L=0.7)	BQL
19-Jun-2025	<20.0	23.55	<0.1	<1.0	<1.0	0.7	BQL(Q L=0.7)	BQL
25-Jun-2025	<20.0	22.57	<0.1	<1.0	<1.0	0.8	BQL(Q L=0.7)	BQL
26-Jun-2025	<20.0	14.13	<0.1	<1.0	<1.0	0.6	BQL(Q L=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: Lingaraj

Project	Lingaraj OCP							
Monitoring Station	Balunga Khamar Village							
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)
04-Jun-2025	<20.0	24.30	<0.1	<1.0	<1.0	0.6	BQL(Q L=0.7)	BQL
05-Jun-2025	<20.0	22.82	<0.1	<1.0	<1.0	0.5	BQL(Q L=0.7)	BQL
11-Jun-2025	<20.0	14.38	<0.1	<1.0	<1.0	0.4	BQL(Q L=0.7)	BQL
12-Jun-2025	<20.0	21.82	<0.1	<1.0	<1.0	0.5	BQL(Q L=0.7)	BQL
18-Jun-2025	<20.0	24.80	<0.1	<1.0	<1.0	0.3	BQL(Q L=0.7)	BQL
19-Jun-2025	<20.0	17.85	<0.1	<1.0	<1.0	0.4	BQL(Q L=0.7)	BQL
25-Jun-2025	<20.0	16.87	<0.1	<1.0	<1.0	0.6	BQL(Q L=0.7)	BQL
26-Jun-2025	<20.0	18.85	<0.1	<1.0	<1.0	0.3	BQL(Q L=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)

Authorised Signatory
CMPDI, RI-VII, LAB
BHUBANESWAR

 <p>सीएमपीडीआई मिनी रत्न cmpdi Mini Ratna</p>	<p>AMBIENT AIR QUALITY DATA</p> <p>Area: Lingaraj</p>
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Project	Lingaraj OCP
Monitoring Station	Near Silo Conveyor Belt
Date of sampling	Carbon Monoxide (CO)
	mg/m³
06-Jun-2025	1.3
21-Jun-2025	1.1
Standard	02(8 Hours)

Project	Lingaraj OCP
Monitoring Station	GM Office Lingaraj
Date of sampling	Carbon Monoxide (CO)
	mg/m³
06-Jun-2025	1.0
21-Jun-2025	0.9
Standard	02(8 Hours)

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Ministry of Environment

TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Lingaraj

PROJECT :

Lingaraj OCP

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
10-Jun-25	Lingaraj Township	52.1	43.1
10-Jun-25	Balunga Khamar Village	50.9	42.8
10-Jun-25	Kandhal Village	50.9	41.5
10-Jun-25	Near Silo Conveyor Belt	65.2	58.8
24-Jun-25	Lingaraj Township	52.1	41.9
24-Jun-25	Balunga Khamar Village	51.6	40.8
24-Jun-25	Kandhal Village	51.4	42.1
24-Jun-25	Near Silo Conveyor Belt	67.9	61.2

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

Jaffar
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A. Jais

TABLE--



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EFFLUENT QUALITY DATA

Area :

Lingaraj

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

Project :

Lingaraj OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	MPN/100mL
13-Jun-25	STP Inlet at Lingaraj Township	7.25	-	45	-	<2	120
13-Jun-25	STP Outlet at Lingaraj Township	7.42	-	30	-	<2	58
27-Jun-25	STP Inlet at Lingaraj Township	6.70	-	41	-	<2	110
27-Jun-25	STP Outlet at Lingaraj Township	6.91	-	27	-	<2	47

T. J. Patra
Authorised Signatory
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BHUBANESWAR

A. J. Patra

G.S.R. 1265(E) Effluent discharge standards (applicable to all mode of disposal), Sewage Treatment Plants (STPs)	6.5-9.0	-	<100	-	30	<1000
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Drinking Water Quality Data Lingraj Area

Project / OCP	Lingraj OCP	Indian Drinking Standards (IS-10500):2012	
Monitoring Station	GM Office, Lingraj Area	Acceptable	Permissible
Date of Sampling	12-Jun-2025		
Colour(Hazen)	2	5	15
Odour	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	1	1	5
pH	7.74	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	54.63	200	600
Chloride(mg/L)	7.78	250	1000
Sulphate(mg/L)	10.54	200	400
Nitrate(mg/L)	<0.5	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	59.76	200	600
Calcium(mg/L)	15.97	75	200
Fluoride(mg/L)	0.39	1	1.5
Total Dissolve Solid(mg/L)	106	500	2000
Copper(mg/L)	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	0.1	0.3
Iron(mg/L)	<0.1	1.0	No relaxation
Zinc(mg/L)	<0.04	5	15
Lead(mg/L)	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.001	0.003	No relaxation
Total Chromium (mg/L)	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	0.5	2.4

J. Jha
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A. Jha



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Drinking Water Quality Data Lingraj Area

Project / OCP	Lingraj OCP	Indian Drinking Standards (IS-10500):2012	
		Acceptable	Permissible
Monitoring Station	GM Office, Lingraj Area		
Date of Sampling	12-Jun-2025		
Selenium(mg/L)	<0.005	0.01	No relaxation
Sodium(mg/L)	12.56	-	-
Potassium(mg/L)	2.93	-	-
Phenolics(mg/L)	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	0.2	1.0
MPN (Index/100 ml)	Not Detected	-	-

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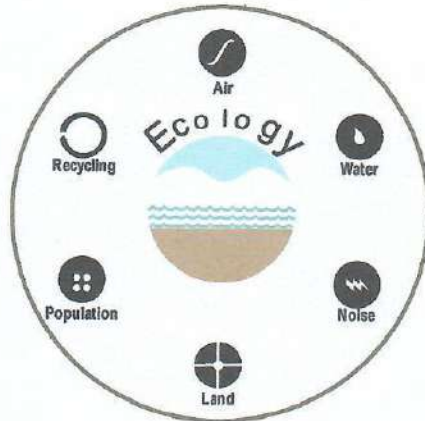
**Environmental Monitoring Report
Of
Hingula Area
For
June-2025**

Talcher Coalfield



MCL

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

Test Report

AMBIENT AIR QUALITY DATA

Area :

Hingula

(Compliance Station)

Project :

Hingula OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
13-Jun-25	Time Office	171	74	35	13.97	31.98	Mining Operations and Haul Road	About 200m
13-Jun-25	South West Side of the Mine	175	79	37	14.93	29.62	Mining Operations	About 300m
21-Jun-25	Time Office	177	80	36	15.14	20.47	Mining Operations and Haul Road	About 200m
21-Jun-25	South West Side of the Mine	205	90	41	16.58	29.54	Mining Operations	About 300m

T. J. J. J.
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A. J. J.

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

Area :

Hingula

(Compliance Station)

Project :

Balaram OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
13-Jun-25	Pump House near Outsourcing Working Patch	170	58	31	11.68	21.41	Mining Operation And Coal Transportation Road	About 200m
13-Jun-25	Near Project Office	185	78	38	10.27	26.04	Mining Activities	About 500m
30-Jun-25	Pump House near Outsourcing Working Patch	215	96	44	16.58	29.62	Mining Operation And Coal Transportation Road	About 200m
30-Jun-25	Near Project Office	203	87	40	12.43	24.17	Mining Activities	About 500m

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MoEF Standards Notification dated 25th September, 2000

600	300		120	120
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Test Report

AMBIENT AIR QUALITY DATA

Area :

