

**Environmental Monitoring Report
Of
Basundhara Area
For
April-2025**

Ib Valley Coalfield



Mahanadi Coalfields Limited



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

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

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सीएमपीडी आई
CMPDI
भुवनेश्वर

Test Report

AMBIENT AIR QUALITY DATA

Area :

Basundhara

(Compliance Station)

Project :

Kulda OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source	Distance from DGS
15-Apr-25	Laikera Railway Siding	240	133	55	12.99	38.68		
15-Apr-25	Kulda PO Office	215	109	47	11.69	21.51		
30-Apr-25	Laikera Railway Siding	219	93	48	16.93	28.99		
30-Apr-25	Kulda PO Office	196	85	44	12.65	34.27		

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

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MoEF Standards Notification dated 25th
September, 2009

500	250		120	120
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AMBIENT AIR QUALITY DATA

Area : **Basundhara**

(Compliance Station)

Project : **Garjanbahal OCP**

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source	Distance from DGS
15-Apr-25	Karlikachar Village	221	118	49	17.61	34.61	External Coal Transportation Road	About 500m
15-Apr-25	KAN-1 Near Coal Sampling Lab	236	132	53	15.02	32.96	Railway Siding, Transportation	About 500m
15-Apr-25	Garjanbahal Village	238	126	54	18.65	31.21	External Coal Transportation Road	About 500m
30-Apr-25	Karlikachar Village	210	91	43	16.98	27.83	External Coal Transportation Road	About 500m
30-Apr-25	KAN-1 Near Coal Sampling Lab	221	95	47	14.78	21.96	Railway Siding, Transportation	About 500m
30-Apr-25	Garjanbahal Village	220	104	48	11.94	38.64	External Coal Transportation Road	About 500m

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Authorised Signatory
 CMPDI, RI-VII, LAB
 BHUBANESWAR

MoEF Standards Notification dated 25th September, 2000	600	250		120	120
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AMBIENT AIR QUALITY DATA

Area :

Basundhara

(Reference Station)

Project :

Garjanbahal OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
03-Apr-25	West of working face, Bihaimunda	168	68	33	19.64	36.33	South-West of Working Face	About 500m
03-Apr-25	South-East of Working Face, Kutabaga Village	156	83	41	13.87	23.62	South-East of Working Face	About 1000m
04-Apr-25	South-East of Working Face, Kutabaga Village	166	67	33	12.53	30.01	South-East of Working Face	About 1000m
04-Apr-25	West of working face, Bihaimunda	172	75	37	11.44	31.11	South-West of Working Face	About 500m
09-Apr-25	West of working face, Bihaimunda	189	83	41	14.98	23.23	South-West of Working Face	About 500m
09-Apr-25	South-East of Working Face, Kutabaga Village	174	71	35	12.93	39.71	South-East of Working Face	About 1000m
10-Apr-25	South-East of Working Face, Kutabaga Village	163	64	30	14.94	27.20	South-East of Working Face	About 1000m
10-Apr-25	West of working face, Bihaimunda	165	68	31	15.08	25.80	South-West of Working Face	About 500m
18-Apr-25	West of working face, Bihaimunda	178	69	36	9.71	20.71	South-West of Working Face	About 500m
18-Apr-25	South-East of Working Face, Kutabaga Village	196	83	40	13.07	23.06	South-East of Working Face	About 1000m
19-Apr-25	South-East of Working Face, Kutabaga Village	185	79	38	12.26	28.03	South-East of Working Face	About 1000m
19-Apr-25	West of working face, Bihaimunda	186	75	39	9.63	25.82	South-West of Working Face	About 500m
25-Apr-25	South-East of Working Face, Kutabaga Village	162	65	31	9.16	24.90	South-East of Working Face	About 1000m
25-Apr-25	West of working face, Bihaimunda	154	56	29	14.17	30.55	South-West of Working Face	About 500m
26-Apr-25	West of working face, Bihaimunda	167	65	34	13.69	20.50	South-West of Working Face	About 500m
26-Apr-25	South-East of Working Face, Kutabaga Village	174	73	35	16.05	20.73	South-East of Working Face	About 1000m

T. H. L.
Authorised Signatory
CMPDI, P-I, VII, LAB
BHUBANESWAR

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*N/A (Q8, 2009)		100	60	80	80
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AMBIENT AIR QUALITY DATA

Area : **Basundhara**

(Reference Station)

Project : **Kulda OCP**

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
03-Apr-25	North of CHP, Teleimal	165	64	30	11.09	18.82	Domestic, OCP, Transportation	About 500m
03-Apr-25	Bilaimunda Village	195	80	46	16.68	35.66	Village Road	About 500m
03-Apr-25	South West of Working Face, Chakarpur	191	73	34	22.59	41.75	Village Road	About 500m
03-Apr-25	External CT Road, Barpali	165	62	29	9.65	39.99	Mining Activities, Coal Transportation	About 500m
04-Apr-25	South West of Working Face, Chakarpur	182	81	40	17.65	32.02	Village Road	About 500m
04-Apr-25	North of CHP, Teleimal	184	74	38	17.09	20.36	Domestic, OCP, Transportation	About 500m
04-Apr-25	External CT Road, Barpali	205	73	44	16.65	40.53	Mining Activities, Coal Transportation	About 500m
04-Apr-25	Bilaimunda Village	175	62	33	14.14	39.08	Village Road	About 500m
09-Apr-25	External CT Road, Barpali	196	73	40	17.89	37.70	Mining Activities, Coal Transportation	About 500m
09-Apr-25	South West of Working Face, Chakarpur	155	70	36	13.18	25.12	Village Road	About 500m
09-Apr-25	North of CHP, Teleimal	175	68	33	8.91	33.80	Domestic, OCP, Transportation	About 500m
09-Apr-25	Bilaimunda Village	182	77	39	14.74	37.66	Village Road	About 500m
10-Apr-25	South West of Working Face, Chakarpur	148	79	39	17.05	27.42	Village Road	About 500m
10-Apr-25	North of CHP, Teleimal	168	60	29	9.94	33.47	Domestic, OCP, Transportation	About 500m
10-Apr-25	Bilaimunda Village	171	72	35	18.07	26.85	Village Road	About 500m
10-Apr-25	External CT Road, Barpali	177	70	38	16.39	30.62	Mining Activities, Coal Transportation	About 500m
18-Apr-25	North of CHP, Teleimal	177	76	34	9.51	21.68	Domestic, OCP, Transportation	About 500m
18-Apr-25	South West of Working Face, Chakarpur	185	79	38	14.18	23.50	Village Road	About 500m
18-Apr-25	Bilaimunda Village	182	73	40	18.83	26.41	Village Road	About 500m
18-Apr-25	External CT Road, Barpali	181	62	34	19.71	24.07	Mining Activities, Coal Transportation	About 500m
19-Apr-25	South West of Working Face, Chakarpur	174	73	35	16.20	27.71	Village Road	About 500m
19-Apr-25	North of CHP, Teleimal	172	73	33	18.81	22.98	Domestic, OCP, Transportation	About 500m

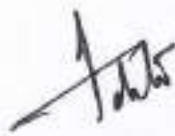
*NAAQS, 2009		100	80	80	80
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Authorized Signatory
CMPDI, RI-VII, LAB
BHUBANESWAR

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
19-Apr-25	External CT Road, Barpali	170	58	32	9.13	28.02	Mining Activities, Coal Transportation	About 500m
19-Apr-25	Bilaimunda Village	173	69	38	17.84	27.64	Village Road	About 500m
25-Apr-25	External CT Road, Barpali	168	60	33	13.54	38.40	Mining Activities, Coal Transportation	About 500m
25-Apr-25	North of CHP, Teleimal	161	69	31	11.06	33.08	Domestic, OCP, Transportation	About 500m
25-Apr-25	Bilaimunda Village	150	60	33	15.22	31.46	Village Road	About 500m
25-Apr-25	South West of Working Face, Chakarpur	182	77	37	13.36	23.58	Village Road	About 500m
26-Apr-25	South West of Working Face, Chakarpur	167	69	33	14.41	28.82	Village Road	About 500m
26-Apr-25	Bilaimunda Village	173	69	38	17.20	26.14	Village Road	About 500m
26-Apr-25	North of CHP, Teleimal	150	62	28	15.64	26.79	Domestic, OCP, Transportation	About 500m
26-Apr-25	External CT Road, Barpali	175	69	35	13.90	26.83	Mining Activities, Coal Transportation	About 500m



T. H. S.
Authorised Signatory
CMPDI, RI-VII, LAB
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*NAAQS, 2009		100	60	80	80
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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Basundhara

Project	Kulda OCP							
Monitoring Station	North of CHP, Teleimal							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (a) Pyrene	Benzene
	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	(ng/m^3)	(ng/m^3)	(mg/m^3)	(ng/m^3)	($\mu\text{g}/\text{m}^3$)
03-Apr-2025	<20.0	26.68	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
04-Apr-2025	<20.0	16.45	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
09-Apr-2025	<20.0	15.2	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
10-Apr-2025	<20.0	18.32	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
18-Apr-2025	<20.0	13.97	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
19-Apr-2025	<20.0	14.58	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
25-Apr-2025	<20.0	13.03	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
26-Apr-2025	<20.0	19.23	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
Standard	400 24hours)	180 (hour)	1.0 (24hours)	6.0 (Annual)	20 (Annual)	02 (8 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Basundhara

Project	Kulda OCP							
Monitoring Station	South West of Working Face, Chakarpur							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (a) Pyrene	Benzene
	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	(ng/m^3)	(ng/m^3)	(mg/m^3)	(ng/m^3)	($\mu\text{g}/\text{m}^3$)
03-Apr-2025	<20.0	23.9	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
04-Apr-2025	<20.0	26.07	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
09-Apr-2025	<20.0	18.32	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
10-Apr-2025	<20.0	16.45	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
18-Apr-2025	<20.0	20.78	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
19-Apr-2025	<20.0	12.72	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
25-Apr-2025	<20.0	13.65	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
26-Apr-2025	<20.0	16.13	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
Standard	400 (24hours)	180 (hour)	1.0 (24hours)	6.0 (Annual)	20 (Annual)	02 (8 hours)	01(annual)	05(annual)

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Authorized Signatory
CMPDI, FI-VII, LAB
MUMBAI



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निर्भी एन
cmpdi
Mini Ratna

AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Basundhara

Project	Kulda OCP							
Monitoring Station	Bilaimunda Village							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (a) Pyrene	Benzene
	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	(ng/m^3)	(ng/m^3)	(mg/m^3)	(ng/m^3)	($\mu\text{g}/\text{m}^3$)
03-Apr-2025	<20.0	25.45	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
04-Apr-2025	<20.0	23.9	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
09-Apr-2025	<20.0	26.38	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
10-Apr-2025	<20.0	12.72	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
18-Apr-2025	<20.0	14.81	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
19-Apr-2025	<20.0	24.52	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
25-Apr-2025	<20.0	13.35	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
26-Apr-2025	<20.0	23.9	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
Standard	400 (24hours)	180 (hour)	1.0 (24hours)	6.0 (Annual)	20(Annual)	02 (8 hours)	01(annual)	05(annual)

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Authorised Signatory
CMPDI, Pl. VII, LA-4
MUMBAI



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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Basundhara

Project	Garjanbahal OCP							
Monitoring Station	South-East of Working Face, Kutabaga							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) Pyrene	Benzene
	(μg/m ³)	(μg/m ³)	(μg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(μg/m ³)
03-Apr-2025	<20.0	25.13	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
04-Apr-2025	<20.0	15.52	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
09-Apr-2025	<20.0	22.97	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
10-Apr-2025	<20.0	17.07	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
18-Apr-2025	<20.0	14.9	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
19-Apr-2025	<20.0	21.1	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
25-Apr-2025	<20.0	20.48	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
26-Apr-2025	<20.0	18.93	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
Standard	400(24hours)	180(hour)	1.0(24hours)	6.0(Annual)	20(Annual)	02 (8 hours)	01(annual)	05(annual)

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Authorised Signatory
CMPDI, RI-VII, LAE
MNSWAR



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Mini Ratna

AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Basundhara

Project	Garjanbahal OCP							
Monitoring Station	Bihaimunda Village							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (a) Pyrene	Benzene
	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	(ng/m^3)	(ng/m^3)	(mg/m^3)	(ng/m^3)	($\mu\text{g}/\text{m}^3$)
03-Apr-2025	<20.0	16.45	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
04-Apr-2025	<20.0	13.65	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
09-Apr-2025	<20.0	17.68	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
10-Apr-2025	<20.0	27	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
18-Apr-2025	<20.0	22.03	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
19-Apr-2025	<20.0	25.13	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
25-Apr-2025	<20.0	19.87	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
26-Apr-2025	<20.0	26.07	<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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MUMBAI-BANESWAR

