



Ref: APL/REGL/EMD/MoEFCC/EC/289/05/24  
Date: 22.05.2024

**To,**  
**Additional Principal Chief Conservator of Forest**  
**Ministry of Environment, Forests & Climate Change,**  
**Integrated Regional Office, Aranya Bhawan, North Block**  
**Sector 19, Naya Raipur, Atal Nagar,**  
**Chhattisgarh 492 002**

**Sub: Submission of Six Monthly Compliance status of Environment Clearance (EC) for 1x600 MW Raigarh Thermal Power Plant at village Chote Bhandar, Bade Bhandar, Sarvani & Amali Bhona in Tehsil Pussore of Raigarh District, Chhattisgarh.**

**Ref:** Environment clearance vide letter no. **J-13012/57/2008-IA.II (T) dated 20.05.2011** and its subsequent amendment vide letter dated 16.04.2015 and 26.11.2019. EC Transfer from Raigarh Energy Generation Ltd. to Adani Power Ltd. dated 24.04.2023.

Dear Sir,

With reference to the above, please find enclosed herewith Six-Monthly Environment Clearance (EC) compliance status report along with environmental monitoring reports as Ambient Air, Water Quality, Noise level, Soil quality, CAAQM data, Met. data, Greenbelt development, Fly ash data & CSR progress report etc. for the period of **October'2023 to March'2024** in soft copy (e-mail).

This is for your kind information and record please.

Thanking You,  
Yours faithfully,  
**for Adani Power Limited, Raigarh**

**(Santosh Kumar Singh)**  
**Head – AESG**

**Encl.:** As above

**CC:**

**Member Secretary,**  
**Central Pollution Control Board,**  
Parivesh Bhavan, East Arjun Nagar,  
New Delhi – 110 032

**Regional Officer**

**Chhattisgarh Environment Conservation Board,**  
TV Tower road, Raigarh – 496 001, Chhattisgarh

**Member Secretary,**  
**Chhattisgarh Environment Conservation Board,**  
Prayavas Bhavan, North Block, Sector-19,  
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# SIX MONTHLY COMPLIANCE REPORT OF ENVIRONMENTAL CLEARANCE (EC)

For

**1x600 MW**

**Raigarh Thermal Power Plant**

At

**BADE BHANDAR VILLAGE, PUSSORE TEHSIL  
RAIGARH DISTRICT CHHATTISGARH**

*Submitted to:*

**Integrated Regional Office, Raipur  
Ministry of Environment, Forest and Climate Change  
Central Pollution Control Board, New Delhi &  
Chhattisgarh Environment Conservation Board, Raipur**



*Submitted By:*

**Environment Management Department**

**Adani Power Limited**

**Bade & Chhote Bhandar Village,  
Pussore Tehsil Raigarh District,  
Chhattisgarh**

**Period: October'2023 – March'2024**

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**Adani Power Limited, Raigarh**  
**600 (1x600) MW Coal Based Thermal Power Plant**

## **Introduction**

**Adani Power Limited, Raigarh** (formerly known Raigarh Energy Generation Limited) has set up a Coal based thermal power plant of capacity 1x600 MW at village Chote Bhandar, Bade Bhandar, Sarvani & Amali Bhona, in Tehsil Pussore of Raigarh District.

Environmental Clearance has been granted by Hon'ble MoEFCC vide letter No. J-13012/57/2008-IA.II (T), dated 20.05.2010, subsequent amendment dated 16.04.2015 & transferred EC from REGL to APL, dated 24.04.2023.

Raigarh TPP has proposed expansion of existing unit of 600MW (1x600MW) Coal based the Thermal Power Plant by adding 1600 (2x800) MW deploying the state-of-the-art technology based on Ultra Super Critical Technology within the plant land area. **The Terms of Reference (ToR) for proposed expansion is already granted by MoEFCC, New Delhi vide File No: J-13012/57/2008.IA.II (T) dated: 23.09.2023.**

Raigarh TPP has engaged NABL Accredited environment consultant M/s Vibrant Techno Lab Pvt. Ltd., Jaipur for sampling, monitoring & analysis of environmental parameters as per the statutory guidelines.

The company has adopted four peripheral villages and executing most of the CSR works which is supported by the Adani Foundation in those villages in the field of their livelihood, infrastructure development, cleanliness, community health and education.



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**Compliance Status on Environment Clearance**

Vide letter no. F. No. J 13012/57/2008-IA. II (T), dated: 20.05.2010 and amendment dated: 16.04.2015 and extension dated 26.11.2019 & 17 & 30.07.2020 & EC transferred from Raigarh Energy Generation Limited to Adani Power Limited dated: 24.04.2023.

Sr. No.	EC Conditions	Compliance Status
<b>A.</b>	<b>Specific Conditions</b>	
i	Detailed hydro-geological study shall be conducted and submitted within six months from an institute/organization of repute to assess impact of surface water regime. Specific mitigation measures shall be spelt out and action plan for implementation of the same shall be provided. It shall be ensured that the area drainage is not disturbed due to the proposed power plant.	Complied. The Hydro-geological study has been carried out by reputed institute "M/S Water Solution Pvt. Ltd." report attached as <b>Annexure - I</b> .  The entire plant area is almost flat. There are no streams within the plant premises. Regular water quality monitoring being carried out by an agency accredited by NABL & Recognized by MoEFCC.
ii	Hydro-geological study of the area shall be also reviewed annually, and results submitted to the Ministry and concerned agency in the State Govt. In case adverse impact on ground water quantity and quality is observed at any stage, immediate mitigating steps to contain any adverse impact on groundwater shall be undertaken.	Complied. The ground water quality and ground water level monitoring being carried out on regular basis monitoring report is enclosed as <b>Annexure - II</b> .
iii	Source of water for meeting the requirement during lean season shall be specified and submitted to the Regional Office of the Ministry within three months.	Being complied. 15 MCM Water has been allotted from Mahanadi River by Water Resources Dept. This quantity is adequate to meet the plant's requirement, including the lean season.
iv	No ground water shall be extracted for use in operation of the power plant even in lean season.	Being Complied. No ground water is being extracted for use in operation of Raigarh TPP. Water has been allotted from Mahanadi River by Water Resources Dept.
v	No water bodies including natural drainage system in the area shall be disturbed due to activities associated with the setting up/operation of the power plant.	Noted & Complied. There is no water body within the power plant premises.
vi	COC of 5.0 shall be adopted.	Complied COC of 5.0 is being maintained during plant operation.

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vii	Local employable youth shall be trained in skills relevant to the project for eventual employment in the project itself. The action taken report and details thereof to this effect shall be submitted to the Regional Office of the Ministry and the State Govt. Dept. concerned from time to time.	Complied. About 70 Number of local employments has been created which is 36% of total on Roll employees. For contractual side we deployed approx. 340 number which is 43% of total contract manpower.
viii	Additional soil for levelling of the proposed site shall be generated within the sites (to the extent possible) so that natural drainage system of the area is protected and improved.	There are no natural streams within the plant premises.
ix	Provision for installation of FGD shall be provided for future use.	Complied. Space for FGD is provided in plant layout. However, as per MoEFCC Notification dated 05 <sup>th</sup> September 2022 APL Raigarh TPP is falling under Category "C" Non- retiring TPPs and the timelines for compliance of SO <sub>2</sub> emission is up to December 2026. Accordingly, the work is under progress & shall be completed within the scheduled time.
x	A stack 275 m with flue gas velocity of 25 m/s shall be installed.	Complied. One flue stack 275 meters has been provided and online continuous emission monitoring system (CEMS) installed for PM, SO <sub>x</sub> & NO <sub>x</sub> . Exit velocity is more than 25 m/sec & records are being maintained.
xi	High Efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission does not exceed 50 mg/Nm <sup>3</sup> .	Complied A High Efficiency Electrostatic Precipitators have been provided (ESPs) to meet particulate emission less than 50 mg/Nm <sup>3</sup> . Monitoring report enclosed as <b>Annexure – II.</b>
xii	Adequate dust extraction system such as cyclones/ bag filters and water spray system in dusty areas such as in coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided.	Complied Adequate dust suppression system like water sprinkling system, dust extraction system, dry fog dust suppression system has been installed throughout coal handling chain and bag filters in LHS, RHS bunkers and crusher house, The high concentrated slurry disposal system and closed transferring pipelines have installed for ash disposal in Dyke.
xiii	Utilization of 100% Fly Ash generated shall be made from 4 <sup>th</sup> year of operation of the plant. Status of implementation shall be reported to the Regional Office of the Ministry from time to time.	Being Complied Fly ash utilization for the period of October'2023 to March'2024 is attached as <b>Annexure – V.</b>

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xiv	Fly ash shall be collected in dry form and storage facility (silos) shall be provided. Unutilized fly ash shall be disposed-off in the ash pond in the form of slurry form. Mercury and other heavy metals (As, Hg, Cr, Pb etc.) will be monitored in the bottom ash as also in the effluents emanating from the existing ash pond. No ash shall be disposed off in low lying area.	Complied. We have established two nos. of silo (Intermediate and Main) with capacity of 1000 MT & 2500 MT respectively for utilization of dry fly ash. High concentration slurry disposal system is provided for disposal of unutilized ash in ash pond. Ash water circulation system is provided. Monitoring of Mercury and other heavy metals (As, Cr, Pb etc.) is being carried out regularly and report is enclosed in <b>Annexure - II.</b>
xv	Ash pond shall be lined with HDP/LDP lining or any other suitable impermeable media such that no leachate takes place at any point of time. Adequate safety measures shall also be implemented to protect the ash dyke from getting breached.	Complied Well-designed Ash Pond with LDPE lining has been established as per guidelines of MoEF/CEA/CPCB. Safety measure such as bund with toe wall and lining of side slope done to prevent any leachate.
xvi	For disposal of Bottom Ash in abandoned mines (if proposed to be undertaken) it shall be ensured that the bottom and sides of the mined-out areas are adequately lined with clay before Bottom Ash is filled up. The project proponent shall inform the State Pollution Control Board well in advance before undertaking the activity.	Compliance assured, after getting approval from concerned authority.
xvii	Green Belt consisting of 3 tiers of plantations of native species around plant and at least 100 m width shall be raised. Wherever 100 m width is not feasible a 50 m width shall be raised, and adequate justification shall be submitted to the Ministry. Tree density shall not less than 2500 per ha with survival rate not less than 75 %.	Complied Green belt / plantation is developed in more than 33% of total plant area. Approximate 3,10,000 trees have been planted. Local plant species being preferred for the plantation as fast growing with thick canopy cover adequate height with longer duration of foliage, Perennial, and evergreen along with fruit bearing plants in adequate have also been planted. Greenbelt development plan has been approved by DFO. Greenbelt development status is enclosed as <b>Annexure - IV.</b>
xviii	Two nearest village shall be adopted and basic amenities like development of roads, drinking water supply, primary health	Complied Four nearby villages are adopted for development of basic amenities such as

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	centre, primary school etc. shall be developed in co-ordination with the district administration.	Construction of approach road, community hall, school room, safe drinking water facilities have been completed in all the adopted villages. Pond deepening work has been undertaken in village Bade bhandar and Sarwani. Tailoring training has been started from September 2022, total trained about 110 during the year. The activities carried earlier are being monitored and sustained by the beneficiaries.
xix	The project proponent shall also adequately contribute in the development of the neighbouring villages. Special package with implementation schedule for providing fluoride free potable drinking water supply in the nearby villages and schools shall be undertaken in a time bound manner.	Development activities are being carried out in the neighbouring villages. Water filter cum cooler has been provided to Govt H S School, Bade Bhandar village. CSR report enclosed as <b>Annexure-III</b>
xx	A good action plan for R&R (if applicable) with package for the project affected persons be submitted and implemented as per prevalent R&R policy within three months from the date of issue of this letter.	Complied The project is out of Abadi/population area. The R&R plan has already been prepared, implemented, under progress and submitted to MoEFCC & CECB, Raipur.
xxi	An amount of Rs 6.0 Crores shall be specially earmarked for development activities for tribals of the nearby villages as committed by the project proponent vide its letter dated 23.03.2010. Specific schemes for upliftment of tribal families mentioning sustainable livelihood schemes shall be submitted to the Ministry within three months with time bound implementation and in-built monitoring programme. The above amount shall be over and above the fund earmarked for CSR activities.	Being Complied. CSR activities are under implementation. CSR report enclosed as <b>Annexure-III</b> .
xxii	Further an amount of Rs 15.0 Crores shall be earmarked as one-time capital cost for CSR programme as committed by the project proponent vide its letter dated 23.03.2010. Subsequently a recurring expenditure of Rs 3.0 Crores per annum shall be earmarked as recurring expenditure for CSR activities. Details of the activities to be undertaken shall be submitted within one month along with road map for implementation.	Complied. The CSR activities are undertaken through Adani Foundation: 1. Infrastructure development in the villages, 2. Livelihood Enhancement and training, 3. Education, 4. Community Health and Promotion of Sports and Culture. CSR report enclosed as <b>Annexure-III</b>