Hingula

(Reference Station)

Project :

Hingula OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
02-Jun-25	Kankarei Village	168	66	31	17.51	27.85		
02-Jun-25	Sanamahitala Village	124	43	23	16.17	24.31		
02-Jun-25	Balichandrapur Village	147	61	29	13.03	23.15		
02-Jun-25	Banabaspur Village	144	57	28	11.78	31.98		
02-Jun-25	Solda Village	138	52	27	17.51	33.76	Coal Transportation Road	About 2km
03-Jun-25	Solda Village	128	47	25	14.40	25.58	Coal Transportation Road	About 2km
03-Jun-25	Banabaspur Village	117	44	23	13.68	28.86		
03-Jun-25	Sanamahitala Village	130	50	25	10.27	29.66		
03-Jun-25	Kankarei Village	138	48	26	13.97	27.98		
03-Jun-25	Balichandrapur Village	123	46	25	17.02	29.58		
09-Jun-25	Balichandrapur Village	113	43	22	15.34	25.82		
09-Jun-25	Banabaspur Village	123	53	26	12.02	25.06		
09-Jun-25	Kankarei Village	155	62	30	16.15	30.38		
09-Jun-25	Solda Village	116	41	23	14.74	23.63	Coal Transportation Road	About 2km
09-Jun-25	Sanamahitala Village	125	39	21	13.97	23.99		
10-Jun-25	Solda Village	109	37	20	11.06	20.98	Coal Transportation Road	About 2km
10-Jun-25	Sanamahitala Village	136	53	27	13.19	18.64		
10-Jun-25	Banabaspur Village	109	40	22	11.61	29.62		
10-Jun-25	Balichandrapur Village	141	54	28	11.78	22.39		
10-Jun-25	Kankarei Village	129	47	24	11.35	29.58		
16-Jun-25	Balichandrapur Village	129	54	26	16.19	24.59		
16-Jun-25	Kankarei Village	155	59	29	15.83	17.26		
16-Jun-25	Sanamahitala Village	119	44	21	15.71	28.78		
16-Jun-25	Banabaspur Village	123	49	25	16.58	34.94		
16-Jun-25	Solda Village	134	53	25	17.89	24.78	Coal Transportation Road	About 2km

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Project :

Hingula OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
17-Jun-25	Sanamahitala Village	154	49	26	15.34	29.62		
17-Jun-25	Banabaspur Village	116	46	23	16.58	19.53		
17-Jun-25	Solda Village	145	58	27	17.82	30.38	Coal Transportation Road	About 2km
17-Jun-25	Balichandrapur Village	133	56	27	16.99	18.99		
17-Jun-25	Kankarei Village	112	47	21	16.18	31.83		
23-Jun-25	Balichandrapur Village	125	52	25	16.98	18.08		
23-Jun-25	Banabaspur Village	135	55	28	12.90	35.45		
23-Jun-25	Kankarei Village	116	49	22	11.05	34.72		
23-Jun-25	Sanamahitala Village	144	47	23	14.51	25.82		
23-Jun-25	Solda Village	127	43	21	14.09	30.38	Coal Transportation Road	About 2km
24-Jun-25	Balichandrapur Village	105	34	16	12.90	37.13		
24-Jun-25	Kankarei Village	169	63	30	16.58	28.93		
24-Jun-25	Sanamahitala Village	161	64	29	16.16	28.86		
24-Jun-25	Solda Village	136	49	24	14.92	24.31	Coal Transportation Road	About 2km
24-Jun-25	Banabaspur Village	155	65	30	12.65	27.98		
27-Jun-25	Balichandrapur Village	140	52	28	16.59	37.13		
27-Jun-25	Solda Village	149	56	30	16.32	28.14	Coal Transportation Road	About 2km
27-Jun-25	Banabaspur Village	110	46	22	17.04	40.51		
27-Jun-25	Kankarei Village	144	52	28	11.45	24.59		
27-Jun-25	Sanamahitala Village	151	52	24	10.81	21.13		
28-Jun-25	Banabaspur Village	134	51	27	17.45	44.77		
28-Jun-25	Kankarei Village	138	48	25	13.09	16.79		
28-Jun-25	Sanamahitala Village	114	43	20	10.45	21.13		
28-Jun-25	Solda Village	112	40	19	15.75	28.10	Coal Transportation Road	About 2km
28-Jun-25	Balichandrapur Village	131	47	26	17.51	24.47		

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Test Report

AMBIENT AIR QUALITY DATA

Area :

Hingula

(Reference Station)

Project :

Balram OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
02-Jun-25	Purunasahi Village	136	57	28	14.74	31.23		
02-Jun-25	East of the Mine, Natedi Village	128	48	25	14.10	27.34	Coal Transportation Road	About 2km
02-Jun-25	Natada Village	152	61	29	15.08	19.33	Anthropogenic Activities, Local	About 2km
02-Jun-25	Solda Village (Reported Only)	138	52	27	17.51	33.76	Coal Transportation Road	About 2km
03-Jun-25	East of the Mine, Natedi Village	119	46	24	15.79	30.38	Coal Transportation Road	About 2km
03-Jun-25	Solda Village (Reported Only)	128	47	25	14.40	25.58	Coal Transportation Road	About 2km
03-Jun-25	Natada Village	137	52	26	15.00	28.21	Anthropogenic Activities, Local	About 2km
03-Jun-25	Purunasahi Village	133	49	25	11.35	31.18		
09-Jun-25	East of the Mine, Natedi Village	110	42	21	10.66	23.87	Coal Transportation Road	About 2km
09-Jun-25	Solda Village (Reported Only)	116	41	23	14.74	23.63	Coal Transportation Road	About 2km
09-Jun-25	Purunasahi Village	141	51	27	12.90	33.76		
09-Jun-25	Natada Village	118	46	24	10.78	23.55	Anthropogenic Activities, Local	About 2km
10-Jun-25	Solda Village (Reported Only)	109	37	20	11.06	20.98	Coal Transportation Road	About 2km
10-Jun-25	Purunasahi Village	119	46	22	13.97	31.18		
10-Jun-25	Natada Village	159	66	31	13.09	27.19	Anthropogenic Activities, Local	About 2km
10-Jun-25	East of the Mine, Natedi Village	135	51	27	17.04	26.16	Coal Transportation Road	About 2km
16-Jun-25	Natada Village	121	38	18	14.51	26.58	Anthropogenic Activities, Local	About 2km
16-Jun-25	Purunasahi Village	166	69	30	13.09	27.98		
16-Jun-25	East of the Mine, Natedi Village	142	51	28	14.09	15.95	Coal Transportation Road	About 2km
16-Jun-25	Solda Village (Reported Only)	134	53	25	17.89	24.78	Coal Transportation Road	About 2km
17-Jun-25	Natada Village	146	53	25	18.42	21.10	Anthropogenic Activities, Local	About 2km
17-Jun-25	Purunasahi Village	157	54	26	18.42	26.16		
17-Jun-25	East of the Mine, Natedi Village	138	47	26	16.99	26.58	Coal Transportation Road	About 2km