NOISE LEVEL MONITORING DATA

AREA :

Basundhara

PROJECT :

Garjanbahal OCP

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
05-Apr-25	Karlikachar Village	58.8	51.4
05-Apr-25	Garjanbahal Village	62.7	59.2
19-Apr-25	Garjanbahal Village	52.9	43.9
19-Apr-25	Karlikachar Village	58.7	44.6

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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NOISE LEVEL MONITORING DATA

AREA :

Basundhara

PROJECT :

Kulda OCP

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
05-Apr-25	South West of Working Face Chakarpur	53.1	43.6
05-Apr-25	Laikera Railway Siding	60.7	58.3
05-Apr-25	Kulda PO Office	68.4	65.8
19-Apr-25	South West of Working Face Chakarpur	54.6	44.2
19-Apr-25	Laikera Railway Siding	60.4	54.8
19-Apr-25	Kulda PO Office	66.2	64.1

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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Authorised Signatory
CMPDI, Pt-VII, LAB
BRUBAKESWAR



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TABLE--

EFFLUENT QUALITY DATA

Area :

Basundhara

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

Project :

Garjanbahal OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	TDS	DO	Remarks
11-Apr-25	Outlet of Settling Tank (Kanika Siding)	7.99	<4.0	28	24	-	-	-	
11-Apr-25	Inlet of Settling Tank (Kanika Siding)	7.46	5.0	47	100	-	-	-	
11-Apr-25	Mine Sump Water	8.24	<4.0	19	12	-	-	-	
24-Apr-25	Outlet of Settling Tank (Kanika Siding)	8.24	<4.0	34	28	-	-	-	
24-Apr-25	Inlet of Settling Tank (Kanika Siding)	7.53	<4.0	63	52	-	-	-	
24-Apr-25	Mine Sump Water	8.16	<4.0	26	16	-	-	-	

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

5.5-9.0	10	100	250	30
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TABLE--

EFFLUENT QUALITY DATA

Area :

Busundhara

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

Project :

Kulda OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	TDS	DO	Remarks
11-Apr-25	Final Outlet Of ETP	8.56	<4.0	28	32	-	-	-	
11-Apr-25	Mine Sump Water Near Kulda Nursery	8.56	<4.0	19	16	-	-	-	
11-Apr-25	Inlet of ETP	8.51	6.8	71	52	-	-	-	
24-Apr-25	Final Outlet Of ETP	8.12	<4.0	28	28	-	-	-	
24-Apr-25	Inlet of ETP	7.76	<4.0	43	48	-	-	-	

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Signature

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

Ib Valley Coalfield



Mahanadi Coalfields Limited



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

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

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


AMBIENT AIR QUALITY DATA
Area : Ib Valley

(Compliance Station)
Project :
Lajkura OCP
(conc. in $\mu\text{g}/\text{cu.m.}$)

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source	Distance from DGS
05-Apr-25	Near South Coal Stock	249	139	58	13.94	37.64	Mining Activities, Coal Transportation	About 500m
05-Apr-25	Near Project Office	243	134	56	17.47	40.78	Domestic, OCP, Transportation	About 500m
23-Apr-25	Near South Coal Stock	234	95	50	12.72	23.20	Mining Activities, Coal Transportation	About 500m
23-Apr-25	Near Project Office	201	83	41	14.49	26.30	Domestic, OCP, Transportation	About 500m


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 BHUBANESWAR


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 MoEF Standards Notification dated 25th
 September, 2009

500	250		120	120
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AMBIENT AIR QUALITY DATA

Area : **Ib Valley**

(Compliance Station)

Project :

Samleswari OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source	Distance from DGS
05-Apr-25	West of the Mine	245	134	58	22.37	24.43	Distance From 'y' Curve Railway Siding	About 450m
05-Apr-25	South of the Mine	128	128	52	13.89	29.57	Mine Haul Roads	About 400m
05-Apr-25	East of the Mine	222	108	49	20.33	41.25	Coal Transportation Road	About 500m
23-Apr-25	West of the Mine	218	94	49	13.28	20.08	Distance From 'y' Curve Railway Siding	About 450m
23-Apr-25	South of the Mine	212	94	45	14.96	32.77	Mine Haul Roads	About 400m
23-Apr-25	East of the Mine	224	92	45	19.71	28.53	Coal Transportation Road	About 500m

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

<i>Date of Sampling</i>	<i>Monitoring Station</i>	<i>SPM</i>	<i>PM10</i>	<i>PM2.5</i>	<i>SO2</i>	<i>NOx</i>	<i>Dust Generating Source(DGS)</i>	<i>Distance from DGS</i>
25-Apr-25	VIP Guest House IB Valley	181	76	37	11.86	36.39	Coal Stock Yard, Surface Bunker, Coal	About 800m
26-Apr-25	VIP Guest House IB Valley	175	71	34	11.05	33.00	Coal Stock Yard, Surface Bunker, Coal	About 800m
28-Apr-25	Chuakani	215	75	39	15.01	37.58	Transportation	About 300m
28-Apr-25	Khokelmal	142	55	29	12.99	33.16	Railway siding	About 1000m
29-Apr-25	Chuakani	138	48	25	13.05	31.46	Transportation	About 300m
29-Apr-25	Khokelmal	157	60	32	17.47	40.78	Railway siding	About 1000m



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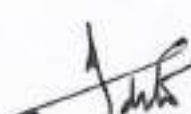
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AMBIENT AIR QUALITY DATA

Area : **Ib Valley** (Reference Station)

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
01-Apr-25	Khokelmal (Reported only)	179	70	38	10.44	26.85	Railway siding	About 1000m
02-Apr-25	Khokelmal (Reported only)	174	68	35	13.89	29.89	Railway siding	About 1000m
03-Apr-25	Kudaloi Village	166	59	28	12.47	18.82		
04-Apr-25	Kudaloi Village	187	72	39	14.78	21.96		
07-Apr-25	Khokelmal (Reported only)	182	74	40	12.37	41.32	Railway siding	About 1000m
08-Apr-25	Khokelmal (Reported only)	191	76	42	11.32	35.55	Railway siding	About 1000m
09-Apr-25	Kudaloi Village	169	68	35	16.98	27.82		
10-Apr-25	Kudaloi Village	164	63	30	10.59	32.93		
16-Apr-25	Khokelmal (Reported only)	196	75	40	13.44	39.28	Railway siding	About 1000m
17-Apr-25	Khokelmal (Reported only)	171	66	35	11.00	33.88	Railway siding	About 1000m
18-Apr-25	Kudaloi Village	186	76	34	13.94	37.64		
19-Apr-25	Kudaloi Village	185	84	38	11.09	18.82		
21-Apr-25	Khokelmal (Reported only)	147	57	30	12.73	38.58	Railway siding	About 1000m
22-Apr-25	Khokelmal (Reported only)	161	62	33	10.75	24.47	Railway siding	About 1000m
25-Apr-25	Kudaloi Village	163	66	30	11.11	30.91		
26-Apr-25	Kudaloi Village	153	62	28	14.70	21.23		
28-Apr-25	Khokelmal (Reported only)	142	55	29	12.99	33.16	Railway siding	About 1000m
29-Apr-25	Khokelmal (Reported only)	157	60	32	17.47	40.78	Railway siding	About 1000m



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AMBIENT AIR QUALITY DATA

Area : **Ib Valley**

(Reference Station)

Project :

Lajkura OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
01-Apr-25	Khokelmal	179	70	38	10.44	26.85	Railway siding	About 1000m
01-Apr-25	Chuakani	173	74	36	11.31	28.40	Transportation	About 300m
02-Apr-25	Chuakani	166	63	29	10.00	19.18	Transportation	About 300m
02-Apr-25	Khokelmal	174	68	35	13.89	29.89	Railway siding	About 1000m
03-Apr-25	VIP Guest House IB Valley	178	74	36	15.33	27.04	Coal Stock Yard, Surface Bunker, Coal	About 800m
04-Apr-25	VIP Guest House IB Valley	196	85	43	9.51	28.76	Coal Stock Yard, Surface Bunker, Coal	About 800m
07-Apr-25	Chuakani	170	78	37	15.77	26.98	Transportation	About 300m
07-Apr-25	Khokelmal	182	74	40	12.37	41.32	Railway siding	About 1000m
08-Apr-25	Chuakani	187	74	41	17.07	26.94	Transportation	About 300m
08-Apr-25	Khokelmal	191	76	42	11.32	35.55	Railway siding	About 1000m
09-Apr-25	VIP Guest House IB Valley	184	70	33	15.87	33.29	Coal Stock Yard, Surface Bunker, Coal	About 800m
10-Apr-25	VIP Guest House IB Valley	166	63	30	14.23	28.70	Coal Stock Yard, Surface Bunker, Coal	About 800m
16-Apr-25	Chuakani	163	58	30	14.42	33.93	Transportation	About 300m
16-Apr-25	Khokelmal	196	75	40	13.44	39.28	Railway siding	About 1000m
17-Apr-25	Chuakani	156	55	28	19.38	30.68	Transportation	About 300m
17-Apr-25	Khokelmal	171	66	35	11.00	33.88	Railway siding	About 1000m
18-Apr-25	VIP Guest House IB Valley	154	62	29	11.82	27.27	Coal Stock Yard, Surface Bunker, Coal	About 800m
19-Apr-25	VIP Guest House IB Valley	170	71	34	18.63	31.27	Coal Stock Yard, Surface Bunker, Coal	About 800m
21-Apr-25	Khokelmal	147	57	30	12.73	38.58	Railway siding	About 1000m
21-Apr-25	Chuakani	171	60	31	16.87	35.72	Transportation	About 300m
22-Apr-25	Chuakani	204	71	37	10.52	32.90	Transportation	About 300m
22-Apr-25	Khokelmal	161	62	33	10.75	24.47	Railway siding	About 1000m

*N44QS,2009

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: IB Valley

Project	Samaleswari OCP							
Monitoring Station	Khokelmal (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-Apr-2025	<20.0	19.23	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
02-Apr-2025	<20.0	17.38	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
07-Apr-2025	<20.0	13.65	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
08-Apr-2025	<20.0	19.87	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
16-Apr-2025	<20.0	23.9	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
17-Apr-2025	<20.0	12.72	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
21-Apr-2025	<20.0	25.75	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
22-Apr-2025	<20.0	26.68	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
28-Apr-2025	<20.0	25.75	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
29-Apr-2025	<20.0	14.58	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
Standard	400 (24 hours)	180 (1 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: IB Valley

Project	Lajkura OCP							
Monitoring Station	Khokelmal							
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-Apr-2025	<20.0	19.23	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
02-Apr-2025	<20.0	17.38	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
07-Apr-2025	<20.0	13.65	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
08-Apr-2025	<20.0	19.87	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
16-Apr-2025	<20.0	23.9	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
17-Apr-2025	<20.0	12.72	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
21-Apr-2025	<20.0	25.75	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
22-Apr-2025	<20.0	26.68	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
28-Apr-2025	<20.0	25.75	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
29-Apr-2025	<20.0	14.58	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
Standard	400 (24hours)	180 (1 hour)	1.0 (24hours)	6.0 (Annual)	20 (Annual)	02 (8 hours)	01(annual)	05(annual)

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Pratik
Authorised Signatory
CMPDI, P.VII, LAB
BHUPENSWAR



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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: IB Valley

Project	Samleswari OCP							
Monitoring Station	Rampur Sub Area (Reported Only)							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) Pyrene	Benzene
	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	(ng/m^3)	(ng/m^3)	(mg/m^3)	(ng/m^3)	($\mu\text{g}/\text{m}^3$)
01-Apr-2025	<20.0	23.58	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
02-Apr-2025	<20.0	17.68	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
07-Apr-2025	<20.0	23.27	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
08-Apr-2025	<20.0	19.23	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
16-Apr-2025	<20.0	27.32	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
17-Apr-2025	<20.0	13.03	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
21-Apr-2025	<20.0	17.07	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
22-Apr-2025	<20.0	18.62	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
28-Apr-2025	<20.0	21.42	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
29-Apr-2025	<20.0	26.68	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
Standard	400 (24hours)	180 (hour)	1.0 (24hours)	6.0 (Annual)	20 (Annual)	02 (8 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: IB Valley