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xxiii	While identifying CSR programme the company shall conduct need-based assessment for the nearby villages to study economic measures with action plan which can help in upliftment of poor section of society. Income generating projects consistent with the traditional skills of the people besides development of fodder farm, fruit bearing orchards, vocational training etc. can form a part of such programme. Company shall provide separate budget for community development activities and income generating programmes. This will be in addition to vocational training for individuals imparted to take up self-employment and jobs.	Various income generating activities were implemented and are under execution. Self Employed Tailor training conducted where 110 girls and women are trained. The company is industry partner for ITI Sariya, where Fitter, Electrician and COPA trade course is under operation. CSR report enclosed as <b>Annexure-III</b>
xxiv	It shall be ensured that in-built monitoring mechanism for the schemes identified is in place and annual social audit shall be got done from the nearest government institute of repute in the region. The project proponent shall also submit the status of implementation of the scheme from time to time.	Being Complied.  Social audit has been carried out by reputed institute IISWBM, Kolkata and Audit report already submitted with previous compliance report.
xxv	Harnessing solar power within the premises of the plant particularly at available roof tops shall be undertaken and status of implementation shall be submitted periodically to the Regional Office of the Ministry.	Complied. All streetlights have been replaced with Solar & solar geysers are installed in roof top of residential complexes within plant premises.
xxvi	A long-term study on radio activity and heavy metals contents on coal to be used shall be carried out through a reputed institute. Thereafter mechanism for an in- built continuous monitoring for radio activity and heavy metals in coal and fly ash (including bottom ash) shall be put in place.	Complied. Radioactive analysis carried out by Board of Radiation and Isotope Technology, Department of Atomic Energy, Govt. of India report enclosed in <b>Annexure – VII</b> .
xxvii	Mercury emissions shall also be monitored. on periodic basis.	Complied Analysis report for Mercury emission monitoring stack is enclosed in <b>Annexure – II</b> .

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xxix	Fly ash shall not be used for agricultural purpose. No mine void filling will be undertaken as an option for ash utilization without adequate lining of mine with suitable media such that no leachate shall take place at any point of time. In case, the option of mine void filling is to be adopted, proper detailed study of soil characteristics of the mine area shall be undertaken from an institute of repute and adequate clay lining shall be ascertained by the State Pollution Control Board and implementation done in close co- ordination with the State Pollution Control Board.	Complied & being followed.
xxx	Green Belt shall also be developed around the ash pond over and above the Green Belt around the plant boundary.	Being Complied Green belt / plantation is developed in more than 33% of total plant area. About 3,10,000 saplings have been planted. Local plant species being preferred for the plantation as fast growing with thick canopy cover adequate height with longer duration of foliage, Perennial and evergreen along with fruit bearing plants in adequate have also been planted. Greenbelt development plan has been approved by DFO. Greenbelt development status is enclosed as <b>Annexure - IV</b> .
xxxii	An Environmental Cell comprising of at least one expert in environmental science/ engineering, ecology, occupational health and social science, shall be created preferably at the project site itself and shall be headed by an officer of appropriate superiority and qualification. It shall be ensured that the Head of the Cell shall directly report to the Head of the Plant who would be accountable for implementation of environmental regulations and social. impact improvement/ mitigation measures.	Complied. We have already established an Environmental Management Cell & Environment Head has direct reported to Senior Management.
xxxiii	The project proponent shall formulate a well laid Corporate Environmental Policy and identify and designate responsible officers at all levels of its hierarchy for ensuring adherence to the policy and compliance with the conditions stipulated in this clearance letter and other applicable environmental	Complied

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	laws and regulations.	
<b>B.</b>	<b>GENERAL CONDITIONS</b>	
i	The treated effluents conforming to the prescribed standards only shall be re-circulated and reused within the plant. There shall be no discharge outside the plant boundary except during monsoon. Arrangements shall be made that effluents and storm water do not get mixed.	Complied ETP has been established to treat effluents and treated water is being reused within the premises. The concept of "Zero Liquid Discharge Condition" is implemented. Separate drainage network is established for storm water. Effluent water quality report is enclosed in <b>Annexure – II.</b>
ii	A sewage treatment plant shall be provided (as applicable) and the treated sewage shall be used for raising greenbelt/plantation.	Complied Sewage Treatment Plants have been installed and the treated effluent is being used for plantation/greenbelt. Analysis report of STP is enclosed in <b>Annexure – II.</b>
iii	Rainwater harvesting should be adopted. Central Groundwater Authority/ Board shall be consulted for finalization of appropriate rainwater harvesting technology within a period of three months from the date of clearance and details shall be furnished.	Complied A rainwater harvesting & recharging system has already been constructed. 04 nos. of rainwater harvesting ponds have been constructed within premises.
iv	Adequate safety measures shall be provided in the plant area to check/minimize spontaneous fires in coal yard, especially during summer season. Copy of these measures with full details along with location plant layout shall be submitted to the Ministry as well as to the Regional Office of the Ministry.	Complied Adequate safety personnel are available in the plant site to take preventive control measures. Fire hydrant system provided for prevention of spontaneous fires in coal yard, especially during summer season. An Emergency Preparedness Plan is submitted at respective authorities.
v	Storage facilities for auxiliary liquid fuel such as LDO and/ HFO/LSHS shall be made in the plant area in consultation with Department of Explosives, Nagpur. Sulphur content in the liquid fuel will not exceed 0.5%. Disaster Management Plan shall be prepared to meet any eventuality in case of an accident taking place due to storage of oil.	Complied The fuel such as LDO and HFO are properly stored in minimum risk area & in consultation with Department of Explosives, Nagpur after getting NOC for the same. Disaster management plan (DMP) has been prepared to handle the any eventuality in case of an accident taking place due to storage of oil.

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vi	Regular monitoring of ground water level shall be carried out by establishing a network of existing wells and constructing new piezometers. Monitoring around the ash pond area shall be carried out particularly for heavy metals (Hg, Cr, As, Pb) and records maintained and submitted to the Regional Office of this Ministry. The data so obtained should be compared with the baseline data so as to ensure that the ground water quality is not adversely affected due to the project.	Complied 05 Nos Piezometric wells are established within the plant premises. 02 Nos. upstream, 02 Nos are in Downstream & 01 is on cross center
vii	Monitoring surface water quantity and quality shall also be regularly conducted, and records maintained. The monitored data shall be submitted to the Ministry regularly. Further, monitoring points shall be located between the plant and drainage in the direction of flow of ground water and records maintained. Monitoring for heavy metals in ground water shall be undertaken.	Complied The surface water samples being collected, and analysis report is enclosed as <b>Annexure II</b> .
viii	First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.	Complied First aid and sanitation for labours was provided during the construction.
ix	Noise levels emanating from turbines shall be so controlled such that the noise in the work zone shall be limited to 75 dBA. For people working in the high noise area, requisite personal protective equipment like earplugs/earmuffs etc. shall be provided. Workers engaged in noisy areas such as turbine area, air compressors etc shall be periodically examined to maintain audiometric record and for treatment for any hearing loss including shifting to non-noisy/less noisy areas.	Complied Necessary action has been taken to maintain noise levels in work zone area within 75 dB (A) from source during the plant operation. The personal protective equipment's (PPE) are provided to workers & employees working in noisy areas. Noise level monitoring is carried out regularly. Periodic audiometric check-up is being carried out.
x	Regular monitoring of ground level concentration of SO <sub>2</sub> , NO <sub>x</sub> , PM <sub>2.5</sub> & PM <sub>10</sub> and Hg shall be carried out in the impact zone and records maintained. If at any stage these levels are found to exceed the prescribed limits, necessary control measures shall be provided immediately. The location of the monitoring stations and frequency of monitoring shall be decided in consultation with SPCB. Periodic reports shall be submitted to the Regional Office of this Ministry. The data shall also be put on	Complied Regular monitoring of SO <sub>2</sub> , NO <sub>x</sub> , PM <sub>2.5</sub> & PM <sub>10</sub> CO and Hg is being carried and records are being maintained during construction phase as well as operational phase. Environmental monitoring report is enclosed as <b>Annexure – II</b> . Three online Continuous Ambient Air Quality Monitoring Station (CAAQM) System and one mobile Van for Ambient Air Quality Monitoring have been established within plant premise in consultation with Regional Office, Chhattisgarh Environment Conservation Board, Raigarh.



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	the website of the company.	
xi	Provision shall be made for the housing of construction labour (as applicable) within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	Complied. All necessary facilities were provided during construction for contractual labours.
xii	The project proponent shall advertise in at least two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned within seven days from the date of this clearance letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the State Pollution Control Board/Committee and may also be seen at Website of the Ministry of Environment and Forests at <a href="http://envfor.nic.in">http://envfor.nic.in</a> .	Complied. Advertised in three newspapers Hindustan Times, Dainik bhaskar & Nai Duniya on 28.02.2010.
xiii	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parisad / Municipal Corporation, urban local Body and the Local NGO, if any, from whom suggestions/ representations, if any, received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.	Complied. Copy of Environment Clearance has been provided to concerned authority. Previous compliance status updated in company website. <a href="http://www.adanipower.com">http://www.adanipower.com</a>
xiv	A separate Environment Management Cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.	Complied. We have already established an Environment Management Cell with well qualified staff for implementation of the stipulated environmental safeguards.

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xv	<p>The proponent shall upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MOEF, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, R S P M (PM<sub>2.5</sub>&amp; PM<sub>10</sub>), SO<sub>2</sub>, NO<sub>x</sub> (ambient levels as well as stack emissions) shall be displayed at a convenient location near the main gate of the company in the public domain.</p>	<p>Complied.  Regular Environmental Monitoring report is being submitted to Regional office, MoEFCC, CPCB and CECB, Chhattisgarh. The environmental parameters display board provided at main gate of the plant.  Previous compliance status was updated in company website.   <a href="http://www.adanipower.com">http://www.adanipower.com</a></p>
xvi	<p>The environment statement for each financial year ending 31<sup>st</sup> March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Offices of the Ministry by e-mail.</p>	<p>Complied  The Environment Statement for the year 2022-23 has been submitted to Chhattisgarh Environment Conservation Board (CECB) vide letter no. APL/Raigarh/ENV/CECB/23-24/40, dated-09.09.2023.  Copy of Environmental statement report is enclosed as <b>Annexure – VI</b>.</p>
xvii	<p>The project proponent shall submit six monthly reports on the status of the Implementation of the stipulated environmental safeguards to the Ministry of Environment and Forests, its Regional Office, Central Pollution Control Board and State Pollution Control Board. The project proponent shall upload the status of compliance of the environment of the environmental clearance conditions on their website and update the same periodically and simultaneously send the same by e-mail to the Regional Office, Ministry of Environment and Forests.</p>	<p>Complied.  Six monthly Environmental Clearance compliance status reports is regularly submitted to MoEFCC, CPCB and CECB. The same is sent by email also.  Last compliance report for the period of April'23 – September'23 had been submitted to your good office via our latter no. Ref: APL/REGL/EMD/ MoEFCC/ 310/11/23 dated- 24.11.2023.</p>

