

ମହାନଦୀ କୋଲଫିଲ୍ଡସ୍ ଲିମିଟେଡ୍
महानदी कोलफील्डस लिमिटेड
Mahanadi Coalfields Limited
(A subsidiary of Coal India Limited)

Mahanadi Coalfields Limited
Office of the Project Officer,
Bharatpur OCP, PO: N.S.Nagar Bharatpur,
P.S.: Colliery, Dist.: Angul, Odisha,
Pin Code- 759148, Ph. No.:06760-295008



MCL

Ref No. MCL/PO (BOCP)/Envt./2025/ 617

Date: 03.12.2025

To,

**The Director General of Forest (In-charge),
Ministry of Environment, Forest & Climate Change,
Eastern Regional Office, A/3, Chandrasekharpur,
Bhubaneswar, Odisha- 751023.**

Sub: Submission of half yearly compliance report of the Environmental Clearance conditions for the period from **April'25 to Sep'25** in respect of BharatpurOCP of M/s. Mahanadi Coalfields Limited.

Ref: 1. Environmental Clearance Order vide No. J-11015/630/2007-IA.II(M), dtd: 31.10.2008.
2. Environmental Clearance Amendment vide no. J-11015/630/2007-IA.II(M), dtd: 27.05.2021.

Dear Sir,

In reference to the above cited subject and EC Order, EC amendment mentioned under reference; enclosed please find herewith the half yearly compliance report of the Environmental Clearance conditions for the period from **April'25 to Sep'25** in respect of Bharatpur OCP of M/s. Mahanadi Coalfields Limited.

This is for favour of your kind information, please.

Yours faithfully,

Encl: As mentioned above.

Project Officer
Bharatpur OCP.

Copy to:

1. The General Manager (E&F), MCL HQ, Burla.
2. The General Manager, Bharatpur Area.
3. The Colliery manager, Bharatpur OCP.
4. The Area Evt. Officer, Bharatpur Area.
4. The Project Engineer (Civil/Excv/E&M), Bharatpur OCP.
5. The Project Evt. Officer, Bharatpur OCP.
6. Office Copy.

HALF YEARLY COMPLIANCE
REPORT ON CONDITIONS IMPOSED IN
THE ENVIRONMENTAL CLEARANCE
ORDER IN RESPECT OF BHARATPUR
OPEN CAST PROJECT

Apr'2025
to Sep' 2025

SIX MONTHLY PROGRESS REPORT ON
IMPLEMENTATION OF ENVIRONMENTAL CLEARANCE
CONDITIONS IMPOSED BY
MoEF&CC.

Compliance report for the period from April-2025 to September-2025 on conditions imposed in the Environmental Clearance Order Vide No. J-11015/630/2007-IA.II (M) Dated 31.10.2008 and subsequent amendment Dated 27.05.2021 granted by MoEF&CC, GOI in respect of Bharatpur Opencast Project of M/s Mahanadi Coalfields Limited.



BHARATPUR OCP
MAHANADI COALFIELDS LIMITED

A. SPECIFIC CONDITONS:

Sl No.	CLEARANCE CONDITIONS	STATUS OF IMPLEMENTATION OF CONDITIONS
(i)	No mining activities shall be undertaken in the forest land for which forestry clearance has not been obtained under the provisions FC Act,1980.	Presently, mining activities are being undertaken in the area having 134.41 Ha. of forest land, for which stage-II forest clearance has already been obtained. Vide Letter No-F.NO.8-87/2012-FC Dtd. 07.02.2014, Govt. of India, Ministry of Environment, Forest & Climate Change and subsequent letter vide No.10F (Consent) 440/2012/4050/F&E, Bhubaneswar, Dated. 28.02.2014.
(ii)	Topsoil, if any, shall be stacked properly with proper slope at earmarked site(s) and shall not be kept active and shall be used for reclamation and development of greenbelt.	Top soil is used concurrently for spreading over the technically reclaimed mined out land for biological reclamation. The Top soil removed up to Sep-2025 is around 7865857.6 cubic meters. The area over which the said top soil has been spread is about 246.97 Ha for development of green belt and the work has been carried out departmentally.
(iii)	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.	Over burden is simultaneously back filled in the de-coaled area. No new external OB dump has been created.
(iv)	No modification of natural drainage by construction of an embankment or diversion of nallahs, Jhores, drains shall be undertaken in the expansion project.	No modification of natural drainage has been done in the project area.
(v)	Monitoring and management of existing reclaimed dumpsite shall continue until the vegetation become self-sustaining. Compliance status shall be submitted to the Ministry of Environment & Forests and its Regional office located at Bhubaneswar on yearly basis.	The biological reclamation of overburden dumps is in continuous process. Total 160.16 ha of backfilled area has already been planted. Total 9600 nos. of plants over 6.0 Ha of backfilled area were planted in 2025 by DFO, Angul and 1.0 Hectare was planted by OFDC. There are 5 nos. of external OB dumps. The total area of external OB dumps is 49.50 Ha. Out of which 30.46 Ha has been biologically reclaimed. In the rest area natural vegetation has come up and stabilized.
(vi)	Catch drains and siltation ponds of appropriate size shall be constructed to arrest silt and sediment flows from soil, OB and mineral dumps. The water so collected shall be utilized for watering the mine area, roads, green	Catch drains have been provided at the toe of OB dumps from where water is collected in different sumps and is utilized for watering the mine area, roads, greenbelt development, etc. The details of the capacity of sumps are as follows:

	<p>Belt development, etc. The drains shall be regularly de-silted and maintained properly.</p> <p>Garland drains (size, gradient and length) and sump capacity shall be designed keeping 50% safety margin over above the peak sudden rainfall and maximum discharge in the area adjoining the mine site. Sump capacity shall also provide adequate retention period to allow proper setting of slit material.</p>	<table border="1" data-bbox="655 129 1497 555"> <thead> <tr> <th>Sump Name</th> <th>Actual Area (m²)</th> <th>Depth(m)(Average)</th> <th>Volume (Lakh m³)</th> </tr> </thead> <tbody> <tr> <td>Departmental Sump</td> <td>145200</td> <td>40</td> <td>58.08</td> </tr> <tr> <td>BLA North sump</td> <td>60060</td> <td>22</td> <td>13.21</td> </tr> <tr> <td>BLA South Sump</td> <td>107160</td> <td>25</td> <td>26.79</td> </tr> <tr> <td>Padmabatipur sump</td> <td>65790</td> <td>20</td> <td>13.15</td> </tr> <tr> <td>Main Sump</td> <td>124000</td> <td>40</td> <td>49.6</td> </tr> <tr> <td>Panchmukhi sump</td> <td>32640</td> <td>10</td> <td>3.26</td> </tr> <tr> <td>South quarry sump</td> <td>359583</td> <td>40</td> <td>143.83</td> </tr> <tr> <td>Old quarry sump</td> <td>47805</td> <td>40</td> <td>19.12</td> </tr> <tr> <td>Total</td> <td></td> <td></td> <td>327.06</td> </tr> </tbody> </table> <p>Garland drains have been provided as per the requirement and safety margin. About two lakhs liters capacity of sedimentation tank is provided for settling the silt material of mine water.</p>	Sump Name	Actual Area (m ²)	Depth(m)(Average)	Volume (Lakh m ³)	Departmental Sump	145200	40	58.08	BLA North sump	60060	22	13.21	BLA South Sump	107160	25	26.79	Padmabatipur sump	65790	20	13.15	Main Sump	124000	40	49.6	Panchmukhi sump	32640	10	3.26	South quarry sump	359583	40	143.83	Old quarry sump	47805	40	19.12	Total			327.06
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(vii)	<p>Dimension of the retaining wall at the toe of the dumps and OB benches within the mine to check run-off and siltation shall be based on the rainfall data.</p>	<p>Retaining wall at toe of Internal OB dumps is not required as the proper catch drain and Garland drains provided around OB dumps in the mine. The catch drains have been constructed to check the runoff and siltation at toe of the OB dumps. Runoff is being diverted into mine sumps within the mine.</p>																																								
(viii)	<p>Crushers at the CHP shall be operated with high efficiency bagfilters, water sprinkling system provided to check fugitive emissions from crushing operations haul road sand at transfer points shall be mist-spray type, and the conveyor system shall be closed type.</p>	<p>Crushers at the C.H.P are operated with high efficiency misters(02 nos. water guns, 26 nos. sprinklers and about 400 misters) to check fugitive dust emission from crushing operation and haul road dust suppression is being done by 07 (numbers of 28 KL departmental mobile Water Tankers and 05 Nos.- 12 KL contractual mobile water tankers. Closed type conveyor system is arranged for coal dispatch. RLS (SILO Loading System) consists of 02 Nos .of loading chutes and each loading chute is provided with 32 Nos. of Misters for suppressing dust. All are working in good condition. New SILO with capacity of 15MTPA has been commissioned and is equipped with water sprinkling system. This will enable dust free transportation with closed conveyor system. 12 nos. of fixed type Fog cannons of 100 meters. Throw have installed at different dust prone points such as railway sidings, haul roads, stock yards and transfer points for dust suppression (mist spray type).</p> <p>01 no. mobile fog canon has also been deployed for dust suppression over coal transportation road & coal corridor road.</p> <p>01 nos. mechanical road sweepers are deployed on Coal Corridor and CT Road to minimize dust.</p>																																								
(ix)	<p>Drills shall be wet operated. Approach roads shall be black-topped, and mechanical sweepers shall be regularly deployed to clear the dust off the main approach roads and mineral transportation roads. Water sprinkling (fixed and mist type, mobile) shall be regularly done along the main haul roads.</p>	<p>Drills are equipped with wet drilling arrangements and are in working order. The haul roads are regularly sprayed with water by mobile tankers (5 nos., 28 KL capacity). Around 5.5 km of internal coal transportation road is being concreted. One mechanical road sweeper is deployed for dust removal from CT roads, approach roads, and the public road near the mine area.</p> <p>Contractual water tankers are also deployed on the coal transportation road, railway siding, and other mining zones at Bharatpur OCP. Apart from this, two numbers of instant water shower systems are installed at the exit of the mine quarry, and 19 nos. of fixed rain-gun water sprinklers at railway sidings VII & VIII are installed.</p>																																								

		<p>01. One mobile fog cannon has also been deployed for dust suppression over the coal transportation road and coal corridor road.</p> <p>02. Two mechanical road sweepers have been deployed for dust suppression over the coal transportation road, coal corridor road, approach road, and nearby village roads.</p>																								
(x)	<p>The total area brought under afforestation shall not be less than 694.28 ha, which includes backfilled area (659.14 ha), infrastructure and along roads, safety zone and vacant area (35.14 ha), and area in township outside the lease (4.40 ha), by planting native species in consultation with the local DFO/Agriculture Department. The density of the trees shall be around 2500 plants per ha.</p>	<p>It is being done as per the norms and afforestation work has been done along the roads, safety zone and vacant area in township etc. in consultation with DFO, Angul / OFDC, Angul. About 193.37 Ha. Of land has already been afforested as on 30.06.2022</p> <p>Plantation data of last seven years is as follows:</p> <table border="1"> <thead> <tr> <th>Year</th> <th>B/F Area Planted (internal OB dumps)</th> <th>Expenditure (Rs)</th> </tr> </thead> <tbody> <tr> <td>2017-18</td> <td>6.88 Ha</td> <td>21,20,141.46/-</td> </tr> <tr> <td>2020-21</td> <td>6.05 Ha</td> <td>18,01,000.00/-</td> </tr> <tr> <td>2021-22</td> <td>7.40 Ha</td> <td>33,01,000.00/-</td> </tr> <tr> <td>2022-23</td> <td>4.00 Ha</td> <td>11,90,279.43/-</td> </tr> <tr> <td>2023-24</td> <td>2.50 Ha</td> <td>22,93,292.00/-</td> </tr> <tr> <td>2024-25</td> <td>5.50 Ha</td> <td>39,68,756.48/-</td> </tr> <tr> <td>2025-26</td> <td>7.0 Ha</td> <td>1,04,33,314.00/-</td> </tr> </tbody> </table>	Year	B/F Area Planted (internal OB dumps)	Expenditure (Rs)	2017-18	6.88 Ha	21,20,141.46/-	2020-21	6.05 Ha	18,01,000.00/-	2021-22	7.40 Ha	33,01,000.00/-	2022-23	4.00 Ha	11,90,279.43/-	2023-24	2.50 Ha	22,93,292.00/-	2024-25	5.50 Ha	39,68,756.48/-	2025-26	7.0 Ha	1,04,33,314.00/-
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(xi)	<p>A Progressive Mine Closure Plan shall be implemented, and OB generated shall be simultaneously backfilled so as to reclaim 659.14 ha of the de-coaled area. The balance 9.60 ha, being converted into a water reservoir, shall be protected by peripheral fencing, and the upper benches of the reservoir shall be gently sloped and stabilized with plantation.</p>	<p>It is being done as per the plan, and the balance area will be converted into a water reservoir and protected with a peripheral wall and O.B. dumps. An area of 375.51 ha has already been backfilled till Sep 2025.</p>																								
(xii)	<p>Regular monitoring of groundwater level and quality shall be carried out by establishing a network of existing wells and construction of new piezometers. The monitoring for quantity shall be done four times a year in pre-monsoon (May), monsoon (August), post-monsoon (November), and winter (January) seasons, and for quality in May. The data thus collected shall be submitted to MoEF&CC and to the Central Pollution Control Board quarterly within one month of monitoring.</p>	<p>A network of 23 piezometers has already been established in Talcher Coalfields to monitor and assess the long-term water table variation in the aquifers. Out of these 23 piezometers, 02 nos. (MTP 09 - inside the premises of Joragarhia Panchayat High School and MTP 10 - inside the premises of Danara High School) fall under the premises of Bharatpur OCP. Apart from this, existing open wells from around three villages are being used for groundwater quality monitoring..</p>																								

(xiii)	The company shall put up artificial groundwater recharge measures for augmentation of groundwater resources. The project authorities shall continue to meet the water requirement of the affected villages in case the village wells go dry due to dewatering of the mine.	Six numbers of rainwater harvesting units have been constructed in the premises of the mine. In addition, three ponds located in the nearby villages of Padmabatipur, Bahal, and Rakas are being filled with runoff water for groundwater recharge, and the details are as follows: <table border="1" data-bbox="770 235 1455 392"> <thead> <tr> <th>Ponds</th> <th>Capacity</th> </tr> </thead> <tbody> <tr> <td>Padmabatipur village</td> <td>0.5 Mm³</td> </tr> <tr> <td>Bahal Village</td> <td>1.2 Mm³</td> </tr> <tr> <td>Rakas Village</td> <td>0.75 Mm³</td> </tr> </tbody> </table> <p>Apart from this, nearby village ponds are de-silted and refilled with water regularly. Besides, there are two nos. of dead quarries in which rainwater is being collected for groundwater recharge..</p>	Ponds	Capacity	Padmabatipur village	0.5 Mm ³	Bahal Village	1.2 Mm ³	Rakas Village	0.75 Mm ³													
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(xiv)	Sewage treatment plant shall be installed/augmented in the existing colony for the expansion project. ETP shall be provided/augmented for workshop and CHP wastewater.	The STP is in running condition in the existing colony, and no new quarters have been constructed for the expansion project. The ETP exists for the workshop, and the wastewater generated at the C.H.P. is channelized to the South Quarry Sump. The ETP is regularly cleaned and maintained. The treated effluent from the ETP is monitored, and the parameters are also within the prescribed limits.																					
(xv)	Besides carrying out regular periodic health check-up of their workers, 10% of the workers identified from the workforce engaged in active mining operations shall be subjected to health check-up for occupational diseases and hearing impairment, if any, through an agency such as NIOH, Ahmedabad within a period of one year, and the results shall be reported to this Ministry and to DGMS.	IME & PME of workmen are being done as per statutory provisions. A medical board for occupational diseases exists as per ILO norms. No cases of occupational diseases have been reported yet <table border="1" data-bbox="689 990 1331 1256"> <thead> <tr> <th>Year</th> <th>IME</th> <th>PME</th> </tr> </thead> <tbody> <tr> <td>2020</td> <td>182</td> <td>173</td> </tr> <tr> <td>2021</td> <td>327</td> <td>213</td> </tr> <tr> <td>2022</td> <td>199</td> <td>651</td> </tr> <tr> <td>2023</td> <td>36</td> <td>763</td> </tr> <tr> <td>2024</td> <td>96</td> <td>458</td> </tr> <tr> <td>2025 (upto Sep)</td> <td>11</td> <td>398</td> </tr> </tbody> </table>	Year	IME	PME	2020	182	173	2021	327	213	2022	199	651	2023	36	763	2024	96	458	2025 (upto Sep)	11	398
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(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 the end of mine life, shall be prepared once in 3 years (for any one particular season which is consistent in the time series), and the report submitted to MoEF and its Regional Office at Bhubaneswar.	A copy of land use maps based on satellite imagery for the year 2018 has already been submitted to Additional PCCF, MoEF&CC, Bhubaneswar by letter vide no. 427 dated 16.05.19. The work for generation of land use pattern maps based on satellite imagery for the year 2020 was carried out by CMPDIL. Annual land use/land cover details of Bharatpur OCP are also available on the website of Mahanadi Coalfields Limited (http://www.mahanadicoal.in/Environment/)																					
(xvii)	A detailed Final Mine Closure Plan, along with details of the Corpus Fund, shall be submitted to the Ministry of Environment & Forests within 6 months of the grant of this letter for approval.	The Final Mine Closure Plan has been prepared by CMPDIL and submitted on 05/12/2015 to the Chief Conservator of Forest, MoEF&CC, Eastern Regional Office, Bhubaneswar, and to the Director, EIA Monitoring Cell, Ministry of Environment and Forests, New Delhi.																					

