

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

Talcher Coalfield



Mahanadi Coalfields Limited



cmpdi

A Mini Ratna Company

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

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

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Test Report



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Cmpdi
भुवनेश्वर

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
05-Aug-25	Near MDTP	193	83	39	14.87	29.72	Railway Siding CHP	About 800m
06-Aug-25	Near NBVL Station	216	107	43	20.41	29.72	CHP, CT Road	About 600m
22-Aug-25	Near MDTP	184	84	37	14.27	23.46	Railway Siding CHP	About 800m
22-Aug-25	Near NBVL Station	201	108	43	17.98	31.37	CHP, CT Road	About 600m

MoEF Standards Notification dated 25th
September, 2000

500	250		120	120
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BHUBANESWAR



AMBIENT AIR QUALITY DATA

Area :

Jagannath

(Reference Station)

Project :

Jagannath OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
01-Aug-25	CWS Colony, Meeti	153	59	27	17.50	29.04	Mining Activity	About 1500 m
01-Aug-25	Kurihan Village	149	59	28	17.94	20.80		
02-Aug-25	CWS Colony, Meeti	112	36	16	10.42	19.81	Mining Activity	About 1500 m
02-Aug-25	Kurihan Village	140	50	24	13.81	27.37		
04-Aug-25	Central Nursery (Reported Only)	142	53	26	13.92	18.91	Open-Cast Mine	Less than 500m
05-Aug-25	Central Nursery (Reported Only)	133	49	22	11.53	20.94	Open-Cast Mine	Less than 500m
08-Aug-25	Kurihan Village	131	39	20	14.74	18.77		
08-Aug-25	CWS Colony, Meeti	145	54	26	13.75	16.98	Mining Activity	About 1500 m
09-Aug-25	CWS Colony, Meeti	132	47	24	18.81	23.03	Mining Activity	About 1500 m
09-Aug-25	Kurihan Village	126	47	23	16.66	23.35		
11-Aug-25	Central Nursery (Reported Only)	110	36	17	16.25	26.89	Open-Cast Mine	Less than 500m
12-Aug-25	Central Nursery (Reported Only)	142	48	20	15.31	20.06	Open-Cast Mine	Less than 500m
18-Aug-25	CWS Colony, Meeti	154	73	32	14.00	23.77	Mining Activity	About 1500 m
18-Aug-25	Kurihan Village	176	69	31	17.04	24.24		
19-Aug-25	CWS Colony, Meeti	121	35	16	14.44	19.31	Mining Activity	About 1500 m
19-Aug-25	Kurihan Village	137	55	26	14.27	18.77		
20-Aug-25	Central Nursery (Reported Only)	146	58	27	16.19	23.77	Open-Cast Mine	Less than 500m
21-Aug-25	Central Nursery (Reported Only)	125	41	22	14.00	32.69	Open-Cast Mine	Less than 500m
25-Aug-25	CWS Colony, Meeti	129	44	19	11.81	28.23	Mining Activity	About 1500 m
25-Aug-25	Kurihan Village	123	44	20	16.19	17.83		
26-Aug-25	Kurihan Village	128	52	24	16.04	18.98		
26-Aug-25	CWS Colony, Meeti	136	53	25	13.81	22.68	Mining Activity	About 1500 m
27-Aug-25	Central Nursery (Reported Only)	153	55	28	15.00	26.89	Open-Cast Mine	Less than 500m
28-Aug-25	Central Nursery (Reported Only)	148	59	25	15.83	23.35	Open-Cast Mine	Less than 500m

*N/AQS,2009

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C.M.P.D.I.
LABORATORY

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
06-Aug-25	North East of Mine	178	78	37	9.62	22.29	Open-Cast Mine	Less than 500m
06-Aug-25	Near NBVL Station (REPORTED)	216	107	43	20.41	29.72	CHP, CT Road	About 600m
22-Aug-25	North East of Mine	199	105	44	14.44	20.06	Open-Cast Mine	Less than 500m
22-Aug-25	Near NBVL Station (REPORTED)	201	108	43	17.98	31.37	CHP, CT Road	About 600m

MoEF Standards Notification dated 25th September, 2000	500	250		120	130
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Jagannath

AMBIENT AIR QUALITY DATA

Area :

Jagannath

(Reference Station)

Project :

Ananta OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
04-Aug-25	Guthasahi Village	143	57	26	16.25	23.35	Mining Activities	About 3km
04-Aug-25	Asanabahali Village	139	50	26	12.43	21.11	Domestic and Mining Activities	About 4km
04-Aug-25	Sibarampur Village	148	63	28	18.96	34.67	Domestic and Mining Activities	About 4km
04-Aug-25	Central Nursery	142	53	26	13.92	18.91	Open-Cast Mine	Less than 500m
05-Aug-25	Sibarampur Village	113	36	17	17.50	30.46	Domestic and Mining Activities	About 4km
05-Aug-25	Guthasahi Village	114	33	19	18.42	21.11	Mining Activities	About 3km
05-Aug-25	Central Nursery	133	49	22	11.53	20.94	Open-Cast Mine	Less than 500m
05-Aug-25	Asanabahali Village	115	46	23	17.50	29.75	Domestic and Mining Activities	About 4km
11-Aug-25	Central Nursery	110	36	17	16.25	26.89	Open-Cast Mine	Less than 500m
11-Aug-25	Sibarampur Village	147	50	23	9.17	31.13	Domestic and Mining Activities	About 4km
11-Aug-25	Guthasahi Village	127	47	20	11.97	26.59	Mining Activities	About 3km
11-Aug-25	Asanabahali Village	352	67	29	13.81	19.55	Domestic and Mining Activities	About 4km
12-Aug-25	Guthasahi Village	137	53	25	14.74	32.84	Mining Activities	About 3km
12-Aug-25	Asanabahali Village	136	56	28	11.51	35.19	Domestic and Mining Activities	About 4km
12-Aug-25	Central Nursery	142	48	20	15.31	20.06	Open-Cast Mine	Less than 500m
13-Aug-25	Sibarampur Village	140	44	21	16.62	31.20	Domestic and Mining Activities	About 4km
20-Aug-25	Guthasahi Village	127	54	23	17.74	17.99	Mining Activities	About 3km
20-Aug-25	Sibarampur Village	136	46	25	14.58	34.67	Domestic and Mining Activities	About 4km
20-Aug-25	Asanabahali Village	148	47	29	19.44	28.89	Domestic and Mining Activities	About 4km
20-Aug-25	Central Nursery	146	58	27	16.19	23.77	Open-Cast Mine	Less than 500m
21-Aug-25	Sibarampur Village	152	57	29	16.53	29.72	Domestic and Mining Activities	About 4km
21-Aug-25	Guthasahi Village	123	73	18	14.27	17.99	Mining Activities	About 3km
21-Aug-25	Central Nursery	125	41	22	14.00	32.69	Open-Cast Mine	Less than 500m

*N/AQS,2009

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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
21-Aug-25	Asanabahali Village	174	65	31	17.50	21.90	Domestic and Mining Activities	About 4km
27-Aug-25	Central Nursery	153	55	28	15.00	26.89	Open-Cast Mine	Less than 500m
27-Aug-25	Guthasahi Village	109	49	21	11.51	32.06	Mining Activities	About 3km
27-Aug-25	Asanabahali Village	128	45	25	14.44	31.20	Domestic and Mining Activities	About 4km
27-Aug-25	Sibarampur Village	147	50	27	15.75	19.31	Domestic and Mining Activities	About 4km
28-Aug-25	Sibarampur Village	120	41	23	11.05	19.55	Domestic and Mining Activities	About 4km
28-Aug-25	Asanabahali Village	134	55	27	11.37	26.00	Domestic and Mining Activities	About 4km
28-Aug-25	Guthasahi Village	144	61	26	20.26	18.77	Mining Activities	About 3km
28-Aug-25	Central Nursery	148	59	25	15.83	23.35	Open-Cast Mine	Less than 500m

*N/AQS, 2009

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Test Report

AMBIENT AIR QUALITY DATA

Area :

Jagannath

(Compliance Station)

Project :

Balanda OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
06-Aug-25	Near NBVL Station (Reported)	216	107	43	20.41	29.72	CHP, CT Road	About 600m
22-Aug-25	Near NBVL Station (Reported)	201	108	43	17.98	31.37	CHP, CT Road	About 600m

MoEF Standards Notification dated 25th September, 2009

500	250		120	120
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Jagannath



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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 (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)	($\mu\text{g}/\text{m}^3$)
01-Aug-2025	<20.0	16.97	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
02-Aug-2025	<20.0	23.75	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
08-Aug-2025	<20.0	13.85	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
09-Aug-2025	<20.0	13.57	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
18-Aug-2025	<20.0	23.75	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
19-Aug-2025	<20.0	24.32	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
25-Aug-2025	<20.0	22.33	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
26-Aug-2025	<20.0	14.42	<0.1	<1.0	<1.0	1.4	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		CWS Colony, Meeti						
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^2)	($\mu\text{g}/\text{m}^3$)
01-Aug-2025	<20.0	11.58	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
02-Aug-2025	<20.0	24.03	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
08-Aug-2025	<20.0	13.28	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
09-Aug-2025	<20.0	13.85	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
18-Aug-2025	<20.0	18.65	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
19-Aug-2025	<20.0	16.97	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
25-Aug-2025	<20.0	18.93	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
26-Aug-2025	<20.0	21.20	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
Standard	400(24h ours)	180(hou r)	1.0(24h ours)	6.0(Ann ual)	20(Ann ual)	02(Shou rs)	01(annual)	05(annu al)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Jagannath

Project		Jagannath OCP						
Monitoring Station		Central Nursery (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)
04-Aug-2025	<20.0	23.61	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
05-Aug-2025	<20.0	15.66	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
11-Aug-2025	<20.0	19.52	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
12-Aug-2025	<20.0	12.9	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
20-Aug-2025	<20.0	14.85	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
21-Aug-2025	<20.0	18.57	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
27-Aug-2025	<20.0	14.63	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
28-Aug-2025	<20.0	12.18	<0.1	<1.0	<1.0	1.3	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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Jagannath



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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
	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	(ng/m^3)	(ng/m^3)	(mg/m^3)	(ng/m^3)	($\mu\text{g}/\text{m}^3$)
04-Aug-2025	<20.0	23.61	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
05-Aug-2025	<20.0	15.66	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
11-Aug-2025	<20.0	19.52	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
12-Aug-2025	<20.0	12.9	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
20-Aug-2025	<20.0	14.85	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
21-Aug-2025	<20.0	18.57	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
27-Aug-2025	<20.0	14.63	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
28-Aug-2025	<20.0	12.18	<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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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Jagannath

Ananta OCP								
Guthasahi Village								
Project								
Monitoring Station								
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-Aug-2025	<20.0	14.42	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
05-Aug-2025	<20.0	14.13	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
11-Aug-2025	<20.0	16.97	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
12-Aug-2025	<20.0	13.85	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
20-Aug-2025	<20.0	17.53	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
21-Aug-2025	<20.0	23.18	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
27-Aug-2025	<20.0	16.40	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
28-Aug-2025	<20.0	24.32	<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)

G. K. Sawik
Authorised Signatory
CMPDI, RI-VII, LAB
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J. J. J.



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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) (µg/m ³)	Ozone (O ₃) (µg/m ³)	Lead (Pb) (µg/m ³)	Arsenic (As) (ng/m ³)	Nickel (Ni) (ng/m ³)	CO (mg/m ³)	Benzo (α) Pyrene (ng/m ³)	Benzene (µg/m ³)
01-Aug-2025	<20.0	18.10	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
02-Aug-2025	<20.0	24.03	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
08-Aug-2025	<20.0	15.27	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
09-Aug-2025	<20.0	21.48	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
20-Aug-2025	<20.0	13.57	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
21-Aug-2025	<20.0	16.12	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
27-Aug-2025	<20.0	13.28	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
28-Aug-2025	<20.0	19.78	<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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नियंत्रण एवं
संशोधन
CMPDI
राज्य प्रदूषण नियंत्रण बोर्ड


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-Aug-2025	<20.0	16.12	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
05-Aug-2025	<20.0	22.90	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
11-Aug-2025	<20.0	23.75	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
12-Aug-2025	<20.0	23.47	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
20-Aug-2025	<20.0	16.12	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
21-Aug-2025	<20.0	15.27	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
27-Aug-2025	<20.0	19.50	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
28-Aug-2025	<20.0	23.47	<0.1	<1.0	<1.0	0.7	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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 सीएमपीडीआई रिपोर्टिंग cmpdi निरीक्षण	AMBIENT AIR QUALITY DATA Area: Jagannath
Project	Ananta OCP
Monitoring Station	North-East of the Mine
Date of sampling	Carbon Monoxide (CO)
	mg/m³
06-Aug-2025	0.6
22-Aug-2025	0.8
Standard	02(8 Hours)


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संयुक्त प्रदूषण नियंत्रण बोर्ड
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TABLE-

NOISE LEVEL MONITORING DATA

AREA :

Jagannath

PROJECT :

Jagannath OCP

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
05-Aug-25	Near NBVL Station	62.7	55.1
05-Aug-25	Near MDTP	65.3	53.2
05-Aug-25	CWS Colony, MEETI	49.7	38.9
05-Aug-25	Central Nursery (Reported only)	60.9	50.7
21-Aug-25	Near NBVL Station	62.3	53.0
21-Aug-25	Near MDTP	64.1	53.7
21-Aug-25	CWS Colony, MEETI	46.5	39.1
21-Aug-25	Central Nursery (Reported only)	47.2	39.9

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)

Jagannath
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Jagannath



संयुक्त प्रदूषण नियंत्रण बोर्ड
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राज्य स्तर पर

TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Jugannath

PROJECT :

Ananta OCP

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
05-Aug-25	Near NBVL Station (Reported only)	62.7	55.1
05-Aug-25	North East of the Mine	65.7	54.0
05-Aug-25	Guthasahi Village	47.3	38.3
05-Aug-25	Central Nursery	60.9	50.7
21-Aug-25	Near NBVL Station (Reported only)	62.3	53.0
21-Aug-25	North East of the Mine	58.1	50.7
21-Aug-25	Guthasahi Village	47.1	36.1
21-Aug-25	Central Nursery	47.2	39.9

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

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Jugannath



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CMPDI
भुवनेश्वर

TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Jagannath

PROJECT :

Balanda OCP

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
05-Aug-25	Near NBVL Station (Reported only)	62.7	55.1
21-Aug-25	Near NBVL Station (Reported only)	62.3	53.0

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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 CENTRAL POLLUTION CONTROL BOARD

EFFLUENT QUALITY DATA

Area :

Jagannath

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

Project :

Jagannath OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	Remarks
14-Aug-25	Central Sump at Quarry no. 8	7.64	-	-	-	-	
14-Aug-25	Face Sump	3.52	<4.0	63	24	-	
14-Aug-25	O & G Trap Inlet	6.94	4.2	67	52	-	
14-Aug-25	O & G Trap Outlet	7.30	<4.0	29	20	-	
14-Aug-25	Sump at Quarry No. 4, Near MDTP	7.82	<4.0	25	16	-	
30-Aug-25	O & G Trap Inlet	7.45	<4.0	46	40	-	
30-Aug-25	O & G Trap Outlet	7.60	<4.0	25	20	-	

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Jagannath

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 :

Jagannath

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

Project :

Jagannath OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	MPN/100ml.
14-Aug-25	STP INLET	6.65	-	37	-	2.4	84
14-Aug-25	STP OUTLET	7.01	-	22	-	<2.0	63
30-Aug-25	STP INLET	7.77	-	35	-	2.4	130
30-Aug-25	STP OUTLET	7.78	-	27	-	<2.0	84

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Jagannath

G.S.R. 1265(E) Effluent discharge standards (applicable to all mode of disposal), Sewage Treatment Plants (STPs)	6.5-9.0	-	<100	-	30	<1000
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EFFLUENT QUALITY DATA

Area :

Jagannath

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

Project :

Ananta OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	Remarks
14-Aug-25	Mine Sump Water	7.19	<4.0	16	12	-	
14-Aug-25	O & G Trap Inlet	6.31	<4.0	29	24	-	
14-Aug-25	O & G Trap Outlet	7.10	<4.0	17	12	-	
30-Aug-25	O & G Trap Inlet	6.50	<4.0	42	36	-	
30-Aug-25	O & G Trap Outlet	7.42	<4.0	21	16	-	

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Jagannath

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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संयुक्त प्रदूषण नियंत्रण बोर्ड
CMPDI
भारत सरकार

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
14-Aug-25	STP INLET	7.03	-	41	-	2.8	94
14-Aug-25	STP OUTLET	7.05	-	26	-	<2.0	70
30-Aug-25	STP INLET	7.20	-	33	-	2.2	110
30-Aug-25	STP OUTLET	7.59	-	23	-	<2.0	94

K. J. Nayak
Authorized Signatory
CMPDI, RI-VII, LA
BHUBANESWAR

J. Nayak

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	Jagannath Colony	Rakas Village Well Water	Balanda Colony	Acceptable	Permissible
Date of Sampling	14-Aug-2025	14-Aug-2025	14-Aug-2025	5	15
Colour(Hazen)	2	3	3	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	3	3	2	1	5
pH	6.93	7.50	7.10	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	79.83	75.63	71.43	200	600
Chloride(mg/L)	25.25	21.37	19.4	250	1000
Sulphate(mg/L)	148	136	112.78	200	400
Nitrate(mg/L)	0.76	0.58	<0.5	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	211.78	196.10	160.80	200	600
Calcium(mg/L)	62.88	55.02	45.59	75	200
Fluoride(mg/L)	0.86	0.74	0.78	1	1.5
Total Dissolve Solid(mg/L)	352	332	292	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)	<0.005	<0.005	<0.001	0.003	No relaxation
Total Chromium (mg/L)	<0.01	<0.01	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	<0.2	<0.2	0.5	2.4

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Drinking Water Quality Data Jagannath Area

Project / OCP	Jagannath OCP			Indian Drinking Standards (IS-10500):2012	
	Monitoring Station	Jagannath Colony	Rakas Village Well Water			Balanda Colony
Date of Sampling	14-Aug-2025	14-Aug-2025	14-Aug-2025	Acceptable	Permissible
Selenium(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Sodium(mg/L)	7.67	15.24	16.12		
Potassium(mg/L)	6.98	7.40	9.81		
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 Jagannath Area

Project / OCP	Ananta OCP		Indian Drinking Standards (IS-10500):2012	
	Monitoring Station	Ananta Colony			Dera Village Tube Well Water
Date of Sampling	14-Aug-2025	14-Aug-2025	Acceptable	Permissible
Colour(Hazen)	1	3	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	2	3	1	5
pH	7.22	6.21	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	33.61	79.83	200	600
Chloride(mg/L)	13.60	50.51	250	1000
Sulphate(mg/L)	38	76.2	200	400
Nitrate(mg/L)	<0.5	30.20	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	47.06	164.72	200	600
Calcium(mg/L)	14.14	40.87	75	200
Fluoride(mg/L)	0.49	0.73	1	1.5
Total Dissolve Solid(mg/L)	128	306	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)	<0.005	<0.005	0.003	No relaxation
Total Chromium (mg/L)	<0.01	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	<0.2	0.5	2.4

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Drinking Water Quality Data Jagannath Area

Project / OCP	Ananta OCP		Indian Drinking Standards (IS-10500):2012	
	Monitoring Station	Ananta Colony			Dera Village Tube Well Water
Date of Sampling	14-Aug-2025	14-Aug-2025	Acceptable	Permissible
Selenium(mg/L)	<0.005	<0.005	0.01	No relaxation
Sodium(mg/L)	19.07	6.28		
Potassium(mg/L)	3.43	2.22		
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 Jagannath Area

Project / OCP	Balanda OCP	Indian Drinking Standards (IS-10500):2012	
Monitoring Station	Balanda Colony (Reported Only)	Acceptable	Permissible
Date of Sampling	14-Aug-2025	Acceptable	Permissible
Colour(Hazen)	3	5	15
Odour	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	2	1	5
pH	7.10	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	71.43	200	600
Chloride(mg/L)	19.4	250	1000
Sulphate(mg/L)	112.78	200	400
Nitrate(mg/L)	<0.5	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	160.80	200	600
Calcium(mg/L)	45.59	75	200
Fluoride(mg/L)	0.78	1	1.5
Total Dissolve Solid(mg/L)	292	500	2000
Copper(mg/L)	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	0.1	0.3
Iron(mg/L)	<0.1	1.0	No relaxation
Zinc(mg/L)	<0.04	5	15
Lead(mg/L)	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.001	0.003	No relaxation
Total Chromium (mg/L)	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	0.5	2.4

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Drinking Water Quality Data Jagannath Area

Project / OCP	Balanda OCP	Indian Drinking Standards (IS-10500):2012	
	Balanda Colony (Reported Only)	Acceptable	Permissible
Monitoring Station	14-Aug-2025		
Date of Sampling	14-Aug-2025	Acceptable	Permissible
Selenium(mg/L)	<0.005	0.01	No relaxation
Sodium(mg/L)	16.12		
Potassium(mg/L)	9.81		
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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MIND BODIES

Effluent Quality (all Parameter): Jagannath Area

Project (OCP / UG) NAME OF THE STATION	Jagannath			MoEF-Sch-VI Standards
	Central Sump at Quarry no. 8	Sump at Quarry no. 4	Face Sump	
Date of Sampling	13-May-25	13-May-25	13-May-25	
Odour	Unobjectionable	Unobjectionable	Unobjectionable	
Colour(Hazen)	6	7	14	
Temperature(°C)	25.3	25.5	25.7	Shall not exceed 5 °C above the receiving temperature
pH	7.69	7.70	3.8	5.5-9.0
Total Hardness (asCaCO ₃),mg/L	378.48	378.48	1044	-
Total Dissolved Solids, mg/L	510	514	1198	-
Nitrate Nitrogen(mg/L)(As N)	<0.5	<0.5	1.75	10
Ammonical Nitrogen , mg/l (As N)	0.25	0.28	4.75	50
Total Kjeldhal Nitrogen, mg/l (As N)	2.21	2.21	7.76	100
Sulphide (mg/L)	<0.1	<0.1	<0.1	2
BOD [3 days at 27°C] (mg/L)	<2	<2	<2	30
Fluoride(mg/L)	1.86	1.89	1.07	2
Copper(mg/L)	<0.03	<0.03	<0.03	3
Manganese(mg/L)	<0.04	<0.04	1.30	2
Iron(mg/L)	<0.1	<0.1	<0.1	3
Zinc(mg/L)	<0.04	<0.04	<0.04	5
Lead, mg/l	<0.005	<0.005	<0.005	0.1
Cadmium, mg/l	<0.001	<0.001	<0.001	2
Total Chromium(mg/L)	<0.01	<0.01	<0.01	2
Hexavalent Chromium(mg/L)	<0.05	<0.05	<0.05	0.1
Nickel(mg/L)	<0.02	<0.02	<0.02	3
Arsenic, mg/l	<0.005	<0.005	<0.005	0.2
Selenium (mg/L)	<0.005	<0.005	<0.005	0.05
Dissolved Phosphate(mg/L)	<4	<4	<4	5
Phenolics (mg/L)	<0.001	<0.001	<0.001	1