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xviii	Regional Office of the Ministry of Environment & Forests will monitor the implementation of the stipulated conditions. A complete set of documents including Environmental Impact Assessment Report and Environment Management Plan along with the additional information submitted from time to time shall be forwarded to the Regional Office for their use during monitoring. Project proponent will up-load the compliance status in their website and up-date the same from time to time at least six-monthly basis. Criteria pollutants levels including NOx (from stack & ambient air) shall be displayed at the main gate of the power plant.	Complied																														
xix	Separate funds shall be allocated for implementation of environmental protection measures along with item-wise break-up. This cost shall be included as part of the project cost. The funds earmarked for the environment protection measures shall not be diverted for other purposes and year-wise expenditure should be reported to the Ministry.	<p>Being Complied For FY 2023-24 Environmental Protection costs are given below.</p> <table border="1" data-bbox="850 943 1500 1597"> <thead> <tr> <th data-bbox="850 943 922 1077">Sr. No</th> <th data-bbox="922 943 1273 1077">Activities Description</th> <th data-bbox="1273 943 1500 1077">Actual Expenditure FY 2023-24 (In Lakhs)</th> </tr> </thead> <tbody> <tr> <td data-bbox="850 1077 922 1178">1</td> <td data-bbox="922 1077 1273 1178">Environmental Protection O&amp;M, ESP, Stack, CHP, Silo</td> <td data-bbox="1273 1077 1500 1178">139.31</td> </tr> <tr> <td data-bbox="850 1178 922 1249">2</td> <td data-bbox="922 1178 1273 1249">Environmental Monitoring Cost</td> <td data-bbox="1273 1178 1500 1249">6.1</td> </tr> <tr> <td data-bbox="850 1249 922 1285">3</td> <td data-bbox="922 1249 1273 1285">Legal &amp; consent Fee</td> <td data-bbox="1273 1249 1500 1285">38.6</td> </tr> <tr> <td data-bbox="850 1285 922 1321">4</td> <td data-bbox="922 1285 1273 1321">CSR</td> <td data-bbox="1273 1285 1500 1321">169.56</td> </tr> <tr> <td data-bbox="850 1321 922 1393">5</td> <td data-bbox="922 1321 1273 1393">Environmental Lab Setup</td> <td data-bbox="1273 1321 1500 1393">17.6</td> </tr> <tr> <td data-bbox="850 1393 922 1429">6</td> <td data-bbox="922 1393 1273 1429">Fly Ash Management</td> <td data-bbox="1273 1393 1500 1429">1686.8</td> </tr> <tr> <td data-bbox="850 1429 922 1464">7</td> <td data-bbox="922 1429 1273 1464">Greenbelt Development</td> <td data-bbox="1273 1429 1500 1464">105.7</td> </tr> <tr> <td data-bbox="850 1464 922 1565">8</td> <td data-bbox="922 1464 1273 1565">Environmental Awareness Training, WED</td> <td data-bbox="1273 1464 1500 1565">3.7</td> </tr> <tr> <td colspan="2" data-bbox="850 1565 1273 1597" style="text-align: center;"><b>Total</b></td> <td data-bbox="1273 1565 1500 1597"><b>2167.37</b></td> </tr> </tbody> </table>	Sr. No	Activities Description	Actual Expenditure FY 2023-24 (In Lakhs)	1	Environmental Protection O&M, ESP, Stack, CHP, Silo	139.31	2	Environmental Monitoring Cost	6.1	3	Legal & consent Fee	38.6	4	CSR	169.56	5	Environmental Lab Setup	17.6	6	Fly Ash Management	1686.8	7	Greenbelt Development	105.7	8	Environmental Awareness Training, WED	3.7	<b>Total</b>		<b>2167.37</b>
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xx	The project authorities shall inform the Regional Office as well as the Ministry regarding the date of financial closure and final approval of the project by the concerned authorities and the dates of start of land development work and commissioning of plant.	Complied.																														

**Adani Power Limited, Raigarh**  
**600 (1x600) MW Coal Based Thermal Power Plant**

xxi	Full cooperation shall be extended to the Scientists/Officers from the Ministry / Regional Office of the Ministry at Bangalore / CPCB/ SPCB who would be monitoring the compliance of environmental status.	Noted & complied. Full co-operation shall be extended to all concerned authorities.
<b>Conditions of EC Amendment Letter</b>		
i	The coal shall be transported on road through mechanically covered trucks.	Being Complied The vehicles are engaged for coal transporting are mechanically covered and periodic refresher training is also being imparted on traffic for safety and environment rules.
ii	Avenue plantation of 2/3 rows all along the road for transportation of coal shall be carried out by the project proponent at its own expenses in consultation with the State Government Authorities.	Being complied. The joint inspection of coal transportation route has been carried out with by Van Vikas Nigam (Govt. of Chhattisgarh). Agency has given a preliminary proposal for plantation in available avenue of around 10 km out of 50 km. The Proposal is under Scrutiny and finalization for execution.
iii	Periodic maintenance of the roads used for transportation of coal shall be carried out by the project proponent at its own expenses and shall also facilitate the traffic control on the roads in consultation with State Government Authorities.	Noted The proposed coal transportation road has been recently constructed by NHAI, therefore no maintenance is required. Traffic vigilance and controls are provided as and when required by state authorities.

**EC amendment – MoEF&CC notification vide letter number S.O. 1561 (E) dated 21<sup>st</sup> May, 2020**

<b>Sl. No.</b>	<b>Condition of Notification</b>	<b>Compliance Status</b>
1)	Setting up technology solution for emission norms i) Compliance of specified emission norms for Particulate Matter, as per extent notifications and instructions of Central Pollution Control Board, issued from time to time. ii) In case of washeries, middling and rejects to be utilized in FBC (Fluidised Bed Combustion) technology based thermal power plant. Washery to have linkage for middling and rejects in Fluidised Bed Combustion plants.	Noted & being complied. i) Technology solutions are being implemented for mitigating fugitive emissions of Particulate Matter. ii) Washeries, middling and rejects are not applicable for this Thermal Power Plant.

**Adani Power Limited, Raigarh**  
**600 (1x600) MW Coal Based Thermal Power Plant**

<p>2)</p>	<p>Management of Ash Ponds</p> <p>i) The thermal power plants shall comply with conditions, as notified in the Fly Ash notifications issued from time to time, without being entitled to additional capacity of fly ash pond (for existing power generation capacity) on ground of switching from washed coal to unwashed coal.</p> <p>ii) Appropriate Technology solutions shall be applied to optimize water consumption for Ash management.</p> <p>iii) The segregation of ash may be done at the Electro- Static Precipitator stage, if required, based on site specific conditions, to ensure maximum utilization of fly ash.</p> <p>iv) Subject to 2(i) above, the thermal power plants to dispose fly ash in abandoned or working mines (to be facilitated by mine owner) with environmental safeguards.</p>	<p>i) Noted &amp; being complied. Fly Ash generation and utilization is regularly submitted to CEA, New Delhi. Enclosed as <b>Annexure V</b>.</p> <p>ii) Water requirement is being restricted to 15 MCM. Optimization of water has been incorporated as part of plant design and COC is being maintained more than 5.0.</p> <p>iii) Noted &amp; being complied.</p> <p>iv) Noted &amp; will be complied as &amp; when fly ash is disposed in abandoned or working mines</p>
<p>3)</p>	<p>Transportation</p> <p>i) Coal transportation may be undertaken by covered Railway wagon (railway wagons covered by tarpaulin or other means) and/or covered conveyor beyond the mine area. However, till such time enabling Rail transport/conveyer beyond infrastructure is not available, road transportation may be undertaken in trucks, covered by tarpaulin or other means.</p> <p>ii) It shall be ensured by the thermal power plant that</p> <p>a) Rail siding facility or conveyer facility is set up at or near the power plant, for transportation by rail or conveyer; and</p> <p>b) If transportation by rail or conveyer facility is not available, ensure that the coal is transported out from the Delivery Point of the respective mine in covered trucks (by tarpaulin or other means), or any mechanized closed trucks by roads.</p>	<p>Being Complied</p> <p>i) EC amendment had been granted for the Coal transportation by road, till the time railway line will be constructed/ commission.</p> <p>ii) Currently, we are transporting coal by road in tarpaulin covered truck.</p> <p>a) Coal is being unloaded at Vimla siding nearby Bhudevapur railway station in Raigarh district.</p> <p>b) Coal is being transported by tarpaulin covered truck from off- take site from being supplied Vimla siding as well as other market purchasing.</p>

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HYDROGEOLOGICAL REPORT  
OF  
RAIGARH ENERGY GENERATION LTD  
(ADANI POWER LTD)  
RAIGARH, CHHATTISGARH



WATER SOLUTIONS  
GURUGRAM, HARYANA, INDIA

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# Accreditation Board of CGWA

## Certificate of Accreditation

***M/s. Water Solutions***  
*Gurugaon, Haryana*

*Has been accredited as a Ground Water Professionals to prepare reports in the Functional Areas of*

- *Impact Assessment of Existing / Proposed GW Extraction*
- *Hydrogeological conditions in mining projects.*

*Valid from : 15.02.2021*

*Certificate No. : CGWA/RGI/011*

*Valid thru : 14.02.2026*

*Dated : 07.07.2021*

क्षेत्रीय निदेशक  
Regional Director  
आरजीएनजीडब्ल्यूटीआरआई  
RGNGWT&RI

सदस्य  
Member  
आरजीएनजीडब्ल्यूटीआरआई  
RGNGWT&RI

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## **1. BACKGROUND**

M/s Raigarh Energy Generation Ltd, previously known as Korba West Power Corporation Ltd a subsidiary of Adani Power, is a power generation company based at village - Chote Bhandar of Pusaur block of Raigarh district, Chhattisgarh state. On 07-Sep-2019, "Adani Power Limited" got approval from NCLT to become new owner of this project "Raigarh Energy Generation Ltd.", has commissioned its Thermal Power Plant first 600MW Unit at Village Chhote Bhandar, Post Office Bade Bhandar, Raigarh- 496100, India. Raigarh Energy Generation Ltd., is also committed towards the environment and the community it operates in. It has successfully implemented several community welfares schemes in the field of livelihood, infrastructure, community health and education which has so far benefited over 60,000 people from close to 75 villages.

## **2. LOCATION AND ACCESSIBILITY**

The Raigarh Energy Generation Ltd (REGL) plant area falls under village - Chote Bhandar situated in west direction of Pussor block of the Raigarh district, Chhattisgarh state. For the present study, an area by considering 10 km of radius, which comes about 350 sq.km and lies between N 21°38' 37" – 21°49' 57" latitude and E 83°10'16 " – 83°22'37" longitude and falls under the Survey of India Topo-sheet No. 64 O/1, 64O/2, 64O/5 & 64O/6 (1:50000 scale).