(xviii)	<p>R&R for the balance 860 PAFs from 3 villages — Padmabatipur (502, including 30 tribal), Dasarathipur (35), and Rakas (353) — shall be prepared and implemented within a specified time frame. R&R norms shall be not less than those of the national R&R Policy. The socioeconomic status of the displaced communities should be monitored over the life of the project for all the 17 villages being displaced, and a report furnished once every 3 years on the key socioeconomic parameters/indices based on the UNDP Human Development Report, in comparison to the pre-project scenario.</p>	<p>As per there cord the status of Rehabilitation & Resettlement of Bharatpur OCP is as follows.</p> <ol style="list-style-type: none"> 1. Resettlement(Displacement/plot and building assistance) <ol style="list-style-type: none"> a. Padmabatipur & Dasarathipur <p>Total Eligible/entitled 220</p> <ul style="list-style-type: none"> ◆ Already provided 215 ◆ Option not yet given 05 <ol style="list-style-type: none"> 2. Rehabilitation(Employment) <ol style="list-style-type: none"> a. Padmabatipur & Dasarathipur <p>Total Eligible/entitled 191</p> <ul style="list-style-type: none"> ◆ Already provided 181 ◆ Not eligible/rejected 04 ◆ Cash compensation opted 05 ◆ Under process 01 <p>The R&R of PAFs of Rakas village is now being implemented by adjacent Jagannath OCP mine.</p>
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B. GENERAL CONDITONS:

(i)	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment and Forests.	The mine is being operated with a shovel-dumper combination, along with a surface miner. The coal is being dispatched through Rail, MGR (RLS-SILO), and another SILO of 15.00 MTPA capacity has been commissioned for dust-free coal dispatch. The surface miner has been introduced to produce coal in an eco-friendly manner, thereby controlling noise, vibration, and dust to a great extent. No change in mining technology and scope of working will be made without prior approval of the MoEF&CC.																		
(ii)	No change in the calendar plan, including excavation and the quantum of mineral coal and waste, should be made.	<p>No change in the calendar plan, including excavation and the quantum of mineral coal and waste (OB), has been made. However, the details of sanctioned capacity and the actual production of coal for the last 5 years are as follows:</p> <table border="1" data-bbox="694 616 1513 1003"> <thead> <tr> <th>Year</th> <th>Sanctioned Capacity (MT)</th> <th>Actual Prod. of Coal(MT)</th> </tr> </thead> <tbody> <tr> <td>2020-21</td> <td>20</td> <td>07.34</td> </tr> <tr> <td>2021-22</td> <td>20</td> <td>09.25</td> </tr> <tr> <td>2022-23</td> <td>20</td> <td>09.25</td> </tr> <tr> <td>2023-24</td> <td>20</td> <td>11.12</td> </tr> <tr> <td>2024-25</td> <td>20</td> <td>13.01</td> </tr> </tbody> </table>	Year	Sanctioned Capacity (MT)	Actual Prod. of Coal(MT)	2020-21	20	07.34	2021-22	20	09.25	2022-23	20	09.25	2023-24	20	11.12	2024-25	20	13.01
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(iii)	Four ambient air quality monitoring stations should be established in the core zone as well as in the buffer zone for SPM, RPM, SO ₂ , and heavy metals such as Hg, Pb, Cr, As, etc. The 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.	Six ambient air quality monitoring stations in the core zone as well as in the buffer zone have been established under the Bharatpur Project in consultation with RO, Angul, OSPCB for monitoring SPM, RPM, PM _{2.5} , SO ₂ , and NO _x .																		
(iv)	Data on ambient air quality (SPM, RPM, SO ₂ , NO _x , and heavy metals such as Hg, Pb, Cr, As, etc.) 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.	The air quality parameters SPM, PM ₁₀ , PM _{2.5} , SO ₂ , and NO _x are being monitored fortnightly. Heavy metals such as Hg, Pb, As, Ni, Cd, and Cr are monitored once in six months at six locations. Data on ambient air quality monitoring for SPM, RPM, SO ₂ , and NO _x is submitted regularly to the MoEF&CC Regional Office and OSPCB every six months.																		
(v)	Fugitive dust emissions (SPM, RPM, SO ₂ , NO _x , and heavy metals such as Hg, Pb, Cr, As, etc.) from all these sources shall be controlled, regularly monitored, and data recorded properly. Water spraying arrangements on haul roads, wagon loading, and dump trucks (loading and unloading) points shall be	Dust emissions (SPM, RPM, SO ₂ , NO _x , and PM _{2.5}) from all sources are being regularly monitored and properly recorded. Water spraying using 7 mobile tankers of 28 KL and 05 mobile tankers of 12 KL, fixed sprinklers, and mist spray systems is regularly carried out on haul roads, C.H.P, wagon loading points, railway sidings, etc. In addition, 01 road sweeping machines are also deployed on coal transportation roads, coal corridor roads, and approach roads before sprinkling to minimize airborne dust.																		

	Provided and properly maintained.	Apart from these arrangements, 01 truck-mounted fog cannon with a 40-meter throw and 12 fixed-type fog cannons with a 100-meter throw are deployed for dust suppression over coal faces, OB faces, stockyards, haul roads, sidings, etc. Continuous efforts are being made to minimize instances of AAQ parameters exceeding limits, especially PM2.5 and SPM. Necessary actions and mitigation measures are continuously being taken to keep dust emissions within the prescribed standards.
(vi)	Adequate measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc., should be provided with earplugs/ear muffs.	During the last six months, a sufficient number of earplugs have been provided to different categories of operators working in zones with high noise levels beyond the threshold limit, such as in blasting/drilling operations, CHP, and RLS.
(vii)	Industrial wastewater (from the workshop and the mine) should be properly collected and treated so as to conform to the standards prescribed under GSR 422(E) dated 19th May 1993 and 31st December 1993, or as amended from time to time. Oil and grease traps should be installed before the discharge of workshop effluents.	Effluent generated in the workshop is treated in the Workshop Effluent Treatment Plant (ETP), and the treated effluent is recycled for vehicle washing purposes in the workshop. Mine water effluent is collected in mine sumps, where sedimentation of particles takes place, and the treated water is then utilized for industrial purposes such as dust suppression, HEMM washing, etc.
(viii)	Vehicle emissions should be kept under control and regularly monitored. Vehicles used for transporting the mineral should be covered with tarpaulins and optimally loaded.	Vehicle emissions are kept under control and regularly monitored. Emission tests are carried out for vehicles by certified pollution testing centers. Vehicles are issued with valid PUC certificates. Vehicles used for transporting coal from the mine to outside are loaded optimally and covered with tarpaulins. All truck owners are taking NOC from SPCB for their vehicles.

(ix)	An environmental laboratory should be established with an adequate number and type of pollution monitoring and analysis equipment, in consultation with the State Pollution Control Board.	An Environmental Laboratory has been established in consultation With SPCB. Contact details of Laboratory In-charge: Mr. G Srinivas, General Manager (Mining) , Regional environmental and Chemical Laboratory ,CMPDILRI-VII, Bhubaneswar Contact Number: 9438881034
(x)	Personnel working in industry areas should wear protective respiratory devices, and they should also be provided with adequate training and information on safety and health aspects. An occupational health surveillance programme for the workers should be undertaken periodically to observe any health effects due to exposure to dust and to take corrective measures, if needed.	Personnel working in industry areas are provided with adequate training and information on safety and health aspects, and they are regularly provided with dust masks. Occupational health surveillance of workers is undertaken periodically. The details of IME & PME reports have already been given at point no. (xv) of the Specific Conditions above. The details of PPEs provided in the last six years at Bharatpur OCP are given in point no. (vi).
(xi)	A separate Environmental Management Cell, with suitably qualified personnel, should be set up under the control of a senior executive, who will report directly to the head of the company.	A separate Environmental Department under the control of GM (Envt.) has been set up at HQ level, reporting to the head of the organization. An executive in the rank of Sr. Manager (Mining) is posted at the area level, and a executive in the rank of Manager (Mining) is posted at the project level to look after environmental compliances.
(xii)	The funds earmarked for environmental protection measures should be kept in a separate account and should not be diverted for other purposes. Year-wise expenditures should be reported to this Ministry and its Regional Office at Bhubaneswar.	Financial provisions are made towards environmental control measures and are not diverted for any other purpose. During Apr 2025 to Sept 2025, around Rs. 548.05 lakhs have been expended.
(xiii)	A copy of the Environmental Clearance letter will be marked to the concerned Panchayat/local NGO, if any, from whom any suggestions or representations have been received while processing the proposal.	The condition has been complied with. No further suggestions or representations have been received at this end.
(xiv)	The State Pollution Control Board should display a copy of the clearance letter at the Regional Office, District Industry Centre, and Collector's Office/Tahasildar's Office for 30 days.	Action has been taken, and the condition has been complied with by OSPCB.
(xv)	The project authorities shall advertise in at least two local newspapers widely circulated around the project, one of which shall be in the vernacular language of the locality concerned, within seven days of the clearance, and a copy of the clearance letter is	The condition has been complied with during the year 2009 and published in three local newspapers in Hindi, Oriya, and English languages. The exact date is not traceable.

	Available with the State Pollution Control Board and may also be seen at the website of the Ministry of Environment & Forests at http://envfor.nic.in .	
Conditions as per the EC amendment F.No-J-11015/630/2007-I.A-II(M)dt.27/05/2021		
(i)	The PP should adopt in-pit conveyor belts for transportation, and the fleet size should increase up to 60 tonnes.	A closed conveyor belt system (2.45 km length) with a SILO of 15 MTPA capacity has been commissioned and has been in operation since Oct' 2018. The receiving hopper of the conveyor system is located within the quarry area. However, the feasibility of adopting an in-pit conveyor belt for transportation will be explored, as the project is already running integrated coal contracts including transportation.
(ii)	Progressive reclamation of OB dumps shall be conducted, and active OB dumps should not be kept barren or open. They should be covered with temporary grass to avoid airborne particles.	The biological reclamation of overburden dumps is in continuous process. Total 160.16 ha of backfilled area has already been planted. Total 12100 nos of plants over 7.00 Ha of backfilled area were planted in 2025 by DFO, Angul and OFDC. There are 5 nos. of external OB dumps. The total area of external OB dumps is 49.50 Ha. Out of which 30.46 Ha has been biologically reclaimed. In the rest area natural vegetation has come up and stabilized.
(iii)	Ten fog cannons shall be installed to reduce the impact of air pollution on haul roads, OB dumps, and mining areas.	01 truck-mounted fog cannon (<40 m throw) has been deployed in the mine for dust suppression over the coal corridor road, haul road, coal face area, and OB face area. 12 fog cannons (<100 m throw) have been installed at different locations such as railway sidings, haul roads, stockyards, and transfer points for dust suppression (mist spray type).
(iv)	The project proponent shall carry out dense plantation (50,000 nos.) in the safety zone of these three mines with Sal forest only.	We have requested to State Forest department and plantation agencies like OFDC and CGRVVNL for taking up Sal plantation in the mine. Safety zone of Bharatpur mine is 7.43 Ha which is covered with dense native species and already 1.875 Ha was planted by DFO, Angul in 2021-22. Plantation of maximum 20000 nos Sal tree @2500 nos/Ha can be done. 9.0 ha of Jagannath OCP was already planted with 18000 Nos plants by DFO, Angul and CGRVVNL in 2020 &2021.
(v)	The project proponent shall plant 2,00,000 Sal trees along the transportation route in two years to prevent the effect of air pollution near the manager's office. After completion of the tree plantation, the number of trees shall be duly endorsed by the District Forest Officer.	Persuasion with State Forest department and plantation agencies like OFDC and CGRVVNL for taking up the plantation is under progress.. The State forest Dept. has denied for taking the sal plantation over backfilled area of Bharatpur OCP. However after persuasion state forest department started Sal plantation from 2023-24 over backfilled area of Bharatpur OCP. Total transportation road including Haul road, CT road and coal corridor road comes to 15.68 Km. Maximum 1,00,000 plants can be planted along the transportation road in the mine at present.

(vi)	<p>Hon'ble Supreme court in an writ petition(s) civil no.114/2014, common cause vs union of India 7 Ors vide its judgement dt 18.01.2020 has directed the union of India to impose a condition in the mining lease and a similar condition in the environmental clearance and the mining plan to the effect that the mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been distributed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc., Compliance of this condition after mining activity is over at the cost of the mining lease holders/ project proponent. The implementation report of the above said condition shall be sent to Regional office of the MoEF&CC</p>	<p>Re-grassing and restoration of degraded land due to mining activities is part of progressive mine closure. However, Project will implement re-grassing and restoration of left out land during final mine closure and the implementation report of the said condition will be submitted to the Regional office of the MoEF&CC.</p>
(vii)	<p>The permanent haul road shall be constructed of cement concrete and fixed type water shall be installed.</p>	<p>5.5 km of internal coal transportation road and haul road of cement concrete road is completed. 3.5 km of dedicated coal corridor road also made concreted. 7 nos. 28KL Water tankers are being deployed for dust suppression over haul road and coal transportation roads. 1 no. truck mounted mist spray fog cannon (more than 40mtrs throw) is deployed for dust suppression over haul road.</p>
(viii)	<p>Recommendation of mitigation measures in R&R report shall be implemented within certain timeline.</p>	<p>Rehabilitation & Resettlement is provided as per the R&R policy of Govt. of Odisha. Status on R&R of Bharatpur mine is provided in special condition no xviii.</p>


Project Officer
Bharatpur OCP



50 YEARS OF COMPANY
5 DECADES OF UNEARTHING ENERGY

Environment Department,
Office of the General Manager,
Bharatpur Area, MCL.

N S Nagar, Bharatpur Area, Talcher, Angul, Odisha- 759148
Ph. 06760 2603224, Fax- 06760 261166

HALF YEARLY DATA APR 2025 to SEPT 2025

ANNEXURE - 1

ENVIRONMENTAL MONITORING DATA FOR THE PERIOD FROM Apr-2025 TO Sept-2025 WITH RESPECT TO BHARATPUR OCP, BHARATPUR AREA.