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
17-Jun-25	Solda Village (Reported Only)	145	58	27	17.82	30.38	Coal Transportation Road	About 2km
23-Jun-25	East of the Mine, Natedi Village	118	39	19	13.68	21.27	Coal Transportation Road	About 2km
23-Jun-25	Purunasahi Village	145	48	24	13.68	28.10		
23-Jun-25	Solda Village (Reported Only)	127	43	21	14.09	30.38	Coal Transportation Road	About 2km
23-Jun-25	Natada Village	115	46	20	14.92	18.99	Anthropogenic Activities, Local	About 2km
24-Jun-25	East of the Mine, Natedi Village	133	44	25	15.34	28.10	Coal Transportation Road	About 2km
24-Jun-25	Natada Village	127	50	22	19.34	23.63	Anthropogenic Activities, Local	About 2km
24-Jun-25	Purunasahi Village	125	45	22	15.00	26.04		
24-Jun-25	Solda Village (Reported Only)	136	49	24	14.92	24.31	Coal Transportation Road	About 2km
27-Jun-25	Solda Village (Reported Only)	149	56	30	16.32	28.14	Coal Transportation Road	About 2km
27-Jun-25	Natada Village	117	42	18	12.81	22.10	Anthropogenic Activities, Local	About 2km
27-Jun-25	Purunasahi Village	115	41	19	15.07	23.48		
27-Jun-25	East of the Mine, Natedi Village	121	40	22	15.75	21.27	Coal Transportation Road	About 2km
28-Jun-25	East of the Mine, Natedi Village	106	37	19	15.04	34.00	Coal Transportation Road	About 2km
28-Jun-25	Natada Village	125	49	21	14.60	12.30	Anthropogenic Activities, Local	About 2km
28-Jun-25	Purunasahi Village	142	48	23	18.53	34.85		
28-Jun-25	Solda Village (Reported Only)	112	40	19	15.75	28.10	Coal Transportation Road	About 2km

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area:Hingula

Project	Hingula OCP							
Monitoring Station	Kankarei Village							
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)	($\mu\text{g}/\text{m}^3$)
02-Jun-2025	<20.0	20.33	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
03-Jun-2025	<20.0	25.53	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
09-Jun-2025	<20.0	16.87	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
10-Jun-2025	<20.0	22.32	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
16-Jun-2025	<20.0	13.13	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL
17-Jun-2025	<20.0	14.13	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
23-Jun-2025	<20.0	16.62	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
24-Jun-2025	<20.0	16.12	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
27-Jun-2025	<20.0	17.35	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
28-Jun-2025	<20.0	20.58	<0.1	<1.0	<1.0	0.9	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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Authorised Signatory
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Mini Ratna

AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area:Hingula

Project	Hingula OCP							
Monitoring Station	Solada Village							
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)
02-Jun-2025	<20.0	20.33	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
03-Jun-2025	<20.0	22.32	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
09-Jun-2025	<20.0	26.78	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
10-Jun-2025	<20.0	16.62	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
16-Jun-2025	<20.0	22.07	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
17-Jun-2025	<20.0	22.57	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
23-Jun-2025	<20.0	21.57	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
24-Jun-2025	<20.0	23.05	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
27-Jun-2025	<20.0	27.27	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
28-Jun-2025	<20.0	13.13	<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)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Hingula

Project	Hingula OCP							
Monitoring Station	Banabaspur Village							
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)
02-Jun-2025	<20.0	23.05	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
03-Jun-2025	<20.0	19.08	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
09-Jun-2025	<20.0	27.27	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
10-Jun-2025	<20.0	17.10	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
16-Jun-2025	<20.0	19.58	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
17-Jun-2025	<20.0	19.58	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
23-Jun-2025	<20.0	21.57	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
24-Jun-2025	<20.0	17.60	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
27-Jun-2025	<20.0	12.65	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
28-Jun-2025	<20.0	14.38	<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(8hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Hingula

Project	Hingula OCP							
Monitoring Station	Sanamahitala Village							
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)
02-Jun-2025	<20.0	24.80	<0.1	<1.0	<1.0	0.9	BQL(QL =0.7)	BQL
03-Jun-2025	<20.0	13.38	<0.1	<1.0	<1.0	0.8	BQL(QL =0.7)	BQL
09-Jun-2025	<20.0	18.85	<0.1	<1.0	<1.0	0.6	BQL(QL =0.7)	BQL
10-Jun-2025	<20.0	24.55	<0.1	<1.0	<1.0	0.8	BQL(QL =0.7)	BQL
16-Jun-2025	<20.0	14.63	<0.1	<1.0	<1.0	0.9	BQL(QL =0.7)	BQL
17-Jun-2025	<20.0	15.37	<0.1	<1.0	<1.0	0.4	BQL(QL =0.7)	BQL
23-Jun-2025	<20.0	25.28	<0.1	<1.0	<1.0	0.5	BQL(QL =0.7)	BQL
24-Jun-2025	<20.0	20.08	<0.1	<1.0	<1.0	0.7	BQL(QL =0.7)	BQL
27-Jun-2025	<20.0	19.83	<0.1	<1.0	<1.0	0.6	BQL(QL =0.7)	BQL
28-Jun-2025	<20.0	26.78	<0.1	<1.0	<1.0	0.5	BQL(QL =0.7)	BQL
Standard	400(24h ours)	180 (hour)	1.0(24h ours)	6.0(Annual)	20 (Annual)	02(8hours)	01 (annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area:Hingula

Project	Hingula OCP							
Monitoring Station	Balichandrapur Village							
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)
02-Jun-2025	<20.0	23.05	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
03-Jun-2025	<20.0	22.32	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
09-Jun-2025	<20.0	15.12	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
10-Jun-2025	<20.0	13.63	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
16-Jun-2025	<20.0	19.08	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
17-Jun-2025	<20.0	17.35	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
23-Jun-2025	<20.0	15.37	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
24-Jun-2025	<20.0	18.35	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
27-Jun-2025	<20.0	22.82	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
28-Jun-2025	<20.0	24.55	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
Standard	400(24h ours)	180(h our)	1.0(24h ours)	6.0(Annual)	20(Annual)	02(8hou rs)	01(annu al)	05(ann ual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Hingula

Project	Balram OCP							
Monitoring Station	East Mine, Natedi 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)	($\mu\text{g}/\text{m}^3$)
02-Jun-2025	<20.0	21.32	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL(QL=2.5)
03-Jun-2025	<20.0	13.88	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL(QL=2.5)
09-Jun-2025	<20.0	26.78	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL(QL=2.5)
10-Jun-2025	<20.0	22.07	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL(QL=2.5)
16-Jun-2025	<20.0	20.33	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL(QL=2.5)
17-Jun-2025	<20.0	25.03	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL(QL=2.5)
23-Jun-2025	<20.0	20.83	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL(QL=2.5)
24-Jun-2025	<20.0	26.53	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL(QL=2.5)
27-Jun-2025	<20.0	15.87	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL(QL=2.5)
28-Jun-2025	<20.0	23.30	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL(QL=2.5)
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:Hingula

Project	Balram OCP							
Monitoring Station	Natada Village							
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)
02-Jun-2025	<20.0	13.88	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL(QL=2.5)
03-Jun-2025	<20.0	22.57	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL(QL=2.5)
09-Jun-2025	<20.0	20.33	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL(QL=2.5)
10-Jun-2025	<20.0	12.90	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL(QL=2.5)
16-Jun-2025	<20.0	17.10	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL(QL=2.5)
17-Jun-2025	<20.0	24.55	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL(QL=2.5)
23-Jun-2025	<20.0	21.07	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL(QL=2.5)
24-Jun-2025	<20.0	18.85	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL(QL=2.5)
27-Jun-2025	<20.0	17.35	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL(QL=2.5)
28-Jun-2025	<20.0	18.10	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL(QL=2.5)
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:Hingula