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Effluent Quality (all Parameter): Jagannath Area

Project (OCP / UG)	Ananta	MoEF-Sch-VI Standards
NAME OF THE STATION	Mine Sump Water	
Date of Sampling	13-May-25	
Odour	Unobjectionable	-
Colour(Hazen)	8	-
Temperature(°C)	25.4	Shall not exceed 5 °C above the receiving temperature
pH	7.49	5.5-9.0
Total Hardness (asCaCO ₃),mg/L	589.63	-
Total Dissolved Solids, mg/L	748	-
Nitrate Nitrogen(mg/L)(As N)	0.86	10
Ammonical Nitrogen , mg/l (As N)	0.24	50
Total Kjeldhal Nitrogen, mg/l (As N)	3.32	100
Sulphide (mg/L)	<0.1	2
BOD [3 days at 27°C] (mg/L)	<2.0	30
Fluoride(mg/L)	1.33	2
Copper(mg/L)	<0.03	3
Manganese(mg/L)	<0.04	2
Iron(mg/L)	<0.1	3
Zinc(mg/L)	<0.04	5
Lead, mg/l	<0.005	0.1
Cadmium, mg/l	<0.001	2
Total Chromium(mg/L)	<0.01	2
Hexavalent Chromium(mg/L)	<0.05	0.1
Nickel(mg/L)	<0.02	3
Arsenic, mg/l	<0.005	0.2
Selenium (mg/L)	<0.005	0.05
Dissolved Phosphate(mg/L)	<4.0	5
Phenolics (mg/L)	<0.001	1

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BHUBANESWAR

Signature



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Mini Ratna

Piezometer Water Quality Data: Jagannath Area

Project / OCP	Jagannath OCP		Indian Drinking Standards (IS-10500):2012	
	MTP 04 (Inside central Nursery beside golf hut)	MTPJ 01 (Near PO Office)	Acceptable	Permissible
Date of Sampling	03-May-25	05-May-25		
Colour(Hazen)	1	3	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	1	2	1	5
pH	7.23	7.17	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	74.21	212.74	200	600
Chloride(mg/L)	5.87	23.48	250	1000
Sulphate(mg/L)	12.73	35.22	200	400
Nitrate(mg/L)	<0.50	<0.50	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	55.70	187.00	200	600
Calcium(mg/L)	12.78	52.70	75	200
Fluoride(mg/L)	0.66	0.58	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	0.14	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
Selenium (mg/L)	<0.005	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	<0.2	0.5	2.4
Sodium mg/L	6.59	8.77	-	-
Potassium mg/L	1.36	0.60	-	-
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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Jaswant



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Piezometer Water Quality Data: Jagannath Area

Project / OCP	Ananta OCP		Indian Drinking Standards (IS-10500):2012	
	MTPA 01 (Near Ananta PO Office)	MTPA 02 (Near Substation)	Acceptable	Permissible
Monitoring Station				
Date of Sampling	05-May-25	03-May-25	5	15
Colour(Hazen)	1	2	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	2	1	1	5
pH	6.53	7.72	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	54.42	178.11	200	600
Chloride(mg/L)	13.70	33.27	250	1000
Sulphate(mg/L)	77.79	31.17	200	400
Nitrate(mg/L)	<0.50	<0.50	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	131.30	179.05	200	600
Calcium(mg/L)	15.97	33.54	75	200
Fluoride(mg/L)	0.55	0.42	1	1.5
Total Dissolve Solid(mg/L)	202	272	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	0.27	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
Selenium (mg/L)	<0.005	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	<0.2	0.5	2.4
Sodium mg/L	8.48	7.91	-	-
Potassium mg/L	0.9	1.03	-	-
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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Janaki



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Piezometer Water Quality Data: Jagannath Area

Project / OCP	Balanda	Indian Drinking Standards (IS-10500):2012	
Monitoring Station	MTPJ 01 (Near PO Office) (Reported)	Acceptable	Permissible
Date of Sampling	05-May-25	Acceptable	Permissible
Colour(Hazen)	3	5	15
Odour	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	2	1	5
pH	7.17	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	212.74	200	600
Chloride(mg/L)	23.48	250	1000
Sulphate(mg/L)	35.22	200	400
Nitrate(mg/L)	<0.50	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	187.00	200	600
Calcium(mg/L)	52.70	75	200
Fluoride(mg/L)	0.58	1	1.5
Total Dissolve Solid(mg/L)	308	500	2000
Copper(mg/L)	<0.03	0.05	1.5
Manganese(mg/L)	0.14	0.1	0.3
Iron(mg/L)	<0.1	1.0	No relaxation
Zinc(mg/L)	<0.04	5	15
Lead(mg/L)	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.001	0.003	No relaxation
Total Chromium (mg/L)	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	0.01	No relaxation
Selenium (mg/L)	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	0.5	2.4
Sodium mg/L	8.77	-	-
Potassium mg/L	0.60	-	-
Phenolics (mg/L)	<0.001	0.001	0.002
Residual Free Chlorine (mg/L)	<0.2	0.2	1
MPN (Index/100ml)	Not Detected	-	-

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Jaisankar

Jagannath OCP

Kurihan village

Legend
Monitoring Station

Near MDTP

Central Nursery

Near NBVL Station

CWS Colony, MEETI

Google Earth



Ananta OCP

Sibatampur Village

Asarabahali Village

North East of Mine

Guthasahi Village

Central Nursery near NBVL Station

Legend

Monitoring Station

Google Earth

4 km



**Environmental Monitoring Report
Of
Bhubaneswari Area
For
August-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]

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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
06-Aug-25	B.C.M.L. Workshop	198	90	37	17.04	20.33	Mining activities, O.B Dump yard	About 400 to 500m
06-Aug-25	Silo Substation Office	206	95	41	10.13	26.59		
22-Aug-25	B.C.M.L. Workshop	183	77	35	16.66	23.35	Mining activities, O.B Dump yard	About 400 to 500m
22-Aug-25	Silo Substation Office	216	118	45	17.04	22.68		


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MoEF Standards Notification dated 25th September, 2009

800	300		120	120
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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-Aug-25	Naraharipur Village	139	44	24	18.37	23.03		
04-Aug-25	Kandhal Village (Reported Only)	118	40	21	20.26	27.37		
05-Aug-25	Kandhal Village (Reported Only)	111	37	17	15.66	24.24		
05-Aug-25	Naraharipur Village	114	37	19	18.96	23.94		
11-Aug-25	Naraharipur Village	134	55	27	13.56	26.00		
11-Aug-25	Kandhal Village (Reported Only)	131	44	23	15.66	17.99		
12-Aug-25	Kandhal Village (Reported Only)	115	42	20	16.58	23.46		
12-Aug-25	Naraharipur Village	137	50	24	15.20	23.46		
20-Aug-25	Naraharipur Village	131	48	22	19.80	17.20		
20-Aug-25	Kandhal Village (Reported Only)	127	45	20	14.27	32.06		
21-Aug-25	Kandhal Village (Reported Only)	122	38	16	13.12	23.94		
21-Aug-25	Naraharipur Village	115	37	17	14.10	27.24		
27-Aug-25	Kandhal Village (Reported Only)	114	47	19	12.15	18.98		
27-Aug-25	Naraharipur Village	139	59	26	13.33	20.52		
28-Aug-25	Naraharipur Village	118	45	20	12.64	26.41		
28-Aug-25	Kandhal Village (Reported Only)	155	63	28	10.69	24.76		


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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Bhubaneswari

Project	Bhubaneswari OCP							
Monitoring Station	Kandhal Village (Reported Only)							
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-Aug-2025	<20.0	12.43	<0.1	<1.0	<1.0	0.4	BQL(Q L=0.7)	BQL
05-Aug-2025	<20.0	18.93	<0.1	<1.0	<1.0	0.4	BQL(Q L=0.7)	BQL
11-Aug-2025	<20.0	14.42	<0.1	<1.0	<1.0	0.6	BQL(Q L=0.7)	BQL
12-Aug-2025	<20.0	12.72	<0.1	<1.0	<1.0	0.6	BQL(Q L=0.7)	BQL
20-Aug-2025	<20.0	20.92	<0.1	<1.0	<1.0	0.8	BQL(Q L=0.7)	BQL
21-Aug-2025	<20.0	22.90	<0.1	<1.0	<1.0	0.6	BQL(Q L=0.7)	BQL
27-Aug-2025	<20.0	24.32	<0.1	<1.0	<1.0	0.8	BQL(Q L=0.7)	BQL
28-Aug-2025	<20.0	20.63	<0.1	<1.0	<1.0	0.7	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: 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-Aug-2025	<20.0	15.55	<0.1	<1.0	<1.0	0.7	BQL(Q L=0.7)	BQL
05-Aug-2025	<20.0	18.65	<0.1	<1.0	<1.0	1.1	BQL(Q L=0.7)	BQL
11-Aug-2025	<20.0	14.42	<0.1	<1.0	<1.0	0.9	BQL(Q L=0.7)	BQL
12-Aug-2025	<20.0	20.63	<0.1	<1.0	<1.0	1.4	BQL(Q L=0.7)	BQL
20-Aug-2025	<20.0	13.85	<0.1	<1.0	<1.0	1.0	BQL(Q L=0.7)	BQL
21-Aug-2025	<20.0	12.72	<0.1	<1.0	<1.0	1.2	BQL(Q L=0.7)	BQL
27-Aug-2025	<20.0	11.58	<0.1	<1.0	<1.0	0.8	BQL(Q L=0.7)	BQL
28-Aug-2025	<20.0	13.57	<0.1	<1.0	<1.0	0.7	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
05-Aug-25	Naraharipur Village	50.3	40.7
05-Aug-25	Silo Substaion Office	70.3	56.9
05-Aug-25	BCML Workshop	67.9	56.3
06-Aug-25	Kandhal Village (Reported)	46.3	39.8
21-Aug-25	Naraharipur Village	47.3	38.7
21-Aug-25	Silo Substaion Office	65.9	57.3
21-Aug-25	BCML Workshop	66.7	59.0
22-Aug-25	Kandhal Village (Reported)	47.3	38.1

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

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BHUBANESWAR

Signature

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
14-Aug-25	Mine Sump Water	7.91	<4.0	22	16	-	
14-Aug-25	O & G Trap Intlet	6.10	<4.0	57	44	-	
14-Aug-25	O & G Trap Outlet	6.73	<4.0	30	28	-	
30-Aug-25	O & G Trap Intlet	6.78	<4.0	35	32	-	
30-Aug-25	O & G Trap Outlet	7.62	<4.0	23	16	-	

J. Jitendra
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Janmati

MoEF Standard Notification dated 23rd September, 2009
 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 Quality

Drinking Water Quality Data Bhubaneswari Area

Project / OCP	Bhubaneswari OCP			Indian Drinking Standards (IS-10500):2012	
	Workshop BCML	Deulbera Office, BCML	Time Office BBSRI, OCP		
Date of Sampling	14-Aug-2025	14-Aug-2025	14-Aug-2025	Acceptable	Permissible
Colour(Hazen)	1	2	2	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	2	2	1	1	5
pH	7.92	7.23	7.32	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	75.63	54.62	84.04	200	600
Chloride(mg/L)	13.60	23.31	17.48	250	1000
Sulphate(mg/L)	68.78	120.2	66.48	200	400
Nitrate(mg/L)	3.41	<0.5	2.55	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	113.73	176.49	125.50	200	600
Calcium(mg/L)	33.01	50.30	36.15	75	200
Fluoride(mg/L)	0.70	0.74	0.78	1	1.5
Total Dissolve Solid(mg/L)	222	286	218	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	0.19	0.95	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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Jasrat



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Drinking Water Quality Data Bhubaneswari Area

Project / OCP	Bhubaneswari OCP			Indian Drinking Standards (IS-10500):2012	
	Monitoring Station	Workshop BCML	Deulbera Office, BCML			Time Office BBSRI,OCP
Date of Sampling	14-Aug-2025	14-Aug-2025	14-Aug-2025	Acceptable	Permissible
Selenium(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Sodium(mg/L)	14.59	9.0	8.07		
Potassium(mg/L)	9.89	9.83	1.60		
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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CMPDI
राज्य प्रदूषण नियंत्रण बोर्ड

Effluent Quality (all Parameter): - Bhubaneswari Area

Project (OCP / UG)	Bhubaneswari	MoEF-Sch-VI Standards
NAME OF THE STATION	Mine Sump Water	
Date of Sampling	13-May-25	
Odour	Unobjectionable	-
Colour(Hazen)	5	-
Temperature(°C)	25.3	Shall not exceed 5 °C above the receiving temperature
pH	7.52	5.5-9.0
Total Hardness (asCaCO ₂),mg/L	136.34	-
Total Dissolved Solids, mg/L	238	-
Nitrate Nitrogen(mg/L)(As N)	<0.5	10
Ammonical Nitrogen , mg/l (As N)	0.35	50
Total Kjeldhal Nitrogen, mg/l (As N)	2.21	100
Sulphide (mg/L)	<0.1	2
BOD [3 days at 27°C] (mg/L)	<2.0	30
Fluoride(mg/L)	0.91	2
Copper(mg/L)	<0.03	3
Manganese(mg/L)	<0.04	2
Iron(mg/L)	<0.1	3
Zinc(mg/L)	<0.04	5
Lead, mg/l	<0.005	0.1
Cadmium, mg/l	<0.001	2
Total Chromium(mg/L)	<0.01	2
Hexavalent Chromium(mg/L)	<0.05	0.1
Nickel(mg/L)	<0.02	3
Arsenic, mg/l	<0.005	0.2
Selenium (mg/L)	<0.005	0.05
Dissolved Phosphate(mg/L)	<4.0	5
Phenolics (mg/L)	<0.001	1

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Jotunai

Bhubaneswar OCP

Legend
Air Monitoring Locations

- BCML Workshop
- Narahaipur Village
- Kandhal Village
- S/O Sub Station Office



**Environmental Monitoring Report
Of
Bharatpur Area
For
August-2025
Talcher Coalfield**



MCL

Mahanadi Coalfields Limited



cmpdi

A Mine Ratna Company

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

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

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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-Aug-25	Near Regional Store	210	95	42	13.81	27.37	Mining Activities	About 500m
06-Aug-25	North-West Point of the Mine	201	95	42	14.27	25.81	Domestic & Mining Activities	About 500m
06-Aug-25	Near ETP/Workshop	205	94	41	15.91	17.56	Mining Activities & Coal Stock	Above 500m
22-Aug-25	Near Regional Store	214	115	46	16.62	20.80	Mining Activities	About 500m
22-Aug-25	North-West Point of the Mine	221	110	46	17.06	17.83	Domestic & Mining Activities	About 500m
22-Aug-25	Near ETP/Workshop	177	83	38	19.80	28.15	Mining Activities & Coal Stock	Above 500m

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

Sanjay

MoEF Standards Notification dated 25th
 September, 2000


600	300		120	120
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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	SO ₂	NO _x	Dust Generating Source(DGS)	Distance from DGS
01-Aug-25	East of the Mine, Natedi Village (Reported Only)	126	44	21	14.16	22.64	Coal Transportation Road	About 2km
02-Aug-25	East of the Mine, Natedi Village (Reported Only)	137	43	24	8.75	23.64	Coal Transportation Road	About 2km
04-Aug-25	Kalinga Colony	133	50	24	10.83	23.35		
04-Aug-25	Karnapur Village	133	47	22	15.55	22.29		
04-Aug-25	Near Joragdia Village	139	49	24	12.73	29.72	Transportation, Domestic Cooking	About 1km
04-Aug-25	Khajuria Village	122	46	23	17.94	19.31		
05-Aug-25	Karnapur Village	127	40	19	10.13	22.68		
05-Aug-25	Kalinga Colony	141	58	27	15.41	30.42		
05-Aug-25	Near Joragdia Village	153	55	26	17.94	26.00	Transportation, Domestic Cooking	About 1km
05-Aug-25	Khajuria Village	125	53	24	16.62	26.74		
08-Aug-25	East of the Mine, Natedi Village (Reported Only)	126	49	20	11.97	35.19	Coal Transportation Road	About 2km
09-Aug-25	East of the Mine, Natedi Village (Reported Only)	123	40	18	13.75	21.93	Coal Transportation Road	About 2km
11-Aug-25	Khajuria Village	116	44	21	13.35	25.81		
11-Aug-25	Karnapur Village	123	34	15	11.18	28.89		
11-Aug-25	Near Joragdia Village	157	76	31	14.16	30.42	Transportation, Domestic Cooking	About 1km
11-Aug-25	Kalinga Colony	166	70	29	14.71	22.96		
12-Aug-25	Near Joragdia Village	118	33	17	17.04	31.28	Transportation, Domestic Cooking	About 1km
12-Aug-25	Khajuria Village	138	57	26	11.97	30.50		
12-Aug-25	Kalinga Colony	134	55	25	10.34	19.59		
12-Aug-25	Karnapur Village	129	43	20	17.50	24.76		
18-Aug-25	East of the Mine, Natedi Village (Reported Only)	158	75	33	14.87	27.49	Coal Transportation Road	About 2km
19-Aug-25	East of the Mine, Natedi Village (Reported Only)	121	40	24	17.06	30.46	Coal Transportation Road	About 2km
20-Aug-25	Kalinga Colony	153	68	28	10.94	20.06		

*NAQS, 2009

100	60	80	80
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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
20-Aug-25	Karnapur Village	113	43	15	19.34	23.46		
20-Aug-25	Near Joragdia Village	155	64	28	17.04	20.33	Transportation, Domestic Cooking	About 1km
20-Aug-25	Khajuria Village	123	46	24	15.55	21.46		
21-Aug-25	Karnapur Village	133	55	26	13.12	36.32		
21-Aug-25	Kalinga Colony	141	52	24	19.25	20.06		
21-Aug-25	Near Joragdia Village	127	48	17	11.05	20.33	Transportation, Domestic Cooking	About 1km
21-Aug-25	Khajuria Village	156	68	30	11.97	29.72		
25-Aug-25	East of the Mine, Natedi Village (Reported Only)	149	59	28	17.04	30.50	Coal Transportation Road	About 2km
26-Aug-25	East of the Mine, Natedi Village (Reported Only)	141	43	25	11.05	25.02	Coal Transportation Road	About 2km
27-Aug-25	Near Joragdia Village	134	57	26	19.34	17.99	Transportation, Domestic Cooking	About 1km
27-Aug-25	Khajuria Village	136	47	25	15.20	26.59		
27-Aug-25	Karnapur Village	139	63	27	15.66	24.24		
27-Aug-25	Kalinga Colony	136	57	25	17.94	23.03		
28-Aug-25	Khajuria Village	110	41	19	17.04	21.90		
28-Aug-25	Near Joragdia Village	126	47	21	13.81	25.02	Transportation, Domestic Cooking	About 1km
28-Aug-25	Kalinga Colony	116	46	19	17.06	27.49		
28-Aug-25	Karnapur Village	120	41	15	10.50	28.97		

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*NA-QS, 2009

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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)
01-Aug-2025	<20.0	22.05	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL(QL=2.5)
02-Aug-2025	<20.0	14.98	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL(QL=2.5)
08-Aug-2025	<20.0	16.40	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL(QL=2.5)
09-Aug-2025	<20.0	18.10	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL(QL=2.5)
18-Aug-2025	<20.0	20.63	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL(QL=2.5)
19-Aug-2025	<20.0	21.20	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL(QL=2.5)
25-Aug-2025	<20.0	22.05	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL(QL=2.5)
26-Aug-2025	<20.0	21.48	<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: 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 (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-Aug-2025	<20.0	23.47	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
05-Aug-2025	<20.0	24.32	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
11-Aug-2025	<20.0	18.93	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
12-Aug-2025	<20.0	11.87	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
20-Aug-2025	<20.0	18.93	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
21-Aug-2025	<20.0	16.40	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
27-Aug-2025	<20.0	18.37	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
28-Aug-2025	<20.0	11.30	<0.1	<1.0	<1.0	0.7	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: 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 (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-Aug-2025	<20.0	22.50	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
05-Aug-2025	<20.0	16.40	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
11-Aug-2025	<20.0	20.92	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
12-Aug-2025	<20.0	16.68	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
20-Aug-2025	<20.0	20.92	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
21-Aug-2025	<20.0	17.25	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
27-Aug-2025	<20.0	24.03	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
28-Aug-2025	<20.0	11.87	<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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केन्द्रीय वायु
प्रदूषण नियंत्रण बोर्ड
CMPDI
Central Board of
Air Pollution Control

AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Bharatpur

Project	Bharatpur OCP							
Monitoring Station	Near Joragadia Village							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (a) Pyrene	Benzen e
	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	(ng/m^3)	(ng/m^3)	(mg/m^3)	(ng/m^3)	($\mu\text{g}/\text{m}^3$)
04-Aug-2025	<20.0	19.50	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
05-Aug-2025	<20.0	13.57	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
11-Aug-2025	<20.0	23.75	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
12-Aug-2025	<20.0	16.40	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
20-Aug-2025	<20.0	13.85	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
21-Aug-2025	<20.0	20.35	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
27-Aug-2025	<20.0	20.07	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
28-Aug-2025	<20.0	22.62	<0.1	<1.0	<1.0	1.0	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: 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 (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)
04-Aug-2025	<20.0	13.48	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
05-Aug-2025	<20.0	16.27	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
11-Aug-2025	<20.0	22.8	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
12-Aug-2025	<20.0	18.52	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
20-Aug-2025	<20.0	17.63	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
21-Aug-2025	<20.0	20.11	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
27-Aug-2025	<20.0	11.29	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
28-Aug-2025	<20.0	15.86	<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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TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Bharatpur

PROJECT :

Bharatpur OCP

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
06-Aug-25	North West Point of the Mine	64.3	55.7
06-Aug-25	Near Regional Store	61.3	53.3
06-Aug-25	Near Wokshop	68.7	55.4
06-Aug-25	Kalinga Colony	47.5	39.9
07-Aug-25	Natedi Village (Reported)	45.0	38.3
22-Aug-25	North West Point of the Mine	62.7	52.7
22-Aug-25	Near Regional Store	61.2	52.3
22-Aug-25	Near Wokshop	64.3	54.2
22-Aug-25	Kalinga Colony	47.9	39.7
23-Aug-25	Natedi Village (Reported)	44.4	36.3