- AQ MONITORING DATA
- EFFLUENT QUALITY MONITORING DATA
- NOISE LEVEL MONITORING DATA
- DRINKING WATER QUALITY DATA
- GROUND WATER LEVEL & QUALITY

ANNEXURE-2

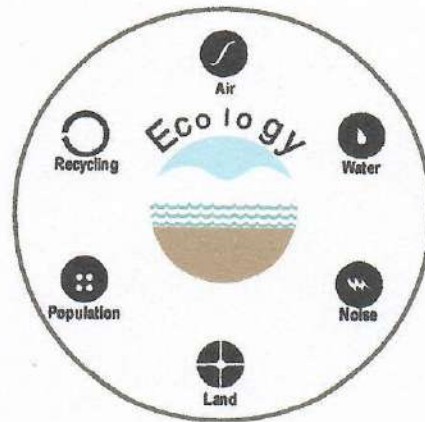
Name of the Work	Amount (Rs.)
Expenditure on E.T. P	1019813.28
Expenditure on S.T. P	200000.00
Expenditure on garland drain	1700000.00
Expenditure on barbed wire fencing	3519572.12
Expenditure on water sprinkling	2533224.15
Expenditure on water tankers for Dust Suppression	7878568.03
Expenditure on mobile and fix type fog canons for dust suppression	1250430.00
Expenditure on Instant shower system	130000.00
Expenditure on Digital water level recorder	17700.00
Expenditure on Digital water flow meter	123808.00
Plantation on O/B dump	10433314.00
Routine Environment Monitoring Work	15327809.00
Consent to operate fee	6000000.00
Hazardous waste authorization fees	7000.00
World Environment Day	249430.00
Distribution of Fruit bearing plant saplings	4233000.00
Ek Ped Maa Ke Naam 2.0	181774.00
Total -	54805442.58

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

Talcher Coalfield



Mahanadi Coalfields Limited



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

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

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

AMBIENT AIR QUALITY DATA

Area :

Bharatpur

(Compliance Station)

Project :

Bharatpur OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
11-Apr-25	Near Regional Store	203	80	41	18.27	41.82	Mining Activities	About 500m
11-Apr-25	North-West Point of the Mine	203	87	44	13.33	25.09	Domestic & Mining Activities	About 500m
11-Apr-25	Near ETP/Workshop	218	96	49	13.59	37.82	Mining Activities & Coal Stock	Above 500m
21-Apr-25	Near Regional Store	218	91	45	12.00	24.31	Mining Activities	About 500m
21-Apr-25	North-West Point of the Mine	212	84	41	11.11	29.01	Domestic & Mining Activities	About 500m
21-Apr-25	Near ETP/Workshop	203	88	45	12.44	26.66	Mining Activities & Coal Stock	Above 500m

MoEF Standards Notification dated 25th September, 2000	600	300		120	120
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 CMPDI, KI-VII, LAB
 BHUBANESWAR



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 MINIS. GOVT OF INDIA

Test Report

AMBIENT AIR QUALITY DATA

Area :

Bharatpur

(Reference Station)

Project :

Bharatpur OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
01-Apr-25	Khajuria Village	172	71	30	13.83	22.65		
01-Apr-25	Karnapur Village	174	60	35	14.67	33.72		
01-Apr-25	Near Joragdia Village	189	73	38	14.22	24.31	Transportation, Domestic Cooking	About 1km
01-Apr-25	Kalinga Colony	170	74	39	11.43	34.35		
02-Apr-25	Near Joragdia Village	173	66	34	15.80	39.21	Transportation, Domestic Cooking	About 1km
02-Apr-25	Khajuria Village	189	67	44	17.33	35.29		
02-Apr-25	Karnapur Village	167	68	30	11.11	24.31		
02-Apr-25	Kalinga Colony	168	62	32	16.84	33.02		
03-Apr-25	East of the Mine, Natedi Village (Reported Only)	175	71	39	10.67	25.88	Coal Transportation Road	About 2km
04-Apr-25	East of the Mine, Natedi Village (Reported Only)	168	69	36	10.82	32.73	Coal Transportation Road	About 2km
07-Apr-25	Karnapur Village	183	66	39	15.56	36.07		
07-Apr-25	Near Joragdia Village	165	60	32	15.31	38.34	Transportation, Domestic Cooking	About 1km
07-Apr-25	Kalinga Colony	174	58	35	12.75	18.41		
07-Apr-25	Khajuria Village	168	57	35	13.10	31.37		
08-Apr-25	Kalinga Colony	163	55	30	16.16	32.08		
08-Apr-25	Khajuria Village	156	78	29	17.28	22.65		
08-Apr-25	Karnapur Village	167	63	35	12.00	36.07		
08-Apr-25	Near Joragdia Village	159	56	29	14.81	33.98	Transportation, Domestic Cooking	About 1km
09-Apr-25	East of the Mine, Natedi Village (Reported Only)	163	65	31	13.54	23.90	Coal Transportation Road	About 2km
10-Apr-25	East of the Mine, Natedi Village (Reported Only)	132	60	28	18.27	34.85	Coal Transportation Road	About 2km
16-Apr-25	Karnapur Village	184	77	38	20.25	38.34		
16-Apr-25	Near Joragdia Village	157	57	30	10.86	32.24	Transportation, Domestic Cooking	About 1km
16-Apr-25	Khajuria Village	195	81	41	14.39	29.87		

*NAAQS,2009

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Signature

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
16-Apr-25	Kalinga Colony	157	63	30	16.84	27.24		
17-Apr-25	Khajuria Village	176	79	38	20.25	24.40		
17-Apr-25	Karnapur Village	194	73	36	18.25	34.67		
17-Apr-25	Near Joragdia Village	166	64	34	16.16	28.51	Transportation, Domestic Cooking	About 1km
17-Apr-25	Kalinga Colony	167	67	32	10.43	23.87		
18-Apr-25	East of the Mine, Natedi Village (Reported Only)	175	74	36	13.33	27.88	Coal Transportation Road	About 2km
19-Apr-25	East of the Mine, Natedi Village (Reported Only)	169	70	33	18.27	35.72	Coal Transportation Road	About 2km
23-Apr-25	Karnapur Village	183	75	38	18.71	30.54		
23-Apr-25	Kalinga Colony	183	75	38	15.56	36.07		
23-Apr-25	Near Joragdia Village	186	72	38	16.30	28.75	Transportation, Domestic Cooking	About 1km
23-Apr-25	Khajuria Village	170	67	32	16.89	34.50		
24-Apr-25	Kalinga Colony	176	69	35	10.86	32.24		
24-Apr-25	Khajuria Village	165	63	30	17.31	26.41		
24-Apr-25	Karnapur Village	175	69	35	12.16	37.14		
24-Apr-25	Near Joragdia Village	171	66	35	17.31	31.37	Transportation, Domestic Cooking	About 1km
25-Apr-25	East of the Mine, Natedi Village (Reported Only)	156	63	29	9.33	32.93	Coal Transportation Road	About 2km
26-Apr-25	East of the Mine, Natedi Village (Reported Only)	180	71	35	15.31	35.72	Coal Transportation Road	About 2km
29-Apr-25	Kalinga Colony	152	60	29	12.35	27.01		
29-Apr-25	Karnapur Village	154	58	28	20.25	32.24		
29-Apr-25	Khajuria Village	174	73	35	11.56	35.29		
29-Apr-25	Near Joragdia Village	168	63	32	16.16	24.95	Transportation, Domestic Cooking	About 1km
30-Apr-25	Near Joragdia Village	155	59	28	13.83	31.37	Transportation, Domestic Cooking	About 1km
30-Apr-25	Kalinga Colony	165	65	31	10.22	33.72		
30-Apr-25	Karnapur Village	146	54	25	18.27	33.11		
30-Apr-25	Khajuria Village	163	64	31	12.89	23.52		

*NAAQS,2009

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TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Bharatpur

PROJECT :

Bharatpur OCP

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
04-Apr-25	North West Point of the Mine	66.2	57.4
04-Apr-25	Near Regional Store	64.5	53.2
04-Apr-25	Near Wokshop	68.7	55.7
04-Apr-25	Natedi Village (Reported)	49.8	37.4
04-Apr-25	Kalinga Colony	50.9	39.6
18-Apr-25	North West Point of the Mine	65.9	56.8
18-Apr-25	Near Regional Store	65.1	54.1
18-Apr-25	Near Wokshop	67.8	54.9
18-Apr-25	Kalinga Colony	49.8	40.1
19-Apr-25	Natedi Village (Reported)	48.8	38.1

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

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Bharatpur

Project	Bharatpur OCP							
Monitoring Station	Near Joragadia Village							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) Pyrene	Benzene
	(μg/m ³)	(μg/m ³)	(μg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(μg/m ³)
01-Apr-2025	<20.0	20.17	<0.1	<1.0	<1.0	1.4	BQL(QL =0.7)	BQL
02-Apr-2025	<20.0	27.32	<0.1	<1.0	<1.0	1.2	BQL(QL =0.7)	BQL
07-Apr-2025	<20.0	14.58	<0.1	<1.0	<1.0	1.3	BQL(QL =0.7)	BQL
08-Apr-2025	<20.0	25.13	<0.1	<1.0	<1.0	1.1	BQL(QL =0.7)	BQL
16-Apr-2025	<20.0	16.45	<0.1	<1.0	<1.0	0.9	BQL(QL =0.7)	BQL
17-Apr-2025	<20.0	14.9	<0.1	<1.0	<1.0	1.2	BQL(QL =0.7)	BQL
23-Apr-2025	<20.0	19.55	<0.1	<1.0	<1.0	1.1	BQL(QL =0.7)	BQL
24-Apr-2025	<20.0	21.1	<0.1	<1.0	<1.0	1.0	BQL(QL =0.7)	BQL
29-Apr-2025	<20.0	20.48	<0.1	<1.0	<1.0	1.4	BQL(QL =0.7)	BQL
30-Apr-2025	<20.0	25.13	<0.1	<1.0	<1.0	1.3	BQL(QL =0.7)	BQL
Standard	400(24 hours)	180(hour)	1.0(24 hours)	6.0(Annual)	20(Annual)	02(8 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Bharatpur

Project	Bharatpur OCP							
Monitoring Station	Kalinga Colony							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) Pyrene	Benzene
	(μg/m ³)	(μg/m ³)	(μg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(μg/m ³)
01-Apr-2025	<20.0	24.32	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
02-Apr-2025	<20.0	26.51	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
07-Apr-2025	<20.0	24.32	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
08-Apr-2025	<20.0	19.68	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
16-Apr-2025	<20.0	18.36	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
17-Apr-2025	<20.0	24.78	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
23-Apr-2025	<20.0	23.84	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
24-Apr-2025	<20.0	26.81	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
29-Apr-2025	<20.0	25.43	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
30-Apr-2025	<20.0	20.68	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
Standard	400(24 hours)	180(hour)	1.0(24 hours)	6.0(Annual)	20(Annual)	02(8 hours)	01(annual)	05(annual)

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BHUBANESWAR



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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Bharatpur

Project	Bharatpur OCP							
Monitoring Station	Khajuria Village							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) Pyrene	Benzene
	(μg/m ³)	(μg/m ³)	(μg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(μg/m ³)
01-Apr-2025	<20.0	16.75	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
02-Apr-2025	<20.0	25.75	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
07-Apr-2025	<20.0	16.75	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
08-Apr-2025	<20.0	17.07	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL
16-Apr-2025	<20.0	18	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
17-Apr-2025	<20.0	13.35	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
23-Apr-2025	<20.0	25.45	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
24-Apr-2025	<20.0	19.23	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
29-Apr-2025	<20.0	17.68	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
30-Apr-2025	<20.0	23.58	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL
Standard	400(24 hours)	180(hour)	1.0(24 hours)	6.0(Annual)	20(Annual)	02(8 hours)	01(annual)	05(annual)

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BHUBANESWAR



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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Bharatpur

Project	Bharatpur OCP							
Monitoring Station	Kamapur Village							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (a) Pyrene	Benzene
	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	(ng/m^3)	(ng/m^3)	(mg/m^3)	(ng/m^3)	($\mu\text{g}/\text{m}^3$)
01-Apr-2025	<20.0	13.97	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
02-Apr-2025	<20.0	16.45	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
07-Apr-2025	<20.0	18.32	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
08-Apr-2025	<20.0	25.45	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL
16-Apr-2025	<20.0	20.17	<0.1	<1.0	<1.0	1.5	BQL(QL=0.7)	BQL
17-Apr-2025	<20.0	12.72	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
23-Apr-2025	<20.0	13.65	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
24-Apr-2025	<20.0	13.97	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
29-Apr-2025	<20.0	23.58	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
30-Apr-2025	<20.0	21.42	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
Standard	400(24 hours)	180(hour)	1.0(24 hours)	6.0(Annual)	20(Annual)	02(8 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Bharatpur

Project	Bharatpur OCP							
Monitoring Station	Near Natedi Village(Reported Only)							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) Pyrene	Benzene
	(µg/m ³)	(µg/m ³)	(µg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(µg/m ³)
03-Apr-2025	<20.0	18.32	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL(QL=2.5)
04-Apr-2025	<20.0	17.07	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL(QL=2.5)
09-Apr-2025	<20.0	23.9	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL(QL=2.5)
10-Apr-2025	<20.0	18.32	<0.1	<1.0	<1.0	1.4	BQL(QL=0.7)	BQL(QL=2.5)
18-Apr-2025	<20.0	13.35	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL(QL=2.5)
19-Apr-2025	<20.0	12.72	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL(QL=2.5)
25-Apr-2025	<20.0	23.58	<0.1	<1.0	<1.0	1.5	BQL(QL=0.7)	BQL(QL=2.5)
26-Apr-2025	<20.0	17.68	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL(QL=2.5)
Standard	400(24 hours)	180(hour)	1.0(24 hours)	6.0(Annual)	20(Annual)	02(8 hours)	01(annual)	05(annual)

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EFFLUENT QUALITY DATA

Area :

Bharatpur


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

Project :

Bharatpur OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	MPN/100mL
09-Apr-25	STP INLET	8.34	-	36	-	<2	94
09-Apr-25	STP Outlet (PH,TSS,MPN,BOD)	8.49	-	28	-	<2	63
24-Apr-25	STP INLET	7.53	-	43	-	<2	70
25-Apr-25	STP Outlet (PH,TSS,MPN,BOD)	7.67	-	31	-	<2	58

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

Area :

Bharatpur

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

Project :

Bharatpur OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	Remarks
09-Apr-25	Workshop ETP Clear Water Tank	7.78	<4.0	64	40	-	
10-Apr-25	Mine Sump Water - Main Sump	8.39	<4.0	20	12	-	
10-Apr-25	Mine Sump Water - Old Quarry Sump	7.46	<4.0	28	12	-	
10-Apr-25	Rakas Quarry Sump	6.30	<4.0	41	24	-	
24-Apr-25	Workshop ETP Clear Water Tank	7.54	5.2	74	132	-	

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

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Drinking Water Quality Data Bharatpur Area

Project / OCP	Bharatpur OCP	Indian Drinking Standards (IS-10500):2012	
Monitoring Station	Time Office, BOCP	Acceptable	Permissible
Date of Sampling	9-Apr-2025	Acceptable	Permissible
Colour(Hazen)	2	5	15
Odour	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	2	1	5
pH	6.95	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	21.01	200	600
Chloride(mg/L)	38.9	250	1000
Sulphate(mg/L)	55.06	200	400
Nitrate(mg/L)	16.88	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	99.6	200	600
Calcium(mg/L)	27.15	75	200
Fluoride(mg/L)	<0.3	1	1.5
Total Dissolve Solid(mg/L)	206	500	2000
Copper(mg/L)	<0.03	0.05	1.5
Manganese(mg/L)	0.05	0.1	0.3
Iron(mg/L)	<0.1	1.0	No relaxation
Zinc(mg/L)	<0.04	5	15
Lead(mg/L)	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.001	0.003	No relaxation
Total Chromium (mg/L)	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	0.5	2.4

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Drinking Water Quality Data Bharatpur Area

Project / OCP	Bharatpur OCP	Indian Drinking Standards (IS-10500):2012	
	Time Office, BOCP	Acceptable	Permissible
Monitoring Station	9-Apr-2025		
Date of Sampling			
Selenium(mg/L)	<0.005	0.01	No relaxation
Phenolics(mg/L)	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	0.2	1.0
MPN (Index/100 ml)	Not Detected	-	-
Sodium(mg/L)	19.64	-	-
Potassium(mg/L)	5.44	-	-


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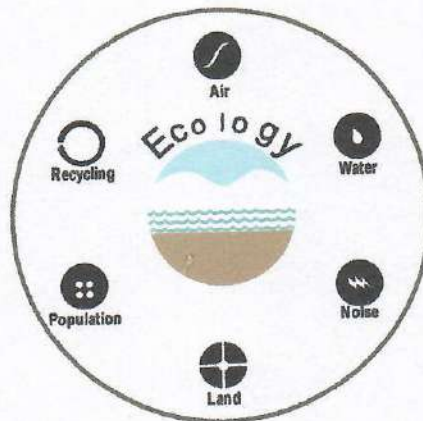


**Environmental Monitoring Report
Of
Bharatpur Area
For
May-2025**

Talcher Coalfield



Mahanadi Coalfields Limited



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

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

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Test Report

AMBIENT AIR QUALITY DATA

Area :

Bharatpur

(Compliance Station)

Project :

