

Let. No.: JPL/GP-IV/1/2023/45

Date: 29/05/2023

Regional Director,  
Ministry of Environment and Forest & Climate Change,  
Regional Office (WCZ), Ground Floor,  
East Wing, New Secretariat Building,  
Civil Lines, Nagpur-440001

Sub: Compliance Status of Environmental Clearance of Gare Palma IV/1 Coal Mine for the period  
1<sup>st</sup> October 2022 to 31<sup>st</sup> March 2023.

Ref: 1. Environmental Clearance No.J-11015/81/2008.IA.II (M) dated 28.10.2021  
2. Environmental Clearance No.J-11015/81/2008.IA.II (M) dated 21.05.2012

Dear Sir,

With reference to the above ,please find enclosed herewith the compliance status of Environmental Clearance for the period 01.10.2022 to 31.03.2023 of Gare Palma IV/1 Coal Mine of M/s Jindal Power Ltd, Dongamahua as per the EIA notification 2006.

Annexures enclosed for the compliance are given below.

- i. Annexure-I-Ground Water Level reports
- ii. Annexure-II-Ground Water Quality
- iii. Annexure-III (A) & (B) CSR Expenditure and Details
- iv. Annexure IV-(A),(B)&(C)-Ambient Air Quality Reports
- v. Annexure-V-Environmental Protection Expenditure

This is for your kind information please.

Thanking you,

Yours Sincerely

For Jindal Power Limited,



Authorised Signatory  
GP IV/1 Coal Mines, Jindal Power Ltd

Cc:

1. Integrated Regional Office (IRO), MoEF & CC  
Aranya Bhawan, North Block, Sector-19,  
Naya Raipur, Atal Nagar,  
Chhattisgarh-492002
2. The Member Secretary  
Chhattisgarh Environment Conservation Board,  
Naya Raipur, Atal Nagar,  
Chhattisgarh-492002
3. The Zonal Officer,  
Central Pollution Control Board,  
3<sup>rd</sup> Floor, Sahkar Bhawan, North T.T. Nagar,  
Bhopal-462003

**Jindal Power Limited**

CIN No. : U04010CT1995PLC008985

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**Registered Office** Tamnar - 496 107, District Raigarh, Chhattisgarh

**The compliance status of conditions of Environmental Clearance (No.J-11015/81/2008.IA.II (M) dated 28.10.2021) granted to Gare IV/1 Open Cast Coal Mines for period 01.10.2022 to 31.03.2023**

S.no.	Condition	Compliance
I	Any change in the scope of work will attract provisions of the environment act,1986 and Environment Impact Assessment Notification, 2006 in conjunction with the subsequent amendments/circulars	<b>Noted for Compliance.</b>
ii.	All the conditions stipulated in shall remain unchanged.	<b>Agreed.</b> Compliance to the EC letter No. J 11015/81/2008.IA.II dated 21 <sup>st</sup> May, 2012 is given below.
fiii.	The successful bidders shall be liable, if any, for any act of violation of EPA 1986/EIA Notification 2006/Subsequent amendments and circulars.	It may be noted that the condition is in contravention of the prevalent law and an application for seeking EC amendment for deletion of the said condition is being submitted to MoEF&CC.
Iv	Successful bidder shall be liable for Compliance of all court conditions, if any.	<b>Noted for Compliance.</b>

**Compliance status of conditions stipulated in EC letter No. J 11015/81/2008.IA.II dated 21.5.2012**

S.no	Condition	Compliance
A.	Specific conditions :	
(i)	Maximum production from the mine shall not exceed 6 MTPA and the washery capacity of Washery-II shall not exceed 3.2 MTPA without prior environmental clearance. The clean coal, middling and rejects from Gare IV/1 shall be utilized in accordance with MOC Allocation Letter for Gare IV/1.	<b>Noted for Compliance.</b>  Coal Production for the FY 2022-23 is 60 Lakh ton only. Washery was not in operation during the reporting period.
(ii)	The diverted stretch of the Bendra Nala shall be strengthened and grouting of weak portions of the embankment to protect the mine from flooding. The slope of the embankment towards the river shall be at least 1:3 for stability and shall be stabilized with plantation using native species selected from the study area.	<b>Noted for compliance.</b> Bendra Nala has been strengthened and grouted in weak portions of the embankment to protect the mine from flooding.
(iii)	Topsoil shall be stored in the earmarked area and used within a year of its generation for green belt development and for plantation/reclamation.	<b>Noted for Compliance.</b> The place has been earmarked to store top soil and is being stored currently in the designated place. This will be used on the top OB benches for reclamation and plantation.
(iv)	No external OB dump shall be created for the expansion project. Monitoring and	<b>Noted for compliance.</b>

	management of existing reclaimed dumpsites shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment & Forests and its Regional office located at Bhopal on yearly basis	As no external OB dump will be created for the expansion project. Timely monitoring and proper management of existing dumps will ensure the stability of reclaimed dumpsites. More plants will be planted above these dumps. Compliance status is being submitted to the Ministry of Environment & Forests and its Regional office located at Bhopal on half-yearly basis.
(vi)	Garland drains (size, gradient and length) and sump capacity shall be designed keeping 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine site. Sump capacity shall also provide adequate retention period to allow proper settling of silt material.	<b>Noted for compliance.</b> The garland drains have been constructed for running parallel to foot of the dumps. This shall be used for collecting, cleaning and channelizing the runoff water to receive settling pond. All the mine water will be generated from seepage is utilized in following applications.  1. Dust suppressions on haul road & 2. Irrigation of green belts/greenery.  Multiple settling ponds at different distances along the length of drain have been made to allow settling of suspended solids present in runoff water. There will be no process water discharge from the mines.
(vii)	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.	<b>Noted for compliance</b> The retaining wall at the Toe of Dump and overburden benches has been suitably designed to check Run-off and siltation.
(viii)	Crushers at the CHP shall be operated with high efficiency bag filters/water sprinkling system shall be provided to check fugitive emissions from crushing operations, conveyor system which shall be closed, haulage roads, transfer points, etc.	<b>Complied</b> Agglomerative dust suppression (ADS) will be installed at all belt conveyors, transfer points, junction points, crushers, screens, and ground hoppers to control Fugitive dust. Mobile water sprinkling system has been arranged for haul road and coal transportation roads for dust suppression.
(ix)	Drills shall be wet operated only.	<b>Complied</b> Wet operated drills are deployed for drilling.
(x)	Controlled blasting shall be practiced with the use of delay detonators and only during daytime. The mitigative measures for control of ground vibrations and to arrest the fly rocks and boulders shall be implemented.	<b>Complied</b> Controlled blasting is being practiced with use of delay detonators and only conducted during daytime.  a. We are adopting sequential blasting system to control the vibration. b. The mitigative measures for control of ground vibration are in place. Ground vibration is measured by vibrometer on regular basis.

		c. Personal protective Equipment like Earplugs and ear muffs are provided to the workers working in noisy areas.
(xi)	The Washery-II shall be a zero-discharge facility and no wastewater shall be discharged from the washery into the drains/natural watercourses. No groundwater shall be used for washery operations. Recycled water shall be used for development and maintenance of the green belt and in the plant operations.	<p><b>Noted for Compliance</b></p> <p>Presently, the washery is not in operation and zero discharge will be ensured while running the washery.</p> <p>No Groundwater will be used for washery operation. All the mine water being generated from seepage will be utilized in the following applications.</p> <ol style="list-style-type: none"> <li>1. Makeup up water at coal washery (Coal Washery not started)</li> <li>2. Dust suppressions on haul road &amp;</li> <li>3. Irrigation of green belts/greenery.</li> </ol>
(xii)	The raw coal, washed coal and middling and coal wastes (rejects) shall be stacked properly at earmarked site(s) within sheds/stockyards fitted with wind breakers/shields. Adequate measures shall be taken to ensure that the stored minerals do not catch fire. The storage period shall be not more than 2-3 days.	<p><b>Noted for Compliance</b></p> <p>Presently, the washery is not in operation. Raw coal is being is being stacked properly at the earmarked site.</p> <p>Adequate measures will be taken to ensure that the stored minerals do not catch fire. The storage period for not more than 2-3 days is being maintained.</p>
(xiii)	The proponent shall maintain proper records of the ash content of raw (ROM) coal, clean coal, middling and coal rejects along with quantum of raw coal obtained and washed and dispatched every month and the same shall be uploaded on the company website every month	<p><b>Noted for Compliance</b></p> <p>Presently, the washery is not in operation. Proper records of the ash content and quantum of raw (ROM) coal dispatched every month are being maintained.</p>
(xiv)	All internal roads shall be concreted or black topped and the approach roads used for the project shall be blacked topped. Facilities for parking of trucks carrying raw coal from the linked coalmines shall be created within the Unit.	<p><b>Complied</b></p> <p>All internal roads are concreted/blacktopped inside the CHP/washery area. Approach roads to the mine are also black topped.</p> <p>The parking space is also provided and maintained.</p>
(xv)	Roads used for coal transportation to the linked DRI/TPP shall be developed with 3-tier avenue plantation using a mix of native species. The trucks used for coal transportation shall be high capacity trucks. Drivers of trucks for coal transportation shall be engaged based on past records of road safety and compliance of safety regulations and shall be suitably sensitized about road safety and maintenance of vehicles to keep vehicular emissions to be within prescribed limits.	<p><b>Noted for compliance.</b></p> <p>Roads used for coal transportation to the TPP are being developed with 3-tier avenue plantation using a mix of native species.</p> <p>The trucks used for coal transportation are high capacity trucks. Drivers of trucks for coal transportation are regularly sensitized about the road safety rules and regulations. All vehicles used in the mine are having valid PUC certificate.</p>
(xvi)	The roads (internal/approach/and roads used for the project) shall be regularly	<b>Noted for compliance.</b>

	<p>cleaned with mechanical sweepers and with water sprinklers.</p> <p>A 3-tier avenue plantation shall be developed along the major approach roads, internal roads and nearby roads used by the company.</p>	<p>All internal roads and approach roads are regularly cleaned. Avenue plantation along the road has been undertaken and will be continued in the monsoon season.</p>
(xvii)	<p>Green belt shall be developed along the areas such as the washery unit, crushing unit, and stockyards and at transfer points and in between mine operations and habitations.</p>	<p><b>Noted for compliance.</b></p> <p>Existing green belt in areas such as Washery unit, crushing unit and stockyards, transfer points, etc. will be strengthened by undertaking gap plantation.</p>
(xviii)	<p>Hoppers of the coal crushing unit at the crushing shed and washery unit shall be fitted with high efficiency bag filters/Dust extractors and mist spray water sprinkling system shall be installed and operated effectively at all times of operation to check fugitive emissions from crushing operations, transfer points of belt conveyor Systems which shall be closed and from transportation roads.</p>	<p><b>Noted for Compliance</b></p> <p>Agglomerative dust suppression (ADS) will be installed at all belt conveyors, transfer points, junction points, crushers, and screen and ground hoppers to control Fugitive dust.</p> <p>Water sprinkling arrangements have been made for haul road and coal transportation roads using water tanker and water sprinklers (rain gun).</p>
(xix)	<p>The proponent shall ensure that coal such as stones, shale and other wastes of an ash content of 77% or more only shall be dumped into the mine voids. Coal rejects with an ash content of 76% or less shall be fully utilised for power generation in linked TPP.</p>	<p><b>Noted for Compliance</b></p> <p>Stones, shale and other wastes from mining with an ash content of 77% or more will be dumped into the mine voids.</p> <p>Coal rejects with an ash content of 76% or less will be utilized for power generation to the maximum extent possible.</p>
(xx)	<p>An estimated 18.832 Mm<sup>3</sup> of fly ash generated from the 4x 150 MW pit head TPS proposed to be dumped in the mine void shall be accommodated in alternate layers of flyash and OB in the ratio of 25:75 after the initial row of OB of not less than 15m thickness as per DGMS recommendation to prevent dump failures.</p>	<p><b>Noted for compliance.</b></p>
(xxi)	<p>Continuous monitoring of long-term impacts of dumping of flyash (for life of the mine) and leaching of heavy metals on soil and water quality of the study area shall be undertaken and the details of which shall be submitted to the Central Ground Water Board, SPCB and to the Regional Office of this Ministry at Bhopal as part of the compliance report. Permanent monitoring arrangements such as piezometers shall be</p>	<p><b>Noted for compliance.</b></p>

	<p>established in and around the mine area covering the potential impact zone for contamination of heavy metals such as Hg, Cd, Cr., Se, etc. due to leachates from the flyash and in case of increasing levels of heavy metals detected in the groundwater, further dumping of flyash shall be stopped immediately. Independent Third-Party monitoring of the impacts of dumping of flyash shall also be undertaken and reported to the regulatory authorities and uploaded on the company website. In case disposal of flyash into the decoaled voids is not found to be an environmentally suitable option, the balance void shall be converted into a water reservoir of a max. depth of 35m and shall be gently sloped and the upper benches of the reservoir shall be stabilized with plantation and the periphery of the reservoir fenced. Water quality monitoring of the water reservoir shall be undertaken.</p>	
(xxii)	<p>Regular monitoring of groundwater level and quality including levels of heavy metals such as Hg, Cd, Cr, Se, etc. shall be carried out by establishing a network of existing wells and construction of new piezometers. The monitoring for quantity and quality of groundwater as per IS:10500 shall be done four times a year in the pre-monsoon (May), monsoon (August), post-monsoon (November), and winter (January) seasons. Proper records of the data thus collected shall be maintained and submitted to the Ministry of Environment &amp; Forests and to the Central Pollution Control Board quarterly within one month of monitoring.</p>	<p><b>Noted for compliance.</b></p> <p>The water table is being regularly monitored using piezometers installed in core and buffer zone at the required frequency.</p> <p>Groundwater quality is being monitored by the MoEF&amp;CC recognized laboratory M/s Ultimate Envirollytical Solutions.</p> <p>. Report of the ground water level is enclosed as <b>Annexure-I</b> and groundwater quality reports of November-2022 and January-2023 are enclosed as <b>Annexure-II</b>.</p>
(xxiii)	<p>As the entire mine water is proposed to be used for the mine-cum-washery operations, measures shall be taken for recharging ground water in and around the mine in the study area. A Plan for water conservation and recharge measures of ground water along with budgetary provisions be prepared and implemented in consultation with the Central/State Ground Water Board to mitigate the adverse impact of mining which may lead to depletion of ground water in the area. The Company shall put</p>	<p><b>Noted for compliance.</b></p>

	up artificial groundwater recharge measures for augmentation of groundwater resource in case monitoring of groundwater levels indicate decline of water table. Any additional water requirement for mining operation shall be met from rainwater use only. The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.	
(xxiv)	ETP shall also be provided for treatment of effluents from workshop, CHP and an STP shall be provided in the colony and the treated effluents shall be used for green belt development. Outflow of rainfall, if any, from the mine shall meet prescribed norms and the water quality of such discharge including levels of heavy metals such as Hg, Cd, Cr, Se, etc shall be monitored at the exit points and records maintained there of and also uploaded on the company website. Online monitoring equipment shall be installed by the proponent to ensure that the water quality parameters of mine water discharge are well within the General Discharge Standards under EP, Rules, 1986.	<p><b>Noted for compliance.</b></p> <p>There is well established oil and grease trap at the work shop. A STP off 500 KLD has been constructed and being fully operational.</p>
(xxv)	An afforestation plan covering an area not less than 699.64 ha shall be implemented, which includes reclaimed external dump (70.36 ha), backfilled area (591.11 ha), along ML boundary, green belt (30.17 ha), along roads and infrastructure, undisturbed/vacant land (8 ha) by planting native species such as Sal, Tendu, Mahua, etc in consultation with the local DFO / Agriculture Department/institution with the relevant discipline. The density of the trees shall be around 2500 plants per ha.	<p><b>Noted for compliance.</b></p>
(xxvi)	Of the total excavated area of 718.79 ha, an area of 699.64 ha shall be backfilled and reclaimed with plantation / afforestation by planting native plant species in consultation with the local DFO/Agriculture Department. The density of the trees shall be around 2500 plants per ha. The balance 127.65 ha of de-coaled quarry area being left as a water body of a max. depth of 161m shall be gently sloped and stabilised and reclaimed with plantation.	<p><b>Noted for compliance.</b></p>

(xxvii)	<p>A Wildlife Conservation Plan for conservation and protection of elephants in the study area prepared for a cost of Rs 454.75 lakhs shall be implemented in consultation with Departments of Forest and Wildlife, Govt. of Chhattisgarh. The WLCP shall comprise of components of habitat improvement and conservation of biodiversity, provision of water holes, and augmenting water bodies, nursery and plantation of species of natural food and fodder found in the natural habitat, salt licks, measures for protection against forest fires and poaching, awareness campaign of villagers in the study area and compensation in case of man-animal conflicts. The status of implementation of the WL Conservation Plan including budgetary provisions of various activities and status of expenditure shall be regularly uploaded on the website of the Forest and Wildlife Departments of Govt. of Chhattisgarh and of the project proponent and the status shall be regularly reported to this Ministry and the MOEF Regional Office, as part of the compliance report.</p>	<p><b>Complied.</b></p> <p>Conservation measures for protection of flora and fauna in the core &amp; buffer zone drawn on the basis of wild life conservation plan for the area has been prepared. Same has been approved by CWLW vide letter dated 10.6.2011. The prior allottee, M/s Jindal Steel &amp; Power (JSPL), has already deposited Rs 454.75 lakh for implementation of the Wildlife Conservation Plan.</p>
(xxviii)	<p>The project authorities shall also participate in a Regional Action Plan of the State Government for conservation of flora and fauna found within the study area, in addition to the above funds shall also contribute financially for implementation of the RWLCP. Habitat development such as grasslands/conservation measures along the migratory route/habitats of elephants found/visiting the area shall form a part of the Regional Action Plan.</p>	<p><b>Noted for compliance.</b></p>
(xxix)	<p>Besides carrying out regular periodic health checkup of their workers, 10% of the workers identified from workforce engaged in active mining operations shall be subjected to health checkup for occupational diseases and hearing impairment, if any, through a recognized agency found in the district, and the results reported to this Ministry and to DGMS.</p>	<p><b>Noted for compliance.</b></p>
(xxx)	<p>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</p>	<p><b>Noted for compliance.</b></p>



	buffer zone, from the start of the project until 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 Bhopal.	
(xxxi)	Cost for additional environmental protection measures shall be not less than Rs 1080.28 lakhs (capital) and the annual recurring costs shall be not less than Rs. 295.43 lakhs. The status of implementation including costs incurred shall be regularly reported to this Ministry and the MOEF Regional Office, as part of the compliance report and also uploaded on the company website.	<b>Noted for compliance.</b>
(xxxii)	R&R Plan prepared for 113 households from villages Aamgaon (23), Nagarmunda (52), Taparanga (21) and Dongamahua (17) and for 185 land losers for an estimated Rs. 798.248 lakhs shall be not less than the norms laid down/approval by the State Government and shall not be inferior than that in the National R&R Policy and shall be completed within a specified time-frame. R&R shall include specific income generation schemes and setting up of SHGs and cooperatives, and activities and assistance under the Tribal development Plan for the tribals being displaced and provision of annuities for the under-privileged sections. The R&R Colony for the 113 households being displaced shall be completed before the process of displacement commences and shall be provided with facilities not below the norms specified by the State Government. In addition, a Corpus Fund of Rs 1 crore/annum shall be provided for the maintenance of the Resettlement site. The status of the implementation of the R&R Plan along with financial status of the activities undertaken shall be uploaded on the company website and updated at least once in a year.	The R&R plan of M/s Jindal Steel & Power was approved by District level committee and recommended R&R plan will be implemented.
(xxxiii)	A CSR Plan for 10 villages- 6 within the ML and 4 adjoining the ML are predominantly (96%) tribal and/or backward communities (SC/ST) with a budgetary provision of 3.728 crores and an additional Rs 2.88 crores for	<b>Noted for Compliance.</b> Details of CSR Activities are enclosed as <b>Annexure-III (A) &amp; III (B).</b>

