



Ref. No.: MCL/MLA/PO/B(W)OCP/2025-26/1711

Date: 29/10/25

To

The Deputy Director General of Forests,

MOEF, Integrated Regional Office,

A/3, Chandrasekharpur Bhubaneswar-751023.

Sub.: Submission of half yearly compliance Report of the Environmental conditions in respect of Basundhara (West) OCP, Mahalaxmi Area, MCL for the period from 1st April 2025 to 30th September 2025.

Respected Sir,

Please find enclosed herewith the half yearly compliance report of the Environmental conditions in respect of Basundhara (West) OCP, Mahalaxmi Area, MCL for the period from 1st April 2025 to 30th September 2025, for your kind perusal and necessary action.

Enclosure: As above.

Yours faithfully,


29/10/25
Project Officer
Project Officer, Basundhara (W) OCP
Basundhara (W) OCP
परियोजना अधिकारी, बसुंधरा (प) ओ.सी.पी.
Mahalaxmi Area, MCL.



Copy to:

1. Director E.I.A Monitoring Cell, MoEF, Paryvaran Bhawan, CGO Complex, New Delhi-10003
(By REGD.POST) - For kind information and necessary action.
2. General Manager (Envt.), MCL, HQ - For kind information through mail.
3. General Manager, Mahalaxmi Area - For kind information.
4. Office copy.

FORM -I


MONITORING PROFORMA-I (DATA SHEET)

1	Project Type: River-Valley/Mining Industry/Thermal/Nuclear/Other (Specify)	Mining				
2	Name of the Project.	Basundhara (West) OCP				
3	Clearance Letter(s) No. OM No. & Date.	J-11018/10/95-IA(II). (M) dated 24.12.2002, E.C.No.J.11015/205/2008-IA.11(M) dtd:25/02/2013				
4	Location: (a) District(s), State(s).	Sundargarh, Odisha				
5(a)	Address of concerned Project Chief Engineer with pin code & Telephone/Telex/Fax No.).	Sri M. Janardan Rao, Project Officer At/PO- Basundhara, Dist- Sundargarh (Odisha) 770076 Ph. No.-(0661)-286135				
(b)	Address of Executive Project Engineer/ Manager (with pin code Telephone/Telex/ Fax No.)	Sri T. R Bollam, Manager, Basundhara (West) OCP. At/Po-Basundhara, Dist- Sundargarh, Orissa				
6	Salient features of the Project:					
(a)	Of the Project	Project with sanctioned capital outlay of Rs.700.59 crores. To produce coal suitable for power plants & local industries of the state & outside.				
(b)	Environmental Management Plan	EMP-being implemented as per the conditions of the Env't. Clearance granted by GOI in Feb'2013; Ref-EC No. J-11015/205/2008- IA.11(M) dtd:25/02/2013				
7	Breakup of the Project Area	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">a.) ML Area</td> <td style="text-align: right;">437.10 Ha</td> </tr> <tr> <td>Excavation Area</td> <td style="text-align: right;">214.30 Ha</td> </tr> </table>	a.) ML Area	437.10 Ha	Excavation Area	214.30 Ha
a.) ML Area	437.10 Ha					
Excavation Area	214.30 Ha					

		External OB dump	39.15 Ha
		Infrastructure	96.63 Ha
		Embankment	15.52 Ha
		Safety zone	52.90 Ha
		Roads	18.60 Ha
		b.) Out of ML Area	21.90 Ha
		Residential colony	16.00 Ha
		R&R colony	5.90 Ha
		Total Project Area	459.00 Ha
(a)	Submergence Area (Forest land & Non-Forest Land)	Nil	
(b)	Others	Nil	
8	Break – up of Project affected population when enumeration of those losing houses/dwelling House only, agriculture land & land less laborer / artisans.	SC: 13 (Approximately.) ST: 184 (Approximately) Others: 103 (Approximately) Total: 300 (Provisional)	
9	Finance Details.		
(a)	Project cost as originally planned & subsequent Revised estimates and the years of price reference.	Project with sanctioned capital outlay of Rs.700.59 cr. as on 31.03.2019.	
(b)	Allocation made for Environmental Management Plans, with item – wise and Year-wise break – up.	Rehab & Resettlement	531.22
		Land reclamation	330.18
		Comp. afforestation	210.07
		Anti-pollution measure	890.06
		Community development	005.00
		Miscellaneous	210.05

		Total	2176.58 ha
(c)	Benefit cost ratio / internal rate of return and the year of assessment.	IRR 25.52% at 100% production level 18.85% at 85% production level Assessment year 2003	
(d)	Whether includes the cost of Environmental Management as shown in (b) Above.	Yes	
(e)	Actual expenditure incurred on the project So far.	Capital-Rs. 196.52 Crores	
(f)	Actual expenditure incurred on the Environmental Management Plan.	Approximately Rs. 4.48/- per ton of coal produced being spent on Environmental management as per EMP for the year 2016-17.	
10	Forest land requirements.		
(a)	The date & status of approval for a diversion of Forest land for non-forestry purpose.	Forest land 149.50 ha. Stage-II approval obtained on dt. 12.04.2002	
(b)	The status of clear felling in forest And non-forest land	Tree felling done by OFDC, Odisha	
(c)	Comments on the viability and sustainability of Compensation afforestation program in the light of actual field experience so far.	Compensatory forestation cost deposited in CAMPA fund. After approval of the compensatory afforestation scheme by forest dept. Govt of Orissa.	
11	Status of construction.		
(a)	Date of commencement (Actual and/or planned)	Started in schedule time in 2003-04 as scheduled.	
(b)	Date of completion (Actual and/or planned)	Still in operation	

12	Reason for the delay if project is yet to start	No delay
13	Date of site visits	
(a)	The dated on which the project was monitored by the regional office on previous occasions if any.	Month of February 2023
(b)	Date of site visit for this monitoring	-
14	Details of correspondence with project Authorities for obtaining action plans information & status of compliance to safeguards	Basundhara (West) has obtained Env't. Clearance for 8 M.T.Y from MoEF, New Delhi.


 29/10/23
Project Officer
Project Officer, Basundhara (W) OCP
Basundhara (W) OCP,
परियोजना अधिकारी, बसुंधरा (प) ओसीपी
Mahalaxmi Area, MCL

Sujay Das

FORM – II

PROFORMA FOR PROVIDING FOR IMPLEMENTATION OF REHABILITATION

1	No. of village affected	2 (Sardega, Kulapada)		
2	Families affected	300 (Provisional) Actual		
3	Compensation package offered per families			
	State / Central Norms	As per State and CIL norms		
4	Budget estimate for rehabilitation			
(a)	Total outlay	Rs. 7567.72 Lakhs (includes Land and R&R)		
(b)	Amount paid /under	Rs. 7098.64 Lakhs		
5	Employment details			
(a)	Total employment to be provided	165		
(b)	Employment given so far	159		
		Name of the Village	Employment provided	Under consideration
		Sardega	128	06
		Kulapara	31	00
6	Rehabilitation & Resettlement details			
(a)	No. of families rehabilitated	185/218 Kulapara-37, Sardega-148 and cash compensation has been sanctioned for 22.		
(b)	Name of the site	Mahalaxmi Area, Tikilipara AT/P.O.- Basundhara		
7	Any other information	---		

Soumitra
29/10/25

Project Officer

Basundhara (W) OCP,

Project Officer, Basundhara (W) OCP

**महालक्ष्मी क्षेत्र, मे.ए.
परियोजना अधिकारी, बसुंधरा (प) ओसीपी**

FORM –III

FORMAT FOR PROVIDING PARTICULARS ON GREEN BELT / PLANTATION UNDER FOREST

CONSERVATION ACT-1980 & ENVIRONMENT PROTECTION ACT-1986

1 (a)	Name of the project	Basundhara (West) OCP	
(b)	Environment / Forest clearance under NOC	J-11018/10/95-IA(II). (M) Dated 24/12/2002, EC No. J-11015/205/2008-IA.11(M) dtd:25/02/2013	
2	Location, Block / Sub-Division / State	Hemgir, Sundargarh, Orissa	
3	Address for communication	Project officer, B(W)OCP AT/PO: Basundhara-770076 Dist: Sundargarh (Orissa)	
4	Existing vegetation in the Area/ Region		
(a)	Species (Trees/Shrubs/Climber)	<i>Shorea robusta,</i> <i>Madhuca latifolia, Palas etc.</i>	
(b)	Major prevalent species of each tree	<i>Shorea Robusta etc.</i>	
5	Land coverage by the project		
(a)	Total area under the project	459.00Ha	
(b)	Area covered for basic infrastructure (Road/Building/Factory etc.)	a.) ML Area	437.10 Ha
		Excavation Area	214.30 Ha
		External OB dump	039.15 Ha
		Infrastructure	096.63 Ha
		Embankment	015.52 Ha
		Safety zone	052.90 Ha
		Roads	018.60 Ha
		b.) Out of ML Area	021.90 Ha
		Residential colony	016.00 Ha
		R&R colony	005.90 Ha

		Total Project Area	459.00 Ha
6	Details about natural vegetation		
(a)	Name and number of tree/species felled	N.A.	
(b)	Name and number of plant species still available in the area	<i>Shorea robusta</i> <i>Madhuca latifolia, Palas etc.</i>	
©	By protecting the area will indigenously stock come up	Partially may come up.	
(d)	Extent of green belt development	92.42 Ha of land has been afforested.	
7	Plantation required to be carried out as per.		
(a)	Conditions of environmental Clearance in ha/Nos.	Plantation on external & internal dump to be planted with spacing of 2 meters internal in 2500/ha.	
(b)	Conditions of Forest © Act. Clearance in ha/Nos.	not mentioned	

8. Details about plantation:

(a) Total area of plantation in each category. B (E&W) OCP:

Category	Dumps	Backfield Area	Roadside	Block plantation/green belt
Area	19.50 ha.	11.40 ha.	2.36 Ha	44.40 Ha

(b) Plantation Details (Category wise and methodology used):

Year of Plantation	No. of Species Planted	Spacing	Height Attained (in ft)	Total Area
2004-05	19410	2mx2m	14	7.76 Ha
2005-06	46000	2mx2m	11	18.40 Ha
2006-07	103725	2mx2m	10	41.50 Ha
2007-08	Nil	-	-	-

2008-09	10000	2mx2m	10	4.00 Ha
2009-10	Nil	-	-	-
2010-11	10000	2mx2m	7	4.0 Ha
2011-12	1350	2mx2m	6	0.54 Ha
2012-13	Nil	Nil	-	Nil
2013-14	Nil	-	-	-
2014-15	1500 Saplings distributed to PAF in R&R site.	-	-	-
2015-16	1650 Saplings distributed to nearby villages.	-	-	-
2016-17	4200	2mx2m	-	2 Ha
2017-18	15800	2mx2m	--	6 Ha
2018-19	3000 nos. of seed balls have been thrown in backfilled area and mine premises	--	--	1.15 Ha
2019-20	17500 plants	2m x 2m	Just Planted	7 Ha
2020-21	250 plants	5m x 5m	Planted on the Occasion of Van Mahotsav 2020	0.22 Ha

2020-21	400	5m x 5m	Planted in Gandhi Udhyan	1.00 ha
Total	2,34,785			92.42 Ha

(c) Survival % plantation: More than 70%.

9. Agency carrying out plantation & Maintenance:

- OFDC, Jharsuguda and Chhattisgarh Rajya Van Vikash Nigam Ltd, Bilaspur
- Financial details (Year wise)/Plantation wise at Basundhara (W) OCP

SL.	Year	Nos. of trees planted.	Expenditure made (Rs.)
I	2004-2005	19410	4.5 lakhs
Ii	2005-2006	46000	8.9 lakhs
Iii	2006-2007	103725	13.8 lakhs
Iv	2007-2008	Nil	-
V	2008-2009	10000	4.98 lakhs
Vi	2009-2010	Nil	-
Vii	2010-2011	10,000,00	9.46 lakhs
Viii	2011-2012	1350	3.36 Lakh
Ix	2012-13	Nil	Nil
X	13-14	Nil	Nil
Xi	14-15	Nil	1500 Saplings distributed to PAF in R&R site. Saplings received from Forest nurseries free of cost.
Xii	15-16	Nil	1650 Saplings distributed to nearby villages. Amount spent – Rs. 0.28 lacs
Xiii	16-17	4200	7.41 lakhs
xiv	17-18	15800	8.59 lakhs
Xv	19-20	17500	126.76 lakhs

Xvi	20-21	250 plants	Rs. 60000.00
9	Inspection of plantation by fixed experts comments & follow up action.		Regular inspection done by OFDC Jharsuguda.
10	Remarks / any other information		Joint enumeration of the plantation has been done.