Bharatpur OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
07-May-25	Near Regional Store	213	90	42	16.45	19.81	Mining Activities	About 500m
07-May-25	North-West Point of the Mine	195	82	39	12.87	32.55	Domestic & Mining Activities	About 500m
07-May-25	Near ETP/Workshop	205	82	37	12.51	22.64	Mining Activities & Coal Stock	Above 500m
21-May-25	Near Regional Store	193	82	40	24.86	28.89	Mining Activities	About 500m
21-May-25	North-West Point of the Mine	181	77	35	14.46	22.68	Domestic & Mining Activities	About 500m
21-May-25	Near LTP/Workshop	171	75	36	15.81	32.84	Mining Activities & Coal Stock	Above 500m

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MoEF, Govt of India, Notification dated 25th September 2009	600	300		120	120
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AMBIENT AIR QUALITY DATA

Area :

Bharatpur

(Reference Station)

Project :

Bharatpur OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
02-May-25	Khajuria Village	166	65	31	18.18	23.46		
02-May-25	Karnapur Village	129	54	24	17.47	40.78		
02-May-25	Near Joragdia Village	139	50	25	16.89	22.29	Transportation. Domestic Cooking	About 1km
02-May-25	Kalinga Colony	160	62	29	12.16	22.64		
03-May-25	Near Joragdia Village	159	64	30	19.19	40.45	Transportation. Domestic Cooking	About 1km
03-May-25	Khajuria Village	176	69	33	14.64	29.72		
03-May-25	Karnapur Village	168	67	33	12.54	25.41		
03-May-25	Kalinga Colony	138	53	27	10.67	22.68		
05-May-25	East of the Mine. Natedi Village (Reported Only)	148	55	26	13.89	34.92	Coal Transportation Road	About 2km
06-May-25	East of the Mine. Natedi Village (Reported Only)	161	62	29	12.10	21.46	Coal Transportation Road	About 2km
09-May-25	Karnapur Village	153	60	29	13.94	37.64		
09-May-25	Near Joragdia Village	141	53	25	19.36	22.68	Transportation. Domestic Cooking	About 1km
09-May-25	Kalinga Colony	119	47	22	10.84	31.37		
09-May-25	Khajuria Village	184	71	36	15.43	25.59		
10-May-25	Kalinga Colony	138	51	24	17.52	36.32		
10-May-25	Khajuria Village	129	51	24	10.27	23.46		
10-May-25	Karnapur Village	147	57	28	11.09	18.82		
10-May-25	Near Joragdia Village	173	68	32	18.39	31.94	Transportation. Domestic Cooking	About 1km
12-May-25	East of the Mine. Natedi Village (Reported Only)	167	65	32	13.89	31.94	Coal Transportation Road	About 2km
13-May-25	East of the Mine. Natedi Village (Reported Only)	151	54	28	12.01	33.43	Coal Transportation Road	About 2km
16-May-25	Karnapur Village	123	41	23	18.77	28.89		
16-May-25	Near Joragdia Village	130	50	24	15.85	27.24	Transportation. Domestic Cooking	About 1km

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AMBIENT AIR QUALITY DATA

Area :

Bharatpur

(Reference Station)

Project :

Bharatpur OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
02-May-25	Khajuria Village	166	65	31	18.18	23.46		
02-May-25	Karnapur Village	129	54	24	17.47	40.78		
02-May-25	Near Joragdia Village	139	50	25	16.89	22.29	Transportation, Domestic Cooking	About 1km
02-May-25	Kalinga Colony	160	62	29	12.16	22.64		
03-May-25	Near Joragdia Village	159	64	30	19.19	40.45	Transportation, Domestic Cooking	About 1km
03-May-25	Khajuria Village	176	69	33	14.64	29.72		
03-May-25	Karnapur Village	168	67	33	12.54	25.41		
03-May-25	Kalinga Colony	138	53	27	10.67	22.68		
05-May-25	East of the Mine, Natedi Village (Reported Only)	148	55	26	13.89	34.92	Coal Transportation Road	About 2km
06-May-25	East of the Mine, Natedi Village (Reported Only)	161	62	29	12.10	21.46	Coal Transportation Road	About 2km
09-May-25	Karnapur Village	153	60	29	13.94	37.64		
09-May-25	Near Joragdia Village	141	53	25	19.36	22.68	Transportation, Domestic Cooking	About 1km
09-May-25	Kalinga Colony	119	47	22	10.84	31.37		
09-May-25	Khajuria Village	184	71	36	15.43	25.59		
10-May-25	Kalinga Colony	138	51	24	17.52	36.32		
10-May-25	Khajuria Village	129	51	24	10.27	23.46		
10-May-25	Karnapur Village	147	57	28	11.09	18.82		
10-May-25	Near Joragdia Village	173	68	32	18.39	31.94	Transportation, Domestic Cooking	About 1km
12-May-25	East of the Mine, Natedi Village (Reported Only)	167	65	32	13.89	31.94	Coal Transportation Road	About 2km
13-May-25	East of the Mine, Natedi Village (Reported Only)	151	54	28	12.01	33.43	Coal Transportation Road	About 2km
16-May-25	Karnapur Village	123	41	23	18.77	28.89		
16-May-25	Near Joragdia Village	130	50	24	15.85	27.24	Transportation, Domestic Cooking	About 1km
16-May-25	Khajuria Village	137	50	28	10.27	35.97		

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
16-May-25	Kalinga Colony	129	52	23	12.47	18.82		
17-May-25	Khajuria Village	130	46	25	13.35	33.02		
17-May-25	Karnapur Village	172	49	35	17.10	29.72		
17-May-25	Near Joragdia Village	124	46	22	18.57	15.19	Transportation, Domestic Cooking	About 1km
17-May-25	Kalinga Colony	145	54	30	14.78	21.96		
19-May-25	East of the Mine, Natedi Village (Reported Only)	130	48	25	19.19	32.19	Coal Transportation Road	About 2km
20-May-25	East of the Mine, Natedi Village (Reported Only)	126	41	23	11.06	21.90	Coal Transportation Road	About 2km
23-May-25	Karnapur Village	153	56	31	11.06	35.19		
23-May-25	Kalinga Colony	112	43	22	10.98	27.82		
23-May-25	Near Joragdia Village	158	61	29	14.22	36.75	Transportation, Domestic Cooking	About 1km
23-May-25	Khajuria Village	125	42	23	14.64	20.80		
24-May-25	Kalinga Colony	160	63	30	10.59	32.93		
24-May-25	Khajuria Village	134	52	25	15.81	21.11		
24-May-25	Karnapur Village	137	47	26	13.76	28.89		
24-May-25	Near Joragdia Village	142	55	26	12.57	28.23	Transportation, Domestic Cooking	About 1km
26-May-25	East of the Mine, Natedi Village (Reported Only)	129	49	26	14.62	24.24	Coal Transportation Road	About 2km
27-May-25	East of the Mine, Natedi Village (Reported Only)	119	45	24	14.26	28.23	Coal Transportation Road	About 2km
30-May-25	Kalinga Colony	167	66	31	11.69	21.51		
30-May-25	Karnapur Village	129	48	25	11.46	31.28		
30-May-25	Khajuria Village	154	57	29	15.39	31.20		
30-May-25	Near Joragdia Village	153	59	28	15.83	31.43	Transportation, Domestic Cooking	About 1km
31-May-25	Near Joragdia Village	125	48	23	18.43	22.29	Transportation, Domestic Cooking	About 1km
31-May-25	Kalinga Colony	140	41	23	12.99	38.68		
31-May-25	Karnapur Village	167	61	34	10.67	34.41		
31-May-25	Khajuria Village	145	55	27	18.57	37.54		

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Bharatpur

Project	Bharatpur OCP							
Monitoring Station	Near Joragadia Village							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) Pyrene	Benzen e
	(µg/m ³)	(µg/m ³)	(µg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(µg/m ³)
02-May-2025	<20.0	22.53	<0.1	<1.0	<1.0	1.2	BQL(QL =0.7)	BQL
03-May-2025	<20.0	21.22	<0.1	<1.0	<1.0	1.0	BQL(QL =0.7)	BQL
09-May-2025	<20.0	12.58	<0.1	<1.0	<1.0	1.3	BQL(QL =0.7)	BQL
10-May-2025	<20.0	20.97	<0.1	<1.0	<1.0	1.4	BQL(QL =0.7)	BQL
16-May-2025	<20.0	23.05	<0.1	<1.0	<1.0	1.2	BQL(QL =0.7)	BQL
17-May-2025	<20.0	25.68	<0.1	<1.0	<1.0	1.0	BQL(QL =0.7)	BQL
23-May-2025	<20.0	15.72	<0.1	<1.0	<1.0	1.2	BQL(QL =0.7)	BQL
24-May-2025	<20.0	19.92	<0.1	<1.0	<1.0	1.3	BQL(QL =0.7)	BQL
30-May-2025	<20.0	25.68	<0.1	<1.0	<1.0	0.9	BQL(QL =0.7)	BQL
31-May-2025	<20.0	20.18	<0.1	<1.0	<1.0	0.8	BQL(QL =0.7)	BQL
Standard	400(24 hours)	180(hour)	1.0(24 hours)	6.0(Annual)	20(Annual)	02(8 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Bharatpur

Project	Bharatpur OCP							
Monitoring Station	Kalinga Colony							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) Pyrene	Benzene
	(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-May-2025	<20.0	21.22	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
03-May-2025	<20.0	25.68	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
09-May-2025	<20.0	15.72	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL
10-May-2025	<20.0	25.68	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
16-May-2025	<20.0	18.87	<0.1	<1.0	<1.0	0.4	BQL(QL=0.7)	BQL
17-May-2025	<20.0	24.37	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL
23-May-2025	<20.0	20.18	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
24-May-2025	<20.0	19.13	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
30-May-2025	<20.0	18.87	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
31-May-2025	<20.0	15.20	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
Standard	400(24 hours)	180(hour)	1.0(24 hours)	6.0(Annual)	20(Annual)	02(8 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Bharatpur

Project	Bharatpur OCP							
Monitoring Station	Khajuria Village							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) Pyrene	Benzene
	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	(ng/m^3)	(ng/m^3)	(mg/m^3)	(ng/m^3)	($\mu\text{g}/\text{m}^3$)
02-May-2025	<20.0	25.68	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL
03-May-2025	<20.0	13.63	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
09-May-2025	<20.0	19.92	<0.1	<1.0	<1.0	0.4	BQL(QL=0.7)	BQL
10-May-2025	<20.0	20.18	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL
16-May-2025	<20.0	19.13	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
17-May-2025	<20.0	11.53	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
23-May-2025	<20.0	11.00	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
24-May-2025	<20.0	11.00	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL
30-May-2025	<20.0	14.15	<0.1	<1.0	<1.0	0.4	BQL(QL=0.7)	BQL
31-May-2025	<20.0	18.87	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL
Standard	400(24 hours)	180(hour)	1.0(24 hours)	6.0(Annual)	20(Annual)	02(8 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Bharatpur

Project	Bharatpur OCP							
Monitoring Station	Karnapur 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-May-2025	<20.0	20.18	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL
03-May-2025	<20.0	15.47	<0.1	<1.0	<1.0	0.3	BQL(QL=0.7)	BQL
09-May-2025	<20.0	11.27	<0.1	<1.0	<1.0	0.4	BQL(QL=0.7)	BQL
10-May-2025	<20.0	13.63	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
16-May-2025	<20.0	15.98	<0.1	<1.0	<1.0	0.4	BQL(QL=0.7)	BQL
17-May-2025	<20.0	18.87	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL
23-May-2025	<20.0	15.20	<0.1	<1.0	<1.0	0.3	BQL(QL=0.7)	BQL
24-May-2025	<20.0	24.37	<0.1	<1.0	<1.0	0.4	BQL(QL=0.7)	BQL
30-May-2025	<20.0	23.32	<0.1	<1.0	<1.0	0.2	BQL(QL=0.7)	BQL
31-May-2025	<20.0	18.35	<0.1	<1.0	<1.0	0.4	BQL(QL=0.7)	BQL
Standard	400(24 hours)	180(hour)	1.0(24 hours)	6.0(Annual)	20(Annual)	02(8 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Bharatpur

Project	Bharatpur OCP							
Monitoring Station	Near Natedi Village(Reported Only)							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) Pyrene	Benzene
	(µg/m ³)	(µg/m ³)	(µg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(µg/m ³)
05-May-2025	<20.0	20.18	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
06-May-2025/	<20.0	13.10	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
12-May-2025	<20.0	25.42	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
13-May-2025	<20.0	1.48	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
19-May-2025	<20.0	20.43	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
20-May-2025	<20.0	24.37	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
26-May-2025	<20.0	12.05	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
27-May-2025	<20.0	16.77	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
Standard	400(24 hours)	180(hour)	1.0(24 hours)	6.0(Annual)	20(Annual)	02(8 hours)	01(annual)	05(annual)

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NOISE LEVEL MONITORING DATA

AREA :

Bharatpur

PROJECT :

Bharatpur OCP

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
13-May-25	North West Point of the Mine	68.2	46.2
13-May-25	Near Regional Store	70.3	47.2
13-May-25	Near Wokshop	70.1	58.9
13-May-25	Kalinga Colony	47.3	35.2
15-May-25	Natedi Village (Reported)	62.3	45.1
27-May-25	North West Point of the Mine	66.3	52.4
27-May-25	Near Regional Store	65.8	52.3
27-May-25	Near Wokshop	68.7	56.8
27-May-25	Kalinga Colony	47.1	38.6
29-May-25	Natedi Village (Reported)	45.7	39.1

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

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TABLE--

EFFLUENT QUALITY DATA

Area :

Bharatpur

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

Project :

Bharatpur OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	Remarks
13-May-25	Mine Sump Water - Old Quarry Sump	7.30	-	-	-	-	
13-May-25	Rakas Quarry Sump	6.93	-	-	-	-	
13-May-25	Workshop ETP Clear Water Tank	7.47	<4.0	59	40	-	
13-May-25	Workshop Inlet	7.51	4.4	77	56	-	
29-May-25	Workshop ETP Clear Water Tank	7.36	<4.0	47	36	-	

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

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TABLE--

EFFLUENT QUALITY DATA

Area :

Bharatpur

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

Project :

Bharatpur OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	MPN/100mL
13-May-25	STP INLET	8.01	-	28	-	<2	81
13-May-25	STP Outlet (PH,TSS,MPN,BOD)	7.80	-	16	-	<2	70
29-May-25	STP INLET	7.79	-	31	-	<2	84
29-May-25	STP Outlet (PH,TSS,MPN,BOD)	7.64	-	23	-	<2	32

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

Project / OCP	Bharatpur OCP			Indian Drinking Standards (IS-10500):2012	
	Tap water in Nehru Satabdi Nagar A Type Quarters	Tap water in Nehru Satabdi Nagar B Type Quarters	Tap water in Nehru Satabdi Nagar C Type Quarters		
Date of Sampling	13-May-2025	13-May-2025	13-May-2025	Acceptable	Permissible
Colour(Hazen)	2	2	1	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	2	2	1	1	5
pH	7.05	6.91	7.90	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	159.68	163.88	54.63	200	600
Chloride(mg/L)	15.56	15.56	7.78	250	1000
Sulphate(mg/L)	9.15	9.27	12.17	200	400
Nitrate(mg/L)	<0.5	<0.5	<0.5	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	147.41	143.42	59.76	200	600
Calcium(mg/L)	35.13	35.13	14.37	75	200
Fluoride(mg/L)	0.67	0.84	0.36	1	1.5
Total Dissolve Solid(mg/L)	240	246	112	500	2000
Copper(mg/L)	<0.03	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	0.22	0.22	<0.04	0.1	0.3
Iron(mg/L)	<0.1	<0.1	<0.1	1.0	No relaxation
Zinc(mg/L)	<0.04	<0.04	<0.04	5	15
Lead(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.001	<0.001	<0.001	0.003	No relaxation
Total Chromium (mg/L)	<0.01	<0.01	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	<0.2	<0.2	0.5	2.4

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Drinking Water Quality Data Bharatpur Area