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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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
14-Aug-25	Mine Sump Water - Main Sump	6.74	<4.0	34	36	-	
14-Aug-25	Mine Sump Water - Old Quarry Sump	6.73	-	-	-	-	
14-Aug-25	Rakas Quarry Sump	7.02	-	-	-	-	
14-Aug-25	Workshop ETP Clear Water Tank	7.36	<4.0	39	40	-	
14-Aug-25	Workshop Inlet	7.21	5.0	57	76	-	
30-Aug-25	Workshop ETP Clear Water Tank	7.49	<4.0	41	32	-	
30-Aug-25	Workshop Inlet	7.65	<4.0	54	48	-	

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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--



संयुक्त प्रदूषण नियंत्रण बोर्ड
 CMPDI
 NEW DELHI

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
14-Aug-25	STP INLET	7.82	-	35	-	2.6	110
14-Aug-25	STP Outlet (PH,TSS,MPN,BOD)	7.04	-	24	-	<2	79
30-Aug-25	STP INLET	7.34	-	41	-	2.9	110
30-Aug-25	STP Outlet (PH,TSS,MPN,BOD)	7.91	-	33	-	2.3	63

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G.S.R. 1263(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 Bharatpur Area

Project / OCP	Bharatpur OCP			Indian Drinking Standards (IS-10500):2012	
	Tap water in Nehru Satabdi Nagar A Type Quarters	Tap water in Nehru Satabdi Nagar B Type Quarters	Tap water in Nehru Satabdi Nagar C Type Quarters		
Date of Sampling	14-Aug-2025	14-Aug-2025	14-Aug-2025	Acceptable	Permissible
Colour(Hazen)	2	2	3	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	1	3	3	1	5
pH	7.15	6.71	6.82	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	33.61	180.68	96.64	200	600
Chloride(mg/L)	15.54	31.08	17.48	250	1000
Sulphate(mg/L)	83.12	54.46	82.94	200	400
Nitrate(mg/L)	<0.5	0.76	<0.5	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	101.97	176.49	141.19	200	600
Calcium(mg/L)	31.44	53.44	44.01	75	200
Fluoride(mg/L)	0.75	0.72	0.70	1	1.5
Total Dissolve Solid(mg/L)	210	310	252	500	2000
Copper(mg/L)	<0.03	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	0.14	0.09	0.1	0.3
Iron(mg/L)	<0.1	<0.1	<0.1	1.0	No relaxation
Zinc(mg/L)	0.1	0.41	0.39	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 Bharatpur Area

Project / OCP	Bharatpur OCP			Indian Drinking Standards (IS-10500):2012	
Monitoring Station	Tap water in Nehru Satabdi Nagar A Type Quarters	Tap water in Nehru Satabdi Nagar B Type Quarters	Tap water in Nehru Satabdi Nagar C Type Quarters	Acceptable	Permissible
Date of Sampling	14-Aug-2025	14-Aug-2025	14-Aug-2025	Acceptable	Permissible
Selenium(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Sodium(mg/L)	20.87	7.69	8.32		
Potassium(mg/L)	6.18	6.88	1.7		
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 Bharatpur Area

Project / OCP	Bharatpur OCP				Indian Drinking Standards (IS-10500):2012		
	Monitoring Station	Tap water in Nehru Satabdi Nagar Transit House	Taleipasi Village Open Well	Joragadia Village Open Well	Time Office,BOCP	Acceptable	Permissible
Date of Sampling	14-Aug-2025	14-Aug-2025	14-Aug-2025	14-Aug-2025	2	5	15
Colour(Hazen)	2	4	3	2	Agreeable	Agreeable	Agreeable
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	1	4	2	2	1	5	No relaxation
pH	7.47	6.99	7.44	6.28	6.5-8.5	No relaxation	No relaxation
Total Alkalinity(mg/L)	37.81	525.25	159.67	88.24	200	600	600
Chloride(mg/L)	11.65	66.06	29.14	11.65	250	1000	1000
Sulphate(mg/L)	44.08	28	46.38	44.28	200	400	400
Nitrate(mg/L)	<0.5	<0.5	7.65	<0.5	45	No relaxation	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	58.83	403.96	180.41	94.12	200	600	600
Calcium(mg/L)	14.14	86.46	53.44	31.44	75	200	200
Fluoride(mg/L)	0.68	0.78	0.49	0.63	1	1.5	1.5
Total Dissolve Solid(mg/L)	136	626	294	186	500	2000	2000
Copper(mg/L)	<0.03	<0.03	<0.03	<0.03	0.05	1.5	1.5
Manganese(mg/L)	<0.04	<0.04	<0.04	0.07	0.1	0.3	0.3
Iron(mg/L)	<0.1	<0.1	<0.1	<0.1	1.0	No relaxation	No relaxation
Zinc(mg/L)	0.12	1.65	0.05	0.27	5	15	15
Lead(mg/L)	<0.005	<0.005	<0.005	<0.005	0.01	No relaxation	No relaxation
Cadmium(mg/L)	<0.001	<0.001	<0.001	<0.005	0.003	No relaxation	No relaxation
Total Chromium (mg/L)	<0.01	<0.01	<0.01	<0.01	0.05	No relaxation	No relaxation
Arsenic(mg/L)	<0.005	<0.005	<0.005	<0.005	0.01	No relaxation	No relaxation
Boron(mg/L)	<0.2	<0.2	<0.2	<0.2	0.5	2.4	2.4

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

J. J. J.



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Mini Ratna

Drinking Water Quality Data Bharatpur Area

Project / OCP	Bharatpur OCP				Indian Drinking Standards (IS-10500):2012	
	Monitoring Station	Taleipasi Village Open Well	Joragadia Village Open Well	Time Office,BOCP		
Tap water in Nehru Satabdi Nagar Transit House	14-Aug-2025	14-Aug-2025	14-Aug-2025	14-Aug-2025	Acceptable	Permissible
Date of Sampling	14-Aug-2025	14-Aug-2025	14-Aug-2025	14-Aug-2025	0.01	No relaxation
Selenium(mg/L)	<0.005	<0.005	<0.005	<0.005		
Sodium(mg/L)	16.14	9.70	12.83	14.13		
Potassium(mg/L)	3.85	5.84	3.47	3.66		
Phenolics(mg/L)	<0.001	<0.001	<0.001	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	<0.2	<0.2	<0.2	0.2	1.0
MPN (Index/100 ml)	Not Detected	Not Detected	Not Detected	Not Detected	-	-

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Effluent Quality (all Parameter): - Bharatpur Area

Project (OCP / UG)	Bharatpur		MoEF-Sch-VI Standards
	Workshop ETP Clear Water Tank Outlet	Mine Sump (Old Quarry Sump)	
NAME OF THE STATION			
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	5.5-9.0
Total Hardness (asCaCO ₃),mg/L	171.31	215.14	-
Total Dissolved Solids, mg/L	246	320	-
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

Jitendra
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Jamali



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Piezometer Water Quality Data: Bharatpur Area

Project / OCP Monitoring Station	Bharatpur OCP MTP 10 (Inside the premises of Danara high school) (Reported)	Indian Drinking Standards (IS-10500):2012	
		Acceptable	Permissible
Date of Sampling	03-May-25	5	15
Colour(Hazen)	1	5	15
Odour	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	1	1	5
pH	6.47	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	19.79	200	600
Chloride(mg/L)	41.10	250	1000
Sulphate(mg/L)	15.19	200	400
Nitrate(mg/L)	10.89	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	75.60	200	600
Calcium(mg/L)	17.57	75	200
Fluoride(mg/L)	0.62	1	1.5
Total Dissolve Solid(mg/L)	138	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)	0.07	5	15
Lead(mg/L)	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.001	0.003	No relaxation
Total Chromium (mg/L)	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	0.01	No relaxation
Selenium (mg/L)	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	0.5	2.4
Sodium mg/L	9.23	-	-
Potassium mg/L	3.77	-	-
Phenolics (mg/L)	<0.001	0.001	0.002
Residual Free Chlorine (mg/L)	<0.2	0.2	1
MPN (Index/100ml)	Not Detected	-	-

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Jaiswal

Bharatpur OCP

Legend
Monitoring Station

- Khajuria Village Near Joragadia Village
- North-West Point of the Mine
- Near ETP/Workshop
- Near Regional Store
- Natedi Village
- Kalinga Colony
- Karnapur Village

Google Earth



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

Talcher Coalfield



MCL

Mahanadi Coalfields Limited



cmpdi

A Mine Rules Company

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

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

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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
07-Aug-25	GM Office Lingraj	191	84	36	10.13	28.93		
07-Aug-25	Near Silo Conveyor Belt	202	90	41	10.59	22.68		
23-Aug-25	GM Office Lingraj	195	87	38	10.59	21.90		
23-Aug-25	Near Silo Conveyor Belt	188	90	41	11.05	17.99		

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Jaitanasth

MuEF Standards Notification dated 25th
September, 2009

600	250		120	130
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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-Aug-25	Kandhal Village	118	40	21	20.26	27.37		
04-Aug-25	Lingaraj Township	148	50	26	15.51	24.99		
04-Aug-25	Balunga Khamar Village	142	65	27	17.50	33.43		
05-Aug-25	Balunga Khamar Village	131	53	24	9.58	16.98		
05-Aug-25	Kandhal Village	111	37	17	15.66	24.24		
05-Aug-25	Lingaraj Township	126	45	21	16.12	35.19		
11-Aug-25	Lingaraj Township	141	55	27	14.74	18.23		
11-Aug-25	Balunga Khamar Village	124	49	21	13.81	25.02		
11-Aug-25	Kandhal Village	131	44	23	15.66	17.99		
12-Aug-25	Balunga Khamar Village	130	50	23	12.89	21.11		
12-Aug-25	Kandhal Village	115	42	20	16.58	23.46		
12-Aug-25	Lingaraj Township	163	63	29	15.51	21.61		
20-Aug-25	Kandhal Village	127	45	20	14.27	32.06		
20-Aug-25	Lingaraj Township	159	66	30	12.25	28.23		
20-Aug-25	Balunga Khamar Village	124	48	21	15.20	34.41		
21-Aug-25	Balunga Khamar Village	119	39	17	16.58	33.63		
21-Aug-25	Kandhal Village	122	38	16	13.12	23.94		
21-Aug-25	Lingaraj Township	151	59	27	14.44	27.49		
27-Aug-25	Balunga Khamar Village	125	44	19	19.34	26.59		
27-Aug-25	Kandhal Village	114	47	19	12.15	18.98		
27-Aug-25	Lingaraj Township	125	49	20	14.44	25.26		
28-Aug-25	Lingaraj Township	171	76	32	14.27	17.20		
28-Aug-25	Balunga Khamar Village	138	52	27	10.13	26.59		

*N/AQS,2009

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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
28-Aug-25	Kandhal Village	155	63	28	10.69	24.76		

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IS:14296		100	60	80	80
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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
	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	(ng/m^3)	(ng/m^3)	(mg/m^3)	(ng/m^3)	($\mu\text{g}/\text{m}^3$)
04-Aug-2025	<20.0	12.43	<0.1	<1.0	<1.0	0.4	BQL(QL=0.7)	BQL
05-Aug-2025	<20.0	18.93	<0.1	<1.0	<1.0	0.4	BQL(QL=0.7)	BQL
11-Aug-2025	<20.0	14.42	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
12-Aug-2025	<20.0	12.72	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
20-Aug-2025	<20.0	20.92	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
21-Aug-2025	<20.0	22.90	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
27-Aug-2025	<20.0	24.32	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
28-Aug-2025	<20.0	20.63	<0.1	<1.0	<1.0	0.7	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: 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-Aug-2025	<20.0	20.35	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
05-Aug-2025	<20.0	12.15	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL
11-Aug-2025	<20.0	12.43	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL
12-Aug-2025	<20.0	14.70	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
20-Aug-2025	<20.0	19.78	<0.1	<1.0	<1.0	0.4	BQL(QL=0.7)	BQL
21-Aug-2025	<20.0	16.12	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
27-Aug-2025	<20.0	16.40	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
28-Aug-2025	<20.0	16.68	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
Standard	400(24 hours)	180(hour)	1.0(24 hours)	6.0(Annual)	20(Annual)	02(Shou rs)	01(annual)	05(annual)

Intinavati
Authorised Signatory
CMPDI, RI-VII, LAB
BHUBANESWAR

Jasmati



सीएमपीडीआई
अपेक्षित
cmpdi
सर्वोत्तम


AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Lingaraj

Project	Lingaraj OCP							
Monitoring Station	Balungakhamar 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-Aug-2025	<20.0	20.35	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
05-Aug-2025	<20.0	13.28	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
11-Aug-2025	<20.0	16.97	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL
12-Aug-2025	<20.0	13.85	<0.1	<1.0	<1.0	0.4	BQL(QL=0.7)	BQL
20-Aug-2025	<20.0	14.13	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
21-Aug-2025	<20.0	19.50	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL
27-Aug-2025	<20.0	13.28	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
28-Aug-2025	<20.0	23.18	<0.1	<1.0	<1.0	0.4	BQL(QL=0.7)	BQL
Standard	400(24h ours)	180(hour)	1.0(24 hours)	6.0(Annual)	20(Annual)	02(8hours)	01(annual)	05(annual)

Shubaneswar
Assistant Laboratory
CMPDI, RI-VII, LAS
SHUBANESWAR

Januati

 सीएनपीडीआई जेने वल cmpdi विनी लोको	AMBIENT AIR QUALITY DATA Area: Lingaraj
	Project LingarajOCP Monitoring Station Near Silo Conveyor Belt Date of sampling Carbon Monoxide (CO) mg/m ³ 07-Aug-2025 0.7 23-Aug-2025 0.9 Standard 02(8 Hours)

Project LingarajOCP Monitoring Station GM OfficeLingaraj Date of sampling Carbon Monoxide (CO) mg/m ³ 07-Aug-2025 0.5 23-Aug-2025 0.7 Standard 02(8 Hours)


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राष्ट्रीय पर्यावरण
संरक्षण बोर्ड
C.M.P.D.I.
भुवनेश्वर

TABLE--

NOISE LEVEL MONITORING DATA

AREA : **Lingaraj**

PROJECT : **Lingaraj OCP**

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
06-Aug-25	Lingaraj Township	44.5	39.6
06-Aug-25	Balunga Khamar Village	50.3	41.3
06-Aug-25	Kandhal Village	46.3	39.8
06-Aug-25	Near Silo Conveyor Belt	70.1	56.7
22-Aug-25	Lingaraj Township	45.1	40.7
22-Aug-25	Balunga Khamar Village	49.1	41.3
22-Aug-25	Kandhal Village	47.3	38.1
22-Aug-25	Near Silo Conveyor Belt	65.7	55.3

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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BHUBANESWAR

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TABLE--



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EFFLUENT QUALITY DATA

Area :

Lingaraj

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

Project :

Lingaraj OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	Remarks
14-Aug-25	Clear Water Reservoir of ETP Near Dumper Parking	6.77	<4.0	43	28	-	
14-Aug-25	Clear Water Reservoir of MDTP near Stock No. 17	6.54	4.4	61	80		
14-Aug-25	Filter Outlet of Workshop ETP	6.29	<4.0	41	32	-	
14-Aug-25	Inlet of ETP Near Dumper Parking	6.22	<4.0	59	60	-	
14-Aug-25	Inlet of MDTP near Stock No. 17	6.61	5.2	73	116		
14-Aug-25	Inlet of Workshop ETP	6.10	4.6	53	64	-	
14-Aug-25	Misc Sump Water	7.82	<4.0	39	48	-	
30-Aug-25	Clear Water Reservoir of ETP Near Dumper Parking	7.19	<4.0	42	44	-	
30-Aug-25	Filter Outlet of Workshop ETP	6.83	<4.0	37	40	-	
30-Aug-25	Inlet of ETP Near Dumper Parking	7.17	4.2	51	64	-	
30-Aug-25	Inlet of Workshop ETP	6.80	<4.0	46	56	-	

F. Inwade
 Authorised Signatory
 CMPDI, RI-VII, LAB
 BHUBANESWAR

J. Inwade

MoEF Standard Notification dated 15th 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 :

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
14-Aug-25	STP Inlet at Lingaraj Township	6.48	-	47	-	3.1	130
14-Aug-25	STP Outlet at Lingaraj Township	7.13	-	33	-	2.2	110
30-Aug-25	STP Inlet at Lingaraj Township	7.35	-	39	-	2.7	94
30-Aug-25	STP Outlet at Lingaraj Township	7.58	-	27	-	2.1	63

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G.S.R. 1261(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	
	GM Office, Lingraj Area	Balunga Khamar Village Well	Acceptable	Permissible
Monitoring Station	14-Aug-2025	14-Aug-2025		
Date of Sampling	14-Aug-2025	14-Aug-2025	Acceptable	Permissible
Colour(Hazen)	1	2	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	2	4	1	5
pH	7.00	7.03	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	25.21	184.88	200	600
Chloride(mg/L)	9.71	21.37	250	1000
Sulphate(mg/L)	26.34	44.2	200	400
Nitrate(mg/L)	<0.5	<0.5	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	43.14	164.72	200	600
Calcium(mg/L)	11.00	45.58	75	200
Fluoride(mg/L)	0.52	0.74	1	1.5
Total Dissolve Solid(mg/L)	88	286	500	2000
Copper(mg/L)	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	0.1	0.1	0.3
Iron(mg/L)	<0.1	<0.1	1.0	No relaxation
Zinc(mg/L)	0.13	0.15	5	15
Lead(mg/L)	<0.005	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.005	<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 Lingraj Area

Project / OCP	Lingraj OCP		Indian Drinking Standards (IS-10500):2012	
	GM Office, Lingraj Area	Balunga Khamar Village Well	Acceptable	Permissible
Monitoring Station				
Date of Sampling	14-Aug-2025	14-Aug-2025		
Selenium(mg/L)	<0.005	<0.005	0.01	No relaxation
Sodium(mg/L)	6.33	14.58		
Potassium(mg/L)	4.32	3.62		
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 Lingraj Area

Project / OCP	Lingraj OCP			Indian Drinking Standards (IS-10500):2012	
	Deulbera Village Well	Talabera Village Well	Kankili Village Well	Acceptable	Permissible
Monitoring Station					
Date of Sampling	14-Aug-2025	14-Aug-2025	14-Aug-2025	Acceptable	Permissible
Colour(Hazen)	4	3	2	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	3	4	1	1	5
pH	6.97	6.67	6.47	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	298.34	163.87	21.01	200	600
Chloride(mg/L)	36.91	38.86	42.74	250	1000
Sulphate(mg/L)	62.14	92.96	19.87	200	400
Nitrate(mg/L)	<0.5	<0.5	19.30	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	254.93	243.16	86.28	200	600
Calcium(mg/L)	62.88	64.45	20.43	75	200
Fluoride(mg/L)	0.78	0.88	0.68	1	1.5
Total Dissolve Solid(mg/L)	438	376	154	500	2000
Copper(mg/L)	<0.03	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	0.16	0.08	<0.04	0.1	0.3
Iron(mg/L)	<0.1	<0.1	<0.1	1.0	No relaxation
Zinc(mg/L)	0.18	0.29	<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 Lingraj Area

Project / OCP	Lingraj OCP			Indian Drinking Standards (IS-10500):2012	
	Monitoring Station	Deulbera Village Well	Talabera Village Well	Kankili Village Well	Acceptable	Permissible
Date of Sampling	14-Aug-2025	14-Aug-2025	14-Aug-2025		
Selenium(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Sodium(mg/L)	18.76	18.20	6.91		
Potassium(mg/L)	5.65	3.28	2.56		
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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Effluent Quality (all Parameter): Lingaraj Area

Project (OCP / UG)	Lingaraj		MoEF-Sch-VI Standards
	Inlet of Workshop ETP	Filter outlet of Workshop ETP	
NAME OF THE STATION	14-May-2025	14-May-25	
Date of Sampling	14-May-2025	14-May-25	
Odour	Unobjectionable	Unobjectionable	-
Colour(Hazen)	7	8.0	
Temperature(°C)	25.8	25.5	Shall not exceed 5 °C above the receiving temperature
pH	6.93	6.22	5.5-9.0
Total Hardness (asCaCO ₃),mg/L	83.66	47.81	-
Total Dissolved Solids, mg/L	130	68	-
Nitrate Nitrogen(mg/L)(As N)	<0.5	0.93	10
Ammonical Nitrogen , mg/l (As N)	0.46	0.54	50
Total Kjeldhal Nitrogen, mg/l (As N)	3.32	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)	1.16	0.78	2
Copper(mg/L)	<0.03	<0.03	3
Manganese(mg/L)	<0.04	0.07	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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Effluent Quality (all Parameter): Lingaraj Area

Project (OCP / UG)	Lingaraj			MoEF-Sch-VI Standards
NAME OF THE STATION	Inlet of ETP near Dumping Parking	Clear Water Reservoir of ETP near Dumper Parking	Mine Sump Water	
Date of Sampling	14-May-25	14-May-25	14-May-25	
Odour	Unobjectionable	Unobjectionable	Unobjectionable	
Colour(Hazen)	3.0	4	13	
Temperature(^o C)	25.2	25.4	25.7	Shall not exceed 5 ^o C above the receiving temperature
pH	7.78	7.82	8.17	5.5-9.0
Total Hardness (asCaCO ₃),mg/L	63.74	75.7	1032	-
Total Dissolved Solids, mg/L	108	128	1202	-
Nitrate Nitrogen(mg/L)(As N)	<0.5	<0.5	3.67	10
Ammonical Nitrogen , mg/l (As N)	0.50	0.56	0.46	50
Total Kjeldhal Nitrogen, mg/l (As N)	3.32	2.21	2.21	100
Sulphide (mg/L)	<0.1	<0.1	<0.1	2
BOD [3 days at 27 ^o C] (mg/L)	<2.0	<2.0	<2.0	30
Fluoride(mg/L)	0.63	0.73	1.29	2
Copper(mg/L)	<0.03	<0.03	<0.03	3
Manganese(mg/L)	<0.04	<0.04	<0.04	2
Iron(mg/L)	<0.1	<0.1	<0.1	3
Zinc(mg/L)	<0.04	<0.04	<0.04	5
Lead, mg/l	<0.005	<0.005	<0.005	0.1
Cadmium, mg/l	<0.001	<0.001	<0.001	2
Total Chromium(mg/L)	<0.01	<0.01	<0.01	2
Hexavalent Chromium(mg/L)	<0.05	<0.05	<0.05	0.1
Nickel(mg/L)	<0.02	<0.02	<0.02	3
Arsenic, mg/l	<0.005	<0.005	<0.005	0.2
Selenium (mg/L)	<0.0005	<0.005	<0.005	0.05
Dissolved Phosphate(mg/L)	<4.0	<4.0	<4.0	5
Phenolics (mg/L)	<0.001	<0.001	<0.001	1