Project	Balram OCP							
Monitoring Station	Purunasahi 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)	($\mu\text{g}/\text{m}^3$)
02-Jun-2025	<20.0	13.63	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
03-Jun-2025	<20.0	16.87	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
09-Jun-2025	<20.0	20.58	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
10-Jun-2025	<20.0	24.05	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
16-Jun-2025	<20.0	20.83	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
17-Jun-2025	<20.0	25.03	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
23-Jun-2025	<20.0	25.53	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
24-Jun-2025	<20.0	16.37	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
27-Jun-2025	<20.0	24.30	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
28-Jun-2025	<20.0	22.07	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
Standard	400(24h hours)	180(hour)	1.0(24h hours)	6.0(Annual)	20(Annual)	02(8hours)	01(annual)	05(annual)


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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Hingula

Project	Balram OCP							
Monitoring Station	Solada Village (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)	($\mu\text{g}/\text{m}^3$)
02-Jun-2025	<20.0	20.33	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
03-Jun-2025	<20.0	22.32	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
09-Jun-2025	<20.0	26.78	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
10-Jun-2025	<20.0	16.62	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
16-Jun-2025	<20.0	22.07	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
17-Jun-2025	<20.0	22.57	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
23-Jun-2025	<20.0	21.57	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
24-Jun-2025	<20.0	23.05	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
27-Jun-2025	<20.0	16.12	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
28-Jun-2025	<20.0	13.13	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
Standard	400(24h ours)	180(ho ur)	1.0(24h ours)	6.0(An nual)	20(An nual)	02(8ho urs)	01(annual)	05(annu al)

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AMBIENT AIR QUALITY DATA

Area: Hingula

Project	Hingula OCP
Monitoring Station	Time Office
Date of sampling	Carbon Monoxide (CO)
	mg/m ³
13-Jun-2025	1.1
21-Jun-2025	1.2
Standard	02(8 Hours)

Project	Hingula OCP
Monitoring Station	South West side of Mine
Date of sampling	Carbon Monoxide (CO)
	mg/m ³
13-Jun-2025	1.3
21-Jun-2025	1.1
Standard	02(8 Hours)

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ANALYSTS

TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Hingula

PROJECT :

Hingula OCP

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
11-Jun-25	South West Side of the Mine	62.4	45.6
11-Jun-25	Solda Village	53.2	40.9
11-Jun-25	Kankarei Village	52.1	43.3
11-Jun-25	Time Office	69.7	57.7
25-Jun-25	South West Side of the Mine	65.3	47.5
25-Jun-25	Solda Village	49.8	40.9
25-Jun-25	Kankarei Village	50.2	41.9
25-Jun-25	Time Office	72.6	60.1

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

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TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Hingula

PROJECT :

Balaram OCP

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
11-Jun-25	Natada Village	53.1	44.2
11-Jun-25	Solada Village (Reported only)	53.2	40.9
11-Jun-25	Near Natedi Village	52.3	43.5
11-Jun-25	Pump House Near Outsourcing Working Patch	67.7	47.8
11-Jun-25	Near Project Office Balram OCP	70.1	54.1
25-Jun-25	Natada Village	48.7	39.8
25-Jun-25	Solada Village (Reported only)	49.8	40.9
25-Jun-25	Near Natedi Village	48.8	40.3
25-Jun-25	Pump House Near Outsourcing Working Patch	70.5	49.8
25-Jun-25	Near Project Office Balram OCP	73.00	56.4

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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TABLE--

EFFLUENT QUALITY DATA

Area :

Hingula

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

Project :

Hingula OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	Remarks
14-Jun-25	Inlet of O & G Trap	7.27	4.6	49	84	-	
14-Jun-25	Mine Sump Water	7.83	<4.0	30	20	-	
14-Jun-25	Outlet of O & G Trap	7.42	<4.0	34	36	-	
28-Jun-25	Inlet of O & G Trap	7.10	4.8	57	96	-	
28-Jun-25	Outlet of O & G Trap	7.28	<4.0	38	52	-	

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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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Central Pollution Control Board
New Delhi

TABLE--

EFFLUENT QUALITY DATA

Area :

Hingula

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

Project :

Balram OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	Remarks
14-Jun-25	Gandhisagar (Mine Sump)	8.07	<4.0	17	12	-	
14-Jun-25	Inlet of O & G Trap	7.72	<4.0	33	40	-	
14-Jun-25	Outlet of O & G Trap	7.97	<4.0	26	24	-	
28-Jun-25	Inlet of O & G Trap	7.61	<4.0	32	24	-	
28-Jun-25	Outlet of O & G Trap	7.69	<4.0	19	12	-	

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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 :

Hingula

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

Project :

Balram OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	MPN/100mL
14-Jun-25	STP Inlet of Balram Colony	7.20	-	46		<2	110
14-Jun-25	STP Outlet of Balram Colony	7.33	-	29	-	<2	70
28-Jun-25	STP Inlet of Balram Colony	6.87	-	43	-	<2	120
28-Jun-25	STP Outlet of Balram Colony	6.90	-	32	-	<2	70

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

6.5-9.0

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Drinking Water Quality Data Hingula Area

Project / OCP	Hingula OCP			Indian Drinking Standards (IS-10500):2012	
	Monitoring Station	Time Office Water	Gopalprasad Village Bore Well Water	Kumunda Village Bore Well Water	
Date of Sampling	13-Jun-2025	13-Jun-2025	13-Jun-2025	Acceptable	Permissible
Colour(Hazen)	2	3	3	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	3	2	2	1	5
pH	7.04	8.03	7.38	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	117.66	243.72	75.64	200	600
Chloride(mg/L)	31.12	40.84	99.19	250	1000
Sulphate(mg/L)	55.16	10.66	51.92	200	400
Nitrate(mg/L)	<0.5	<0.5	<0.5	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	167.33	179.3	211.15	200	600
Calcium(mg/L)	39.92	35.13	57.49	75	200
Fluoride(mg/L)	0.54	0.67	0.36	1	1.5
Total Dissolve Solid(mg/L)	298	378	472	500	2000
Copper(mg/L)	<0.03	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	<0.04	0.07	0.1	0.3
Iron(mg/L)	<0.1	<0.1	<0.1	1.0	No relaxation
Zinc(mg/L)	<0.04	<0.04	0.29	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 Hingula Area

Project / OCP	Hingula OCP			Indian Drinking Standards (IS-10500):2012	
	Monitoring Station	Time Office Water	Gopalprasad Village Bore Well Water	Kumunda Village Bore Well Water	
Date of Sampling	13-Jun-2025	13-Jun-2025	13-Jun-2025	Acceptable	Permissible
Selenium(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Sodium(mg/L)	15.33	19.57	21.34	-	-
Potassium(mg/L)	3.35	4.49	20.07	-	-
Phenolics(mg/L)	<0.001	<0.001	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	<0.2	<0.2	0.2	1.0
MPN (Index/100 ml)	Not Detected	Not Detected	Not Detected	-	-

Project / OCP	Balaram OCP			Indian Drinking Standards (IS-10500):2012	
	Monitoring Station	Danara Village Borewell Water	Balaram Colony	Nakeipasi Village Bore Well Water	
Date of Sampling	13-Jun-2025	13-Jun-2025	13-Jun-2025	Acceptable	Permissible
Selenium(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Sodium(mg/L)	14.41	14.58	22.65	-	-
Potassium(mg/L)	3.41	3.62	1.55	-	-
Phenolics(mg/L)	<0.001	<0.001	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	<0.2	<0.2	0.2	1.0
MPN (Index/100 ml)	Not Detected	Not Detected	Not Detected	-	-