10. Inspection of plantation by field experts and their comments and follow up action

- Regular inspection done by afforestation division, Rourkela and other State Govt. Dept.

11. Remarks / any other information: NIL

Sonali
29/10/25
Project Officer

Project Officer, Bhusandhara (W) OCP
परियोजना अधिकारी, बसुंधरा (प) ओसीपी
Mahalaxmi Area, MCL

Sujay Das.

Six Monthly Progress Report

on the implementation

of

Environmental Clearance Conditions

(1st April 2025 to 30th September 2025)

BASUNDHARA (WEST) OCP

of

MAHALAXMI AREA, MCL

**Clearance letter: - J-11018/10/95-IA (II). (M)
dated 24.12.2002,**

No.J.11015/205/2008-1A.11(M) dtd:25/02/2013

Half Yearly Compliance Report of Basundhara (West) OCP MCL

(1st April 2025 to 30th September 2025)

Sl.	General Condition	Status of compliance
i)	No diversion of river Basundhara or Telendra Nala shall be taken up. The embankment constructed along the river Basundhara shall be stabilized by vegetation consisting of a mix of native species found in the study area.	No diversion of river Basundhara or Telendra Nala has been done. Stone pitching has been done in sensitive areas on the slope of embankment along the Basundhara River. Further native species have been planted at the embankment for stabilization of the slope.
ii)	Top soil if any created in the balance life of the mine, should be stacked properly with proper slope at earmarked site(s) and should not be kept active and shall be used within a year of its generation for mine reclamation and development of green belt.	The mine is on the verge of exhaustion, and the total excavation area of 214.30 ha has been completely excavated, hence there is no production of top soil. Coal production has ceased in the month of February 2025.
iii)	Balance OB shall be simultaneously backfilled in the de-coaled area. No new OB dumps shall be created for the OB to be generated in the balance life of mine.	OB Dumps have been stacked at earmarked sites which were started during the period of 2004-05. Back filling has been started in 2006-07 (4th year of mine operation). As per the mining plan of Siarmal OCP, 134.35 M. cum. of OB will be dumped into the voids of Basundhara (West) OCP from Siarmal OCP.
iv)	At the mine closure stage, all the external OB dumps of 39.15 Ha shall be re-handled and backfilled and there shall be no external OB dump at the post-mining stage and the area reclaimed and afforested. Monitoring of the reclamation shall continue until the vegetation becomes self-sustaining. Compliance status should be submitted to the Ministry of Environment & Forests and its Regional	Around 2,34,785 trees have been planted in an area of 92.42 ha as on date. The OB dump is being re-handled and will be used for technical reclamation of internal dump.

	Office located at Bhubaneswar on yearly basis	
v)	Catch drains and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from soil, OB and mineral dumps. The water so collected should be utilized for watering the mine area, roads, green belt development, etc. The drains should be regularly desilted and maintained properly.	The total runoff generated over the OB Dump & coal stock is collected back & is allowed to settle down for sufficient time for sedimentation of the suspended particles in the mine sump. Water so collected is being reused for dust suppression of mine road, and firefighting of coal stock yards. The drains are being regularly de-silted and maintained. Garland drains with check dams have been constructed all along the mine boundary so that the runoff is taken care off even in monsoons. Garland drains around external OB dump in North side of mine has been constructed up to a length of 1120 m. 3 nos. of check dams also have been constructed along this garland drain and on the eastern side of the mine lease area, 1480 m long garland drain have been constructed. Regular monitoring & Management of the measures are being taken to achieve zero discharge within the mines.
vi)	Garland drains (size, gradient, and length) and sump capacity should be designed keeping 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine site. Sump capacity should also be provided adequate retention period to allow proper settling of silt material	The total run-off generated over the OB Dump & coal stock is collected back in the mine sump inside the mine which has sufficient capacity for the peak rainfall. This runoff is allowed to settle down for sufficient time for sedimentation of the suspended particles. Water thus collected is being reused for dust suppression on mine road, and firefighting at coal stock yards.
vii)	Dimension of the retaining wall at the toe of the dumps and OB benches within the mine to check run-off and siltation should be based on the rainfall data.	The external OB dump is currently being re-handled and will be used for technical reclamation of internal dump and top soil is being spread over the surface for carrying out plantation. The total runoff generated over the OB Dump & coal stock is collected back in the mine sump inside the mine which has sufficient capacity for the peak rainfall.

		Once the dump stabilizes, retaining wall will be constructed.
viii)	Crushers at the CHP should be operated with high efficiency bag filters, water sprinkling system should be provided to check fugitive emissions from crushing operations, conveyor system, haulage roads, transfer points, etc.	CHP is not in operation.
ix)	Drills should be wet operated. Roads shall be metal topped and mechanical sweepers shall be regularly deployed to clear the dust off the main approach and mineral transportation roads. Water sprinkling (fixed and mist type, mobile) shall be regularly done along the main haul roads.	Since coal production has ceased, the drill has been transferred to nearby opencast coal mining project for further utilization. 3 nos. of 28 KL mobile water tankers are still being used for dust suppression. A road sweeping machine has been deployed and is working on daily basis to arrest dust.
x)	Of the total ML area, an area not less than 226.47 Ha shall be brought under plantation which includes 133.80 Ha of reclaimed quarry area, 3.72Ha along roads, 19.32 Ha in built-up area, 10.58 Ha is for safety zone; 4 Ha is for embankment by planting native species in consultation with the local DFO/Agriculture Department. The density of the trees should be around 2500 plants per Ha.	Around 2,34,785 trees have been planted in an area of 92.42 ha as on date. The plantation has been carried out by OFDC/CGRVVN govt. agencies of Orissa & Chhattisgarh in and around mines, the density being 2500/ ha.
xi)	A progressive Mine Closure Plan shall be implemented and OB generated shall be simultaneously backfilled so as to backfill and reclaim 133.80 Ha of de-coaled area and stabilized with plantation, leaving an area of 32.30 Ha of quarry area along dip side being left for future mining and a water body of 48.21 Ha of the excavated void being left as a water body at the post-mining stage shall be gently sloped and the	Progressive Mine closure report has been submitted towards CMPDIL. Back filling has been started in 2006-07 (4th year of mine operation). An area of 170.97 ha has been backfilled till 30.09.2025.

	upper benches stabilized with plantation using a mix of native species.	
xii)	Regular monitoring of ground water level and quality should be carried out by establishing a network of existing wells and construction of new piezometers. The monitoring for quantity should be done four times a year in pre-monsoon (May), monsoon (August), post-monsoon (November) and winter (January) seasons and for quality in May. Data thus collected should be submitted to the Ministry of Environment & Forest and to the Central Pollution Control Board quarterly within on month of monitoring	Ground water monitoring is being done regularly by the CMPDIL at required interval. The ground water level is being measured at 3 dug wells located at Bankibahal village, Sardega village and Tiklipara village and at the required frequency. The quality of the water from these wells are also monitored monthly. The ground water level as seen in the ground water table shows an increasing trend.
xiii)	The company shall put up artificial ground water recharge measures for augmentation of groundwater resource. The project authorities should meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.	Two numbers of sumps have been established in the abandoned quarry area and in Basundhara (W) OCP's mine void, which serves as artificial ground water recharge resource. The demand of water supply from the nearby villages like Tiklipara, Siarmal, Gopalpur, Khamarpara, etc., is being met through tankers in summer.
xiv)	ETP should be provided to treat workshop effluents and for CHP wastewater to prescribed standards before discharge.	Conventional safety tanks/soak pit arrangement is provided for the colony. ETP is provided in the Excavation workshop, (Dimensions; 1 st settling tank (16.1m*4.6m*2m*2), O> (3.6m*2m*2m*2, 2m*2m*2m*2, 1m*1m*1m*2) & the final settling tank (16.1m*4.6m*2m*2)). However, the flow of water to the ETP is not of significant quantity as there is no involvement of any HEMM in coal production and allied activities. Thus, only the wastewater from dust suppression is being channelized back to the ETP for further treatment and re-use.
xv)	Besides carrying out regular periodic health check-up of their workers, 10% of	Regular Periodic Medical Examination is being done and the reports are being communicated to DGMS.

	the workers identified from work force engaged in active mining operations shall be subjected to health check-up for occupational diseases and hearing impairment, if any, through an agency within the district/State and the results reported to this Ministry and to DGMS	<p>The details of IME and PME for the period from October 2024 to March 2025 is as follows:</p> <table border="1"> <thead> <tr> <th rowspan="2">Year</th> <th colspan="2">No of individuals undergone P.M.E.</th> <th rowspan="2">Remarks</th> </tr> <tr> <th>Departmental</th> <th>Contractual</th> </tr> </thead> <tbody> <tr> <td>2025-26</td> <td>51</td> <td>18</td> <td>Fit</td> </tr> </tbody> </table>	Year	No of individuals undergone P.M.E.		Remarks	Departmental	Contractual	2025-26	51	18	Fit
Year	No of individuals undergone P.M.E.			Remarks								
	Departmental	Contractual										
2025-26	51	18	Fit									
xvi)	For monitoring land use pattern and for post mining land use, a time series of land use maps, based on satellite imagery (on a scale of 1:5000) of the core zone and buffer zone, from the start of the project until end of mine life shall be prepared once in 3 years (for anyone particular season which is consistent in the time series), and the report submitted to MoEF and its Regional Office at Bhubaneswar.	Land use pattern and for post mining land use, a time series of land use maps, based on satellite imagery (on a scale of 1:5000) of the core zone and buffer zone, from the start of the project until the end of mine life has been prepared and is published in the MCL website.										
xvii)	A detailed final mine closure plan along with details of corpus fund shall be submitted to the Ministry of Environment & Forests within 6 months of grant of this letter for approval.	Final mine closure plan has been submitted to MoC for approval. Escrow account (Account No. 365203800000323) has been opened and funds are deposited on regular basis in respect of Basundhara (W) OCP. The total balance in Escrow account of Basundhara (W) OCP is Rs. 63.499 crores as on 31.03.2025.										
(xviii)	R&R for the expansion project for the remaining 207 PAFs in village Sardega shall be completed during the year. R&R norms shall be not less that of the National R&R policy. Details of the status of R&R shall be furnished as part of the Compliance Report to MoEF RO, Bhubaneswar and also uploaded on the company website.	Complied.										
xix)	CSR shall be implemented for the balance life of the mine for the villages near the	CSR is being implemented for the villages near the mine. Details of village-wise activities under CSR										

	mine. Details of village-wise activities under CSR shall be furnished as part of the Compliance Report to MoEF, RO, Bhubaneswar and also uploaded on the company website.	are maintained at the area level and it is also uploaded on the company website.						
I.	Specific Condition	Response from the project proponent						
(i)	No change in mining technology and scope of work shall be made without prior approval of the Ministry of Environment and Forests.	No change in technology and scope of work. However, the mine has ceased its coal production in the month of February 2025.						
ii)	No change in the calendar plan including quantum of mineral coal and waste being produced shall be made.	No change in the calendar plan including quantum of mineral coal and waste being produced will be made. The details of production of coal & OB during 2025-2026 is as follows: <table border="1" data-bbox="834 869 1458 1024"> <thead> <tr> <th>Year</th> <th>Coal (Te)</th> <th>Over Burden (m³)</th> </tr> </thead> <tbody> <tr> <td>2025-26</td> <td>Nil</td> <td>Nil</td> </tr> </tbody> </table>	Year	Coal (Te)	Over Burden (m ³)	2025-26	Nil	Nil
Year	Coal (Te)	Over Burden (m ³)						
2025-26	Nil	Nil						
iii)	Four ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for monitoring PM ₁₀ , PM _{2.5} , SO ₂ and NO _x . Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Monitoring of heavy metals such as Hg, As, Ni, Ch, Cr, in particulates shall be carried out at least once in six months	<p>Air quality is presently being monitored at 05 stations in consultation with the State Pollution Control Board and the location has been finalized on the basis of environmental & ecological sensitivity. The monitoring reports have been analysed accordingly and Max., Min. & Avg. readings at different stations have been derived.</p> <p>In order to suppress dust suspension, the following measures have been taken by the project proponent:</p> <ol style="list-style-type: none"> 1. Sprinkling is being done by 03 nos. of 28KI departmental water tanker 2. 115 nos. of fixed mist type Sprinklers have been installed along the Coal transportation road from Basundhara (West) OCP's Check gate till Sardega Railway Siding and 08 sprinklers have been installed along the platform of the siding. 						