	tribal development as capital expenditure and a provision of Rs 5/T of coal as recurring expenditure shall be prepared and implemented for the balance life of the project. Details of village-wise activities under CSR along with the activities and budgetary provision shall be uploaded on the company website and the status of its implementation along with expenditure thereon and also desired that a Third-party audit of the implementation of CSR shall be done periodically.	
(xxxiii)	A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment & Forests five year before mine closure for approval. Habitat Restoration Plan of the mine area shall be carried out using a mix of native species found in the original ecosystem, which were conserved in-situ and ex-situ in an identified area within the lease for reintroduction in the mine during mine reclamation and at the post mining stage for habitat restoration and for development of grasslands.	<b>Noted for compliance</b>
(xxxiv)	Corporate Environment Responsibility: a) The Company shall have a well laid down Environment Policy approved by the Board of Directors. b) The Environment Policy shall prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions. c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions shall be furnished. d) To have proper checks and balances, the company shall have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.	<b>Noted for compliance</b>
<b>B</b>	<b>General Conditions</b>	
i	No change in mining technology and scope of working shall be made without prior	<b>Noted</b>

	approval of the Ministry of Environment and Forests.	
ii	No change in the calendar plan including excavation, quantum of mineral coal and waste shall be made	<b>Noted for compliance.</b>
iii	Four ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for monitoring PM10, PM2.5, SO2 and NOx. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, in PM10 and PM2.5 etc. shall be carried out at least once in a year.	Four ambient air quality monitoring stations are established in the core zone as well as in the buffer zone for monitoring PM10, PM2.5, SO2 and NOx. Locations of the stations have been decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, in PM10 and PM2.5 etc. are being carried out at least once in a year.
iv	Data on ambient air quality (PM10, PM2.5, SO2, and NOx and heavy metals such as Hg, As, Ni, Cr, etc) and other monitoring data shall be regularly submitted to the Ministry including its Regional Office at Bhopal, and to the State Pollution Control Board and the Central Pollution Control Board once in six months. Random verification of samples through analysis from independent laboratories recognized under the EP Rules, 1986 shall be furnished as part of the compliance report.	<b>Noted for compliance.</b>  AAQ reports of Buffer zone and Core zone are enclosed as <b>Annexure-IV (A) &amp; IV (B)</b> AAQ reports of Nov-22 & Jan-23 from MoEF&CC recognized laboratory are enclosed as <b>Annexure-IV (C).</b>
v	Fugitive dust emissions (PM10, PM2.5, and heavy metals such as Hg, Pb, Cr, As, etc.) from all the sources shall be controlled regularly monitored and data recorded properly. Water spraying arrangement on haul roads, wagon loading, dump trucks (loading and unloading) points shall be provided and properly maintained.	<b>Noted for compliance.</b> Water sprinkling arrangements have been made for haul road and coal transportation roads using water tankers and water sprinklers (rain gun). Fugitive emissions are being regularly monitored and records maintained.
vi	Adequate measures shall 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 shall be provided with ear plugs/muffs.	<b>Noted for compliance.</b> Adequate measures are being taken for control of noise levels well below 85 dBA in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc. have been provided with earplugs/muffs
vii	Industrial wastewater (workshop and wastewater from the mine) shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May 1993 and 31st	<b>Noted for compliance.</b> Industrial wastewater (workshop and wastewater from the mine) is being properly collected and treated. Oil and grease trap has been installed.

	December 1993 or as amended from time to time before discharge. Oil and grease trap shall be installed before discharge of workshop effluents.	
viii	Vehicular emissions shall be kept under control and regularly monitored.	<b>Noted for compliance.</b> Vehicular emissions are being kept under control and vehicles with valid PUC certificates are permitted to be used.
ix	Environmental laboratory shall be established with adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board.	<b>Noted for compliance.</b> We have established well equipped laboratory for monitoring environmental parameters.
x	Personnel working in dusty areas shall wear protective respiratory devices and they shall also be provided with adequate training and information on safety and health aspects. Occupational health surveillance program of the workers shall be undertaken periodically to observe any contractions due to exposure to dust and to take corrective measures, if needed.	<b>Noted for compliance</b>
xi	A separate environmental management cell with suitable qualified personnel shall be set up under the control of a Senior Executive, who will report directly to the Head of the company.	<b>Noted for compliance.</b> A full-fledged Environment Management cell has been established headed by a Sr. executive who reports to the head of the mine.
xii	The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to this Ministry and its Regional Office at Bhopal.	<b>Noted for compliance</b> Year-wise environmental protection expenditure is enclosed as <b>Annexure-V</b> .
xiii	The Regional Office of this Ministry located at Bhopal shall monitor compliance of the stipulated conditions. The Project authorities shall extend full cooperation to the office(s) of the Regional Office by furnishing the requisite data/information/monitoring reports.	<b>Noted for compliance</b>
xiv	A copy will be marked to concerned Panchayat/ local NGO, if any, from whom any suggestion/representation has been received while processing the proposal.	<b>Noted for compliance</b>
xv	State Pollution Control Board shall display a copy of the clearance letter at the Regional Office, District Industry Centre and Collector's Office/Topsider's Office for 30	NA

	days.	
xvi	<p>The Project authorities shall advertise at least in 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 letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution control Board and may also be seen at the website of the ministry of Environment &amp; Forests at <a href="http://envfor.nic.in">http://envfor.nic.in</a>. The compliance status shall also be uploaded by the project authorities in their website and regularly updated at least once in six months so as to bring the same in the public domain. The data shall also be displayed at the entrance of the project premises and mines office and in corporate office.</p>	<p><b>Complied.</b></p> <p>The name of newspaper with dates are:</p> <p>Kelo Prawah: 26th May 2012</p> <p>Nav Bharat : 26th May 2012</p>

## Annexure-1

Gare Palma IV/1 Coal Mines, Jindal Power Limited, Tamnar			
Piezometer Levels Monitoring Report			
Period: October 2022 to March 2023			
		Ground Water Level (Mbgl)	
Sl. No	Monitoring Location	November-2022	January-2023
P-1	NG colony Play ground	10.3	13.7
P-2	VTC office behind site	15.4	13.3
P-3	Near Brick plant	38.1	38.8
P-4	Near DCPG Gate	52.3	52.8
P-5	Near Shiv Temple Road	31.5	31.1
P-6	Near Mine Janjgir Road Security Post	14.6	18.2
P-7	Nagaramunda (Near Pit – III)	7.8	8.2
P-8	Near JSSTPL Camp	14.8	14.9
P-9	Near Magazine	2.0	3.2



HDD-272, Phase III - Near JP Chowk  
Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099  
Ph : 0771 - 4027777 | Email : ultimatenviro@gmail.com

Recognized by Ministry of Environment Forest and Climate Change under EP act 1996

<b>Name &amp; Address Of The Customer</b> <b>TO,</b> <b>M/S JINDAL POWER LIMITED,</b> <b>GARE PALMA IV/1 COAL MINE,</b> <b>VILLAGE: DONGAMAHUA</b> <b>TEHSIL: TAMNAR, DISTRICT: RAIGARH,</b> <b>(C.G.) 496107</b>	<b>Report No</b>	UES/TR/22-23/05282	
	<b>Lab Ref No</b>	UES/22-23/W/011969	
	<b>Date of Sampling</b>	24/11/2022	
	<b>Date of Receipt</b>	25/11/2022	
	<b>Date of Report</b>	29/11/2022	
	<b>Date of analysis</b>	Start: 25/11/2022	End: 29/11/2022
<b>SAMPLE DETAILS</b>			
<b>Customer Sample Id /Sampling Location</b>	DHOURABHANTHA VILLAGE		
<b>Sample Type</b>	Ground Water		
<b>Packing Of Sample</b>	Plastic Bottle (5.0ltr.) Glass Bottle (1.0ltr.)		
<b>Sample Collected By</b>	Laboratory Chemist		
<b>Sample Condition At Receipt</b>	ok		

REPORT NO.05282

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
A. Organoleptic & Physical Parameters						
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1.0
2	Odour	-	IS:3025(part-5)	Agreeable	Agreeable	Agreeable
3	pH Value at 25.2°C	-	IS:3025:(Part-11)	6.5-8.5	No Relaxation	7.01
4	Taste	-	IS:3025(part-8)	Agreeable	Agreeable	Agreeable
5	Turbidity	NTU	IS:3025:(Part-10)	1	5	0.68
6	Total Dissolved Solids	mg/L	IS:3025:(Part-16)	500	2000	238.8
B. General Parameters Concerning Substances undesirable in excessive amounts						
1	Aluminium (as Al)	mg/L	IS:3025(part-55)	0.03	0.2	N.D.
2	Ammonia (as total ammonia-N)	mg/L	IS:3025(part-34)	0.5	No Relaxation	N.D.
3	Anionic Detergent (as MBAS)	mg/L	Annex K of IS:13428	0.2	1.0	N.D.
4	Barium (as Ba)	mg/L	Annex F of IS:13428	0.7	No Relaxation	N.D.
5	Boron (as B)	mg/L	IS:3025:(Part-57)	0.5	1.0	N.D.
6	Calcium (as Ca)	mg/L	IS:3025:(Part-40)	75	200	28.45
7	Chloramines (as Cl <sub>2</sub> )	mg/L	IS:3025:(Part-26)	4.0	No Relaxation	N.D.
8	Chloride (as Cl)	mg/L	IS:3025:(Part-32)	250	1000	14.9

AN ISO : 9001:2015 / ISO: 14001:2015 / ISO 45001:2018 CERTIFIED LABORATORY





HDD-272, Phase III - Near JP Chowk  
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REPORT NO.05282

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
9	Copper (as Cu)	mg/L	IS 3025(part-42)	0.05	1.5	N.D.
10	Fluoride (as F)	mg/L	IS 3025(part-60)	1	1.5	0.11
11	Free Residual Chlorine	mg/L	IS 3025:(Part-26)	0.2	1	N.D.
12	Iron (as Fe)	mg/L	IS 3025(part-53)	0.3	No Relaxation	0.13
13	Magnesium (as Mg)	mg/L	IS 3025:(Part-46)	30	100	7.9
14	Manganese (as Mn)	mg/L	IS 3025(part-59)	0.1	0.3	0.09
15	Mineral Oil	mg/L	Clause 6 of IS 3025 (Part-39) Infrared partition method	0.5	No Relaxation	N.D.
16	Nitrate (as NO <sub>3</sub> )	mg/L	IS 3025(part-34)	45	No Relaxation	0.64
17	Phenolic Compound (as C <sub>6</sub> H <sub>5</sub> OH)	mg/L	IS 3025(part-43)	0.001	0.002	N.D.
18	Selenium (as Se)	mg/L	IS 3025(part-56)	0.01	No Relaxation	N.D.
19	Silver (as Ag)	mg/L	Annex J of IS 13428	0.1	No Relaxation	N.D.
20	Sulphate (as SO <sub>4</sub> )	mg/L	IS 3025:(Part-24)	200	400	12.6
21	Sulphide (as H <sub>2</sub> S)	mg/L	IS 3025:(Part-29)	0.05	No Relaxation	N.D.
22	Total Alkalinity (as CaCO <sub>3</sub> )	mg/L	IS 3025:(Part-23)	200	600	28
23	Total Hardness (as CaCO <sub>3</sub> )	mg/L	IS 3025:(Part-21)	200	600	174
24	Zinc (as Zn)	mg/L	IS 3025(part-49)	5	15	0.10
<b>C. Parameters concerning toxic substances:-</b>						
1	Cadmium (as Cd)	mg/L	IS 3025(part-41)	0.003	No Relaxation	N.D.
2	Cyanide (as CN)	mg/L	IS 3025(part-27)	0.05	No Relaxation	N.D.
3	Lead (as Pb)	mg/L	IS 3025(part-47)	0.01	No Relaxation	N.D.
4	Mercury (as Hg)	mg/L	IS 3025(part-48)	0.001	No Relaxation	N.D.
5	Molybdenum (as Mo)	mg/L	IS 3025(part-2)	0.07	No Relaxation	N.D.
6	Nickel (as Ni)	mg/L	IS 3025(part-54)	0.02	No Relaxation	N.D.
7	Polychlorinated biphenyls	mg/L	ASTM 5175	0.0005	No Relaxation	N.D.
8	Polynuclear aromatic	mg/L	APHA 6440	0.0001	No Relaxation	N.D.





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REPORT NO.05282

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
	hydrocarbons (as PAH)					
9	Arsenic (as As)	mg/L	IS 3025(part-37)	0.01	0.05	N.D.
10	Chromium (as Cr)	mg/L	Annex J of IS:13428	0.05	No Relaxation	N.D.
11	Trihalomethanes:					
a)	Bromoform	mg/L	APHA 6232	0.1	No Relaxation	N.D.
b)	Dibromochloromethane	mg/L	APHA 6232	0.1	No Relaxation	N.D.
c)	Bromodichloromethane	mg/L	APHA 6232	0.06	No Relaxation	N.D.
d)	Chloroform	mg/L	APHA 6232	0.2	No Relaxation	N.D.
D.	Pesticides:-					
1	Alpha HCH	µg/l	USEPA 508	0.01		N.D.
2	Beta HCH	µg/l	USEPA 508	0.04		N.D.
3	Delta HCH	µg/l	USEPA 508	0.04		N.D.
4	Alachlor	µg/l	USEPA 525.2, 507	20		N.D.
5	Aldrin / Dieldrin	µg/l	USEPA 508	0.03		N.D.
6	Atrazine	µg/l	USEPA 525.2, 8141 A	2		N.D.
7	Butachlor	µg/l	USEPA 525.2, 8141 A	125		N.D.
8	Chlorpyrifos	µg/l	USEPA 525.2, 8141 A	30		N.D.
9	DDT (o,p and p, p-Isomers of DDT, DDE and DDD)	µg/l	USEPA 508	1		N.D.
10	Gamma HCH	µg/l	USEPA 508	2		N.D.
11	2,4-Dichlorophenoxyacetic Acid	µg/l	USEPA 515.1	30		N.D.
12	Endosulphan (alpha, beta and sulphate)	µg/l	USEPA 508	0.4		N.D.
13	Ethion	µg/l	USEPA 1657 A	3		N.D.
14	Isoproturon	µg/l	USEPA 532	9		N.D.
15	Malathion	µg/l	USEPA 8141 A	190		N.D.
16	Methyl Parathion	µg/l	USEPA 8141 A	0.3		N.D.



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REPORT NO.05282

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
17	Monocrotophos	µg/l	USEPA 8141 A		1	N.D.
18	Phorate	µg/l	USEPA 8141 A		2	N.D.
<b>E. Microbial Parameters</b>						
1	Total Coliform	MPN/100ml	IS:1622:1981:RA:2019		-	Absent
2	E. Coli	MPN/100ml	IS:1622:1981:RA:2019		-	Absent

Note: mg/lit.: milligram per liter, N.D.: Not Detected.

### REMARKS: RESULTS ARE AS ABOVE

#### Terms & conditions

- > The above analysis report refers to the particular sample received at our end and the use of the report for publication, arbitration or as legal dispute is forbidden.
- > Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer.
- > This is for information as the party has asked for above test(s) only.

*[Signature]*  
23/11/22

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For ULTIMATE ENVIROLYTICAL SOLUTIONS

*[Signature]*

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-----End of the test report-----





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<b>TO,</b> <b>M/S JINDAL POWER LIMITED,</b> <b>GARE PALMA IV/1 COAL MINE,</b> <b>VILLAGE: DONGAMAHUA</b> <b>TEHSIL: TAMNAR, DISTRICT: RAIGARH,</b> <b>(C.G.) 496107</b>	Report No	UES/TR/22-23/05283	
	Lab Ref No	UES/22-23/W/011970	
	Date of Sampling	24/11/2022	
	Date of Receipt	25/11/2022	
	Date of Report	29/11/2022	
	Date of analysis	Start: 25/11/2022	End: 29/11/2022
SAMPLE DETAILS			
Customer Sample Id /Sampling Location	DONGAMAHUA VILLAGE		
Sample Type	Ground Water		
Packing Of Sample	Plastic Bottle (5.0ltr.) Glass Bottle (1.0ltr.)		
Sample Collected By	Laboratory Chemist		
Sample Condition At Receipt	OK		

REPORT NO.05283

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
A. Organoleptic & Physical Parameters						
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1.0
2	Odour	-	IS 3025(part-5)	Agreeable	Agreeable	Agreeable
3	pH Value at 25.2°C	-	IS:3025:(Part-11)	6.5-8.5	No Relaxation	7.08
4	Taste	-	IS 3025(part-8)	Agreeable	Agreeable	Agreeable
5	Turbidity	NTU	IS 3025:(Part-10)	1	5	1.42
6	Total Dissolved Solids	mg/L	IS:3025:(Part-16)	500	2000	156.6
B. General Parameters Concerning Substances undesirable in excessive amounts						
1	Aluminium (as Al)	mg/L	IS 3025(part-55)	0.03	0.2	N.D.
2	Ammonia (as total ammonia-N)	mg/L	IS 3025(part-34)	0.5	No Relaxation	N.D.
3	Anionic Detergent (as MBAS)	mg/L	Annex K of IS:13428	0.2	1.0	N.D.
4	Barium (as Ba)	mg/L	Annex F of IS:13428	0.7	No Relaxation	N.D.
5	Boron (as B)	mg/L	IS 3025:(Part-57)	0.5	1.0	N.D.
6	Calcium (as Ca)	mg/L	IS 3025:(Part-40)	75	200	16.4
7	Chloramines (as Cl <sub>2</sub> )	mg/L	IS 3025:(Part-26)	4.0	No Relaxation	N.D.





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## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
8	Chloride (as Cl)	mg/L	IS 3025: (Part-32)	250	1000	4.9
9	Copper (as Cu)	mg/L	IS 3025(part-42)	0.05	1.5	N.D.
10	Fluoride (as F)	mg/L	IS 3025(part-60)	1	1.5	0.12
11	Free Residual Chlorine	mg/L	IS 3025: (Part-26)	0.2	1	N.D.
12	Iron (as Fe)	mg/L	IS 3025(part-53)	0.3	No Relaxation	N.D.
13	Magnesium (as Mg)	mg/L	IS 3025: (Part-46)	30	100	10.20
14	Manganese (as Mn)	mg/L	IS 3025(part-59)	0.1	0.3	N.D.
15	Mineral Oil	mg/L	Clause 6 of IS 3025 (Part-39) Infrared partition method	0.5	No Relaxation	N.D.
16	Nitrate (as NO <sub>3</sub> )	mg/L	IS 3025(part-34)	45	No Relaxation	2.15
17	Phenolic Compound (as C <sub>6</sub> H <sub>5</sub> OH)	mg/L	IS 3025(part-43)	0.001	0.002	N.D.
18	Selenium (as Se)	mg/L	IS 3025(part-56)	0.01	No Relaxation	N.D.
19	Silver (as Ag)	mg/L	Annex J of IS 13428	0.1	No Relaxation	N.D.
20	Sulphate (as SO <sub>4</sub> )	mg/L	IS 3025: (Part-24)	200	400	26.8
21	Sulphide (as H <sub>2</sub> S)	mg/L	IS 3025: (Part-29)	0.05	No Relaxation	N.D.
22	Total Alkalinity (as CaCO <sub>3</sub> )	mg/L	IS 3025: (Part-23)	200	600	28.0
23	Total Hardness (as CaCO <sub>3</sub> )	mg/L	IS 3025: (Part-21)	200	600	96.0
24	Zinc (as Zn)	mg/L	IS 3025(part-49)	5	15	N.D.
<b>C. Parameters concerning toxic substances:-</b>						
1	Cadmium (as Cd)	mg/L	IS 3025(part-41)	0.003	No Relaxation	N.D.
2	Cyanide (as CN)	mg/L	IS 3025(part-27)	0.05	No Relaxation	N.D.
3	Lead (as Pb)	mg/L	IS 3025(part-47)	0.01	No Relaxation	N.D.
4	Mercury (as Hg)	mg/L	IS 3025(part-48)	0.001	No Relaxation	N.D.
5	Molybdenum (as Mo)	mg/L	IS 3025(part-2)	0.07	No Relaxation	N.D.
6	Nickel (as Ni)	mg/L	IS 3025(part-54)	0.02	No Relaxation	N.D.
7	Polychlorinated biphenyls	mg/L	ASTM 5175	0.0005	No Relaxation	N.D.