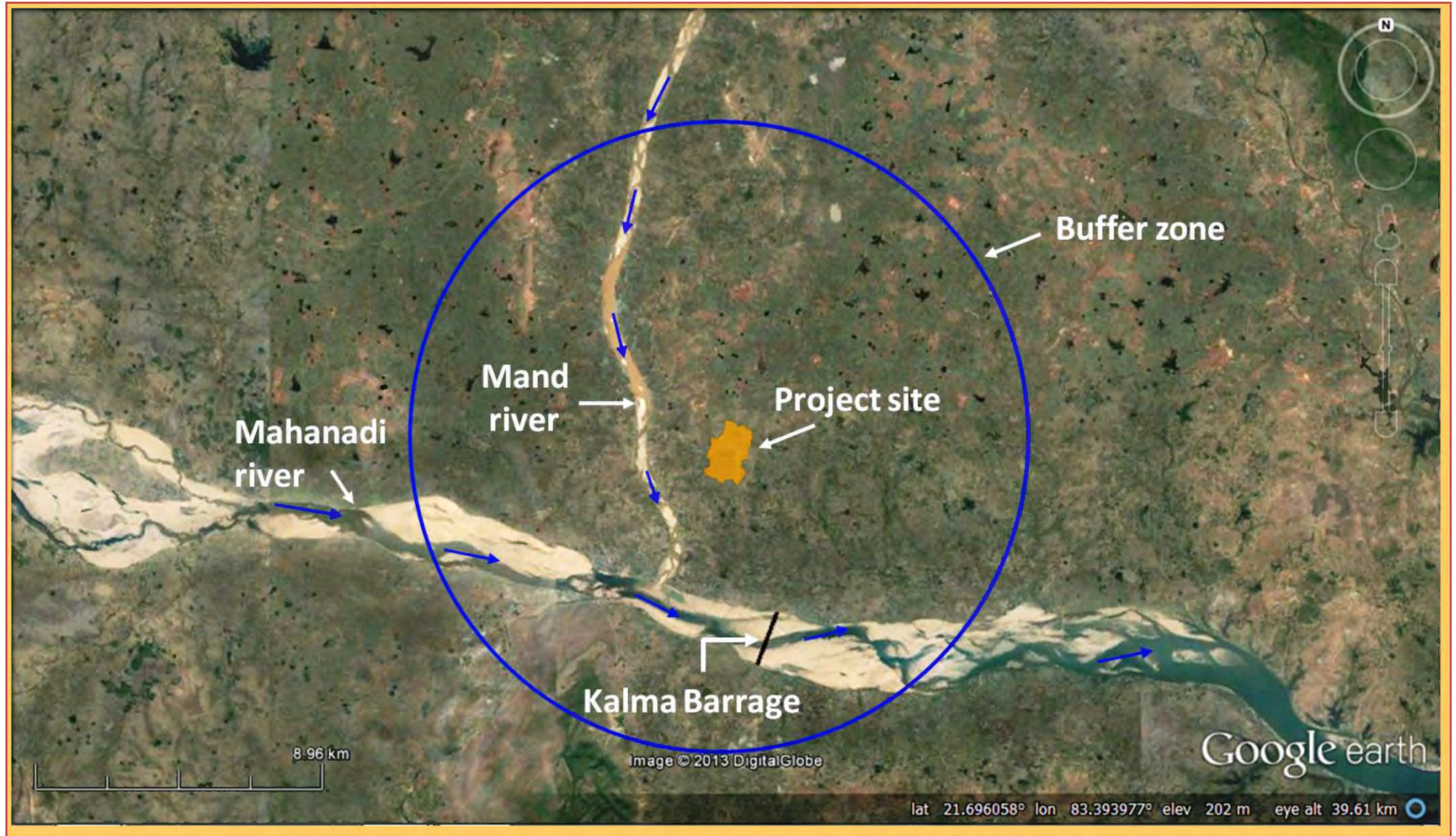
The Project site is in the vicinity of the rivers, Mand about 3 km towards west and Mahanadi River about 5 km towards south, on their left banks. The area is well connected by Bituminous Road as well as Rail networks. The surrounding of the projects is connected by Bituminous Road as well as mettle and un-mettle road within 10 km radius. Raigarh Railway station, on Mumbai- Howrah Broad Gauge main line of the South-Eastern-Central Railway is close to the project area around 23 km away. The block head quarter is Pussor & is about 15 km away from the study area on eastern side.

The location map of the project site is given in Fig. 1, 2 & 3



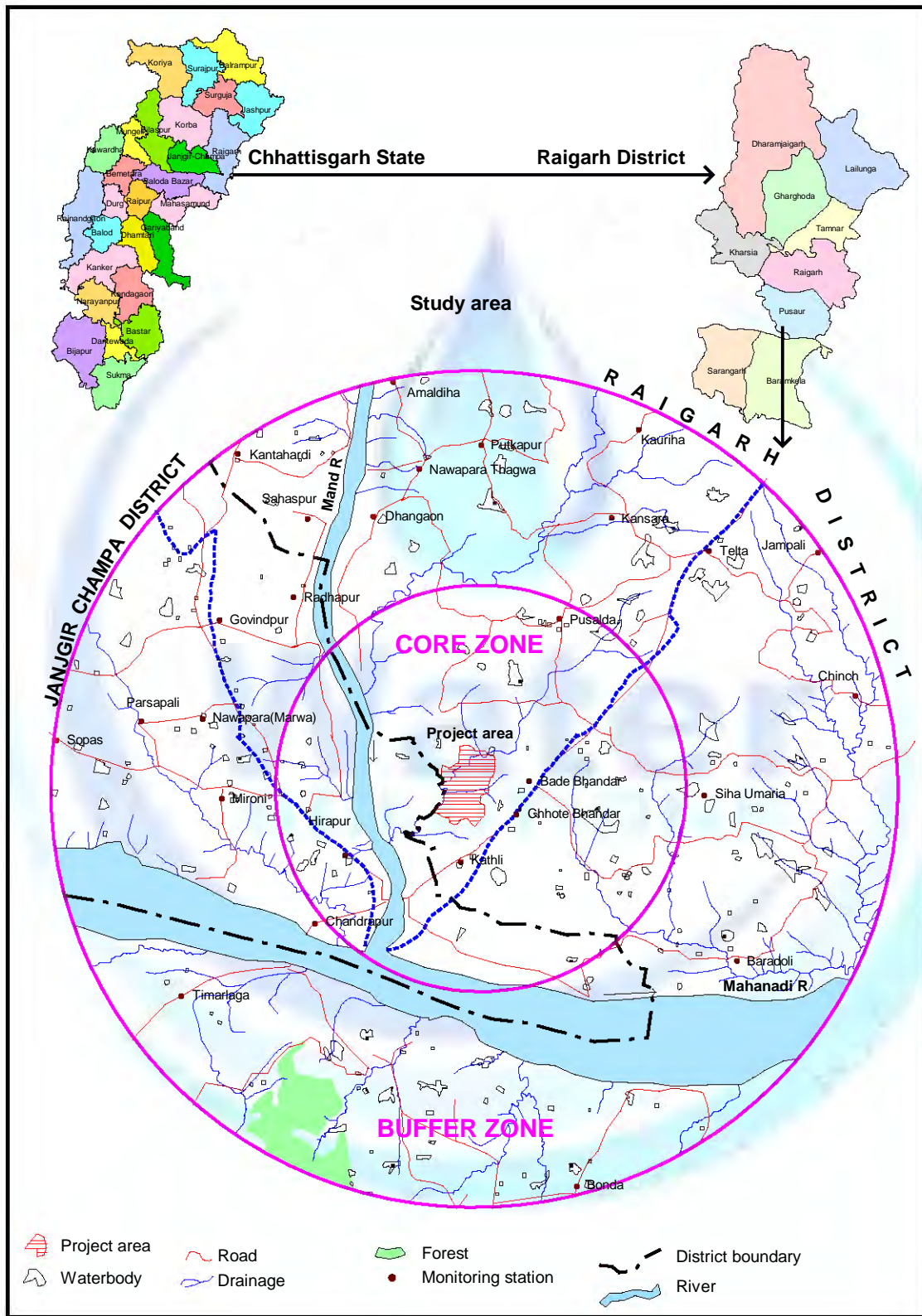
**Fig.1 Location map of the project site, Satellite image (True Color)**





**Fig.2 Location map of the project site with Buffer Zone (Satellite image -True Color)**





**Fig.3 Location map of the project site: Topo sheet map (1:50000)**

### 3. GENERAL DESCRIPTION OF THE AREA

The brief description of the study area is given below.

#### 3.1 Demography

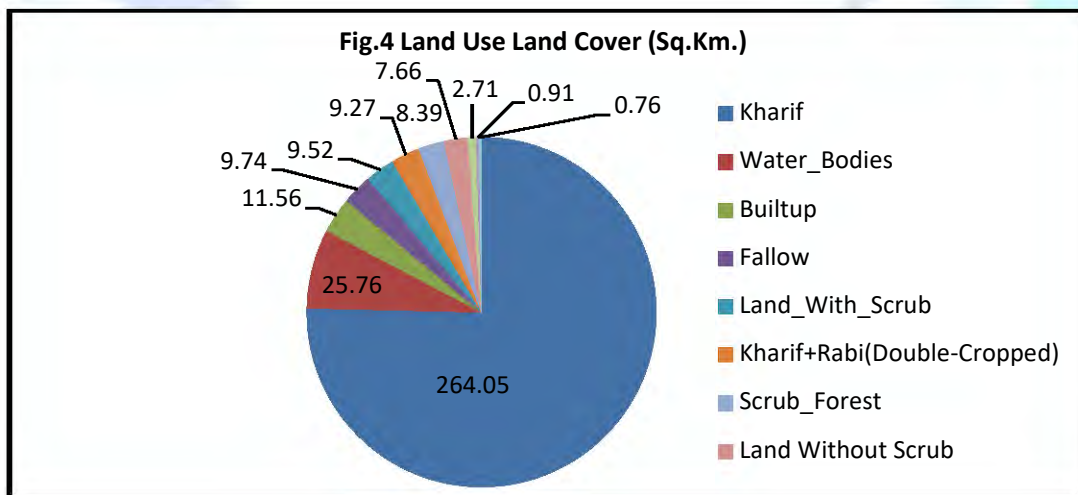
There are 97 nos. of villages present in the area within 10 km of radius. According to Census 2011, the total population of the area is 98489. Out of which 49450 are males & 49039 are female. Schedule Tribe & Schedule Cast population is 22583 & 13394 respectively.

#### 3.2 Land use

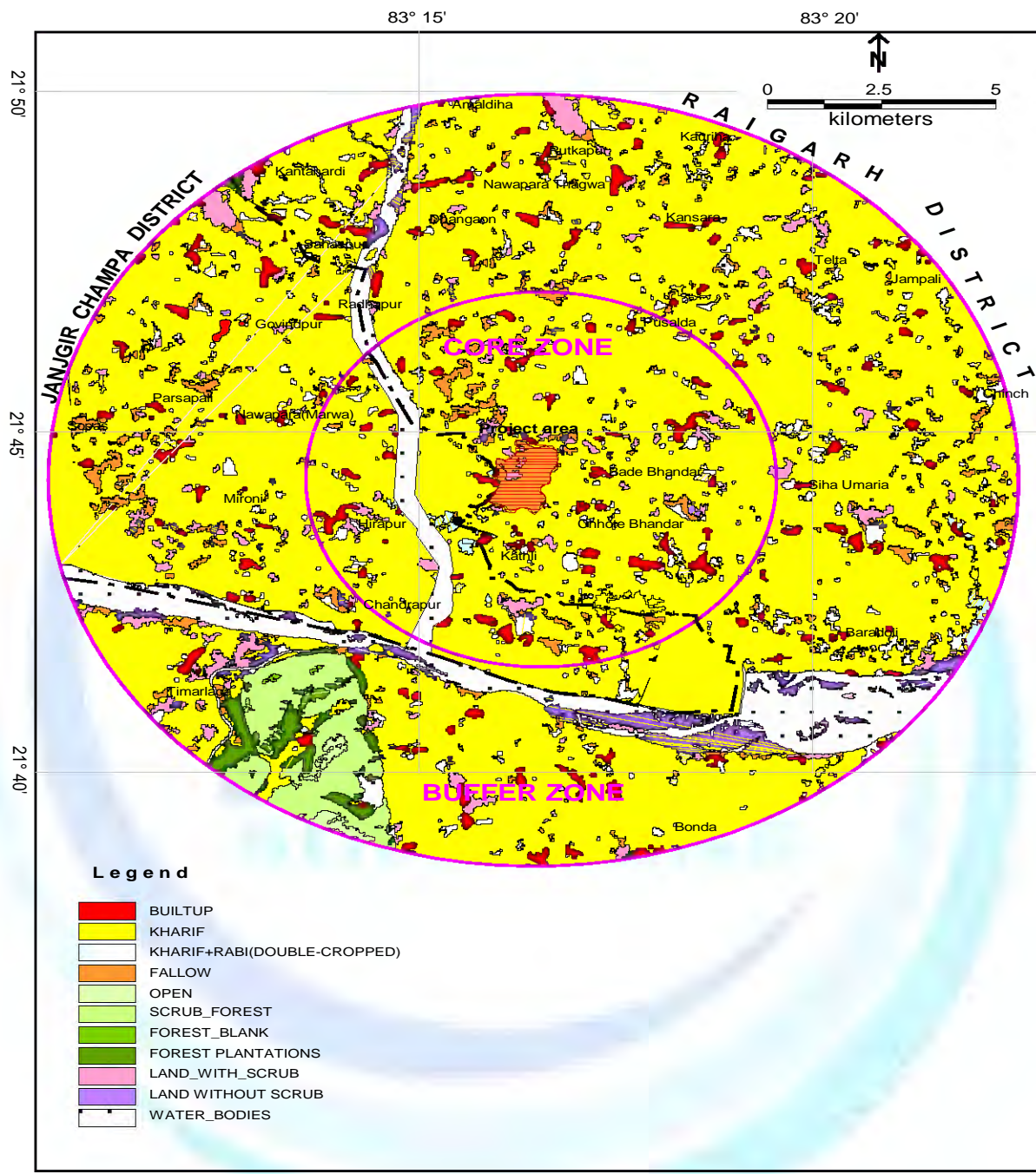
The Satellite Image has been used for Land use study is given in Table no: 1

**Table.1 Land use of the Study area**

Sl. No.	Land Use	Area In Sq.Km.
1	Forest Blank	0.91
2	Scrub Forest	8.39
3	Open	0.76
4	Forest Plantations	2.71
5	Built up	11.56
6	Land with Scrub	9.52
7	Land Without Scrub	7.66
8	Kharif+Rabi (Double-Cropped)	9.27
9	Water Bodies	25.76
10	Kharif	264.05
11	Fallow	9.74
	<b>Total</b>	<b>350.33</b>



**Fig: 4 Land Use Land Cover (Sq. Km.)**



**Fig.5 Land use Map of the Study**





**Fig.6 Sentinel-2 Satellite Image of the Study Area (10 m Resolution)**

### **3.3 Soil**

There are two soil categories are present in the study area namely Ultisols (Red & Yellow soil) and Alfisols (Sandy& Red Sandy soil).