Project	Lajkura OCP							
Monitoring Station	Chukani							
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-Apr-2025	<20.0	25.45	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
02-Apr-2025	<20.0	12.42	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
07-Apr-2025	<20.0	12.1	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
08-Apr-2025	<20.0	14.58	<0.1	<1.0	<1.0	1.5	BQL(QL=0.7)	BQL
16-Apr-2025	<20.0	22.35	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
17-Apr-2025	<20.0	15.52	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
21-Apr-2025	<20.0	14.27	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
22-Apr-2025	<20.0	26.38	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
28-Apr-2025	<20.0	18	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
29-Apr-2025	<20.0	12.42	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
Standard	400 (24hours)	180 (hour)	1.0 (24hours)	6.0 (Annual)	20 (Annual)	02 (8 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: IB Valley

Project	Lajkura OCP							
Monitoring Station	VIP Guest House, IB Valley							
Date of sampling	Ammonia (NH ₃)	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)
03-Apr-2025	<20.0	21.60	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
04-Apr-2025	<20.0	15.98	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
09-Apr-2025	<20.0	14.64	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
10-Apr-2025	<20.0	13.58	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
18-Apr-2025	<20.0	16.84	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
19-Apr-2025	<20.0	17.68	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
25-Apr-2025	<20.0	19.89	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
26-Apr-2025	<20.0	15.87	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
Standard	400 (24hours)	180 (hour)	1.0 (24hours)	6.0 Annual	20 (Annual)	02 (8 hours)	01(annual)	05(annual)

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Authorised Signatory
CMPDI, RI-VII, LAB
BHUBANESWAR



TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Ib Valley

PROJECT :

Lajkura OCP

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
03-Apr-25	Near South Coal Stock	65.9	63.8
03-Apr-25	Near Project Office	68.7	65.4
03-Apr-25	Khokelmal	50.2	38.7
03-Apr-25	Chuakani	49.6	37.6
03-Apr-25	VIP Guest House, IB Valley	53.6	46.7
17-Apr-25	Near Project Office	68.7	65.4
17-Apr-25	Near South Coal Stock	65.2	63.8
17-Apr-25	VIP Guest House, IB Valley	60.4	58.6
17-Apr-25	Chuakani	50.6	35.2
17-Apr-25	Khokelmal	49.2	38.6

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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Water & Air

TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Ib Valley

PROJECT :

Samleswari OCP

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
03-Apr-25	Kudaloi Village	53.6	46.3
03-Apr-25	East of the Mine	55.2	44.8
03-Apr-25	South of the Mine	63.5	59.3
03-Apr-25	West of the Mine	62.6	53.9
03-Apr-25	Rampur Sub Area	50.1	39.8
03-Apr-25	Khokelmal (Reported Only)	50.2	38.7
17-Apr-25	Kudaloi Village	52.1	43.7
17-Apr-25	South of the Mine	63.6	60.1
17-Apr-25	West of the Mine	62.4	57.8
17-Apr-25	Rampur Sub Area	48.8	37.6
17-Apr-25	East of the Mine	66.3	61.9
17-Apr-25	Khokelmal (Reported Only)	49.2	38.6

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 :

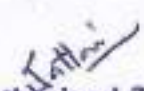
IB Valley

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

Project :

Lajkura OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	TDS	DO	Remarks
09-Apr-25	Mine Sump Water	3.41	<4.0	43	20	-	-	-	
09-Apr-25	Lajkura Railway Siding	8.18	<4.0	42	28	-	-	-	
25-Apr-25	Outlet of ETP	7.48	<4.0	26	24	-	-	-	
25-Apr-25	Lajkura Railway Siding	7.06	<4.0	73	84	-	-	-	
25-Apr-25	Inlet of ETP	7.41	<4.0	39	32	-	-	-	


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

5.5-9.0	10	100	250	30
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EFFLUENT QUALITY DATA

Area :

IB Valley

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

Project :

Samaleswari OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	TDS	DO	MPN/100mL
09-Apr-25	STP Inlet	8.01	-	33	-	<2	-	-	84
09-Apr-25	STP Outlet	8.10	-	22	-	<2	-	-	58
25-Apr-25	STP Inlet	7.35	-	44	-	<2	-	-	79
25-Apr-25	STP Outlet	7.47	-	27	-	<2	-	-	46

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

Area :

IB Valley

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

Project :

Samaleswari OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	TDS	DO	Remarks
09-Apr-25	Outlet of ETP	8.06	5.6	112	164	-	-	-	
09-Apr-25	Inlet of ETP	7.36	6.8	148	204	-	-	-	
09-Apr-25	Mine Sump Water	4.10	<4.0	43	20	-	-	-	

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

Project / OCP	Samaleswari OCP		Indian Drinking Standards (IS-10500):2012	
	Well Water From Kudopali	Tap Water From Samaleswari OCP Colony		
Monitoring Station				
Date of Sampling	9-Apr-2025	9-Apr-2025	Acceptable	Permissible
Colour(Hazen)	2	2	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	1	1	1	5
pH	7.22	8.0	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	84.04	130.26	200	600
Chloride(mg/L)	25.28	25.28	250	1000
Sulphate(mg/L)	30.26	3.77	200	400
Nitrate(mg/L)	2.43	<0.5	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	99.6	99.6	200	600
Calcium(mg/L)	25.55	27.15	75	200
Fluoride(mg/L)	<0.3	<0.3	1	1.5
Total Dissolve Solid(mg/L)	198	194	500	2000
Copper(mg/L)	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	0.07	<0.04	0.1	0.3
Iron(mg/L)	<0.1	<0.1	1	No relaxation
Zinc(mg/L)	<0.04	0.07	5	15
Lead(mg/L)	<0.005	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.001	<0.001	0.003	No relaxation
Total Chromium (mg/L)	<0.01	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	<0.2	0.5	2.4

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Drinking Water Quality Data IB Valley Area

Project / OCP	Samaleswari OCP		Indian Drinking Standards (IS-10500):2012	
	Well Water From Kudopali	Tap Water From Samaleswari OCP Colony		
Monitoring Station				
Date of Sampling	9-Apr-2025	9-Apr-2025	Acceptable	Permissible
Selenium(mg/L)	<0.005	<0.005	0.01	No relaxation
Phenolics(mg/L)	<0.001	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	<0.2	0.2	1
MPN (Index/100 ml)	Not Detected	Not Detected	-	-
Sodium(mg/L)	5.38	5.06		
Potassium(mg/L)	3.30	8.47		

Project / OCP	Samleswari OCP			Indian Drinking Standards (IS- 10500):2012	
	Inlet Water from IWSS, IB Valley Area	Outlet Water from IWSS, IB Valley Area	Well Water From Lajkura		
Monitoring Station					
Date of Sampling	9-Apr-2025	9-Apr-2025	9-Apr-2025	Acceptable	Permissible
Selenium(mg/L)	<0.2	<0.005	<0.005	0.01	No relaxation
Phenolics(mg/L)	<0.001	<0.001	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	<0.2	<0.2	0.2	1
MPN (Index/100 ml)	Not Detected	Not Detected	Not Detected	-	-
Sodium(mg/L)	2.62	2.15	7.91		
Potassium(mg/L)	1.08	1.01	17.36		

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Drinking Water Quality Data IB Valley Area

Project / OCP	Samleswari OCP			Indian Drinking Standards (IS-10500):2012	
	Monitoring Station	Inlet Water from IWSS, IB Valley Area	Outlet Water from IWSS, IB Valley Area		
Date of Sampling	9-Apr-2025	9-Apr-2025	9-Apr-2025	Acceptable	Permissible
Colour(Hazen)	2	2	4	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	2	1	3	1	5
pH	8.11	7.98	7.60	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	71.43	71.43	50.42	200	600
Chloride(mg/L)	9.72	11.67	50.57	250	1000
Sulphate(mg/L)	11.04	10.52	46.62	200	400
Nitrate(mg/L)	<0.5	<0.5	30.1	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	59.73	63.74	103.58	200	600
Calcium(mg/L)	17.57	19.16	36.73	75	200
Fluoride(mg/L)	0.40	0.37	0.49	1	1.5
Total Dissolve Solid(mg/L)	120	126	304	500	2000
Copper(mg/L)	<0.03	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	<0.04	<0.04	0.1	0.3
Iron(mg/L)	<0.1	<0.1	<0.1	1	No relaxation
Zinc(mg/L)	<0.04	<0.04	<0.04	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)	<0.005	<0.2	<0.2	0.5	2.4

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Drinking Water Quality Data IB Valley Area

Project / OCP	Lajkura OCP		Indian Drinking Standards (IS-10500):2012	
	Madhuban Nagar Well Water	Adarsh Nagar Colony Well Water		
Monitoring Station				
Date of Sampling	9-Apr-2025	9-Apr-2025	Acceptable	Permissible
Selenium(mg/L)	<0.005	<0.005	0.01	No relaxation
Phenolics(mg/L)	<0.001	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	<0.2	0.2	1
MPN (Index/100 ml)	Not Detected	Not Detected	-	-
Sodium(mg/L)	1.30	6.51	-	-
Potassium(mg/L)	0.41	6.72	-	-

Project / OCP	Lajkura OCP		Indian Drinking Standards (IS-10500):2012	
	Chhualiberna Village Well Water	VIP Guest House Tap Water		
Monitoring Station				
Date of Sampling	9-Apr-2025	9-Apr-2025	Acceptable	Permissible
Selenium(mg/L)	<0.005	<0.005	0.01	No relaxation
Phenolics(mg/L)	<0.001	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	<0.2	0.2	1
MPN (Index/100 ml)	Not Detected	Not Detected	-	-
Sodium(mg/L)	1.16	1.95	-	-
Potassium(mg/L)	0.34	5.49	-	-

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Drinking Water Quality Data IB Valley Area

Project / OCP	Lajkura OCP		Indian Drinking Standards (IS-10500):2012	
	Madhuban Nagar Well Water	Adarsh Nagar Colony Well Water		
Monitoring Station				
Date of Sampling	9-Apr-2025	9-Apr-2025	Acceptable	Permissible
Colour(Hazen)	3	2	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	2	1	1	5
pH	6.85	7.65	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	8.40	113.45	200	600
Chloride(mg/L)	19.45	46.68	250	1000
Sulphate(mg/L)	8.44	21.43	200	400
Nitrate(mg/L)	11.47	12.63	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	43.82	119.52	200	600
Calcium(mg/L)	9.58	38.33	75	200
Fluoride(mg/L)	0.74	0.54	1	1.5
Total Dissolve Solid(mg/L)	80	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	No relaxation
Zinc(mg/L)	0.10	<0.04	5	15
Lead(mg/L)	<0.005	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.001	<0.001	0.003	No relaxation
Total Chromium (mg/L)	<0.01	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	<0.2	0.5	2.4

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Drinking Water Quality Data IB Valley Area

Project / OCP	Lajkura OCP		Indian Drinking Standards (IS-10500):2012	
	Chhualibera Village Well Water	VIP Guest House Tap Water		
Monitoring Station				
Date of Sampling	9-Apr-2025	9-Apr-2025	Acceptable	Permissible
Colour(Hazen)	1	3	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	2	1	1	5
pH	6.78	7.80	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	8.40	79.84	200	600
Chloride(mg/L)	19.45	19.45	250	1000
Sulphate(mg/L)	<2	17.01	200	400
Nitrate(mg/L)	11.22	<0.5	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	31.87	87.65	200	600
Calcium(mg/L)	11.18	23.95	75	200
Fluoride(mg/L)	0.71	<0.3	1	1.5
Total Dissolve Solid(mg/L)	74	160	500	2000
Copper(mg/L)	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	0.07	<0.04	0.1	0.3
Iron(mg/L)	<0.1	<0.1	1	No relaxation
Zinc(mg/L)	0.10	<0.04	5	15
Lead(mg/L)	<0.005	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.001	<0.001	0.003	No relaxation
Total Chromium (mg/L)	<0.01	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	<0.2	0.5	2.4

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BHUBANESWAR

**Environmental Monitoring Report
Of
Lakhanpur Area
For
April-2025**

Ib Valley Coalfield



Mahanadi Coalfields Limited



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

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

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AMBIENT AIR QUALITY DATA

Area : **Lakhanpur**

(Compliance Station)


Project :