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Piezometer Water Quality Data: Lingaraj Area

Project / OCP Monitoring Station	Lingaraj OCP	Indian Drinking Standards (IS-10500):2012	
	MTP 04 (Inside central Nursery beside golf hut) (Reported)	Acceptable	Permissible
Date of Sampling	03-May-25	5	15
Colour(Hazen)	1	Agreeable	Agreeable
Odour	Agreeable	Agreeable	Agreeable
Taste	Agreeable	1	5
Turbidity(NTU)	1	6.5-8.5	No relaxation
pH	7.23	200	600
Total Alkalinity(mg/L)	74.21	250	1000
Chloride(mg/L)	5.87	200	400
Sulphate(mg/L)	12.73	45	No relaxation
Nitrate(mg/L)	<0.50	200	600
Total Hardness (Ca CO ₃)(mg/L)	55.70	75	200
Calcium(mg/L)	12.78	1	1.5
Fluoride(mg/L)	0.66	500	2000
Total Dissolve Solid(mg/L)	108	0.05	1.5
Copper(mg/L)	<0.03	0.1	0.3
Manganese(mg/L)	<0.04	1.0	No relaxation
Iron(mg/L)	<0.1	5	15
Zinc(mg/L)	<0.04	0.01	No relaxation
Lead(mg/L)	<0.005	0.003	No relaxation
Cadmium(mg/L)	<0.001	0.05	No relaxation
Total Chromium (mg/L)	<0.01	0.01	No relaxation
Arsenic(mg/L)	<0.005	0.01	No relaxation
Selenium (mg/L)	<0.005	0.5	2.4
Boron(mg/L)	<0.2	-	-
Sodium mg/L	6.59	-	-
Potassium mg/L	1.36	-	-
Phenolics (mg/L)	<0.001	0.001	0.002
Residual Free Chlorine (mg/L)	<0.2	0.2	1
MPN (Index/100ml)	Not Detected	-	-

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Lingraj OCP

Kandhal Village

Balunga village

GM Office, Lingraj

Near Conveyor belt

Lingraj Township

Legend

● Air Monitoring Locations

Google Earth



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

Talcher Coalfield



MCL

Mahanadi Coalfields Limited



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A Mini Ratna Company

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

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

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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-Aug-25	Near External OB Dump, Jamania	181	85	35	15.66	33.63	Mining Activities	About 500m
13-Aug-25	New Time Office (Near Z-Patch)	185	84	38	12.50	18.40	Mining Activities	About 500m
13-Aug-25	Near Project Office	169	81	37	15.66	31.28	Mining Activities	About 500m
23-Aug-25	Near Project Office	176	81	37	10.83	16.27	Mining Activities	About 500m
30-Aug-25	Near External OB Dump, Jamania	195	88	40	14.00	23.03	Mining Activities	About 500m
30-Aug-25	New Time Office (Near Z-Patch)	178	87	40	18.37	20.80	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 :

Kaniha

(Reference Station)

Project :

Kaniha OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
01-Aug-25	Kansamunda Village (West of the mine)	155	62	29	18.96	20.64		
01-Aug-25	Gandaberna	136	46	25	13.12	37.97		
01-Aug-25	South Of Proposed Quarry Limit of KOCP	140	55	26	9.58	25.47	Mining Activities	About 500m
01-Aug-25	Guliland, South West of Mine	140	56	26	19.34	32.06		
01-Aug-25	Near Harichandanpur	110	39	18	11.97	30.50		
01-Aug-25	Kaniha (North of the Mine)	110	37	18	14.16	26.89	Mining Activities	About 500m
02-Aug-25	South Of Proposed Quarry Limit of KOCP	126	44	20	17.08	29.72	Mining Activities	About 500m
02-Aug-25	Near Harichandanpur	128	47	20	16.04	36.32		
02-Aug-25	Kansamunda Village (West of the mine)	126	46	23	18.81	23.77		
02-Aug-25	Kaniha (North of the Mine)	144	63	26	13.52	19.59	Mining Activities	About 500m
02-Aug-25	Guliland, South West of Mine	120	38	18	19.34	27.37		
02-Aug-25	Gandaberna	162	63	29	19.44	38.79		
08-Aug-25	Kaniha (North of the Mine)	168	74	30	14.87	31.20	Mining Activities	About 500m
08-Aug-25	South Of Proposed Quarry Limit of KOCP	135	47	22	10.42	16.27	Mining Activities	About 500m
08-Aug-25	Kansamunda Village (West of the mine)	149	49	25	18.42	23.46		
08-Aug-25	Guliland, South West of Mine	141	47	24	12.15	31.37		
08-Aug-25	Near Harichandanpur	141	52	23	18.33	18.40		
08-Aug-25	Gandaberna	155	60	28	19.80	31.28		
09-Aug-25	Guliland, South West of Mine	130	44	21	15.55	28.89		
09-Aug-25	South Of Proposed Quarry Limit of KOCP	110	33	16	17.50	23.77	Mining Activities	About 500m
09-Aug-25	Kansamunda Village (West of the mine)	146	54	28	16.58	33.63		
09-Aug-25	Near Harichandanpur	116	36	17	11.37	28.23		
09-Aug-25	Gandaberna	145	56	26	13.12	21.46		

*NAAQS, 2009

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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
09-Aug-25	Kaniha (North of the Mine)	149	50	23	13.12	23.77	Mining Activities	About 500m
18-Aug-25	Kansamunda Village (West of the mine)	138	63	25	15.75	28.23		
18-Aug-25	South Of Proposed Quarry Limit of KOCP	115	39	20	15.91	24.31	Mining Activities	About 500m
18-Aug-25	Guland, South West of Mine	133	49	27	18.96	33.84		
18-Aug-25	Near Harichandanpur	165	53	28	17.50	32.84		
18-Aug-25	Gandaberna	167	72	31	11.97	28.93		
18-Aug-25	Kaniha (North of the Mine)	133	59	22	12.50	26.18	Mining Activities	About 500m
19-Aug-25	South Of Proposed Quarry Limit of KOCP	108	34	18	14.87	31.20	Mining Activities	About 500m
19-Aug-25	Near Harichandanpur	132	45	20	14.10	22.29		
19-Aug-25	Kansamunda Village (West of the mine)	122	51	18	14.74	26.59		
19-Aug-25	Kaniha (North of the Mine)	124	47	19	18.47	35.49	Mining Activities	About 500m
19-Aug-25	Guland, South West of Mine	112	43	16	19.44	18.98		
19-Aug-25	Gandaberna	128	41	23	18.47	28.89		
25-Aug-25	Kaniha (North of the Mine)	160	75	27	14.58	20.52	Mining Activities	About 500m
25-Aug-25	Guland, South West of Mine	153	74	30	19.93	22.29		
25-Aug-25	Kansamunda Village (West of the mine)	129	47	23	12.89	30.50		
25-Aug-25	Near Harichandanpur	144	48	23	10.59	32.06		
25-Aug-25	Gandaberna	136	53	25	10.13	17.99		
25-Aug-25	South Of Proposed Quarry Limit of KOCP	116	41	24	13.56	22.29	Mining Activities	About 500m
26-Aug-25	South Of Proposed Quarry Limit of KOCP	138	49	27	10.06	17.83	Mining Activities	About 500m
26-Aug-25	Guland, South West of Mine	116	45	20	19.80	34.41		
26-Aug-25	Kansamunda Village (West of the mine)	157	73	29	16.88	21.11		
26-Aug-25	Gandaberna	122	49	17	12.43	27.37		
26-Aug-25	Near Harichandanpur	164	70	31	10.50	23.03		
26-Aug-25	Kaniha (North of the Mine)	143	49	23	13.12	28.23	Mining Activities	About 500m

*NLS, 2009

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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 (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)
01-Aug-2025	<20.0	23.75	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
02-Aug-2025	<20.0	14.13	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
08-Aug-2025	<20.0	21.48	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
09-Aug-2025	<20.0	13.85	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL
18-Aug-2025	<20.0	22.33	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL
19-Aug-2025	<20.0	12.72	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
25-Aug-2025	<20.0	20.63	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL
26-Aug-2025	<20.0	13.57	<0.1	<1.0	<1.0	0.5	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(annual)	05(annu al)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Kaniha

Kaniha OCP

Project	South of Proposed Quarry Limit of KOCP							
Monitoring Station	Ammonia (NH ₃) (µg/m ³)	Ozone (O ₃) (µg/m ³)	Lead (Pb) (µg/m ³)	Arsenic (As) (ng/m ³)	Nickel (Ni) (ng/m ³)	CO (mg/m ³)	Benzo (a) Pyrene (ng/m ³)	Benzene (µg/m ³)
01-Aug-2025	<20.0	23.18	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
02-Aug-2025	<20.0	12.15	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
08-Aug-2025	<20.0	17.53	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
09-Aug-2025	<20.0	12.15	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
18-Aug-2025	<20.0	12.43	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
19-Aug-2025	<20.0	11.58	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
25-Aug-2025	<20.0	13.85	<0.1	<1.0	<1.0	0.4	BQL(QL=0.7)	BQL
26-Aug-2025	<20.0	24.32	<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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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) (µg/m ³)	Ozone (O ₃) (µg/m ³)	Lead (Pb) (µg/m ³)	Arsenic (As) (ng/m ³)	Nickel (Ni) (ng/m ³)	CO (mg/m ³)	Benzo (a) Pyrene (ng/m ³)	Benzene (µg/m ³)
01-Aug-2025	<20.0	22.33	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
02-Aug-2025	<20.0	13.57	<0.1	<1.0	<1.0	0.4	BQL(QL=0.7)	BQL
08-Aug-2025	<20.0	21.48	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
09-Aug-2025	<20.0	20.92	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
18-Aug-2025	<20.0	18.93	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
19-Aug-2025	<20.0	11.30	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
25-Aug-2025	<20.0	21.48	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
26-Aug-2025	<20.0	23.18	<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)

Authorised Signatory
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Jasmati



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रिसेच लैब
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Mini Kotna

AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Kaniha

Project	Kaniba 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)
01-Aug-2025	<20.0	20.63	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
02-Aug-2025	<20.0	20.07	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
08-Aug-2025	<20.0	18.37	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL
09-Aug-2025	<20.0	18.37	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
18-Aug-2025	<20.0	24.32	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
19-Aug-2025	<20.0	12.72	<0.1	<1.0	<1.0	0.4	BQL(QL=0.7)	BQL
25-Aug-2025	<20.0	24.32	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
26-Aug-2025	<20.0	18.93	<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 (NAAQS PARAMETER)

Area: Kaniha

Project	Kaniha OCP							
Monitoring Station	Kaniha North of the Mine							
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 ($\mu\text{g}/\text{m}^3$)
01-Aug-2025	<20.0	11.58	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
02-Aug-2025	<20.0	15.55	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
08-Aug-2025	<20.0	22.90	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
09-Aug-2025	<20.0	23.18	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
18-Aug-2025	<20.0	14.42	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
19-Aug-2025	<20.0	20.63	<0.1	<1.0	<1.0	0.4	BQL(QL=0.7)	BQL
25-Aug-2025	<20.0	22.33	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
26-Aug-2025	<20.0	22.33	<0.1	<1.0	<1.0	0.4	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(annual)	05(annu al)

Kattawath
Authorised Signatory
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Jarwal



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cmpdi
National Institute


AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Kaniha

Project	Kaniha OCP							
Monitoring Station	Gandaberana							
Date of sampling	Ammonia (NH ₃) (µg/m ³)	Ozone (O ₃) (µg/m ³)	Lead (Pb) (µg/m ³)	Arsenic (As) (ng/m ³)	Nickel (Ni) (ng/m ³)	CO (mg/m ³)	Benzo (α) Pyrene (ng/m ³)	Benzene (µg/m ³)
01-Aug-2025	<20.0	22.90	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
02-Aug-2025	<20.0	13.57	<0.1	<1.0	<1.0	0.4	BQL(QL=0.7)	BQL
08-Aug-2025	<20.0	18.93	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL
09-Aug-2025	<20.0	13.57	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
18-Aug-2025	<20.0	19.78	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
19-Aug-2025	<20.0	18.37	<0.1	<1.0	<1.0	0.4	BQL(QL=0.7)	BQL
25-Aug-2025	<20.0	22.05	<0.1	<1.0	<1.0	0.4	BQL(QL=0.7)	BQL
26-Aug-2025	<20.0	18.65	<0.1	<1.0	<1.0	0.8	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(annual)	05(annu al)

Tattanaik
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Jasmati

 सीएमपीडीआई रि-वी एन cmpdi Ministry of Environment Govt. of India	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-Aug-2025	0.6
30-Aug-2025	0.8
Standard	02(8 Hours)

Project	KanihaOCP
Monitoring Station	New Time Office (Near Z-Patch)
Date of sampling	Carbon Monoxide (CO)
	mg/m³
13-Aug-2025	0.7
30-Aug-2025	0.9
Standard	02(8 Hours)

Project	KanihaOCP
Monitoring Station	Near External OB Dump, Jamania
Date of sampling	Carbon Monoxide (CO)
	mg/m³
13-Aug-2025	0.6
30-Aug-2025	0.8
Standard	02(8 Hours)


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सौरजपीडीआई
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ENVIRONMENTAL

TABLE-

NOISE LEVEL MONITORING DATA

AREA :

Kaniha

PROJECT :

Kaniha OCP

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
07-Aug-25	Kansamunda Village (West of the Mine)	49.9	42.1
07-Aug-25	Near External OB Dump, Jamania	64.3	50.9
07-Aug-25	Near Time Office (Near Z-Patch)	60.4	54.3
07-Aug-25	Near Project Office	60.3	32.7
23-Aug-25	Kansamunda Village (West of the Mine)	49.1	40.3
23-Aug-25	Near External OB Dump, Jamania	66.3	55.1
23-Aug-25	Near Time Office (Near Z-Patch)	64.9	54.3
23-Aug-25	Near Project Office	65.7	52.7

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

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Janapati

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ସଂଗଠନ
କମ୍ପାନୀ
ଲିମିଟେଡ୍
ଭୁବନେଶ୍ୱର

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-Aug-25	Clear Water Pond	7.35	<4.0	31	28	-	
14-Aug-25	Kansamunda Sump	7.31	<4.0	36	32	-	
14-Aug-25	Pre Sedimentation Pond	7.21	<4.0	29	24	-	
14-Aug-25	Z-Pach Sump	7.19	<4.0	23	32	-	
30-Aug-25	Clear Water Pond	7.55	<4.0	36	28	-	
30-Aug-25	Pre Sedimentation Pond	7.50	<4.0	40	32	-	

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BHUBANESWAR

Signature

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

8.5-9.0	10	100	250	30
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मिनी रिंग
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Drinking Water Quality Data Kaniha Area

Project / OCP	Kaniha		Indian Drinking Standards (IS-10500):2012	
	Telisinga Well Water	Jarda Village Well Water	Acceptable	Permissible
Monitoring Station				
Date of Sampling	14-Aug-2025	14-Aug-2025		
Colour(Hazen)	1	3	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	1	4	1	5
pH	6.89	7.07	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	29.41	243.71	200	600
Chloride(mg/L)	27.20	54.40	250	1000
Sulphate(mg/L)	40.4	48.12	200	400
Nitrate(mg/L)	<0.5	<0.5	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	66.67	239.24	200	600
Calcium(mg/L)	12.57	66.02	75	200
Fluoride(mg/L)	0.58	0.74	1	1.5
Total Dissolve Solid(mg/L)	152	404	500	2000
Copper(mg/L)	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	0.18	0.1	0.3
Iron(mg/L)	<0.1	<0.1	1.0	No relaxation
Zinc(mg/L)	0.07	0.22	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

Janaki



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निजी एन
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Mini Rotna

Drinking Water Quality Data Kaniha Area

Project / OCP	Kaniha		Indian Drinking Standards (IS-10500):2012	
	Telisinga Well Water	Jarda Village Well Water	Acceptable	Permissible
Monitoring Station				
Date of Sampling	14-Aug-2025	14-Aug-2025		
Selenium(mg/L)	<0.005	<0.005	0.01	No relaxation
Sodium(mg/L)	21.33	22.06		
Potassium(mg/L)	1.54	5.45		
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	-	-

J. J. J.
Authorised Signatory
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BHUBANESWAR

J. J. J.



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रिजी वल
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Effluent Quality (all Parameter): Kaniha Area

Project (OCP / UG)	Kaniha		MoEF-Sch-VI Standards
	Clear Water Pond (Inflow)	Z-Patch Sump	
NAME OF THE STATION	15-May-25	15-May-25	
Date of Sampling	15-May-25	15-May-25	
Odour	Unobjectionable	Unobjectionable	-
Colour(Hazen)	7	8	-
Temperature(°C)	25.5	25.8	Shall not exceed 5 °C above the receiving temperature
pH	7.93	7.44	5.5-9.0
Total Hardness (asCaCO ₃),mg/L	270.91	386.45	-
Total Dissolved Solids, mg/L	420	566	-
Nitrate Nitrogen(mg/L)(As N)	<0.5	3.08	10
Ammonical Nitrogen , mg/l (As N)	0.52	0.44	50
Total Kjeldhal Nitrogen, mg/l (As N)	4.43	4.43	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)	1.56	1.05	2
Copper(mg/L)	<0.03	<0.03	3
Manganese(mg/L)	<0.04	0.19	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)	<0.0005	<0.005	0.05
Dissolved Phosphate(mg/L)	<4.0	<4.0	5
Phenolics (mg/L)	<0.001	<0.001	1

Kattamarts
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Kaniha OCP

Legend
Mining Station

Kaniha (North of the mine)

New Time Office (Near Z-Patch)

Kansamunda (West of the mine)

Near Project Office

Gulland

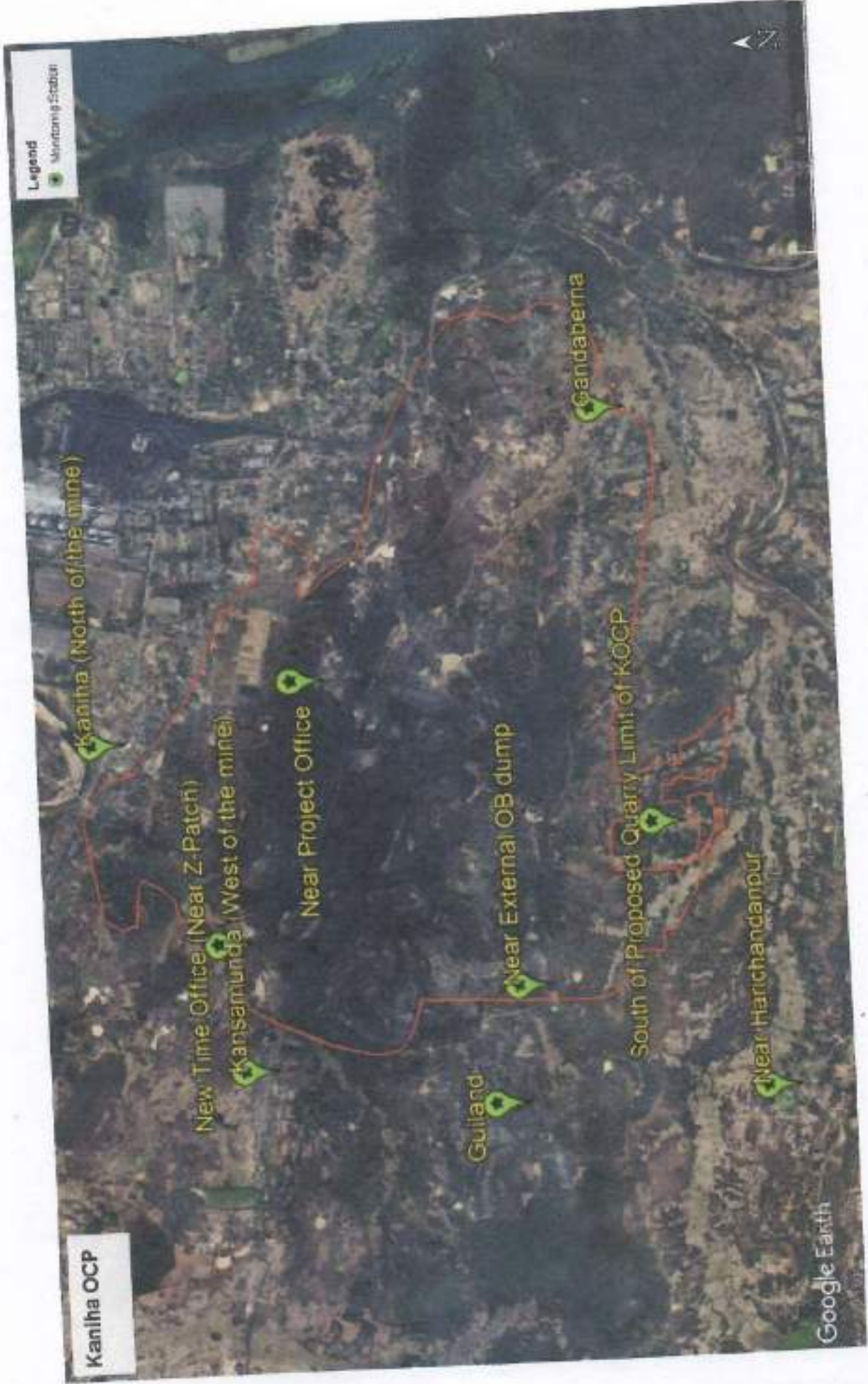
Near External OB dump

Gandaberma

South of Proposed Quarry Limit of KOCP

Near Harichandampur

Google Earth



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

Talcher Coalfield



MCL

Mahanadi Coalfields Limited



cmpdi

A Mini Ratna Company

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

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

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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-Aug-25	Time Office	215	97	42	12.22	16.36	Mining Operations and Haul Road	About 200m
13-Aug-25	South West Side of the Mine	206	93	41	11.81	24.52	Mining Operations	About 300m
30-Aug-25	Time Office	201	94	40	17.50	21.90	Mining Operations and Haul Road	About 200m
30-Aug-25	South West Side of the Mine	207	97	43	14.87	17.83	Mining Operations	About 300m

Signature
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 CMPDI, RI-VII, LAB
 BHUBANESWAR