Project / OCP	Bharatpur OCP				Indian Drinking Standards (IS-10500):2012	
	Monitoring Station	Tap water in Nehru Satabdi Nagar Transit House	Talcipasi Village Open Well	Joragadia Village Open Well		
Date of Sampling	13-May-2025	13-May-2025	13-May-2025	13-May-2025	Acceptable	Permissible
Colour(Hazen)	4	4	2	1	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	3	3	1	1	1	5
pH	7.48	7.62	7.71	8.30	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	268.93	537.86	50.42	58.83	200	600
Chloride(mg/L)	62.24	31.12	7.78	11.67	250	1000
Sulphate(mg/L)	58.84	27.34	6.95	7.18	200	400
Nitrate(mg/L)	<0.5	<0.5	<0.5	<0.5	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	239.04	382.46	55.78	59.76	200	600
Calcium(mg/L)	54.3	62.28	14.37	17.57	75	200
Fluoride(mg/L)	0.78	1.06	0.41	0.62	1	1.5
Total Dissolve Solid(mg/L)	522	684	102	112	500	2000
Copper(mg/L)	<0.03	<0.03	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	<0.04	<0.04	<0.04	0.1	0.3
Iron(mg/L)	<0.1	<0.1	<0.1	<0.1	1.0	No relaxation
Zinc(mg/L)	<0.04	1.49	<0.04	<0.04	5	15
Lead(mg/L)	<0.005	<0.005	<0.005	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.001	<0.001	<0.001	<0.001	0.003	No relaxation
Total Chromium (mg/L)	<0.01	<0.01	<0.01	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	<0.005	<0.005	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	<0.2	<0.2	<0.2	0.5	2.4

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Drinking Water Quality Data Bharatpur Area

Project / OCP	Bharatpur OCP			Indian Drinking Standards (IS-10500):2012	
Monitoring Station	Tap water in Nehru Satabdi Nagar A Type Quarters	Tap water in Nehru Satabdi Nagar B Type Quarters	Tap water in Nehru Satabdi Nagar C Type Quarters		
Date of Sampling	13-May-2025	13-May-2025	13-May-2025	Acceptable	Permissible
Selenium(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Sodium(mg/L)	10.62	10.38	7.82	-	-
Potassium(mg/L)	6.62	6.09	2.52	-	-
Phenolics(mg/L)	<0.001	<0.001	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	<0.2	<0.2	0.2	1.0
MPN (Index/100 ml)	Not Detected	Not Detected	Not Detected	-	-

Project / OCP	Bharatpur OCP				Indian Drinking Standards (IS-10500):2012	
Monitoring Station	Tap water in Nehru Satabdi Nagar Transit House	Taleipasi Village Open Well	Joragadia Village Open Well	Time Office,BOCP		
Date of Sampling	13-May-2025	13-May-2025	13-May-2025	13-May-2025	Acceptable	Permissible
Selenium(mg/L)	<0.005	<0.005	<0.005	<0.005	0.01	No relaxation
Sodium(mg/L)	40.90	51.96	5.77	4.65	-	-
Potassium(mg/L)	20.04	16.27	1.90	1.33	-	-
Phenolics(mg/L)	<0.001	<0.001	<0.001	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	<0.2	<0.2	<0.2	0.2	1.0
MPN (Index/100 ml)	Not Detected	Not Detected	Not Detected	Not Detected	-	-

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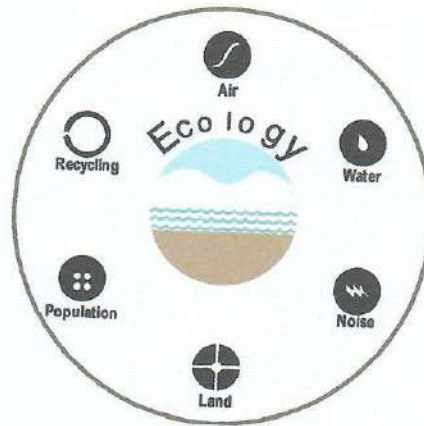
**Environmental Monitoring Report
Of
Bharatpur Area
For
June-2025**

Talcher 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

AMBIENT AIR QUALITY DATA

Area :

Bharatpur

(Compliance Station)

Project :

Bharatpur OCP

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

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

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MoEF Standards Notification dated 25th
September, 2000

600	300		120	120
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Test Report

AMBIENT AIR QUALITY DATA

Area :

Bharatpur

(Reference Station)

Project :

Bharatpur OCP

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

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

*NAAQS, 2009

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Project :

Bharatpur OCP

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

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

*NAAQS, 2009

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Bharatpur

Project	Bharatpur OCP							
Monitoring Station	Kalinga Colony							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) Pyrene	Benzene
	(μg/m ³)	(μg/m ³)	(μg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(μg/m ³)
04-Jun-2025	<20.0	17.10	<0.1	<1.0	<1.0	0.3	BQL(QL=0.7)	BQL
05-Jun-2025	<20.0	21.82	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL
11-Jun-2025	<20.0	21.57	<0.1	<1.0	<1.0	0.4	BQL(QL=0.7)	BQL
12-Jun-2025	<20.0	23.30	<0.1	<1.0	<1.0	0.3	BQL(QL=0.7)	BQL
18-Jun-2025	<20.0	16.12	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
19-Jun-2025	<20.0	23.30	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL
25-Jun-2025	<20.0	17.60	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
26-Jun-2025	<20.0	24.55	<0.1	<1.0	<1.0	0.4	BQL(QL=0.7)	BQL
Standard	400(24 hours)	180(hour)	1.0(24 hours)	6.0(Annual)	20(Annual)	02(8 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Bharatpur

Project	Bharatpur OCP							
Monitoring Station	Near Joragadia Village							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) Pyrene	Benzen e
	(μg/m ³)	(μg/m ³)	(μg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(μg/m ³)
04-Jun-2025	<20.0	19.33	<0.1	<1.0	<1.0	0.6	BQL(QL =0.7)	BQL
05-Jun-2025	<20.0	20.33	<0.1	<1.0	<1.0	0.8	BQL(QL =0.7)	BQL
11-Jun-2025	<20.0	17.10	<0.1	<1.0	<1.0	0.7	BQL(QL =0.7)	BQL
12-Jun-2025	<20.0	24.55	<0.1	<1.0	<1.0	0.6	BQL(QL =0.7)	BQL
18-Jun-2025	<20.0	21.82	<0.1	<1.0	<1.0	0.8	BQL(QL =0.7)	BQL
19-Jun-2025	<20.0	21.57	<0.1	<1.0	<1.0	0.9	BQL(QL =0.7)	BQL
25-Jun-2025	<20.0	23.30	<0.1	<1.0	<1.0	0.7	BQL(QL =0.7)	BQL
26-Jun-2025	<20.0	17.60	<0.1	<1.0	<1.0	0.8	BQL(QL =0.7)	BQL
Standard	400(24 hours)	180(hour)	1.0(24 hours)	6.0(Annual)	20(Annual)	02(8 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Bharatpur

Project	Bharatpur OCP							
Monitoring Station	Khajuria Village							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) Pyrene	Benzene
	(μg/m ³)	(μg/m ³)	(μg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(μg/m ³)
04-Jun-2025	<20.0	15.87	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
05-Jun-2025	<20.0	25.53	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL
11-Jun-2025	<20.0	15.12	<0.1	<1.0	<1.0	0.3	BQL(QL=0.7)	BQL
12-Jun-2025	<20.0	18.10	<0.1	<1.0	<1.0	0.4	BQL(QL=0.7)	BQL
18-Jun-2025	<20.0	21.32	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL
19-Jun-2025	<20.0	15.37	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
25-Jun-2025	<20.0	18.60	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
26-Jun-2025	<20.0	24.30	<0.1	<1.0	<1.0	0.3	BQL(QL=0.7)	BQL
Standard	400(24 hours)	180(hour)	1.0(24 hours)	6.0(Annual)	20(Annual)	02(8 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Bharatpur

Project	Bharatpur OCP							
Monitoring Station	Karanpur Village							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) Pyrene	Benzene
	(µg/m ³)	(µg/m ³)	(µg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(µg/m ³)
04-Jun-2025	<20.0	16.12	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL
05-Jun-2025	<20.0	25.53	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
11-Jun-2025	<20.0	26.03	<0.1	<1.0	<1.0	0.3	BQL(QL=0.7)	BQL
12-Jun-2025	<20.0	25.28	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
18-Jun-2025	<20.0	14.38	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
19-Jun-2025	<20.0	18.10	<0.1	<1.0	<1.0	0.4	BQL(QL=0.7)	BQL
25-Jun-2025	<20.0	24.80	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
26-Jun-2025	<20.0	15.12	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL
Standard	400(24 hours)	180(hour)	1.0(24 hours)	6.0(Annual)	20(Annual)	02(8 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Bharatpur

Project	Bharatpur OCP							
Monitoring Station	Near Natedi Village(Reported Only)							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) Pyrene	Benzene
	(µg/m ³)	(µg/m ³)	(µg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(µg/m ³)
02-Jun-2025	<20.0	21.32	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
03-Jun-2025	<20.0	13.88	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
09-Jun-2025	<20.0	26.78	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
10-Jun-2025	<20.0	22.07	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
16-Jun-2025	<20.0	20.33	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
17-Jun-2025	<20.0	25.03	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
23-Jun-2025	<20.0	20.83	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
24-Jun-2025	<20.0	26.53	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
27-Jun-2025	<20.0	15.87	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
28-Jun-2025	<20.0	23.30	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
Standard	400(24 hours)	180(hour)	1.0(24 hours)	6.0(Annual)	20(Annual)	02(8 hours)	01(annual)	05(annual)

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TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Bharatpur

PROJECT :

Bharatpur OCP

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

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

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TABLE--

EFFLUENT QUALITY DATA

Area :

Bharatpur

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

Project :

Bharatpur OCP

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

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

5.5-9.0	10	100	250	30
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TABLE--

EFFLUENT QUALITY DATA

Area :

Bharatpur

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

Project :

Bharatpur OCP

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

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

Project (OCP / UG)	Bharatpur		MoEF-Sch-VI Standards
	Workshop ETP Clear Water Tank Outlet	Mine Sump (Old Quarry Sump)	
NAME OF THE STATION	13-May-25	13-May-25	
Date of Sampling	13-May-25	13-May-25	
Odour	Unobjectionable	Unobjectionable	
Colour(Hazen)	6	6	
Temperature(°C)	25.7	25.6	Shall not exceed 5 °C above the receiving temperature
pH	7.48	7.28	
Total Hardness (asCaco3),mg/L	171.31	215.14	4.0
Total Dissolved Solids, mg/L	246	320	10
Nitrate Nitrogen(mg/L)(As N)	<0.5	<0.5	10
Ammonical Nitrogen , mg/l (As N)	0.29	0.30	50
Total Kjeldhal Nitrogen, mg/l (As N)	2.21	2.21	100
Sulphide (mg/L)	<0.1	<0.1	2
BOD [3 days at 27°C] (mg/L)	<2.0	<2.0	30
Fluoride(mg/L)	0.84	1.04	2
Copper(mg/L)	<0.03	<0.03	3
Manganese(mg/L)	<0.04	<0.04	2
Iron(mg/L)	<0.1	<0.1	3
Zinc(mg/L)	<0.04	<0.04	5
Lead, mg/l	<0.005	<0.005	0.1
Cadmium, mg/l	<0.001	<0.001	2
Total Chromium(mg/L)	<0.01	<0.01	2
Hexavalent Chromium(mg/L)	<0.05	<0.05	0.1
Nickel(mg/L)	<0.02	<0.02	3
Arsenic, mg/l	<0.005	<0.005	0.2
Selenium (mg/L)	<0.005	<0.005	0.05
Dissolved Phosphate(mg/L)	<4.0	<4.0	5
Phenolics (mg/L)	<0.001	<0.001	1

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Drinking Water Quality Data Bharatpur Area

Project / OCP	Bharatpur OCP	Indian Drinking Standards (IS-10500):2012	
		Acceptable	Permissible
Monitoring Station	Time Office,BOCP		
Date of Sampling	12-Jun-2025		
Colour(Hazen)	3	5	15
Odour	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	2	1	5
pH	6.72	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	89.09	200	600
Chloride(mg/L)	25.28	250	1000
Sulphate(mg/L)	5.56	200	400
Nitrate(mg/L)	<0.5	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	187.25	200	600
Calcium(mg/L)	62.28	75	200
Fluoride(mg/L)	0.66	1	1.5
Total Dissolve Solid(mg/L)	258	500	2000
Copper(mg/L)	<0.03	0.05	1.5
Manganese(mg/L)	0.16	0.1	0.3
Iron(mg/L)	<0.1	1.0	No relaxation
Zinc(mg/L)	0.62	5	15
Lead(mg/L)	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.001	0.003	No relaxation
Total Chromium (mg/L)	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	0.5	2.4

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Drinking Water Quality Data Bharatpur Area

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

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Surface Water Quality Data Bharatpur Area

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

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Surface Water Quality Data Bharatpur Area

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

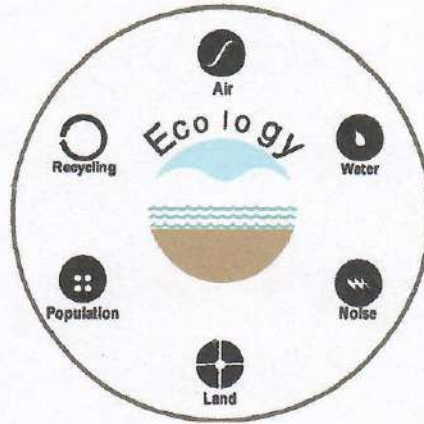
K. Jaiswal
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**Environmental Monitoring Report
Of
Bharatpur Area
For
July-2025**

Talcher Coalfield



Mahanadi Coalfields Limited



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

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

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Test Report

AMBIENT AIR QUALITY DATA

Area :

Bharatpur

(Compliance Station)

Project :

Bharatpur OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
05-Jul-25	Near Regional Store	204	96	45	14.20	32.66	Mining Activities	About 500m
05-Jul-25	North-West Point of the Mine	196	92	43	16.27	33.58	Domestic & Mining Activities	About 500m
05-Jul-25	Near ETP/Workshop	183	85	42	11.87	26.38	Mining Activities & Coal Stock	Above 500m
23-Jul-25	Near Regional Store	180	81	38	13.92	25.32	Mining Activities	About 500m
23-Jul-25	North-West Point of the Mine	194	83	42	14.95	22.39	Domestic & Mining Activities	About 500m
23-Jul-25	Near ETP/Workshop	223	104	45	13.29	17.26	Mining Activities & Coal Stock	Above 500m

MoEF Standards Notification dated 25th September, 2000

600	300		120	120
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Signature

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 AMBI AIR QUALITY DATA

Test Report

AMBIENT AIR QUALITY DATA

Area :

Bharatpur

(Reference Station)

Project :

Bharatpur OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
01-Jul-25	East of the Mine, Natedi Village (Reported Only)	137	48	25	10.55	19.99	Coal Transportation Road	About 2km
02-Jul-25	East of the Mine, Natedi Village (Reported Only)	157	65	32	12.07	21.94	Coal Transportation Road	About 2km
03-Jul-25	Karnapur Village	118	41	23	18.47	18.39		
03-Jul-25	Near Joragdia Village	126	38	20	10.99	20.79	Transportation, Domestic Cooking	About 1km
03-Jul-25	Kalinga Colony	135	48	26	12.95	30.38		
03-Jul-25	Khajuria Village	129	47	23	11.28	27.34		
04-Jul-25	Khajuria Village	123	40	21	11.87	21.59		
04-Jul-25	Karnapur Village	155	57	29	14.07	19.19		
04-Jul-25	Near Joragdia Village	131	46	23	18.10	32.07	Transportation, Domestic Cooking	About 1km
04-Jul-25	Kalinga Colony	128	44	23	10.44	28.86		
07-Jul-25	East of the Mine, Natedi Village (Reported Only)	132	47	24	16.71	25.06	Coal Transportation Road	About 2km
08-Jul-25	East of the Mine, Natedi Village (Reported Only)	118	41	22	12.31	28.78	Coal Transportation Road	About 2km
11-Jul-25	Near Joragdia Village	148	53	27	12.75	33.58	Transportation, Domestic Cooking	About 1km
11-Jul-25	Kalinga Colony	150	59	29	10.44	22.03		
11-Jul-25	Khajuria Village	115	42	18	11.14	35.45		
11-Jul-25	Karnapur Village	120	45	24	16.27	28.78		
12-Jul-25	Khajuria Village	126	56	23	11.87	20.79		
12-Jul-25	Kalinga Colony	119	47	24	10.86	31.14		
12-Jul-25	Near Joragdia Village	126	44	21	19.96	32.07	Transportation, Domestic Cooking	About 1km
12-Jul-25	Karnapur Village	148	50	27	14.85	23.63		
14-Jul-25	East of the Mine, Natedi Village (Reported Only)	116	38	20	12.75	27.18	Coal Transportation Road	About 2km
15-Jul-25	East of the Mine, Natedi Village (Reported Only)	146	50	27	13.92	25.32	Coal Transportation Road	About 2km
18-Jul-25	Khajuria Village	165	60	27	15.39	28.78		