Red & yellow soil (Ultisols) exposed in major part of the study area. It is the ultimate product of continuous weathering of minerals in a humid climate. This is a highly weathered and leached acid soil with high levels of clay below top layer.

Sandy soil (Alfisols) is exposed along river courses of the study area while Red Sandy soil (Alfisols) is exposed in the southern part of the study area in patch. It is a fertile leached soil found in humid areas which is alkaline in nature and contains clay-rich layer.

### 3.4 Climate and Rainfall

The area falls under tropical climate with hot summer followed by well-distributed rainfall through South-West monsoon season. The winter commences from December and last till the end of February. The period from March to the end of May is hot season. The monsoon season starts from the middle of June and last till the end of September. The average daily annual normal temperature for the area is 32°C. During the summer Season humidity is lowest i.e. about 32% and is highest during the South-West Monsoon period i.e. about 80%.

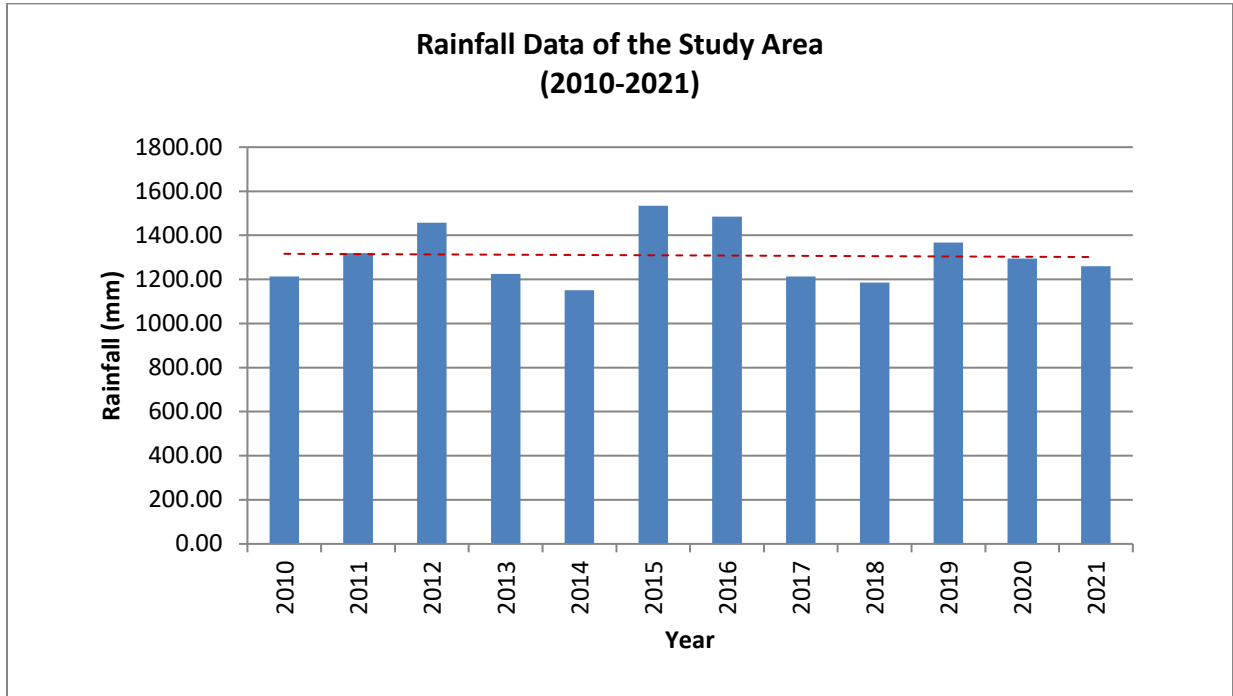
The study area receives an average rainfall of 1380.80 mm/annum. About 94% of the annual rainfall is received during the Northwest Monsoon period (June to October), of which July and August being the main rainy months. The variation in annual rainfall from year to year is very large. On an average there are 60- 80 rainy days in a year.

Rainfall data of the area for last 12 years is as mentioned in the table no: 2

S. No.	Year	Rainfall ( mm)
1	2010	1212.6
2	2011	1319.6
3	2012	1457.6
4	2013	1224.8
5	2014	1150.2
6	2015	1534.7
7	2016	1484.2
8	2017	1213.5
9	2018	1186.3
10	2019	1367.5
11	2020	1294.12
12	2021	1260.47
Average Rainfall		1308.80

**Table.2 Rainfall data for last 12 years**

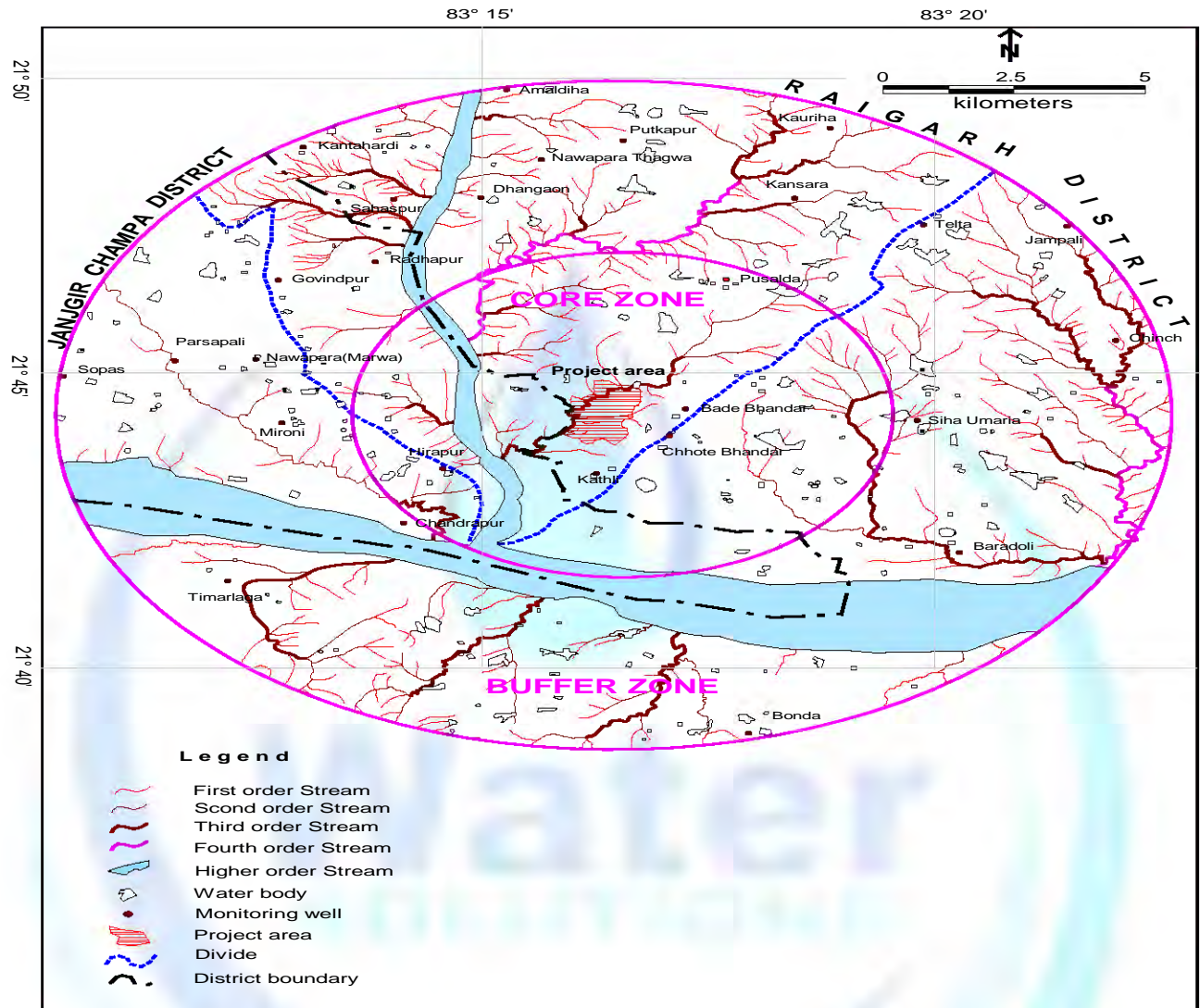




**Fig.7 Rainfall Data of the Study Area (2010-2021)**

### **3.5 Drainage**

The area is mainly drained by tributaries of Mand River. This tributary system comes under Mahanadi basin which flows through the study area from 1<sup>st</sup> to 5<sup>th</sup> order. The drainage pattern is dendritic to sub parallel. The drainage density is high especially in hilly area and low in the plain and low lying area. The high drainage density in the upper reaches of the study area indicates high surface run-off and less infiltration of the water while in plain area it indicates less surface run-off and high infiltration.



**Fig.8 Drainage map of the study area**

### 3.6 Geomorphology

Geomorphological the study area is characterized by gently sloping plain land which is classified as structural plain on Proterozoic rocks, structural hills& Valleys and Flood plain. The elevation of the area varies from 200 to 750 mamsl. The Physiography of the basin is controlled by geological formations namely limestone, Shale, sandstone& Conglomerate. The rocks were exposed to renewed post depositional activities and were subjected to intensive and extensive pedimentation, peneplanation and denudation during Pre-Quaternary and Quaternary time. In response to lithology of rocks, their chemical composition, their relative deposition, tectonic set up, they were chiselled into various geomorphic and hydro geomorphic surfaces namely structural plain on Proterozoic rocks, structural hills& Valleys and Flood plain.



**Fig.9 Geomorphological Map of the study area**

## 4. GEOLOGY

### 4.1 Stratigraphic Sequence

The area mainly covers the rocks Chandrapur, Gunderdehi, Raigarh & Chandi Formations of Chhattisgarh Super Group of Proterozoic in age. The generalised geological succession in the area as per Geological Survey of India is given below in the form of Table 4.1.