Signature

MoE P Standards Notification dated 25th
 September, 2000

600	260		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
01-Aug-25	Balichandrapur Village	156	61	28	11.81	32.69		
01-Aug-25	Banabaspur Village	117	43	20	18.42	19.55		
01-Aug-25	Solda Village	113	34	18	16.19	17.83	Coal Transportation Road	About 2km
01-Aug-25	Kankarei Village	161	65	28	17.01	25.59		
01-Aug-25	Sanamahitala Village	108	40	18	13.81	35.97		
02-Aug-25	Kankarei Village	117	35	18	17.01	22.29		
02-Aug-25	Balichandrapur Village	114	34	16	17.08	24.06		
02-Aug-25	Solda Village	118	47	24	19.25	29.72	Coal Transportation Road	About 2km
02-Aug-25	Banabaspur Village	114	32	17	16.04	18.98		
02-Aug-25	Sanamahitala Village	153	52	28	13.56	28.97		
08-Aug-25	Sanamahitala Village	135	42	22	19.34	35.19		
08-Aug-25	Kankarei Village	136	52	25	12.64	20.64		
08-Aug-25	Solda Village	133	43	22	17.04	35.97	Coal Transportation Road	About 2km
08-Aug-25	Banabaspur Village	163	55	29	18.88	18.77		
08-Aug-25	Balichandrapur Village	133	50	25	10.59	28.15		
09-Aug-25	Solda Village	137	57	25	11.81	30.46	Coal Transportation Road	About 2km
09-Aug-25	Banabaspur Village	115	42	23	16.58	17.99		
09-Aug-25	Sanamahitala Village	139	46	25	14.27	20.33		
09-Aug-25	Balichandrapur Village	125	44	21	11.37	20.80		
09-Aug-25	Kankarei Village	128	43	21	12.69	22.29		
18-Aug-25	Banabaspur Village	110	36	15	19.34	32.06		
18-Aug-25	Solda Village	121	38	17	13.12	26.00	Coal Transportation Road	About 2km
18-Aug-25	Kankarei Village	138	53	22	12.89	25.02		

*N/A(QS,2009)

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BHUBANESWAR

Janaki

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
18-Aug-25	Sanamahitala Village	123	46	18	18.47	21.46		
18-Aug-25	Balichandrapur Village	113	39	21	12.89	22.68		
19-Aug-25	Kankarei Village	144	61	27	16.58	34.41		
19-Aug-25	Balichandrapur Village	156	52	30	20.26	32.06		
19-Aug-25	Solda Village	126	49	23	16.58	21.11	Coal Transportation Road	About 2km
19-Aug-25	Banabaspur Village	119	48	21	17.06	17.09		
19-Aug-25	Sanamahitala Village	136	59	25	11.51	21.11		
25-Aug-25	Solda Village	132	53	26	10.83	19.10	Coal Transportation Road	About 2km
25-Aug-25	Sanamahitala Village	131	49	20	17.96	32.06		
25-Aug-25	Kankarei Village	113	45	17	10.06	26.74		
25-Aug-25	Banabaspur Village	157	66	30	15.20	30.50		
25-Aug-25	Balichandrapur Village	125	44	23	17.50	27.49		
26-Aug-25	Solda Village	143	55	29	16.25	18.40	Coal Transportation Road	About 2km
26-Aug-25	Banabaspur Village	128	51	26	16.19	20.06		
26-Aug-25	Sanamahitala Village	142	53	22	17.96	25.81		
26-Aug-25	Balichandrapur Village	165	73	33	14.74	20.33		
26-Aug-25	Kankarei Village	131	54	20	12.64	22.29		

T. Haranik
 Authorised Signatory
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 BHUBANESWAR

Jaswant

NAQS.2009

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 CMPDI
 AIR LAB

Test Report

AMBIENT AIR QUALITY DATA

Area :

Hingula

(Compliance Station)

Project :

Balaram OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
13-Aug-25	Pump House near Outsourcing Working Patch	188	87	40	20.90	23.11	Mining Operation And Coal Transportation Road	About 200m
13-Aug-25	Near Project Office	188	88	39	17.06	31.94	Mining Activities	About 500m
30-Aug-25	Pump House near Outsourcing Working Patch	205	106	44	16.19	18.57	Mining Operation And Coal Transportation Road	About 200m
30-Aug-25	Near Project Office	185	96	41	10.59	28.15	Mining Activities	About 500m

S. K. Das
 Authorized Signatory
 CMPDI, RI-VII, LAB
 BHUBANESWAR

J. S. Das

MoEF Standards Notification dated 25th September, 2009	600	250		120	120
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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	SO ₂	NO _x	Dust Generating Source(DGS)	Distance from DGS
01-Aug-25	East of the Mine, Natedi Village	126	44	21	14.16	22.64	Coal Transportation Road	About 2km
01-Aug-25	Kurihan Village (Reported Only)	149	59	28	17.94	20.80		
01-Aug-25	Solda Village (Reported Only)	113	34	18	16.19	17.83	Coal Transportation Road	About 2km
01-Aug-25	Natada Village	112	33	17	10.94	22.29	Anthropogenic Activities, Local	About 2km
01-Aug-25	Purunasahi Village	170	65	32	21.39	37.14		
02-Aug-25	Natada Village	145	66	29	13.61	38.79	Anthropogenic Activities, Local	About 2km
02-Aug-25	East of the Mine, Natedi Village	137	43	24	8.75	23.64	Coal Transportation Road	About 2km
02-Aug-25	Solda Village (Reported Only)	118	47	24	19.25	29.72	Coal Transportation Road	About 2km
02-Aug-25	Kurihan Village (Reported Only)	140	50	24	13.81	27.37		
02-Aug-25	Purunasahi Village	145	56	27	17.04	25.81		
08-Aug-25	Purunasahi Village	129	44	23	16.58	32.06		
08-Aug-25	Natada Village	129	55	26	14.58	38.79	Anthropogenic Activities, Local	About 2km
08-Aug-25	Solda Village (Reported Only)	133	43	22	17.04	35.97	Coal Transportation Road	About 2km
08-Aug-25	Kurihan Village (Reported Only)	131	39	20	14.74	18.77		
08-Aug-25	East of the Mine, Natedi Village	126	49	20	11.97	35.19	Coal Transportation Road	About 2km
09-Aug-25	Solda Village (Reported Only)	137	57	25	11.81	30.46	Coal Transportation Road	About 2km
09-Aug-25	Kurihan Village (Reported Only)	126	47	23	16.66	23.35		
09-Aug-25	Purunasahi Village	144	49	26	20.90	35.49		
09-Aug-25	East of the Mine, Natedi Village	123	40	18	13.73	21.93	Coal Transportation Road	About 2km
09-Aug-25	Natada Village	113	49	22	15.51	21.61	Anthropogenic Activities, Local	About 2km
18-Aug-25	Kurihan Village (Reported Only)	176	69	31	17.04	24.24		
18-Aug-25	Solda Village (Reported Only)	121	38	17	13.12	26.00	Coal Transportation Road	About 2km
18-Aug-25	Natada Village	112	41	19	17.91	22.64	Anthropogenic Activities, Local	About 2km

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	100	60	60	80
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Project :

Balram OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
18-Aug-25	Purunasahi Village	114	43	19	11.51	31.28		
18-Aug-25	East of the Mine, Natedi Village	158	75	33	14.87	27.49	Coal Transportation Road	About 2km
19-Aug-25	Natada Village	155	54	26	17.96	18.77	Anthropogenic Activities, Local	About 2km
19-Aug-25	East of the Mine, Natedi Village	121	40	24	17.06	30.46	Coal Transportation Road	About 2km
19-Aug-25	Solda Village (Reported Only)	126	49	23	16.58	21.11	Coal Transportation Road	About 2km
19-Aug-25	Kurihan Village (Reported Only)	137	55	26	14.27	18.77		
19-Aug-25	Purunasahi Village	127	55	26	14.58	33.84		
25-Aug-25	Solda Village (Reported Only)	132	53	26	10.83	19.10	Coal Transportation Road	About 2km
25-Aug-25	Purunasahi Village	163	67	29	15.55	29.72		
25-Aug-25	Natada Village	127	51	22	18.47	20.64	Anthropogenic Activities, Local	About 2km
25-Aug-25	Kurihan Village (Reported Only)	123	44	20	16.19	17.83		
25-Aug-25	East of the Mine, Natedi Village	149	59	28	17.04	30.50	Coal Transportation Road	About 2km
26-Aug-25	Solda Village (Reported Only)	143	55	29	16.25	18.40	Coal Transportation Road	About 2km
26-Aug-25	Kurihan Village (Reported Only)	128	52	24	16.04	18.98		
26-Aug-25	Purunasahi Village	139	53	24	13.35	25.81		
26-Aug-25	East of the Mine, Natedi Village	141	43	25	11.05	25.02	Coal Transportation Road	About 2km
26-Aug-25	Natada Village	135	59	18	18.88	29.72	Anthropogenic Activities, Local	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 (a) Pyrene	Benzen e
	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	(ng/m^3)	(ng/m^3)	(mg/m^3)	(ng/m^3)	($\mu\text{g}/\text{m}^3$)
01-Aug-2025	<20.0	21.48	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL
02-Aug-2025	<20.0	13.85	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
08-Aug-2025	<20.0	23.75	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
09-Aug-2025/	<20.0	16.68	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
18-Aug-2025	<20.0	23.75	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL
19-Aug-2025	<20.0	14.98	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
25-Aug-2025	<20.0	11.87	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL
26-Aug-2025	<20.0	23.18	<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)

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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)
01-Aug-2025	<20.0	22.05	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
02-Aug-2025	<20.0	20.63	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
08-Aug-2025	<20.0	22.05	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
09-Aug-2025	<20.0	15.83	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
18-Aug-2025	<20.0	13.28	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
19-Aug-2025	<20.0	16.40	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
25-Aug-2025	<20.0	17.53	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
26-Aug-2025	<20.0	14.42	<0.1	<1.0	<1.0	0.7	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	Banabaspur Village							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (a) Pyrene	Benzen e
	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	(ng/m^3)	(ng/m^3)	(mg/m^3)	(ng/m^3)	($\mu\text{g}/\text{m}^3$)
01-Aug-2025	<20.0	20.35	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
02-Aug-2025	<20.0	21.20	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
08-Aug-2025	<20.0	13.85	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
09-Aug-2025	<20.0	18.10	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
18-Aug-2025	<20.0	20.92	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
19-Aug-2025	<20.0	17.53	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
25-Aug-2025	<20.0	12.43	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
26-Aug-2025	<20.0	16.40	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
Standard	400(24hours)	180(hour)	1.0(24hours)	6.0(Annual)	20(Annual)	02(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
	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	(ng/m^3)	(ng/m^3)	(mg/m^3)	(ng/m^3)	($\mu\text{g}/\text{m}^3$)
01-Aug-2025	<20.0	18.10	<0.1	<1.0	<1.0	0.5	BQL(QL =0.7)	BQL
02-Aug-2025	<20.0	24.03	<0.1	<1.0	<1.0	0.5	BQL(QL =0.7)	BQL
08-Aug-2025	<20.0	15.27	<0.1	<1.0	<1.0	0.6	BQL(QL =0.7)	BQL
09-Aug-2025	<20.0	21.48	<0.1	<1.0	<1.0	1.1	BQL(QL =0.7)	BQL
18-Aug-2025	<20.0	18.93	<0.1	<1.0	<1.0	1.1	BQL(QL =0.7)	BQL
19-Aug-2025	<20.0	23.75	<0.1	<1.0	<1.0	0.7	BQL(QL =0.7)	BQL
25-Aug-2025	<20.0	20.35	<0.1	<1.0	<1.0	0.6	BQL(QL =0.7)	BQL
26-Aug-2025	<20.0	23.18	<0.1	<1.0	<1.0	0.9	BQL(QL =0.7)	BQL
Standard	400(24h ours)	180 (hour)	1.0(24h ours)	6.0(Annual)	20 (Annual)	02(8ho urs)	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 (a) Pyrene	Benzen e
	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	(ng/m^3)	(ng/m^3)	(mg/m^3)	(ng/m^3)	($\mu\text{g}/\text{m}^3$)
01-Aug-2025	<20.0	23.75	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
02-Aug-2025	<20.0	19.78	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
08-Aug-2025	<20.0	13.28	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
09-Aug-2025	<20.0	18.65	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
18-Aug-2025	<20.0	17.53	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
19-Aug-2025	<20.0	14.98	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
25-Aug-2025	<20.0	23.47	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
26-Aug-2025	<20.0	11.87	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
Standard	400(24h ours)	180(h our)	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	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 (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)	($\mu\text{g}/\text{m}^3$)
01-Aug-2025	<20.0	22.05	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
02-Aug-2025	<20.0	20.63	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
08-Aug-2025	<20.0	22.05	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
09-Aug-2025	<20.0	15.83	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
18-Aug-2025	<20.0	13.28	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
19-Aug-2025	<20.0	16.40	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
25-Aug-2025	<20.0	17.53	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
26-Aug-2025	<20.0	14.42	<0.1	<1.0	<1.0	0.7	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	Balram OCP							
Monitoring Station	East Mine, Natedi Village							
Date of sampling	Ammونيا (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)	($\mu\text{g}/\text{m}^3$)
01-Aug-2025	<20.0	22.05	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL(QL=2.5)
02-Aug-2025	<20.0	14.98	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL(QL=2.5)
08-Aug-2025	<20.0	16.40	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL(QL=2.5)
09-Aug-2025	<20.0	18.10	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL(QL=2.5)
18-Aug-2025	<20.0	20.63	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL(QL=2.5)
19-Aug-2025	<20.0	21.20	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL(QL=2.5)
25-Aug-2025	<20.0	22.05	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL(QL=2.5)
26-Aug-2025	<20.0	21.48	<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 (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)	($\mu\text{g}/\text{m}^3$)
01-Aug-2025	<20.0	15.27	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL(QL=2.5)
02-Aug-2025	<20.0	14.42	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL(QL=2.5)
08-Aug-2025	<20.0	12.43	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL(QL=2.5)
09-Aug-2025	<20.0	19.22	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL(QL=2.5)
18-Aug-2025	<20.0	19.22	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL(QL=2.5)
19-Aug-2025	<20.0	11.30	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL(QL=2.5)
25-Aug-2025	<20.0	21.48	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL(QL=2.5)
26-Aug-2025	<20.0	13.57	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL(QL=2.5)
Standard	400(24h ours)	180(h our)	1.0(24h ours)	6.0(A nnu al)	20(Ann ual)	02(8hou rs)	01(annu al)	05(annu al)

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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 (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)	($\mu\text{g}/\text{m}^3$)
01-Aug-2025	<20.0	18.10	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL
02-Aug-2025	<20.0	22.05	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
08-Aug-2025	<20.0	14.70	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
09-Aug-2025	<20.0	15.55	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
18-Aug-2025	<20.0	11.58	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
19-Aug-2025	<20.0	16.12	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
25-Aug-2025	<20.0	19.22	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
26-Aug-2025	<20.0	19.22	<0.1	<1.0	<1.0	0.9	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	Balram OCP							
Monitoring Station	Kurihan Village (Reported Only)							
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)	($\mu\text{g}/\text{m}^3$)
01-Aug-2025	<20.0	16.97	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
02-Aug-2025	<20.0	23.75	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
08-Aug-2025	<20.0	13.85	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
09-Aug-2025	<20.0	13.57	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
18-Aug-2025	<20.0	23.75	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
19-Aug-2025	<20.0	24.32	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
25-Aug-2025	<20.0	22.33	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
26-Aug-2025	<20.0	14.42	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
Standard	400(24 hours)	180(hour)	1.0(24 hours)	6.0(Annual)	20(Annual)	02(8 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA

Area: Hingula

Project	Hingula OCP
Monitoring Station	Time Office
Date of sampling	Carbon Monoxide (CO)
	mg/m³
13-Aug-2025	0.8
30-Aug-2025	0.9
Standard	02(8 Hours)

Project	Hingula OCP
Monitoring Station	South West side of Mine
Date of sampling	Carbon Monoxide (CO)
	mg/m³
13-Aug-2025	0.7
30-Aug-2025	0.8
Standard	02(8 Hours)

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TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Hingula

PROJECT :

Hingula OCP

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
07-Aug-25	South West Side of the Mine	69.0	54.3
07-Aug-25	Solda Village	47.1	40.2
07-Aug-25	Kankarei Village	49.9	38.7
07-Aug-25	Time Office	65.7	56.6
23-Aug-25	South West Side of the Mine	62.3	55.9
23-Aug-25	Solda Village	47.1	39.1
23-Aug-25	Kankarei Village	46.8	38.5
23-Aug-25	Time Office	65.1	55.6

MoEF Standard Notification dated 25th September, 2009	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, 2009	6.00 AM -10.00 PM Leq 55dB(A) (Residential)	10.00 PM -6.00 AM Leq 45dB(A) (Residential)
MoEF Standard Notification dated 23rd September, 2009	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, 2009	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
07-Aug-25	Natada Village	43.3	38.6
07-Aug-25	Solada Village (Reported only)	47.1	40.2
07-Aug-25	Near Natedi Village	45.0	38.3
07-Aug-25	Pump House Near Outsourcing Working Patch	66.9	52.9
07-Aug-25	Near Project Office Balram OCP	66.3	54.1
23-Aug-25	Natada Village	43.9	38.5
23-Aug-25	Solada Village (Reported only)	47.1	39.1
23-Aug-25	Near Natedi Village	44.4	36.3
23-Aug-25	Pump House Near Outsourcing Working Patch	66.9	55.7
23-Aug-25	Near Project Office Balram OCP	64.7	32.9

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 23rd 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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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-Aug-25	Inlet of O & G Trap	7.58	5.6	71	128	-	
14-Aug-25	Mine Sump Water	7.95	<4.0	30	28	-	
14-Aug-25	Outlet of O & G Trap	7.84	4.2	39	48	-	
30-Aug-25	Inlet of O & G Trap	7.42	<4.0	39	16	-	
30-Aug-25	Outlet of O & G Trap	7.56	<4.0	26	24	-	

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Jamal

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 :

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-Aug-25	Gandhisagar (Mine Sump)	7.26	<4.0	19	16	-	
14-Aug-25	Inlet of O & G Trap	7.83	<4.0	39	40	-	
14-Aug-25	Outlet of O & G Trap	7.71	<4.0	27	24	-	
30-Aug-25	Inlet of O & G Trap	7.87	<4.0	33	32	-	
30-Aug-25	Outlet of O & G Trap	7.90	<4.0	21	20	-	

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Signature

MoEF Standard Notification dated 25th September, 1999
 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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संयुक्त प्रदूषण नियंत्रण बोर्ड
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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-Aug-25	STP Inlet of Balram Colony	7.27	-	43		2.9	140
14-Aug-25	STP Outlet of Balram Colony	7.07	-	32	-	2.1	94
30-Aug-25	STP Inlet of Balram Colony	7.54	-	45	-	3.2	120
30-Aug-25	STP Outlet of Balram Colony	8.47	-	34	-	2.4	79

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Jaswanti

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 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	14-Aug-2025	14-Aug-2025	14-Aug-2025	Acceptable	Permissible
Colour(Hazen)	4	2	4	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	2	3	4	1	5
pH	6.67	7.95	7.25	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	130.26	243.71	373.97	200	600
Chloride(mg/L)	34.97	40.80	79.56	250	1000
Sulphate(mg/L)	72.26	11.97	60.20	200	400
Nitrate(mg/L)	<0.5	<0.5	<0.5	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	184.33	188.25	388.27	200	600
Calcium(mg/L)	50.30	34.58	111.61	75	200
Fluoride(mg/L)	0.58	0.66	0.72	1	1.5
Total Dissolve Solid(mg/L)	302	312	592	500	2000
Copper(mg/L)	<0.03	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	0.05	<0.04	0.12	0.1	0.3
Iron(mg/L)	<0.1	<0.1	<0.1	1.0	No relaxation
Zinc(mg/L)	0.11	0.31	0.63	5	15
Lead(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.005	<0.005	<0.005	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	
	Time Office Water	Gopalprasad Village Bore Well Water	Kumunda Village Bore Well Water	Acceptable	Permissible
Date of Sampling	14-Aug-2025	14-Aug-2025	14-Aug-2025	Acceptable	Permissible
Selenium(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Sodium(mg/L)	12.86	13.17	18.69		
Potassium(mg/L)	2.99	5.75	10.41		
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	14-Aug-2025	14-Aug-2025	14-Aug-2025	Acceptable	Permissible
Colour(Hazen)	2	3	3	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	2	4	3	1	5
pH	6.91	7.61	7.18	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	75.63	84.04	235.31	200	600
Chloride(mg/L)	29.14	25.25	50.51	250	1000
Sulphate(mg/L)	60.36	118.40	24.80	200	400
Nitrate(mg/L)	25.20	<0.5	<0.5	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	149.03	211.78	188.25	200	600
Calcium(mg/L)	42.44	64.45	40.87	75	200
Fluoride(mg/L)	0.46	0.84	0.62	1	1.5
Total Dissolve Solid(mg/L)	270	326	322	500	2000
Copper(mg/L)	<0.03	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	<0.04	0.1	0.1	0.3
Iron(mg/L)	<0.1	<0.1	<0.1	1.0	No relaxation
Zinc(mg/L)	0.07	0.04	1.35	5	15
Lead(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.005	<0.005	<0.005	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	Balaram OCP			Indian Drinking Standards (IS-10500):2012	
	Danara Village Borewell Water	Balaram Colony	Nakeipasi Village Bore Well Water		
Monitoring Station					
Date of Sampling	14-Aug-2025	14-Aug-2025	14-Aug-2025	Acceptable	Permissible
Selenium(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Sodium(mg/L)	16.67	14.37	5.71		
Potassium(mg/L)	10.70	3.36	2.15		
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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Effluent Quality (all Parameter): Hingula Area

Project (OCP / UG)	Hingula	MoEF-Sch-VI Standards
NAME OF THE STATION	Mine Sump Water	
Date of Sampling	15-May-25	
Odour	Unobjectionable	-
Colour(Hazen)	10	-
Temperature(°C)	26.1	Shall not exceed 5 °C above the receiving temperature
pH	7.86	5.5-9.0
Total Hardness (asCaCO ₃),mg/L	561.74	-
Total Dissolved Solids, mg/L	746	-
Nitrate Nitrogen(mg/L)(As N)	1.23	10
Ammonical Nitrogen , mg/l (As N)	0.38	50
Total Kjeldhal Nitrogen, mg/l (As N)	3.32	100
Sulphide (mg/L)	<0.1	2
BOD [3 days at 27°C] (mg/L)	<2.0	30
Fluoride(mg/L)	1.15	2
Copper(mg/L)	<0.03	3
Manganese(mg/L)	0.27	2
Iron(mg/L)	<0.1	3
Zinc(mg/L)	<0.04	5
Lead, mg/l	<0.005	0.1
Cadmium, mg/l	<0.001	2
Total Chromium(mg/L)	<0.01	2
Hexavalent Chromium(mg/L)	<0.05	0.1
Nickel(mg/L)	<0.02	3
Arsenic, mg/l	<0.005	0.2
Selenium (mg/L)	<0.005	0.05
Dissolved Phosphate(mg/L)	<4.0	5
Phenolics (mg/L)	<0.001	1