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## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
8	Polynuclear aromatic hydrocarbons (as PAH)	mg/L	APHA 6440	0.0001	No Relaxation	N.D.
9	Arsenic (as As)	mg/L	IS 3025(part-37)	0.01	0.05	N.D.
10	Chromium (as Cr)	mg/L	Annex J of IS:13426	0.05	No Relaxation	N.D.
11	Trihalomethanes:-					
a)	Bromoform	mg/L	APHA 6232	0.1	No Relaxation	N.D.
b)	Dibromochloromethane	mg/L	APHA 6232	0.1	No Relaxation	N.D.
c)	Bromodichloromethane	mg/L	APHA 6232	0.06	No Relaxation	N.D.
d)	Chloroform	mg/L	APHA 6232	0.2	No Relaxation	N.D.
D.	Pesticides:-					
1	Alpha HCH	µg/l	USEPA 508		0.01	N.D.
2	Beta HCH	µg/l	USEPA 508		0.04	N.D.
3	Delta HCH	µg/l	USEPA 508		0.04	N.D.
4	Alachlor	µg/l	USEPA 525.2, 507		20	N.D.
5	Aldrin / Dieldrin	µg/l	USEPA 508		0.03	N.D.
6	Atrazine	µg/l	USEPA 525.2, 8141 A		2	N.D.
7	Butachlor	µg/l	USEPA 525.2, 8141 A		125	N.D.
8	Chlorpyrifos	µg/l	USEPA 525.2, 8141 A		30	N.D.
9	DDT (o,p and p, p-Isomers of DDT, DDE and DDD)	µg/l	USEPA 508		1	N.D.
10	Gamma HCH	µg/l	USEPA 508		2	N.D.
11	2,4-Dichlorophenoxyacetic Acid	µg/l	USEPA 515.1		30	N.D.
12	Endosulphan (alpha, beta and sulphate)	µg/l	USEPA 508		0.4	N.D.
13	Ethion	µg/l	USEPA 1657 A		3	N.D.
14	Isoproturon	µg/l	USEPA 532		9	N.D.
15	Malathion	µg/l	USEPA 8141 A		190	N.D.





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## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
16	Methyl Parathion	µg/l	USEPA 8141 A		0.3	N.D.
17	Monocrotophos	µg/l	USEPA 8141 A		1	N.D.
18	Phorate	µg/l	USEPA 8141 A		2	N.D.
<b>E. Microbial Parameters</b>						
1	Total Coliform	MPN/100ml	IS:1622:1981:RA:2019		-	Absent
2	E. Coli	MPN/100ml	IS:1622:1981:RA:2019		-	Absent

Note: mg/lit.: milligram per liter, N.D.: Not Detected.

### REMARKS: RESULTS ARE AS ABOVE

#### Terms & conditions

- > The above analysis report refers to the particular sample received at our end and the use of the report for publication, arbitration or as legal dispute is forbidden.
- > Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer.
- > This is for information as the party has asked for additional test(s) only.

*[Signature]*  
23/11/22

REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

*[Signature]*  
AUTHORIZED SIGNATORY

-----End of the test report-----



HDD-272, Phase III - Near JP Chowk  
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Name & Address Of The Customer		Report No	UES/TR/22-23/05284	
To, M/S JINDAL POWER LIMITED, GARE PALMA IV/1 COAL MINE, VILLAGE: DONGAMAHUA TEHSIL: TAMNAR, DISTRICT: RAIGARH, (C.G.) 496107		Lab Ref No	UES/22-23/W/011971	
		Date of Sampling	24/11/2022	
		Date of Receipt	25/11/2022	
		Date of Report	29/11/2022	
		Date of analysis	Start: 25/11/2022	End: 29/11/2022
SAMPLE DETAILS				
Customer Sample Id /Sampling Location	JANJIGIR VILLAGE			
Sample Type	Ground Water			
Packing Of Sample	Plastic Bottle (5.0ltr.) Glass Bottle (1.0ltr.)			
Sample Collected By	Laboratory Chemist			
Sample Condition At Receipt	Ok			

REPORT NO.05284

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
A. Organoleptic & Physical Parameters						
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1.0
2	Odour	-	IS 3025(part-5)	Agreeable	Agreeable	Agreeable
3	pH Value at 25.2°C	-	IS:3025:(Part-11)	6.5-8.5	No Relaxation	6.96
4	Taste	-	IS 3025(part-8)	Agreeable	Agreeable	Agreeable
5	Turbidity	NTU	IS 3025:(Part-10)	1	5	1.4
6	Total Dissolved Solids	mg/L	IS:3025:(Part-16)	500	2000	104.0
B. General Parameters Concerning Substances undesirable in excessive amounts						
1	Aluminium (as Al)	mg/L	IS 3025(part-55)	0.03	0.2	N.D.
2	Ammonia (as total ammonia-N)	mg/L	IS 3025(part-34)	0.5	No Relaxation	N.D.
3	Anionic Detergent (as MBAS)	mg/L	Annex K of IS:13428	0.2	1.0	N.D.
4	Barium (as Ba)	mg/L	Annex F of IS:13428	0.7	No Relaxation	N.D.
5	Boron (as B)	mg/L	IS 3025:(Part-57)	0.5	1.0	N.D.
6	Calcium (as Ca)	mg/L	IS 3025:(Part-40)	75	200	11.22
7	Chloramines (as Cl <sub>2</sub> )	mg/L	IS 3025:(Part-26)	4.0	No Relaxation	N.D.





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REPORT NO.05284

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
8	Chloride (as Cl)	mg/L	IS 3025: (Part-32)	250	1000	7.99
9	Copper (as Cu)	mg/L	IS 3025(part-42)	0.05	1.5	N.D.
10	Fluoride (as F)	mg/L	IS 3025(part-60)	1	1.5	0.12
11	Free Residual Chlorine	mg/L	IS 3025: (Part-26)	0.2	1	N.D.
12	Iron (as Fe)	mg/L	IS 3025(part-53)	0.3	No Relaxation	N.D.
13	Magnesium (as Mg)	mg/L	IS 3025: (Part-46)	30	100	3.88
14	Manganese (as Mn)	mg/L	IS 3025(part-59)	0.1	0.3	N.D.
15	Mineral Oil	mg/L	Clause 6 of IS 3025 (Part-39) Infrared partition method	0.5	No Relaxation	N.D.
16	Nitrate (as NO <sub>3</sub> )	mg/L	IS 3025(part-34)	45	No Relaxation	0.26
17	Phenolic Compound (as C <sub>6</sub> H <sub>5</sub> OH)	mg/L	IS 3025(part-43)	0.001	0.002	N.D.
18	Selenium (as Se)	mg/L	IS 3025(part-56)	0.01	No Relaxation	N.D.
19	Silver (as Ag)	mg/L	Annex J of IS 13428	0.1	No Relaxation	N.D.
20	Sulphate (as SO <sub>4</sub> )	mg/L	IS 3025: (Part-24)	200	400	11.2
21	Sulphide (as H <sub>2</sub> S)	mg/L	IS 3025: (Part-29)	0.05	No Relaxation	N.D.
22	Total Alkalinity (as CaCO <sub>3</sub> )	mg/L	IS 3025: (Part-23)	200	600	24.0
23	Total Hardness (as CaCO <sub>3</sub> )	mg/L	IS 3025: (Part-21)	200	600	72.8
24	Zinc (as Zn)	mg/L	IS 3025(part-49)	5	15	N.D.

### C. Parameters concerning toxic substances:-

1	Cadmium (as Cd)	mg/L	IS 3025(part-41)	0.003	No Relaxation	N.D.
2	Cyanide (as CN)	mg/L	IS 3025(part-27)	0.05	No Relaxation	N.D.
3	Lead (as Pb)	mg/L	IS 3025(part-47)	0.01	No Relaxation	N.D.
4	Mercury (as Hg)	mg/L	IS 3025(part-48)	0.001	No Relaxation	N.D.
5	Molybdenum (as Mo)	mg/L	IS 3025(part-2)	0.07	No Relaxation	N.D.
6	Nickel (as Ni)	mg/L	IS 3025(part-54)	0.02	No Relaxation	N.D.





HDD-272, Phase III - Near JP Chowk  
Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099  
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REPORT NO.05284

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
7	Polychlorinated biphenyls	mg/L	ASTM 5175	0.0005	No Relaxation	N.D.
8	Polynuclear aromatic hydrocarbons (as PAH)	mg/L	APHA 6440	0.0001	No Relaxation	N.D.
9	Arsenic (as As)	mg/L	IS 3025(part-37)	0.01	0.05	N.D.
10	Chromium (as Cr)	mg/L	Annex J of IS:13428	0.05	No Relaxation	N.D.
11	Trihalomethanes:					
a)	Bromoform	mg/L	APHA 6232	0.1	No Relaxation	N.D.
b)	Dibromochloromethane	mg/L	APHA 6232	0.1	No Relaxation	N.D.
c)	Bromodichloromethane	mg/L	APHA 6232	0.06	No Relaxation	N.D.
d)	Chloroform	mg/L	APHA 6232	0.2	No Relaxation	N.D.
D.	Pesticides:-					
1	Alpha HCH	µg/l	USEPA 508		0.01	N.D.
2	Beta HCH	µg/l	USEPA 508		0.04	N.D.
3	Delta HCH	µg/l	USEPA 508		0.04	N.D.
4	Alachlor	µg/l	USEPA 525.2, 507		20	N.D.
5	Aldrin / Dieldrin	µg/l	USEPA 508		0.03	N.D.
6	Atrazine	µg/l	USEPA 525.2, 8141 A		2	N.D.
7	Butachlor	µg/l	USEPA 525.2, 8141 A		125	N.D.
8	Chlorpyrifos	µg/l	USEPA 525.2, 8141 A		30	N.D.
9	DDT (o,p and p, p-Isomers of DDT, DDE and DDD)	µg/l	USEPA 508		1	N.D.
10	Gamma HCH	µg/l	USEPA 508		2	N.D.
11	2,4-Dichlorophenoxyacetic Acid	µg/l	USEPA 515.1		30	N.D.
12	Endosulphan (alpha, beta and sulphate)	µg/l	USEPA 508		0.4	N.D.
13	Ethion	µg/l	USEPA 1657 A		3	N.D.
14	Isoproturon	µg/l	USEPA 532		9	N.D.



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## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
15	Malathion	µg/l	USEPA 8141 A		190	N.D.
16	Methyl Parathion	µg/l	USEPA 8141 A		0.3	N.D.
17	Monocrotophos	µg/l	USEPA 8141 A		1	N.D.
18	Phorate	µg/l	USEPA 8141 A		2	N.D.
<b>E. Microbial Parameters</b>						
1	Total Coliform	MPN/100ml	IS:1622:1981:RA:2019		-	Absent
2	E. Coli	MPN/100ml	IS:1622:1981:RA:2019		-	Absent

Note: mg/lit.: milligram per liter, N.D.: Not Detected.

### REMARKS: RESULTS ARE AS ABOVE

#### Terms & conditions

- > The above analysis report refers to the particular sample received at our end and the use of the report for publication, arbitration or as legal dispute is forbidden.
- > Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer.
- > This is for information as the party has asked for above test(s) only.

*[Signature]*  
25/11/20

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*[Signature]*

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-----End of the test report-----





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Name & Address Of The Customer		Report No	UES/TR/22-23/05285	
<b>TO,</b> <b>M/S JINDAL POWER LIMITED,</b> <b>GARE PALMA IV/1 COAL MINE,</b> <b>VILLAGE: DONGAMAHUA</b> <b>TEHSIL: TAMNAR, DISTRICT: RAIGARH,</b> <b>(C.G.) 496107</b>		Lab Ref No	UES/22-23/W/011972	
		Date of Sampling	24/11/2022	
		Date of Receipt	25/11/2022	
		Date of Report	29/11/2022	
		Date of analysis	Start: 25/11/2022	End: 29/11/2022
SAMPLE DETAILS				
Customer Sample Id /Sampling Location	TAPRANGA VILLAGE			
Sample Type	Ground Water			
Packing Of Sample	Plastic Bottle (5.0ltr.) Glass Bottle (1.0ltr.)			
Sample Collected By	Laboratory Chemist			
Sample Condition At Receipt	OK			

REPORT NO.05285

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
A. Organoleptic & Physical Parameters						
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1.0
2	Odour	-	IS 3025(part-5)	Agreeable	Agreeable	Agreeable
3	pH Value at 25.2°C	-	IS:3025:(Part-11)	6.5-8.5	No Relaxation	6.94
4	Taste	-	IS 3025(part-8)	Agreeable	Agreeable	Agreeable
5	Turbidity	NTU	IS 3025:(Part-10)	1	5	4.72
6	Total Dissolved Solids	mg/L	IS:3025:(Part-16)	500	2000	165.0
B. General Parameters Concerning Substances undesirable in excessive amounts						
1	Aluminium (as Al)	mg/L	IS 3025(part-55)	0.03	0.2	N.D.
2	Ammonia (as total ammonia-N)	mg/L	IS 3025(part-34)	0.5	No Relaxation	N.D.
3	Anionic Detergent (as MBAS)	mg/L	Annex K of IS:13428	0.2	1.0	N.D.
4	Barium (as Ba)	mg/L	Annex F of IS:13428	0.7	No Relaxation	N.D.
5	Boron (as B)	mg/L	IS 3025:(Part-57)	0.5	1.0	N.D.
6	Calcium (as Ca)	mg/L	IS 3025:(Part-40)	75	200	24.84
7	Chloramines (as Cl <sub>2</sub> )	mg/L	IS 3025:(Part-26)	4.0	No Relaxation	N.D.
8	Chloride (as Cl)	mg/L	IS 3025:(Part-32)	250	1000	6.99

AN ISO : 9001:2015 / ISO: 14001:2015 / ISO 45001:2018 CERTIFIED LABORATORY





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REPORT NO.05285

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
9	Copper (as Cu)	mg/L	IS 3025(part-42)	0.05	1.5	N.D.
10	Fluoride (as F)	mg/L	IS 3025(part-60)	1	1.5	0.13
11	Free Residual Chlorine	mg/L	IS 3025:(Part-26)	0.2	1	N.D.
12	Iron (as Fe)	mg/L	IS 3025(part-53)	0.3	No Relaxation	N.D.
13	Magnesium (as Mg)	mg/L	IS 3025:(Part-46)	30	100	7.53
14	Manganese (as Mn)	mg/L	IS 3025(part-59)	0.1	0.3	N.D.
15	Mineral Oil	mg/L	Clause 6 of IS 3025 (Part-39) Infrared partition method	0.5	No Relaxation	N.D.
16	Nitrate (as NO <sub>3</sub> )	mg/L	IS 3025(part-34)	45	No Relaxation	0.16
17	Phenolic Compound (as C <sub>6</sub> H <sub>5</sub> OH)	mg/L	IS 3025(part-43)	0.001	0.002	N.D.
18	Selenium (as Se)	mg/L	IS 3025(part-56)	0.01	No Relaxation	N.D.
19	Silver (as Ag)	mg/L	Annex J of IS 13428	0.1	No Relaxation	N.D.
20	Sulphate (as SO <sub>4</sub> )	mg/L	IS 3025:(Part-24)	200	400	20.2
21	Sulphide (as H <sub>2</sub> S)	mg/L	IS 3025:(Part-29)	0.05	No Relaxation	N.D.
22	Total Alkalinity (as CaCO <sub>3</sub> )	mg/L	IS 3025:(Part-23)	200	600	32.0
23	Total Hardness (as CaCO <sub>3</sub> )	mg/L	IS 3025:(Part-21)	200	600	102.0
24	Zinc (as Zn)	mg/L	IS 3025(part-49)	5	15	N.D.
<b>C. Parameters concerning toxic substances:-</b>						
1	Cadmium (as Cd)	mg/L	IS 3025(part-41)	0.003	No Relaxation	N.D.
2	Cyanide (as CN)	mg/L	IS 3025(part-27)	0.05	No Relaxation	N.D.
3	Lead (as Pb)	mg/L	IS 3025(part-47)	0.01	No Relaxation	N.D.
4	Mercury (as Hg)	mg/L	IS 3025(part-48)	0.001	No Relaxation	N.D.
5	Molybdenum (as Mo)	mg/L	IS 3025(part-2)	0.07	No Relaxation	N.D.
6	Nickel (as Ni)	mg/L	IS 3025(part-54)	0.02	No Relaxation	N.D.
7	Polychlorinated biphenyls	mg/L	ASTM 5175	0.0005	No Relaxation	N.D.
8	Polynuclear aromatic	mg/L	APHA 6440	0.0001	No Relaxation	N.D.



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## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
	hydrocarbons (as PAH)					
9	Arsenic (as As)	mg/L	IS 3025 (part-37)	0.01	0.05	N.D.
10	Chromium (as Cr)	mg/L	Annex J of IS:13428	0.05	No Relaxation	N.D.
11	Trihalomethanes:					
a)	Bromoform	mg/L	APHA 6232	0.1	No Relaxation	N.D.
b)	Dibromochloromethane	mg/L	APHA 6232	0.1	No Relaxation	N.D.
c)	Bromodichloromethane	mg/L	APHA 6232	0.06	No Relaxation	N.D.
d)	Chloroform	mg/L	APHA 6232	0.2	No Relaxation	N.D.
D.	Pesticides:-					
1	Alpha HCH	µg/l	USEPA 508		0.01	N.D.
2	Beta HCH	µg/l	USEPA 508		0.04	N.D.
3	Delta HCH	µg/l	USEPA 508		0.04	N.D.
4	Alachlor	µg/l	USEPA 525.2, 507		20	N.D.
5	Aldrin / Dieldrin	µg/l	USEPA 508		0.03	N.D.
6	Atrazine	µg/l	USEPA 525.2, 8141 A		2	N.D.
7	Butachlor	µg/l	USEPA 525.2, 8141 A		125	N.D.
8	Chlorpyrifos	µg/l	USEPA 525.2, 8141 A		30	N.D.
9	DDT (o,p and p, p-Isomers of DDT, DDE and DDD)	µg/l	USEPA 508		1	N.D.
10	Gamma HCH	µg/l	USEPA 508		2	N.D.
11	2,4-Dichlorophenoxyacetic Acid	µg/l	USEPA 515.1		30	N.D.
12	Endosulphan (alpha, beta and sulphate)	µg/l	USEPA 508		0.4	N.D.
13	Ethion	µg/l	USEPA 1657 A		3	N.D.
14	Isoproturon	µg/l	USEPA 532		9	N.D.
15	Malathion	µg/l	USEPA 8141 A		190	N.D.
16	Methyl Parathion	µg/l	USEPA 8141 A		0.3	N.D.





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## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
17	Monocrotophos	µg/l	USEPA 8141 A		1	N.D.
18	Phorate	µg/l	USEPA 8141 A		2	N.D.
<b>E. Microbial Parameters</b>						
1	Total Coliform	MPN/100ml	IS:1622:1981:RA:2019		-	Absent
2	E. Coli	MPN/100ml	IS:1622:1981:RA:2019		-	Absent

Note: mg/lit.: milligram per liter, N.D.: Not Detected.