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Drinking Water Quality Data Hingula Area

Project / OCP	Balaram OCP			Indian Drinking Standards (IS-10500):2012	
	Danara Village Borewell Water	Balaram Colony	Nakeipasi Village Bore Well Water		
Date of Sampling	13-Jun-2025	13-Jun-2025	13-Jun-2025	Acceptable	Permissible
Colour(Hazen)	2	3	4	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	1	2	3	1	5
pH	6.72	7.74	7.37	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	67.23	71.43	260.52	200	600
Chloride(mg/L)	17.50	17.50	54.46	250	1000
Sulphate(mg/L)	67.2	165.1	8.34	200	400
Nitrate(mg/L)	4.17	<0.5	<0.5	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	135.46	250.99	187.25	200	600
Calcium(mg/L)	36.73	67.07	36.73	75	200
Fluoride(mg/L)	0.32	0.81	0.78	1	1.5
Total Dissolve Solid(mg/L)	238	388	424	500	2000
Copper(mg/L)	<0.03	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	<0.04	<0.04	0.1	0.3
Iron(mg/L)	<0.1	<0.1	<0.1	1.0	No relaxation
Zinc(mg/L)	<0.04	<0.04	<0.04	5	15
Lead(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.001	<0.001	<0.001	0.003	No relaxation
Total Chromium (mg/L)	<0.01	<0.01	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	<0.2	<0.2	0.5	2.4

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Surface Water Quality Data Hingula Area

Project/OCP	Hingula				IS:2296-1982 Tolerance for inland Surface water (Class C)
	Singadhajhor stream near Kumunda Village	Singadhajhor stream near Baghabaspur Village	Sinia Jhor near meeting Singhada Jhor	Pond water of Kankarei village	
NAME OF STATIONS					
Date of sampling	14-Jun-25	14-Jun-25	14-Jun-25	14-Jun-25	
pH	7.30	7.37	7.40	6.07	6.5-8.5
Color (Hazen unit)	3	3	2	2	300
Dissolved Oxygen(mg/L)	6.4	6.1	6.8	6.3	4
BOD (3 days 27°C)(mg/L)	<2	<2	<2	<2	3
Chlorides(mg/L)	21.42	21.42	25.31	15.58	600
Sulphate(mg/L)	82.73	80.00	74.81	77.53	400
Nitrate(mg/L)	14.67	15.10	2.97	12.3	50
Fluoride(mg/L)	0.33	0.35	0.96	0.50	1.5
Total Hardness(mg/L)	183.02	198.94	274.54	175.07	-
Total dissolved solids (mg/L)	256	254	322	238	1500
TSS(mg/L)	24	26	26	44	-
Copper(mg/L)	<0.03	<0.03	<0.03	<0.03	1.5
Iron(mg/L)	<0.1	<0.1	<0.1	<0.1	50
Zinc(mg/L)	0.06	<0.04	0.06	0.24	15
Lead(mg/L)	<0.005	<0.005	<0.005	<0.005	0.1
Cadmium(mg/L)	<0.001	<0.001	<0.001	<0.001	0.01
Total Chromium (mg/L)	<0.01	<0.01	<0.01	<0.01	-
Arsenic(mg/L)	<0.005	<0.005	<0.005	<0.005	0.2
Selenium(mg/L)	<0.005	<0.005	<0.005	<0.005	0.05
Chromium(as Cr ⁶⁺)(mg/L)	<0.05	<0.05	<0.05	<0.05	0.05
Phenolics(mg/L)	<0.001	<0.001	<0.001	<0.001	0.005
Oil & Grease (mg/L)	<4.0	<4.0	<4.0	<4.0	0.1
MPN (Index/100 ml)	79	94	84	120	-
Residual Free Chlorine(mg/L)	<0.2	<0.2	<0.2	<0.2	0.2

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Surface Water Quality Data Hingula Area

Project/OCP	Balram			IS:2296-1982 Tolerance for inland Surface water (Class C)
	Upstream of Bangaru Jhor	Downstream Bangaru Jhor near Nakeipasi village	Pond water of Ambapal village	
Date of sampling	14-Jun-25	14-Jun-25	14-Jun-25	
pH	7.82	7.15	6.82	6.5-8.5
Color (Hazen unit)	6	6	2	300
Dissolved Oxygen(mg/L)	6.8	6.2	6.4	4
BOD (3 days 27°C(mg/L)	<2	<2	<2	3
Chlorides(mg/L)	17.52	27.26	72.04	600
Sulphate(mg/L)	219.48	261.04	42.47	400
Nitrate(mg/L)	1.97	5.04	3.63	50
Fluoride(mg/L)	0.86	0.98	0.69	1.5
Total Hardness(mg/L)	179.05	190.98	115.39	-
Total dissolved solids (mg/L)	578	642	246	1500
TSS(mg/L)	46	54	40	-
Copper(mg/L)	<0.03	<0.03	<0.03	1.5
Iron(mg/L)	<0.1	<0.1	<0.1	50
Zinc(mg/L)	0.05	0.06	0.13	15
Lead(mg/L)	<0.005	<0.005	<0.005	0.1
Cadmium(mg/L)	<0.001	<0.001	<0.001	0.01
Total Chromium (mg/L)	<0.01	<0.01	<0.01	-
Arsenic(mg/L)	<0.005	<0.005	<0.005	0.2
Selenium(mg/L)	<0.005	<0.005	<0.005	0.05
Chromium(as Cr ⁶⁺)(mg/L)	<0.05	<0.05	<0.05	0.05
Phenolics(mg/L)	<0.001	<0.001	<0.001	0.005
Oil & Grease (mg/L)	<4.0	<4.0	<4.0	0.1
MPN (Index/100 ml)	94	120	94	-
Residual Free Chlorine(mg/L)	<0.2	<0.2	<0.2	0.2

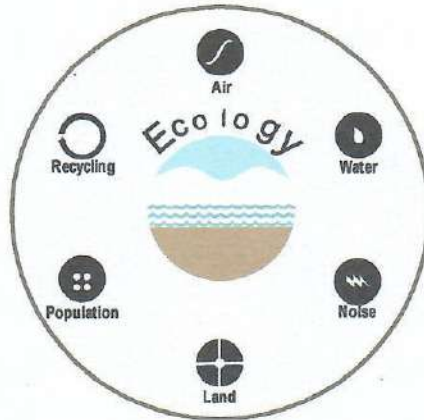
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**Environmental Monitoring Report
Of
Talcher Area
For
June-2025**

Talcher Coalfield



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 :

Talcher

(Compliance Station)

Project :

Talcher Colliery

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
14-Jun-25	Near Canteen Talcher Colliery	170	78	36	14.51	28.10	Locl Transportation	About 500m
14-Jun-25	Officer Club, Talcher Area	149	69	34	17.46	31.98	Mining Activities, Ananta, Lingaraj	About 1000m
30-Jun-25	Near Canteen Talcher Colliery	196	85	39	11.30	30.38	Locl Transportation	About 500m
30-Jun-25	Officer Club, Talcher Area	203	88	40	11.05	27.49	Mining Activities, Ananta, Lingaraj	About 1000m

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Anto

MoEF Standards Notification dated 25th
September, 2000

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Test Report

AMBIENT AIR QUALITY DATA

Area :

Talcher

(Compliance Station)

Project :

Nandira Colliery

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
14-Jun-25	Project Office	180	75	36	14.21	20.25	Mining Activities, Transportation, CHP	About 500m
14-Jun-25	Sub-station	166	67	31	12.02	22.79	Transportation & Railway Sidings of BOCP	About 500m
30-Jun-25	Project Office	173	78	35	11.89	24.44	Mining Activities, Transportation, CHP	About 500m
30-Jun-25	Sub-station	194	84	38	14.40	27.18	Transportation & Railway Sidings of BOCP	About 500m

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MoEF Standards Notification dated 25th
September, 2000

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Test Report

AMBIENT AIR QUALITY DATA

Area : Talcher (Compliance Station)

Project : Handhidhua Colliery (conc. in µg/cu.m.)