LBL OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source	Distance from DGS
11-Apr-25	West of Lakhanpur Quarry Near Solada	231	125	52	11.37	23.28	Mining Activities	About 500m
11-Apr-25	Kirulbal Village	207	115	48	12.10	24.20	Mining Activities	About 500m
11-Apr-25	BOCM Workshop	236	123	52	14.72	31.02	Mining Activities	About 500m
11-Apr-25	Lilari Magazine House	217	117	49	10.75	24.47	Coal Transportation	About 500m
23-Apr-25	Kirulbal Village	233	105	51	12.54	25.41	Mining Activities	About 500m
23-Apr-25	Lilari Magazine House	227	98	51	9.93	21.33	Coal Transportation	About 500m
24-Apr-25	West of Lakhanpur Quarry Near Solada	206	87	45	13.20	34.09	Mining Activities	About 500m
24-Apr-25	BOCM Workshop	218	96	46	12.13	22.19	Mining Activities	About 500m




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C.M.P.D.I.
भुवनेश्वर

Test Report

AMBIENT AIR QUALITY DATA

Area :

Lakhanpur

(Reference Station)

Project :

LBL 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-Apr-25	Ramada Village South of Mine	176	68	35	13.29	26.69	Domestic Anthropogenic Source	
01-Apr-25	Lakhanpur Police Station West of Mine	188	76	41	12.45	22.09	Mining Activities	About 1.6km
01-Apr-25	Ardhapara Village South East of Mine	175	68	36	12.22	27.73		
01-Apr-25	Barihapali Village South West of Mine	205	81	44	19.84	39.27	Domestic Anthropogenic Source	
01-Apr-25	Gumadera Village North of Mine	190	75	40	17.91	23.06	Domestic Source and Mining Activities	About 3km
01-Apr-25	Bartap Village North West of Mine	161	69	36	15.88	24.62	Domestic Anthropogenic Source	
01-Apr-25	Kadam Rehab Centre East of Mine	175	73	38	10.16	35.84	Mining Activities	About 2km
02-Apr-25	Kadam Rehab Centre East of Mine	162	58	26	16.94	34.49	Mining Activities	About 2km
02-Apr-25	Lakhanpur Police Station West of Mine	169	65	34	13.44	39.28	Mining Activities	About 1.6km
02-Apr-25	Gumadera Village North of Mine	169	63	30	9.13	32.99	Domestic Source and Mining Activities	About 3km
02-Apr-25	Bartap Village North West of Mine	164	62	30	17.34	25.50	Domestic Anthropogenic Source	
02-Apr-25	Ramada Village South of Mine	140	53	24	9.52	18.26	Domestic Anthropogenic Source	
02-Apr-25	Barihapali Village South West of Mine	178	66	34	15.55	36.30	Domestic Anthropogenic Source	
02-Apr-25	Ardhapara Village South East of Mine	159	63	31	16.63	35.39		
07-Apr-25	Kadam Rehab Centre East of Mine	168	64	31	19.65	42.16	Mining Activities	About 2km
07-Apr-25	Barihapali Village South West of Mine	169	60	31	16.33	41.83	Domestic Anthropogenic Source	
07-Apr-25	Gumadera Village North of Mine	174	71	37	14.65	32.99	Domestic Source and Mining Activities	About 3km
07-Apr-25	Lakhanpur Police Station West of Mine	184	73	39	11.00	33.88	Mining Activities	About 1.6km
07-Apr-25	Ramada Village South of Mine	160	60	28	16.00	33.06	Domestic Anthropogenic Source	
07-Apr-25	Ardhapara Village South East of Mine	192	74	40	16.63	26.67		
07-Apr-25	Bartap Village North West of Mine	173	64	34	12.68	32.33	Domestic Anthropogenic Source	
08-Apr-25	Lakhanpur Police Station West of Mine	194	79	42	12.73	38.58	Mining Activities	About 1.6km

*NAAQS, 2009		100	60	30	80
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Project :

LBL OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
08-Apr-25	Ramada Village South of Mine	175	68	34	14.84	23.20	Domestic Anthropogenic Source	
08-Apr-25	Kadam Rehab Centre East of Mine	170	69	34	20.41	31.61	Mining Activities	About 2km
08-Apr-25	Gumadera Village North of Mine	182	74	38	19.20	32.10	Domestic Source and Mining Activities	About 3km
08-Apr-25	Bartap Village North West of Mine	188	78	41	15.64	35.48	Domestic Anthropogenic Source	
08-Apr-25	Barihapali Village South West of Mine	163	57	28	20.26	38.36	Domestic Anthropogenic Source	
08-Apr-25	Ardhapara Village South East of Mine	197	75	42	21.19	43.14		
16-Apr-25	Gumadera Village North of Mine	182	66	37	21.24	27.17	Domestic Source and Mining Activities	About 3km
16-Apr-25	Barihapali Village South West of Mine	132	54	28	21.08	28.82	Domestic Anthropogenic Source	
16-Apr-25	Lakhanpur Police Station West of Mine	183	75	34	8.30	19.53	Mining Activities	About 1.6km
16-Apr-25	Bartap Village North West of Mine	149	60	33	20.72	25.86	Domestic Anthropogenic Source	
16-Apr-25	Ramada Village South of Mine	186	69	34	14.41	36.82	Domestic Anthropogenic Source	
16-Apr-25	Ardhapara Village South East of Mine	179	73	38	17.46	24.65		
16-Apr-25	Kadam Rehab Centre East of Mine	170	66	31	16.09	26.09	Mining Activities	About 2km
17-Apr-25	Ardhapara Village South East of Mine	136	55	30	13.21	36.25		
17-Apr-25	Kadam Rehab Centre East of Mine	160	62	29	13.89	29.89	Mining Activities	About 2km
17-Apr-25	Lakhanpur Police Station West of Mine	153	62	28	12.58	33.68	Mining Activities	About 1.6km
17-Apr-25	Ramada Village South of Mine	140	53	24	11.39	36.00	Domestic Anthropogenic Source	
17-Apr-25	Bartap Village North West of Mine	118	49	24	18.85	30.77	Domestic Anthropogenic Source	
17-Apr-25	Barihapali Village South West of Mine	164	65	36	18.28	35.74	Domestic Anthropogenic Source	
17-Apr-25	Gumadera Village North of Mine	148	53	27	15.02	23.64	Domestic Source and Mining Activities	About 3km
21-Apr-25	Bartap Village North West of Mine	159	64	35	16.77	38.56	Domestic Anthropogenic Source	
21-Apr-25	Kadam Rehab Centre East of Mine	192	74	35	12.37	41.22	Mining Activities	About 2km
21-Apr-25	Ardhapara Village South East of Mine	159	64	35	16.86	28.72		
21-Apr-25	Barihapali Village South West of Mine	155	62	34	18.77	36.51	Domestic Anthropogenic Source	
21-Apr-25	Lakhanpur Police Station West of Mine	166	67	30	17.24	24.02	Mining Activities	About 1.6km

*N.A.Q.S. 2009

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Project :

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(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-Apr-25	Ramada Village South of Mine	169	69	33	12.45	26.19	Domestic Anthropogenic Source	
21-Apr-25	Gumadera Village North of Mine	171	63	35	17.10	31.95	Domestic Source and Mining Activities	About 3km
22-Apr-25	Lakhanpur Police Station West of Mine	178	75	36	19.12	32.84	Mining Activities	About 1.6km
22-Apr-25	Kadam Rehab Centre East of Mine	171	68	32	11.32	35.55	Mining Activities	About 2km
22-Apr-25	Bartap Village North West of Mine	134	54	30	11.89	33.56	Domestic Anthropogenic Source	
22-Apr-25	Gumadera Village North of Mine	152	54	28	19.36	33.30	Domestic Source and Mining Activities	About 3km
22-Apr-25	Barihapali Village South West of Mine	137	55	30	19.27	30.60	Domestic Anthropogenic Source	
22-Apr-25	Ramada Village South of Mine	182	77	37	18.28	34.16	Domestic Anthropogenic Source	
22-Apr-25	Ardhapara Village South East of Mine	155	62	34	16.30	38.34		
28-Apr-25	Ramada Village South of Mine	179	75	36	17.05	27.58	Domestic Anthropogenic Source	
28-Apr-25	Lakhanpur Police Station West of Mine	165	68	31	17.16	26.07	Mining Activities	About 1.6km
28-Apr-25	Kadam Rehab Centre East of Mine	165	64	30	12.10	24.20	Mining Activities	About 2km
28-Apr-25	Gumadera Village North of Mine	183	75	39	17.27	28.86	Domestic Source and Mining Activities	About 3km
28-Apr-25	Bartap Village North West of Mine	155	62	34	8.59	19.48	Domestic Anthropogenic Source	
28-Apr-25	Barihapali Village South West of Mine	141	56	31	11.28	24.04	Domestic Anthropogenic Source	
28-Apr-25	Ardhapara Village South East of Mine	150	60	33	11.61	29.88		
29-Apr-25	Kadam Rehab Centre East of Mine	154	60	28	12.47	18.82	Mining Activities	About 2km
29-Apr-25	Ardhapara Village South East of Mine	123	50	26	18.29	22.59		
29-Apr-25	Bartap Village North West of Mine	139	57	29	9.00	24.20	Domestic Anthropogenic Source	
29-Apr-25	Lakhanpur Police Station West of Mine	147	56	25	14.48	28.75	Mining Activities	About 1.6km
29-Apr-25	Barihapali Village South West of Mine	123	49	27	11.17	33.12	Domestic Anthropogenic Source	
29-Apr-25	Ramada Village South of Mine	157	63	30	19.51	39.07	Domestic Anthropogenic Source	
29-Apr-25	Gumadera Village North of Mine	152	58	28	16.11	22.57	Domestic Source and Mining Activities	About 3km

*NAQS, 2009		100	60	80	80
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 सीएमपीडीआई मिनी रान cmpdi <small>Mini Rano</small>	AMBIENT AIR QUALITY DATA Area: Lakhanpur
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Project	LBL OCP
Monitoring Station	Kirulbal Village
Date of sampling	Carbon Monoxide (CO)
	mg/m³
11-Apr-2025	1.8
23-Apr-2025	1.6
Standard	02(8 Hours)

Project	LBL OCP
Monitoring Station	Lilari Magazine House
Date of sampling	Carbon Monoxide (CO)
	mg/m³
11-Apr-2025	1.7
23-Apr-2025	1.8
Standard	02(8 Hours)

Project	LBL OCP
Monitoring Station	BOCM Workshop
Date of sampling	Carbon Monoxide (CO)
	mg/m³
11-Apr-2025	1.9
24-Apr-2025	1.8
Standard	02(8 Hours)

Project	LBL OCP
Monitoring Station	West of Lakhanpur Quarry Near Solada
Date of sampling	Carbon Monoxide (CO)
	mg/m³
11-Apr-2025	1.7
24-Apr-2025	1.8
Standard	02(8 Hours)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Lakhanpur

Project	LBL OCP							
Monitoring Station	Kadam Rehab Centre East of Mine							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) Pyrene	Benzene
	(μg/m ³)	(μg/m ³)	(μg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(μg/m ³)
01-Apr-2025	<20.0	18.32	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
02-Apr-2025	<20.0	20.48	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
07-Apr-2025	<20.0		<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
08-Apr-2025	<20.0	17.38	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
16-Apr-2025	<20.0	14.9	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
17-Apr-2025	<20.0	26.07	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
21-Apr-2025	<20.0	23.58	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
22-Apr-2025	<20.0	22.97	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
28-Apr-2025	<20.0	13.03	<0.1	<1.0	<1.0	1.5	BQL(QL=0.7)	BQL
29-Apr-2025	<20.0	24.52	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
Standard	400 (24hours)	180 (hour)	1.0 (24hours)	6.0 (Annual)	20 (Annual)	02 (8 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Lakhanpur

Project	LBL OCP							
Monitoring Station	Lakhanpur Police Station West of Mine							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (a) Pyrene	Benzene
	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	(ng/m^3)	(ng/m^3)	(mg/m^3)	(ng/m^3)	($\mu\text{g}/\text{m}^3$)
01-Apr-2025	<20.0	25.75	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
02-Apr-2025	<20.0	13.35	<0.1	<1.0	<1.0	1.6	BQL(QL=0.7)	BQL
07-Apr-2025	<20.0	22.97	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
08-Apr-2025	<20.0	21.42	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
16-Apr-2025	<20.0	13.65	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
17-Apr-2025	<20.0	26.68	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
21-Apr-2025	<20.0	18	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
22-Apr-2025	<20.0	25.13	<0.1	<1.0	<1.0	1.5	BQL(QL=0.7)	BQL
28-Apr-2025	<20.0	26.07	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
29-Apr-2025	<20.0	21.72	<0.1	<1.0	<1.0	1.6	BQL(QL=0.7)	BQL
Standard	400 (24hours)	180 (hour)	1.0 (24hours)	6.0 (Annual)	20 (Annual)	02 (8 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Lakhanpur