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Effluent Quality (all Parameter): Hingula Area

Project (OCP / UG)	Balaram	MoEF-Sch-VI Standards
NAME OF THE STATION	Gandhisagar Mine Sump Water	
Date of Sampling	15-May-25	
Odour	Unobjectionable	-
Colour(Hazen)	9	-
Temperature(°C)	25.9	Shall not exceed 5 °C above the receiving temperature
pH	7.52	5.5-9.0
Total Hardness (asCaCO ₃),mg/L	545.18	-
Total Dissolved Solids, mg/L	724	-
Nitrate Nitrogen(mg/L)(As N)	1.44	10
Ammonical Nitrogen , mg/l (As N)	0.28	50
Total Kjeldhal Nitrogen, mg/l (As N)	2.21	100
Sulphide (mg/L)	<0.1	2
BOD [3 days at 27°C] (mg/L)	<2.0	30
Fluoride(mg/L)	1.02	2
Copper(mg/L)	<0.03	3
Manganese(mg/L)	0.23	2
Iron(mg/L)	<0.1	3
Zinc(mg/L)	<0.04	5
Lead, mg/l	<0.005	0.1
Cadmium, mg/l	<0.001	2
Total Chromium(mg/L)	<0.01	2
Hexavalent Chromium(mg/L)	<0.05	0.1
Nickel(mg/L)	<0.02	3
Arsenic, mg/l	<0.005	0.2
Selenium (mg/L)	<0.005	0.05
Dissolved Phosphate(mg/L)	<4.0	5
Phenolics (mg/L)	<0.001	1

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Piezometer Water Quality Data: Hingula Area

Project / OCP	Hingula OCP		Indian Drinking Standards (IS-10500):2012	
	Monitoring Station	MTP 14 (inside the premises of Pirakhaam village primary school)			MTP 15 (Beside Sujan Pradhans house in chottaberani village)
Date of Sampling	03-May-25	05-May-25	Acceptable	Permissible
Colour(Hazen)	1	2	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	1	2	1	5
pH	7.74	7.34	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	143.48	188.01	200	600
Chloride(mg/L)	27.40	27.40	250	1000
Sulphate(mg/L)	17.79	35.22	200	400
Nitrate(mg/L)	<0.50	7.53	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	131.30	187.00	200	600
Calcium(mg/L)	33.54	63.88	75	200
Fluoride(mg/L)	0.71	0.47	1	1.5
Total Dissolve Solid(mg/L)	218	314	500	2000
Copper(mg/L)	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	0.13	<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	<0.2	0.01	No relaxation
Selenium (mg/L)	<0.005	<0.001	0.01	No relaxation
Boron(mg/L)	<0.2	<1.8	0.5	2.4
Sodium mg/L	8.34	<0.02	-	-
Potassium mg/L	2.58	<0.002	-	-
Phenolics (mg/L)	<0.001	<0.005	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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Piezometer Water Quality Data: Hingula Area

Project / OCP	Balaram OCP			Indian Drinking Standards (IS-10500):2012	
	Monitoring Station	MTP 10 (inside the premises of Danara high school)	MTP 12 (In Betianali Village, opposite to Sindhu Deori's House)			MTP 17 (inside premises of market bulding, gramina rojgar yojana, Kandhaberani Village)
Date of Sampling	03-May-25	03-May-25	5-May-25	Acceptable 5	Permissible 15
Colour(Hazen)	1	1	1	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	1	1	1	1	5
pH	6.47	6.55	6.99	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	19.79	39.58	64.32	200	600
Chloride(mg/L)	41.10	19.57	17.61	250	1000
Sulphate(mg/L)	15.19	12.47	24.55	200	400
Nitrate(mg/L)	10.89	4.86	2.29	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	75.60	59.68	83.55	200	600
Calcium(mg/L)	17.57	12.78	23.96	75	200
Fluoride(mg/L)	0.62	0.55	0.59	1	1.5
Total Dissolve Solid(mg/L)	138	104	139	500	2000
Copper(mg/L)	<0.03	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	0.38	<0.04	0.1	0.3
Iron(mg/L)	<0.1	<0.1	<0.1	1.0	No relaxation
Zinc(mg/L)	0.07	<0.04	0.05	5	15
Lead(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.001	<0.001	<0.001	0.003	No relaxation
Total Chromium (mg/L)	<0.01	<0.01	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Selenium (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
Sodium mg/L	9.23	6.18	8.08	-	-
Potassium mg/L	3.77	2.84	0.64	-	-
Phenolics (mg/L)	<0.001	<0.001	<0.001	0.001	0.002
Residual Free Chlorine (mg/L)	<0.2	<0.2	<0.2	0.2	1
MPN (Index/100ml)	Not Detected	Not Detected	Not Detected	-	-

Authorised Signatory
CMPDI, RI-VII, LAB
BHUBANESWAR

Journal

Hingula OCP

Legend
Monitoring Station

Banabaspur Village

Solada Village

Kankarai Village

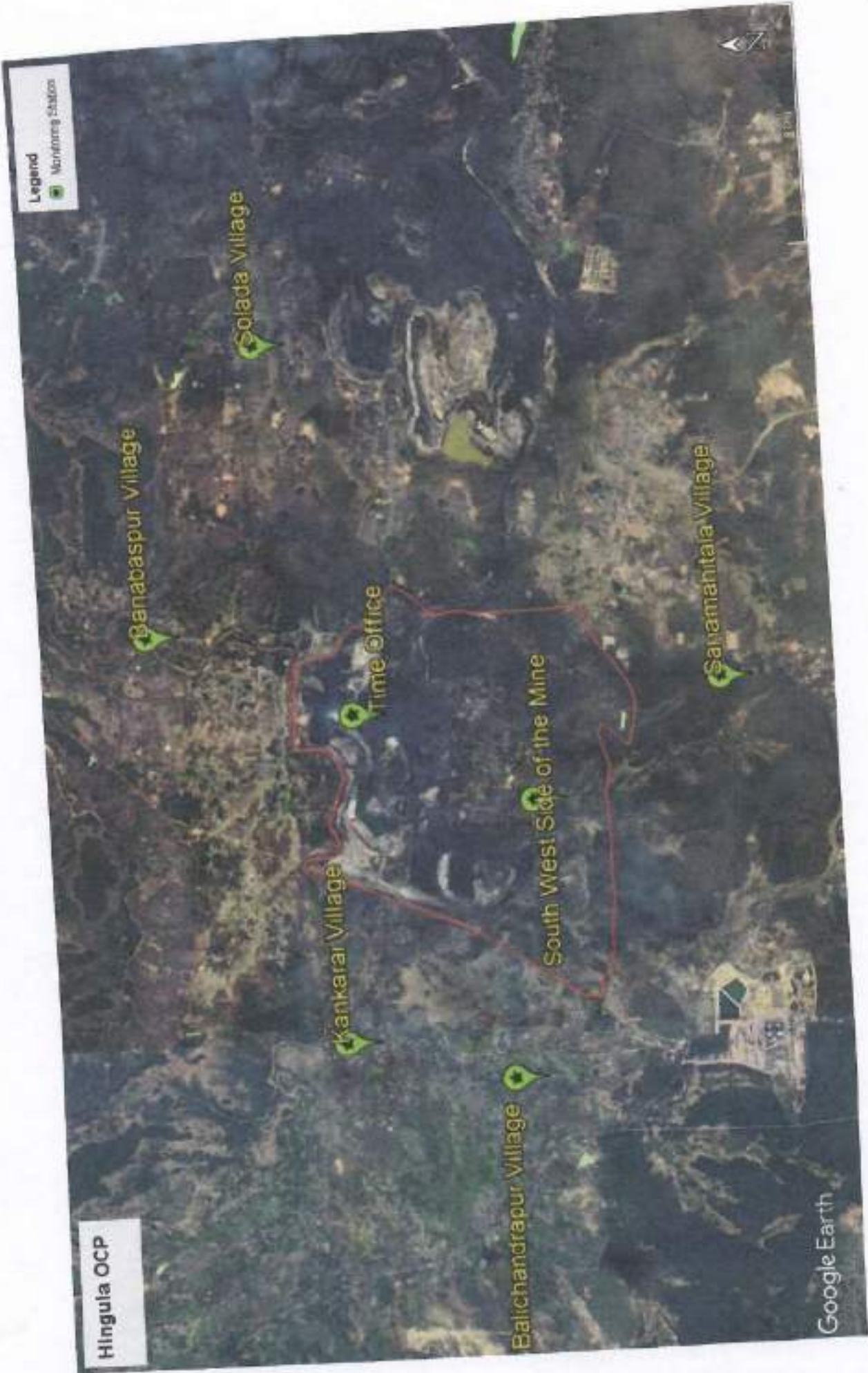
Time Office

Balichandrapur Village

South West Side of the Mine

Saramahitola Village

Google Earth



Bairam OCP

Legend
Monitoring Station



Google Earth

**Environmental Monitoring Report
Of
Talcher Area
For
August-2025
Talcher Coalfield**



MCL

Mahanadi Coalfields Limited



cmpdi

A Mini Ratna Company

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

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

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सीएमपीडी
CMPDI
भुवनेश्वर

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
07-Aug-25	Near Canteen Talcher Colliery	193	89	38	8.75	25.66	Local Transportation	About 500m
07-Aug-25	Officer Club, Talcher Area	219	105	45	15.83	16.98	Mining Activities, Ananta, Lingaraj	About 1000m
23-Aug-25	Near Canteen Talcher Colliery	214	94	43	16.12	27.37	Local Transportation	About 500m
23-Aug-25	Officer Club, Talcher Area	179	87	41	13.61	33.84	Mining Activities, Ananta, Lingaraj	About 1000m

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

J. Prasad

MoEF Standards Notification dated 25th September, 2009	600	300		120	120
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सीएमपीडी आई
cmpdi
LABORATORY

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
07-Aug-25	Project Office	207	96	43	14.58	20.52	Mining Activities, Transportation, CHP	About 500m
07-Aug-25	Sub-station	182	85	38	10.83	21.23	Transportation & Railway Sidings of BOCP	About 500m
23-Aug-25	Project Office	192	95	42	18.42	32.06	Mining Activities, Transportation, CHP	About 500m
23-Aug-25	Sub-station	193	88	37	11.37	21.54	Transportation & Railway Sidings of BOCP	About 500m

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

Janak

MoEF Standards Notification dated 25th September, 2009

800	300		120	120
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सीएनपीडी आई
Centre for Monitoring and Pollution Data Institute
cmpdi

Test Report

AMBIENT AIR QUALITY DATA

Area : **Talcher** (Compliance Station)

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
07-Aug-25	GM Office Lingraj (Reported Only)	191	84	36	10.13	28.93		
23-Aug-25	GM Office Lingraj (Reported Only)	195	87	38	10.59	21.90		

Talwar
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 CMPDI, RI-VII, LAB
 BHUBANESWAR

Jena

MoEF Standards Notification dated 25th September, 2009	500	250		120	120
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Test Report



सीएनपीडी
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LAB

AMBIENT AIR QUALITY DATA

Area :

Talcher

(Compliance Station)

Project :

Handhidhua Colliery

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
07-Aug-25	Manager's Office	184	90	37	13.92	22.29	Local Transportation, CHP	About 500m
23-Aug-25	Manager's Office	203	37	40	16.62	32.69	Local Transportation, CHP	About 500m

Sachin
Authorised Signatory
CMPDI, RI-VII, LAB
BHUBANESWAR

Sachin

MofF Standards Notification dated 25th September, 2009	600	300		120	120
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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
01-Aug-25	East of the Mine, Natedi Village (Reported Only)	126	44	21	14.16	22.64	Coal Transportation Road	About 2km
02-Aug-25	East of the Mine, Natedi Village (Reported Only)	137	43	24	8.75	23.64	Coal Transportation Road	About 2km
04-Aug-25	Nandira Colony	110	37	18	11.53	29.04	Local Transportation,	About 500m
05-Aug-25	Nandira Colony	132	47	23	17.50	22.64	Local Transportation,	About 500m
08-Aug-25	East of the Mine, Natedi Village (Reported Only)	126	49	20	11.97	35.19	Coal Transportation Road	About 2km
09-Aug-25	East of the Mine, Natedi Village (Reported Only)	123	40	18	13.75	21.93	Coal Transportation Road	About 2km
11-Aug-25	Nandira Colony	147	53	26	10.34	29.04	Local Transportation,	About 500m
12-Aug-25	Nandira Colony	124	40	22	21.39	18.98	Local Transportation,	About 500m
18-Aug-25	East of the Mine, Natedi Village (Reported Only)	158	75	33	14.87	27.49	Coal Transportation Road	About 2km
19-Aug-25	East of the Mine, Natedi Village (Reported Only)	121	40	24	17.06	30.46	Coal Transportation Road	About 2km
20-Aug-25	Nandira Colony	137	60	25	11.37	20.06	Local Transportation,	About 500m
21-Aug-25	Nandira Colony	129	55	23	12.69	26.00	Local Transportation,	About 500m
25-Aug-25	East of the Mine, Natedi Village (Reported Only)	149	59	28	17.04	30.50	Coal Transportation Road	About 2km
26-Aug-25	East of the Mine, Natedi Village (Reported Only)	141	43	25	11.05	25.02	Coal Transportation Road	About 2km
27-Aug-25	Nandira Colony	110	37	16	19.44	29.72	Local Transportation,	About 500m
28-Aug-25	Nandira Colony	116	43	18	14.58	29.01	Local Transportation,	About 500m

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BHUBANESWAR

Janaki



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-Aug-25	Near Pachismeshwar Temple	111	34	16	20.41	34.67	Mining Activity	Less than 500m
04-Aug-25	Near Mandapal Chowk	129	42	20	17.50	31.28	Mining Activity	Less than 500m
05-Aug-25	Near Mandapal Chowk	141	49	23	19.44	18.98	Mining Activity	Less than 500m
05-Aug-25	Near Pachismeshwar Temple	138	39	23	13.81	32.84	Mining Activity	Less than 500m
11-Aug-25	Near Pachismeshwar Temple	144	48	26	19.80	18.77	Mining Activity	Less than 500m
11-Aug-25	Near Mandapal Chowk	133	45	22	21.39	25.59	Mining Activity	Less than 500m
12-Aug-25	Near Mandapal Chowk	148	56	25	8.75	15.53	Mining Activity	Less than 500m
12-Aug-25	Near Pachismeshwar Temple	118	43	21	13.92	29.72	Mining Activity	Less than 500m
20-Aug-25	Near Pachismeshwar Temple	127	40	21	16.12	22.68	Mining Activity	Less than 500m
20-Aug-25	Near Mandapal Chowk	140	54	24	16.53	18.16	Mining Activity	Less than 500m
21-Aug-25	Near Mandapal Chowk	144	60	28	17.98	18.16	Mining Activity	Less than 500m
21-Aug-25	Near Pachismeshwar Temple	113	39	17	16.04	26.41	Mining Activity	Less than 500m
27-Aug-25	Near Mandapal Chowk	168	73	31	14.58	22.29	Mining Activity	Less than 500m
27-Aug-25	Near Pachismeshwar Temple	134	48	26	18.33	16.27	Mining Activity	Less than 500m
28-Aug-25	Near Pachismeshwar Temple	123	45	19	15.31	29.72	Mining Activity	Less than 500m
28-Aug-25	Near Mandapal Chowk	141	72	23	9.15	20.26	Mining Activity	Less than 500m

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BHUBANESWAR

Signature

*N/AQS.2099

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भारत

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)	($\mu\text{g}/\text{m}^3$)
01-Aug-2025	<20.0	22.05	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL(QL=2.5)
02-Aug-2025	<20.0	14.98	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL(QL=2.5)
08-Aug-2025	<20.0	16.40	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL(QL=2.5)
09-Aug-2025	<20.0	18.10	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL(QL=2.5)
18-Aug-2025	<20.0	20.63	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL(QL=2.5)
19-Aug-2025	<20.0	21.20	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL(QL=2.5)
25-Aug-2025	<20.0	22.05	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL(QL=2.5)
26-Aug-2025	<20.0	21.48	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL(QL=2.5)
Standard	400(24h ours)	180(hour)	1.0(24h ours)	6.0(A nnual)	20(Ann ual)	0.9(8ho urs)	01(ann ual)	05(annu al)

Janaki



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रिजिस्टर्ड एन
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भुवनेश्वर

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 (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-Aug-2025	<20.0	16.97	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
05-Aug-2025	<20.0	15.27	<0.1	<1.0	<1.0	0.4	BQL(QL=0.7)	BQL
11-Aug-2025	<20.0	16.68	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
12-Aug-2025	<20.0	17.53	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
20-Aug-2025	<20.0	22.05	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
21-Aug-2025	<20.0	16.40	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
27-Aug-2025	<20.0	14.70	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
28-Aug-2025	<20.0	24.32	<0.1	<1.0	<1.0	0.4	BQL(QL=0.7)	BQL
Standard	400(24h ours)	180(hour)	1.0(24h ours)	6.0(Annual)	20(Annual)	0.4(8hours)	01(annual)	05(annual)

Taffanick
Authorised Signatory
CMPDI, RI-VII, LAB
BHUBANESWAR

Jaswant



सीएनपीडी
CMPDI
भारत सरकार

TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Talcher

PROJECT :

Talcher Colliery

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
06-Aug-25	Officers Club, Talcher Area	56.4	46.1
06-Aug-25	Near Canteen, Talcher Colliery	58.2	50.2
22-Aug-25	Officers Club, Talcher Area	55.9	47.1
22-Aug-25	Near Canteen, Talcher Colliery	58.1	49.9

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)

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

Jasmit



सीएनपीडीआई
CMPDI
भुवनेश्वर

TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Talcher

PROJECT :

Nandira Colliery

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
06-Aug-25	Project Office	59.9	50.3
06-Aug-25	Sub Station, Nandira Colliery	60.6	53.1
22-Aug-25	Project Office	60.3	48.3
22-Aug-25	Sub Station, Nandira Colliery	62.3	48.9

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 22nd 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)

Tatavain
Authorized Signatory
CMPDI, RI-VII, LAB
BHUBANESWAR

Jaswant



सिंहभद्रपीडीआई
CMPDI

TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Talcher

PROJECT :

Deulbera Colliery

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
06-Aug-25	Manager's Office	61.3	50.1
22-Aug-25	Manager's Office	60.1	47.3

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)

Janani

Testowal
Authorised Signatory
CMPDI, RI-VII, LAB
BHUBANESWAR



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CMPDI
भुवनेश्वर

TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Talcher

PROJECT :

Mandapal Sand Mine

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
06-Aug-25	Near Gopinathpur Village	44.3	36.9
22-Aug-25	Near Gopinathpur Village	44.9	36.9

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 55dB(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)

Jatthanai
Authorized Signatory
CMPDI, RI-VII, LAB
BHUBANESWAR

Jatthanai

TABLE--



सीएनपीडीआई
Cmpdi
भारत सरकार

EFFLUENT QUALITY DATA

Area :

Talcher

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

Project :

Talcher Colliery

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	Remarks
14-Aug-25	Talcher Colliery Sedimentation Tank Discharge	6.21	<4.0	33	28	-	
30-Aug-25	Talcher Colliery Sedimentation Tank Discharge	7.04	<4.0	34	28	-	

Authorised Signatory
GMPDI, RI-VII, LAB
BHUBANESWAR

Januati

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--


 सौरभजीवी
 CMPDI
 नवी दिल्ली

EFFLUENT QUALITY DATA

Area :

Talcher

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

Project :

Nandira Colliery

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	Remarks
14-Aug-25	Nandira Colliery Sedimentation Tank Discharge	6.76	<4.0	30	24	-	
30-Aug-25	Nandira Colliery Sedimentation Tank Discharge	7.16	<4.0	27	24	-	

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 BHUBANESWAR

Jarnati

 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



सीएमपीडीआई
मिनी रल
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MINI RATHA

Drinking Water Quality Data Talcher Area

Project / OCP	Talcher U/G		Indian Drinking Standards (IS-10500):2012	
	Ganteen Water, GM Office	Canteen , Talcher Colliery		
Monitoring Station				
Date of Sampling	14-Aug-2025	14-Aug-2025	Acceptable	Permissible
Colour(Hazen)	1	3	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	2	2	1	5
pH	7.25	6.84	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	29.41	54.62	200	600
Chloride(mg/L)	11.65	23.31	250	1000
Sulphate(mg/L)	23.28	78.88	200	400
Nitrate(mg/L)	<0.5	1.76	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	50.98	129.42	200	600
Calcium(mg/L)	12.57	33.01	75	200
Fluoride(mg/L)	0.54	0.64	1	1.5
Total Dissolve Solid(mg/L)	92	234	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)	0.06	0.07	5	15
Lead(mg/L)	<0.005	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.005	<0.005	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

Signature



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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	Acceptable	Permissible
Monitoring Station				
Date of Sampling	14-Aug-2025	14-Aug-2025	Acceptable	Permissible
Selenium(mg/L)	<0.005	<0.005	0.01	No relaxation
Sodium(mg/L)	6.77	17.08		
Potassium(mg/L)	2.38	7.88		
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	-	-

T. J. S. S. S.
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CMPDI, RI-VII, LAB
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Jasmit



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रिनि वल
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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-Aug-2025	14-Aug-2025	Acceptable	Permissible
Colour(Hazen)	1	2	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	2	2	1	5
pH	6.98	6.78	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	63.03	54.62	200	600
Chloride(mg/L)	17.48	13.60	250	1000
Sulphate(mg/L)	90.78	96.30	200	400
Nitrate(mg/L)	<0.5	<0.5	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	156.88	152.95	200	600
Calcium(mg/L)	40.87	37.72	75	200
Fluoride(mg/L)	0.64	0.48	1	1.5
Total Dissolve Solid(mg/L)	244	238	500	2000
Copper(mg/L)	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	0.22	0.17	0.1	0.3
Iron(mg/L)	<0.1	<0.1	1.0	No relaxation
Zinc(mg/L)	0.22	0.10	5	15
Lead(mg/L)	<0.005	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.005	<0.005	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	Acceptable	Permissible
Monitoring Station				
Date of Sampling	14-Aug-2025	14-Aug-2025	Acceptable	Permissible
Selenium(mg/L)	<0.005	<0.005	0.01	No relaxation
Sodium(mg/L)	8.30	8.34		
Potassium(mg/L)	7.50	7.29		
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	
	Deulbera Colliery Mine Discharge at Pit Top	Rani Park Submersible Pump	Deulbera Manager Office Tap Water		
Monitoring Station					
Date of Sampling	14-Aug-2025	14-Aug-2025	14-Aug-2025	Acceptable	Permissible
Colour(Hazen)	3	3	2	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	2	4	2	1	5
pH	6.66	6.78	7.68	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	134.46	184.88	54.62	200	600
Chloride(mg/L)	36.91	44.68	13.60	250	1000
Sulphate(mg/L)	106.42	70.26	58.8	200	400
Nitrate(mg/L)	8.01	15.6	1.54	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	243.16	215.71	105.89	200	600
Calcium(mg/L)	64.45	70.74	28.29	75	200
Fluoride(mg/L)	0.38	0.70	0.52	1	1.5
Total Dissolve Solid(mg/L)	364	378	178	500	2000
Copper(mg/L)	<0.03	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	0.06	<0.04	<0.04	0.1	0.3
Iron(mg/L)	<0.1	<0.1	<0.1	1.0	No relaxation
Zinc(mg/L)	0.06	0.34	0.25	5	15
Lead(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.005	<0.005	<0.005	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