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
14-Jun-25	Manager's Office	174	77	35	13.97	33.58	Local Transportation, CHP	About 500m
30-Jun-25	Manager's Office	188	81	37	17.89	24.78	Local Transportation, CHP	About 500m

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MoEF Standards Notification dated 25th September, 2000	800	300		120	120
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Test Report



AMBIENT AIR QUALITY DATA

Area :

Talcher

(Reference Station)

Project :

Nandira Colliery

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
02-Jun-25	East of the Mine, Natedi Village (Reported Only)	128	48	25	14.10	27.34	Coal Transportation Road	About 2km
03-Jun-25	East of the Mine, Natedi Village (Reported Only)	119	46	24	15.79	30.38	Coal Transportation Road	About 2km
04-Jun-25	Nandira Colony	152	63	30	13.68	21.27	Local Transportation,	About 500m
05-Jun-25	Nandira Colony	135	51	27	11.61	26.58	Local Transportation,	About 500m
09-Jun-25	East of the Mine, Natedi Village (Reported Only)	110	42	21	10.66	23.87	Coal Transportation Road	About 2km
10-Jun-25	East of the Mine, Natedi Village (Reported Only)	135	51	27	17.04	26.16	Coal Transportation Road	About 2km
11-Jun-25	Nandira Colony	119	43	24	14.70	21.41	Local Transportation,	About 500m
12-Jun-25	Nandira Colony	115	40	22	16.58	25.58	Local Transportation,	About 500m
16-Jun-25	East of the Mine, Natedi Village (Reported Only)	142	51	28	14.09	15.95	Coal Transportation Road	About 2km
17-Jun-25	East of the Mine, Natedi Village (Reported Only)	138	47	26	16.99	26.58	Coal Transportation Road	About 2km
18-Jun-25	Nandira Colony	168	67	32	19.80	18.57	Local Transportation,	About 500m
19-Jun-25	Nandira Colony	153	60	29	14.92	19.75	Local Transportation,	About 500m
23-Jun-25	East of the Mine, Natedi Village (Reported Only)	118	39	19	13.68	21.27	Coal Transportation Road	About 2km
24-Jun-25	East of the Mine, Natedi Village (Reported Only)	133	44	25	15.34	28.10	Coal Transportation Road	About 2km
25-Jun-25	Nandira Colony	148	55	26	14.40	20.79	Local Transportation,	About 500m
26-Jun-25	Nandira Colony	138	46	24	19.34	22.79	Local Transportation,	About 500m
27-Jun-25	East of the Mine, Natedi Village (Reported Only)	121	40	22	15.75	21.27	Coal Transportation Road	About 2km
28-Jun-25	East of the Mine, Natedi Village (Reported Only)	106	37	19	15.04	34.00	Coal Transportation Road	About 2km

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*NAAQS, 2009

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Test Report

AMBIENT AIR QUALITY DATA

Area :

Talcher

(Reference Station)

Project :

Mandapal Sand Mine

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
04-Jun-25	Near Pachismeshwar Temple	159	63	31	14.74	27.01	Mining Activity	Less than 500m
04-Jun-25	Near Mandapal Chowk	120	50	23	16.12	27.85	Mining Activity	Less than 500m
05-Jun-25	Near Mandapal Chowk	127	47	25	17.04	32.07	Mining Activity	Less than 500m
05-Jun-25	Near Pachismeshwar Temple	147	55	29	13.09	28.78	Mining Activity	Less than 500m
11-Jun-25	Near Pachismeshwar Temple	134	53	27	15.27	32.78	Mining Activity	Less than 500m
11-Jun-25	Near Mandapal Chowk	132	53	26	16.58	26.16	Mining Activity	Less than 500m
12-Jun-25	Near Mandapal Chowk	158	61	30	13.36	35.45	Mining Activity	Less than 500m
12-Jun-25	Near Pachismeshwar Temple	142	55	28	15.27	23.19	Mining Activity	Less than 500m
18-Jun-25	Near Pachismeshwar Temple	147	55	26	13.82	26.76	Mining Activity	Less than 500m
18-Jun-25	Near Mandapal Chowk	155	48	27	15.14	20.47	Mining Activity	Less than 500m
19-Jun-25	Near Mandapal Chowk	144	60	24	15.71	29.58	Mining Activity	Less than 500m
19-Jun-25	Near Pachismeshwar Temple	136	53	24	16.58	30.38	Mining Activity	Less than 500m
25-Jun-25	Near Mandapal Chowk	118	42	19	12.22	31.98	Mining Activity	Less than 500m
25-Jun-25	Near Pachismeshwar Temple	157	68	30	12.63	21.70	Mining Activity	Less than 500m
26-Jun-25	Near Pachismeshwar Temple	144	58	27	12.97	20.47	Mining Activity	Less than 500m
26-Jun-25	Near Mandapal Chowk	141	50	23	13.96	26.38	Mining Activity	Less than 500m

*NAAQS, 2009

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Talcher

Project	Nandira							
Monitoring Station	Near Natedi Village (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)	($\mu\text{g}/\text{m}^3$)
02-Jun-2025	<20.0	21.32	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
03-Jun-2025	<20.0	13.88	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
09-Jun-2025	<20.0	26.78	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
10-Jun-2025	<20.0	22.07	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
16-Jun-2025	<20.0	20.33	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
17-Jun-2025	<20.0	25.03	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
23-Jun-2025	<20.0	20.83	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
24-Jun-2025	<20.0	26.53	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
27-Jun-2025	<20.0	15.87	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
28-Jun-2025	<20.0	23.30	<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)	04(1 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Talcher

Project	Nandira							
Monitoring Station	Nandira Colony							
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)
04-Jun-2025	<20.0	11.27	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
05-Jun-2025	<20.0	19.38	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
11-Jun-2025	<20.0	24.63	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
12-Jun-2025	<20.0	15.72	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
18-Jun-2025	<20.0	13.37	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
19-Jun-2025	<20.0	17.82	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
25-Jun-2025	<20.0	16.25	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
26-Jun-2025	<20.0	22.27	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
Standard	400(24h ours)	180(hour)	1.0(24h ours)	6.0(Annual)	20(Annual)	04(1hours)	01(annual)	05(annual)


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TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Talcher

PROJECT :

Talcher Colliery

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
10-Jun-25	Officers Club, Talcher Area	59.7	41.8
10-Jun-25	Near Canteen, Talcher Colliery	56.9	47.2
24-Jun-25	Officers Club, Talcher Area	67.3	43.5
24-Jun-25	Near Canteen, Talcher Colliery	70.1	49.2

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

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TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Talcher

PROJECT :

Nandira Colliery

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
10-Jun-25	Project Office	65.7	48.4
10-Jun-25	Sub Station, Nandira Colliery	66.4	49.1
24-Jun-25	Project Office	68.4	50.4
24-Jun-25	Sub Station, Nandira Colliery	69.2	51.1