		<ol style="list-style-type: none"> 3. Installation of 80 nos. of mist sprayers on a stretch of 2.2 km, from Bankibahal check gate to Basundhara check gate, has been completed. 4. 4 km of coal transportation road have been concreted within the mines. 5. An instant water showering system along with a wheel washing facility has also been set up by the project proponent to arrest fugitive dust from vehicles.
iv)	<p>Data on ambient air quality (PM10, PM2.5, SO2, and NOx and heavy metals such as Hg, As, Ni, Cr, etc) and other monitoring data shall be regularly submitted to the Ministry including its Regional Office at Bhubaneswar and to the State Pollution Control Board and the Central, Pollution Control Board once in six months. Random verification of samples through analysis from independent laboratories recognized under the EP rules, 1986 shall be furnished as part of the compliance report.</p>	<p>Air quality is presently being monitored at 06 stations in consultation with the State Pollution Control Board and the location has been finalized on the basis of environmental & ecological sensitivity.</p> <div data-bbox="834 821 1459 1215" data-label="Image"> </div> <p>The monitoring reports have been analysed accordingly and Max., Min. & Avg. readings at different stations have been derived.</p> <p>In order to suppress dust suspension, the following measures have been taken by the project proponent:</p> <ol style="list-style-type: none"> 1. Sprinkling is being done by 03 nos. of 28Kl departmental water tanker. 2. 115 nos. of fixed mist type Sprinklers have been installed along the Coal transportation road from Basundhara (West) OCP's Check gate till Sardega Railway Siding. 3. Installation of 80 nos. of mist sprayers on a stretch of 2.2 km, from Bankibahal check gate to Basundhara check gate, has been completed.

4. 4 km of coal transportation road have been concreted within the mines.




5. An instant water showering system along with a wheel washing facility has also been set up by the project proponent to arrest fugitive dust from vehicles.



v) Adequate measures shall be taken for control of noise levels below 85dBA in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc. shall be provided with ear plugs/muffs.

Adequate measures are being taken to control the noise level within the prescribed limits. Noise proof & AC Cabins are being provided and maintained in HEMMs. The data regarding the noise levels are being properly recorded near the working environment. Reports for the last six months are being enclosed herewith along with the max. and min. noise levels.

<p>vi)</p>	<p>Industrial waste water (workshop and waste water from the mine) shall be properly collected, and treated so as to conform to the standards including for heavy metals before discharge prescribed under GSR 422 (E) dated 19th May 1993 and 31st December 1993 or as amended from time to time. Oil and grease trap shall be installed before discharge of workshop effluents.</p>	<p>The mine effluent is being stored at the abandoned quarry in Basundhara (East) & mine voids of Basundhara (W) OCP & the industrial waste water is being reused for dust suppression of mine road, and fire-fighting of coal stocks. ETP & OGT has been constructed and are in working condition. The treated water is being reused for washing purpose, (Dimensions; 1st settling tank (16.1m*4.6m*2m*2m), O&GT (3.6m*2m*2m*2m, 2m*2m*2m*2m, 1m*1m*1m*2m) & the final settling tank (16.1m*4.6m*2m*2m)). However, the</p>  <p>flow of water to the ETP is not of significant quantity as there is no involvement of any HEMM in coal production and allied activities. Thus, only the wastewater from dust suppression is being channelized back to the ETP for further treatment and re-use.</p>
<p>vii)</p>	<p>Vehicular emissions shall be kept under control and regularly monitored. Vehicles used for transportation of the mineral shall be covered with tarpaulins and optimally loaded.</p>	<p>Vehicles used for transportation of the coal are being covered with tarpaulin and are optimally loaded in order to control the vehicular emission.</p>

viii)	Monitoring of environmental quality parameters shall be carried out through establishment of adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board and data got analysed through a laboratory recognized under EP rules, 1986	<p>Environmental monitoring is carried out by CMPDI (A subsidiary of CIL) BBSR. It has its air and water analysis Laboratory which is recognized by the CPCB. The following equipment are available in the laboratory:</p> <table border="1" data-bbox="834 401 1458 940"> <tr> <td data-bbox="834 401 980 632">Air Quality Analysis</td> <td data-bbox="980 401 1458 632">1. PM₁₀ – RDS 2. PM_{2.5} – Fine particulate RDS 3. SO_x & NO_x – Spectrophotometer and titration method</td> </tr> <tr> <td data-bbox="834 632 980 940">Water Quality Analysis</td> <td data-bbox="980 632 1458 940">1. Spectrophotometer 2. Atomic Adsorption Spectrophotometer 3. pH meter, conductivity meter, TDS meter, incubator, COD digester, UV double beam spectrophotometer.</td> </tr> </table>	Air Quality Analysis	1. PM ₁₀ – RDS 2. PM _{2.5} – Fine particulate RDS 3. SO _x & NO _x – Spectrophotometer and titration method	Water Quality Analysis	1. Spectrophotometer 2. Atomic Adsorption Spectrophotometer 3. pH meter, conductivity meter, TDS meter, incubator, COD digester, UV double beam spectrophotometer.						
Air Quality Analysis	1. PM ₁₀ – RDS 2. PM _{2.5} – Fine particulate RDS 3. SO _x & NO _x – Spectrophotometer and titration method											
Water Quality Analysis	1. Spectrophotometer 2. Atomic Adsorption Spectrophotometer 3. pH meter, conductivity meter, TDS meter, incubator, COD digester, UV double beam spectrophotometer.											
ix)	Personnel working in dusty areas wear protective respiratory devices and they shall also be provided with adequate training and information on safety and health aspects. Occupational health surveillance programme of the workers shall be undertaken periodically to observe any contractions due to exposure to dust and to take corrective measures, if needed.	<p>Personnel working in dusty area have been provided with 108 pairs of mining shoes, 0 gumboots, 16 helmets, 51 fluorescent jackets, 35 safety goggles, and 15 rechargeable torches to protect themselves from occupational hazards.</p> <p>The workers are trained at VTC regarding safety & health awareness. Their health is being monitored through Periodical Medical Examination which is held at every 5 years interval. Regular Periodic Medical Examination is being done and the reports are being communicated to DGMS. The details of IME and PME for the period from April 2025 to September 2025 is as follows:</p> <table border="1" data-bbox="834 1619 1458 1877"> <thead> <tr> <th data-bbox="834 1619 980 1717" rowspan="2">Year</th> <th colspan="2" data-bbox="980 1619 1317 1717">No of individuals undergone P.M.E.</th> <th data-bbox="1317 1619 1458 1717" rowspan="2">Remarks</th> </tr> <tr> <th data-bbox="980 1717 1114 1822">Departmental</th> <th data-bbox="1114 1717 1317 1822">Contractual</th> </tr> </thead> <tbody> <tr> <td data-bbox="834 1822 980 1877">2025-26</td> <td data-bbox="980 1822 1114 1877">51</td> <td data-bbox="1114 1822 1317 1877">18</td> <td data-bbox="1317 1822 1458 1877">Fit</td> </tr> </tbody> </table>	Year	No of individuals undergone P.M.E.		Remarks	Departmental	Contractual	2025-26	51	18	Fit
Year	No of individuals undergone P.M.E.			Remarks								
	Departmental	Contractual										
2025-26	51	18	Fit									
x)	A separate environmental management cell with suitable qualified personnel shall	Environment management cell has been established in Project as well as area and head quarter level. One										

	be set up under the control of a senior executive, who will report directly to the head of the company.	Staff Officer (E&F) (E-4) level is heading the Area Environment Cell and reports to General Manager, Mahalaxmi area and to the G.M.(Envt.) who is heading the company's environment dept. And reporting to Director (Tech., P&P)									
xi)	The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to this Ministry and its regional Office at Bhubaneswar.	The environmental protection measures are being kept in separate account and are not diverted for other purpose. The year-wise expenditure in Form V that is being submitted to SPCB on yearly basis indicating the expenses on environmental management.									
xii)	The Project authorities shall advertise at least in two local newspaper widely circulated around the project, one of which shall be in vernacular language of the locality concerned within seven days of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and may also be seen at the website of Ministry of Environment & Forests at http://envfor.nic.in	EC publication details of Basundhara (W) OCP are as follows: <table border="1" data-bbox="834 814 1455 1077"> <tr> <td>1</td> <td>Dainik Jagran, Jamshedpur</td> <td>04.03.2013</td> </tr> <tr> <td>2</td> <td>The Samaja, Rourkela</td> <td>02.03.2013</td> </tr> <tr> <td>3</td> <td>The New Indian Express, Bhubaneswar</td> <td>02.03.2013</td> </tr> </table>	1	Dainik Jagran, Jamshedpur	04.03.2013	2	The Samaja, Rourkela	02.03.2013	3	The New Indian Express, Bhubaneswar	02.03.2013
1	Dainik Jagran, Jamshedpur	04.03.2013									
2	The Samaja, Rourkela	02.03.2013									
3	The New Indian Express, Bhubaneswar	02.03.2013									
xiii)	A copy of the environmental clearance letter shall be marked to the concerned panchayat/Zila Parishad, Municipal Corporation or Urban Local Body and the local NGO, if any, from whom any suggestion/representation has been received while processing the proposal. A copy of the clearance letter shall also be displayed on the company's website	The condition has been complied with.									
xiv)	A copy of the clearance letter shall be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the	Action has been taken to comply with.									

	regional office, District Industry Centre and collector's Office/ Tehsildar's Office for 30 days.	
xv)	The clearance letter shall be uploaded on the company's website. The compliance status of the stipulated EC conditions shall also be uploaded by the project authorities on their website and updated at least once in every six months so as to bring the same in the public domain. The monitoring data of environmental quality parameters (air, water, noise and soil) and critical pollutants such as PM _{2.5} , SO ₂ , and NO _x (ambient and stack if any) and critical sectoral parameters shall also be displayed at the entrance of the project premises and mines office and in corporate office and on the company's website.	The condition has been complied with.
xvi)	The project proponent shall submit six monthly reports on the status of compliance of the stipulated environmental clearance conditions (both in hard copy and in e-mail) to the respective Regional Office of the MoEF, the respective zonal offices of CPCB and the SPCB	The condition has been complied with.
xvii)	The regional Office of this Ministry located at Bhubaneswar shall monitor compliance of the stipulated conditions. The Project authorities shall extend full cooperation to the office(s) of the Regional Office by furnishing the requisite data/information/monitoring reports	Full cooperation is extended to the officer(s) of the Regional Office and required data submitted. The condition is being complied with.
xviii)	The environmental statement for each financial year ending 31 st March in form-	Being complied.

v is mandated to be submitted by the Project Proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be uploaded on the company's website along with the status of compliance of EC conditions and shall be sent the respective Regional Offices of the MoEF by E-mail.

Sonali
29/10/25

Project Officer,

**Project Officer, Basundhara (W) OCF,
परिसोजना अधिकारी, बसुंधरा (प) ऑसोप
Mahalaxmi Area, MCL.**

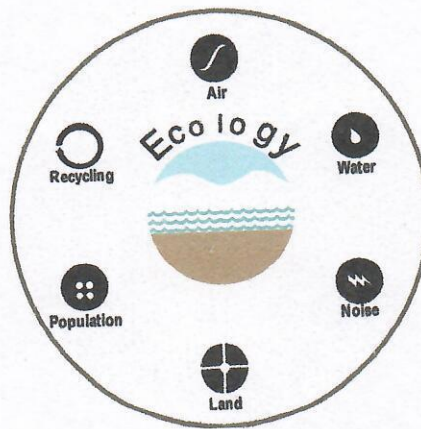
Sujay. Das.