### REMARKS: RESULTS ARE AS ABOVE

#### Terms & conditions

- > The above analysis report refers to the particular sample received at our end and the use of the report for publication, arbitration or as legal dispute is forbidden.
- > Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer.
- > This is for information as the party has asked for analysis only.

*[Signature]*  
25/11/22  
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*[Signature]*  
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-----End of the test report-----



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<b>Name &amp; Address Of The Customer</b> <b>To,</b> <b>M/S JINDAL POWER LIMITED,</b> <b>GARE PALMA IV/1 COAL MINE,</b> <b>VILLAGE: DONGAMAHUA</b> <b>TEHSIL: TAMNAR, DISTRICT: RAIGARH,</b> <b>(C.G.) 496107</b>	Report No	UES/TR/22-23/05286	
	Lab Ref No	UES/22-23/W/011973	
	Date of Sampling	24/11/2022	
	Date of Receipt	25/11/2022	
	Date of Report	29/11/2022	
	Date of analysis	Start: 25/11/2022	End: 29/11/2022
<b>SAMPLE DETAILS</b>			
Customer Sample Id /Sampling Location	NAGARAMUNDA VILLAGE		
Sample Type	Ground Water		
Packing Of Sample	Plastic Bottle (5.0ltr.) Glass Bottle (1.0ltr.)		
Sample Collected By	Laboratory Chemist		
Sample Condition At Receipt	OK		

REPORT NO.05286

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
A. Organoleptic & Physical Parameters						
1	Colour	Hazen	IS:3025: (Part-4)	5	15	<1.0
2	Odour	-	IS:3025(part-5)	Agreeable	Agreeable	Agreeable
3	pH Value at 25.2°C	-	IS:3025: (Part-11)	6.5-8.5	No Relaxation	7.08
4	Taste	-	IS:3025(part-8)	Agreeable	Agreeable	Agreeable
5	Turbidity	NTU	IS:3025: (Part-10)	1	5	1.38
6	Total Dissolved Solids	mg/L	IS:3025: (Part-16)	500	2000	90.0
B. General Parameters Concerning Substances undesirable in excessive amounts						
1	Aluminium (as Al)	mg/L	IS:3025(part-55)	0.03	0.2	N.D.
2	Ammonia (as total ammonia-N)	mg/L	IS:3025(part-34)	0.5	No Relaxation	N.D.
3	Anionic Detergent (as MBAS)	mg/L	Annex K of IS:13428	0.2	1.0	N.D.
4	Barium (as Ba)	mg/L	Annex F of IS:13428	0.7	No Relaxation	N.D.
5	Boron (as B)	mg/L	IS:3025: (Part-57)	0.5	1.0	N.D.
6	Calcium (as Ca)	mg/L	IS:3025: (Part-40)	75	200	8.41
7	Chloramines (as Cl <sub>2</sub> )	mg/L	IS:3025: (Part-26)	4.0	No Relaxation	N.D.





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## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
8	Chloride (as Cl)	mg/L	IS 3025: (Part-32)	250	1000	3.99
9	Copper (as Cu)	mg/L	IS 3025(part-42)	0.05	1.5	N.D.
10	Fluoride (as F)	mg/L	IS 3025(part-60)	1	1.5	0.07
11	Free Residual Chlorine	mg/L	IS 3025: (Part-26)	0.2	1	N.D.
12	Iron (as Fe)	mg/L	IS 3025(part-53)	0.3	No Relaxation	N.D.
13	Magnesium (as Mg)	mg/L	IS 3025: (Part-46)	30	100	2.91
14	Manganese (as Mn)	mg/L	IS 3025(part-59)	0.1	0.3	N.D.
15	Mineral Oil	mg/L	Clause 6 of IS 3025 (Part-39) Infrared partition method	0.5	No Relaxation	N.D.
16	Nitrate (as NO <sub>3</sub> )	mg/L	IS 3025(part-34)	45	No Relaxation	0.44
17	Phenolic Compound (as C <sub>6</sub> H <sub>5</sub> OH)	mg/L	IS 3025(part-43)	0.001	0.002	N.D.
18	Selenium (as Se)	mg/L	IS 3025(part-56)	0.01	No Relaxation	N.D.
19	Silver (as Ag)	mg/L	Annex J of IS 19428	0.1	No Relaxation	N.D.
20	Sulphate (as SO <sub>4</sub> )	mg/L	IS 3025: (Part-24)	200	400	10.0
21	Sulphide (as H <sub>2</sub> S)	mg/L	IS 3025: (Part-29)	0.05	No Relaxation	N.D.
22	Total Alkalinity (as CaCO <sub>3</sub> )	mg/L	IS 3025: (Part-23)	200	600	18.0
23	Total Hardness (as CaCO <sub>3</sub> )	mg/L	IS 3025: (Part-21)	200	600	63.0
24	Zinc (as Zn)	mg/L	IS 3025(part-49)	5	15	N.D.
<b>C. Parameters concerning toxic substances:-</b>						
1	Cadmium (as Cd)	mg/L	IS 3025(part-61)	0.003	No Relaxation	N.D.
2	Cyanide (as CN)	mg/L	IS 3025(part-27)	0.05	No Relaxation	N.D.
3	Lead (as Pb)	mg/L	IS 3025(part-47)	0.01	No Relaxation	N.D.
4	Mercury (as Hg)	mg/L	IS 3025(part-48)	0.001	No Relaxation	N.D.
5	Molybdenum (as Mo)	mg/L	IS 3025(part-2)	0.07	No Relaxation	N.D.
6	Nickel (as Ni)	mg/L	IS 3025(part-54)	0.02	No Relaxation	N.D.
7	Polychlorinated biphenyls	mg/L	ASTM 5175	0.0005	No Relaxation	N.D.





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## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
8	Polynuclear aromatic hydrocarbons (as PAH)	mg/L	APHA 6440	0.0001	No Relaxation	N.D.
9	Arsenic (as As)	mg/L	IS 3025(part-37)	0.01	0.05	N.D.
10	Chromium (as Cr)	mg/L	Annex J of IS:13428	0.05	No Relaxation	N.D.
11	Trihalomethanes:					
a)	Bromoform	mg/L	APHA 6232	0.1	No Relaxation	N.D.
b)	Dibromochloromethane	mg/L	APHA 6232	0.1	No Relaxation	N.D.
c)	Bromodichloromethane	mg/L	APHA 6232	0.06	No Relaxation	N.D.
d)	Chloroform	mg/L	APHA 6232	0.2	No Relaxation	N.D.
D.	Pesticides:-					
1	Alpha HCH	µg/l	USEPA 508	0.01		N.D.
2	Beta HCH	µg/l	USEPA 508	0.04		N.D.
3	Delta HCH	µg/l	USEPA 508	0.04		N.D.
4	Alachlor	µg/l	USEPA 525.2, 507	20		N.D.
5	Aldrin / Dieldrin	µg/l	USEPA 508	0.03		N.D.
6	Atrazine	µg/l	USEPA 525.2, 8141 A	2		N.D.
7	Butachlor	µg/l	USEPA 525.2, 8141 A	125		N.D.
8	Chlorpyrifos	µg/l	USEPA 525.2, 8141 A	30		N.D.
9	DDT (o,p and p, p-Isomers of DDT, DDE and DDD)	µg/l	USEPA 508	1		N.D.
10	Gamma HCH	µg/l	USEPA 508	2		N.D.
11	2,4-Dichlorophenoxyacetic Acid	µg/l	USEPA 515.1	30		N.D.
12	Endosulphan (alpha, beta and sulphate)	µg/l	USEPA 508	0.4		N.D.
13	Ethion	µg/l	USEPA 1657 A	3		N.D.
14	Isoproturon	µg/l	USEPA 532	9		N.D.
15	Malathion	µg/l	USEPA 8141 A	190		N.D.



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## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
16	Methyl Parathion	µg/l	USEPA 8141 A		0.3	N.D.
17	Monocrotophos	µg/l	USEPA 8141 A		1	N.D.
18	Phorate	µg/l	USEPA 8141 A		2	N.D.
<b>E. Microbial Parameters</b>						
1	Total Coliform	MPN/100ml	IS:1622:1981:RA:2019		-	Absent
2	E. Coli	MPN/100ml	IS:1622:1981:RA:2019		-	Absent

Note: mg/lit.: milligram per liter, N.D.: Not Detected.

### REMARKS: RESULTS ARE AS ABOVE

#### Terms & conditions

- The above analysis report refers to the particular sample received at our end and the use of the report for publication, arbitration or as legal dispute is forbidden.
- Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer.
- This is for information as the party has asked for above test(s) only.

*Signature*  
25/11/22

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*Signature*

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-----End of the test report-----





HDD-272, Phase III - Near JP Chowk  
Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099  
Ph : 0771 - 4027777 | Email : ultimatenviron@gmail.com

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<b>Name &amp; Address Of The Customer</b> <b>TO,</b> <b>M/S JINDAL POWER LIMITED,</b> <b>GARE PALMA IV/1 COAL MINE,</b> <b>VILLAGE: DONGAMAHUA</b> <b>TEHSIL: TAMNAR, DISTRICT: RAIGARH,</b> <b>(C.G.) 496107</b>	Report No	UES/TR/22-23/07992	
	Lab Ref No	UES/22-23/W/015946	
	Date of Sampling	24/01/2023	
	Date of Receipt	27/01/2023	
	Date of Report	30/01/2023	
	Date of analysis	Start: 27/01/2023	End: 30/01/2023
<b>SAMPLE DETAILS</b>			
Customer Sample Id /Sampling Location	DONGAMAHUA VILLAGE		
Sample Type	Ground Water		
Packing Of Sample	Plastic Bottle (5.0ltr.) Glass Bottle (1.0ltr.)		
Sample Collected By	Laboratory Chemist		
Sample Condition At Receipt	OK		

REPORT NO.07992

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
A. Organoleptic & Physical Parameters						
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1.0
2	Odour	-	IS 3025(part-5)	Agreeable	Agreeable	Agreeable
3	pH Value at 25.2°C	-	IS:3025:(Part-11)	6.5-8.5	No Relaxation	7.18
4	Taste	-	IS 3025(part-8)	Agreeable	Agreeable	Agreeable
5	Turbidity	NTU	IS 3025:(Part-10)	1	5	1.50
6	Total Dissolved Solids	mg/L	IS:3025:(Part-16)	500	2000	158.0
B. General Parameters Concerning Substances undesirable in excessive amounts						
1	Aluminium (as Al)	mg/L	IS 3025(part-55)	0.03	0.2	N.D.
2	Ammonia (as total ammonia-N)	mg/L	IS 3025(part-34)	0.5	No Relaxation	N.D.
3	Anionic Detergent (as MBAS)	mg/L	Annex K of IS:13428	0.2	1.0	N.D.
4	Barium (as Ba)	mg/L	Annex F of IS:13428	0.7	No Relaxation	N.D.
5	Boron (as B)	mg/L	IS 3025:(Part-57)	0.5	1.0	N.D.
6	Calcium (as Ca)	mg/L	IS 3025:(Part-40)	75	200	20.6
7	Chloramines (as Cl <sub>2</sub> )	mg/L	IS 3025:(Part-26)	4.0	No Relaxation	N.D.





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REPORT NO.07992

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
8	Chloride (as Cl)	mg/L	IS 3025: (Part-32)	250	1000	6.9
9	Copper (as Cu)	mg/L	IS 3025(part-42)	0.05	1.5	N.D.
10	Fluoride (as F)	mg/L	IS 3025(part-60)	1	1.5	0.14
11	Free Residual Chlorine	mg/L	IS 3025: (Part-26)	0.2	1	N.D.
12	Iron (as Fe)	mg/L	IS 3025(part-53)	0.3	No Relaxation	N.D.
13	Magnesium (as Mg)	mg/L	IS 3025: (Part-46)	30	100	12.63
14	Manganese (as Mn)	mg/L	IS 3025(part-59)	0.1	0.3	N.D.
15	Mineral Oil	mg/L	Clause 6 of IS 3025 (Part-39) Infrared partition method	0.5	No Relaxation	N.D.
16	Nitrate (as NO <sub>3</sub> )	mg/L	IS 3025(part-34)	45	No Relaxation	2.18
17	Phenolic Compound (as C <sub>6</sub> H <sub>5</sub> OH)	mg/L	IS 3025(part-43)	0.001	0.002	N.D.
18	Selenium (as Se)	mg/L	IS 3025(part-56)	0.01	No Relaxation	N.D.
19	Silver (as Ag)	mg/L	Annex J of IS 13428	0.1	No Relaxation	N.D.
20	Sulphate (as SO <sub>4</sub> )	mg/L	IS 3025: (Part-24)	200	400	28.4
21	Sulphide (as H <sub>2</sub> S)	mg/L	IS 3025: (Part-29)	0.05	No Relaxation	N.D.
22	Total Alkalinity (as CaCO <sub>3</sub> )	mg/L	IS 3025: (Part-23)	200	600	40.0
23	Total Hardness (as CaCO <sub>3</sub> )	mg/L	IS 3025: (Part-21)	200	600	104.0
24	Zinc (as Zn)	mg/L	IS 3025(part-49)	5	15	N.D.
<b>C. Parameters concerning toxic substances:-</b>						
1	Cadmium (as Cd)	mg/L	IS 3025(part-41)	0.003	No Relaxation	N.D.
2	Cyanide (as CN)	mg/L	IS 3025(part-27)	0.05	No Relaxation	N.D.
3	Lead (as Pb)	mg/L	IS 3025(part-47)	0.01	No Relaxation	N.D.
4	Mercury (as Hg)	mg/L	IS 3025(part-48)	0.001	No Relaxation	N.D.
5	Molybdenum (as Mo)	mg/L	IS 3025(part-21)	0.07	No Relaxation	N.D.
6	Nickel (as Ni)	mg/L	IS 3025(part-54)	0.02	No Relaxation	N.D.
7	Polychlorinated biphenyls	mg/L	ASTM 5175	0.0005	No Relaxation	N.D.



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REPORT NO.07992

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
8	Polynuclear aromatic hydrocarbons (as PAH)	mg/L	APHA 6440	0.0001	No Relaxation	N.D.
9	Arsenic (as As)	mg/L	IS 3025(part-37)	0.01	0.05	N.D.
10	Chromium (as Cr)	mg/L	Annex J of IS:13428	0.05	No Relaxation	N.D.
11	Trihalomethanes:					
a)	Bromoform	mg/L	APHA 6232	0.1	No Relaxation	N.D.
b)	Dibromochloromethane	mg/L	APHA 6232	0.1	No Relaxation	N.D.
c)	Bromodichloromethane	mg/L	APHA 6232	0.06	No Relaxation	N.D.
d)	Chloroform	mg/L	APHA 6232	0.2	No Relaxation	N.D.
D.	Pesticides:-					
1	Alpha HCH	µg/l	USEPA 508	0.01		N.D.
2	Beta HCH	µg/l	USEPA 508	0.04		N.D.
3	Delta HCH	µg/l	USEPA 508	0.04		N.D.
4	Alachlor	µg/l	USEPA 525.2, 507	20		N.D.
5	Aldrin / Dieldrin	µg/l	USEPA 508	0.03		N.D.
6	Atrazine	µg/l	USEPA 525.2, 8141 A	2		N.D.
7	Butachlor	µg/l	USEPA 525.2, 8141 A	125		N.D.
8	Chlorpyrifos	µg/l	USEPA 525.2, 8141 A	30		N.D.
9	DDT (o,p and p, p-Isomers of DDT, DDE and DDD)	µg/l	USEPA 508	1		N.D.
10	Gamma HCH	µg/l	USEPA 508	2		N.D.
11	2,4-Dichlorophenoxyacetic Acid	µg/l	USEPA 515.1	30		N.D.
12	Endosulphan (alpha, beta and sulphate)	µg/l	USEPA 508	0.4		N.D.
13	Ethion	µg/l	USEPA 1657 A	3		N.D.
14	Isoproturon	µg/l	USEPA 532	9		N.D.
15	Malathion	µg/l	USEPA 8141 A	190		N.D.





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## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
16	Methyl Parathion	µg/l	USEFA 8141 A		0.3	N.D.
17	Monocrotophos	µg/l	USEPA 8141 A		1	N.D.
18	Phorate	µg/l	USEPA 8141 A		2	N.D.
<b>E. Microbial Parameters</b>						
1	Total Coliform	MPN/100ml	IS:1622:1981:RA:2019		-	Absent
2	E. Coli	MPN/100ml	IS:1622:1981:RA:2019		-	Absent

Note: mg/lit.: milligram per liter, N.D.: Not Detected.

### REMARKS: RESULTS ARE AS ABOVE

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- > Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer.
- > This is for information as the party has asked for above test(s) only.

*[Signature]*  
30/01/23

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*[Signature]*

AUTHORIZED SIGNATORY

-----End of the test report-----



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Name & Address Of The Customer		Report No	UES/TR/22-23/07991	
<b>TO,</b> <b>M/S JINDAL POWER LIMITED,</b> <b>GARE PALMA IV/1 COAL MINE,</b> <b>VILLAGE: DONGAMAHUA</b> <b>TEHSIL: TAMNAR, DISTRICT: RAIGARH,</b> <b>(C.G.) 496107</b>		Lab Ref No	UES/22-23/W/015945	
		Date of Sampling	24/01/2023	
		Date of Receipt	27/01/2023	
		Date of Report	30/01/2023	
		Date of analysis	Start: 27/01/2023	End: 30/01/2023
SAMPLE DETAILS				
Customer Sample Id /Sampling Location	DHOURASHANTRA VILLAGE			
Sample Type	Ground Water			
Packing Of Sample	Plastic Bottle (5.0ltr.) Glass Bottle (1.0ltr.)			
Sample Collected By	Laboratory Chemist			
Sample Condition At Receipt	Ok			

REPORT NO.07991

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
A. Organoleptic & Physical Parameters						
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1.0
2	Odour	-	IS:3025:(part-5)	Agreeable	Agreeable	Agreeable
3	pH Value at 25.2°C	-	IS:3025:(Part-11)	6.5-8.5	No Relaxation	7.02
4	Taste	-	IS:3025:(part-8)	Agreeable	Agreeable	Agreeable
5	Turbidity	NTU	IS:3025:(Part-10)	1	5	0.74
6	Total Dissolved Solids	mg/L	IS:3025:(Part-16)	500	2000	240.2
B. General Parameters Concerning Substances undesirable in excessive amounts						
1	Aluminium (as Al)	mg/L	IS:3025:(part-55)	0.03	0.2	N.D.
2	Ammonia (as total ammonia-N)	mg/L	IS:3025:(part-34)	0.5	No Relaxation	N.D.
3	Anionic Detergent (as MBAS)	mg/L	Annex K of IS:13428	0.2	1.0	N.D.
4	Barium (as Ba)	mg/L	Annex F of IS:13428	0.7	No Relaxation	N.D.
5	Boron (as B)	mg/L	IS:3025:(Part-57)	0.5	1.0	N.D.
6	Calcium (as Ca)	mg/L	IS:3025:(Part-40)	75	200	30.46
7	Chloramines (as Cl <sub>2</sub> )	mg/L	IS:3025:(Part-26)	4.0	No Relaxation	N.D.
8	Chloride (as Cl)	mg/L	IS:3025:(Part-32)	250	1000	20.9





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REPORT NO.07991

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
9	Copper (as Cu)	mg/L	IS 3025(part-42)	0.05	1.5	N.D.
10	Fluoride (as F)	mg/L	IS 3025(part-60)	1	1.5	0.09
11	Free Residual Chlorine	mg/L	IS 3025:(Part-26)	0.2	1	N.D.
12	Iron (as Fe)	mg/L	IS 3025(part-53)	0.3	No Relaxation	0.11
13	Magnesium (as Mg)	mg/L	IS 3025:(Part-46)	30	100	22.35
14	Manganese (as Mn)	mg/L	IS 3025(part-59)	0.1	0.3	0.08
15	Mineral Oil	mg/L	Clause 6 of IS 3025 (Part-39) Infrared partition method	0.5	No Relaxation	N.D.
16	Nitrate (as NO <sub>3</sub> )	mg/L	IS 3025(part-34)	45	No Relaxation	0.68
17	Phenolic Compound (as C <sub>6</sub> H <sub>5</sub> OH)	mg/L	IS 3025(part-43)	0.001	0.002	N.D.
18	Selenium (as Se)	mg/L	IS 3025(part-56)	0.01	No Relaxation	N.D.
19	Silver (as Ag)	mg/L	Annex J of IS 13428	0.1	No Relaxation	N.D.
20	Sulphate (as SO <sub>4</sub> )	mg/L	IS 3025:(Part-24)	200	400	18.8
21	Sulphide (as H <sub>2</sub> S)	mg/L	IS 3025:(Part-29)	0.05	No Relaxation	N.D.
22	Total Alkalinity (as CaCO <sub>3</sub> )	mg/L	IS 3025:(Part-23)	200	600	44
23	Total Hardness (as CaCO <sub>3</sub> )	mg/L	IS 3025:(Part-21)	200	600	168
24	Zinc (as Zn)	mg/L	IS 3025(part-49)	5	15	0.11
<b>C. Parameters concerning toxic substances:-</b>						
1	Cadmium (as Cd)	mg/L	IS 3025(part-41)	0.003	No Relaxation	N.D.
2	Cyanide (as CN)	mg/L	IS 3025(part-27)	0.05	No Relaxation	N.D.
3	Lead (as Pb)	mg/L	IS 3025(part-47)	0.01	No Relaxation	N.D.
4	Mercury (as Hg)	mg/L	IS 3025(part-48)	0.001	No Relaxation	N.D.
5	Molybdenum (as Mo)	mg/L	IS 3025(part-2)	0.07	No Relaxation	N.D.
6	Nickel (as Ni)	mg/L	IS 3025(part-54)	0.02	No Relaxation	N.D.
7	Polychlorinated biphenyls	mg/L	ASTM 5175	0.0005	No Relaxation	N.D.
8	Polynuclear aromatic	mg/L	APHA 6440	0.0001	No Relaxation	N.D.