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

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TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Talcher

PROJECT :

Deulbera Colliery

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
10-Jun-25	Manager's Office	65.1	47.7
24-Jun-25	Manager's Office	67.8	49.7

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)

K. Sankar
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TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Talcher

PROJECT :

Mandapal Sand Mine

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
10-Jun-25	Near Gopinathpur Village	50.9	43.5
24-Jun-25	Near Gopinathpur Village	51.8	40.9

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

K. H. H. H.
Authorized Signatory
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A. H. H.

TABLE--



EFFLUENT QUALITY DATA

Area :

Talcher

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

Project :

Talcher Colliery

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	Remarks
13-Jun-25	Talcher Colliery Sedimentation Tank Discharge	7.26	<4.0	22	16	-	
27-Jun-25	Talcher Colliery Sedimentation Tank Discharge	6.11	<4.0	37	28	-	

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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 :

Talcher

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

Project :

Nandira Colliery

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	Remarks
13-Jun-25	Nandira Colliery Sedimentation Tank Discharge	6.92	<4.0	15	12	-	
27-Jun-25	Nandira Colliery Sedimentation Tank Discharge	6.54	<4.0	30	20	-	

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A. K. Das

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 Talcher Area

Project / OCP	Talcher U/G		Indian Drinking Standards (IS-10500):2012	
	Canteen Water, GM Office	Canteen , Talcher Colliery		
Monitoring Station				
Date of Sampling	14-Jun-2025	14-Jun-2025	Acceptable	Permissible
Colour(Hazen)	1	2	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	<1	1	1	5
pH	7.62	7.06	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	54.63	67.23	200	600
Chloride(mg/L)	7.78	21.39	250	1000
Sulphate(mg/L)	9.85	117	200	400
Nitrate(mg/L)	<0.5	<0.5	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	63.74	183.26	200	600
Calcium(mg/L)	15.97	41.52	75	200
Fluoride(mg/L)	0.54	0.43	1	1.5
Total Dissolve Solid(mg/L)	108	308	500	2000
Copper(mg/L)	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	<0.04	0.1	0.3
Iron(mg/L)	<0.1	<0.1	1.0	No relaxation
Zinc(mg/L)	<0.04	<0.04	5	15
Lead(mg/L)	<0.005	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.001	<0.001	0.003	No relaxation
Total Chromium (mg/L)	<0.01	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	<0.2	0.5	2.4

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Drinking Water Quality Data Talcher Area

Project / OCP	Talcher U/G		Indian Drinking Standards (IS-10500):2012	
	Cnteen Water, GM Office	Canteen , Talcher Colliery		
Monitoring Station				
Date of Sampling	14-Jun-2025	14-Jun-2025	Acceptable	Permissible
Selenium(mg/L)	<0.005	<0.005	0.01	No relaxation
Sodium(mg/L)	12.70	15.45	—	—
Potassium(mg/L)	1.35	2.28	—	—
Phenolics(mg/L)	<0.001	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	<0.2	0.2	1.0
MPN (Index/100 ml)	Not Detected	Not Detected	—	—

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Drinking Water Quality Data Talcher Area

Project / OCP Monitoring Station	Nandira U/G		Indian Drinking Standards (IS-10500):2012	
	Canteen , Nandira Colliery	Pit Top, Nandira Colliery	Acceptable	Permissible
Date of Sampling	14-Jun-2025	14-Jun-2025		
Colour(Hazen)	1	3	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	2	2	1	5
pH	6.03	7.13	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	42.02	63.03	200	600
Chloride(mg/L)	21.39	11.67	250	1000
Sulphate(mg/L)	7.65	98.5	200	400
Nitrate(mg/L)	<0.5	<0.5	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	43.82	171.31	200	600
Calcium(mg/L)	11.18	38.33	75	200
Fluoride(mg/L)	<0.3	0.47	1	1.5
Total Dissolve Solid(mg/L)	112	260	500	2000
Copper(mg/L)	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	0.1	0.1	0.1	0.3
Iron(mg/L)	<0.1	<0.1	1.0	No relaxation
Zinc(mg/L)	0.36	<0.04	5	15
Lead(mg/L)	<0.005	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.001	<0.001	0.003	No relaxation
Total Chromium (mg/L)	<0.01	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	<0.2	0.5	2.4

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Drinking Water Quality Data Talcher Area

Project / OCP	Nandira U/G		Indian Drinking Standards (IS-10500):2012	
	Canteen , Nandira Colliery	Pit Top, Nandira Colliery		
Monitoring Station				
Date of Sampling	14-Jun-2025	14-Jun-2025	Acceptable	Permissible
Selenium(mg/L)	<0.005	<0.005	0.01	No relaxation
Sodium(mg/L)	12.46	15.79	—	—
Potassium(mg/L)	4.46	6.73	—	—
Phenolics(mg/L)	<0.001	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	<0.2	0.2	1.0
MPN (Index/100 ml)	Not Detected	Not Detected	—	—

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Drinking Water Quality Data Talcher Area

Project / OCP	Deulbera U/G			Indian Drinking Standards (IS-10500):2012	
	Monitoring Station	Deulbera Colliery Mine Discharge at Pit Top	Rani Park Submersible Pump		
Date of Sampling	14-Jun-2025	14-Jun-2025	14-Jun-2025	Acceptable	Permissible
Colour(Hazen)	2	1	2	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	3	<1	<1	1	5
pH	7.19	7.69	7.91	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	138.67	54.63	75.64	200	600
Chloride(mg/L)	31.12	7.78	15.56	250	1000
Sulphate(mg/L)	111.8	7.53	30.13	200	400
Nitrate(mg/L)	5.38	<0.5	<0.5	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	250.99	63.74	115.54	200	600
Calcium(mg/L)	62.28	15.97	28.75	75	200
Fluoride(mg/L)	0.41	0.57	0.54	1	1.5
Total Dissolve Solid(mg/L)	406	102	180	500	2000
Copper(mg/L)	<0.03	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	0.04	<0.04	<0.04	0.1	0.3
Iron(mg/L)	<0.1	<0.1	<0.1	1.0	No relaxation
Zinc(mg/L)	<0.04	<0.04	<0.04	5	15
Lead(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.001	<0.001	<0.001	0.003	No relaxation
Total Chromium (mg/L)	<0.01	<0.01	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	<0.2	<0.2	0.5	2.4

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Project / OCP	Deulbera U/G			Indian Drinking Standards (IS-10500):2012	
	Monitoring Station	Deulbera Colliery Mine Discharge at Pit Top	Rani Park Submersible Pump		
Date of Sampling	14-Jun-2025	14-Jun-2025	14-Jun-2025	Acceptable	Permissible
Selenium(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Sodium(mg/L)	17.55	11.84	13.65	—	—
Potassium(mg/L)	5.26	1.89	4.14	—	—
Phenolics(mg/L)	<0.001	<0.001	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	<0.2	<0.2	0.2	1.0
MPN (Index/100 ml)	Not Detected	Not Detected	Not Detected	—	—

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Drinking Water Quality Data Talcher Area