**Environmental Monitoring Report
Of
Mahalaxmi Area
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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Test Report

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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 BHUBANESWAR

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

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	Sarangijharia 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	Sarangijharia 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	Sarangijharia 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	Sarangijharia 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	Sarangijharia 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	10.59	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	Sarangijharia 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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*NAAQS,2009

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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	BasundharaOCP
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) ($\mu\text{g}/\text{m}^3$)	Ozone (O ₃) ($\mu\text{g}/\text{m}^3$)	Lead (Pb) ($\mu\text{g}/\text{m}^3$)	Arsenic (As) (ng/m^3)	Nickel (Ni) (ng/m^3)	CO (mg/m^3)	Benzo (α) Pyrene (ng/m^3)	Benzene ($\mu\text{g}/\text{m}^3$)
03-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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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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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 25th September, 2000
and MoEF Schedule VI, General standard for discharge
of Environmental Pollutants Part A: Effluents

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

Project / OCP	Basundhara (W)		Indian Drinking Standards (IS-10500):2012	
	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		
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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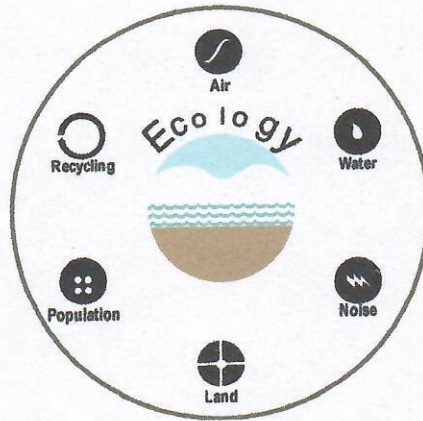
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**Environmental Monitoring Report
Of
Mahalaxmi Area
For
May-2025**

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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Test Report

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
07-May-25	North of the Sardega Railway Siding, Kulapada	178	79	37	12.87	30.10	Mining Activities, OCP, Coal Transportation	About 500m
07-May-25	Body Workshop Basundhara	181	85	38	11.12	23.43		
21-May-25	North of the Sardega Railway Siding, Kulapada	181	78	35	14.85	36.65	Mining Activities, OCP, Coal Transportation	About 500m
21-May-25	Body Workshop Basundhara	189	77	35	12.57	20.18		

MoEF Standards Notification dated 25th
September, 2000

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P. Jaiswal
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AMBIENT AIR QUALITY DATA

Area : **Mahalaxmi** (Reference Station)

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
05-May-25	Sarangijharia Village	139	54	28	16.87	34.19	Domestic	About 500m
05-May-25	Khamarpara Village	188	86	41	19.09	30.39		
05-May-25	West of Coal Stock, Near Golf Course	130	48	25	15.82	29.07	Mining Activities, OCP, Transportation	About 500m
05-May-25	Ratansara Village	156	60	29	12.26	14.89	Transportation	About 100m
06-May-25	West of Coal Stock, Near Golf Course	159	64	30	17.66	27.79	Mining Activities, OCP, Transportation	About 500m
06-May-25	Sarangijharia Village	154	60	31	12.46	30.05	Domestic	About 500m
06-May-25	Ratansara Village	163	63	33	15.35	24.93	Transportation	About 100m
06-May-25	Khamarpara Village	142	61	29	13.89	29.89		
12-May-25	Ratansara Village	128	46	24	17.74	28.53	Transportation	About 100m
12-May-25	West of Coal Stock, Near Golf Course	143	55	27	14.78	16.62	Mining Activities, OCP, Transportation	About 500m
12-May-25	Sarangijharia Village	134	48	25	16.33	30.29	Domestic	About 500m
12-May-25	Khamarpara Village	129	55	26	12.37	41.22		
13-May-25	West of Coal Stock, Near Golf Course	127	51	24	11.56	23.58	Mining Activities, OCP, Transportation	About 500m
13-May-25	Sarangijharia Village	153	56	29	16.55	31.39	Domestic	About 500m
13-May-25	Khamarpara Village	139	60	28	11.32	35.55		
13-May-25	Ratansara Village	134	53	26	17.22	31.11	Transportation	About 100m
19-May-25	Sarangijharia Village	117	42	21	10.79	28.47	Domestic	About 500m
19-May-25	West of Coal Stock, Near Golf Course	177	67	33	9.90	31.28	Mining Activities, OCP, Transportation	About 500m
19-May-25	Khamarpara Village	116	46	21	10.59	12.93		
19-May-25	Ratansara Village	138	51	26	15.61	35.78	Transportation	About 100m
20-May-25	West of Coal Stock, Near Golf Course	138	51	26	16.12	33.80	Mining Activities, OCP, Transportation	About 500m
20-May-25	Sarangijharia Village	154	57	29	12.92	27.13	Domestic	About 500m

*NAAQS, 2009		100	60	80	80
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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
20-May-25	Ratansara Village	164	64	32	15.61	30.90	Transportation	About 100m
20-May-25	Khamarpara Village	132	51	25	11.69	21.51		
26-May-25	Ratansara Village	116	43	22	8.63	24.30	Transportation	About 100m
26-May-25	Sarangijharia Village	127	47	24	11.47	31.64	Domestic	About 500m
26-May-25	Khamarpara Village	154	56	28	12.99	38.68		
26-May-25	West of Coal Stock, Near Golf Course	160	59	29	12.68	40.02	Mining Activities, OCP, Transportation	About 500m
27-May-25	West of Coal Stock, Near Golf Course	120	45	23	11.19	26.98	Mining Activities, OCP, Transportation	About 500m
27-May-25	Khamarpara Village	129	12	48	22.09	126		
27-May-25	Sarangijharia Village	115	42	21	14.49	29.42	Domestic	About 500m
27-May-25	Ratansara Village	140	55	27	15.37	31.86	Transportation	About 100m

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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)	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)
05-May-2025	<20.0	18.35	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
06-May-2025	<20.0	12.58	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
12-May-2025	<20.0	26.47	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
13-May-2025	<20.0	16.25	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
19-May-2025	<20.0	15.47	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
20-May-2025	<20.0	21.75	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
26-May-2025	<20.0	14.93	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
27-May-2025	<20.0	18.08	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
Standard	400 (24hours)	180 (hour)	1.0 (24hours)	6.0 (Annual)	20 (Annual)	02 (8 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: 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 (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)
05-May-2025	<20.0	11.53	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
06-May-2025	<20.0	21.22	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
12-May-2025	<20.0	19.92	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
13-May-2025	<20.0	15.98	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
19-May-2025	<20.0	17.82	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
20-May-2025	<20.0	21.22	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
26-May-2025	<20.0	15.20	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
27-May-2025	<20.0	13.37	<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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Project	Basundhara OCP
Monitoring Station	North of the Sardega Railway Siding, Kulapada
Date of sampling	Carbon Monoxide (CO)
	mg/m ³
07-May-2025	1.6
21-May-2025	1.5
Standard	02(8Hours)

Project	BasundharaOCP
Monitoring Station	Body Workshp Basundhara
Date of sampling	Carbon Monoxide (CO)
	mg/m ³
07-May-2025	1.6
21-May-2025	1.8
Standard	02(8Hours)

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TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Mahalaxmi

PROJECT :

Basundhara (W) OCP

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
15-May-25	Quary Sump of Basundhara East OCP/ Near CHP of Basundhara East OCP	60.3	55.7
15-May-25	South-West of Working Face -Gopalpur Village,Near CMPDIL Camp	64.6	56.9
15-May-25	North of the Sardega Railway Siding ,Kulapada	63.4	56.7
15-May-25	West of Coal Stock , Near Golf Course	60.7	52.8
15-May-25	Sarangijharia Community Centre	50.4	41.6
15-May-25	Ratansara Village	50.6	41.2
29-May-25	South-West of Working Face -Gopalpur Village,Near CMPDIL Camp	61.7	52.3
29-May-25	North of the Sardega Railway Siding ,Kulapada	60.7	55.2
29-May-25	West of Coal Stock , Near Golf Course	62.2	52.4
29-May-25	Quary Sump of Basundhara East OCP/ Near CHP of Basundhara East OCP	61.2	56.3
29-May-25	Ratansara Village	50.8	41.6
29-May-25	Sarangijharia Community Centre	50.8	41.3

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

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EFFLUENT QUALITY DATA

Area :

Mahalaxmi

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

Date of Sampling	Sampling Station	pH	Project : Basundhara (W) OCP					DO	Remarks
			Oil & Grease	TSS	COD	BOD	TDS		
15-May-25	Sardega Railway Siding Sedementation Pond0	7.21	<4.0	36	24	-	-	-	
15-May-25	Basundhara (W) OCP Mine Sump	7.69	<4.0	34	8	-	-	-	

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

Project / OCP	Basundhara (W)		Indian Drinking Standards (IS-10500):2012	
	Water Treatment Plant Clear Water reservoir	Basundhar East Sump Quarry OCP		
Monitoring Station				
Date of Sampling	15-May-2025	15-May-2025	Acceptable	Permissible
Colour(Hazen)	3	3	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	1	4	1	5
pH	7.44	7.44	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	44	60	200	600
Chloride(mg/L)	12	10	250	1000
Sulphate(mg/L)	64.10	80.72	200	400
Nitrate(mg/L)	<0.5	<0.5	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	224	216	200	600
Calcium(mg/L)	44.00	44.8	75	200
Fluoride(mg/L)	<0.3	<0.3	1	1.5
Total Dissolve Solid(mg/L)	270	265	500	2000
Copper(mg/L)	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	0.05	0.1	0.3
Iron(mg/L)	<0.1	<0.1	1	No relaxation
Zinc(mg/L)	0.05	0.10	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	15-May-2025	15-May-2025	Acceptable	Permissible
Selenium(mg/L)	<0.005	<0.005	0.01	No relaxation
Sodium(mg/L)	8.34	8.01	—	—
Potassium(mg/L)	5.74	5.88	—	—
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	—	—

S. Hanish
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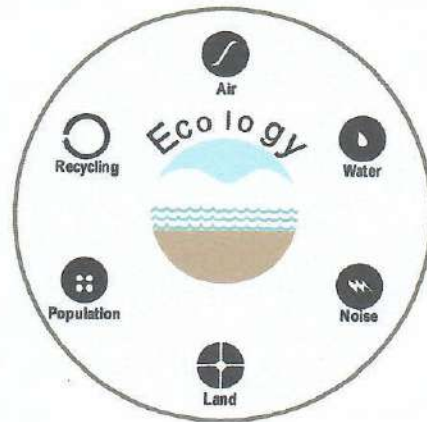
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**Environmental Monitoring Report
Of
Mahalaxmi Area
For
June-2025**

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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Test Report

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
13-Jun-25	North of the Sardega Railway Siding, Kulapada	173	74	32	14.63	32.16	Mining Activities, OCP, Coal Transportation	About 500m
13-Jun-25	Body Workshop Basundhara	183	87	39	17.42	22.26		
21-Jun-25	North of the Sardega Railway Siding, Kulapada	189	84	36	17.96	26.32	Mining Activities, OCP, Coal Transportation	About 500m
21-Jun-25	Body Workshop Basundhara	195	88	42	13.72	24.49		

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MoEF Standards Notification dated 25th
September, 2000