Project	LBL OCP							
Monitoring Station	Gumadera Village North of Mine							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (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-Apr-2025	<20.0	22.65	<0.1	<1.0	<1.0	1.5	BQL(QL=0.7)	BQL
02-Apr-2025	<20.0	21.1	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
07-Apr-2025	<20.0	22.35	<0.1	<1.0	<1.0	1.6	BQL(QL=0.7)	BQL
08-Apr-2025	<20.0	12.72	<0.1	<1.0	<1.0	1.5	BQL(QL=0.7)	BQL
16-Apr-2025	<20.0	21.72	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
17-Apr-2025	<20.0	17.38	<0.1	<1.0	<1.0	1.8	BQL(QL=0.7)	BQL
21-Apr-2025	<20.0	25.45	<0.1	<1.0	<1.0	1.7	BQL(QL=0.7)	BQL
22-Apr-2025	<20.0	24.2	<0.1	<1.0	<1.0	1.5	BQL(QL=0.7)	BQL
28-Apr-2025	<20.0	16.13	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
29-Apr-2025	<20.0	24.52	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
Standard	400 (24hours)	180 (hour)	1.0 (24hours)	6.0 (Annual)	20 (Annual)	02 (8 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Lakhanpur

Project	LBL OCP							
Monitoring Station	Ramada Village South of Mine							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (a) Pyrene	Benzene
	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	(ng/m^3)	(ng/m^3)	(mg/m^3)	(ng/m^3)	($\mu\text{g}/\text{m}^3$)
01-Apr-2025	<20.0	18.62	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
02-Apr-2025	<20.0	18	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
07-Apr-2025	<20.0	13.03	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
08-Apr-2025	<20.0	24.83	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
16-Apr-2025	<20.0	27.32	<0.1	<1.0	<1.0	1.5	BQL(QL=0.7)	BQL
17-Apr-2025	<20.0	13.03	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
21-Apr-2025	<20.0	17.07	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
22-Apr-2025	<20.0	18.62	<0.1	<1.0	<1.0	1.7	BQL(QL=0.7)	BQL
28-Apr-2025	<20.0	21.42	<0.1	<1.0	<1.0	1.5	BQL(QL=0.7)	BQL
29-Apr-2025	<20.0	26.68	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
Standard	400 (24hours)	180 (hour)	1.0 (24hours)	6.0 (Annual)	20 Annual	02 (8 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Lakhanpur

Project	LBL OCP							
Monitoring Station	Barihapali Village South West of Mine							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) Pyrene	Benzene
	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	(ng/m^3)	(ng/m^3)	(mg/m^3)	(ng/m^3)	($\mu\text{g}/\text{m}^3$)
01-Apr-2025	<20.0	24.83	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
02-Apr-2025	<20.0	26.38	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
07-Apr-2025	<20.0	18	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
08-Apr-2025	<20.0	16.13	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
16-Apr-2025	<20.0	14.27	<0.1	<1.0	<1.0	1.5	BQL(QL=0.7)	BQL
17-Apr-2025	<20.0	14.9	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
21-Apr-2025	<20.0	21.1	<0.1	<1.0	<1.0	1.6	BQL(QL=0.7)	BQL
22-Apr-2025	<20.0	27.32	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
28-Apr-2025	<20.0	16.13	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
29-Apr-2025	<20.0	21.42	<0.1	<1.0	<1.0	1.5	BQL(QL=0.7)	BQL
Standard	400 (24hours)	180 (hour)	1.0 (24hours)	6.0 (Annual)	20 (Annual)	02 (8 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Lakhanpur

Project	LBL OCP							
Monitoring Station	Bartap Village North West of Mine							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (a) Pyrene	Benzene
	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	(ng/m^3)	(ng/m^3)	(mg/m^3)	(ng/m^3)	($\mu\text{g}/\text{m}^3$)
01-Apr-2025	<20.0	15.83	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
02-Apr-2025	<20.0	22.97	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
07-Apr-2025	<20.0	12.42	<0.1	<1.0	<1.0	1.6	BQL(QL=0.7)	BQL
08-Apr-2025	<20.0	19.23	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
16-Apr-2025	<20.0	22.97	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
17-Apr-2025	<20.0	19.87	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
21-Apr-2025	<20.0	16.75	<0.1	<1.0	<1.0	1.8	BQL(QL=0.7)	BQL
22-Apr-2025	<20.0	25.45	<0.1	<1.0	<1.0	1.7	BQL(QL=0.7)	BQL
28-Apr-2025	<20.0	27	<0.1	<1.0	<1.0	1.8	BQL(QL=0.7)	BQL
29-Apr-2025	<20.0	24.2	<0.1	<1.0	<1.0	1.6	BQL(QL=0.7)	BQL
Standard	400 (24hours)	180 (hour)	1.0 (24hours)	6.0 (Annual)	20 (Annual)	02 (8 hours)	01(annual)	05(annual)

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TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Lakhanpur

PROJECT :

LBL OCP

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
04-Apr-25	Near Lilari Magazine House	60.2	58.4
04-Apr-25	Kadam Rehab Centre East of Mine	51.1	39.8
04-Apr-25	Bartap Village North West of Mine	47.9	38.1
04-Apr-25	Gumadera Village North of Mine	47.6	38.9
04-Apr-25	Ramada Village South of Mine	49.7	39.6
04-Apr-25	Kirulbal Village	48.4	36.9
04-Apr-25	Barihapali Village South West of Mine	48.9	37.6
04-Apr-25	West of Lakhanpur Quarry Near Solada	59.6	53.8
04-Apr-25	BOCM Workshop	63.9	59.5
04-Apr-25	Lakhanpur Police Station West of Mine	48.9	37.9
04-Apr-25	Ardhapara Village South East of Mine	49.8	38.6
18-Apr-25	Barihapali Village South West of Mine	47.9	36.8
18-Apr-25	Kirulbal Village	49.8	36.7
18-Apr-25	Ramada Village South of Mine	48.6	37.8
18-Apr-25	Bartap Village North West of Mine	48.1	37.6
18-Apr-25	Kadam Rehab Centre East of Mine	50.1	41.8
18-Apr-25	Gumadera Village North of Mine	48.7	39.6
18-Apr-25	West of Lakhanpur Quarry Near Solada	59.8	53.6
18-Apr-25	BOCM Workshop	60.5	54.1
18-Apr-25	Near Lilari Magazine House	61.3	56.9
18-Apr-25	Ardhapara Village South East of Mine	50.1	38.2
18-Apr-25	Lakhanpur Police Station West of Mine	49.6	40.1

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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EFFLUENT QUALITY DATA

Area :

Lakhanpur

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

Project :

LBL OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	TDS	DO	MPN/100mL
10-Apr-25	STP Inlet	7.49	-	34	-	<2	-	-	70
10-Apr-25	Clear Water Tank of Sewage Treatment Plant	7.67	-	27	-	<2	-	-	63
26-Apr-25	STP Inlet	7.04	-	48	-	<2	-	-	58
26-Apr-25	Clear Water Tank of Sewage Treatment Plant	7.40	-	34	-	<2	-	-	33

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

Area :

Lakhanpur

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

Project :

LBL OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	TDS	DO	Remarks
10-Apr-25	Mine Sump Water, Lakhanpur	5.21	<4.0	16	8	-	-	-	
10-Apr-25	Mine Sump Water, Lilari	3.18	<4.0	15	8	-	-	-	
10-Apr-25	Mine Sump Water, Belpahar	7.80	<4.0	18	8	-	-	-	
10-Apr-25	Inlet of ETP, Belpahar	8.24	<4.0	29	20	-	-	-	
10-Apr-25	Outlet of ETP, Lakhanpur	8.18	<4.0	25	16	-	-	-	
10-Apr-25	Inlet of ETP, Lakhanpur	8.12	<4.0	39	28	-	-	-	
10-Apr-25	Outlet of ETP, Belpahar	8.30	<4.0	20	12	-	-	-	
25-Apr-25	Outlet of ETP, Belpahar	7.64	<4.0	39	36	-	-	-	
26-Apr-25	Inlet of ETP, Belpahar	7.41	<4.0	61	72	-	-	-	
26-Apr-25	Outlet of ETP, Lakhanpur	7.69	<4.0	38	28	-	-	-	
26-Apr-25	Inlet of ETP, Lakhanpur	7.60	<4.0	59	40	-	-	-	

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

Project / OCP	LBL OCP		Indian Drinking Standards (IS-10500):2012	
	LKP Project Office	IWSS Outlet	Acceptable	Permissible
Monitoring Station	10-Apr-2025	10-Apr-2025		
Date of Sampling	10-Apr-2025	10-Apr-2025	Acceptable	Permissible
Colour(Hazen)	2	4	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	2	3	1	5
pH	7.90	7.92	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	79.84	79.84	200	600
Chloride(mg/L)	11.67	13.61	250	1000
Sulphate(mg/L)	16.62	15.97	200	400
Nitrate(mg/L)	<0.5	<0.5	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	91.63	91.63	200	600
Calcium(mg/L)	28.75	27.15	75	200
Fluoride(mg/L)	0.56	<0.3	1	1.5
Total Dissolve Solid(mg/L)	148	144	500	2000
Copper(mg/L)	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	0.06	0.1	0.3
Iron(mg/L)	<0.1	<0.1	1	No relaxation
Zinc(mg/L)	<0.04	0.05	5	15
Lead(mg/L)	<0.005	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.001	<0.001	0.003	No relaxation
Total Chromium (mg/L)	<0.01	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	<0.2	0.5	2.4

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Drinking Water Quality Data Lakhanpur Area

Project / OCP	LBL OCP	Indian Drinking Standards (IS-10500):2012	
Monitoring Station	IWSS Inlet	Acceptable	Permissible
Date of Sampling	10-Apr-2025		
Colour(Hazen)	3	5	15
Odour	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	4	1	5
pH	8.15	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	75.64	200	600
Chloride(mg/L)	13.61	250	1000
Sulphate(mg/L)	16.10	200	400
Nitrate(mg/L)	<0.5	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	87.65	200	600
Calcium(mg/L)	25.55	75	200
Fluoride(mg/L)	<0.3	1	1.5
Total Dissolve Solid(mg/L)	140	500	2000
Copper(mg/L)	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	0.1	0.3
Iron(mg/L)	0.13	1	No relaxation
Zinc(mg/L)	<0.04	5	15
Lead(mg/L)	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.001	0.003	No relaxation
Total Chromium (mg/L)	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	0.5	2.4

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Drinking Water Quality Data Lakhanpur Area

Project / OCP	LBL OCP		Indian Drinking Standards (IS-10500):2012	
	LKP Project Office	IWSS Outlet	Acceptable	Permissible
Monitoring Station	10-Apr-2025	10-Apr-2025	Acceptable	Permissible
Date of Sampling	10-Apr-2025	10-Apr-2025	Acceptable	Permissible
Selenium(mg/L)	<0.005	<0.005	0.01	No relaxation
Phenolics(mg/L)	<0.001	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	<0.2	0.2	1
MPN (Index/100 ml)	Not Detected	Not Detected	-	-
Sodium(mg/L)	1.85	2.90		
Potassium(mg/L)	1.45	3.56		

Project / OCP	LBL OCP		Indian Drinking Standards (IS-10500):2012	
	IWSS Outlet		Acceptable	Permissible
Monitoring Station	10-Apr-2025		Acceptable	Permissible
Date of Sampling	10-Apr-2025		Acceptable	Permissible
Selenium(mg/L)	<0.005		0.01	No relaxation
Phenolics(mg/L)	<0.001		0.001	0.002
Residual Free Chlorine(mg/L)	<0.2		0.2	1
MPN (Index/100 ml)	Not Detected		-	-
Sodium(mg/L)	1.51			
Potassium(mg/L)	166			

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**Environmental Monitoring Report
Of
Mahalaxmi Area
For
April-2025**

Ib Valley Coalfield



MCL

Mahanadi Coalfields Limited



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

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

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Test Report



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 AIR QUALITY

AMBIENT AIR QUALITY DATA

Area :

Mahalaxmi

(Compliance Station)

Project :

Basundhara (w) OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source	Distance from DGS
12-Apr-25	North of the Sardega Railway Siding, Kulapada	176	79	43	14.44	40.42	Mining Activities, OCP, Coal Transportation	About 500m
12-Apr-25	Body Workshop Basundhara	229	110	48	18.00	31.76		
30-Apr-25	North of the Sardega Railway Siding, Kulapada	195	89	40	11.61	23.42	Mining Activities, OCP, Coal Transportation	About 500m
30-Apr-25	Body Workshop Basundhara	232	102	49	18.30	25.11		