**Table 3: Generalized geological succession in Raigarh district**

Age	Period	Group	Formation	Lithology
Quaternary	Recent to sub-recent		Alluvium & laterite	Sand, silt, clay, lateritic soil
Cenozoic			Rhyolite(intrusive)	
Proterozoic		Raipur Group	Saradih	Dolomite
			Bamnidi	Shale & Limest.
			<b>Chandi</b>	<b>Lime st. &amp; Shale</b>
			<b>Raigarh</b>	<b>Shale, Limest., Arenite &amp; Conglomerate</b>
			<b>Gunderdehi</b>	<b>Shale</b>
		Charmuria	Lime st. & Shale	
		<b>Chandrapur Group</b>	<b>Orthoquartzite to Sub-arkosic Sandstones</b>	
Archaean	Bilaspur-Raigarh-Surguja belt, Metamorphic & Igneous rock (Basement Crystallines)		Granites, gneiss, mica schists with quartz vein & pegmatite	

### 4.2 Geological formation of the area

#### 4.2.1 Chandrapur Group

The Chandrapur Formation is exposed in south part of the study area in small patch. It mainly consists of conglomerate, arkose, sub-arkose, chert and fine-grained ferruginous arenite. Black shale varies laterally on either side to pink and light grey shale. The intercalated arenite is fine grained containing asymmetric ripple marks.

#### 4.2.2 Raipur group

##### a) Gunderdehi Formation:

The Gunderdehi Formation It is exposed in south-western part of the study area in small patch. Charmuria Formation is conformably overlain by Gunderdehi Formation, which is dominantly a calcareous argillite developed as a distinct facies in the sub-basin. Although

the purple-coloured shale with intercalated limestone is the dominate member, a buff-coloured shale and a ferruginous arenite are also two prominent members occurring at the middle of the formation.

The purple shale is generally calcareous, highly friable in character and is associated with impersistent limestone bands. Locally intra-formational conglomerate lenses are present in the upper part. Besides this, lenses and pockets of stromatolitic limestone appearing towards top indicate a gradational contact with the overlying formation. It is reported that at subsurface Gunderdehi purple shale grades to black shale.

**b) Raigarh Formation:**

The formation is developed in major part of the study area comprising dominantly friable calcareous purple shale with limestone intercalations. The formation can be classified into a lower shale flaggy carbonate-arenite member which is followed upward by a purple calcareous shale member. At places, arenite lenses and bands are also present in the member. The upper member is mainly purple calcareous shale with limestone as well as arenite lenses. Mud cracks and ripple marks are the common structures.

**c) Chandi Formation:**

It is also exposed in south-western part of the study area in small patch. This comprises a major stromatolitic limestone sequence consist of limestone and shale. The carbonate facies is intercalated discrete pockets or lenses in calcareous argillite. Chandi Formation had been classified into four major carbonate members as Newari, Pendri, Deodongar and Nipania Member.

The geological map of the study area is given in **Fig.10**





Fig 10 Geological map of the Study area

## **5. HYDROGEOLOGY**

### **5.1 Introduction**

The ground water occurrence and its distribution in space are highly influenced by the underlying geological formations and hydro-geological characteristic of the surroundings. The weathered and fractured zones present in the rocks or formation provides scope of ground water occurrence, storage and its movement. The hydrogeology of the area broadly describes the disposition of water bearing formations occurrence of ground water and their yield potential, groundwater regime conditions, depth to water levels in different seasons, yield potential of the aquifers etc.

### **5.2 Ground water occurrence and Aquifer systems**

In the area, ground water occurs under phreatic or unconfined condition in weathered portion of rocks and semi-confined to confined conditions in fractures/cavernous part of rocks i.e. limestone and shale at depths.

The shallow aquifers of the study area occur within an average depth of 20 m. They are composed of weathered mantle. The configuration of water table in the shallow aquifer follows the topography due to which the ground water movement is generally towards valleys or topographic low. The recharging bodies such as tanks, canals and streams also influence the occurrence and movement of ground water in shallow aquifers. The shallow aquifers of the area are mostly developed by way of dug wells in the area whose depth varies from 7 to 16 m. In general, the yield of dug wells ranges from 25 to 40 m<sup>3</sup>/day.

### **5.3 Pumping Test**

A pumping test is one of the most useful means of determining hydraulic properties of water-bearing layers and confining beds, and important for a proper understanding of some groundwater system to evaluate groundwater as a water supply. The aquifer was pumped at a constant discharge rate of about 3870 m<sup>3</sup> /day. Amongst different analytical methods, it is important to select numerical formula which is more appropriate to actual field conditions. Hydrogeologists and engineers have developed several theoretical models over the past century to analyze and evaluate pumping test data. These methods for analyzing groundwater flow in bounded aquifers is based on the principle of superposition. According to this principle, the drawdown induced by two or more wells is equal to the sum of the drawdowns caused by each separate well. Therefore, by introducing imaginary wells, or image wells, it is possible to transform an aquifer of finite extent into one of seemingly infinite extent.

Pumping Test was conducted at Village- Chote Bhandar, Private Borewell. The static water level observed is 6.45m, drawdown observed is 7.64m after 100minutes of pumping. The analysis is explained in the following section.

To apply the Cooper and Jacob solution, plot  $S_s$  as a function of  $\log t$  on semi-logarithmic axes and draw a straight line through the data and the equation to Determine T is given below:

$$T = 2.303 / Q4\pi\Delta s$$

$\Delta s$  is the slope of the fitted line (change in drawdown per log cycle time) With the estimate of  $T$  obtained from, calculate  $S_s$  as follows:

$$S = 2.25Tt_0 / r^2$$

Where

$Q$  is pumping rate [ $L^3/T$ ]

$r$  is radial distance from pumping well to observation well [ $L$ ]

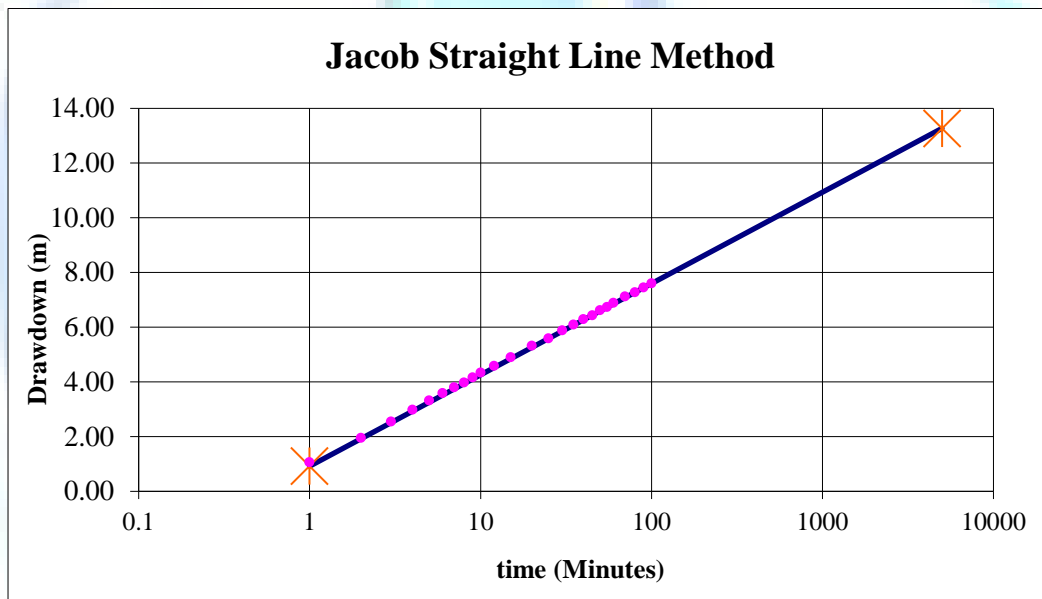
$s$  is drawdown [ $L$ ]

$S$  is storativity [dimensionless]

$t$  is elapsed time since start of pumping [ $T$ ]

$T$  is transmissivity [ $L^2/T$ ]

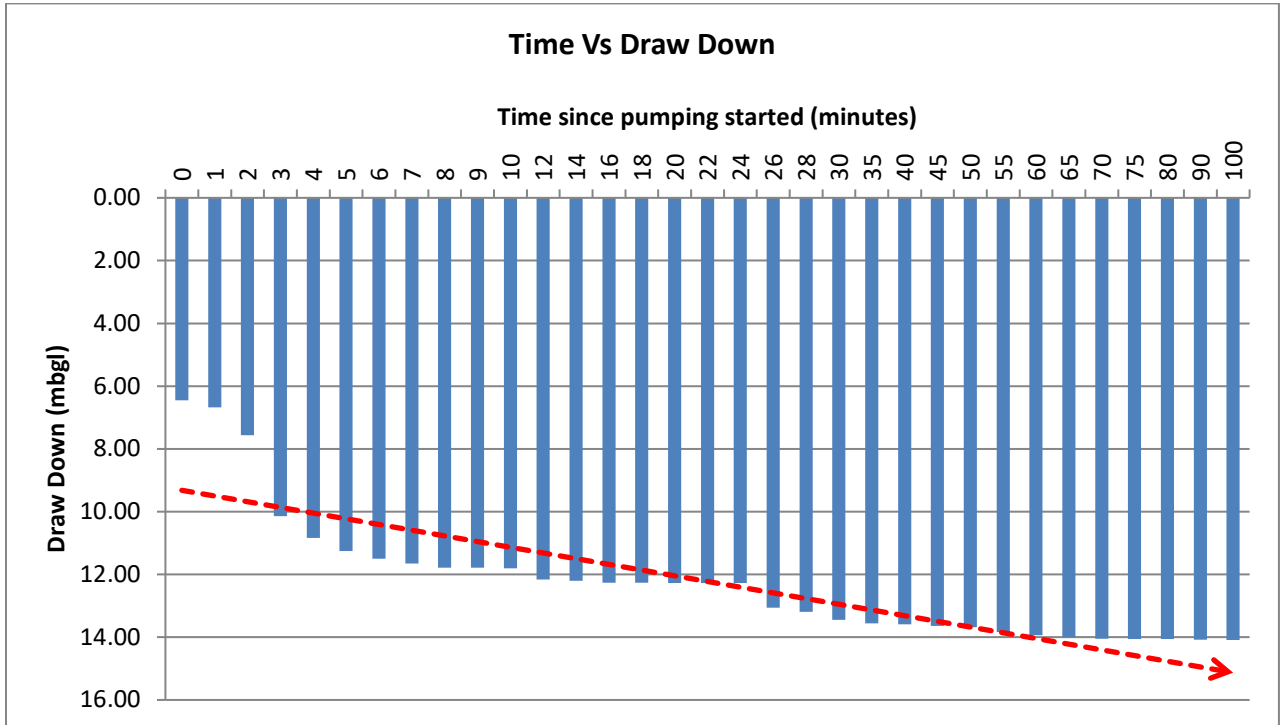
$w(u)$  is the Theis well function for nonleaky confined aquifers [dimensionless]