*NAAQS, 2009

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Project :

Bharatpur OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
18-Jul-25	Near Joragdia Village	132	44	23	10.21	27.85	Transportation, Domestic Cooking	About 1km
18-Jul-25	Kalinga Colony	135	48	21	17.13	20.51		
18-Jul-25	Karnapur Village	131	58	25	13.00	31.23		
19-Jul-25	Near Joragdia Village	119	35	15	13.19	27.98	Transportation, Domestic Cooking	About 1km
19-Jul-25	Kalinga Colony	159	51	25	12.33	18.08		
19-Jul-25	Karnapur Village	110	34	15	10.99	29.58		
19-Jul-25	Khajuria Village	133	66	30	12.53	22.79		
21-Jul-25	East of the Mine, Natedi Village (Reported Only)	129	43	21	14.62	26.58	Coal Transportation Road	About 2km
22-Jul-25	East of the Mine, Natedi Village (Reported Only)	153	65	27	14.20	22.03	Coal Transportation Road	About 2km
28-Jul-25	East of the Mine, Natedi Village (Reported Only)	148	45	23	10.11	21.59	Coal Transportation Road	About 2km
29-Jul-25	East of the Mine, Natedi Village (Reported Only)	114	42	17	10.44	23.55	Coal Transportation Road	About 2km
30-Jul-25	Near Joragdia Village	165	50	26	15.39	20.79	Transportation, Domestic Cooking	About 1km
30-Jul-25	Khajuria Village	126	52	22	10.03	25.06		
30-Jul-25	Karnapur Village	135	46	22	17.17	27.01		
30-Jul-25	Kalinga Colony	121	36	16	16.71	24.31		
31-Jul-25	Khajuria Village	151	54	26	16.71	21.59		
31-Jul-25	Kalinga Colony	123	43	19	13.78	28.86		
31-Jul-25	Near Joragdia Village	142	47	23	10.99	31.18	Transportation, Domestic Cooking	About 1km
31-Jul-25	Karnapur Village	155	54	26	16.24	23.63		

*NAAQS, 2009

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Bharatpur

Project	Bharatpur OCP							
Monitoring Station	Kalinga Colony							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) Pyrene	Benzene
	(μg/m ³)	(μg/m ³)	(μg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(μg/m ³)
03-Jul-2025	<20.0	17.25	<0.1	<1.0	<1.0	0.3	BQL(QL=0.7)	BQL
04-Jul-2025	<20.0	18.00	<0.1	<1.0	<1.0	0.4	BQL(QL=0.7)	BQL
11-Jul-2025	<20.0	19.50	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
12-Jul-2025	<20.0	18.50	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL
18-Jul-2025	<20.0	19.00	<0.1	<1.0	<1.0	0.4	BQL(QL=0.7)	BQL
19-Jul-2025	<20.0	16.50	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
30-Jul-2025	<20.0	16.50	<0.1	<1.0	<1.0	0.4	BQL(QL=0.7)	BQL
31-Jul-2025	<20.0	17.50	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
Standard	400(24 hours)	180(hour)	1.0(24 hours)	6.0(Annual)	20(Annual)	02(8 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Bharatpur

Project	Bharatpur OCP							
Monitoring Station	Near Natedi Village(Reported Only)							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) Pyrene	Benzene
	(μg/m ³)	(μg/m ³)	(μg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(μg/m ³)
01-Jul-2025	<20.0	17.50	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL
02-Jul-2025	<20.0	16.50	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
07-Jul-2025	<20.0	11.75	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
08-Jul-2025	<20.0	22.50	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
14-Jul-2025	<20.0	19.00	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
15-Jul-2025	<20.0	16.00	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
21-Jul-2025	<20.0	27.25	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
22-Jul-2025	<20.0	19.50	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
28-Jul-2025	<20.0	18.50	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
29-Jul-2025	<20.0	13.75	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
Standard	400(24 hours)	180(hour)	1.0(24 hours)	6.0(Annual)	20(Annual)	02(8 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Bharatpur

Project	Bharatpur OCP							
Monitoring Station	Near Joragadia Village							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) Pyrene	Benzen e
	(μg/m ³)	(μg/m ³)	(μg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(μg/m ³)
03-Jul-2025	<20.0	14.75	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL
04-Jul-2025	<20.0	15.75	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
11-Jul-2025	<20.0	23.75	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
12-Jul-2025	<20.0	18.50	<0.1	<1.0	<1.0	0.4	BQL(QL=0.7)	BQL
18-Jul-2025	<20.0	13.50	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
19-Jul-2025	<20.0	16.50	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
30-Jul-2025	<20.0	21.75	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
31-Jul-2025	<20.0	27.25	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
Standard	400(24 hours)	180(hour)	1.0(24 hours)	6.0(Annual)	20(Annual)	02(8 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Bharatpur

Project	Bharatpur OCP							
Monitoring Station	Khajuria Village							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) Pyrene	Benzene
	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	(ng/m^3)	(ng/m^3)	(mg/m^3)	(ng/m^3)	($\mu\text{g}/\text{m}^3$)
03-Jul-2025	<20.0	20.00	<0.1	<1.0	<1.0	0.4	BQL(QL=0.7)	BQL
04-Jul-2025	<20.0	19.50	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
11-Jul-2025	<20.0	25.00	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL
12-Jul-2025	<20.0	23.00	<0.1	<1.0	<1.0	0.4	BQL(QL=0.7)	BQL
18-Jul-2025	<20.0	12.00	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
19-Jul-2025	<20.0	15.50	<0.1	<1.0	<1.0	0.4	BQL(QL=0.7)	BQL
30-Jul-2025	<20.0	26.25	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
31-Jul-2025	<20.0	21.50	<0.1	<1.0	<1.0	0.4	BQL(QL=0.7)	BQL
Standard	400(24 hours)	180(hour)	1.0(24 hours)	6.0(Annual)	20(Annual)	02(8 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Bharatpur

Project	Bharatpur OCP							
Monitoring Station	Karanpur Village							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) Pyrene	Benzene
	(µg/m ³)	(µg/m ³)	(µg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(µg/m ³)
03-Jul-2025	<20.0	12.25	<0.1	<1.0	<1.0	0.3	BQL(QL=0.7)	BQL
04-Jul-2025	<20.0	27.75	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL
11-Jul-2025	<20.0	18.00	<0.1	<1.0	<1.0	0.4	BQL(QL=0.7)	BQL
12-Jul-2025	<20.0	17.25	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL
18-Jul-2025	<20.0	14.00	<0.1	<1.0	<1.0	0.4	BQL(QL=0.7)	BQL
19-Jul-2025	<20.0	13.50	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
30-Jul-2025	<20.0	28.25	<0.1	<1.0	<1.0	0.4	BQL(QL=0.7)	BQL
31-Jul-2025	<20.0	27.00	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
Standard	400(24 hours)	180(hour)	1.0(24 hours)	6.0(Annual)	20(Annual)	02(8 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Bharatpur

Project	Bharatpur OCP			
Monitoring Station	Near ETP/Workshop			
Date of sampling	Lead (Pb)	Arsenic (As)	Mercury (Hg)	Chromium (Cr)
	($\mu\text{g}/\text{m}^3$)	(ng/m^3)	(ng/m^3)	($\mu\text{g}/\text{m}^3$)
20-May-2025	<0.1	<1.0	<1.0	<0.1
Standard	1.0(24hours)	6.0(Annual)	-	-

Project	Bharatpur OCP			
Monitoring Station	North-West Point of the Mine			
Date of sampling	Lead (Pb)	Arsenic (As)	Mercury (Hg)	Chromium (Cr)
	($\mu\text{g}/\text{m}^3$)	(ng/m^3)	(ng/m^3)	($\mu\text{g}/\text{m}^3$)
21-May-2025	<0.1	<1.0	<1.0	<0.1
Standard	1.0(24hours)	6.0(Annual)	-	-

Project	Bharatpur OCP			
Monitoring Station	Near Regional Store			
Date of sampling	Lead (Pb)	Arsenic (As)	Mercury (Hg)	Chromium (Cr)
	($\mu\text{g}/\text{m}^3$)	(ng/m^3)	(ng/m^3)	($\mu\text{g}/\text{m}^3$)
21-May-2025	<0.1	<1.0	<1.0	<0.1
Standard	1.0(24hours)	6.0(Annual)	-	-

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TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Bharatpur

PROJECT :

Bharatpur OCP

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
10-Jul-25	North West Point of the Mine	63.5	53.9
10-Jul-25	Near Regional Store	66.8	54.2
10-Jul-25	Near Wokshop	65.3	55.4
10-Jul-25	Kalinga Colony	49.2	40.6
11-Jul-25	Natedi Village (Reported)	46.7	40.3
25-Jul-25	North West Point of the Mine	65.5	54.4
25-Jul-25	Near Regional Store	67.1	54.7
25-Jul-25	Near Wokshop	67.3	56.0
25-Jul-25	Kalinga Colony	50.7	41.1
26-Jul-25	Natedi Village (Reported)	48.2	40.8

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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EFFLUENT QUALITY DATA

Area :

Bharatpur

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

Project :

Bharatpur OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	Remarks
16-Jul-25	Mine Sump Water - Main Sump	6.84	-	-	-	-	
16-Jul-25	Mine Sump Water - Old Quarry Sump	6.99	-	-	-	-	
16-Jul-25	Rakas Quarry Sump	6.99	<4.0	43	32	-	
16-Jul-25	Workshop ETP Clear Water Tank	7.61	4.2	47	60	-	
16-Jul-25	Workshop Inlet	7.42	5.0	67	84	-	
31-Jul-25	Workshop ETP Clear Water Tank	8.19	<4.0	37	44	-	
31-Jul-25	Workshop Inlet	8.58	4.6	58	80	-	

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

5.5-9.0	10	100	250	30
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EFFLUENT QUALITY DATA

Area :

Bharatpur

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

Project :

Bharatpur OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	MPN/100mL
16-Jul-25	STP INLET	8.15	-	31	-	2.2	170
16-Jul-25	STP Outlet (PH,TSS,MPN,BOD)	8.48	-	22	-	<2	110
31-Jul-25	STP INLET	8.57	-	37	-	2.4	280
31-Jul-25	STP Outlet (PH,TSS,MPN,BOD)	8.39	-	25	-	<2	120

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

6.5-9.0 - <100 - 30 <1000

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Drinking Water Quality Data Bharatpur Area

Project / OCP	Bharatpur OCP	Indian Drinking Standards (IS-10500):2012	
Monitoring Station	Time Office,BOCP	Acceptable	Permissible
Date of Sampling	16-Jul-2025		
Colour(Hazen)	3	5	15
Odour	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	3	1	5
pH	6.77	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	142.87	200	600
Chloride(mg/L)	36.9	250	1000
Sulphate(mg/L)	44.28	200	400
Nitrate(mg/L)	0.98	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	184.33	200	600
Calcium(mg/L)	50.52	75	200
Fluoride(mg/L)	0.86	1	1.5
Total Dissolve Solid(mg/L)	290	500	2000
Copper(mg/L)	<0.03	0.05	1.5
Manganese(mg/L)	0.26	0.1	0.3
Iron(mg/L)	<0.1	1.0	No relaxation
Zinc(mg/L)	3.13	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 Bharatpur Area

Project / OCP	Bharatpur OCP	Indian Drinking Standards (IS-10500):2012	
		Acceptable	Permissible
Monitoring Station	Time Office,BOCP		
Date of Sampling	16-Jul-2025		
Selenium(mg/L)	<0.005	0.01	No relaxation
Sodium(mg/L)	6.45		
Potassium(mg/L)	4.23		
Phenolics(mg/L)	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	0.2	1.0
MPN (Index/100 ml)	Not Detected		

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format:

Bharatpur OCP

Khajuria Village
Near Joragadia Village

North-West Point of the Mine

Near ETP/Workshop

Near Regional Store

Natedi Village

Kalinga Colony

Karnapur Village

Legend
Monitoring Station



3 km

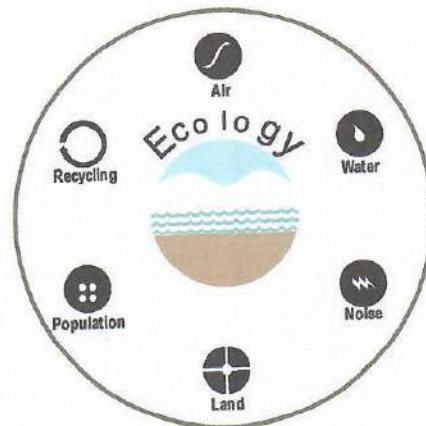


**Environmental Monitoring Report
Of
Bharatpur Area
For
August-2025
Talcher Coalfield**



MCL

Mahanadi Coalfields Limited



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A Mini Ratna Company

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

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

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Test Report



AMBIENT AIR QUALITY DATA

Area :

Bharatpur

(Compliance Station)

Project :

Bharatpur OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
06-Aug-25	Near Regional Store	210	95	42	13.81	27.37	Mining Activities	About 500m
06-Aug-25	North-West Point of the Mine	201	95	42	14.27	25.81	Domestic & Mining Activities	About 500m
06-Aug-25	Near ETP/Workshop	205	94	41	15.91	17.56	Mining Activities & Coal Stock	Above 500m
22-Aug-25	Near Regional Store	214	115	46	16.62	20.80	Mining Activities	About 500m
22-Aug-25	North-West Point of the Mine	221	110	46	17.06	17.83	Domestic & Mining Activities	About 500m
22-Aug-25	Near ETP/Workshop	177	83	38	19.80	28.15	Mining Activities & Coal Stock	Above 500m

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MoEF Standards Notification dated 25th September, 2000	600	300		120	120
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AMBIENT AIR QUALITY DATA

Area :

Bharatpur

(Reference Station)

Project :

Bharatpur OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
01-Aug-25	East of the Mine, Natedi Village (Reported Only)	126	44	21	14.16	22.64	Coal Transportation Road	About 2km
02-Aug-25	East of the Mine, Natedi Village (Reported Only)	137	43	24	8.75	23.64	Coal Transportation Road	About 2km
04-Aug-25	Kalinga Colony	133	50	24	10.83	23.35		
04-Aug-25	Karnapur Village	133	47	22	15.55	22.29		
04-Aug-25	Near Joragdia Village	139	49	24	12.73	29.72	Transportation, Domestic Cooking	About 1km
04-Aug-25	Khajuria Village	122	46	23	17.94	19.31		
05-Aug-25	Karnapur Village	127	40	19	10.13	22.68		
05-Aug-25	Kalinga Colony	141	58	27	15.41	30.42		
05-Aug-25	Near Joragdia Village	153	55	26	17.94	26.00	Transportation, Domestic Cooking	About 1km
05-Aug-25	Khajuria Village	125	53	24	16.62	26.74		
08-Aug-25	East of the Mine, Natedi Village (Reported Only)	126	49	20	11.97	35.19	Coal Transportation Road	About 2km
09-Aug-25	East of the Mine, Natedi Village (Reported Only)	123	40	18	13.75	21.93	Coal Transportation Road	About 2km
11-Aug-25	Khajuria Village	116	44	21	13.35	25.81		
11-Aug-25	Karnapur Village	123	34	15	11.18	28.89		
11-Aug-25	Near Joragdia Village	157	76	31	14.16	30.42	Transportation, Domestic Cooking	About 1km
11-Aug-25	Kalinga Colony	166	70	29	14.71	22.96		
12-Aug-25	Near Joragdia Village	118	33	17	17.04	31.28	Transportation, Domestic Cooking	About 1km
12-Aug-25	Khajuria Village	138	57	26	11.97	30.50		
12-Aug-25	Kalinga Colony	134	55	25	10.34	19.59		
12-Aug-25	Karnapur Village	129	43	20	17.50	24.76		
18-Aug-25	East of the Mine, Natedi Village (Reported Only)	158	75	33	14.87	27.49	Coal Transportation Road	About 2km
19-Aug-25	East of the Mine, Natedi Village (Reported Only)	121	40	24	17.06	30.46	Coal Transportation Road	About 2km
20-Aug-25	Kalinga Colony	153	68	28	10.94	20.06		

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Project :

Bharatpur OCP

(conc. in µg/cu.m.)