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MoEF Standards Notification dated 28th
 September, 2000

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Test Report

AMBIENT AIR QUALITY DATA

Area : **Mahalaxmi**

(Reference Station)

Project :

Basundhara (w) OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
03-Apr-25	Sarangjharria Village	170	65	32	21.50	33.19	Domestic	About 500m
03-Apr-25	Ratansara Village	143	67	31	14.69	39.29	Transportation	About 100m
03-Apr-25	Khamarpara Village	159	59	28	20.32	24.76		
03-Apr-25	West of Coal Stock, Near Golf Course	159	59	28	16.60	35.99	Mining Activities, OCP, Transportation	About 500m
04-Apr-25	Ratansara Village	195	84	43	15.14	26.72	Transportation	About 100m
04-Apr-25	West of Coal Stock, Near Golf Course	183	80	39	13.87	31.59	Mining Activities, OCP, Transportation	About 500m
04-Apr-25	Sarangjharria Village	185	81	43	15.62	37.34	Domestic	About 500m
04-Apr-25	Khamarpara Village	183	76	39	9.54	23.25		
09-Apr-25	West of Coal Stock, Near Golf Course	194	84	41	16.58	20.90	Mining Activities, OCP, Transportation	About 500m
09-Apr-25	Khamarpara Village	189	79	41	16.58	27.59		
09-Apr-25	Sarangjharria Village	178	78	40	20.37	21.92	Domestic	About 500m
09-Apr-25	Ratansara Village	165	64	31	22.04	41.66	Transportation	About 100m
10-Apr-25	West of Coal Stock, Near Golf Course	172	68	33	8.90	22.76	Mining Activities, OCP, Transportation	About 500m
10-Apr-25	Sarangjharria Village	165	73	35	9.49	22.61	Domestic	About 500m
10-Apr-25	Ratansara Village	177	73	37	11.46	22.86	Transportation	About 100m
10-Apr-25	Khamarpara Village	170	66	34	12.97	32.34		
18-Apr-25	Sarangjharria Village	148	54	26	10.01	30.27	Domestic	About 500m
18-Apr-25	West of Coal Stock, Near Golf Course	153	58	28	14.02	24.74	Mining Activities, OCP, Transportation	About 500m
18-Apr-25	Khamarpara Village	166	57	30	10.50	32.94		
18-Apr-25	Ratansara Village	129	54	26	12.01	31.40	Transportation	About 100m
19-Apr-25	West of Coal Stock, Near Golf Course	148	54	26	19.13	22.78	Mining Activities, OCP, Transportation	About 500m
19-Apr-25	Sarangjharria Village	155	60	29	10.90	28.83	Domestic	About 500m

*NAAQS, 2009

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Project :

Basundhara (w) OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
19-Apr-25	Ratansara Village	157	60	29	16.83	30.50	Transportation	About 100m
19-Apr-25	Khamarpara Village	171	66	35	11.69	21.51		
25-Apr-25	Ratansara Village	173	71	34	11.18	25.37	Transportation	About 100m
25-Apr-25	Sarangijharia Village	166	65	33	16.91	29.83	Domestic	About 500m
25-Apr-25	Khamarpara Village	186	72	38	12.99	38.67		
25-Apr-25	West of Coal Stock, Near Golf Course	183	73	35	15.02	21.05	Mining Activities, OCP, Transportation	About 500m
26-Apr-25	West of Coal Stock, Near Golf Course	198	77	40	16.84	29.70	Mining Activities, OCP, Transportation	About 500m
26-Apr-25	Khamarpara Village	161	62	33	12.45	22.93		
26-Apr-25	Sarangijharia Village	185	79	38	17.20	34.45	Domestic	About 500m
26-Apr-25	Ratansara Village	155	58	28	11.97	24.50	Transportation	About 100m


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AMBIENT AIR QUALITY DATA
Area: Mahalaxmi

Project	Basundhara OCP
Monitoring Station	North of the Sardega Railway Siding, Kulapada
Date of sampling	Carbon Monoxide (CO)
	mg/m³
12-Apr-2025	1.8
30-Apr-2025	1.6
Standard	02(8Hours)

Project	Basundhara OCP
Monitoring Station	Body Workshp Basundhara
Date of sampling	Carbon Monoxide (CO)
	mg/m³
12-Apr-2025	1.9
30-Apr-2025	1.5
Standard	02(8Hours)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Mahalaxmi

Project	Basundhara (W) OCP							
Monitoring Station	Ratansara Village							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (a) Pyrene	Benzene
	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	(ng/m^3)	(ng/m^3)	(mg/m^3)	(ng/m^3)	($\mu\text{g}/\text{m}^3$)
03-Apr-2025	<20.0	17.07	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
04-Apr-2025	<20.0	24.52	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
09-Apr-2025	<20.0	16.75	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
10-Apr-2025	<20.0	14.9	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
18-Apr-2025	<20.0	24.2	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
19-Apr-2025	<20.0	17.07	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
25-Apr-2025	<20.0	23.9	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
26-Apr-2025	<20.0	24.2	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
Standard	400 (24hours)	180 (hour)	1.0 (24hours)	6.0 (Annual)	20 (Annual)	02 (8 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Mahalaxmi

Project	Basundhara (W) OCP							
Monitoring Station	Sarangijharia Community Centre							
Date of sampling	Ammonia (NH ₃) ($\mu\text{g}/\text{m}^3$)	Ozone (O ₃) ($\mu\text{g}/\text{m}^3$)	Lead (Pb) ($\mu\text{g}/\text{m}^3$)	Arsenic (As) (ng/m^3)	Nickel (Ni) (ng/m^3)	CO (mg/m^3)	Benzo (a) Pyrene (ng/m^3)	Benzene ($\mu\text{g}/\text{m}^3$)
03-Apr-2025	<20.0	20.17	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
04-Apr-2025	<20.0	17.38	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
09-Apr-2025	<20.0	22.35	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
10-Apr-2025	<20.0	26.38	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
18-Apr-2025	<20.0	20.48	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
19-Apr-2025	<20.0	14.9	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
25-Apr-2025	<20.0	13.35	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
26-Apr-2025	<20.0	22.65	<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 (8 hours)	01(annual)	05(annual)

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BHUBANESWAR



TABLE-

NOISE LEVEL MONITORING DATA

AREA :

Mahalaxmi

PROJECT :

Basundhara (W) OCP

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
05-Apr-25	Quary Sump of Basundhara East OCP/ Near CHP of Basundhara East OCP	65.9	62.3
05-Apr-25	Ratansara Village	48.6	37.8
05-Apr-25	Sarangijharia Community Centre	49.8	38.7
05-Apr-25	North of the Sardega Railway Siding ,Kulapada	64.2	60.7
05-Apr-25	West of Coal Stock , Near Golf Course	60.8	56.3
05-Apr-25	South-West of Working Face -Gopalpur Village,Near CMPDIL Camp	64.3	54.7
19-Apr-25	Quary Sump of Basundhara East OCP/ Near CHP of Basundhara East OCP	64.5	61.2
19-Apr-25	Ratansara Village	48.6	37.9
19-Apr-25	Sarangijharia Community Centre	51.1	39.8
19-Apr-25	North of the Sardega Railway Siding ,Kulapada	60.3	52.7
19-Apr-25	West of Coal Stock , Near Golf Course	58.9	58.6
19-Apr-25	South-West of Working Face -Gopalpur Village,Near CMPDIL Camp	59.6	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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CENTRAL POLLUTION CONTROL BOARD

TABLE--

EFFLUENT QUALITY DATA

Area :

Mahalaxmi

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

Project :

Basundhara (W) OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	TDS	DO	Remarks
11-Apr-25	Basundhara (W) OCP Mine Sump	8.52	<4.0	30	20	-	-	-	
11-Apr-25	Sardega Railway Siding Sedimentation Pond	8.04	<4.0	27	20	-	-	-	
11-Apr-25	Inlet of Excavation Workshop, B(W) OCP	8.50	6.6	88	236	-	-	-	
11-Apr-25	Outlet of Excavation Workshop, B(W) OCP	8.58	<4.0	39	40	-	-	-	

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MoEF Standard Notification dated 23rd September, 2000
and MoEF Schedule VI, General standard for discharge
of Environmental Pollutants Part A: Effluents

5.5-9.0	10	100	250	30
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Drinking Water Quality Data Mahalaxmi Area

Project / OCP	Basundhara (W)		Indian Drinking Standards (IS-10500):2012	
	Water Treatment Plant Clear Water reservoir	Basundhar East Sump Quarry OCP		
Monitoring Station				
Date of Sampling	11-Apr-2025	11-Apr-2025	Acceptable	Permissible
Colour(Hazen)	4	2	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	3	1	1	5
pH	7.71	7.68	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	42.02	46.22	200	600
Chloride(mg/L)	15.56	11.67	250	1000
Sulphate(mg/L)	52.60	75.71	200	400
Nitrate(mg/L)	<0.5	<0.5	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	223.10	215.14	200	600
Calcium(mg/L)	49.51	49.51	75	200
Fluoride(mg/L)	<0.3	<0.3	1	1.5
Total Dissolve Solid(mg/L)	318	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	No relaxation
Zinc(mg/L)	<0.04	<0.04	5	15
Lead(mg/L)	<0.005	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.001	<0.001	0.003	No relaxation
Total Chromium (mg/L)	<0.01	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	<0.2	0.5	2.4

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Drinking Water Quality Data Mahalaxmi Area

Project / OCP	Basundhara (W)		Indian Drinking Standards (IS-10500):2012	
	Water Treatment Plant Clear Water reservoir	Basundhar East Sump Quarry OCP		
Monitoring Station				
Date of Sampling	11-Apr-2025	11-Apr-2025	Acceptable	Permissible
Selenium(mg/L)	<0.005	<0.005	0.01	No relaxation
Phenolics(mg/L)	<0.001	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	<0.2	0.2	1
MPN (Index/100 ml)	Not Detected	Not Detected	-	-
Sodium(mg/L)	1.35	1.29	-	-
Potassium(mg/L)	5.91	6.34	-	-

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**Environmental Monitoring Report
Of
MCL HQ
For
April-2025**

IB Valley 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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Drinking Water Quality Data MCL (HQ)

Project / OCP	MCL (HQ)		Indian Drinking Standards (IS-10500):2012	
	DAV School (Anand vihar)	Corporate Office (Jagriti Vihar)	Acceptable	Permissible
Date of Sampling	10-Apr-2025	10-Apr-2025		
Colour(Hazen)	2	3	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	2	1	1	5
pH	8.02	7.91	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	96.65	67.23	200	600
Chloride(mg/L)	13.61	15.56	250	1000
Sulphate(mg/L)	12.73	19.74	200	400
Nitrate(mg/L)	<0.5	<0.5	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	103.58	75.7	200	600
Calcium(mg/L)	36.73	20.76	75	200
Fluoride(mg/L)	0.91	<0.3	1	1.5
Total Dissolve Solid(mg/L)	170	140	500	2000
Copper(mg/L)	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	<0.04	0.1	0.3
Iron(mg/L)	<0.1	<0.1	1	No relaxation
Zinc(mg/L)	<0.04	<0.04	5	15
Lead(mg/L)	<0.005	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.001	<0.001	0.003	No relaxation
Total Chromium (mg/L)	<0.01	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	<0.2	0.5	2.4

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Drinking Water Quality Data MCL (HQ)

Project / OCP	MCL(HQ)		Indian Drinking Standards (IS-10500):2012	
	Inlet to Water Treatment Plant (Anand Vihar)	Outlet to Water Treatment Plant (Anand Vihar)		
Monitoring Station			Acceptable	Permissible
Date of Sampling	10-Apr-2025	10-Apr-2025		
Colour(Hazen)	4	2	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	1	2	1	5
pH	7.94	7.85	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	88.24	96.65	200	600
Chloride(mg/L)	9.72	13.61	250	1000
Sulphate(mg/L)	12.86	14.81	200	400
Nitrate(mg/L)	<0.5	<0.5	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	91.63	95.62	200	600
Calcium(mg/L)	28.75	27.15	75	200
Fluoride(mg/L)	<0.3	0.42	1	1.5
Total Dissolve Solid(mg/L)	152	164	500	2000
Copper(mg/L)	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	<0.04	0.1	0.3
Iron(mg/L)	<0.1	<0.1	1	No relaxation
Zinc(mg/L)	<0.04	<0.04	5	15
Lead(mg/L)	<0.005	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.001	<0.001	0.003	No relaxation
Total Chromium (mg/L)	<0.01	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	<0.2	0.5	2.4