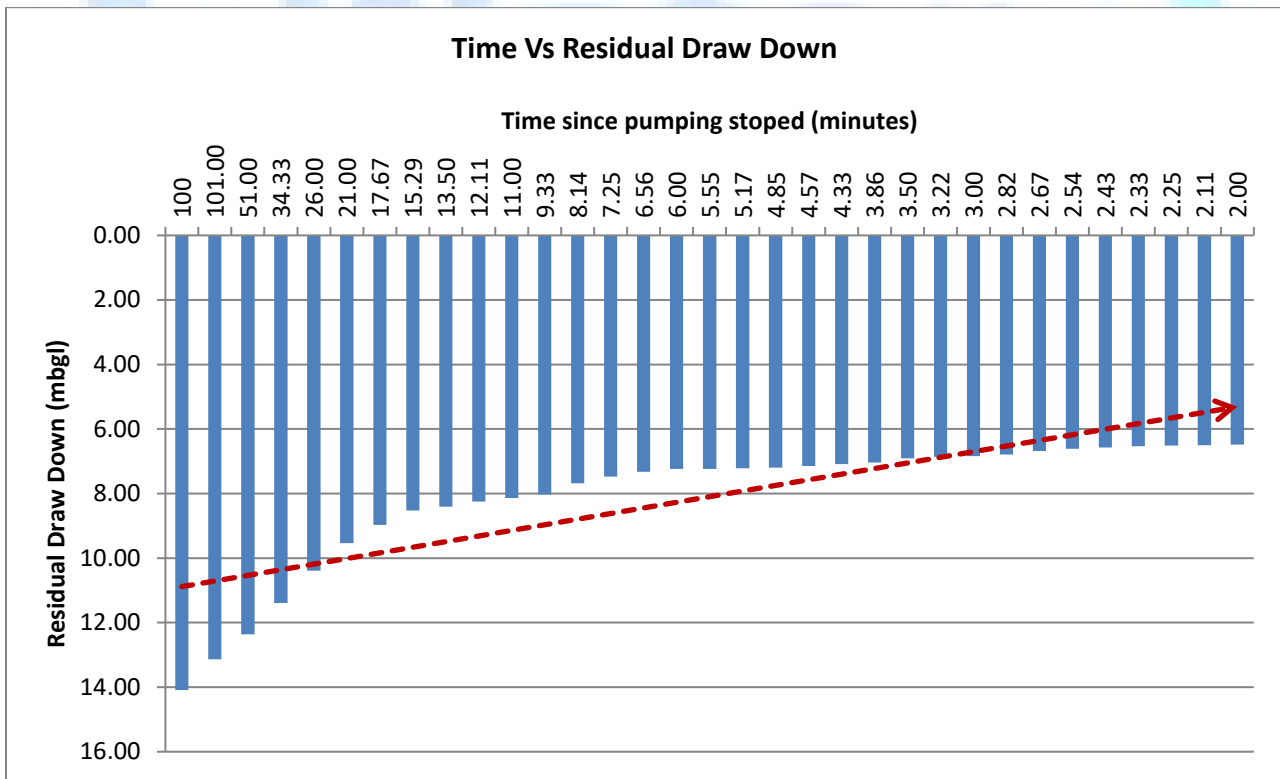
**Fig: 10 Jacob straight line Method**

Based on the pumping test data analysis the transmissivity ( $T$ ) value observed from the study is 23.71 m<sup>2</sup>/day, Storage value obtained from the aquifer test is  $3.84 \times 10^{-05}$





**Fig: 11 Time Vs Draw Down**



**Fig: 12 Time vs Residual draw down**

**Table no 4: Data collected during the pumping test**

Pumping			Recuperation				Residual Draw Down
Time in minutes since pumping started	Water level in m bmp	Drawdown	Time since pump started t (min)	Time since pump stopped t` (min)	t/t`	Water level in m	
0	6.45	0.00	100	0	0	14.09	7.64
1	6.68	0.23	101	1	101.00	13.14	6.69
2	7.56	1.11	102	2	51.00	12.36	5.91
3	10.14	3.69	103	3	34.33	11.39	4.94
4	10.84	4.39	104	4	26.00	10.39	3.94
5	11.25	4.80	105	5	21.00	9.54	3.09
6	11.5	5.05	106	6	17.67	8.97	2.52
7	11.65	5.20	107	7	15.29	8.53	2.08
8	11.78	5.33	108	8	13.50	8.41	1.96
9	11.79	5.34	109	9	12.11	8.25	1.80
10	11.81	5.36	110	10	11.00	8.14	1.69
12	12.16	5.71	112	12	9.33	8.03	1.58
14	12.20	5.75	114	14	8.14	7.68	1.23
16	12.26	5.81	116	16	7.25	7.47	1.02
18	12.26	5.81	118	18	6.56	7.33	0.88
20	12.27	5.82	120	20	6.00	7.24	0.79
22	12.27	5.82	122	22	5.55	7.24	0.79
24	12.27	5.82	124	24	5.17	7.22	0.77
26	13.06	6.61	126	26	4.85	7.20	0.75
28	13.19	6.74	128	28	4.57	7.15	0.70
30	13.45	7.00	130	30	4.33	7.09	0.64
35	13.56	7.11	135	35	3.86	7.04	0.59
40	13.59	7.14	140	40	3.50	6.91	0.46
45	13.64	7.19	145	45	3.22	6.86	0.41
50	13.68	7.23	150	50	3.00	6.84	0.39
55	13.83	7.38	155	55	2.82	6.79	0.34
60	13.94	7.49	160	60	2.67	6.68	0.23
65	14.01	7.56	165	65	2.54	6.61	0.16
70	14.05	7.60	170	70	2.43	6.57	0.12
75	14.06	7.61	175	75	2.33	6.53	0.08
80	14.06	7.61	180	80	2.25	6.51	0.06
90	14.08	7.63	190	90	2.11	6.50	0.05
100	14.09	7.64	200	100	2.00	6.48	0.03

### 5.4 Water table configuration and flow direction

The ground water flow direction follows broadly the topographic pattern, in northern part of the study area, it is in east-west and in southern part of the study area and it is in north-south direction indicating the major surface water divides in the central portion of the study area N-S & E-W and two local water divides NW-SE & NE-SW. A local variation in flow direction is also observed in the vicinity of surface water divide. The water table elevation in the study area ranges between 190 to 200mamsl. Eastern & southern part of the area is having high altitude of water table elevation i.e. 200mamsl while water table elevation decreases to south-eastern & is 190mamsl. The gradient of water table is variable. Ground water divide has been demarcated based on the field data as shown in Hydrogeological map, Fig. 5.1.

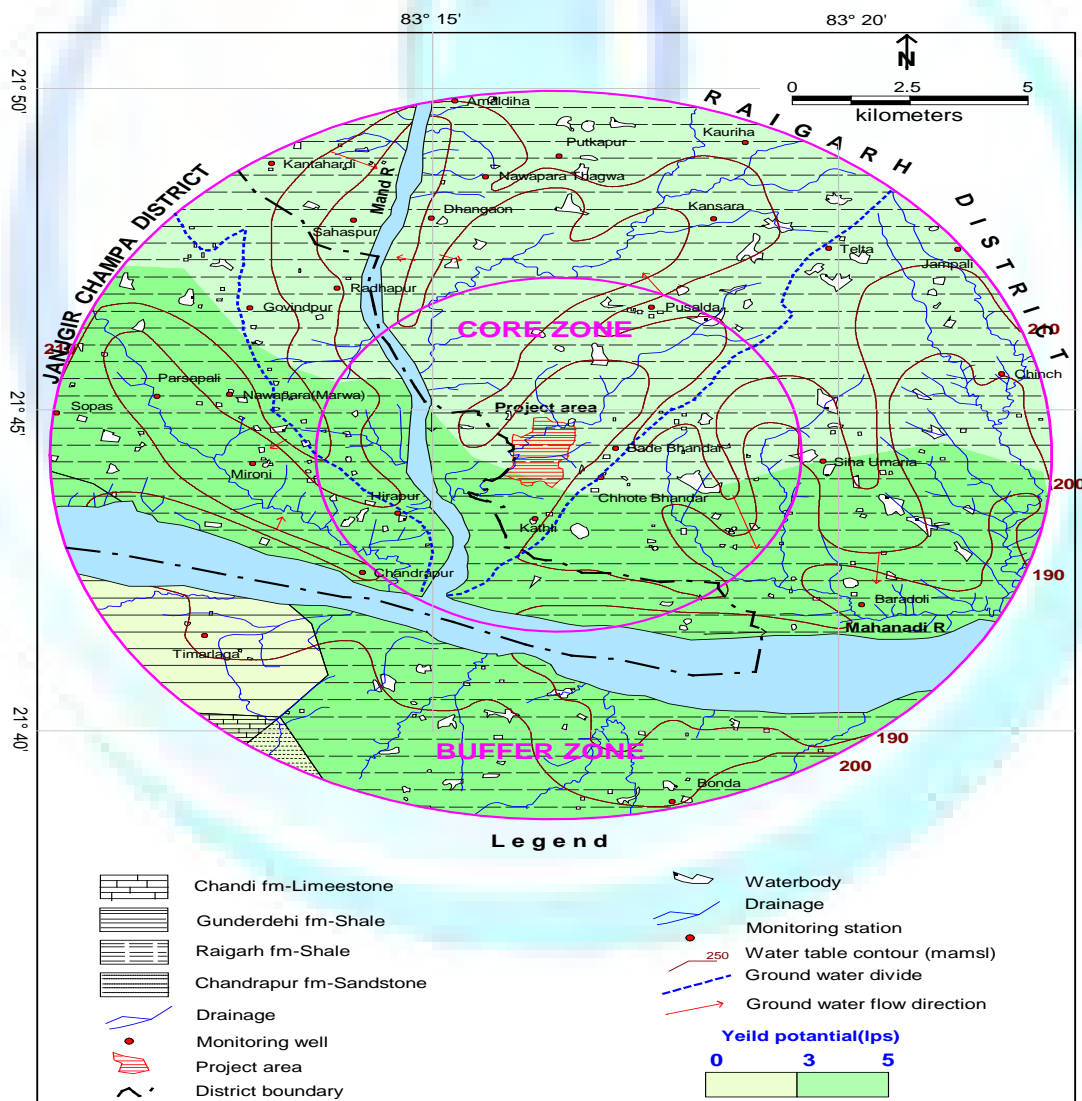


Fig. 13 Hydrogeological map

## 6 GROUND WATER REGIME MONITORING

### 6.1 Introduction

The monitoring data will be of immense helpful in management of the water resources as well as protecting the ground water storage. Such study envisages regular monitoring of water level at selected locations to observe the variation of the ground water level and the changes in water quality with respect to ground water withdrawal over a period of time and space. It is pertinent to say that any ground water development of a particular area would bring changes in the immediate vicinity of the development area.

The objective is to identify the potential areas that have registered change in ground water levels and quality which in turn would help in identifying the appropriate measures for adoption of artificial recharge to neutralize the negative impact of the envisaged ground water development. In the present report, the monitored data has been presented and the overall picture of ground water storage behaviour due to continuous abstraction of ground water has been analysed for the January 2010 to November 2021. The monitoring was carried out four times in each year i.e. January May, August and November. The water level data of the month of May and November are taken as level of pre-monsoon and post-monsoon respectively.

### 6.2 Distribution of monitoring stations

To study the change in ground water regime in and around study area, a total of 27 monitoring wells (DW & BW) were selected at different locations for regular monitoring of ground water level (Core zone- 4 nos., Buffer zone-23nos.The monitoring schedule undertaken in and around the plant area has been bifurcated in core and buffer zone to have a better understating about the changes that is being observed in the ground water regime. The separate analysis of the long term ground water behaviour in core and buffer zone would enable to demarcate the areas that bear direct impact of any ground water development that has triggered its impact in the surrounding areas has also been discussed in subsequent headings. The basic details of these monitoring wells are presented in **Table Nos.5**

**Table 5: Basic details of established monitoring wells in the Core Zone**

Sl No	Location	Lat	Long	Type of well	Dia in (m)	Depth in (m)	RL (m amsl)
1	Bade Bhandar	21.739360	83.289519	Borewell	0.15	82	217
2	Chhote Bhandar	21.731270	83.282079	Borewell	0.15	85	218
3	Amlibhouna	21.725683	83.268322	Borewell	0.15	100	237
4	Jevridih	21.732607	83.285202	Borewell	0.15	95	215
5	Barpali	21.747425	83.293045	Borewell	0.15	90	244

6	Gopalpur	21.738151	83.225732	Borewell	0.15	80	204
7	Kotmara	21.758395	83.273520	Borewell	0.15	85	231
8	Supa	21.751738	83.299698	Borewell	0.15	95	227
9	Taparda	21.720197	83.284497	Borewell	0.15	100	229
10	Kotasura	21.745560	83.334827	Borewell	0.15	80	220
11	Kathali	21.723253	83.271810	Borewell	0.15	86	238
12	Bunga	21.726707	83.300077	Borewell	0.15	75	214
13	Ranbhata	21.718512	83.293932	Borewell	0.15	90	228
14	Kalma	21.700327	83.274772	Borewell	0.15	75	212
15	Chandli	21.713263	83.259052	Borewell	0.15	70	212
16	Chandarpur	21.710450	83.237630	Borewell	0.15	85	207
17	Nandeli	21.760950	83.336739	Borewell	0.15	80	224
18	Gotma	21.740673	83.361387	Borewell	0.15	90	216
19	Basanpali	21.812959	83.290373	Borewell	0.15	95	223
20	Latesara	21.743418	83.191503	Borewell	0.15	85	207
21	Borsi	21.771609	83.229350	Borewell	0.15	72	204
22	Dadarpali	21.660214	83.257402	Borewell	0.15	70	209
23	Naughata	21.664786	83.289977	Borewell	0.15	78	201
24	Parsapali	21.701567	83.346822	Borewell	0.15	85	204
25	Tetala	21.790384	83.329855	Borewell	0.15	90	225
26	Semra	21.760510	83.254302	Borewell	0.15	85	224
27	Dhangaon	21.812103	83.259367	Borewell	0.15	85	216
28	Timarlaga	21.694123	83.203903	Borewell	0.15	70	198
29	Kawriha	21.818007	83.310533	Borewell	0.15	90	212
30	Ruchida	21.795896	83.278562	Borewell	0.15	85	217

## 7. ANALYSIS OF WATER LEVELS

### 7.1 Introduction

Water level or piezometric heads is the resultant of all the input and output to the ground water reservoir, considering it to behave as a system with defined boundaries. Ground water is a dynamic system. The variables required to be monitored, namely water level or head, chemical quality are subject to changes both due to natural and manmade causes. The zones of aeration and saturation play important roles in ground water recharge and ground water level fluctuations, as also in evolution of its quality. Hence assessment of chemical quality and temperature monitoring are essential parts of the monitoring system.