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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
02-Jun-25	Sarangijharia Village	163	63	30	19.66	18.01	Domestic	About 500m
02-Jun-25	Khamarpara Village	117	42	23	18.54	39.50		
02-Jun-25	Ratansara Village	121	45	24	9.85	21.19	Transportation	About 100m
02-Jun-25	West of Coal Stock, Near Golf Course	155	57	29	9.33	36.50	Mining Activities, OCP, Transportation	About 500m
03-Jun-25	Khamarpara Village	135	51	26	17.20	31.51		
03-Jun-25	West of Coal Stock, Near Golf Course	118	42	23	13.54	17.00	Mining Activities, OCP, Transportation	About 500m
03-Jun-25	Ratansara Village	150	55	28	14.29	23.35	Transportation	About 100m
03-Jun-25	Sarangijharia Village	142	53	27	15.42	19.32	Domestic	About 500m
09-Jun-25	Khamarpara Village	114	41	22	10.38	34.52		
09-Jun-25	West of Coal Stock, Near Golf Course	145	53	27	15.16	30.02	Mining Activities, OCP, Transportation	About 500m
09-Jun-25	Sarangijharia Village	154	57	29	13.85	31.00	Domestic	About 500m
09-Jun-25	Ratansara Village	128	48	25	9.28	20.55	Transportation	About 100m
10-Jun-25	West of Coal Stock, Near Golf Course	127	48	25	11.64	29.21	Mining Activities, OCP, Transportation	About 500m
10-Jun-25	Sarangijharia Village	133	49	26	12.65	22.34	Domestic	About 500m
10-Jun-25	Ratansara Village	117	43	23	12.59	22.29	Transportation	About 100m
10-Jun-25	Khamarpara Village	154	58	29	19.79	29.17		
16-Jun-25	Ratansara Village	132	46	24	15.28	26.52	Transportation	About 100m
16-Jun-25	Sarangijharia Village	147	48	26	13.45	26.82	Domestic	About 500m
16-Jun-25	Khamarpara Village	125	36	20	13.99	24.36		
16-Jun-25	West of Coal Stock, Near Golf Course	128	45	22	15.20	21.08	Mining Activities, OCP, Transportation	About 500m
17-Jun-25	Ratansara Village	110	34	19	15.53	34.32	Transportation	About 100m
17-Jun-25	Sarangijharia Village	155	53	29	15.97	19.50	Domestic	About 500m

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
17-Jun-25	Khamarpara Village	146	48	27	13.89	22.94		
17-Jun-25	West of Coal Stock, Near Golf Course	138	53	27	16.08	24.68	Mining Activities, OCP, Transportation	About 500m
23-Jun-25	Khamarpara Village	136	40	24	12.37	22.99		
23-Jun-25	Sarangijharia Village	127	34	20	12.11	18.15	Domestic	About 500m
23-Jun-25	West of Coal Stock, Near Golf Course	115	42	20	12.74	28.02	Mining Activities, OCP, Transportation	About 500m
23-Jun-25	Ratansara Village	143	50	26	13.32	20.44	Transportation	About 100m
24-Jun-25	Khamarpara Village	171	65	30	11.32	21.14		
24-Jun-25	Ratansara Village	154	54	29	14.57	18.75	Transportation	About 100m
24-Jun-25	Sarangijharia Village	111	45	24	13.17	20.68	Domestic	About 500m
24-Jun-25	West of Coal Stock, Near Golf Course	133	48	25	13.69	17.82	Mining Activities, OCP, Transportation	About 500m
27-Jun-25	Ratansara Village	133	47	24	17.02	24.62	Transportation	About 100m
27-Jun-25	Sarangijharia Village	136	41	23	12.37	20.72	Domestic	About 500m
27-Jun-25	West of Coal Stock, Near Golf Course	106	37	17	14.20	26.66	Mining Activities, OCP, Transportation	About 500m
27-Jun-25	Khamarpara Village	115	36	19	12.10	28.78		
28-Jun-25	West of Coal Stock, Near Golf Course	126	45	23	11.89	27.90	Mining Activities, OCP, Transportation	About 500m
28-Jun-25	Khamarpara Village	107	44	26	12.47	19.19		
28-Jun-25	Ratansara Village	122	38	20	12.53	29.83	Transportation	About 100m
28-Jun-25	Sarangijharia Village	112	35	17	15.40	27.38	Domestic	About 500m

*NAAQS, 2009

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Mahalaxmi

Project	Basundhara (W) OCP							
Monitoring Station	Sarangijharia Village							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) Pyrene	Benzene
	(μg/m ³)	(μg/m ³)	(μg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(μg/m ³)
02-Jun-2025	<20.0	15.62	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
03-Jun-2025	<20.0	16.12	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
09-Jun-2025	<20.0	24.80	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
10-Jun-2025	<20.0	13.63	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
16-Jun-2025	<20.0	20.83	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
17-Jun-2025	<20.0	17.60	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
23-Jun-2025	<20.0	21.07	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
24-Jun-2025	<20.0	19.83	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
27-Jun-2025	<20.0	17.10	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
28-Jun-2025	<20.0	15.87	<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: 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 (α) Pyrene	Benzene
	(μg/m ³)	(μg/m ³)	(μg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(μg/m ³)
02-Jun-2025	<20.0	12.65	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
03-Jun-2025	<20.0	19.33	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
09-Jun-2025	<20.0	24.30	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
10-Jun-2025	<20.0	17.35	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
16-Jun-2025	<20.0	16.12	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
17-Jun-2025	<20.0	25.53	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
23-Jun-2025	<20.0	17.35	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
24-Jun-2025	<20.0	17.85	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
27-Jun-2025	<20.0	26.53	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
28-Jun-2025	<20.0	26.78	<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 :

Mahalaxmi

PROJECT :

Basundhara (W) OCP

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
04-Jun-25	South-West of Working Face -Gopalpur Village,Near CMPDIL Camp	62.7	56.2
04-Jun-25	North of the Sardega Railway Siding ,Kulapada	59.1	47.3
04-Jun-25	West of Coal Stock , Near Golf Course	61.4	58.7
04-Jun-25	Ratansara Village	50.9	41.7
04-Jun-25	Sarangijharia Community Centre	52.1	41.9
25-Jun-25	South-West of Working Face -Gopalpur Village,Near CMPDIL Camp	59.3	52.7
25-Jun-25	West of Coal Stock , Near Golf Course	58.3	53.6
25-Jun-25	Sarangijharia Community Centre	51.8	40.6
25-Jun-25	North of the Sardega Railway Siding ,Kulapada	60.7	52.4
25-Jun-25	Ratansara Village	50.1	42.7

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 :

Mahalaxmi


PROJECT :

Basundhara (E) OCP

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
04-Jun-25	Quary Sump of Basundhara East OCP/ Near CHP of Basundhara East OCP	60.7	54.2
25-Jun-25	Quary Sump of Basundhara East OCP/ Near CHP of Basundhara East OCP	64.4	60.8


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

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Project	Basundhara OCP
Monitoring Station	North of the Sardega Railway Siding, Kulapada
Date of sampling	Carbon Monoxide (CO)
	mg/m³
13-Jun-2025	1.2
21-Jun-2025	1.3
Standard	02(8Hours)

Project	BasundharaOCP
Monitoring Station	Body Workshp Basundhara
Date of sampling	Carbon Monoxide (CO)
	mg/m³
13-Jun-2025	1.4
21-Jun-2025	1.2
Standard	02(8Hours)


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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
13-Jun-25	Inlet to ETP at Excavation Workshop, B(W)OCP	-	-	-	-	-	-	-	Dry
13-Jun-25	Outlet of ETP at Excavation Workshop, B(W)OCP	-	-	-	-	-	-	-	Dry
13-Jun-25	Sardega Railway Siding Sedimentation Pond	7.25	<4.0	63	84	-	-	-	
13-Jun-25	Basundhara (W) OCP Mine Sump	8.29	<4.0	33	20	-	-	-	
28-Jun-25	Inlet to ETP at Excavation Workshop, B(W)OCP	-	-	-	-	-	-	-	Dry
28-Jun-25	Outlet of ETP at Excavation Workshop, B(W)OCP	-	-	-	-	-	-	-	Dry

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MoEF Standard for discharge of Environmental Pollutants Part A: Effluents

5.5-9.0	10	100	250	30
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Effluent Quality (All Parameter): - Mahalaxmi Area

Project (OCP / UG)	Basundhara OCP		MoEF-Sch-VI Standards
	Basundhara (W) OCP Mine Sump	Sardega Railway Siding Sedimentation Pond	
NAME OF THE STATION			
Date of Sampling	15-May-2025	15-May-2025	
pH	7.69	7.21	
Total Hardness (asCaCO ₃),mg/L	280	332	4.0
Total Dissolved Solids, mg/L	420	498	10
Odour	Unobjectionable	Unobjectionable	-
Colour(Hazen)	2	3	-
Temperature(^o C)	31.5	32.1	Shall not exceed 5 ^o C above the receiving temperature
Nitrate Nitrogen(mg/L)(As N)	<0.5	1.60	10
Ammonical Nitrogen , mg/l (As N)	0.64	0.52	50
Total Kjeldhal Nitrogen, mg/l (As N)	3.32	3.32	100
Sulphide (mg/L)	<0.1	<0.1	2
BOD [3 days at 27 ^o C] (mg/L)	<2	<2	30
Fluoride(mg/L)	0.03	0.75	2
Copper(mg/L)	<0.03	<0.03	3
Manganese(mg/L)	<0.04	<0.04	2
Iron(mg/L)	<0.1	<0.1	3
Zinc(mg/L)	0.04	<0.04	5
Lead, mg/l	<0.005	<0.005	0.1
Cadmium, mg/l	<0.001	<0.001	2
Total Chromium(mg/L)	<0.01	<0.01	2
Hexavalent Chromium(mg/L)	<0.05	<0.05	0.1
Nickel(mg/L)	<0.02	<0.02	3
Arsenic, mg/l	<0.005	<0.005	0.2
Selenium (mg/L)	<0.005	<0.005	0.05
Disolved Phosphate(mg/L)	<4	<4	5
Phenolics (mg/L)	<0.001	<0.001	1


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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	13-Jun-2025	13-Jun-2025	Acceptable	Permissible
Colour(Hazen)	2	2	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	3	2	1	5
pH	7.37	8.88	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	60	80	200	600
Chloride(mg/L)	40	56	250	1000
Sulphate(mg/L)	75.12	88.76	200	400
Nitrate(mg/L)	<0.5	<0.5	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	232	236	200	600
Calcium(mg/L)	46.4	48	75	200
Fluoride(mg/L)	<0.3	<0.3	1	1.5
Total Dissolve Solid(mg/L)	400	405	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 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	13-Jun-2025	13-Jun-2025	Acceptable	Permissible
Selenium(mg/L)	<0.005	<0.005	0.01	No relaxation
Sodium(mg/L)	16.16	17.34		
Potassium(mg/L)	3.71	5.42		
Phenolics(mg/L)	<0.001	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	<0.2	0.2	1
MPN (Index/100 ml)	Not Detected	Not Detected	-	-

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Piezometer Water Quality Data: Mahalaxmi Area

Project / OCP	Basundhara (W)			Indian Drinking Standards (IS-10500):2012	
	Monitoring Station	MIP 13 (Tumulia Village, Inside campus of Manikeswari)	MIP 15 (Back side of Sardega Primary School)	MIP 17 (Gopalpur, CMPDI Expl Camp)	Acceptable
Date of Sampling	28-May-25	28-May-25	28-May-25	5	15
Colour(Hazen)	3	3	2	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	2	2	2	1	5
pH	6.90	7.61	6.77	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	296.85	316.64	192.95	200	600
Chloride(mg/L)	88.07	64.58	39.14	250	1000
Sulphate(mg/L)	59.22	36.75	32.12	200	400
Nitrate(mg/L)	0.65	12.61	<0.50	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	290.45	290.45	198.94	200	600
Calcium(mg/L)	81.45	78.25	43.12	75	200
Fluoride(mg/L)	0.49	0.47	0.59	1	1.5
Total Dissolve Solid(mg/L)	523	495	334	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	0.3	No relaxation
Zinc(mg/L)	<0.04	<0.04	0.22	5	15
Lead(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.001	<0.001	<0.001	0.003	No relaxation
Total Chromium (mg/L)	<0.01	<0.01	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	<0.005	<0.005	0.01	0.05
Selenium (mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	<0.2	<0.2	0.5	1
Sodium mg/L	20.07	22.98	7.20	-	-
Potassium mg/L	2.61	4.88	4.13	-	-
Phenolics (mg/L)	<0.001	<0.001	<0.001	0.001	0.002
Residual Free Chlorine (mg/L)	<0.2	<0.2	<0.2	0.2	1
MPN (Index/100ml)	Not Detected	Not Detected	Not Detected	-	-

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Surface Water Quality Data Mahalaxmi Area