Signature



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Drinking Water Quality Data Talcher Area

Project / OCP	Deulbera U/G			Indian Drinking Standards (IS-10500):2012	
	Deulbera Colliery Mine Discharge at Pit Top	Rani Park Submersible Pump	Deulbera Manager Office Tap Water		
Monitoring Station					
Date of Sampling	14-Aug-2025	14-Aug-2025	14-Aug-2025	Acceptable	Permissible
Selenium(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Sodium(mg/L)	6.18	6.41	9.88		
Potassium(mg/L)	2.37	9.67	5.15		
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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MINI RATING

Drinking Water Quality Data Talcher Area

Project / OCP	Handhidhua Colliery			Indian Drinking Standards (IS-10500):2012	
	Monitoring Station	19X Cut Road Bore Hole Point	Pit Top Water	RWSS (Pit Top Water)	Acceptable	Permissible
Date of Sampling	14-Aug-2025	14-Aug-2025	14-Aug-2025	5	15
Colour(Hazen)	3	3	4	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	2	4	3	1	5
pH	6.15	6.16	6.18	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	84.04	88.24	75.63	200	600
Chloride(mg/L)	36.91	34.97	31.08	250	1000
Sulphate(mg/L)	116.8	114.6	102.68	200	400
Nitrate(mg/L)	3.55	3.66	3.74	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	192.17	184.33	172.56	200	600
Calcium(mg/L)	47.16	44.01	42.44	75	200
Fluoride(mg/L)	0.72	0.76	0.64	1	1.5
Total Dissolve Solid(mg/L)	318	316	282	500	2000
Copper(mg/L)	<0.03	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	0.26	0.26	0.23	0.1	0.3
Iron(mg/L)	<0.1	<0.1	<0.1	1.0	No relaxation
Zinc(mg/L)	0.12	0.06	0.23	5	15
Lead(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.005	<0.005	<0.005	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	
	19X Cut Road Bore Hole Point	Pit Top Water	RWSS (Pit Top Water)	Acceptable	Permissible
Monitoring Station					
Date of Sampling	14-Aug-2025	14-Aug-2025	14-Aug-2025		
Selenium(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Sodium(mg/L)	8.16	8.2	6.10		
Potassium(mg/L)	7.23	5.60	2.87		
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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Effluent Quality (all Parameter): Talcher Area

Project (OCP / UG)	Talcher	MoEF-Sch-VI Standards
NAME OF THE STATION	Talcher Colliery Sedimentation Tank Discharge	
Date of Sampling	14-May-25	
Odour	Unobjectionable	-
Colour(Hazen)	6	-
Temperature(°C)	25.8	Shall not exceed 5 °C above the receiving temperature
pH	7.29	5.5-9.0
Total Hardness (asCaCO ₂),mg/L	235.06	-
Total Dissolved Solids, mg/L	380	-
Nitrate Nitrogen(mg/L)(As N)	<0.5	10
Ammonical Nitrogen , mg/l (As N)	0.32	50
Total Kjeldhal Nitrogen, mg/l (As N)	2.21	100
Sulphide (mg/L)	<0.1	2
BOD [3 days at 27°C] (mg/L)	<2	30
Fluoride(mg/L)	0.84	2
Copper(mg/L)	<0.03	3
Manganese(mg/L)	0.25	2
Iron(mg/L)	<0.1	3
Zinc(mg/L)	<0.04	5
Lead, mg/l	<0.005	0.1
Cadmium, mg/l	<0.001	2
Total Chromium(mg/L)	<0.01	2
Hexavalent Chromium(mg/L)	<0.05	0.1
Nickel(mg/L)	<0.02	3
Arsenic, mg/l	<0.005	0.2
Selenium (mg/L)	<0.005	0.05
Dissolved Phosphate(mg/L)	<4	5
Phenolics (mg/L)	<0.001	1

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Effluent Quality (all Parameter): Talcher Area

Project (OCP / UG)	Nandira	MoEF-Sch-VI Standards
NAME OF THE STATION	Nandira Colliery Sedimentation Tank Discharge	
Date of Sampling	14-May-25	
Odour	Unobjectionable	-
Colour(Hazen)	5	-
Temperature(°C)	25.6	Shall not exceed 5 °C above the receiving temperature
pH	7.92	5.5-9.0
Total Hardness (asCaCO ₃),mg/L	183.26	-
Total Dissolved Solids, mg/L	248	-
Nitrate Nitrogen(mg/L)(As N)	<0.5	10
Ammonical Nitrogen , mg/l (As N)	0.39	50
Total Kjeldhal Nitrogen, mg/l (As N)	3.32	100
Sulphide (mg/L)	<0.1	2
BOD [3 days at 27°C] (mg/L)	<2	30
Fluoride(mg/L)	0.67	2
Copper(mg/L)	<0.03	3
Manganese(mg/L)	0.64	2
Iron(mg/L)	0.16	3
Zinc(mg/L)	<0.04	5
Lead, mg/l	<0.005	0.1
Cadmium, mg/l	<0.001	2
Total Chromium(mg/L)	<0.01	2
Hexavalent Chromium(mg/L)	<0.05	0.1
Nickel(mg/L)	<0.1	3
Arsenic, mg/l	<0.005	0.2
Selenium (mg/L)	<0.005	0.05
Dissolved Phosphate(mg/L)	<4.0	5
Phenolics (mg/L)	<0.001	1

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Samal



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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)	MTP 10 (Inside the premises of Danara high school) (Reported)	Acceptable	Permissible
Date of Sampling	05-May-25	03-May-25	5	15
Colour(Hazen)	1	1	Agreeable	Agreeable
Odour	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	1	5
Turbidity(NTU)	1	1	6.5-8.5	No relaxation
pH	6.09	6.47	200	600
Total Alkalinity(mg/L)	19.79	19.79	250	1000
Chloride(mg/L)	15.66	41.10	200	400
Sulphate(mg/L)	20.91	15.19	45	No relaxation
Nitrate(mg/L)	<0.50	10.89	200	600
Total Hardness (Ca CO ₃)(mg/L)	39.79	75.60	75	200
Calcium(mg/L)	6.39	17.57	1	1.5
Fluoride(mg/L)	0.45	0.62	500	2000
Total Dissolve Solid(mg/L)	80	138	0.05	1.5
Copper(mg/L)	<0.03	<0.03	0.1	0.3
Manganese(mg/L)	0.12	<0.04	1.0	No relaxation
Iron(mg/L)	<0.1	<0.1	5	15
Zinc(mg/L)	<0.04	0.07	0.01	No relaxation
Lead(mg/L)	<0.005	<0.005	0.003	No relaxation
Cadmium(mg/L)	<0.001	<0.001	0.05	No relaxation
Total Chromium (mg/L)	<0.01	<0.01	0.01	No relaxation
Arsenic(mg/L)	<0.005	<0.005	0.01	No relaxation
Selenium (mg/L)	<0.005	<0.005	0.5	2.4
Boron(mg/L)	<0.2	<0.2	-	-
Sodium mg/L	8.03	9.23	-	-
Potassium mg/L	0.6	3.77	0.001	0.002
Phenolics (mg/L)	<0.001	<0.001	0.2	1
Residual Free Chlorine (mg/L)	<0.2	<0.2	-	-
MPN (Index/100ml)	Not Detected	Not Detected	-	-

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Piezometer Water Quality Data: Talcher Area

Project / OCP Monitoring Station	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	03-May-25	03-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	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
Selenium (mg/L)	<0.005	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	<0.2	0.5	2.4
Sodium mg/L	17.78	6.59	-	-
Potassium mg/L	0.65	1.36	-	-
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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Piezometer Water Quality Data: Talcher Area

Project / OCP Monitoring Station	Handhidhua Colliery		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	03-May-25	03-May-25	5	15
Colour(Hazen)	3	1	Agreeable	Agreeable
Odour	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	1	5
Turbidity(NTU)	3	1	6.5-8.5	No relaxation
pH	8.03	7.23	200	600
Total Alkalinity(mg/L)	336.43	74.21	250	1000
Chloride(mg/L)	91.98	5.87	200	400
Sulphate(mg/L)	68.19	12.73	45	No relaxation
Nitrate(mg/L)	2.08	<0.50	200	600
Total Hardness (Ca CO ₃)(mg/L)	370.03	55.70	75	200
Calcium(mg/L)	91.03	12.78	1	1.5
Fluoride(mg/L)	0.39	0.66	500	2000
Total Dissolve Solid(mg/L)	601	108	0.05	1.5
Copper(mg/L)	<0.03	<0.03	0.1	0.3
Manganese(mg/L)	<0.04	<0.04	1.0	No relaxation
Iron(mg/L)	<0.1	<0.1	5	15
Zinc(mg/L)	<0.04	<0.04	0.01	No relaxation
Lead(mg/L)	<0.005	<0.005	0.003	No relaxation
Cadmium(mg/L)	<0.001	<0.001	0.05	No relaxation
Total Chromium (mg/L)	<0.01	<0.01	0.01	No relaxation
Arsenic(mg/L)	<0.005	<0.005	0.01	No relaxation
Selenium (mg/L)	<0.005	<0.005	0.5	2.4
Boron(mg/L)	<0.2	<0.2	-	-
Sodium mg/L	17.78	6.59	-	-
Potassium mg/L	0.65	1.36	-	-
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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Talcher Air Stations

Talcher Air monitoring stations

Rodhasar

Near canteen, TC

GM office, TA

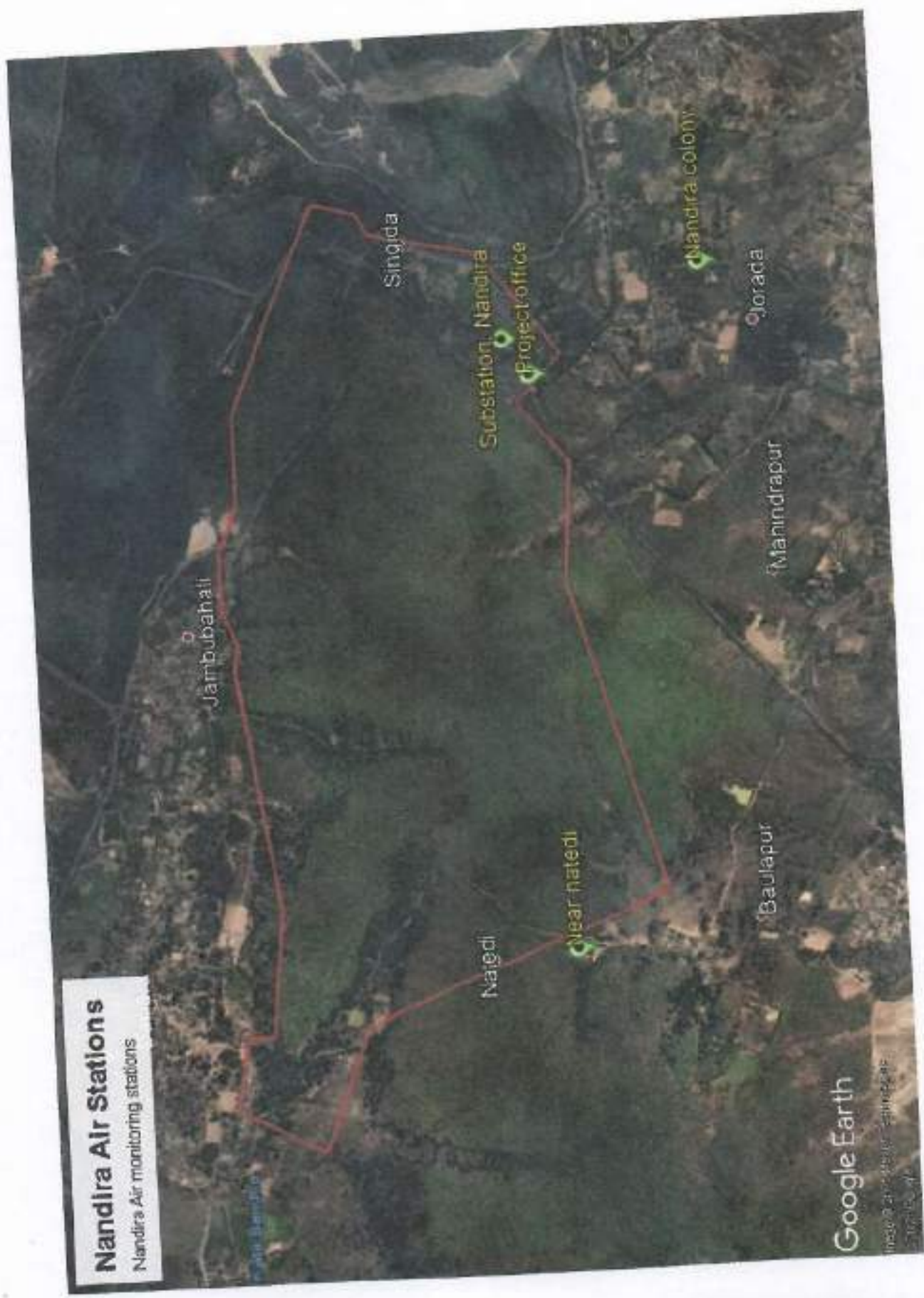
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Deulbera Air Stations

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Mandapal sand mine Air Stations

Mandapal sand mine Air monitoring stations



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**Well Water Quality Report
Of
Talcher Coal Field
For
May-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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Well Water Quality Data: Jagannath Area

Project / OCP	Jagannath OCP			Indian Drinking Standards (IS-10500):2012	
	Dasanal	Maniabeda	Achalapur	Acceptable	Permissible
Monitoring Station					
Date of Sampling	28.05.2025	28.05.2025	28.05.2025	5	15
Colour (Hazen)	3	4	1		
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity (NTU)	2	4	3	1	5
pH	7.61	7.52	7.26	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	439.12	178.90	138.24	200	600
Chloride(mg/L)	29.35	140.9	133.07	250	1000
Sulphate(mg/L)	10.22	126.64	31.28	200	400
Nitrate(mg/L)	<0.5	16.28	<0.5	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	282.15	405.34	194.72	200	600
Calcium(mg/L)	44.52	147.87	57.24	75	200
Fluoride(mg/L)	0.52	0.42	0.83	1	1.5
Total Dissolve Solid(mg/L)	448	625	396	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)	0.14	0.70	0.21	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
Selenium(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
Phenolics(mg/L)	<0.001	<0.001	<0.001	0.001	0.002
Sodium (mg/l)	9.56	13.21	26.32	.....	.....
Potassium (mg/l)	6.3	6.39	10.23	.....	.....
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	-	-

T. K. Mohapatra
Authorised Signatory
CMPDI, RI-VII, LAB
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J. K. Mohapatra



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Well Water Quality Data: Jagannath Area

Project / OCP	Jagannath OCP			Indian Drinking Standards (IS-10500):2012	
	Gotamara	Balaramprasad	Kararhapalli	Acceptable	Permissible
Monitoring Station					
Date of Sampling	28.05.2025	28.05.20225	28.05.2025		
Colour (Hazen)	4	3	2	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity (NTU)	4	2	1	1	5
pH	7.52	8.15	7.21	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	317.14	182.97	40.66	200	600
Chloride(mg/L)	74.36	19.57	11.74	250	1000
Sulphate(mg/L)	48.56	94.97	5.26	200	400
Nitrate(mg/L)	12.36	<0.5	<0.5	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	321.89	202.67	35.76	200	600
Calcium(mg/L)	65.19	47.70	6.36	75	200
Fluoride(mg/L)	0.84	1.01	<0.3	1	1.5
Total Dissolve Solid(mg/L)	504	352	68	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)	0.21	0.17	0.97	5	15
Lead(mg/L)	0.006	<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
Selenium(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
Phenolics(mg/L)	<0.001	<0.001	<0.001	0.001	0.002
Sodium (mg/l)	12.55	16.23	3.22	.....	.....
Potassium (mg/l)	7.11	10.77	1.55	.....	.....
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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Well Water Quality Data: Jagannath Area

Project / OCP	Jagannath OCP			Indian Drinking Standards (IS-10500):2012	
	Monitoring Station	Ghantaparha	Kendupalli	Kashipur	Acceptable	Permissible
Date of Sampling	28.05.2025	28.05.2025	28.05.2025	5	15
Colour(Hazen)	3	2	2	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	1	1	2	1	5
pH	7.16	7.64	7.36	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	16.26	52.85	60.99	200	600
Chloride(mg/L)	27.39	35.22	17.61	250	1000
Sulphate(mg/L)	28.71	29.66	45.06	200	400
Nitrate(mg/L)	11.51	21.5	1.10	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	47.68	107.29	91.4	200	600
Calcium(mg/L)	12.72	30.21	28.62	75	200
Fluoride(mg/L)	<0.3	<0.3	<0.3	1	1.5
Total Dissolve Solid(mg/L)	138	196	166	500	2000
Copper(mg/L)	0.03	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	0.14	<0.04	<0.04	0.1	0.3
Iron(mg/L)	<0.1	<0.1	<0.1	1.0	No relaxation
Zinc(mg/L)	0.42	0.70	0.22	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	0.011	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Selenium(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
Phenolics(mg/L)	<0.001	<0.001	<0.001	0.001	0.002
Sodium (mg/l)	14.55	9.66	7.5	.....	.....
Potassium (mg/l)	13.09	8.81	4.21	.....	.....
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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Well Water Quality Data: Jagannath Area

Project / OCP	Ananta OCP			Indian Drinking Standards (IS-10500):2012	
	✓Akadal	Kandhabarani	Joragadia	Acceptable	Permissible
Date of Sampling	29.05.2025	29.05.2025	29.05.2025		
Colour (Hazen)	1	3	3	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity (NTU)	4	1	3	1	5
pH	7.56	7.21	7.62	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	386.27	77.25	264.29	200	600
Chloride(mg/L)	70.45	45.01	123.29	250	1000
Sulphate(mg/L)	60.24	23.21	18.26	200	400
Nitrate(mg/L)	8.57	8.55	9.64	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	365.60	111.27	286.12	200	600
Calcium(mg/L)	66.78	23.85	74.73	75	200
Fluoride(mg/L)	0.83	<0.3	0.36	1	1.5
Total Dissolve Solid(mg/L)	567	216	476	500	2000
Copper(mg/L)	<0.03	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	0.33	<0.04	0.1	0.3
Iron(mg/L)	<0.1	<0.1	<0.1	1.0	No relaxation
Zinc(mg/L)	0.12	0.52	0.18	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
Selenium(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
Phenolics(mg/L)	<0.001	<0.001	<0.001	0.001	0.002
Sodium (mg/l)	10.12	13.24	13.65	.....	.....
Potassium (mg/l)	5.36	6.68	8.09	.....	.....
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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Well Water Quality Data: Jagannath Area

Project / OCP	Ananta OCP			Indian Drinking Standards (IS-10500):2012	
	Brajanathpur	Gurujanga	Basulei	Acceptable	Permissible
Date of Sampling	29.05.2025	29.05.2025	29.05.2025	5	15
Colour (Hazen)	2	2	3	5	15
Odour	Agreeable	Agreeable	Agrecable	Agreeable	Agreeable
Taste	Agrecable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity (NTU)	2	2	4	1	5
pH	7.12	7.16	7.56	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	138.24	166.70	187.03	200	600
Chloride(mg/L)	35.22	43.05	191.78	250	1000
Sulphate(mg/L)	23.21	36.54	40.12	200	400
Nitrate(mg/L)	5.54	11.26	<0.5	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	123.19	178.83	425.21	200	600
Calcium(mg/L)	25.44	49.29	131.97	75	200
Fluoride(mg/L)	0.53	0.53	0.73	1	1.5
Total Dissolve Solid(mg/L)	242	306	578	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)	0.22	0.10	0.30	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
Selenium(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
Phenolics(mg/L)	<0.001	<0.001	<0.001	0.001	0.002
Sodium (mg/l)	16.54	10.21	13.24	.....	.....
Potassium (mg/l)	10.55	6.31	6.77	.....	.....
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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Well Water Quality Data: Jagannath Area

Project / OCP	Ananta OCP			Indian Drinking Standards (IS-10500):2012	
	Kulei	Sunakhani	Manikamara / Zandabahal		
Monitoring Station					
Date of Sampling	29.05.2025	29.05.2025	29.05.2025	Acceptable	Permissible
Colour (Hazen)	3	2	1	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity (NTU)	4	2	1	1	5
pH	7.86	7.21	7.18	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	365.94	126.04	65.05	200	600
Chloride(mg/L)	60.66	41.09	41.09	250	1000
Sulphate(mg/L)	18.24	12.36	8.65	200	400
Nitrate(mg/L)	21.64	12.46	3.21	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	262.28	111.27	95.37	200	600
Calcium(mg/L)	47.70	25.44	20.67	75	200
Fluoride(mg/L)	0.72	0.41	<0.3	1	1.5
Total Dissolve Solid(mg/L)	480	212	155	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)	0.55	0.29	0.16	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
Selenium(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
Phenolics(mg/L)	<0.001	<0.001	<0.001	0.001	0.002
Sodium (mg/l)	13.55	6.32	7.51	.....	.....
Potassium (mg/l)	10.23	3.54	4.1	.....	.....
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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Well Water Quality Data: Bharatpur Area