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
20-Aug-25	Karnapur Village	113	43	15	19.34	23.46		
20-Aug-25	Near Joragdia Village	155	64	28	17.04	20.33	Transportation, Domestic Cooking	About 1km
20-Aug-25	Khajuria Village	123	46	24	15.55	21.46		
21-Aug-25	Karnapur Village	133	55	26	13.12	36.32		
21-Aug-25	Kalinga Colony	141	52	24	19.25	20.06		
21-Aug-25	Near Joragdia Village	127	48	17	11.05	20.33	Transportation, Domestic Cooking	About 1km
21-Aug-25	Khajuria Village	156	68	30	11.97	29.72		
25-Aug-25	East of the Mine, Natedi Village (Reported Only)	149	59	28	17.04	30.50	Coal Transportation Road	About 2km
26-Aug-25	East of the Mine, Natedi Village (Reported Only)	141	43	25	11.05	25.02	Coal Transportation Road	About 2km
27-Aug-25	Near Joragdia Village	134	57	26	19.34	17.99	Transportation, Domestic Cooking	About 1km
27-Aug-25	Khajuria Village	136	47	25	15.20	26.59		
27-Aug-25	Karnapur Village	139	63	27	15.66	24.24		
27-Aug-25	Kalinga Colony	136	57	25	17.94	23.03		
28-Aug-25	Khajuria Village	110	41	19	17.04	21.90		
28-Aug-25	Near Joragdia Village	126	47	21	13.81	25.02	Transportation, Domestic Cooking	About 1km
28-Aug-25	Kalinga Colony	116	46	19	17.06	27.49		
28-Aug-25	Karnapur Village	120	41	15	10.50	28.97		

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Bharatpur

Project	Bharatpur OCP							
Monitoring Station	Near Natedi Village(Reported Only)							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) Pyrene	Benzene
	(µg/m ³)	(µg/m ³)	(µg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(µg/m ³)
01-Aug-2025	<20.0	22.05	<0.1	<1.0	<1.0	0.6	BQL(QL=0.7)	BQL(QL=2.5)
02-Aug-2025	<20.0	14.98	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL(QL=2.5)
08-Aug-2025	<20.0	16.40	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL(QL=2.5)
09-Aug-2025	<20.0	18.10	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL(QL=2.5)
18-Aug-2025	<20.0	20.63	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL(QL=2.5)
19-Aug-2025	<20.0	21.20	<0.1	<1.0	<1.0	0.5	BQL(QL=0.7)	BQL(QL=2.5)
25-Aug-2025	<20.0	22.05	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL(QL=2.5)
26-Aug-2025	<20.0	21.48	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL(QL=2.5)
Standard	400(24 hours)	180(hour)	1.0(24 hours)	6.0(Annual)	20(Annual)	02(8 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Bharatpur

Project	Bharatpur OCP							
Monitoring Station	Karanpur Village							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) Pyrene	Benzene
	(μg/m ³)	(μg/m ³)	(μg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(μg/m ³)
04-Aug-2025	<20.0	23.47	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
05-Aug-2025	<20.0	24.32	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
11-Aug-2025	<20.0	18.93	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
12-Aug-2025	<20.0	11.87	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
20-Aug-2025	<20.0	18.93	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
21-Aug-2025	<20.0	16.40	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
27-Aug-2025	<20.0	18.37	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
28-Aug-2025	<20.0	11.30	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
Standard	400(24 hours)	180(hour)	1.0(24 hours)	6.0(Annual)	20(Annual)	02(8 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Bharatpur

Project	Bharatpur OCP							
Monitoring Station	Khajuria Village							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (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	22.90	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
05-Aug-2025	<20.0	16.40	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
11-Aug-2025	<20.0	20.92	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
12-Aug-2025	<20.0	16.68	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
20-Aug-2025	<20.0	20.92	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
21-Aug-2025	<20.0	17.25	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
27-Aug-2025	<20.0	24.03	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
28-Aug-2025	<20.0	11.87	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
Standard	400(24 hours)	180(hour)	1.0(24 hours)	6.0(Annual)	20(Annual)	02(8 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Bharatpur

Project	Bharatpur OCP							
Monitoring Station	Near Joragadia Village							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (a) Pyrene	Benzen e
	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	(ng/m^3)	(ng/m^3)	(mg/m^3)	(ng/m^3)	($\mu\text{g}/\text{m}^3$)
04-Aug-2025	<20.0	19.50	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
05-Aug-2025	<20.0	13.57	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
11-Aug-2025	<20.0	23.75	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
12-Aug-2025	<20.0	16.40	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
20-Aug-2025	<20.0	13.85	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
21-Aug-2025	<20.0	20.35	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
27-Aug-2025	<20.0	20.07	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
28-Aug-2025	<20.0	22.62	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
Standard	400(24 hours)	180(hour)	1.0(24 hours)	6.0(Annual)	20(Annual)	02(8 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Bharatpur

Project	Bharatpur OCP							
Monitoring Station	Kalinga Colony							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (a) Pyrene	Benzene
	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	(ng/m^3)	(ng/m^3)	(mg/m^3)	(ng/m^3)	($\mu\text{g}/\text{m}^3$)
04-Aug-2025	<20.0	13.48	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
05-Aug-2025	<20.0	16.27	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL
11-Aug-2025	<20.0	22.8	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
12-Aug-2025	<20.0	18.52	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
20-Aug-2025	<20.0	17.63	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
21-Aug-2025	<20.0	20.11	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
27-Aug-2025	<20.0	11.29	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
28-Aug-2025	<20.0	15.86	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
Standard	400(24 hours)	180(hour)	1.0(24 hours)	6.0(Annual)	20(Annual)	02(8 hours)	01(annual)	05(annual)

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TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Bharatpur

PROJECT :

Bharatpur OCP

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

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

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EFFLUENT QUALITY DATA

Area :

Bharatpur

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

Project :

Bharatpur OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	Remarks
14-Aug-25	Mine Sump Water - Main Sump	6.74	<4.0	34	36	-	
14-Aug-25	Mine Sump Water - Old Quarry Sump	6.73	-	-	-	-	
14-Aug-25	Rakas Quarry Sump	7.02	-	-	-	-	
14-Aug-25	Workshop ETP Clear Water Tank	7.36	<4.0	39	40	-	
14-Aug-25	Workshop Inlet	7.21	5.0	57	76	-	
30-Aug-25	Workshop ETP Clear Water Tank	7.49	<4.0	41	32	-	
30-Aug-25	Workshop Inlet	7.65	<4.0	54	48	-	

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

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TABLE--



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EFFLUENT QUALITY DATA

Area :

Bharatpur

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

Project :

Bharatpur OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	MPN/100mL
14-Aug-25	STP INLET	7.82	-	35	-	2.6	110
14-Aug-25	STP Outlet (PH,TSS,MPN,BOD)	7.04	-	24	-	<2	79
30-Aug-25	STP INLET	7.34	-	41	-	2.9	110
30-Aug-25	STP Outlet (PH,TSS,MPN,BOD)	7.91	-	33	-	2.3	63

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

Project / OCP	Bharatpur OCP			Indian Drinking Standards (IS-10500):2012	
	Monitoring Station	Tap water in Nehru Satabdi Nagar A Type Quarters	Tap water in Nehru Satabdi Nagar B Type Quarters		
Date of Sampling	14-Aug-2025	14-Aug-2025	14-Aug-2025	Acceptable	Permissible
Colour(Hazen)	2	2	3	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	1	3	3	1	5
pH	7.15	6.71	6.82	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	33.61	180.68	96.64	200	600
Chloride(mg/L)	15.54	31.08	17.48	250	1000
Sulphate(mg/L)	83.12	54.46	82.94	200	400
Nitrate(mg/L)	<0.5	0.76	<0.5	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	101.97	176.49	141.19	200	600
Calcium(mg/L)	31.44	53.44	44.01	75	200
Fluoride(mg/L)	0.75	0.72	0.70	1	1.5
Total Dissolve Solid(mg/L)	210	310	252	500	2000
Copper(mg/L)	<0.03	<0.03	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	0.14	0.09	0.1	0.3
Iron(mg/L)	<0.1	<0.1	<0.1	1.0	No relaxation
Zinc(mg/L)	0.1	0.41	0.39	5	15
Lead(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.001	<0.001	<0.001	0.003	No relaxation
Total Chromium (mg/L)	<0.01	<0.01	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	<0.2	<0.2	0.5	2.4

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Drinking Water Quality Data Bharatpur Area

Project / OCP	Bharatpur OCP			Indian Drinking Standards (IS-10500):2012	
	Monitoring Station	Tap water in Nehru Satabdi Nagar A Type Quarters	Tap water in Nehru Satabdi Nagar B Type Quarters		
Date of Sampling	14-Aug-2025	14-Aug-2025	14-Aug-2025	Acceptable	Permissible
Selenium(mg/L)	<0.005	<0.005	<0.005	0.01	No relaxation
Sodium(mg/L)	20.87	7.69	8.32		
Potassium(mg/L)	6.18	6.88	1.7		
Phenolics(mg/L)	<0.001	<0.001	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	<0.2	<0.2	0.2	1.0
MPN (Index/100 ml)	Not Detected	Not Detected	Not Detected	-	-

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Drinking Water Quality Data Bharatpur Area

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

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Jasmati



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Drinking Water Quality Data Bharatpur Area

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

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Effluent Quality (all Parameter): - Bharatpur Area

Project (OCP / UG)	Bharatpur		MoEF-Sch-VI Standards
	Workshop ETP Clear Water Tank Outlet	Mine Sump (Old Quarry Sump)	
NAME OF THE STATION			
Date of Sampling	13-May-25	13-May-25	
Odour	Unobjectionable	Unobjectionable	-
Colour(Hazen)	6	6	-
Temperature(°C)	25.7	25.6	Shall not exceed 5 °C above the receiving temperature
pH	7.48	7.28	5.5-9.0
Total Hardness (asCaCO ₃),mg/L	171.31	215.14	-
Total Dissolved Solids, mg/L	246	320	-
Nitrate Nitrogen(mg/L)(As N)	<0.5	<0.5	10
Ammonical Nitrogen , mg/l (As N)	0.29	0.30	50
Total Kjeldhal Nitrogen, mg/l (As N)	2.21	2.21	100
Sulphide (mg/L)	<0.1	<0.1	2
BOD [3 days at 27°C] (mg/L)	<2.0	<2.0	30
Fluoride(mg/L)	0.84	1.04	2
Copper(mg/L)	<0.03	<0.03	3
Manganese(mg/L)	<0.04	<0.04	2
Iron(mg/L)	<0.1	<0.1	3
Zinc(mg/L)	<0.04	<0.04	5
Lead, mg/l	<0.005	<0.005	0.1
Cadmium, mg/l	<0.001	<0.001	2
Total Chromium(mg/L)	<0.01	<0.01	2
Hexavalent Chromium(mg/L)	<0.05	<0.05	0.1
Nickel(mg/L)	<0.02	<0.02	3
Arsenic, mg/l	<0.005	<0.005	0.2
Selenium (mg/L)	<0.005	<0.005	0.05
Dissolved Phosphate(mg/L)	<4.0	<4.0	5
Phenolics (mg/L)	<0.001	<0.001	1

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Piezometer Water Quality Data: Bharatpur Area

Project / OCP Monitoring Station	Bharatpur OCP MTP 10 (Inside the premises of Danara high school) (Reported)	Indian Drinking Standards (IS-10500):2012	
		Acceptable	Permissible
Date of Sampling	03-May-25	Acceptable	Permissible
Colour(Hazen)	1	5	15
Odour	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable
Turbidity(NTU)	1	1	5
pH	6.47	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	19.79	200	600
Chloride(mg/L)	41.10	250	1000
Sulphate(mg/L)	15.19	200	400
Nitrate(mg/L)	10.89	45	No relaxation
Total Hardness (Ca CO ₃)(mg/L)	75.60	200	600
Calcium(mg/L)	17.57	75	200
Fluoride(mg/L)	0.62	1	1.5
Total Dissolve Solid(mg/L)	138	500	2000
Copper(mg/L)	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	0.1	0.3
Iron(mg/L)	<0.1	1.0	No relaxation
Zinc(mg/L)	0.07	5	15
Lead(mg/L)	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.001	0.003	No relaxation
Total Chromium (mg/L)	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	0.01	No relaxation
Selenium (mg/L)	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	0.5	2.4
Sodium mg/L	9.23	-	-
Potassium mg/L	3.77	-	-
Phenolics (mg/L)	<0.001	0.001	0.002
Residual Free Chlorine (mg/L)	<0.2	0.2	1
MPN (Index/100ml)	Not Detected	-	-

T. Jaisankar
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Jaisankar

Eharatpur OCP

Legend
Monitoring Station

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



Google Earth



3 km

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



MCL

Mahanadi Coalfields Limited



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A Mini Ratna Company

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

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

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Test Report



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AMBIENT AIR QUALITY DATA

Area :

Bharatpur

(Compliance Station)

Project :

Bharatpur OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
05-Sep-25	Near Regional Store	210	95	40	15.69	18.91	Mining Activities	About 500m
05-Sep-25	North-West Point of the Mine	214	113	45	15.99	27.49	Domestic & Mining Activities	About 500m
05-Sep-25	Near ETP/Workshop	210	105	43	16.43	38.91	Mining Activities & Coal Stock	Above 500m
25-Sep-25	Near Regional Store	227	116	49	10.02	31.13	Mining Activities	About 500m
25-Sep-25	North-West Point of the Mine	196	89	38	15.69	28.36	Domestic & Mining Activities	About 500m
25-Sep-25	Near ETP/Workshop	204	95	44	14.43	26.89	Mining Activities & Coal Stock	Above 500m

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Signature

APQP Standards Notification dated 25th September, 2000	600	300		120	120
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Test Report



AMBIENT AIR QUALITY DATA

Area :

Bharatpur

(Reference Station)

Project :

Bharatpur OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
01-Sep-25	East of the Mine, Natedi Village (Reported Only)	114	38	17	15.99	30.46	Coal Transportation Road	About 2km
02-Sep-25	East of the Mine, Natedi Village (Reported Only)	178	69	32	12.63	26.00	Coal Transportation Road	About 2km
03-Sep-25	Kalinga Colony	127	58	23	17.68	34.92		
03-Sep-25	Karnapur Village	130	54	23	14.54	15.53		
03-Sep-25	Near Joragdia Village	124	41	18	11.78	16.34	Transportation, Domestic Cooking	About 1km
03-Sep-25	Khajuria Village	148	65	27	9.22	12.74		
04-Sep-25	Karnapur Village	143	68	27	16.45	18.91		
04-Sep-25	Kalinga Colony	142	63	27	11.96	21.11		
04-Sep-25	Near Joragdia Village	139	54	23	12.40	20.33	Transportation, Domestic Cooking	About 1km
04-Sep-25	Khajuria Village	145	53	25	14.73	18.57		
08-Sep-25	East of the Mine, Natedi Village (Reported Only)	143	63	27	10.94	25.26	Coal Transportation Road	About 2km
09-Sep-25	East of the Mine, Natedi Village (Reported Only)	132	57	23	13.63	33.96	Coal Transportation Road	About 2km
10-Sep-25	Khajuria Village	136	45	23	13.91	28.42		
10-Sep-25	Karnapur Village	131	56	24	10.10	30.46		
10-Sep-25	Near Joragdia Village	159	62	26	14.83	18.40	Transportation, Domestic Cooking	About 1km
10-Sep-25	Kalinga Colony	122	42	19	17.64	24.76		
11-Sep-25	Near Joragdia Village	166	70	31	13.39	18.23	Transportation, Domestic Cooking	About 1km
11-Sep-25	Khajuria Village	166	72	31	16.84	37.54		
11-Sep-25	Kalinga Colony	113	35	16	12.63	17.83		
11-Sep-25	Karnapur Village	123	48	20	14.16	24.99		
15-Sep-25	East of the Mine, Natedi Village (Reported Only)	124	44	20	15.23	33.25	Coal Transportation Road	About 2km
16-Sep-25	East of the Mine, Natedi Village (Reported Only)	137	56	24	15.23	33.96	Coal Transportation Road	About 2km
17-Sep-25	Kalinga Colony	147	65	28	15.30	21.61		
17-Sep-25	Karnapur Village	123	44	19	18.94	24.52		
17-Sep-25	Near Joragdia Village	134	53	22	11.08	32.84	Transportation, Domestic Cooking	About 1km