Project/OCF	Basundhara (W)	IS:2296-1982 Tolerance for inland Surface water (Class C)
NAME OF STATIONS	Chaturdhara River Down Stream	
Date of sampling	28-Jun-25	
pH	6.52	6.5-8.5
Color (Hazen unit)	2	300
Dissolved Oxygen(mg/L)	6.2	4
BOD (3 days 27°C)(mg/L)	<2	3
Chlorides(mg/L)	5.84	600
Sulphate(mg/L)	18.31	400
Nitrate(mg/L)	2.52	50
Fluoride(mg/L)	0.69	1.5
Total Hardness(mg/L)	23.84	-
Total dissolved solids (mg/L)	86	1500
TSS(mg/L)	58	-
Copper(mg/L)	<0.03	1.5
Iron(mg/L)	<0.1	50
Zinc(mg/L)	0.090	15
Lead(mg/L)	<0.005	0.1
Cadmium(mg/L)	<0.001	0.01
Total Chromium (mg/L)	<0.01	-
Arsenic(mg/L)	<0.005	0.2
Selenium(mg/L)	<0.005	0.05
Chromium(as Cr ⁶⁺)(mg/L)	<0.05	0.05
Phenolics(mg/L)	<0.001	0.005
Oil & Grease (mg/L)	<4.0	0.1
MPN (Index/100 ml)	46	-
Residual Free Chlorine(mg/L)	<0.2	0.2

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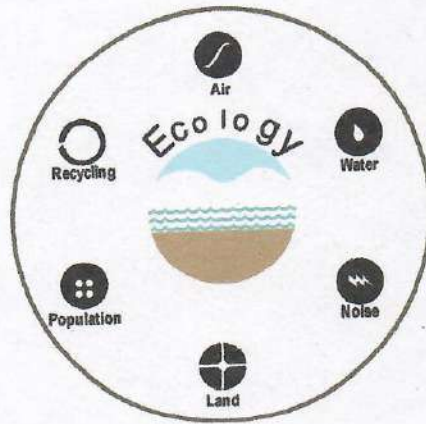
**Environmental Monitoring Report
Of
Mahalaxmi Area
For
July-2025**

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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AMBIENT AIR QUALITY DATA

Area : Mahalaxmi

(Compliance Station)

Project :

Basundhara (w) OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source	Distance from DGS
08-Jul-25	North of the Sardega Railway Siding, Kulapada	184	85	39	14.33	23.69	Mining Activities, OCP, Coal	About 500m
08-Jul-25	Body Workshop Basundhara	206	92	45	12.95	21.97		
28-Jul-25	North of the Sardega Railway Siding, Kulapada	218	103	44	17.31	33.06	Mining Activities, OCP, Coal	About 500m
28-Jul-25	Body Workshop Basundhara	189	83	41	11.90	27.04		

MoEF Standards Notification dated 25th
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
01-Jul-25	Sarangijharia Village	168	61	29	11.30	26.22	Domestic	About 500m
01-Jul-25	Khamarpara Village	138	53	25	17.59	26.04		
01-Jul-25	Ratansara Village	130	43	26	15.47	23.99	Transportation	About 100m
01-Jul-25	West of Coal Stock, Near Golf Course	154	63	29	15.33	37.71	Mining Activities, OCP, Transportation	About 500m
02-Jul-25	Khamarpara Village	122	41	18	11.53	29.75		
02-Jul-25	West of Coal Stock, Near Golf Course	138	37	21	13.90	24.53	Mining Activities, OCP, Transportation	About 500m
02-Jul-25	Ratansara Village	166	53	31	15.59	26.92	Transportation	About 100m
02-Jul-25	Sarangijharia Village	132	46	24	12.86	26.92	Domestic	About 500m
09-Jul-25	Khamarpara Village	126	46	22	13.05	26.44		
09-Jul-25	West of Coal Stock, Near Golf Course	130	52	24	10.18	26.06	Mining Activities, OCP, Transportation	About 500m
09-Jul-25	Sarangijharia Village	128	51	22	11.49	21.64	Domestic	About 500m
09-Jul-25	Ratansara Village	136	54	24	15.12	21.54	Transportation	About 100m
10-Jul-25	West of Coal Stock, Near Golf Course	151	53	26	12.30	33.96	Mining Activities, OCP, Transportation	About 500m
10-Jul-25	Sarangijharia Village	123	37	18	14.17	24.29	Domestic	About 500m
10-Jul-25	Ratansara Village	118	44	20	17.16	31.99	Transportation	About 100m
10-Jul-25	Khamarpara Village	129	49	24	15.89	33.12		
16-Jul-25	Ratansara Village	154	60	29	13.20	27.30	Transportation	About 100m
16-Jul-25	Sarangijharia Village	114	42	19	15.68	38.58	Domestic	About 500m
16-Jul-25	Khamarpara Village	144	53	26	20.19	37.52		
16-Jul-25	West of Coal Stock, Near Golf Course	145	48	27	12.28	25.41	Mining Activities, OCP, Transportation	About 500m
17-Jul-25	Ratansara Village	141	48	25	10.41	20.27	Transportation	About 100m
17-Jul-25	Sarangijharia Village	135	46	24	14.71	26.74	Domestic	About 500m

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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
17-Jul-25	Khamarpara Village	157	63	29	13.89	29.89		
17-Jul-25	West of Coal Stock, Near Golf Course	174	65	31	19.01	24.04	Mining Activities, OCP, Transportation	About 500m
23-Jul-25	Khamarpara Village	121	45	18	12.37	41.22		
23-Jul-25	Sarangijharia Village	130	40	21	17.08	26.82	Domestic	About 500m
23-Jul-25	West of Coal Stock, Near Golf Course	153	58	24	11.16	21.69	Mining Activities, OCP, Transportation	About 500m
23-Jul-25	Ratansara Village	125	42	20	13.16	29.92	Transportation	About 100m
24-Jul-25	Khamarpara Village	127	50	22	11.32	35.55		
24-Jul-25	Ratansara Village	153	57	28	16.92	22.31	Transportation	About 100m
24-Jul-25	Sarangijharia Village	139	49	26	16.33	29.02	Domestic	About 500m
24-Jul-25	West of Coal Stock, Near Golf Course	168	56	29	16.91	26.55	Mining Activities, OCP, Transportation	About 500m
30-Jul-25	Ratansara Village	144	51	23	18.86	25.72	Transportation	About 100m
30-Jul-25	Sarangijharia Village	136	43	22	20.11	21.13	Domestic	About 500m
30-Jul-25	West of Coal Stock, Near Golf Course	136	47	23	17.26	30.56	Mining Activities, OCP, Transportation	About 500m
30-Jul-25	Khamarpara Village	137	56	24	12.10	24.20		
31-Jul-25	West of Coal Stock, Near Golf Course	116	51	21	15.40	31.33	Mining Activities, OCP, Transportation	About 500m
31-Jul-25	Khamarpara Village	112	42	16	12.47	18.82		
31-Jul-25	Ratansara Village	173	66	30	10.08	29.19	Transportation	About 100m
31-Jul-25	Sarangijharia Village	129	38	20	20.86	32.88	Domestic	About 500m

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AMBIENT AIR QUALITY DATA

Area :

Mahalaxmi

(Reference Station)

Project :

Basundhara (E) OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
01-Jul-25	Khamarpara Village (Reported Only)	138	53	25	17.59	26.04		
02-Jul-25	Khamarpara Village (Reported Only)	122	41	18	11.53	29.75		
09-Jul-25	Khamarpara Village (Reported Only)	126	46	22	13.05	26.44		
10-Jul-25	Khamarpara Village (Reported Only)	129	49	24	15.89	33.12		
16-Jul-25	Khamarpara Village (Reported Only)	144	53	26	20.19	37.52		
17-Jul-25	Khamarpara Village (Reported Only)	157	63	29	13.89	29.89		
23-Jul-25	Khamarpara Village (Reported Only)	121	45	18	12.37	41.22		
24-Jul-25	Khamarpara Village (Reported Only)	127	50	22	11.32	35.55		
30-Jul-25	Khamarpara Village (Reported Only)	137	56	24	12.10	24.20		
31-Jul-25	Khamarpara Village (Reported Only)	112	42	16	12.47	18.82		

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Mahalaxmi

Project	Basundhara (W) OCP							
Monitoring Station	Sarangijharia Village							
Date of sampling	Ammonia (NH ₃) ($\mu\text{g}/\text{m}^3$)	Ozone (O ₃) ($\mu\text{g}/\text{m}^3$)	Lead (Pb) ($\mu\text{g}/\text{m}^3$)	Arsenic (As) (ng/m^3)	Nickel (Ni) (ng/m^3)	CO (mg/m^3)	Benzo (a) Pyrene (ng/m^3)	Benzene ($\mu\text{g}/\text{m}^3$)
01-Jul-2025	<20.0	18.00	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
02-Jul-2025	<20.0	24.25	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
09-Jul-2025	<20.0	17.25	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
10-Jul-2025	<20.0	25.00	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
16-Jul-2025	<20.0	28.00	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
17-Jul-2025	<20.0	20.75	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
23-Jul-2025	<20.0	19.50	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
24-Jul-2025	<20.0	16.50	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
30-Jul-2025	<20.0	26.75	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
31-Jul-2025	<20.0	11.50	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
Standard	400 (24hours)	180 (hour)	1.0 (24hours)	6.0 (Annual)	20 (Annual)	02 (8 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)
Area: Mahalaxmi

Project	Basundhara (W) OCP							
Monitoring Station	Khamarpara Village							
Date of sampling	Ammonia (NH ₃) (µg/m ³)	Ozone (O ₃) (µg/m ³)	Lead (Pb) (µg/m ³)	Arsenic (As) (ng/m ³)	Nickel (Ni) (ng/m ³)	CO (mg/m ³)	Benzo (α) Pyrene (ng/m ³)	Benzene (µg/m ³)
01-Jul-2025	<20.0	21.25	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
02-Jul-2025	<20.0	26.25	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
09-Jul-2025	<20.0	20.25	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
10-Jul-2025	<20.0	23.75	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
16-Jul-2025	<20.0	21.25	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
17-Jul-2025	<20.0	19.25	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
23-Jul-2025	<20.0	28.00	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
24-Jul-2025	<20.0	28.50	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
30-Jul-2025	<20.0	22.00	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
31-Jul-2025	<20.0	27.75	<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: Mahalaxmi

Project	Basundhara (W) OCP							
Monitoring Station	Ratansara Village							
Date of sampling	Ammonia (NH ₃) ($\mu\text{g}/\text{m}^3$)	Ozone (O ₃) ($\mu\text{g}/\text{m}^3$)	Lead (Pb) ($\mu\text{g}/\text{m}^3$)	Arsenic (As) (ng/m^3)	Nickel (Ni) (ng/m^3)	CO (mg/m^3)	Benzo (a) Pyrene (ng/m^3)	Benzene ($\mu\text{g}/\text{m}^3$)
01-Jul-2025	<20.0	24.25	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
02-Jul-2025	<20.0	24.75	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
09-Jul-2025	<20.0	18.75	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
10-Jul-2025	<20.0	25.00	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
16-Jul-2025	<20.0	14.00	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
17-Jul-2025	<20.0	28.75	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
23-Jul-2025	<20.0	11.25	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
24-Jul-2025	<20.0	28.25	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
30-Jul-2025	<20.0	18.25	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
31-Jul-2025	<20.0	26.75	<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: Mahalaxmi