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## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
	hydrocarbons (as PAH)					
9	Arsenic (as As)	mg/L	IS 3025(part-37)	0.01	0.05	N.D.
10	Chromium (as Cr)	mg/L	Annex J of IS:13428	0.05	No Relaxation	N.D.
11	Trihalomethanes:-					
a)	Bromoform	mg/L	APHA 6232	0.1	No Relaxation	N.D.
b)	Dibromochloromethane	mg/L	APHA 6232	0.1	No Relaxation	N.D.
c)	Bromodichloromethane	mg/L	APHA 6232	0.06	No Relaxation	N.D.
d)	Chloroform	mg/L	APHA 6232	0.2	No Relaxation	N.D.
D.	Pesticides:-					
1	Alpha HCH	µg/l	USEPA 508	0.01		N.D.
2	Beta HCH	µg/l	USEPA 508	0.04		N.D.
3	Delta HCH	µg/l	USEPA 508	0.04		N.D.
4	Alachlor	µg/l	USEPA 525.2, 507	20		N.D.
5	Aldrin / Dieldrin	µg/l	USEPA 508	0.03		N.D.
6	Atrazine	µg/l	USEPA 525.2, 8141 A	2		N.D.
7	Butachlor	µg/l	USEPA 525.2, 8141 A	125		N.D.
8	Chlorpyrifos	µg/l	USEPA 525.2, 8141 A	30		N.D.
9	DDT (o,p and p, p-Isomers of DDT, DDE and DDD)	µg/l	USEPA 508	1		N.D.
10	Gamma HCH	µg/l	USEPA 508	2		N.D.
11	2,4-Dichlorophenoxyacetic Acid	µg/l	USEPA 515.1	30		N.D.
12	Endosulphan (alpha, beta and sulphate)	µg/l	USEPA 508	0.4		N.D.
13	Ethion	µg/l	USEPA 1657 A	3		N.D.
14	Isoproturon	µg/l	USEPA 532	9		N.D.
15	Malathion	µg/l	USEPA 8141 A	190		N.D.
16	Methyl Parathion	µg/l	USEPA 8141 A	0.3		N.D.



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REPORT NO.07991

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
17	Monocrotophos	µg/l	USEPA 8141 A		1	N.D.
18	Phorate	µg/l	USEPA 8141 A		2	N.D.
<b>E. Microbial Parameters</b>						
1	Total Coliform	MPN/100ml	IS:1622:1981:RA:2019		-	Absent
2	E. Coli	MPN/100ml	IS:1622:1981:RA:2019		-	Absent

Note: mg/lit.: milligram per liter, N.D.: Not Detected.

### REMARKS: RESULTS ARE AS ABOVE

#### Terms & conditions

- > The above analysis report refers to the particular sample received at our end and the use of the report for publication, arbitration or as legal dispute is forbidden.
- > Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer.
- > This is for information as the party has asked for above test(s) only.

*[Signature]*  
30/01/23

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*[Signature]*

AUTHORIZED SIGNATORY

-----End of the test report-----





HDD-272, Phase III - Near JP Chowk  
Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099  
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Name & Address Of The Customer <b>To, M/S JINDAL POWER LIMITED, GARE PALMA IV/1 COAL MINE, VILLAGE: DONGAMAHUA TEHSIL: TAMNAR, DISTRICT: RAIGARH, (C.G.) 496107</b>	Report No	UES/TR/22-23/07993	
	Lab Ref No	UES/22-23/W/015947	
	Date of Sampling	24/01/2023	
	Date of Receipt	27/01/2023	
	Date of Report	30/01/2023	
	Date of analysis	Start: 27/01/2023	End: 30/01/2023
SAMPLE DETAILS			
Customer Sample Id /Sampling Location	JANJGIR VILLAGE		
Sample Type	Ground Water		
Packing Of Sample	Plastic Bottle (5.0ltr.) Glass Bottle (1.0ltr.)		
Sample Collected By	Laboratory Chemist		
Sample Condition At Receipt	OK		

REPORT NO.07993

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
A. Organoleptic & Physical Parameters						
1	Colour	Hazen	IS:3025:(Part-4)	5	15	<1.0
2	Odour	-	IS:3025(part-5)	Agreeable	Agreeable	Agreeable
3	pH Value at 25.2°C	-	IS:3025:(Part-11)	6.5-8.5	No Relaxation	6.98
4	Taste	-	IS:3025(part-8)	Agreeable	Agreeable	Agreeable
5	Turbidity	NTU	IS:3025:(Part-10)	1	5	1.22
6	Total Dissolved Solids	mg/L	IS:3025:(Part-16)	500	2000	108.0
B. General Parameters Concerning Substances undesirable in excessive amounts						
1	Aluminium (as Al)	mg/L	IS:3025(part-55)	0.03	0.2	N.D.
2	Ammonia (as total ammonia-N)	mg/L	IS:3025(part-34)	0.5	No Relaxation	N.D.
3	Anionic Detergent (as MBAS)	mg/L	Annex K of IS:13428	0.2	1.0	N.D.
4	Barium (as Ba)	mg/L	Annex F of IS:13428	0.7	No Relaxation	N.D.
5	Boron (as B)	mg/L	IS:3025:(Part-57)	0.5	1.0	N.D.
6	Calcium (as Ca)	mg/L	IS:3025:(Part-40)	75	200	18.03
7	Chloramines (as Cl <sub>2</sub> )	mg/L	IS:3025:(Part-26)	4.0	No Relaxation	N.D.





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REPORT NO.07993

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
8	Chloride (as Cl)	mg/L	IS 3025:(Part-32)	250	1000	9.99
9	Copper (as Cu)	mg/L	IS 3025(part-42)	0.05	1.5	N.D.
10	Fluoride (as F)	mg/L	IS 3025(part-60)	1	1.5	0.14
11	Free Residual Chlorine	mg/L	IS 3025:(Part-26)	0.2	1	N.D.
12	Iron (as Fe)	mg/L	IS 3025(part-53)	0.3	No Relaxation	N.D.
13	Magnesium (as Mg)	mg/L	IS 3025:(Part-46)	30	100	7.53
14	Manganese (as Mn)	mg/L	IS 3025(part-59)	0.1	0.3	N.D.
15	Mineral Oil	mg/L	Clause 6 of IS 3025 (Part-39) Infrared partition method	0.5	No Relaxation	N.D.
16	Nitrate (as NO <sub>3</sub> )	mg/L	IS 3025(part-34)	45	No Relaxation	0.29
17	Phenolic Compound (as C <sub>6</sub> H <sub>5</sub> OH)	mg/L	IS 3025(part-43)	0.001	0.002	N.D.
18	Selenium (as Se)	mg/L	IS 3025(part-56)	0.01	No Relaxation	N.D.
19	Silver (as Ag)	mg/L	Annex J of IS 13428	0.1	No Relaxation	N.D.
20	Sulphate (as SO <sub>4</sub> )	mg/L	IS 3025:(Part-24)	200	400	10.8
21	Sulphide (as H <sub>2</sub> S)	mg/L	IS 3025:(Part-29)	0.05	No Relaxation	N.D.
22	Total Alkalinity (as CaCO <sub>3</sub> )	mg/L	IS 3025:(Part-23)	200	600	38.0
23	Total Hardness (as CaCO <sub>3</sub> )	mg/L	IS 3025:(Part-21)	200	600	76.0
24	Zinc (as Zn)	mg/L	IS 3025(part-49)	5	15	N.D.
<b>C. Parameters concerning toxic substances:-</b>						
1	Cadmium (as Cd)	mg/L	IS 3025(part-41)	0.003	No Relaxation	N.D.
2	Cyanide (as CN)	mg/L	IS 3025(part-27)	0.05	No Relaxation	N.D.
3	Lead (as Pb)	mg/L	IS 3025(part-47)	0.01	No Relaxation	N.D.
4	Mercury (as Hg)	mg/L	IS 3025(part-48)	0.001	No Relaxation	N.D.
5	Molybdenum (as Mo)	mg/L	IS 3025(part-2)	0.07	No Relaxation	N.D.
6	Nickel (as Ni)	mg/L	IS 3025(part-54)	0.02	No Relaxation	N.D.



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REPORT NO.07993

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
7	Polychlorinated biphenyls	mg/L	ASTM 5175	0.0005	No Relaxation	N.D.
8	Polynuclear aromatic hydrocarbons (as PAH)	mg/L	APHA 6440	0.0001	No Relaxation	N.D.
9	Arsenic (as As)	mg/L	IS 3025(part-37)	0.01	0.05	N.D.
10	Chromium (as Cr)	mg/L	Annex J of IS:13428	0.05	No Relaxation	N.D.
11	Trihalomethanes:					
a)	Bromoform	mg/L	APHA 6232	0.1	No Relaxation	N.D.
b)	Dibromochloromethane	mg/L	APHA 6232	0.1	No Relaxation	N.D.
c)	Bromodichloromethane	mg/L	APHA 6232	0.06	No Relaxation	N.D.
d)	Chloroform	mg/L	APHA 6232	0.2	No Relaxation	N.D.
D.	Pesticides:-					
1	Alpha HCH	µg/l	USEPA 508	0.01		N.D.
2	Beta HCH	µg/l	USEPA 508	0.04		N.D.
3	Delta HCH	µg/l	USEPA 508	0.04		N.D.
4	Alachlor	µg/l	USEPA 525.2, 507	20		N.D.
5	Aldrin / Dieldrin	µg/l	USEPA 508	0.03		N.D.
6	Atrazine	µg/l	USEPA 525.2, 8141 A	2		N.D.
7	Butachlor	µg/l	USEPA 525.2, 8141 A	125		N.D.
8	Chlorpyrifos	µg/l	USEPA 525.2, 8141 A	30		N.D.
9	DDT (o,p and p, p-isomers of DDT, DDE and DDD)	µg/l	USEPA 508	1		N.D.
10	Gamma HCH	µg/l	USEPA 508	2		N.D.
11	2,4-Dichlorophenoxyacetic Acid	µg/l	USEPA 515.1	30		N.D.
12	Endosulphan (alpha, beta and sulphate)	µg/l	USEPA 508	0.4		N.D.
13	Ethion	µg/l	USEPA 1657 A	3		N.D.
14	Isoproturon	µg/l	USEPA 532	9		N.D.





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## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
15	Malathion	µg/l	USEPA 8141 A		190	N.D.
16	Methyl Parathion	µg/l	USEPA 8141 A		0.3	N.D.
17	Monocrotophos	µg/l	USEPA 8141 A		1	N.D.
18	Phorate	µg/l	USEPA 8141 A		2	N.D.
<b>E. Microbial Parameters</b>						
1	Total Coliform	MPN/100ml	IS:1622:1981:RA:2019		-	Absent
2	E. Coli	MPN/100ml	IS:1622:1981:RA:2019		-	Absent

Note: mg/lit.: milligram per liter, N.D.: Not Detected.

### REMARKS: RESULTS ARE AS ABOVE

#### Terms & conditions

- > The above analysis report refers to the particular sample received at our end and the use of the report for publication, arbitration or as legal dispute is forbidden.
- > Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer.
- > This is for information as the party has asked for above test(s) only.

*Rekha*  
30/01/23

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*Subhajeet*

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-----End of the test report-----



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Name & Address Of The Customer <b>TO, M/S JINDAL POWER LIMITED, GARE PALMA IV/1 COAL MINE, VILLAGE: DONGAMAHUA TEHSIL: TAMNAR, DISTRICT: RAIGARH, (C.G.) 496107</b>	Report No	UES/TR/22-23/07994	
	Lab Ref No	UES/22-23/W/015948	
	Date of Sampling	24/01/2023	
	Date of Receipt	27/01/2023	
	Date of Report	30/01/2023	
	Date of analysis	Start: 27/01/2023	End: 30/01/2023

#### SAMPLE DETAILS

Customer Sample Id /Sampling Location	TAPRANGA VILLAGE
Sample Type	Ground Water
Packing Of Sample	Plastic Bottle (5.0ltr.) Glass Bottle (1.0ltr.)
Sample Collected By	Laboratory Chemist
Sample Condition At Receipt	Ok

REPORT NO.07994

### TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
A. Organoleptic & Physical Parameters						
1	Colour	Hazen	IS:3025: (Part-4)	5	15	<1.0
2	Odour	-	IS 3025(part-5)	Agreeable	Agreeable	Agreeable
3	pH Value at 25.2°C	-	IS:3025: (Part-11)	6.5-8.5	No Relaxation	6.96
4	Taste	-	IS 3025(part-8)	Agreeable	Agreeable	Agreeable
5	Turbidity	NTU	IS 3025: (Part-10)	1	5	1.2
6	Total Dissolved Solids	mg/L	IS:3025: (Part-16)	500	2000	168.0
B. General Parameters Concerning Substances Undesirable in excessive amounts						
1	Aluminium (as Al)	mg/L	IS 3025(part-55)	0.03	0.2	N.D.
2	Ammonia (as total ammonia-N)	mg/L	IS 3025(part-34)	0.5	No Relaxation	N.D.
3	Anionic Detergent (as MBAS)	mg/L	Annex K of IS:13428	0.2	1.0	N.D.
4	Barium (as Ba)	mg/L	Annex F of IS:13428	0.7	No Relaxation	N.D.
5	Boron (as B)	mg/L	IS 3025: (Part-57)	0.5	1.0	N.D.
6	Calcium (as Ca)	mg/L	IS 3025: (Part-40)	75	200	28.05
7	Chloramines (as Cl <sub>2</sub> )	mg/L	IS 3025: (Part-26)	4.0	No Relaxation	N.D.





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## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
8	Chloride (as Cl)	mg/L	IS 3025: (Part-32)	250	1000	8.99
9	Copper (as Cu)	mg/L	IS 3025(part-42)	0.05	1.5	N.D.
10	Fluoride (as F)	mg/L	IS 3025(part-60)	1	1.5	0.15
11	Free Residual Chlorine	mg/L	IS 3025: (Part-26)	0.2	1	N.D.
12	Iron (as Fe)	mg/L	IS 3025(part-53)	0.3	No Relaxation	N.D.
13	Magnesium (as Mg)	mg/L	IS 3025: (Part-46)	30	100	11.66
14	Manganese (as Mn)	mg/L	IS 3025(part-59)	0.1	0.3	N.D.
15	Mineral Oil	mg/L	Clause 6 of IS 3025 (Part-39) Infrared partition method	0.5	No Relaxation	N.D.
16	Nitrate (as NO <sub>3</sub> )	mg/L	IS 3025(part-34)	45	No Relaxation	0.19
17	Phenolic Compound (as C <sub>6</sub> H <sub>5</sub> OH)	mg/L	IS 3025(part-43)	0.001	0.002	N.D.
18	Selenium (as Se)	mg/L	IS 3025(part-56)	0.01	No Relaxation	N.D.
19	Silver (as Ag)	mg/L	Annex J of IS 13426	0.1	No Relaxation	N.D.
20	Sulphate (as SO <sub>4</sub> )	mg/L	IS 3025: (Part-24)	200	400	17.4
21	Sulphide (as H <sub>2</sub> S)	mg/L	IS 3025: (Part-29)	0.05	No Relaxation	N.D.
22	Total Alkalinity (as CaCO <sub>3</sub> )	mg/L	IS 3025: (Part-23)	200	600	50.0
23	Total Hardness (as CaCO <sub>3</sub> )	mg/L	IS 3025: (Part-21)	200	600	118.0
24	Zinc (as Zn)	mg/L	IS 3025(part-49)	5	15	N.D.
C.	Parameters concerning toxic substances:-					
1	Cadmium (as Cd)	mg/L	IS 3025(part-41)	0.003	No Relaxation	N.D.
2	Cyanide (as CN)	mg/L	IS 3025(part-27)	0.05	No Relaxation	N.D.
3	Lead (as Pb)	mg/L	IS 3025(part-47)	0.01	No Relaxation	N.D.
4	Mercury (as Hg)	mg/L	IS 3025(part-48)	0.001	No Relaxation	N.D.
5	Molybdenum (as Mo)	mg/L	IS 3025(part-2)	0.07	No Relaxation	N.D.
6	Nickel (as Ni)	mg/L	IS 3025(part-54)	0.02	No Relaxation	N.D.
7	Polychlorinated biphenyls	mg/L	ASTM 5175	0.0005	No Relaxation	N.D.



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REPORT NO.07994

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
8	Polynuclear aromatic hydrocarbons (as PAH)	mg/L	APHA 6440	0.0001	No Relaxation	N.D.
9	Arsenic (as As)	mg/L	IS 3025(part-37)	0.01	0.05	N.D.
10	Chromium (as Cr)	mg/L	Annex J of IS:13428	0.05	No Relaxation	N.D.
11	Trihalomethanes:					
a)	Bromoform	mg/L	APHA 6232	0.1	No Relaxation	N.D.
b)	Dibromochloromethane	mg/L	APHA 6232	0.1	No Relaxation	N.D.
c)	Bromodichloromethane	mg/L	APHA 6232	0.06	No Relaxation	N.D.
d)	Chloroform	mg/L	APHA 6232	0.2	No Relaxation	N.D.
D.	Pesticides:-					
1	Alpha HCH	µg/l	USEPA 508		0.01	N.D.
2	Beta HCH	µg/l	USEPA 508		0.04	N.D.
3	Delta HCH	µg/l	USEPA 508		0.04	N.D.
4	Alachlor	µg/l	USEPA 525.2, 507		20	N.D.
5	Aldrin / Dieldrin	µg/l	USEPA 508		0.03	N.D.
6	Atrazine	µg/l	USEPA 525.2, 8141 A		2	N.D.
7	Butachlor	µg/l	USEPA 525.2, 8141 A		125	N.D.
8	Chlorpyrifos	µg/l	USEPA 525.2, 8141 A		30	N.D.
9	DDT (o,p and p, p-Isomers of DDT, DDE and DDD)	µg/l	USEPA 508		1	N.D.
10	Gamma HCH	µg/l	USEPA 508		2	N.D.
11	2,4-Dichlorophenoxyacetic Acid	µg/l	USEPA 515.1		30	N.D.
12	Endosulphan (alpha, beta and sulphate)	µg/l	USEPA 508		0.4	N.D.
13	Ethion	µg/l	USEPA 1657 A		3	N.D.
14	Isoproturon	µg/l	USEPA 532		9	N.D.
15	Malathion	µg/l	USEPA 8141 A		190	N.D.