*NAAQS, 2009

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Project :

Bharatpur OCP

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

Date of Sampling	Monitoring Station	SPM	PM10	PM2.5	SO2	NOx	Dust Generating Source(DGS)	Distance from DGS
17-Sep-25	Khajuria Village	141	53	24	14.03	34.67		
18-Sep-25	Karnapur Village	164	71	31	11.86	20.26		
18-Sep-25	Kalinga Colony	139	58	24	14.18	25.81		
18-Sep-25	Near Joragdia Village	143	61	25	16.10	21.32	Transportation, Domestic Cooking	About 1km
18-Sep-25	Khajuria Village	145	60	26	18.52	29.72		
19-Sep-25	East of the Mine, Natedi Village (Reported Only)	123	43	19	18.16	37.54	Coal Transportation Road	About 2km
20-Sep-25	East of the Mine, Natedi Village (Reported Only)	118	34	15	17.30	27.24	Coal Transportation Road	About 2km
22-Sep-25	Near Joragdia Village	127	47	21	11.62	27.59	Transportation, Domestic Cooking	About 1km
22-Sep-25	Khajuria Village	149	67	29	16.03	26.89		
22-Sep-25	Karnapur Village	147	58	27	16.39	23.46		
22-Sep-25	Kalinga Colony	145	63	27	18.94	20.06		
23-Sep-25	Khajuria Village	134	53	23	14.62	31.28		
23-Sep-25	Near Joragdia Village	153	63	28	17.77	26.41	Transportation, Domestic Cooking	About 1km
23-Sep-25	Kalinga Colony	120	41	18	15.15	36.40		
23-Sep-25	Karnapur Village	127	47	20	11.78	32.69		

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*NAQS, 2009

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Bharatpur

Project	Bharatpur OCP							
Monitoring Station	Kalinga Colony							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) Pyrene	Benzene
	(μg/m ³)	(μg/m ³)	(μg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(μg/m ³)
03-Sep-2025	<20.0	24.32	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
04-Sep-2025	<20.0	23.18	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
10-Sep-2025	<20.0	12.72	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
11-Sep-2025	<20.0	14.42	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
17-Sep-2025	<20.0	24.32	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
18-Sep-2025	<20.0	13.85	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
22-Sep-2025	<20.0	21.48	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
23-Sep-2025	<20.0	23.18	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
Standard	400(24 hours)	180(hour)	1.0(24 hours)	6.0(Annual)	20(Annual)	02(8 hours)	01(annual)	05(annual)

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Bharatpur

Project		Bharatpur OCP							
Monitoring Station		Near Natedi Village (Reported Only)							
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (a) Pyrene	Benzene	
	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	($\mu\text{g}/\text{m}^3$)	(ng/m^3)	(ng/m^3)	(mg/m^3)	(ng/m^3)	($\mu\text{g}/\text{m}^3$)	
01-Sep-2025	<20.0	16.42	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL(QL=2.5)	
02-Sep-2025	<20.0	25.18	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL(QL=2.5)	
08-Sep-2025	<20.0	21.07	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL(QL=2.5)	
09-Sep-2025	<20.0	12.32	<0.1	<1.0	<1.0	1.2	BQL(QL=0.7)	BQL(QL=2.5)	
15-Sep-2025	<20.0	13.68	<0.1	<1.0	<1.0	1.3	BQL(QL=0.7)	BQL(QL=2.5)	
16-Sep-2025	<20.0	26.28	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL(QL=2.5)	
19-Sep-2025	<20.0	18.33	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL(QL=2.5)	
20-Sep-2025	<20.0	14.50	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL(QL=2.5)	
Standard	400(24 hours)	180(hour)	1.0(24 hours)	6.0(Annual)	20(Annual)	02(8 hours)	01(annual)	05(annual)	

Janaki

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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Bharatpur

Project		Bharatpur OCP						
Monitoring Station		Near Joragadia Village						
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (α) Pyrene	Benzen e
	(μg/m ³)	(μg/m ³)	(μg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(μg/m ³)
03-Sep-2025	<20.0	16.70	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
04-Sep-2025	<20.0	12.58	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
10-Sep-2025	<20.0	15.33	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
11-Sep-2025	<20.0	14.23	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
17-Sep-2025	<20.0	23.53	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
18-Sep-2025	<20.0	22.45	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
22-Sep-2025	<20.0	25.18	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
23-Sep-2025	<20.0	16.15	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
Standard	400(24 hours)	180(hour)	1.0(24 hours)	6.0(Annual)	20(Annual)	02(8 hours)	01(annual)	05(annual)


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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Bharatpur

Project	Bharatpur OCP							
Monitoring Station	Khajuria 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 ($\mu\text{g}/\text{m}^3$)
03-Sep-2025	<20.0	19.43	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
04-Sep-2025	<20.0	17.25	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
10-Sep-2025	<20.0	15.33	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
11-Sep-2025	<20.0	13.97	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
17-Sep-2025	<20.0	26.55	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
18-Sep-2025	<20.0	14.50	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
22-Sep-2025	<20.0	13.97	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
23-Sep-2025	<20.0	22.72	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
Standard	400(24 hours)	180(hour)	1.0(24 hours)	6.0(Annual)	20(Annual)	02(8 hours)	01(annual)	05(annual)


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AMBIENT AIR QUALITY DATA (NAAQS PARAMETER)

Area: Bharatpur

Project		Bharatpur OCP						
Monitoring Station		Karanpur Village						
Date of sampling	Ammonia (NH ₃)	Ozone (O ₃)	Lead (Pb)	Arsenic (As)	Nickel (Ni)	CO	Benzo (a) Pyrene	Benzene
	(µg/m ³)	(µg/m ³)	(µg/m ³)	(ng/m ³)	(ng/m ³)	(mg/m ³)	(ng/m ³)	(µg/m ³)
03-Sep-2025	<20.0	14.50	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
04-Sep-2025	<20.0	19.17	<0.1	<1.0	<1.0	1.0	BQL(QL=0.7)	BQL
10-Sep-2025	<20.0	14.23	<0.1	<1.0	<1.0	1.1	BQL(QL=0.7)	BQL
11-Sep-2025	<20.0	25.18	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
17-Sep-2025	<20.0	19.70	<0.1	<1.0	<1.0	0.9	BQL(QL=0.7)	BQL
18-Sep-2025	<20.0	20.53	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
22-Sep-2025	<20.0	26.55	<0.1	<1.0	<1.0	0.7	BQL(QL=0.7)	BQL
23-Sep-2025	<20.0	13.42	<0.1	<1.0	<1.0	0.8	BQL(QL=0.7)	BQL
Standard	400(24 hours)	180(hour)	1.0(24 hours)	6.0(Annual)	20(Annual)	02(8 hours)	01(annual)	05(annual)

Janaki

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Arora



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TABLE--

NOISE LEVEL MONITORING DATA

AREA :

Bharatpur

PROJECT :

Bharatpur OCP

DATE OF SAMPLING	STATION	Noise Level Measurement in Leq dB(A)	
		DAY	NIGHT
05-Sep-25	North West Point of the Mine	62.8	53.1
05-Sep-25	Near Regional Store	64.3	55.3
05-Sep-25	Near Wokshop	64.3	55.9
05-Sep-25	Kalinga Colony	47.4	39.1
06-Sep-25	Natedi Village (Reported)	45.9	37.3
24-Sep-25	North West Point of the Mine	61.1	51.1
24-Sep-25	Near Regional Store	60.9	50.8
24-Sep-25	Near Wokshop	64.4	55.7
24-Sep-25	Kalinga Colony	47.1	37.4
25-Sep-25	Natedi Village (Reported)	44.5	36.1

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

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Jaswant

TABLE-



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EFFLUENT QUALITY DATA

Area :

Bharatpur

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

Project :

Bharatpur OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	Remarks
13-Sep-25	Mine Sump Water - Main Sump	7.54	<4.0	29	32	-	
13-Sep-25	Mine Sump Water - Old Quarry Sump	6.87	-	-	-	-	
13-Sep-25	Rakas Quarry Sump	4.77	-	-	-	-	
13-Sep-25	Workshop ETP Clear Water Tank	7.71	<4.0	40	44	-	
13-Sep-25	Workshop Inlet	7.39	5.4	69	92	-	
27-Sep-25	Workshop ETP Clear Water Tank	7.64	<4.0	36	44	-	
27-Sep-25	Workshop Inlet	7.28	4.8	57	84	-	

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A. S. S.

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

5.5-9.0	10	100	250	30
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TABLE--



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EFFLUENT QUALITY DATA

Area :

Bharatpur

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

Project :

Bharatpur OCP

Date of Sampling	Sampling Station	pH	Oil & Grease	TSS	COD	BOD	MPN/100mL
13-Sep-25	STP INLET	7.47	-	34	-	2.4	170
13-Sep-25	STP Outlet (PH,TSS,MPN,BOD)	7.70	-	23	-	<2.0	120
27-Sep-25	STP INLET	7.44	-	39	-	3.1	210
27-Sep-25	STP Outlet (PH,TSS,MPN,BOD)	7.80	-	25	-	<2.0	170

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J. Singh

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

6.5-9.0	-	<100	-	30	<1000
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Effluent Quality (all Parameter): - Bharatpur Area

Project (OCP / UG)	Bharatpur		MoEF-Sch-VI Standards
	Mine Sump Water-Mine Sump	Mine Sump (Old Quarry Sump)	
NAME OF THE STATION			
Date of Sampling	30-Aug-25	30-Aug-25	
Odour	Unobjectionable	Unobjectionable	-
Colour(Hazen)	3	2	-
Temperature(oC)	29.40	28.7	Shall not exceed 5 °C above the receiving temperature
pH	6.46	6.52	5.5-9.0
Total Hardness (asCaCO ₃),mg/L	139.07	194.70	-
Total Dissolved Solids, mg/L	203	366	-
Nitrate Nitrogen(mg/L)(As N)	<0.11	<0.11	10
Ammonical Nitrogen , mg/l (As N)	0.43	0.49	50
Total Kjeldhal Nitrogen, mg/l (As N)	3.01	4.52	100
Sulphide (mg/L)	<0.1	<0.1	2
BOD [3 days at 27°C] (mg/L)	2.9	3.0	30
Fluoride(mg/L)	<0.30	0.48	2
Copper(mg/L)	<0.03	<0.03	3
Manganese(mg/L)	0.12	1.53	2
Iron(mg/L)	<0.1	<0.1	3
Zinc(mg/L)	<0.04	0.54	5
Lead, mg/l	<0.005	<0.005	0.1
Cadmium, mg/l	<0.001	<0.001	2.0
Total Chromium(mg/L)	<0.01	<0.01	2.0
Hexavalent Chromium(mg/L)	<0.05	<0.05	0.1
Nickel(mg/L)	<0.02	<0.02	3
Arsenic, mg/l	<0.005	<0.005	0.2
Selenium (mg/L)	<0.005	<0.005	0.05
Dissolved Phosphate(mg/L)	<4.0	<4.0	5
Phenolics (mg/L)	<0.001	<0.001	1


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Drinking Water Quality Data Bharatpur Area

Project / OCP	Bharatpur OCP	Indian Drinking Standards (IS-10500):2012	
Monitoring Station	Time Office,BOCP	Acceptable	Permissible
Date of Sampling	13-Sep-2025		
Colour (Hazen)	2	5	15
Odour	Agreeable	Agreeable	Agreeable
Taste	Agreeable	Agreeable	Agreeable
Turbidity (NTU)	2	1	5
pH	6.41	6.5-8.5	No relaxation
Total Alkalinity(mg/L)	105.05	200	600
Chloride(mg/L)	17.48	250	1000
Sulphate(mg/L)	30.86	200	400
Nitrate(mg/L)	<0.5	45	No relaxation
Total Hardness (Ca CO ₃) (mg/L)	109.81	200	600
Calcium(mg/L)	29.86	75	200
Fluoride(mg/L)	0.60	1	1.5
Total Dissolve Solid(mg/L)	188	500	2000
Copper(mg/L)	<0.03	0.05	1.5
Manganese(mg/L)	<0.04	0.1	0.3
Iron(mg/L)	<0.1	1.0	No relaxation
Zinc(mg/L)	0.04	5	15
Lead(mg/L)	<0.005	0.01	No relaxation
Cadmium(mg/L)	<0.001	0.003	No relaxation
Total Chromium (mg/L)	<0.01	0.05	No relaxation
Arsenic(mg/L)	<0.005	0.01	No relaxation
Boron(mg/L)	<0.2	0.5	2.4


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Drinking Water Quality Data Bharatpur Area

Project / OCP	Bharatpur OCP	Indian Drinking Standards (IS-10500):2012	
Monitoring Station	Time Office,BOCP	Acceptable	Permissible
Date of Sampling	13-Sep-2025		
Selenium(mg/L)	<0.005	0.01	No relaxation
Sodium(mg/L)	9.16		
Potassium(mg/L)	2.46		
Phenolics(mg/L)	<0.001	0.001	0.002
Residual Free Chlorine(mg/L)	<0.2	0.2	1.0
MPN (Index/100 ml)	Not Detected	-	-

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Surface Water Quality Data Bharatpur Area

Project/OCP	Bharatpur		IS:2296-1982 Tolerance for inland Surface water (Class C)
	Bangaru Jhor river near Joragadia as downstream water point of Bharatpur OCP	Upstream of Bangaru Jhor river of Bharatpur OCP as downstream of Balram OCP (Reported)	
NAME OF STATIONS			
Date of sampling	30-Aug-25	30-Aug-25	
pH	7.84	7.71	6.5-8.5
Color (Hazen unit)	2	3	300
Dissolved Oxygen(mg/L)	6.5	6.0	4
BOD (3 days 27°C)(mg/L)	2.2	<2.0	3
Chlorides(mg/L)	23.48	29.35	600
Sulphate(mg/L)	129.34	60.26	400
Nitrate(mg/L)	0.64	2.76	50
Fluoride(mg/L)	<0.30	0.46	1.5
Total Hardness(mg/L)	310.34	385.94	-
Total dissolved solids (mg/L)	408	425	1500
TSS(mg/L)	29	46	-
Copper(mg/L)	<0.03	<0.03	1.5
Iron(mg/L)	0.8	0.30	50
Zinc(mg/L)	<0.04	0.19	15
Lead(mg/L)	<0.005	<0.005	0.1
Cadmium(mg/L)	<0.001	<0.001	0.01
Arsenic(mg/L)	<0.005	<0.005	0.2
Selenium(mg/L)	<0.005	<0.005	0.05
Hexavalent Chromium(as Cr ⁶⁺)(mg/L)	<0.05	<0.05	0.05
Phenolics(mg/L)	<0.001	<0.001	0.005
Oil & Grease (mg/L)	<4.0	<4.0	0.1
MPN (Index/100 ml)	220	220	-


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Surface Water Quality Data Bharatpur Area

Project/OCP	Bharatpur		IS:2296-1982 Tolerance for inland Surface water (Class C)
	Pond Near N-W Point of the Mine	Jambubahali Village pond	
NAME OF STATIONS	30-Aug-25	30-Aug-25	
Date of sampling			
pH	7.60	7.33	6.5-8.5
Color (Hazen unit)	3	3	300
Dissolved Oxygen(mg/L)	6.6	6.4	4
BOD (3 days 27°C)(mg/L)	2.3	2.2	3
Chlorides(mg/L)	13.70	45.01	600
Sulphate(mg/L)	96.58	80.92	400
Nitrate(mg/L)	0.72	0.64	50
Fluoride(mg/L)	0.55	0.35	1.5
Total Hardness(mg/L)	441.64	497.34	-
Total dissolved solids (mg/L)	394	442	1500
TSS(mg/L)	37	42	-
Copper(mg/L)	<0.03	<0.03	1.5
Iron(mg/L)	0.4	0.28	50
Zinc(mg/L)	<0.04	<0.04	15
Lead(mg/L)	<0.005	<0.005	0.1
Cadmium(mg/L)	<0.001	<0.001	0.01
Arsenic(mg/L)	<0.005	<0.005	0.2
Selenium(mg/L)	<0.005	<0.005	0.05
Hexavalent Chromium(as Cr ⁶⁺)(mg/L)	<0.05	<0.05	0.05
Phenolics(mg/L)	<0.001	<0.001	0.005
Oil & Grease (mg/L)	<4.0	<4.0	0.1
MPN (Index/100 ml)	63	70	-

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