Project	Basundhara (W) OCP							
Monitoring Station	West of Coal Stock, Near Golf Course							
Date of sampling	Ammonia (NH ₃) ($\mu\text{g}/\text{m}^3$)	Ozone (O ₃) ($\mu\text{g}/\text{m}^3$)	Lead (Pb) ($\mu\text{g}/\text{m}^3$)	Arsenic (As) (ng/m^3)	Nickel (Ni) (ng/m^3)	CO (mg/m^3)	Benzo (a) Pyrene (ng/m^3)	Benzene ($\mu\text{g}/\text{m}^3$)
01-Jul-2025	<20.0	25.00	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
02-Jul-2025	<20.0	21.25	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
09-Jul-2025	<20.0	19.25	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
10-Jul-2025	<20.0	27.75	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
16-Jul-2025	<20.0	26.25	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
17-Jul-2025	<20.0	16.50	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
23-Jul-2025	<20.0	19.50	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
24-Jul-2025	<20.0	18.00	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
30-Jul-2025	<20.0	19.25	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
31-Jul-2025	<20.0	19.50	<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 (E) OCP							
Monitoring Station	Khamarpara Village (Reported)							
Date of sampling	Ammonia (NH ₃) ($\mu\text{g}/\text{m}^3$)	Ozone (O ₃) ($\mu\text{g}/\text{m}^3$)	Lead (Pb) ($\mu\text{g}/\text{m}^3$)	Arsenic (As) (ng/m^3)	Nickel (Ni) (ng/m^3)	CO (mg/m^3)	Benzo (a) Pyrene (ng/m^3)	Benzene ($\mu\text{g}/\text{m}^3$)
01-Jul-2025	<20.0	21.25	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
02-Jul-2025	<20.0	26.25	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
09-Jul-2025	<20.0	20.25	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
10-Jul-2025	<20.0	23.75	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
16-Jul-2025	<20.0	21.25	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
17-Jul-2025	<20.0	19.25	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
23-Jul-2025	<20.0	28.00	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
24-Jul-2025	<20.0	28.50	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
30-Jul-2025	<20.0	22.00	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
31-Jul-2025	<20.0	27.75	<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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 <p>सीएमपीडीआई मिनी रत्न cmpdi Mini Ratna</p>	AMBIENT AIR QUALITY DATA
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Project	Basundhara(W)OCP
Monitoring Station	North of the Sardega Railway Siding, Kulapada
Date of sampling	Carbon Monoxide (CO)
	mg/m³
08-Jul-2025	1.1
29-Jul-2025	0.9
Standard	02(8Hours)

Project	Basundhara(W)OCP
Monitoring Station	Body WorkshpBasundhara
Date of sampling	Carbon Monoxide (CO)
	mg/m³
08-Jul-2025	1.2
29-Jul-2025	1.1
Standard	02(8Hours)


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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Mahalaxmi

Project	Basundhara (W) OCP				
Monitoring Station	North of the Sardega Railway Siding				
Date of sampling	Arsenic (As)	Nickel (Ni)	Mercury (Hg)	Chromium (Cr)	Cadmium (Cd)
	(ng/m ³)	(ng/m ³)	(ng/m ³)	(μg/m ³)	(μg/m ³)
21-May-2025	<1.0	<1.0	<1.0	<0.1	<0.1
Standard	6.0(Annual)	20(Annual)	-	-	-

Project	Basundhara (W) OCP				
Monitoring Station	Body Workshop Basunshara				
Date of sampling	Arsenic (As)	Nickel (Ni)	Mercury (Hg)	Chromium (Cr)	Cadmium (Cd)
	(ng/m ³)	(ng/m ³)	(ng/m ³)	(μg/m ³)	(μg/m ³)
21-May-2025	<1.0	<1.0	<1.0	<0.1	<0.1
Standard	6.0(Annual)	20(Annual)	-	-	-

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TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Mahulaxmi

PROJECT :

Basundhara (W) OCP

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
10-Jul-25	South-West of Working Face -Gopalpur Village,Near CMPDIL Camp	49.2	39.4
10-Jul-25	West of Coal Stock , Near Golf Course	50.7	41.5
10-Jul-25	North of the Sardega Railway Siding ,Kulapada	49.4	40.9
10-Jul-25	Sarangijharia Community Centre	50.6	42.3
10-Jul-25	Ratansara Village	52.4	40.7
30-Jul-25	South-West of Working Face -Gopalpur Village,Near CMPDIL Camp	52.7	41.4
30-Jul-25	West of Coal Stock , Near Golf Course	51.8	42.4
30-Jul-25	North of the Sardega Railway Siding ,Kulapada	49.3	40.7
30-Jul-25	Sarangijharia Community Centre	49.5	40.8
30-Jul-25	Ratansara Village	52.3	41.6

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 :

Mahalaxmi

PROJECT :

Basundhara (E) OCP

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
10-Jul-25	Quary Sump of Basundhara East OCP/ Near CHP of Basundhara East OCP	49.7	42.4
30-Jul-25	Quary Sump of Basundhara East OCP/ Near CHP of Basundhara East OCP	51.7	42.3

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

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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
15-Jul-25	Basundhara (W) OCP Mine Sump	7.23	<4.0	23	12	-	-	-	
15-Jul-25	Sardega Railway Siding Sedementation Pond	7.60	<4.0	17	24	-	-	-	
15-Jul-25	Inlet to ETP at Excavation Workshop, B(W)OCP	-	-	-	-	-	-	-	Dry
15-Jul-25	Outlet of ETP at Excavation Workshop, B(W)OCP	-	-	-	-	-	-	-	Dry
28-Jul-25	Inlet to ETP at Excavation Workshop, B(W)OCP	-	-	-	-	-	-	-	Dry
28-Jul-25	Outlet of ETP at Excavation Workshop, B(W)OCP	-	-	-	-	-	-	-	Dry

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

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

Project / OCP	Basundhara (W)	Indian Drinking Standards (IS-10500):2012	
Monitoring Station	Water Treatment Plant Clear Water Reservoir	Acceptable	Permissible
Date of Sampling	15-Jul-2025	Acceptable	Permissible
Colour(Hazen)	3	5	15
Odour	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	3	1	5
pH	7.59	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	89.06	200	600
Chloride(mg/L)	50.9	250	1000
Sulphate(mg/L)	87.21	200	400
Nitrate(mg/L)	<0.5	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	214.6	200	600
Calcium(mg/L)	41.34	75	200
Fluoride(mg/L)	<0.3	1	1.5
Total Dissolve Solid(mg/L)	324	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)	0.11	5	15
Lead(mg/L)	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.005	0.003	No relaxation
Total Chromium (mg/L)	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	0.5	2.4

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Drinking Water Quality Data Mahalaxmi Area

Project / OCP	Basundhara (W)	Indian Drinking Standards (IS-10500):2012	
Monitoring Station	Water Treatment Plant Clear Water Reservoir	Acceptable	Permissible
Date of Sampling	15-Jul-2025		
Selenium(mg/L)	<0.005	0.01	No relaxation
Sodium(mg/L)	8.65	—	—
Potassium(mg/L)	5.89	—	—
Phenolics(mg/L)	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	0.2	1
MPN (Index/100 ml)	Not Detected	—	—

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Drinking Water Quality Data Mahalaxmi Area

Project / OCP	Basundhara (E)	Indian Drinking Standards (IS-10500):2012	
	Basundhar East Sump Quarry OCP	Acceptable	Permissible
Monitoring Station	15-Jul-2025		
Date of Sampling	3	5	15
Colour(Hazen)	3	5	15
Odour	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	3	1	5
pH	8.46	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	89.06	200	600
Chloride(mg/L)	60.7	250	1000
Sulphate(mg/L)	95.21	200	400
Nitrate(mg/L)	<0.5	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	226.52	200	600
Calcium(mg/L)	46.11	75	200
Fluoride(mg/L)	<0.3	1	1.5
Total Dissolve Solid(mg/L)	337	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)	<0.005	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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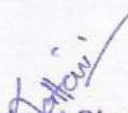
Signature



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Drinking Water Quality Data Mahalaxmi Area

Project / OCP	Basundhara (E)	Indian Drinking Standards (IS-10500):2012	
Monitoring Station	Basundhar East Sump Quarry OCP	Acceptable	Permissible
Date of Sampling	15-Jul-2025		
Selenium(mg/L)	<0.005	0.01	No relaxation
Sodium(mg/L)	8.6		
Potassium(mg/L)	6.22		
Phenolics(mg/L)	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	0.2	1
MPN (Index/100 ml)	Not Detected	-	-


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Basundhara (W) OCP

Sarangijharia Village

North of the Sardega Railway Siding, Kalapada

West of Coal Stock, Near Golf Course

Khamarpara, East Side of Sardega Railway Siding

Ratansara Village

Legend
Air Monitoring Locations

Google Earth

Image © 2005 Airbus

3 km

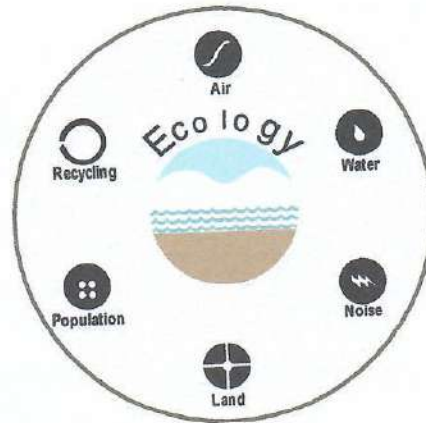


**Environmental Monitoring Report
Of
Mahalaxmi Area
For
August-2025**

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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Test Report



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
13-Aug-25	North of the Sardega Railway Siding, Kulapada	196	94	41	16.11	35.39	Mining Activities, OCP, Coal Transportation	About 500m
13-Aug-25	Body Workshop Basundhara	194	83	38	13.79	31.69		
23-Aug-25	North of the Sardega Railway Siding, Kulapada	208	109	44	14.77	25.08	Mining Activities, OCP, Coal Transportation	About 500m
23-Aug-25	Body Workshop Basundhara	196	93	41	12.37	28.57		

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

AMBIENT AIR QUALITY DATA

Area :

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
04-Aug-25	Sarangijharia Village	146	46	22	16.15	23.39	Domestic	About 500m
04-Aug-25	Khamarpara Village	110	42	18	15.36	29.15		
04-Aug-25	West of Coal Stock, Near Golf Course	131	43	22	14.05	28.07	Mining Activities, OCP, Transportation	About 500m
04-Aug-25	Ratansara Village	158	66	31	15.36	31.45	Transportation	About 100m
05-Aug-25	West of Coal Stock, Near Golf Course	113	35	17	15.12	33.99	Mining Activities, OCP, Transportation	About 500m
05-Aug-25	Sarangijharia Village	132	62	20	13.91	16.67	Domestic	About 500m
05-Aug-25	Ratansara Village	120	51	27	13.85	24.91	Transportation	About 100m
05-Aug-25	Khamarpara Village	117	49	22	16.05	34.48		
11-Aug-25	Ratansara Village	136	45	23	13.84	22.82	Transportation	About 100m
11-Aug-25	West of Coal Stock, Near Golf Course	129	43	23	16.11	32.18	Mining Activities, OCP, Transportation	About 500m
11-Aug-25	Sarangijharia Village	149	50	27	16.19	29.93	Domestic	About 500m
11-Aug-25	Khamarpara Village	105	36	17	14.53	21.77		
12-Aug-25	West of Coal Stock, Near Golf Course	149	55	28	14.47	28.91	Mining Activities, OCP, Transportation	About 500m
12-Aug-25	Sarangijharia Village	118	39	16	15.28	27.47	Domestic	About 500m
12-Aug-25	Khamarpara Village	136	58	25	13.84	24.20		
12-Aug-25	Ratansara Village	172	62	29	16.20	25.09	Transportation	About 100m
20-Aug-25	Sarangijharia Village	134	48	23	16.58	23.75	Domestic	About 500m
20-Aug-25	West of Coal Stock, Near Golf Course	144	54	24	17.74	31.71	Mining Activities, OCP, Transportation	About 500m
20-Aug-25	Khamarpara Village	124	47	20	20.01	33.13		
20-Aug-25	Ratansara Village	128	48	21	13.65	32.77	Transportation	About 100m
21-Aug-25	West of Coal Stock, Near Golf Course	130	47	22	13.33	33.20	Mining Activities, OCP, Transportation	About 500m
21-Aug-25	Sarangijharia Village	167	69	31	12.36	23.50	Domestic	About 500m