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## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
16	Methyl Parathion	µg/l	USEPA 8141 A		0.3	N.D.
17	Monocrotophos	µg/l	USEPA 8141 A		1	N.D.
18	Phorate	µg/l	USEPA 8141 A		2	N.D.
<b>E. Microbial Parameters</b>						
1	Total Coliform	MPN/100ml	IS:1622:1981:RA:2019		-	Absent
2	E. Coli	MPN/100ml	IS:1622:1981:RA:2019		-	Absent

Note: mg/lit.: milligram per liter, N.D.: Not Detected.

### REMARKS: RESULTS ARE AS ABOVE

#### Terms & conditions

- > The above analysis report refers to the particular sample received at our end and the use of the report for publication, arbitration or as legal dispute is forbidden.
- > Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer.
- > This is for information as the party has asked for above test(s) only.

*[Signature]*  
30/01/23

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*[Signature]*

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-----End of the test report-----





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Name & Address Of The Customer <b>TO,</b> <b>M/S JINDAL POWER LIMITED,</b> <b>GARE PALMA IV/1 COAL MINE,</b> <b>VILLAGE: DONGAMAHUA</b> <b>TEHSIL: TAMNAR, DISTRICT: RAIGARH,</b> <b>(C.G.) 496107</b>	Report No	UES/TR/22-23/07995	
	Lab Ref No	UES/22-23/W/015949	
	Date of Sampling	24/01/2023	
	Date of Receipt	27/01/2023	
	Date of Report	30/01/2023	
	Date of analysis	Start: 27/01/2023	End: 30/01/2023

#### SAMPLE DETAILS

Customer Sample Id /Sampling Location	NAGARAMUNDA VILLAGE
Sample Type	Ground Water
Packing Of Sample	Plastic Bottle (5.0ltr.) Glass Bottle (1.0ltr.)
Sample Collected By	Laboratory Chemist
Sample Condition At Receipt	OK

REPORT NO.07995

### TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
A. Organoleptic & Physical Parameters						
1	Colour	Hazen	IS:3025: (Part-4)	5	15	8.0
2	Odour	-	IS 3025 (part-5)	Agreeable	Agreeable	Agreeable
3	pH Value at 25.2°C	-	IS:3025: (Part-11)	6.5-8.5	No Relaxation	6.98
4	Taste	-	IS 3025 (part-8)	Agreeable	Agreeable	Agreeable
5	Turbidity	NTU	IS 3025: (Part-10)	1	5	4.0
6	Total Dissolved Solids	mg/L	IS:3025: (Part-16)	500	2000	162
B. General Parameters Concerning Substances undesirable in excessive amounts						
1	Aluminium (as Al)	mg/L	IS 3025 (part-55)	0.03	0.2	N.D.
2	Ammonia (as total ammonia-N)	mg/L	IS 3025 (part-34)	0.5	No Relaxation	N.D.
3	Anionic Detergent (as MBAS)	mg/L	Annex K of IS:13428	0.2	1.0	N.D.
4	Barium (as Ba)	mg/L	Annex F of IS:13428	0.7	No Relaxation	N.D.
5	Boron (as B)	mg/L	IS 3025: (Part-57)	0.5	1.0	N.D.
6	Calcium (as Ca)	mg/L	IS 3025: (Part-40)	75	200	43.28
7	Chloramines (as Cl <sub>2</sub> )	mg/L	IS 3025: (Part-26)	4.0	No Relaxation	N.D.





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REPORT NO.07995

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
8	Chloride (as Cl)	mg/L	IS 3025: (Part-32)	250	1000	20.9
9	Copper (as Cu)	mg/L	IS 3025(part-42)	0.05	1.5	N.D.
10	Fluoride (as F)	mg/L	IS 3025(part-60)	1	1.5	0.59
11	Free Residual Chlorine	mg/L	IS 3025: (Part-26)	0.2	1	N.D.
12	Iron (as Fe)	mg/L	IS 3025(part-53)	0.3	No Relaxation	0.27
13	Magnesium (as Mg)	mg/L	IS 3025: (Part-46)	30	100	17.49
14	Manganese (as Mn)	mg/L	IS 3025(part-59)	0.1	0.3	0.18
15	Mineral Oil	mg/L	Clause 6 of IS 3025 (Part-39) Infrared partition method	0.5	No Relaxation	N.D.
16	Nitrate (as NO <sub>3</sub> )	mg/L	IS 3025(part-34)	45	No Relaxation	8.24
17	Phenolic Compound (as C <sub>6</sub> H <sub>5</sub> OH)	mg/L	IS 3025(part-43)	0.001	0.002	N.D.
18	Selenium (as Se)	mg/L	IS 3025(part-56)	0.01	No Relaxation	N.D.
19	Silver (as Ag)	mg/L	Annex J of IS 13428	0.1	No Relaxation	N.D.
20	Sulphate (as SO <sub>4</sub> )	mg/L	IS 3025: (Part-24)	200	400	22.0
21	Sulphide (as H <sub>2</sub> S)	mg/L	IS 3025: (Part-29)	0.05	No Relaxation	N.D.
22	Total Alkalinity (as CaCO <sub>3</sub> )	mg/L	IS 3025: (Part-23)	200	600	68.0
23	Total Hardness (as CaCO <sub>3</sub> )	mg/L	IS 3025: (Part-21)	200	600	112.0
24	Zinc (as Zn)	mg/L	IS 3025(part-49)	5	15	0.48
<b>C. Parameters concerning toxic substances:-</b>						
1	Cadmium (as Cd)	mg/L	IS 3025(part-41)	0.003	No Relaxation	N.D.
2	Cyanide (as CN)	mg/L	IS 3025(part-27)	0.05	No Relaxation	N.D.
3	Lead (as Pb)	mg/L	IS 3025(part-47)	0.01	No Relaxation	N.D.
4	Mercury (as Hg)	mg/L	IS 3025(part-48)	0.001	No Relaxation	N.D.
5	Molybdenum (as Mo)	mg/L	IS 3025(part-2)	0.07	No Relaxation	N.D.
6	Nickel (as Ni)	mg/L	IS 3025(part-54)	0.02	No Relaxation	N.D.
7	Polychlorinated biphenyls	mg/L	ASTM 5175	0.0005	No Relaxation	N.D.



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REPORT NO.07995

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
8	Polynuclear aromatic hydrocarbons (as PAH)	mg/L	APHA 6440	0.0001	No Relaxation	N.D.
9	Arsenic (as As)	mg/L	IS 3025(part-37)	0.01	0.05	N.D.
10	Chromium (as Cr)	mg/L	Annex J of IS:13428	0.05	No Relaxation	N.D.
11	Trihalomethanes:-					
a)	Bromoform	mg/L	APHA 6232	0.1	No Relaxation	N.D.
b)	Dibromochloromethane	mg/L	APHA 6232	0.1	No Relaxation	N.D.
c)	Bromodichloromethane	mg/L	APHA 6232	0.06	No Relaxation	N.D.
d)	Chloroform	mg/L	APHA 6232	0.2	No Relaxation	N.D.
D.	Pesticides:-					
1	Alpha HCH	µg/l	USEPA 508	0.01		N.D.
2	Beta HCH	µg/l	USEPA 508	0.04		N.D.
3	Delta HCH	µg/l	USEPA 508	0.04		N.D.
4	Alachlor	µg/l	USEPA 525.2, 507	20		N.D.
5	Aldrin / Dieldrin	µg/l	USEPA 508	0.03		N.D.
6	Atrazine	µg/l	USEPA 525.2, 8141 A	2		N.D.
7	Butachlor	µg/l	USEPA 525.2, 8141 A	125		N.D.
8	Chlorpyrifos	µg/l	USEPA 525.2, 8141 A	30		N.D.
9	DDT (o,p and p, p-Isomers of DDT, DDE and DDD)	µg/l	USEPA 508	1		N.D.
10	Gamma HCH	µg/l	USEPA 508	2		N.D.
11	2,4-Dichlorophenoxyacetic Acid	µg/l	USEPA 515.1	30		N.D.
12	Endosulphan (alpha, beta and sulphate)	µg/l	USEPA 508	0.4		N.D.
13	Ethion	µg/l	USEPA 1657 A	3		N.D.
14	Isoproturon	µg/l	USEPA 532	9		N.D.
15	Malathion	µg/l	USEPA 8141 A	190		N.D.





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REPORT NO.07985

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Acceptable Limit	Permissible limit	
16	Methyl Parathion	µg/l	USEPA 8141 A		0.3	N.D.
17	Monocrotophos	µg/l	USEPA 8141 A		1	N.D.
18	Phorate	µg/l	USEPA 8141 A		2	N.D.
<b>E. Microbial Parameters</b>						
1	Total Coliform	MPN/100ml	IS:1622:1981:RA:2019		-	70
2	E. Coli	MPN/100ml	IS:1622:1981:RA:2019		-	30

Note: mg/lit.: milligram per liter, N.D.: Not Detected.

### REMARKS: RESULTS ARE AS ABOVE

#### Terms & conditions

- > The above analysis report refers to the particular sample received at our end and the use of the report for publication, arbitration or as legal dispute is forbidden.
- > Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer.
- > This is for information as the party has asked for above test(s) only.

*[Signature]*  
30/01/21

REVIEWED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

*[Signature]*

AUTHORIZED SIGNATORY

-----End of the test report-----

## Annexure-III A

## Corporate Social Responsibility -Jindal Power Limited -Tamnar

Financial Expenditure- April-22 to March-23 (FY-2022-23 ) Gare -IV/1 Mines -CSR JPL Tamnar

S. No.	Area of intervention	Proposed Project	Expenditure -FY-22-23 (In Lakh)
1	Health, Nutrition & Drinking water	Mobile Health camp	2.41
		Vatsalya Project	4.9
		Establishment of 06 Vatsalaya Center	6
		Chiranjivi Project	1.39
		Renovation/strengthening of PHC	2
		Rennnovation of sub center	4
		Rennovation of Aganwadi Center	24
		Clean and safe Drinking water in all 6 villages	16.00
		ODF	8.86
Sub total of Health ,Nutrition & Drinking water			69.56
3	Community Education	Renovation of primary/middle and secondary Schools along with drinking water water & sanitation facilities	20.00
		Boundry wall Govt. Primary school/Aganwadi centre	9.50
		Estabishmnet of 02 little angel center for pre primary education	5.00
Total Community Education			34.50
4	Sustainable Livelihood & Women Empowerment	Promotion of IGAs	13.15
		Project Mushroom - training & development, shed construction	3.00
		EDP- Swawlamban & Swa Shakti	10.90
Total Sustainable Livelihood & Women Empowerment			27.05
5	NRM	Creating carbon Sinks	20.00
		Agriculture Development -Promotion of SRI method in paddy cultivation, Organic vegetable cultivation , farmers training	3.00
Total of NRM			23.00

6	Sports	Renovation /construction /painting of sports ground	5.00
		Sports promotion among youth	8.00
Total Sports			13.00
7	Rural Infrastructure	Construction of CC Road	65.00
		Boundry wall and other misc work at Gothan Jangeer, Amgaon and other viilages	15.00
		Muroom road	6.00
		Construction / rennovation of Community building	25.00
		Construction of Bathing ghats	7.00
		Construction/ repairing of drain	5.00
		Market Shed -Dhaurabhanta	15.00
		Total Rural Infrastructure	
GRAND TOTAL			305.11



### **Physical Achievement Report- Gare IV/1 Mines-CSR JPL Tamnar- FY-2022-23**

As per EC condition Jindal Power Limited implementing CSR activities in 10 villages near (06 core villages and 04 nearby village) of Gare IV/1 mine from July 2021. Under CSR we are working in village Nagramuda, Janjgeer, Tapranga, Amgaon, Jharadeeh, Dhaurabhanta, Dongamauha, Beljor, Libra, and Jharna. Following CSR projects/activities initiated in above mentioned villages from April -22 to March-23 -FY-2022-23

#### **1. Health & Nutrition**

**Rural Health Camps**- In FY -2023-24 a total 124 health camps were organised against a target of 120 camps in which 2298 (Male- 623, female-907, Children-579 and Old Age-189) patients were catered out of 2298, 30 patients were referred to Fortis OP Jindal Hospital Tamnar and 23 patients were referred to Govt. hospital. Disease wise bifurcations of the patients are as following:-

Hypertension	97	Dental	65
Pregnant women(ANC)	08	URTI	596
Under nutrition	123	GI	154
Fever	177	Skin	358
Gyne	22	Anaemia	110
PNC	45	Cataract	01
Other general patients	489	Referred	53

**1.1 Project Vatsalya**- Community based village health volunteers i.e. Swasthya Sanginis were played a very catalytic role in mother and child health care in their respective villages. They are the point of contacts in their respective villages as a resource person about disseminating preventive awareness messages, vaccination details and other related aspects. Following activities were done under project Vatsalya:-

- Antenatal care services were provided to 106 women against the target of 106 women. During the pregnancy period of an expecting mother, care is being taken for early registration, ante natal check-ups ensuring intake of IFA tablets, TT injections and necessary tests.
- The lactating mothers received Post-natal care service (86 women, 100% target achieved) ensuring Colostrum feeding to the new born child, exclusive breast feeding, and supplementary nutrition for both the mother and the child was ensured.

Apart from the above stated, following activities were carried out to ensure maternal & child health care-nutrition and health education in this quarter:-

- 212 community meetings were organised (against target of 200 meetings) with 2202 women.
- 73 Ante Natal & 80 Post Natal care sessions were organised against a target of 150 sessions (75 ANC and 75 PNC sessions) attended by 291 pregnant women and 399 mothers respectively.
- 150 health education sessions (Khelwadi) was organized against the target of 144 sessions in which 1504 children participated.

- 37 meetings with the Village Health and Sanitation Committee (VHSC) was organised against the target of 40. The "Swasthaya Sanginis" strengthen the existing VHSC formed under the NRHM.

On 9<sup>th</sup> of every month, safe motherhood day is observed in coordination with Health department in which complete care for ante natal and post-natal is done at Community Health Centre by specialist. The VHV's mobilized and facilitate the target women to avail the services. *During the period of April-22 to March'23, 61 pregnant mothers attended the safe motherhood day sensitization programme.*

Reduction in maternal and child mortality is a major objective of Vatsalya program. Zero MMR reported in this quarter.

*During the said period, a total 43 institutional deliveries out of 45 deliveries were facilitated, achieving 95.55% of the target.*

*306 out of targeted 306 children got vaccination for proper immunization achieving 100 % of the target.*

153 Kishori Swasthaya Pathshala by VHVs were organised against the target of 150 in which 1346 adolescent girls participated.

*In the Pathshalas, 350 counselling sessions of adolescent girls were carried out in Vatsalya Kendra out of which 35 identified girls were referred to e-hc for the treatment of anaemia and menstruation related problems.*

**1.2 Project Chiranjeevi-** JPL CSR has successfully undertaken the project Chiranjeevi in convergence with ICDS. Under the project, BMI of 528 children (age group: 6 months old to 5 years) was measured. 42 malnourished children were identified (**Moderate-27, Severe -15**) from 06 villages. Under this project regular clinical and nutritional intervention is being taken care for all 42 identified children.

The identified malnourished children are linked to ICDS schemes with the help of "Swasthaya Sangini" (VHVs) for nutrition supplement. For better clinical support these children were referred to further treatment at e-health centre.

Take Home Ration (THR) and Ready to Eat food was provided to the children in convergence with ICDS.

*By providing regular nutritional and clinical support. In this financial year a total 27 malnourished children turned to normal category. 64.28 % reduction in malnutrition (Present status-15 malnourished children (Moderate-09-severe-06)*

**1.3 Population stabilization programme-**74 eligible couple meetings were organised against the target of 70 by VHVs in which 663 couple attended. 500 individual counselling was done and the total contraceptive users registered in the village were 4146.

#### **1.4 High Risk Pregnancy check up and treatment camp**

To reduce IMR & MMR Vatsalya program is executing in 10 villages of Gare IV/1 mines area under the Vatsalya project 07 Swasthya Sangini is working to ensure safe mother hood and child care. In the operational area 15 high risk pregnant women identified. To counsel and ensure better health of high risk



mother 09 special camps organized at OPJHRC- Tamnar. All 15 high risk mothers attended and counselled and treated with Gyne specialist. The follow-up of the mothers will be continued. Out of 15 -12 mothers turned from high risk.10 normal delivery reported of high risk mothers.

## **1.5 Theme days & Health awareness program**

### **1.5.1 National Doctors day**

National doctors day observed on 1<sup>st</sup> July -22 at OPJHRC –Tamnar. On the occasion felicitation program of doctors organized. In the program Dr. D.S. Painkara Block medical officer –Tamnar ,Dr. U.K. Patti- CMO – OPJHRC Tamnar Dr. Rajesh Patel -Medical officer PHC-Libra , Dr. Bishkha Day –Gynaecologist, Dr. Vinay Kumar Patel –Sonologist,Dr. Priya Rai – General surgeon were presented and honoured .

### **1.5.2 World Population Day**

World Population Day is celebrated annually on 11 July to focus attention on the urgency and importance of population issues. On the occasion JSP Foundation in JPL Tamnar organised a felicitations program for ideal couple who were married on right age of marriage, maintained three year of spacing between first and second child and adopted sterilization as a family planning norms on completion of family (1/2 child) . In the program resource person from CHC Tamnar sensitized to all Swasthya Sangini about various scheme and services of population stabilization. Total 06 ideal couples were felicitated. A weeklong awareness program from 11<sup>th</sup> to 17<sup>th</sup> July organized in surrounding villages more than 125 people attended

### **1.5.3 World Breast Feeding week (1<sup>st</sup> to 7<sup>th</sup> August)**

To encourage breastfeeding and improve the health of babies, world breast feeding week celebrated from 1<sup>st</sup> to 7<sup>th</sup> August in operational area under Vatsalaya project. Under the week awareness program organized in operational villages.

### **1.5.4 Blood Donation Camp-10<sup>th</sup> August-22**

Blood Donation Camp was organized on 10<sup>th</sup> August at OPJHRC Tamnar in joint collaboration with RED Cross Society and OPJHRC-Raigarh. In the camp 43 unit blood were voluntarily donated by JPL employee.

### **1.5.5 National Nutrition week**

National Nutrition Week (NWN) is observed from 1-7 every year to educate the populace about the significance of nutrition. Adequate nutrition is the corner stone that determines the overall well-being of a person, as it supports individuals in mainstreaming health status and average growth and development. To lead a healthy lifestyle and stay disease free, every individual should adopt mindful eating practices. JSP Foundation in JPL Tamnar observed National Nutrition week awareness and nutrition classes organized among parents of malnourished children, Pregnant and lactating mothers. The program organised in 10 villages more than 250 people attended.

### **1.5.6 World First AID day**

On the occasion of World First AID Day 10<sup>th</sup> September, first Aid training organized by JSP Foundation in JPL Tamnar for Swasthya Sangini –Women Village Health workers working under Vatsalaya project. Dr. Ashwani Patel MO –OPJHRC Tamnar delivered the training.

#### **1.5.7 National Eye care week**

Promoting the importance of good eye health and the need of regular eye test for all. National eye care week observed from 1<sup>st</sup> to 7<sup>th</sup> September-22 by JSP Foundation in JPL Tamnar. Under the program eye health awareness and eye test program conducted in the Govt. schools. More than 90 students attended awareness program and eye check-up of 30 students done.