Project / OCP	Handhidhua Colliery			Indian Drinking Standards (IS-10500):2012	
	19X Cut Road Bore Hole Point	Pit Top Water	RWSS (Pit Top Water)		
Monitoring Station					
Date of Sampling	14-Jun-2025	14-Jun-2025	14-Jun-2025	Acceptable	Permissible
Colour(Hazen)	3	4	2	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	2	3	2	1	5
pH	6.37	6.95	6.24	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	63.03	71.43	67.23	200	600
Chloride(mg/L)	25.28	29.17	27.23	250	1000
Sulphate(mg/L)	136.7	167.45	145.4	200	400
Nitrate(mg/L)	0.82	<0.5	0.94	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	207.17	243.02	211.15	200	600
Calcium(mg/L)	47.91	54.30	47.91	75	200
Fluoride(mg/L)	0.52	0.50	0.45	1	1.5
Total Dissolve Solid(mg/L)	345	398	360	500	2000
Copper(mg/L)	<0.03	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	0.06	0.13	0.14	0.1	0.3
Iron(mg/L)	<0.1	<0.1	<0.1	1.0	No relaxation
Zinc(mg/L)	<0.04	<0.04	0.49	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 Talcher Area

Project / OCP	Handhidhua Colliery			Indian Drinking Standards (IS-10500):2012	
	Monitoring Station	19X Cut Road Bore Hole Point	Pit Top Water		
Date of Sampling	14-Jun-2025	14-Jun-2025	14-Jun-2025	Acceptable	Permissible
Selenium(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Sodium(mg/L)	17.86	16.56	16.12	—	—
Potassium(mg/L)	0.91	0.65	2.71	—	—
Phenolics(mg/L)	<0.001	<0.001	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	<0.2	<0.2	0.2	1.0
MPN (Index/100 ml)	Not Detected	Not Detected	Not Detected	—	—

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Surface Water Quality Data Talcher Area

Project/OCP	Mandapal Sand Mine		IS:2296-1982 Tolerance for inland Surface water (Class C)
	Upstream - At 200 m before leasehold area	Downstream - At 200 m after leasehold area	
NAME OF STATIONS			
Date of sampling	13-Jun-25	13-Jun-25	
pH	6.97	6.84	6.5-8.5
Color (Hazen unit)	2	2	300
Dissolved Oxygen(mg/L)	7.0	6.5	4
BOD (3 days 27°C)(mg/L)	<2	<2	3
Chlorides(mg/L)	5.84	7.79	600
Sulphate(mg/L)	37.40	44.81	400
Nitrate(mg/L)	23.69	25.78	50
Fluoride(mg/L)	0.53	0.59	1.5
Total Hardness(mg/L)	35.81	43.77	-
Total dissolved solids (mg/L)	158	182	1500
TSS(mg/L)	36	45	-
Copper(mg/L)	<0.03	<0.03	1.5
Iron(mg/L)	<0.1	<0.1	50
Zinc(mg/L)	0.07	0.04	15
Lead(mg/L)	<0.005	<0.005	0.1
Cadmium(mg/L)	<0.001	<0.001	0.01
Total Chromium (mg/L)	<0.01	<0.01	-
Arsenic(mg/L)	<0.005	<0.005	0.2
Selenium(mg/L)	<0.005	<0.005	0.05
Chromium(as Cr ⁶⁺)(mg/L)	<0.05	<0.05	0.05
Phenolics(mg/L)	<0.001	<0.001	0.005
Oil & Grease (mg/L)	<4.0	<4.0	0.1
MPN (Index/100 ml)	130	150	-
Residual Free Chlorine(mg/L)	<0.2	<0.2	0.2

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Piezometer Water Quality Data: Talcher Area

Project / OCP	Nandira Colliery		Indian Drinking Standards (IS-10500):2012	
	Monitoring Station	MTP 11 (Inside the premises of Hingula Area Office)		
Date of Sampling	5-May-25	3-May-25	Acceptable	Permissible
Colour(Hazen)	1	1	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	1	1	1	5
pH	6.09	6.47	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	19.79	19.79	200	600
Chloride(mg/L)	15.66	41.10	250	1000
Sulphate(mg/L)	20.91	15.19	200	400
Nitrate(mg/L)	<0.50	10.89	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	39.79	75.60	200	600
Calcium(mg/L)	6.39	17.57	75	200
Fluoride(mg/L)	0.45	0.62	1	1.5
Total Dissolve Solid(mg/L)	80	138	500	2000
Copper(mg/L)	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	0.12	<0.04	0.1	0.3
Iron(mg/L)	<0.1	<0.1	0.3	No relaxation
Zinc(mg/L)	<0.04	0.07	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	0.05
Selenium (mg/L)	<0.005	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	<0.2	0.5	1
Sodium mg/L	8.03	9.23	0.5	-
Potassium mg/L	0.6	3.77	0.5	-
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/100ml)	Not Detected	Not Detected	-	-

P. J. Jaiswal
Authorised Signatory
CMPDI, RI-VII, LAB
BHUBANESWAR



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Piezometer Water Quality Data: Talcher Area

Project / OCP	Deulbera		Indian Drinking Standards (IS-10500):2012	
	MTP 01 (Near Mandapal Hospital) (Reported)	MTP 04 (Inside central Nursery beside golf hut) (Reported)	Acceptable	Permissible
Date of Sampling	3-May-25	3-May-25	Acceptable	Permissible
Colour(Hazen)	3	1	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	3	1	1	5
pH	8.03	7.23	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	336.43	74.21	200	600
Chloride(mg/L)	91.98	5.87	250	1000
Sulphate(mg/L)	68.19	12.73	200	400
Nitrate(mg/L)	2.08	<0.50	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	370.03	55.70	200	600
Calcium(mg/L)	91.03	12.78	75	200
Fluoride(mg/L)	0.39	0.66	1	1.5
Total Dissolve Solid(mg/L)	601	108	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	0.3	No relaxation
Zinc(mg/L)	<0.04	<0.04	5	15
Lead(mg/L)	<0.005	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.001	<0.001	0.003	No relaxation
Total Chromium (mg/L)	<0.01	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	<0.005	0.01	0.05
Selenium (mg/L)	<0.005	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	<0.2	0.5	1
Sodium mg/L	17.78	6.59	0.5	-
Potassium mg/L	0.65	1.36	0.5	-
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/100ml)	Not Detected	Not Detected	-	-

Ratna
LAB
BHUBANESWAR



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मिनी रत्न
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Mini Ratna

Piezometer Water Quality Data: Talcher Area

Project / OCP	Handhidhua Colliery		Indian Drinking Standards (IS-10500):2012	
Monitoring Station	MTP 01 (Near Mandapal Hospital) (Reported)	MTP 04 (Inside central Nursery beside golf hut) (Reported)	Acceptable	Permissible
Date of Sampling	3-May-25	3-May-25	5	15
Colour(Hazen)	3	1	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	3	1	1	5
pH	8.03	7.23	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	336.43	74.21	200	600
Chloride(mg/L)	91.98	5.87	250	1000
Sulphate(mg/L)	68.19	12.73	200	400
Nitrate(mg/L)	2.08	<0.50	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	370.03	55.70	200	600
Calcium(mg/L)	91.03	12.78	75	200
Fluoride(mg/L)	0.39	0.66	1	1.5
Total Dissolve Solid(mg/L)	601	108	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	0.3	No relaxation
Zinc(mg/L)	<0.04	<0.04	5	15
Lead(mg/L)	<0.005	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.001	<0.001	0.003	No relaxation
Total Chromium (mg/L)	<0.01	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	<0.005	0.01	0.05
Selenium (mg/L)	<0.005	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	<0.2	0.5	1
Sodium mg/L	17.78	6.59	0.5	-
Potassium mg/L	0.65	1.36	0.5	-
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/100ml)	Not Detected	Not Detected	-	-

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