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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
21-Aug-25	Ratansara Village	137	55	24	10.25	27.25	Transportation	About 100m
21-Aug-25	Khamarpara Village	144	56	24	10.87	23.27		
27-Aug-25	Ratansara Village	119	37	18	16.01	17.59	Transportation	About 100m
27-Aug-25	Sarangijharia Village	137	51	22	22.28	21.62	Domestic	About 500m
27-Aug-25	Khamarpara Village	130	51	22	12.60	32.09		
27-Aug-25	West of Coal Stock, Near Golf Course	157	66	28	18.73	18.29	Mining Activities, OCP, Transportation	About 500m
28-Aug-25	West of Coal Stock, Near Golf Course	108	34	15	12.50	28.06	Mining Activities, OCP, Transportation	About 500m
28-Aug-25	Khamarpara Village	112	43	17	12.01	34.83		
28-Aug-25	Sarangijharia Village	156	70	29	15.42	20.27	Domestic	About 500m
28-Aug-25	Ratansara Village	149	53	26	15.36	22.6	Transportation	About 100m

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Test Report

AMBIENT AIR QUALITY DATA

Area :

Mahalaxmi

(Reference Station)

Project :

Basundhara (E) OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
04-Aug-25	Khamarpara Village (Reported Only)	110	42	18	15.36	29.15		
05-Aug-25	Khamarpara Village (Reported Only)	117	49	22	16.05	34.48		
11-Aug-25	Khamarpara Village (Reported Only)	105	36	17	14.53	21.77		
12-Aug-25	Khamarpara Village (Reported Only)	136	58	25	13.84	24.20		
20-Aug-25	Khamarpara Village (Reported Only)	124	47	20	20.01	33.13		
21-Aug-25	Khamarpara Village (Reported Only)	144	56	24	10.87	23.27		
27-Aug-25	Khamarpara Village (Reported Only)	130	51	22	12.60	32.09		
28-Aug-25	Khamarpara Village (Reported Only)	112	43	17	12.01	34.83		

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Mahalaxmi

Project	Basundhara (W) OCP							
Monitoring Station	West of Coal Stock, Near Golf Course							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) Pyrene	Benzene
	(μg/m ³)	(μg/m ³)	(μg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(μg/m ³)
04-Aug-2025	<20.0	22.33	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
05-Aug-2025	<20.0	13.87	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
11-Aug-2025	<20.0	15.28	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
12-Aug-2025	<20.0	11.49	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
20-Aug-2025	<20.0	18.73	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
21-Aug-2025	<20.0	20.19	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
27-Aug-2025	<20.0	12.62	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
28-Aug-2025	<20.0	16.38	<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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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Mahalaxmi

Project	Basundhara (W) OCP							
Monitoring Station	Sarangijharia Village							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) Pyrene	Benzene
	(μg/m ³)	(μg/m ³)	(μg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(μg/m ³)
04-Aug-2025	<20.0	16.40	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
05-Aug-2025	<20.0	14.70	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
11-Aug-2025	<20.0	24.32	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
12-Aug-2025	<20.0	19.22	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
20-Aug-2025	<20.0	18.93	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
21-Aug-2025	<20.0	20.92	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
27-Aug-2025	<20.0	24.03	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
28-Aug-2025	<20.0	20.35	<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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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 (α) Pyrene	Benzene
	(μg/m ³)	(μg/m ³)	(μg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(μg/m ³)
04-Aug-2025	<20.0	11.30	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
05-Aug-2025	<20.0	18.37	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
11-Aug-2025	<20.0	18.65	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
12-Aug-2025	<20.0	19.22	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
20-Aug-2025	<20.0	24.32	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
21-Aug-2025	<20.0	22.05	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
27-Aug-2025	<20.0	22.05	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
28-Aug-2025	<20.0	14.42	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
Standard	400 (24hours)	180 (hour)	1.0 (24hours)	6.0 (Annual)	20 (Annual)	02 (8 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Mahalaxmi

Project	Basundhara (W) OCP							
Monitoring Station	Khamarpara Village							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) Pyrene	Benzene
	(μg/m ³)	(μg/m ³)	(μg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(μg/m ³)
04-Aug-2025	<20.0	19.78	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
05-Aug-2025	<20.0	23.18	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
11-Aug-2025	<20.0	24.32	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
12-Aug-2025	<20.0	21.48	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
20-Aug-2025	<20.0	19.34	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
21-Aug-2025	<20.0	17.50	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
27-Aug-2025	<20.0	19.97	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
28-Aug-2025	<20.0	21.21	<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: Mahalaxmi

Project	Basundhara (E) OCP							
Monitoring Station	Khamarpara Village (Reported)							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (a) Pyrene	Benzene
	(µg/m ³)	(µg/m ³)	(µg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(µg/m ³)
04-Aug-2025	<20.0	19.78	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
05-Aug-2025	<20.0	23.18	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
11-Aug-2025	<20.0	24.32	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
12-Aug-2025	<20.0	21.48	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
20-Aug-2025	<20.0	19.34	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
21-Aug-2025	<20.0	17.50	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
27-Aug-2025	<20.0	19.97	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
28-Aug-2025	<20.0	21.21	<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)

T. Tewari
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AMBIENT AIR QUALITY DATA

Area: Mahalaxmi

Project	Basundhara(W)OCP
Monitoring Station	North of the Sardega Railway Siding, Kulapada
Date of sampling	Carbon Monoxide (CO)
	mg/m³
13-Aug-2025	0.7
23-Aug-2025	0.6
Standard	02(8Hours)

Project	Basundhara(W)OCP
Monitoring Station	Body WorkshpBasundhara
Date of sampling	Carbon Monoxide (CO)
	mg/m³
13-Aug-2025	0.8
23-Aug-2025	0.7
Standard	02(8Hours)

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TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Mahalaxmi

PROJECT :

Basundhara (W) OCP

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
06-Aug-25	South-West of Working Face -Gopalpur Village,Near CMPDIL Camp	52.6	40.3
06-Aug-25	Ratansara Village	49.7	42.4
06-Aug-25	West of Coal Stock , Near Golf Course	50.7	42.4
06-Aug-25	Sarangijharia Community Centre	50.4	40.3
06-Aug-25	North of the Sardega Railway Siding ,Kulapada	52.3	42.9
22-Aug-25	South-West of Working Face -Gopalpur Village,Near CMPDIL Camp	54.4	44.5
22-Aug-25	North of the Sardega Railway Siding ,Kulapada	60.4	52.7
22-Aug-25	West of Coal Stock , Near Golf Course	52.3	41.6
22-Aug-25	Sarangijharia Community Centre	50.2	40.7
22-Aug-25	Ratansara Village	52.6	42.3

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

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CMPDI, RI-VII, LAB
BHUBANESWAR

Jamati



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विश्व स्तर पर
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सर्वोत्तम

TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Mahalaxmi

PROJECT :

Basundhara (E) OCP

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
06-Aug-25	Quary Sump of Basundhara East OCP/ Near CHP of Basundhara East OCP	52.4	40.7
22-Aug-25	Quary Sump of Basundhara East OCP/ Near CHP of Basundhara East OCP	51.9	40.4

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

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TABLE--

EFFLUENT QUALITY DATA

Area :

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
14-Aug-25	Sardega Railway Siding Sedimentation Pond	6.47	<4.0	32	28	-	-	-	
14-Aug-25	Outlet of ETP at Excavation Workshop, B(W)OCP	-	-	-	-	-	-	-	Dry
14-Aug-25	Inlet to ETP at Excavation Workshop, B(W)OCP	-	-	-	-	-	-	-	Dry
14-Aug-25	Basundhara (W) OCP Mine Sump	6.93	<4.0	29	20	-	-	-	
30-Aug-25	Outlet of ETP at Excavation Workshop, B(W)OCP	-	-	-	-	-	-	-	Dry
30-Aug-25	Inlet to ETP at Excavation Workshop, B(W)OCP	-	-	-	-	-	-	-	Dry

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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 Mahalaxmi Area

Project / OCP	Basundhara (W)	Indian Drinking Standards (IS-10500):2012	
Monitoring Station	Water Treatment Plant Clear Water Reservoir	Acceptable	Permissible
Date of Sampling	14-Aug-2025		
Colour(Hazen)	2	5	15
Odour	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	3	1	5
pH	6.92	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	21.01	200	600
Chloride(mg/L)	15.54	250	1000
Sulphate(mg/L)	75	200	400
Nitrate(mg/L)	16.34	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	109.81	200	600
Calcium(mg/L)	25.15	75	200
Fluoride(mg/L)	0.59	1	1.5
Total Dissolve Solid(mg/L)	206	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)	<0.005	0.003	No relaxation
Total Chromium (mg/L)	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	0.5	2.4

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Drinking Water Quality Data Mahalaxmi Area

Project / OCP	Basundhara (W) Water Treatment Plant Clear Water Reservoir	Indian Drinking Standards (IS-10500):2012	
		Acceptable	Permissible
Monitoring Station			
Date of Sampling	14-Aug-2025		
Selenium(mg/L)	<0.005	0.01	No relaxation
Sodium(mg/L)	8.34		
Potassium(mg/L)	5.87		
Phenolics(mg/L)	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	0.2	1
MPN (Index/100 ml)	Not Detected	-	-

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Drinking Water Quality Data Mahalaxmi Area

Project / OCP	Basundhara (E)	Indian Drinking Standards (IS-10500):2012	
Monitoring Station	Basundhar East Sump Quarry OCP	Acceptable	Permissible
Date of Sampling	14-Aug-2025		
Colour(Hazen)	2	5	15
Odour	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	4	1	5
pH	7.20	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	46.22	200	600
Chloride(mg/L)	13.60	250	1000
Sulphate(mg/L)	92.5	200	400
Nitrate(mg/L)	12.26	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	152.95	200	600
Calcium(mg/L)	29.86	75	200
Fluoride(mg/L)	0.76	1	1.5
Total Dissolve Solid(mg/L)	233	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)	<0.005	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

T. J. Jaiswal
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Jaiswal



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Drinking Water Quality Data Mahalaxmi Area

Project / OCP	Basundhara (E)	Indian Drinking Standards (IS-10500):2012	
	Basundhar East Sump Quarry OCP	Acceptable	Permissible
Monitoring Station	14-Aug-2025		
Date of Sampling			
Selenium(mg/L)	<0.005	0.01	No relaxation
Sodium(mg/L)	8.31		
Potassium(mg/L)	7.02		
Phenolics(mg/L)	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	0.2	1
MPN (Index/100 ml)	Not Detected	-	-


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Piezometer Water Quality Data: Mahalaxmi Area

Project / OCP	Basundhara (W)			Indian Drinking Standards (IS-10500):2012	
	Monitoring Station	MIP 13 (Tumulia Village, Inside campus of Manikeswari)	MIP 15 (Back side of Sardega Primary School)	MIP 17 (Gopalpur, CMPDI Expl Camp)	Acceptable
Date of Sampling	28-May-25	28-May-25	28-May-25	5	15
Colour(Hazen)	3	3	2	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	2	2	2	1	5
pH	6.90	7.61	6.77	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	296.85	316.64	192.95	200	600
Chloride(mg/L)	88.07	64.58	39.14	250	1000
Sulphate(mg/L)	59.22	36.75	32.12	200	400
Nitrate(mg/L)	0.65	12.61	<0.50	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	290.45	290.45	198.94	200	600
Calcium(mg/L)	81.45	78.25	43.12	75	200
Fluoride(mg/L)	0.49	0.47	0.59	1	1.5
Total Dissolve Solid(mg/L)	523	495	334	500	2000
Copper(mg/L)	<0.03	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	<0.04	<0.04	0.1	0.3
Iron(mg/L)	<0.1	<0.1	<0.1	1.0	No relaxation
Zinc(mg/L)	<0.04	<0.04	0.22	5	15
Lead(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.001	<0.001	<0.001	0.003	No relaxation
Total Chromium (mg/L)	<0.01	<0.01	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Selenium (mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	<0.2	<0.2	0.5	2.4
Sodium mg/L	20.07	22.98	7.20	-	-
Potassium mg/L	2.61	4.88	4.13	-	-
Phenolics (mg/L)	<0.001	<0.001	<0.001	0.001	0.002
Residual Free Chlorine (mg/L)	<0.2	<0.2	<0.2	0.2	1
MPN (Index/100ml)	Not Detected	Not Detected	Not Detected	-	-

Kattarank

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Jasmati

Basundhara (W) OCP

Sarangijharia Village

Legend

Air Monitoring Locations

North of the Sardega Railway Siding, Kurapada

Khamarpara, East Side of Sardega Railway Siding

West of Coal Stock, Near Golf Course

Ratansara Village

Google Earth

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3 km