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Drinking Water Quality Data MCL (HQ)

Project / OCP	MCL (HQ)		Indian Drinking Standards (IS-10500):2012	
	DAV School (Anand vihar)	Corporate Office (Jagrati Vihar)		
Monitoring Station				
Date of Sampling	10-Apr-2025	10-Apr-2025	Acceptable	Permissible
Selenium(mg/L)	<0.005	<0.005	0.01	No relaxation
Phenolics(mg/L)	<0.001	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	<0.2	0.2	1
MPN (Index/100 ml)	Not Detected	Not Detected	-	-
Sodium(mg/L)	1.58	1.23		
Potassium(mg/L)	135	1.69		

Project / OCP	MCL(HQ)		Indian Drinking Standards (IS-10500):2012	
	Inlet to Water Treatment Plant (Anand Vihar)	Outlet to Water Treatment Plant (Anand Vihar)		
Monitoring Station				
Date of Sampling	10-Apr-2025	10-Apr-2025	Acceptable	Permissible
Selenium(mg/L)	<0.005	<0.005	0.01	No relaxation
Phenolics(mg/L)	<0.001	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	<0.2	0.2	1
MPN (Index/100 ml)	Not Detected	Not Detected	-	-
Sodium(mg/L)	0.71	0.80		
Potassium(mg/L)	1.05	1.03		

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**Environmental Monitoring Report
Of
Orient Area
For
April-2025**

Ib Valley Coalfield



Mahanadi Coalfields Limited



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

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

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Test Report

AMBIENT AIR QUALITY DATA

Area : **Orient** (Compliance Station)

Project : **Orient Mine No. 1 & 2**

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source	Distance from DGS
05-Apr-25	Orient Mine No. 1 & 2	134	122	51	9.53	26.07	Coal Stock Yard, Surface Bunker, Coal	About 250m
24-Apr-25	Orient Mine No. 1 & 2	215	89	46	20.43	35.16	Coal Stock Yard, Surface Bunker, Coal	About 250m

1/10/25

10/11/25
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MoEF Standards Notification dated 23rd
September, 2000

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Test Report

AMBIENT AIR QUALITY DATA

Area :

Orient


(Compliance Station)

Project :

Orient Mine No. 3

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source	Distance from DGS
11-Apr-25	Orient Mine No. 3	148	136	57	13.13	35.93	Coal Stockyard, Surface Bunker, Coal	About 200m
24-Apr-25	Orient Mine No. 3	221	93	48	12.36	30.34	Coal Stockyard, Surface Bunker, Coal	About 200m


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MoEF Standards Notification dated 25th
September, 2009

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AMBIENT AIR QUALITY DATA

Area : **Orient** (Compliance Station)

Project : **Orient Mine No. 4**

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source	Distance from DGS
11-Apr-25	Orient Mine No. 4	140	129	55	9.07	32.75	Coal Transportation Road	About 300m
24-Apr-25	Orient Mine No. 4	208	87	43	17.13	33.78	Coal Transportation Road	About 300m

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MoEF Standards Notification dated 25th September, 2009	500	250		120	120
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भारत सरकार

Test Report

AMBIENT AIR QUALITY DATA

Area : **Orient** (Compliance Station)

Project :

HBI Mine

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source	Distance from DGS
12-Apr-25	HBI Mine	213	106	44	10.72	23.82	Coal Stockyard, Surface Bunker, Coal Transport	About 100m
12-Apr-25	Bundia Colony Pump House	246	128	55	13.52	31.52	Coal Stockyard, Surface Bunker, Coal Transport	About 150m
24-Apr-25	HBI Mine	188	91	42	16.10	22.09	Coal Stockyard, Surface Bunker, Coal Transport	About 100m
24-Apr-25	Bundia Colony Pump House	209	92	44	19.29	22.98	Coal Stockyard, Surface Bunker, Coal Transport	About 150m


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MoEF Standards Notification dated 25th
September, 2000

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AMBIENT AIR QUALITY DATA

Area : **Orient** (Compliance Station)

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source	Distance from DGS
12-Apr-25	Near Rampur Colliery Check Post	228	123	52	12.54	25.41		
12-Apr-25	Near CHP HRC	238	129	54	12.99	33.16		
24-Apr-25	Near Rampur Colliery Check Post	209	85	44	16.91	34.67		
24-Apr-25	Near CHP HRC	215	90	48	16.50	27.50		

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MoEF Standards Notification dated 25th September, 2009	500	250		120	120
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AMBIENT AIR QUALITY DATA

Area :

Orient

(Reference Station)

Project :

Orient Mine No.1 & 2

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
01-Apr-25	Orient GM Office	183	78	39	8.70	19.53	Domestic and other Anthropogenic Activities	
02-Apr-25	Orient GM Office	129	75	37	9.11	23.73	Domestic and other Anthropogenic Activities	
07-Apr-25	Orient GM Office	146	80	41	10.89	23.22	Domestic and other Anthropogenic Activities	
08-Apr-25	Orient GM Office	145	72	35	19.62	30.18	Domestic and other Anthropogenic Activities	
16-Apr-25	Orient GM Office	175	63	34	11.64	25.68	Domestic and other Anthropogenic Activities	
17-Apr-25	Orient GM Office	163	57	31	15.03	33.97	Domestic and other Anthropogenic Activities	
21-Apr-25	Orient GM Office	168	67	36	10.75	26.07	Domestic and other Anthropogenic Activities	
22-Apr-25	Orient GM Office	155	56	30	18.01	35.95	Domestic and other Anthropogenic Activities	
28-Apr-25	Orient GM Office	159	58	31	14.68	26.72	Domestic and other Anthropogenic Activities	
29-Apr-25	Orient GM Office	149	55	27	13.12	41.66	Domestic and other Anthropogenic Activities	

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AMBIENT AIR QUALITY DATA

Area : **Orient** (Reference Station)

Project : **Hirakand Bundia Mine (HBM)** (conc. in $\mu\text{g}/\text{cu.m.}$)

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
01-Apr-25	Rampur Sub Area	161	65	33	13.27	32.20	Coal Stock And CT Road	About 1000m
01-Apr-25	Rampur Officers Guest House	184	75	39	13.87	20.98	Coal Stockyard, Surface Bunker, Coal Transport	About 1000m
02-Apr-25	Rampur Officers Guest House	163	62	28	20.26	37.44	Coal Stockyard, Surface Bunker, Coal Transport	About 1000m
02-Apr-25	Rampur Sub Area	126	58	37	15.04	24.83	Coal Stock And CT Road	About 1000m
07-Apr-25	Rampur Officers Guest House	172	67	33	17.31	31.38	Coal Stockyard, Surface Bunker, Coal Transport	About 1000m
07-Apr-25	Rampur Sub Area	126	75	38	15.04	24.83	Coal Stock And CT Road	About 1000m
08-Apr-25	Rampur Officers Guest House	194	76	38	16.10	25.98	Coal Stockyard, Surface Bunker, Coal Transport	About 1000m
08-Apr-25	Rampur Sub Area	149	80	42	11.20	35.55	Coal Stock And CT Road	About 1000m
16-Apr-25	Rampur Officers Guest House	163	65	31	11.53	32.73	Coal Stockyard, Surface Bunker, Coal Transport	About 1000m
16-Apr-25	Rampur Sub Area	169	70	35	18.57	21.57	Coal Stock And CT Road	About 1000m
17-Apr-25	Rampur Officers Guest House	143	53	25	10.04	36.28	Coal Stockyard, Surface Bunker, Coal Transport	About 1000m
17-Apr-25	Rampur Sub Area	143	51	27	11.58	24.97	Coal Stock And CT Road	About 1000m
21-Apr-25	Rampur Sub Area	175	75	36	9.35	20.09	Coal Stock And CT Road	About 1000m
21-Apr-25	Rampur Officers Guest House	184	77	37	12.98	21.32	Coal Stockyard, Surface Bunker, Coal Transport	About 1000m
22-Apr-25	Rampur Officers Guest House	135	47	23	19.16	35.49	Coal Stockyard, Surface Bunker, Coal Transport	About 1000m
22-Apr-25	Rampur Sub Area	159	65	31	10.91	35.99	Coal Stock And CT Road	About 1000m
28-Apr-25	Rampur Officers Guest House	155	55	27	13.01	27.20	Coal Stockyard, Surface Bunker, Coal Transport	About 1000m
28-Apr-25	Rampur Sub Area	155	57	29	14.77	21.32	Coal Stock And CT Road	About 1000m
29-Apr-25	Rampur Sub Area	162	63	30	17.53	25.92	Coal Stock And CT Road	About 1000m
29-Apr-25	Rampur Officers Guest House	158	63	30	12.45	31.26	Coal Stockyard, Surface Bunker, Coal Transport	About 1000m

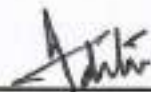
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104 QS, 2009		100	60	80	80
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AMBIENT AIR QUALITY DATA
Area : **Orient** **(Reference Station)**
Project : **HRC** **(conc. in µg/cu.m.)**

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
01-Apr-25	Rampur Sub Area (Reported only)	161	65	33	13.27	32.20	Coal Stock And CT Road	About 1000m
01-Apr-25	Rampur Officers Guest House (Reported only)	184	75	39	13.87	20.98	Coal Stockyard, Surface Bunker, Coal Transport	About 1000m
02-Apr-25	Rampur Sub Area (Reported only)	126	58	37	15.04	24.83	Coal Stock And CT Road	About 1000m
02-Apr-25	Rampur Officers Guest House (Reported only)	163	62	28	20.26	37.44	Coal Stockyard, Surface Bunker, Coal Transport	About 1000m
07-Apr-25	Rampur Sub Area (Reported only)	126	75	38	15.04	24.83	Coal Stock And CT Road	About 1000m
07-Apr-25	Rampur Officers Guest House (Reported only)	172	67	33	17.31	31.38	Coal Stockyard, Surface Bunker, Coal Transport	About 1000m
08-Apr-25	Rampur Sub Area (Reported only)	149	80	42	11.20	35.55	Coal Stock And CT Road	About 1000m
08-Apr-25	Rampur Officers Guest House (Reported only)	194	76	38	16.10	25.98	Coal Stockyard, Surface Bunker, Coal Transport	About 1000m
16-Apr-25	Rampur Sub Area (Reported only)	169	70	35	18.57	21.57	Coal Stock And CT Road	About 1000m
16-Apr-25	Rampur Officers Guest House (Reported only)	163	65	31	11.53	32.73	Coal Stockyard, Surface Bunker, Coal Transport	About 1000m
17-Apr-25	Rampur Officers Guest House (Reported only)	143	53	25	10.04	36.28	Coal Stockyard, Surface Bunker, Coal Transport	About 1000m
17-Apr-25	Rampur Sub Area (Reported only)	143	51	27	11.58	24.97	Coal Stock And CT Road	About 1000m
21-Apr-25	Rampur Officers Guest House (Reported only)	184	77	37	12.98	21.32	Coal Stockyard, Surface Bunker, Coal Transport	About 1000m
21-Apr-25	Rampur Sub Area (Reported only)	175	75	36	9.35	20.09	Coal Stock And CT Road	About 1000m
22-Apr-25	Rampur Officers Guest House (Reported only)	135	47	23	19.16	35.49	Coal Stockyard, Surface Bunker, Coal Transport	About 1000m
22-Apr-25	Rampur Sub Area (Reported only)	159	65	31	10.91	35.99	Coal Stock And CT Road	About 1000m
28-Apr-25	Rampur Officers Guest House (Reported only)	155	55	27	13.01	27.20	Coal Stockyard, Surface Bunker, Coal Transport	About 1000m
28-Apr-25	Rampur Sub Area (Reported only)	155	57	29	14.77	21.32	Coal Stock And CT Road	About 1000m
29-Apr-25	Rampur Sub Area (Reported only)	162	63	30	17.53	25.92	Coal Stock And CT Road	About 1000m
29-Apr-25	Rampur Officers Guest House (Reported only)	158	63	30	12.45	31.26	Coal Stockyard, Surface Bunker, Coal Transport	About 1000m


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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Orient