#### **1.5.8 Global Hand washing day**

Global Hand washing Day is an international hand washing promotion campaign to motivate and mobilize people around the world to improve their hand washing habits. JSP Foundation JPL Tamnar observed Global hand washing day on 15<sup>th</sup> of October 2022 among school children to motivate them on hand washing. In the program awareness on hand washing and demonstration of the step of hand washing practices were delivered among children. The program was organized in 05 schools and more than 350 children attended.

#### **1.5.9 New born care week**

National New-born care Week is celebrated every year from 15 to 21 November-22. This week aims to reinforce the importance of neonatal health as a priority area of the health sector and reduce infant mortality by improving health care conditions for infants in the neonatal period. Under our Vatsalaya project we are working to reduce Infant mortality in the area. Keeping in view of this New born care week was observed in operational villages. Under the week Healthy baby show , awareness program, importance of child nutrition, breastfeeding, child vaccination were discussed. Parents of healthy baby felicitated in the program.

#### **1.5.10 World Immunization day**

November 10 is observed as World Immunization Day every year, which aims to spread the incredible health benefits of getting vaccinated and how it can prevent many diseases and disorders. Vaccination has become the need of the hour in today's world. Keeping in view of that World Immunization day was observed at village –Tapranga, more than 50 mothers attended.

#### **1.5.11 World Diabetes day**

World Diabetes Day provides an opportunity to raise awareness of diabetes as a global public health issue In JPL Tamnar world diabetes day was observed on 14<sup>th</sup> November, awareness program and diabetes testing camp organized in Gare IV/1 mines area villages. In the camp 40 people were tested for diabetes, 120 people attended awareness program.

#### **1.5.12 World Toilet Day**



World Toilet Day is celebrated annually on 19<sup>th</sup> November to inspire action to tackle the global sanitation crisis and help to achieve Sustainable Development Goal 6 (SDG 6), which promises sanitation for all by 2030. In JPL Tamnar World Toilet day was observed in all cluster villages. Awareness program on use of toilet and sanitation, cycle rallies were organized in the villages. In the program families who have best toilet and ensuring 100% use, were felicitated. More than 450 male, female and children attended.

#### **1.5.13 De-addiction awareness campaign**

Alcoholism in India has affected people of all ages, genders and social backgrounds in the country for ages. Alcohol can cause high blood pressure, which increases your risk of having a heart attack or stroke. Alcohol also weakens heart muscles, which can affect the lungs, liver, brain and other body systems, and also cause heart failure. Alcohol consumption can have adverse social and economic effects on the individual immediate environment and society as a whole.

To sensitize people on bad effects of alcohol and tobacco an awareness campaign organized by JSP Foundation in JPL Tamnar from 12<sup>th</sup> to 18<sup>th</sup> January in mines surrounding villages under the campaign awareness program, rally organized more than 500 people sensitized

#### **1.5.14 World TB Day :-**

To make aware people on TB world TB day observed on 24<sup>th</sup> March-23. An awareness program organized at village –Dhaurabhanta and nutrition basket distributed to 10 TB patients. Dr. Hemendra Sahu Patel as resource person delivered the cause & treatment, precaution of the TB among people.

**2.00 Renovation /maientance of PHC & Sub centre –** construction of entry gate, barbed wire fencing at PHC Libra, renovation of sub –centre Nagramuda & Dhaurabhanta, benefiting more than 3500 people

### **3. Drinking water & Sanitation**

**3.1 ODF-** 99 meetings were organised to change behaviour of the people on sanitation and use of toilet 980 people attended. *The attendees were sensitized on hygiene and cleanliness aspects. Maintenance of 50 individual BPL toilets done at village –Janjgeer & Tapranga.*

**3.2 Drinking water facilities in villages:-** Drinking water facilities arrange in 06 village –Tapranga- Yadav Mohalla, Dhaurabhanta main Chouk, Amgaon –Rawanguda, Libra –CHP Chouk, Jharadeeh-Neechepara,Kondkel , benefiting more than 1800 people.

#### **3.3 Supply of safe drinking water through water Tanker**

60 water tanker / 3000 people (drinking water supplied in villages through water tanker in stress period)

### **4.0 Project Shubhangi– Menstural health & hygeine**

CSR JPL initiated Shubhangi project to enhance the menstrual health status and promote use of low cost Sanitary napkins among adolescent girls and women through social marketing. To make aware and sensitize adolescent girls on menstrual health & hygiene during the period of April-22 to March- 2023, 123 educational sessions were organised in villages through VHVs 1139 women & adolescent girls were attended.

*The social business model of manufacturing and distribution of sanitary napkin witnessed a total sale of 3500 and adolescent girls of worth Rs. 98,000/.*

#### **5.00 COMMUNITY EDUCATION & Skill Development :**

**5.1 Little Angels Schools-** Pre-Primary education is being undertaken at Little Angels Schools in villages Libra with strength of 30 children. In education session 2022-23, 14 children mainstreamed in nearby by schools for further education. 02 new Little Angel centre proposed to open at village – Amgaon & Tapranga

**5.2 Knowledge Park-** The Knowledge Park is located at Libra and Rabo. The centres consist of library and indoor sports facilities for school children in the form of Child Learning centre and Community Information centre for rural youths. Newspapers, Magazines, Books, Journals and associated resource materials are available at the centres. 350 children and youths are the part of the centres in the said period.

**5.3 Skills training for girls under the Yashasvi project-** 90 girls are attended skill development training in Assistant Beauty Therapist, GDA, Retail sales, Domestic Data Entry operator at OPJCC Punjipathara. 06 girls nominated for scholarship for higher education.

#### **5.4 Facilitation program of meritorious students**

On 6<sup>th</sup> September-22 facilitation programs was organized for meritorious students of OP Jindal School Savitri Nagar, and OPJS Kunjemura who were passed class 10<sup>th</sup> & 12<sup>th</sup> with excellent number. Plant head Sh. C.N. Singh graced the occasion. Under the program 60 students awarded with certificate and mementoes.

#### **5.5 Mini Science Center**

Mini Science center was established at Govt. Hr. Secondary school –Dhaurabhanta through STEM learning, more than 300 students benefiting.

**5.6 School Infra –** Under school infrastructure development\_Height extension & Partition of Boundary wall of Govt.Primary School – Janjgeer, Dining Hall shed at Govt. Primary school Tapranga, Boundary wall Govt. Middle school Khuruslenga & CLC Libra, renovation of Science Lab at Govt. Hr. Secondary School – Dhaurabhanta, renovation of community building to establish Little Angel Centre at village Amgaon & Tapranga benefiting more than 1500 children's.

#### **5.7 Renovation of Aganwadi Centres -**

Renovation/painting and basic amenities at 12 Aganwadi center of Gare IV/1 mines area villages i.e. Tapranga, Dhaurabhanta -02 nos. (Bazarapara & Khalepara), Jharadeeh, Nagramuda, 04 AWC at village-



Janjgeer, 03 at Amgaon, Boundary wall Govt. Primary school & Aganwadi- Dongamauha, benefiting more than 600 children.

## **6.0 ENTREPRENEURSHIP DEVELOPMENT PROGRAMME**

### **6.1 Mushroom Production:**

**Training and Capacity Building-** The mushroom production resource centre has been established to provide technical support to the farmers and entrepreneurs. Technical assistance to 1160 farmers is being provided from the centre. During the period of April-22 to March-23, 15 training programmes have been conducted on Paddy straw mushroom cultivation with 450 SHGs/ farmers.

**6.2 Mushroom Production** – Mushroom production is very popular among farmers because of its high protein values. More than 50 farmers, women SHGs members are regularly producing mushroom and this is an easy livelihood generation option for them.

60 women /06 SHGs adopted mushroom cultivation, 06 mushroom production shed constructed to promote mushroom cultivation. In this period 2500 kg Mushroom were produced cost worth Rs.2,50,000/.

06 Mushroom shed 40 bedded constructed\_in village – 03 in Amgaon & 03 in Janjgeer , benefiting more than 100 women

**6.3 Jute Bag training** – Jute Bag making training has been initiating at village –Tapranga in which 30 women are getting trained in jute bag making.

## **7.0 Natural Resource Development**

### **7.1 Create Carbon Sink**

To create carbon sink Pond deepening work done at village Tapranga Pond, benefiting more than 1500 people.

## **8.00 Agriculture Development**

### **8.1 Promotion of Paddy cultivation through SRI**

To enhance the income of farmers, paddy cultivation through SRI is being promoted in 30 acres of land, benefitting 30 farmers. The System of Rice Intensification (SRI) is a methodology for increasing the yield of rice produced in farming. Training and hybrid paddy seed provided to 40 farmers. Paddy produce 32.30 qtl paddy per acre, Total earning of the farmers were Rs. 30.19 Lakhs.

### **8.2 Training to adopt innovative practices in farming**

To improve the skill of farmers and make them adequate enough on new technologies and innovative practices in farming, 10 training programmes were organised with 150 Farmers in collaboration with Agriculture Department. In the training new technique in Paddy cultivation, crop insurance, other govt. schemes for farmers, promotion of pulses cultivation was discussed and appraised.

**8.3 Promotion of Vegetable cultivation** – To increase the income of farmer's vegetable cultivation among farmers is being promoted. 10 farmers have been undertaking vegetable cultivation. In the said period, 10 farmers earned Rs.3.60 Lakhs as an additional income from vegetable selling.

## **9.00 Sports, Art & culture**

**9.1 Sports promotion among youths:** - To promote sports activities among youth CSR JPL supporting to youth to organised sports competition. In this period Kabbadi Tournament at village-Janjgeer, Amgaon organised. Sankul level sports organised at village –Dhaurabhanta, more than 300 children's from Govt. Schools participated.

### **9.2 CSR week celebration**

CSR week celebrated from 7th to 13th August-22. Various community development and social welfare programs organized under the Mahila Sammelan -8th August ,World Tribal day -9th August, Blood Donation camp -10th August-43 unit blood collected, serving old age people-11th August, International Youth day -12th August, Har Ghar Tiranga campaign -13th August organized more than 1600 people attended

## **10.00 Social inclusion**

### **10.1 Jindal Children home**

Jindal Children home establish at JPL Tamnar with an approval of 50 boys & 50 girls from February-22 with 35 orphan children. The home is executing under JJ Act -2015, regular monitoring of home is being done by Child welfare committee –Raigarh and district Child protection officer. At present 91 boys & girls are residing in the home (boys-50, girls -41).

### **11.00 Rural Infrastructure Development work**

- **Community building** – Construction of 02 community Building at village Jharadeeh & Amgaon
  - **Boundary wall at Gothan** – Construction of boundary wall of Gothan –Amgaon & Janjgeer
  - **Construction of Bathing Ghats** -05 Bathing Ghats in village – Janjgeer, Jharadeeh, Jharna, Tapranga
  - **CC Road** – 1950 RM CC road constructed at village-Jharadeeh-500 RM, Tapranga-500 RM , Libra 200 RM, Janjgeer -500 RM , Amgaon -250 Rm
  - **Construction of Drain**– 340 RM drain construction in village- Janjgeer
  - **Construction of Murom road** – Murom road constructed at Dhaurabhanta to Beljor-2000 RM
  - **Market shed** – Market shed constructed at village- Dhaurabhanta
-

AMBIENT AIR QUALITY MONITORING DATA-GP IV/1 COAL MINE – Buffer Zone															
Month: October 22 to March 2023															
Location	Month	1	2	3	4	5	6	7	8	9	Min.	Max.	Avg.	Limit (24 Hrs.)	
		PM – 2.5													
Location – 1 (Near Dongamahua)	Oct – 22	18	23	21	22	20	19	25	26	20	18	26	21.6	60 µg/m3	
	Nov - 22	24	26	35	32	34	22	25	28	23	22	35	27.7		
	Dec – 22	31	34	37	32	33	27	30	23	33	23	37	31.1		
	Jan – 23	36	39	27	25	32	26	34	31	28	25	39	30.9		
	Feb – 23	24	26	31	25	32	28	36	29	-	24	36	28.9		
	Mar – 23	37	34	36	32	38	24	21	23	26	21	38	30.1		
	Month	PM - 10													
	Oct – 22	51	62	68	72	65	63	73	71	61	51	73	65.1	100 µg/m3	
	Nov - 22	76	81	78	72	80	71	74	77	75	71	81	76.0		
	Dec – 22	74	78	81	77	80	76	77	70	79	70	81	76.9		
	Jan – 23	84	87	72	76	86	82	88	79	85	72	88	82.1		
	Feb – 23	65	68	82	77	84	81	86	75	-	65	86	77.3		
	Mar – 23	81	86	78	76	83	62	56	59	69	56	86	72.2		
	Month	NOx													
	Oct – 22	20	18	22	19	23	25	21	23	26	18	26	21.9	80 µg/m3	
	Nov - 22	32	29	31	25	28	26	27	25	31	25	32	28.2		
	Dec – 22	24	26	32	28	35	23	31	27	30	23	35	28.4		
	Jan – 23	26	32	27	31	33	28	34	30	29	26	34	30.0		
	Feb – 23	27	23	29	28	30	26	31	28	-	23	31	27.8		
	Mar – 23	31	28	26	30	25	27	23	26	29	23	31	27.2		
	Month	SO <sub>2</sub>													
	Oct – 22	14	12	13	16	15	17	16	14	22	12	22	15.4	80 µg/m3	
	Nov - 22	18	15	16	13	17	14	13	16	15	13	18	15.2		
	Dec – 22	15	13	19	16	18	11	15	14	13	11	19	14.9		
	Jan – 23	16	19	14	18	15	17	12	13	15	12	19	15.4		
	Feb – 23	17	16	12	15	18	14	21	16	-	12	21	16.1		
	Mar – 23	19	16	14	21	15	17	12	13	22	12	22	16.6		



## Annexure-IVA

Location	Month	1	2	3	4	5	6	7	8	9	Min.	Max.	Avg.	Limit (24 Hrs.)
		PM - 2.5												
Location - 2 (Near Janjgir)	Oct – 22	16	18	20	19	15	17	21	22	18	15	22	18.4	60 µg/m <sup>3</sup>
	Nov - 22	21	18	30	19	27	20	23	20	21	18	30	22.1	
	Dec – 22	24	21	28	32	25	22	24	26	23	21	32	25.0	
	Jan – 23	28	32	21	20	27	36	25	22	24	20	36	26.1	
	Feb – 23	23	26	29	21	26	29	31	24	-	21	31	26.1	
	Mar – 23	31	27	35	28	30	16	18	17	21	16	35	24.8	
	Month	PM - 10												
	Oct – 22	38	48	53	47	42	54	51	58	63	38	63	50.4	100 µg/m <sup>3</sup>
	Nov - 22	55	58	61	51	63	57	54	62	59	51	63	57.8	
	Dec – 22	57	52	62	71	65	64	67	63	61	52	71	62.4	
	Jan – 23	69	76	53	68	61	79	57	58	65	53	79	65.1	
	Feb – 23	64	57	67	65	73	74	79	66	-	57	79	68.1	
	Mar – 23	78	64	73	66	71	41	45	49	54	41	78	60.1	
	Month	NOx												
	Oct – 22	18	20	16	17	22	29	23	26	28	16	29	22.1	80 µg/m <sup>3</sup>
	Nov - 22	24	26	22	19	21	23	20	24	26	19	26	22.8	
	Dec – 22	20	22	24	28	19	25	26	25	22	19	28	23.4	
	Jan – 23	23	27	26	25	20	31	23	21	22	20	31	24.2	
	Feb – 23	24	21	26	22	25	28	32	23	-	21	32	25.1	
	Mar – 23	25	19	22	18	21	17	19	21	18	17	25	20.0	
	Month	SO <sub>2</sub>												
	Oct – 22	11	12	10	11	14	19	18	15	17	10	19	14.1	80 µg/m <sup>3</sup>
	Nov - 22	13	14	11	10	12	15	16	13	12	10	16	12.9	
	Dec – 22	11	10	13	14	12	11	15	14	11	10	15	12.3	
	Jan – 23	15	14	16	12	11	19	13	14	11	11	19	13.9	
	Feb – 23	14	12	13	17	11	10	12	11	-	10	17	12.5	
	Mar – 23	13	12	15	12	11	13	10	15	13	10	15	12.7	

## Annexure-IVA

Location	Month	1	2	3	4	5	6	7	8	9	Min.	Max.	Avg.	Limit (24 Hrs.)
		PM - 2.5												
Location - 3 (Near Dhourabhata)	Oct – 22	21	20	23	21	22	23	22	25	22	20	25	22.1	60 µg/m3
	Nov - 22	26	23	28	21	36	32	29	31	28	21	36	28.2	
	Dec – 22	34	26	31	27	28	36	31	29	32	26	36	30.4	
	Jan – 23	26	35	29	27	38	33	36	24	26	24	38	30.4	
	Feb – 23	32	28	34	24	29	31	37	35	-	24	37	31.3	
	Mar – 23	39	32	37	29	32	21	23	19	22	19	39	28.2	
	Month	PM - 10												
	Oct – 22	52	56	59	60	58	65	71	74	68	52	74	62.6	100 µg/m3
	Nov - 22	78	83	73	70	72	74	72	79	77	70	83	75.3	
	Dec – 22	76	72	69	74	82	83	76	73	75	69	83	75.6	
	Jan – 23	79	85	81	75	82	87	89	77	82	75	89	81.9	
	Feb – 23	74	76	79	71	78	81	84	82	-	71	84	78.1	
	Mar – 23	87	83	85	78	82	61	54	58	67	54	87	72.8	
	Month	NOx												
	Oct – 22	19	22	23	19	17	27	25	20	24	17	27	21.8	80 µg/m3
	Nov - 22	27	24	25	28	23	25	19	26	28	19	28	25.0	
	Dec – 22	32	28	36	33	31	32	29	24	26	24	36	30.1	
	Jan – 23	25	30	28	26	27	32	31	23	26	23	32	27.6	
	Feb – 23	28	30	32	29	31	34	26	28	-	26	34	29.8	
	Mar – 23	30	26	25	23	29	24	22	27	18	18	30	24.9	
	Month	SO <sub>2</sub>												
	Oct – 22	19	22	23	19	17	27	25	20	24	17	27	21.8	80 µg/m3
	Nov - 22	15	11	17	12	16	13	11	14	17	11	17	14.0	
	Dec – 22	17	12	18	15	16	13	14	13	17	12	18	15.0	
	Jan – 23	17	16	14	14	12	15	14	11	13	11	17	14.0	
	Feb – 23	15	14	17	12	15	16	11	13	-	11	17	14.1	
	Mar – 23	16	13	17	14	15	16	11	13	15	11	17	14.4	