Project / OCP	Bharatpur OCP			Indian Drinking Standards (IS-10500):2012	
	Nuaparha	Sakasingha	Natedi	Acceptable	Permissible
Monitoring Station					
Date of Sampling	30.05.2025	30.05.2025	30.05.2025		
Colour(Hazen)	3	2	2	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	2	3	1	1	5
pH	6.96	7.21	7.34	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	170.77	170.77	77.25	200	600
Chloride(mg/L)	113.5	29.35	21.52	250	1000
Sulphate(mg/L)	26.54	25.27	12.36	200	400
Nitrate(mg/L)	<0.5	10.22	2.12	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	214.59	151.01	63.58	200	600
Calcium(mg/L)	54.06	47.70	7.95	75	200
Fluoride(mg/L)	0.84	<0.3	<0.3	1	1.5
Total Dissolve Solid(mg/L)	386	288	136	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)	0.94	0.07	<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
Selenium(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
Phenolics(mg/L)	<0.001	<0.001	<0.001	0.001	0.002
Sodium (mg/l)	20.18	9.44	6.48	.....	.....
Potassium (mg/l)	6.33	5.28	3.12	.....	.....
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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Well Water Quality Data: Bharatpur Area

Project / OCP Monitoring Station	Bharatpur OCP			Indian Drinking Standards (IS-10500):2012	
	Natada	Kalamachhuin	Kuio	Acceptable	Permissible
Date of Sampling	30.05.2025	30.05.2025	30.05.2025	5	15
Colour (Hazen)	2	3	3	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity (NTU)	3	3	4	1	5
pH	7.26	7.72	7.16	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	317.14	170.77	195.16	200	600
Chloride(mg/L)	50.88	140.9	146.77	250	1000
Sulphate(mg/L)	35.12	112.24	96.42	200	400
Nitrate(mg/L)	2.12	26.68	19.86	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	298.05	393.42	313.94	200	600
Calcium(mg/L)	54.06	141.51	90.63	75	200
Fluoride(mg/L)	0.51	0.51	0.53	1	1.5
Total Dissolve Solid(mg/L)	428	627	599	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)	0.05	0.84	0.47	5	15
Lead(mg/L)	0.007	0.01	0.01	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
Selenium(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
Phenolics(mg/L)	<0.001	<0.001	<0.001	0.001	0.002
Sodium (mg/l)	6.04	18.56	33.12	.....	.....
Potassium (mg/l)	3.08	10.55	7.78	.....	.....
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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Well Water Quality Data: Bharatpur Area

Project / OCP Monitoring Station	Bharatpur OCP			Indian Drinking Standards (IS-10500):2012	
	Danara	Teleipasi	Lakeriashi / Nakeipasi	Acceptable	Permissible
Date of Sampling	30.05.2025	30.05.2025	30.05.2025	5	15
Colour (Hazen)	1	2	2	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity (NTU)	2	3	3	1	5
pH	7.43	7.52	7.81	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	77.25	219.56	276.48	200	600
Chloride(mg/L)	21.52	46.96	56.75	250	1000
Sulphate(mg/L)	29.36	16.48	14.21	200	400
Nitrate(mg/L)	<0.5	4.26	<0.5	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	79.48	166.9	194.72	200	600
Calcium(mg/L)	25.44	41.34	41.34	75	200
Fluoride(mg/L)	<0.3	0.53	0.61	1	1.5
Total Dissolve Solid(mg/L)	158	320	358	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	0.16	1.31	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
Selenium(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
Phenolics(mg/L)	<0.001	<0.001	<0.001	0.001	0.002
Sodium (mg/l)	11.08	16.02	11.23	.....	.....
Potassium (mg/l)	3.09	7.02	3.21	.....	.....
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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Well Water Quality Data: Bharatpur Area

Project / OCP	Bharatpur OCP		Indian Drinking Standards (IS-10500):2012	
	Jodunathpur	Turanga	Acceptable	Permissible
Monitoring Station				
Date of Sampling	30.05.2025	30.05.2025		
Colour (Hazen)	3	2	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity (NTU)	2	3	1	5
pH	7.46	7.60	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	386.27	430.99	200	600
Chloride(mg/L)	50.88	62.62	250	1000
Sulphate(mg/L)	16.84	92.86	200	400
Nitrate(mg/L)	<0.5	14.84	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	278.18	421.24	200	600
Calcium(mg/L)	81.09	81.09	75	200
Fluoride(mg/L)	0.53	0.81	1	1.5
Total Dissolve Solid(mg/L)	470	662	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)	0.05	<0.04	5	15
Lead(mg/L)	0.007	0.012	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
Selenium(mg/L)	<0.005	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	<0.2	0.5	2.4
Phenolics(mg/L)	<0.001	<0.001	0.001	0.002
Sodium (mg/l)	15.23	16.56	.....	.....
Potassium (mg/l)	6.31	5.21	.....	.....
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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Jasvati



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Well Water Quality Data: Kaniha Area

Project / OCP	Kaniha OCP			Indian Drinking Standards (IS-10500):2012	
	Kamarei	Jarada	Patharamunda	Acceptable	Permissible
Monitoring Station					
Date of Sampling	26.05.2025	26.05.2025	26.05.2025	5	15
Colour (Hazen)	2	2	2		
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity (NTU)	2	3	4	1	5
pH	7.42	8.26	7.32	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	296.81	154.50	260.22	200	600
Chloride(mg/L)	58.71	62.62	297.46	250	1000
Sulphate(mg/L)	19.31	78.64	65.47	200	400
Nitrate(mg/L)	<0.5	9.3	32.64	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	270.23	254.33	480.85	200	600
Calcium(mg/L)	46.11	55.65	131.97	75	200
Fluoride(mg/L)	0.53	0.53	0.37	1	1.5
Total Dissolve Solid(mg/L)	387	379	836	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)	0.06	0.07	<0.04	5	15
Lead(mg/L)	0.007	0.01	0.01	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
Selenium(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
Phenolics(mg/L)	<0.001	<0.001	<0.001	0.001	0.002
Sodium (mg/l)	6.38	9.87	31.12	.....	.....
Potassium (mg/l)	0.88	1.56	12.47	.....	.....
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	-	-

Authorised Laboratory
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Well Water Quality Data: Kaniha Area

Project / OCP Monitoring Station	Kaniha OCP			Indian Drinking Standards (IS-10500):2012	
	Dereng	Takua	Deonali	Acceptable	Permissible
Date of Sampling	26.05.2025	26.05.2025	26.05.2025	5	15
Colour (Hazen)	3	2	3	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity (NTU)	2	2	2	1	5
pH	7.7	8.24	7.32	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	117.91	182.97	60.99	200	600
Chloride(mg/L)	27.39	21.52	27.39	250	1000
Sulphate(mg/L)	22.12	10.34	100.55	200	400
Nitrate(mg/L)	<0.5	<0.5	2.57	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	83.45	127.16	151.01	200	600
Calcium(mg/L)	19.08	38.16	34.98	75	200
Fluoride(mg/L)	0.71	0.78	0.51	1	1.5
Total Dissolve Solid(mg/L)	180	212	264	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)	0.01	0.01	0.01	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
Selenium(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
Phenolics(mg/L)	<0.001	<0.001	<0.001	0.001	0.002
Sodium (mg/l)	11.25	8.97	12.68	.....	.....
Potassium (mg/l)	3.74	0.88	4.21	.....	.....
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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Well Water Quality Data: Kaniha Area

Project / OCP Monitoring Station	Kaniha OCP			Indian Drinking Standards (IS-10500):2012	
	Ambapala	Durgapur	Bilinda	Acceptable	Permissible
Date of Sampling	26.05.2025	26.05.2025	26.05.2025	5	15
Colour (Hazen)	2	4	2	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity (NTU)	3	3	3	1	5
pH	8.24	7.62	7.64	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	93.51	243.96	264.29	200	600
Chloride(mg/L)	66.53	174.17	54.79	250	1000
Sulphate(mg/L)	82.82	78.24	26.32	200	400
Nitrate(mg/L)	<0.5	16.82	<0.5	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	222.54	361.63	139.09	200	600
Calcium(mg/L)	31.8	117.7	34.98	75	200
Fluoride(mg/L)	<0.3	0.53	0.51	1	1.5
Total Dissolve Solid(mg/L)	316	640	364	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	0.33	0.17	5	15
Lead(mg/L)	0.006	0.01	<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
Selenium(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
Phenolics(mg/L)	<0.001	<0.001	<0.001	0.001	0.002
Sodium (mg/l)	8.07	20.46	26.55	.....	.....
Potassium (mg/l)	2.58	6.11	8.76	.....	.....
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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Well Water Quality Data: Kaniha Area

Project / OCP Monitoring Station	Kaniha OCP Brahmanabil	Kaniha OCP Barhaberena	Indian Drinking Standards (IS-10500):2012	
			Acceptable	Permissible
Date of Sampling	26.05.2025	26.05.2025	5	15
Colour (Hazen)	3	2	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity (NTU)	2	2	1	5
pH	7.36	7.22	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	195.16	292.75	200	600
Chloride(mg/L)	164.38	45.01	250	1000
Sulphate(mg/L)	35.47	29.44	200	400
Nitrate(mg/L)	<0.5	1.56	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	357.66	238.44	200	600
Calcium(mg/L)	124.02	74.73	75	200
Fluoride(mg/L)	0.53	0.66	1	1.5
Total Dissolve Solid(mg/L)	524	396	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	0.09	5	15
Lead(mg/L)	0.007	0.007	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
Selenium(mg/L)	<0.005	<0.005	0.01	No relaxation
Boron(mg/L)	<0.02	<0.2	0.5	2.4
Phenolics(mg/L)	<0.001	<0.001	0.001	0.002
Sodium (mg/l)	12.45	11.47	.....	.....
Potassium (mg/l)	3.77	3.47	.....	.....
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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Well Water Quality Data: Lingaraj Area

Project / OCP	Lingaraj OCP			Indian Drinking Standards (IS-10500):2012	
	Kanibal/kandhala	Deulbera	Simlipal	Acceptable	Permissible
Monitoring Station					
Date of Sampling	28.05.2025	28.05.2025	28.05.2025	5	15
Colour (Hazen)	2	3	2	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity (NTU)	2	2	3	1	5
pH	7.86	7.21	7.96	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	117.91	113.84	313.08	200	600
Chloride(mg/L)	19.57	17.61	60.66	250	1000
Sulphate(mg/L)	8.12	28.63	8.64	200	400
Nitrate(mg/L)	<0.5	<0.5	2.68	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	91.4	79.48	254.33	200	600
Calcium(mg/L)	25.44	31.80	47.70	75	200
Fluoride(mg/L)	0.84	0.53	0.91	1	1.5
Total Dissolve Solid(mg/L)	168	190	399	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)	0.54	<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
Selenium(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
Phenolics(mg/L)	<0.001	<0.001	<0.001	0.001	0.002
Sodium (mg/l)	6.21	10.36	10.21	.....	.....
Potassium (mg/l)	2.14	3.78	2.36	.....	.....
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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Well Water Quality Data: Lingaraj Area

Project / OCP	Lingaraj OCP			Indian Drinking Standards (IS-10500):2012	
	Santhaparha	Sarang	Nuataela		
Monitoring Station				Acceptable	Permissible
Date of Sampling	28.05.2025	28.05.2025	28.05.2025	5	15
Colour (Hazen)	2	3	1	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity (NTU)	2	2	1	1	5
pH	7.12	7.26	7.14	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	73.18	223.63	81.32	200	600
Chloride(mg/L)	56.75	41.09	15.65	250	1000
Sulphate(mg/L)	36.54	21.14	4.12	200	400
Nitrate(mg/L)	6.58	12.86	<0.5	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	158.96	206.64	51.66	200	600
Calcium(mg/L)	42.93	65.19	11.13	75	200
Fluoride(mg/L)	0.51	0.31	0.33	1	1.5
Total Dissolve Solid(mg/L)	216	329	116	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)	0.45	0.12	0.33	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
Selenium(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
Phenolics(mg/L)	<0.001	<0.001	<0.001	0.001	0.002
Sodium (mg/l)	6.21	4.67	6.01	.....	.....
Potassium (mg/l)	1.56	1.66	2.11	.....	.....
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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Well Water Quality Data: Lingaraj Area

Project / OCP	Lingaraj OCP			Indian Drinking Standards (IS-10500):2012	
	Talcher	Khalpal	Khairmunda	Acceptable	Permissible
Monitoring Station					
Date of Sampling	28.05.2025	28.05.2025	28.05.2025	5	15
Colour (Hazen)	2	2	3	Agreeable	Agreeable
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity (NTU)	3	2	2	1	5
pH	7.42	7.26	7.68	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	309.01	170.77	304.95	200	600
Chloride(mg/L)	37.18	68.49	48.92	250	1000
Sulphate(mg/L)	58.68	46.32	23.11	200	400
Nitrate(mg/L)	<0.5	14.68	<0.5	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	298.05	254.33	246.38	200	600
Calcium(mg/L)	73.14	71.55	44.52	75	200
Fluoride(mg/L)	0.53	0.31	0.86	1	1.5
Total Dissolve Solid(mg/L)	446	379	399	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	0.41	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
Selenium(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
Phenolics(mg/L)	<0.001	<0.001	<0.001	0.001	0.002
Sodium (mg/l)	4.26	10.08	8.65	.....	.....
Potassium (mg/l)	0.99	1.88	2.01	.....	.....
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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Well Water Quality Data: Hingula Area

Project / OCP	Hingula OCP			Indian Drinking Standards (IS-10500):2012	
	Malibandha	Pirakhaman	Kumunda	Acceptable	Permissible
Monitoring Station					
Date of Sampling	27.05.2025	27.05.2025	27.05.2025	5	15
Colour (Hazen)	2	2	2	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity (NTU)	1	1	2	1	5
pH	7.42	7.7	7.86	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	105.71	142.31	77.25	200	600
Chloride(mg/L)	45.01	31.31	60.66	250	1000
Sulphate(mg/L)	36.82	28.4	78.64	200	400
Nitrate(mg/L)	6.82	<0.5	16.84	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	151.01	87.42	186.77	200	600
Calcium(mg/L)	47.70	17.49	52.47	75	200
Fluoride(mg/L)	0.51	0.73	<0.3	1	1.5
Total Dissolve Solid(mg/L)	238	220	311	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)	0.11	0.15	0.33	5	15
Lead(mg/L)	<0.005	<0.005	0.006	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
Selenium(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
Phenolics(mg/L)	<0.001	<0.001	<0.001	0.001	0.002
Sodium (mg/l)	12.58	16.22	6.21	.....	.....
Potassium (mg/l)	4.21	5.74	1.58	.....	.....
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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Well Water Quality Data: Hingula Area

Project / OCP	Hingula OCP			Indian Drinking Standards (IS-10500):2012	
	Jamujarhi	Jalatap	Kosala	Acceptable	Permissible
Monitoring Station					
Date of Sampling	27.05.2025	27.05.2025	27.05.2025	Acceptable	Permissible
Colour (Hazen)	4	2	3	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity (NTU)	3	2	2	1	5
pH	7.68	7.21	7.96	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	386.27	256.15	195.16	200	600
Chloride(mg/L)	31.31	88.06	54.79	250	1000
Sulphate(mg/L)	21.1	32.08	14.62	200	400
Nitrate(mg/L)	<0.5	<0.5	<0.5	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	186.77	186.77	135.11	200	600
Calcium(mg/L)	41.34	44.52	62.01	75	200
Fluoride(mg/L)	0.51	0.31	0.38	1	1.5
Total Dissolve Solid(mg/L)	407	412	303	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	0.49	0.51	5	15
Lead(mg/L)	<0.005	<0.005	0.01	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
Selenium(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
Phenolics(mg/L)	<0.001	<0.001	<0.001	0.001	0.002
Sodium (mg/l)	19.24	26.17	14.66	.....	.....
Potassium (mg/l)	5.44	9.45	10.21	.....	.....
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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Well Water Quality Data: Hingula Area

Project / OCP	Balaram OCP			Indian Drinking Standards (IS-10500):2012	
	Udkapa	Dudhiabera	Berhasar	Acceptable	Permissible
Monitoring Station					
Date of Sampling	28.05.2025	28.05.2025	28.05.2025	5	15
Colour (Hazen)	2	3	2	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity (NTU)	2	3	2	1	5
pH	7.82	7.75	8.1	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	174.83	166.70	199.23	200	600
Chloride(mg/L)	33.26	95.89	46.96	250	1000
Sulphate(mg/L)	32.40	45.77	14.26	200	400
Nitrate(mg/L)	<0.5	23.03	1.21	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	111.27	202.67	147.03	200	600
Calcium(mg/L)	19.08	52.47	31.80	75	200
Fluoride(mg/L)	0.58	0.79	0.51	1	1.5
Total Dissolve Solid(mg/L)	276	416	288	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)	0.48	0.26	0.44	5	15
Lead(mg/L)	<0.005	<0.005	0.01	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
Selenium(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
Phenolics(mg/L)	<0.001	<0.001	<0.001	0.001	0.002
Sodium (mg/l)	23.12	22.07	12.01	.....	.....
Potassium (mg/l)	13.08	9.04	5.01	.....	.....
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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Well water quality Data:Hingula Area

Project / OCP	Balaram OCP		Indian Drinking Standards (IS-10500):2012	
	Dabomila	Durgapur Tangrisahi	Acceptable	Permissible
Monitoring Station				
Date of Sampling	28.05.2025	28.05.2025	5	15
Colour(Hazen)	3	4	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	2	3	1	5
pH	7.36	8.21	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	211.43	370.00	200	600
Chloride(mg/L)	29.35	138.94	250	1000
Sulphate(mg/L)	122.5	67.48	200	400
Nitrate(mg/L)	2.57	2.51	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	190.75	337.79	200	600
Calcium(mg/L)	33.39	28.62	75	200
Fluoride(mg/L)	0.55	1.05	1	1.5
Total Dissolve Solid(mg/L)	415	649	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)	0.22	0.11	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
Selenium(mg/L)	<0.005	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	<0.2	0.5	2.4
Phenolics(mg/L)	<0.001	<0.001	0.001	0.002
Sodium(mg/L)	7.67	15.24		
Potassium(mg/L)	6.98	7.40		
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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Well Water Quality Data: Hingula Area

Project / OCP	Balaram OCP			Indian Drinking Standards (IS-10500):2012	
	Bhubanpur	Kusumpal /Bhalugaria	Nuapada	Acceptable	Permissible
Monitoring Station					
Date of Sampling	28.05.2025	28.05.2025	28.05.2025		
Colour (Hazen)	4	2	2	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity (NTU)	2	1	2	1	5
pH	8.10	7.12	7.36	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	361.87	32.52	126.04	200	600
Chloride(mg/L)	25.44	15.65	76.32	250	1000
Sulphate(mg/L)	23.80	4.21	52.58	200	400
Nitrate(mg/L)	12.54	<0.5	<0.5	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	202.67	35.76	218.57	200	600
Calcium(mg/L)	44.52	7.95	65.19	75	200
Fluoride(mg/L)	1.25	0.52	0.31	1	1.5
Total Dissolve Solid(mg/L)	426	67	335	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)	0.22	0.14	0.19	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
Selenium(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
Phenolics(mg/L)	<0.001	<0.2	<0.001	0.001	0.002
Sodium (mg/l)	22.01	4.2	9.21	.....	.....
Potassium (mg/l)	7.23	2.3	4.01	.....	.....
Residual Free Chlorine(mg/L)	<0.2	<0.001	<0.2	0.2	1.0
MPN (Index/100 ml)	Not Detected	Not Detected	Not Detected	-	-

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Well Water Quality Data: Hingula Area

Project / OCP	Hingula OCP				Indian Drinking Standards (IS-10500):2012	
	Chakradharpur	Kuskila	Korala	Laksmi Malibrahmin	Acceptable	Permissible
Monitoring Station						
Date of Sampling	27.05.2025	27.05.2025	27.05.2025	27.05.2025		
Colour (Hazen)	5	2	2	2	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity (NTU)	3	2	3	3	1	5
pH	7.90	8.26	8.21	8.25	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	304.95	182.97	158.57	166.70	200	600
Chloride(mg/L)	50.88	21.52	76.32	86.1	250	1000
Sulphate(mg/L)	19.51	13.21	62.33	66.31	200	400
Nitrate(mg/L)	<0.5	<0.5	10.23	1.12	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	174.85	135.11	210.62	242.41	200	600
Calcium(mg/L)	65.19	41.34	57.24	63.60	75	200
Fluoride(mg/L)	0.58	0.76	0.43	0.51	1	1.5
Total Dissolve Solid(mg/L)	398	231	379	416	500	2000
Copper(mg/L)	<0.03	<0.03	<0.03	<0.03	0.05	1.5
Manganesec(mg/L)	<0.04	<0.04	<0.04	<0.04	0.1	0.3
Iron(mg/L)	<0.1	<0.1	<0.1	<0.1	1.0	No relaxation
Zinc(mg/L)	0.37	0.41	0.05	0.06	5	15
Lead(mg/L)	<0.005	<0.005	0.01	0.01	0.01	No relaxation
Cadmium(mg/L)	<0.001	<0.001	<0.001	<0.001	0.003	No relaxation
Total Chromium (mg/L)	<0.01	<0.01	<0.01	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	<0.005	<0.005	<0.005	0.01	No relaxation
Selenium(mg/L)	<0.005	<0.005	<0.005	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	<0.2	<0.2	<0.2	0.5	2.4
Phenolics(mg/L)	<0.001	<0.001	<0.001	<0.001	0.001	0.002
Sodium (mg/l)	19.21	8.45	11.05	22.12	.....	.....
Potassium (mg/l)	9.45	1.88	8.56	8.64	.....	.....
Residual Free Chlorine(mg/L)	<0.2	<0.2	<0.2	<0.2	0.2	1.0
MPN (Index/100 ml)	Not Detected	Not Detected	Not Detected	Not Detected	-	-

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Well Water Quality Data: Hingula Area

Project / OCP	Hingula OCP			Indian Drinking Standards (IS-10500):2012	
	Barnahara	Dhobapala	Harichandanapur	Acceptable	Permissible
Monitoring Station					
Date of Sampling	27.05.2025	27.05.2025	27.05.2025		
Colour (Hazen)	4	3	3	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity (NTU)	3	2	2	1	5
pH	7.58	7.24	7.01	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	292.75	296.81	60.99	200	600
Chloride(mg/L)	131.11	41.09	62.62	250	1000
Sulphate(mg/L)	60.22	10.16	35.22	200	400
Nitrate(mg/L)	<0.5	<0.5	19.62	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	282.15	162.93	166.9	200	600
Calcium(mg/L)	71.55	41.34	34.98	75	200
Fluoride(mg/L)	0.62	0.53	0.31	1	1.5
Total Dissolve Solid(mg/L)	554	338	245	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)	1.15	<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
Selenium(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
Phenolics(mg/L)	<0.001	<0.001	<0.001	0.001	0.002
Sodium (mg/l)	24.21	12.54	9.45	.....	.....
Potassium (mg/l)	8.09	4.63	3.04	.....	.....
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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