Project	HBI Mine							
Monitoring Station	Rampur Officers Guest House							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (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-Apr-2025	<20.0	19.55	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
02-Apr-2025	<20.0	12.1	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
07-Apr-2025	<20.0	22.65	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
08-Apr-2025	<20.0	12.42	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
16-Apr-2025	<20.0	13.65	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
17-Apr-2025	<20.0	23.9	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
21-Apr-2025	<20.0	24.2	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
22-Apr-2025	<20.0	24.83	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
28-Apr-2025	<20.0	24.2	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
29-Apr-2025	<20.0	13.65	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
Standard	400 (24hours)	180 (hour)	1.0 (24hours)	6.0 (Annual)	20 (Annual)	02 (8 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Orient

Project	HBI Mine							
Monitoring Station	Rampur Sub Area							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (a) Pyrene	Benzene
	(µg/m ³)	(µg/m ³)	(µg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(µg/m ³)
01-Apr-2025	<20.0	23.58	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
02-Apr-2025	<20.0	17.68	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
07-Apr-2025	<20.0	23.27	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
08-Apr-2025	<20.0	19.23	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
16-Apr-2025	<20.0	27.32	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
17-Apr-2025	<20.0	13.03	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
21-Apr-2025	<20.0	17.07	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
22-Apr-2025	<20.0	18.62	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
28-Apr-2025	<20.0	21.42	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
29-Apr-2025	<20.0	26.68	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
Standard	400 (24hours)	180 (hour)	1.0 (24hours)	6.0 (Annual)	20 (Annual)	02 (8 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Orient

Project	Orient Mine No.2							
Monitoring Station	VIP Guest House, IB Valley (Reported Only)							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (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)	($\mu\text{g}/\text{m}^3$)
03-Apr-2025	<20.0	21.60	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
04-Apr-2025	<20.0	15.98	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
09-Apr-2025	<20.0	14.64	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
10-Apr-2025	<20.0	13.58	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
18-Apr-2025	<20.0	16.84	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
19-Apr-2025	<20.0	17.68	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
25-Apr-2025	<20.0	19.89	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
26-Apr-2025	<20.0	15.87	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
Standard	400 (24hours)	180 (hour)	1.0 (24hours)	6.0 Annual)	20 (Annual)	02 (8 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Orient

Project	HRC							
Monitoring Station	Rampur Sub Area (Reported Only)							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) Pyrene	Benzene
	(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-Apr-2025	<20.0	23.58	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
02-Apr-2025	<20.0	17.68	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
07-Apr-2025	<20.0	23.27	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
08-Apr-2025	<20.0	19.23	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
16-Apr-2025	<20.0	27.32	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
17-Apr-2025	<20.0	13.03	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
21-Apr-2025	<20.0	17.07	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
22-Apr-2025	<20.0	18.62	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
28-Apr-2025	<20.0	21.42	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
29-Apr-2025	<20.0	26.68	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
Standard	400 (24hours)	180 (hour)	1.0 (24hours)	6.0 (Annual)	20 (Annual)	02 (8 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Orient

Project	HRC							
Monitoring Station	Rampur Officers Guest House (Reported Only)							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (a) Pyrene	Benzen c
	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	(ng/m^3)	(ng/m^3)	(mg/m^3)	(ng/m^3)	($\mu\text{g}/\text{m}^3$)
01-Apr-2025	<20.0	19.55	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
02-Apr-2025	<20.0	12.1	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
07-Apr-2025	<20.0	22.65	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
08-Apr-2025	<20.0	12.42	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
16-Apr-2025	<20.0	13.65	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
17-Apr-2025	<20.0	23.9	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
21-Apr-2025	<20.0	24.2	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
22-Apr-2025	<20.0	24.83	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
28-Apr-2025	<20.0	24.2	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
29-Apr-2025	<20.0	13.65	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
Standard	400 (24hours)	180 (hour)	1.0 (24hours)	6.0 (Annual)	20 (Annual)	02 (8 hours)	01(annual)	05(annual)

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TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Orient

PROJECT :

Orient Mine No. 1 & 2

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
03-Apr-25	Orient Mine No. 1 & 2	64.9	60.5
03-Apr-25	VIP Guest House, IB Valley (Reported Only)	53.6	46.7
17-Apr-25	Orient Mine No. 1 & 2	60.4	56.7
17-Apr-25	VIP Guest House, IB Valley (Reported Only)	60.4	58.6

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

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TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Orient

PROJECT :

Orient Mine No.3

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
03-Apr-25	Orient Mine No.3	60.3	58.7
17-Apr-25	Orient Mine No.3	59.2	53.6

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

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TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Orient

PROJECT :

Orient Mine No.4

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
03-Apr-25	Orient Mine No.4	54.4	45.6
17-Apr-25	Orient Mine No.4	54.6	44.4

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

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TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Orient

PROJECT :

HBI Mine

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
03-Apr-25	Rampur Officer's Guest House	49.9	39.8
03-Apr-25	HBI Mine	65.7	60.3
03-Apr-25	Rampur Sub Area (Reported)	50.1	39.8
03-Apr-25	Bundia Colony Pump House	58.6	52.8
17-Apr-25	HBI Mine	60.8	54.9
17-Apr-25	Bundia Colony Pump House	58.3	52.7
17-Apr-25	Rampur Sub Area (Reported)	48.8	37.6
17-Apr-25	Rampur Officer's Guest House	50.1	38.7

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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TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Orient

PROJECT :

HRC

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
03-Apr-25	Near CHP HRC	58.7	52.6
03-Apr-25	Near Rampur Colliery Check Post	54.4	44.9
17-Apr-25	Near Rampur Colliery Check Post	58.5	52.7
17-Apr-25	Near CHP HRC	54.9	44.3

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

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TABLE--

EFFLUENT QUALITY DATA

Area :

Orient

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

Project :

Orient Mine No. 1 & 2

Date of Sampling	Sampling Station	pH	Orient Mine No. 1 & 2					DO	Remarks
			Oil & Grease	TSS	COD	BOD	TDS		
09-Apr-25	Mine Sump of Mine No. 2	8.55	<4.0	27	16	-	-	-	

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MoEF Standard Notification dated 25th 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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EFFLUENT QUALITY DATA

Area :

Orient

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

Project :

Orient Mine No. 3

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	TDS	DO	Remarks
09-Apr-25	Mine Sump of Mine No. 3	7.71	<4.0	21	12	-	-	-	
25-Apr-25	Mine Sump of Mine No. 3	7.48	<4.0	21	12	-	-	-	

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AS-11

MoEF Standard Notification dated 25th 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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TABLE--

EFFLUENT QUALITY DATA

Area :

Orient

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

Project :

HBI Mine

Date of Sampling	Sampling Station	pH	HBI Mine						Remarks
			Oil & Grease	TSS	COD	BOD	TDS	DO	
09-Apr-25	Mine Sump of HBM	8.17	<4.0	25	20	-	-	-	

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MoEF Standard Notification dated 25th 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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TABLE--

EFFLUENT QUALITY DATA

Area :

Orient

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

Project :

Orient Mine No. 4

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	TDS	DO	Remarks
09-Apr-25	Mine Sump of Mine No. 4	7.72	<4.0	23	16	-	-	-	

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

5.5-9.0	10	100	250	30
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TABLE--

EFFLUENT QUALITY DATA

Area :

IB Valley1

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

Project :

Central Hospital

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	TDS	DO	Remarks
09-Apr-25	Discharge of Hospital	8.22	<4.0	16	8	<2	-	-	

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

5.5-9.0	10	100	250	30
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Drinking Water Quality Data Orient Area

Project / OCP	Orient Mine No. 1 & 2		Indian Drinking Standards (IS-10500):2012	
	Budhijaam Colony	Mine no 1 & 2 Filter Plant	Acceptable	Permissible
Monitoring Station	10-Apr-2025	10-Apr-2025		
Date of Sampling	10-Apr-2025	10-Apr-2025		
Colour(Hazen)	1	2	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	2	3	1	5
pH	7.98	8.13	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	79.84	109.25	200	600
Chloride(mg/L)	19.45	31.12	250	1000
Sulphate(mg/L)	18.18	11.56	200	400
Nitrate(mg/L)	<0.5	<0.5	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	95.62	95.62	200	600
Calcium(mg/L)	20.76	19.16	75	200
Fluoride(mg/L)	<0.3	0.38	1	1.5
Total Dissolve Solid(mg/L)	162	212	500	2000
Copper(mg/L)	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	<0.04	0.1	0.3
Iron(mg/L)	<0.1	<0.1	1	No relaxation
Zinc(mg/L)	0.07	0.23	5	15
Lead(mg/L)	<0.005	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.001	<0.001	0.003	No relaxation
Total Chromium (mg/L)	<0.01	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	<0.2	0.5	2.4

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Drinking Water Quality Data Orient Area

Project / OCP	Orient Mine No. 3	Indian Drinking Standards (IS-10500):2012	
		Acceptable	Permissible
Monitoring Station	Mine no 3 Filter Plant		
Date of Sampling	10-Apr-2025		
Colour(Hazen)	3	5	15
Odour	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	4	1	5
pH	7.83	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	67.23	200	600
Chloride(mg/L)	21.39	250	1000
Sulphate(mg/L)	21.82	200	400
Nitrate(mg/L)	<0.5	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	87.65	200	600
Calcium(mg/L)	19.16	75	200
Fluoride(mg/L)	0.35	1	1.5
Total Dissolve Solid(mg/L)	158	500	2000
Copper(mg/L)	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	0.1	0.3
Iron(mg/L)	<0.1	1	No relaxation
Zinc(mg/L)	<0.04	5	15
Lead(mg/L)	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.001	0.003	No relaxation
Total Chromium (mg/L)	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	0.5	2.4

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Drinking Water Quality Data Orient Area

Project / OCP	HBI Mine		Indian Drinking Standards (IS-10500):2012	
	Rampur Colony	HBI Water Filter Plant	Acceptable	Permissible
Monitoring Station	10-Apr-2025	10-Apr-2025		
Date of Sampling	10-Apr-2025	10-Apr-2025		
Colour(Hazen)	2	1	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	2	1	1	5
pH	8.03	8.42	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	134.46	142.87	200	600
Chloride(mg/L)	2.23	27.23	250	1000
Sulphate(mg/L)	5.58	5.32	200	400
Nitrate(mg/L)	<0.5	<0.5	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	103.58	107.57	200	600
Calcium(mg/L)	23.95	28.75	75	200
Fluoride(mg/L)	<0.3	0.39	1	1.5
Total Dissolve Solid(mg/L)	208	220	500	2000
Copper(mg/L)	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	<0.04	0.1	0.3
Iron(mg/L)	<0.1	<0.1	1	No relaxation
Zinc(mg/L)	<0.04	<0.04	5	15
Lead(mg/L)	<0.005	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.001	<0.001	0.003	No relaxation
Total Chromium (mg/L)	<0.01	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	<0.2	0.5	2.4

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Drinking Water Quality Data Orient Area

Project / OCP	Orient Mine No. 1 & 2		Indian Drinking Standards (IS-10500):2012	
	Budhijaam Colony	Mine no 1 & 2 Filter Plant	Acceptable	Permissible
Monitoring Station				
Date of Sampling	10-Apr-2025	10-Apr-2025		
Selenium(mg/L)	<0.005	<0.005	0.01	No relaxation
Phenolics(mg/L)	<0.001	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	<0.2	0.2	1
MPN (Index/100 ml)	Not Detected	Not Detected	-	-
Sodium(mg/L)	1.58	1.91		
Potassium(mg/L)	6.7	8.65		

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Drinking Water Quality Data Orient Area

Project / OCP	Orient Mine No. 3	Indian Drinking Standards (IS-10500):2012	
		Acceptable	Permissible
Monitoring Station	Mine no 3 Filter Plant		
Date of Sampling	10-Apr-2025		
Selenium(mg/L)	<0.005	0.01	No relaxation
Phenolics(mg/L)	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	0.2	1
MPN (Index/100 ml)	Not Detected	-	-
Sodium(mg/L)	3.04	-	-
Potassium(mg/L)	8.74	-	-

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Drinking Water Quality Data Orient Area

Project / OCP	HBI Mine		Indian Drinking Standards (IS-10500):2012	
	Rampur Colony	HBI Water Filter Plant	Acceptable	Permissible
Monitoring Station				
Date of Sampling	10-Apr-2025	10-Apr-2025		
Selenium(mg/L)	<0.005	<0.005	0.01	No relaxation
Phenolics(mg/L)	<0.001	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	<0.2	0.2	1
MPN (Index/100 ml)	Not Detected	Not Detected	-	-
Sodium(mg/L)	3.34	3.76	-	-
Potassium(mg/L)	5.64	5.62	-	-

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