## Annexure-IVA

Location	Month	1	2	3	4	5	6	7	8	9	Min.	Max.	Avg.	Limit (24 Hrs.)
		PM - 2.5												
Location - 4 (Near Tapranga)	Oct – 22	12	10	16	14	10	22	17	16	15	10	22	14.7	60 µg/m3
	Nov - 22	23	31	26	22	23	20	24	25	21	20	31	23.9	
	Dec – 22	28	23	34	31	26	25	33	32	25	23	34	28.6	
	Jan – 23	34	31	29	26	35	29	34	27	25	25	35	30.0	
	Feb – 23	23	27	29	21	26	28	33	23	-	21	33	26.3	
	Mar – 23	34	29	32	26	31	17	19	20	23	17	34	25.7	
	Month	PM - 10												
	Oct – 22	48	52	64	69	59	62	74	68	71	48	74	63.0	100 µg/m3
	Nov - 22	71	78	75	68	79	73	70	74	68	68	79	72.9	
	Dec – 22	75	68	82	73	80	78	76	74	71	68	82	75.2	
	Jan – 23	72	81	76	78	84	81	84	75	79	72	84	78.9	
	Feb – 23	71	74	77	67	79	82	81	76	-	67	82	75.9	
	Mar – 23	76	81	83	74	84	52	55	58	62	52	84	69.4	
	Month	NOx												
	Oct – 22	21	18	22	23	16	23	22	24	21	16	24	21.1	80 µg/m3
	Nov - 22	30	28	26	23	24	27	22	23	25	22	30	25.3	
	Dec – 22	27	24	31	25	32	29	26	27	26	24	32	27.4	
	Jan – 23	27	29	25	23	26	33	30	24	28	23	33	27.2	
	Feb – 23	31	25	27	29	24	32	28	34	-	24	34	28.8	
	Mar – 23	27	21	23	20	26	22	24	23	21	20	27	23.0	
	Month	SO <sub>2</sub>												
	Oct – 22	10	14	17	15	13	12	18	15	16	10	18	14.4	80 µg/m3
	Nov - 22	16	13	15	14	10	12	15	12	14	10	16	13.4	
	Dec – 22	14	12	16	11	12	14	15	16	13	11	16	13.7	
	Jan – 23	15	13	12	16	13	19	11	14	16	11	19	14.3	
	Feb – 23	16	14	13	14	13	11	15	12	-	11	16	13.5	
	Mar – 23	14	15	13	12	16	10	13	11	14	10	16	13.1	



AMBIENT AIR QUALITY MONITORING DATA-GP IV/1 COAL MINES-Core Zone							
Month: October 22 to March 2023							
Location	Month	1	2	Min.	Max.	Avg.	Limit (24 Hrs.)
		SPM					
Location – 1 Haul road (Near Weigh Bridge)	Oct – 22	201	256	201	256	228.5	500 µg/m <sup>3</sup>
	Nov - 22	237	250	237	250	243.5	
	Dec – 22	271	211	211	271	241.0	
	Jan – 23	275	311	275	311	293.0	
	Feb – 23	247	291	247	291	269.0	
	Mar – 23	251	302	251	302	276.5	
		RSPM					
	Oct – 22	165	131	131	165	148.0	250 µg/m <sup>3</sup>
	Nov - 22	144	139	139	144	141.5	
	Dec – 22	201	153	153	201	177.0	
	Jan – 23	165	245	165	245	205.0	
	Feb – 23	223	151	151	223	187.0	
	Mar – 23	161	234	161	234	197.5	
		NO <sub>2</sub>					
	Oct – 22	19	32	19	32	25.5	120 µg/m <sup>3</sup>
	Nov - 22	22	29	22	29	25.5	
	Dec – 22	18	27	18	27	22.5	
	Jan – 23	36	23	23	36	29.5	
	Feb – 23	31	38	31	38	34.5	
	Mar – 23	37	22	22	37	29.5	
		SO <sub>2</sub>					
	Oct – 22	9	17	9	17	13.0	120 µg/m <sup>3</sup>
	Nov - 22	11	21	11	21	16.0	
	Dec – 22	10	14	10	14	12.0	
	Jan – 23	8	15	8	15	11.5	
	Feb – 23	14	19	14	19	16.5	
	Mar – 23	8	21	8	21	14.5	

**Annexure-IVB**

Location	Month	1	2	Min.	Max.	Avg.	Limit (24 Hrs.)
		SPM					
Location – 2 (500 m from Drilling Area)	Oct – 22	219	200	200	219	209.5	500 µg/m <sup>3</sup>
	Nov - 22	236	265	236	265	250.5	
	Dec – 22	266	250	250	266	258.0	
	Jan – 23	286	227	227	286	256.5	
	Feb – 23	279	244	244	279	261.5	
	Mar – 23	281	211	211	281	246.0	
		RSPM					
	Oct – 22	98	238	98	238	168.0	250 µg/m <sup>3</sup>
	Nov - 22	112	131	112	131	121.5	
	Dec – 22	154	126	126	154	140.0	
	Jan – 23	238	241	238	241	239.5	
	Feb – 23	227	200	200	227	213.5	
	Mar – 23	148	174	148	174	161.0	
		NO <sub>2</sub>					
	Oct – 22	22	26	22	26	24.0	120 µg/m <sup>3</sup>
	Nov - 22	28	21	21	28	24.5	
	Dec – 22	27	19	19	27	23.0	
	Jan – 23	38	19	19	38	28.5	
	Feb – 23	23	32	23	32	27.5	
	Mar – 23	18	22	18	22	20.0	
		SO <sub>2</sub>					
	Oct – 22	15	11	11	15	13.0	120 µg/m <sup>3</sup>
	Nov - 22	14	16	14	16	15	
	Dec – 22	11	9	9	11	10	
	Jan – 23	10	12	10	12	11.0	
	Feb – 23	16	10	10	16	13.0	
	Mar – 23	19	17	17	19	18.0	

**Annexure-IVB**

Location	Month	1	2	Min.	Max.	Avg.	Limit (24 Hrs.)
		SPM					
Location – 3 (500 m from OB Dump(Near Switch yard))	Oct – 22	250	248	248	250	249.0	500 µg/m <sup>3</sup>
	Nov - 22	211	243	211	243	227.0	
	Dec – 22	262	254	254	262	258.0	
	Jan – 23	236	269	236	269	252.5	
	Feb – 23	286	169	169	286	227.5	
	Mar – 23	191	296	191	296	243.5	
	Month	RSPM					
	Oct – 22	121	132	121	132	126.5	250 µg/m <sup>3</sup>
	Nov - 22	134	100	100	134	117.0	
	Dec – 22	149	115	115	149	132.0	
	Jan – 23	223	168	168	223	195.5	
	Feb – 23	129	165	129	165	147.0	
	Mar – 23	152	180	152	180	166.0	
	Month	NO <sub>2</sub>					
	Oct – 22	19	24	19	24	21.5	120 µg/m <sup>3</sup>
	Nov - 22	32	27	27	32	29.5	
	Dec – 22	23	26	23	26	24.5	
	Jan – 23	36	19	19	36	27.5	
	Feb – 23	25	28	25	28	26.5	
	Mar – 23	32	25	25	32	28.5	
	Month	SO <sub>2</sub>					
	Oct – 22	13	9	9	13	11.0	120 µg/m <sup>3</sup>
	Nov - 22	8	12	8	12	10.0	
	Dec – 22	14	9	9	14	11.5	
	Jan – 23	9	14	9	14	11.5	
	Feb – 23	11	17	11	17	14.0	
	Mar – 23	12	21	12	21	16.5	



**Annexure-IVB**

	Month	1	2	Min.	Max.	Avg.	Limit (24 Hrs.)
		SPM					
Location – 4 (500 m Coal Unloading Point)	Oct – 22	188	211	188	211	199.5	500 µg/m <sup>3</sup>
	Nov - 22	216	175	175	216	195.5	
	Dec – 22	147	255	147	255	201.0	
	Jan – 23	236	325	236	325	280.5	
	Feb – 23	235	316	235	316	275.5	
	Mar – 23	269	291	269	291	280.0	
	Month	RSPM					
	Oct – 22	153	236	153	236	194.5	250 µg/m <sup>3</sup>
	Nov - 22	225	198	198	225	211.5	
	Dec – 22	211	191	191	211	201.0	
	Jan – 23	153	236	153	236	194.5	
	Feb – 23	216	139	139	216	177.5	
	Mar – 23	189	232	189	232	210.5	
	Month	NO <sub>2</sub>					
	Oct – 22	19	22	19	22	20.5	120 µg/m <sup>3</sup>
	Nov - 22	27	19	19	27	23.0	
	Dec – 22	22	29	22	29	25.5	
	Jan – 23	20	36	20	36	28.0	
	Feb – 23	32	18	18	32	25.0	
	Mar – 23	19	27	19	27	23.0	
	Month	SO <sub>2</sub>					
	Oct – 22	11	14	11	14	12.5	120 µg/m <sup>3</sup>
	Nov - 22	9	13	9	13	11.0	
	Dec – 22	14	12	12	14	13.0	
	Jan – 23	17	13	13	17	15.0	
	Feb – 23	19	10	10	19	14.5	
	Mar – 23	13	20	13	20	16.5	

**Note:** Limit: Industrial Zone -(G.S.R. 742(E), dated 25.9.2000)

Recognized by Ministry of Environment Forest and Climate Change under EP act 1996

Annexure-IVC

Name & Address Of The Customer		Report No.	UES/TR/22-23/05281	
<b>To,</b> <b>M/S JINDAL POWER LIMITED,</b> <b>GARE PALMA IV/1 COAL MINE,</b> <b>Village: Dongamahua</b> <b>Tehsil: TAMNAR, DISTRICT: RAIGARH,</b> <b>(C.G.) 496107</b>		Lab Ref No.	UES/22-23/AAQM/011965-011968	
		Date of Sampling	24/11/2022	
		Date of Receipt	25/11/2022	
		Date of Report	29/11/2022	
		Date of Analysis	Start: 25/11/2022	End: 29/11/2022
SAMPLE DETAILS				
Monitoring For	Ambient Air Quality Monitoring			
Sampling Location	1. Tapranga Village			
	2. Dhaurabhata			
	3. Janjgir Village			
	4. Dongamauha Main Gate			
Duration Of Sampling	As per CPCB norms			
Sample Collected By	Laboratory Chemist			
Sampling Procedure	As Per Method Reference			
Sample Quantity/Packing	Filter Paper (PM <sub>10</sub> ): 1X1 No., Filter Paper (PM <sub>2.5</sub> ): 1X1 No. SO <sub>2</sub> : 30mlX1 No. PVC Bottle, NO <sub>2</sub> : 30mlX1 NO. PVC Bottle, Rubber Bladder: 1X1 No.			

### TEST REPORT

PARAMETER	UNIT	METHOD REFERENCE	NAAQM STANDARD	RESULT			
				Tapranga Village	Dhaura-bhata	Janjgir Village	Donga-mauha Main Gate
Particulate Matter size less than 10 microns (PM <sub>10</sub> )	µg/m <sup>3</sup>	IS 5182 (Part 23): 2006 & CPCB Guidelines Vol.-I	100	53.4	54.8	46.1	58.2
Particulate Matter size less than 2.5 microns (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	CPCB Guidelines Vol.-I.	60	28.7	29.2	22.3	29.9
Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80	14.6	13.8	10.1	13.4
Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	80	17.2	16.4	14.2	16.7
Carbon Monoxide (CO) *	mg/m <sup>3</sup>	IS 5182 (Part 10): 1999, RA 2003	4.0	0.59	0.56	0.54	0.49
Lead (Pb)	µg/m <sup>3</sup>	CPCB Guidelines Vol-I and AAS Method	1.0	N.D.	N.D.	N.D.	N.D.
Nickel (Ni)	ng/m <sup>3</sup>	CPCB Guidelines Vol-I and AAS Method	20	N.D.	N.D.	N.D.	N.D.
Arsenic (As)	ng/m <sup>3</sup>	CPCB Guidelines Vol-I and AAS Method	6.0	N.D.	N.D.	N.D.	N.D.
Ozone (O <sub>3</sub> ) *	µg/m <sup>3</sup>	CPCB Guidelines Vol-I	180	22.4	23.2	22.6	24.2
Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	CPCB Guidelines Vol-I	400	30.2	24.8	26.4	26.3
Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	IS 5182 (Part 11): 2006	5.0	N.D.	N.D.	N.D.	N.D.
Benzo (a) Pyrene	ng/m <sup>3</sup>	IS 5182 (Part 12): 2014	1.0	N.D.	N.D.	N.D.	N.D.

REMARKS: \* These Results are on the basis of 1 hour sampling, N.D.: Not Detected

#### Terms & conditions

- The report for publication, arbitration or as legal dispute is forbidden.
- Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer.
- This is for information as the party has asked for above test(s) only.

 <b>REVIEWED BY</b>		<b>For ULTIMATE ENVIROLYTICAL SOLUTIONS</b>  <b>AUTHORIZED SIGNATORY</b>
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-----End of the test report-----





HDD-272, Phase III - Near JP Chowk  
Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099  
Ph : 0771 - 4027777 | Email : ultimatenviro@gmail.com

Recognized by Ministry of Environment Forest and Climate Change under EP act 1996

Name & Address Of The Customer		Report No.	UES/TR/22-23/07990	
<b>To,</b> <b>M/S JINDAL POWER LIMITED,</b> <b>GARE PALMA IV/1 COAL MINE,</b> <b>Village: Dongamahua</b> <b>Tehsil: TAMNAR, DISTRICT: RAIGARH,</b> <b>(C.G.) 496107</b>		Lab Ref No.	UES/22-23/AAQM/015941-015944	
		Date of Sampling	24/01/2023	
		Date of Receipt	27/01/2023	
		Date of Report	30/01/2023	
		Date of Analysis	Start: 27/01/2023	End: 30/01/2023
<b>SAMPLE DETAILS</b>				
Monitoring For	Ambient Air Quality Monitoring			
Sampling Location	1. Tapranga Village			
	2. Dhaurabhata			
	3. Janjgir Village			
	4. Dongamauha Main Gate			
Duration Of Sampling	As per CPCB norms			
Sample Collected By	Laboratory Chemist			
Sampling Procedure	As Per Method Reference			
Sample Quantity/Packing	Filter Paper (PM <sub>10</sub> ): 1X1 No., Filter Paper (PM <sub>2.5</sub> ): 1X1 No. SO <sub>2</sub> : 30mlX1 No. PVC Bottle, NO <sub>2</sub> : 30mlX1 NO. PVC Bottle, Rubber Bladder: 1X1 No.			

TEST REPORT							
PARAMETER	UNIT	METHOD REFERENCE	NAAQM STANDARD	RESULT			
				Tapranga Village	Dhaura-bhata	Janjgir Village	Donga-mauha Main Gate
Particulate Matter size less than 10 microns (PM <sub>10</sub> )	µg/m <sup>3</sup>	IS 5182 (Part 23): 2006 & CPCB Guidelines Vol.-I	100	53.6	47.2	49.3	56.2
Particulate Matter size less than 2.5 microns (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	CPCB Guidelines Vol.-I.	60	26.9	27.4	25.6	29.1
Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	IS 5182 (Part 2): 2001, RA 2006 & CPCB Guidelines Vol.-I	80	13.6	13.8	12.4	13.2
Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	IS 5182 (Part 6): 2006 & CPCB Guidelines Vol.-I	80	16.4	16.2	15.9	16.8
Carbon Monoxide (CO) *	mg/m <sup>3</sup>	IS 5182 (Part 10): 1999, RA 2003	4.0	0.52	0.54	0.50	0.51
Lead (Pb)	µg/m <sup>3</sup>	CPCB Guidelines Vol-I and AAS Method	1.0	N.D.	N.D.	N.D.	N.D.
Nickel (Ni)	ng/m <sup>3</sup>	CPCB Guidelines Vol-I and AAS Method	20	N.D.	N.D.	N.D.	N.D.
Arsenic (As)	ng/m <sup>3</sup>	CPCB Guidelines Vol-I and AAS Method	6.0	N.D.	N.D.	N.D.	N.D.
Ozone (O <sub>3</sub> ) *	µg/m <sup>3</sup>	CPCB Guidelines Vol-I	180	14.6	14.2	13.8	13.0
Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	CPCB Guidelines Vol-I	400	24.4	23.8	26.2	24.6
Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	IS 5182 (Part 11): 2006	5.0	N.D.	N.D.	N.D.	N.D.
Benzo (a) Pyrene	ng/m <sup>3</sup>	IS 5182 (Part 12): 2014	1.0	N.D.	N.D.	N.D.	N.D.

**REMARKS:** \* These Results are on the basis of 1 hour sampling, N.D.: Not Detected

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 30/01/23 <b>REVIEWED BY</b>	 <b>For ULTIMATE ENVIROLYTICAL SOLUTIONS</b>  <b>AUTHORIZED SIGNATORY</b>
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-----End of the test report-----



Annexure-V		
Environmental Management Department, GP IV/1 Coal Mine-Jindal Power Limited -Tamnar		
Environmental Expenditure- April-22 to March-23 (FY-2022-23 ) Gare -IV/1 Mines - JPL Tamnar		
S. No.	Details	Expenditure -FY-22-23 (In Lakh)
1	Installation and Commissioning of CAAQMS Station	₹ 66,67,000.00
2	Tree Plantation	₹ 1,03,07,300.00
3	Roof top Rain water harvesting system	₹ 5,38,790.34
4	Thrid Party Environmental sampling and testing	₹ 1,82,469.00
5	Scientific Study and Environmental study on flyash dumping in mine voids	₹ 33,04,000.00
6	Scientific studies of Slope stability	₹ 24,00,000.00
7	STP Operation and Maintenance	₹ 19,06,132.00
8	Preparation and cleaning of garland drains and settling ponds	₹ 79,90,449.00
9	Calibration of Environmental Monitoring Instruments	₹ 39,600.00
10	Truck mounted Mist Cannon with pressurised pump	₹ 38,35,000.00
11	Installation of water flow meters	₹ 5,76,000.00
12	Wind sheald for Dust protection	₹ 12,003.00
13	Automatic Weather Station	₹ 4,24,800.00
14	Establishment of Piezometers at GP IV/1	₹ 6,10,650.00
15	Construction of black top road	₹ 27,70,000.00
Total Expenditure		₹ 4,15,64,193.34

## Photographs

TOP SOIL STORAGE YARD



USAGE OF SOIL AS TOP COVER IN  
RECLAIMED MINE AREA



TOP SOIL COVERED OVER MINE BACKFILL SITE WITH FLYASH AND OB

TRUCKS COVERED WITH TARPAULIN  
SHEET



FIXED WATER SPRINKLING



**WET DRILLING**



**BLACK TOPPED ROADS FOR COAL TRANSPORT OPERATIONS**



**CLOSED CIRCUIT COAL CONVEYOR SYSTEM**



**DUST EXTRACTION SYSTEM AND CLADDING IN CHP (COAL CRUSHER & SCREEN BUILDING)**



**DE SYSTEM**

**CLADDING**

**WATER SPRINKLING ON HAUL ROADS**

**CANNON MIST GENERATOR FOR DUST SUPPRESSION**





**TRUCK WHEEL WASHING SYSTEM**



**WHEEL WASHING WATER TREATMENT AND REUSE**



**PLANTATION  
BOUNDARY  
ACTIVITIES AND**



**ALONG THE MINE  
BETWEEN MINE  
HABITATION**



**GREENBELT ON ROAD SIDES**



**GREENBELT IN CHP BOUNDARY**



**GREENBELT ALONG THE**



**WASHERY BOUNDARY**



**CONTINUOUS AMBIENT AIR QUALITY  
MONITORING CUM WEATHER STATION**



**MANUAL AAQ MONITORING STATIONS**



**MONITORING DATA DIGITAL**



**DISPLAY BOARD AT MAIN GATE**



**PEIZO METER**



**WELLS**

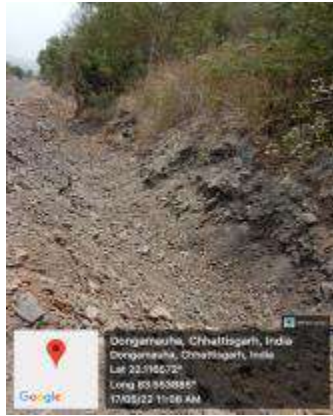


**DUG WELL**





### GARLAND DRAINS



### SEWAGE TREATMENT PLANT



### SILT PONDS





### SETTLING PONDS



### WATER TREATMENT PLANT



### ENVIRONMENT LABORATORY



### NOISE MEASUREMENT



### VIBRATION MEASUREMENT



### HAZARDOUS WASTE STORAGE



### NON-HAZARDOUS WASTE STORAGE



**PLANTATATION AND STABILIZATION OVER DUMP SLOPE**







Plantation on dump slope



Plantation on dump slope







**IN HOUSE NURSERY**





COAL MINES COLONY



WASHERY



CELEBRATION OF WORLD ENVIRONMENT DAY 2022



## AWARENESS PROGRAMS