### 7.2 Ground water levels:

The configuration of the water table depends upon by topography, geology, climate, water yielding and water bearing properties of rocks in the zones of aeration and saturation, which control ground water recharge. The upper surface of the zone of saturation is the water table. In case of wells penetrating confined aquifers, the water level represents the

pressure or piezometric head at that point. The water level is dependent on static or time independent topographical features and also Dynamic or time- dependent variables.

Monitoring network planning is basic to groundwater assessment and development programmed. The groundwater, being subterranean resource can only be accessed through the indirect reflection in the form of water level fluctuations. The systematic and regular monitoring of groundwater levels can bring out the changes taking place in the regime. The data so generated are of immense help for regional groundwater flow modeling to serve as a groundwater management tool, and to provide the necessary advance information to the user agencies to frame contingency plans in case of unfavorable groundwater recharge situation.

The seasonal water levels in different years have been collected, analyzed for every set of measurements and write up with maps are presented in following sections. It is observed that in the study area major surface water divides are present in central part of the study area extending N-S & E-W. Hence, for the analysis part of Bade Bhandar, ChoteBhandar, Kathli and Pusalda villages of core zone and Amaldiha, Baradoli, Chinch, Dhangaon, Jampali, Kansara, Kauriha, Nawagaon Thangwa and Putkapur of buffer zone have been considered.

### 7.2.1 Analysis of water levels

The water level data collected four times during the year 2022 from the observation wells in core zone as well as buffer zone is presented in **Table No.6**

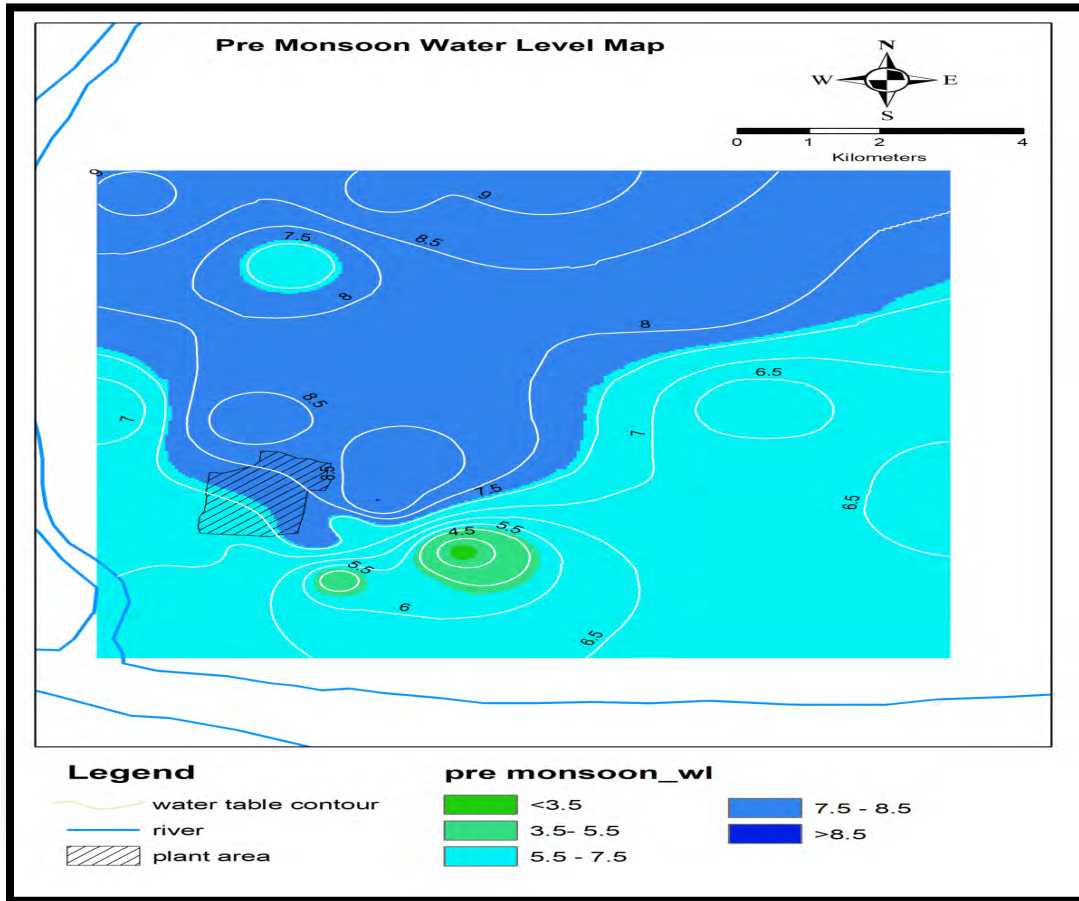
Sl No	Location	Lat	Long	Pre Monsoon Water Level (mbgl)	Post Monsoon Water Level (mbgl)	Fluctuation (m)
1	Bade Bhandar	21.739360	83.289519	9.5	6.8	2.7
2	Chhote Bhandar	21.731270	83.282079	8.45	7.19	1.26
3	Amlibhouna	21.725683	83.268322	7.15	6.45	0.7
4	Jevridih	21.732607	83.285202	6.95	5.75	1.2
5	Barpali	21.747425	83.293045	9.5	6.5	3
6	Gopalpur	21.738151	83.225732	6.45	5.85	0.6
7	Kotmara	21.758395	83.273520	9	7.45	1.55
8	Supa	21.751738	83.299698	8.5	7.75	0.75
9	Taparda	21.720197	83.284497	5.15	3.35	1.8
10	Kotasura	21.745560	83.334827	7	6.1	0.9



11	Kathali	21.723253	83.271810	6.5	5.65	0.85
12	Bunga	21.726707	83.300077	3.5	1.45	2.05
13	Ranbhata	21.718512	83.293932	5.8	4.35	1.45
14	Kalma	21.700327	83.274772	5.95	5.15	0.8
15	Chandli	21.713263	83.259052	9.65	8.35	1.3
16	Chandarpur	21.710450	83.237630	7.1	5.5	1.6
17	Nandeli	21.760950	83.336739	6	4.95	1.05
18	Gotma	21.740673	83.361387	6.15	5.5	0.65
19	Basanpali	21.812959	83.290373	9.15	7.65	1.5
20	Latesara	21.743418	83.191503	5.46	4.85	0.61
21	Borsi	21.771609	83.229350	5	4.5	0.5
22	Dadarpali	21.660214	83.257402	6.4	5.12	1.28
23	Naughata	21.664786	83.289977	5.5	4.78	0.72
24	Parsapali	21.701567	83.346822	6.9	5.74	1.16
25	Tetala	21.790384	83.329855	8.5	6.45	2.05
26	Semra	21.760510	83.254302	6.45	5.94	0.51
27	Dhangaon	21.812103	83.259367	9.1	8.4	0.7
28	Timarlaga	21.694123	83.203903	6.3	5.18	1.12
29	Kawriha	21.818007	83.310533	9.4	8.5	0.9
30	Ruchida	21.795896	83.278562	7.2	6.34	0.86

### 7.2.1.1 Pre-monsoon Depth to Water level (May'2022)

The depth to water level map has been prepared based on ground water monitoring data of May 2022. From the perusal of Table 7.1, it is observed that the overall depth to water level in area remains between 3.50 to 9.65 meters below ground level in core and buffer zone. The lowest water level observed at Village Bunga and Maximum water level observed at Chandli are 3.5 & 9.65 mbgl respectively. The pre monsoon water level map study is given below at Fig. 7.

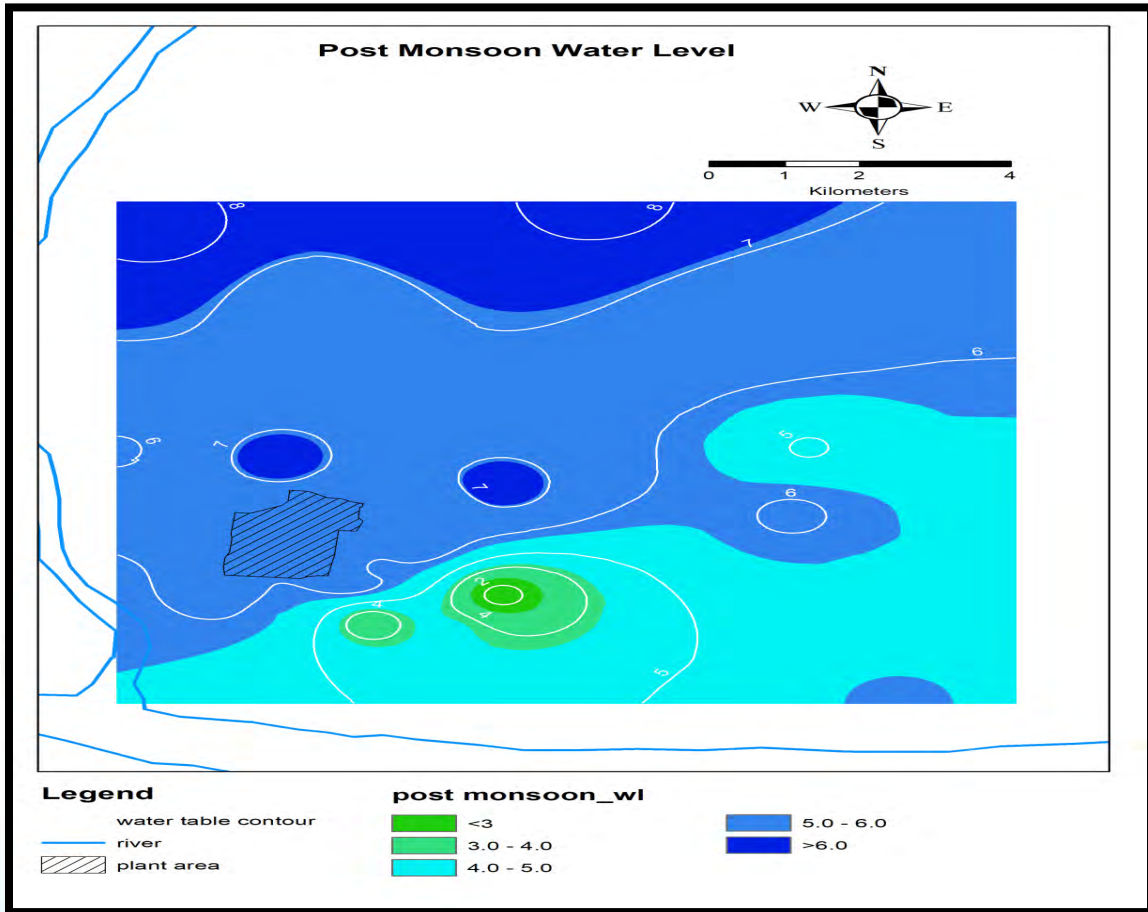


**Fig: 14 Pre Monsoon water Level map**

### 7.2.1.2 Post-monsoon Depth to Water level (November'2022)

The depth to water level map has been prepared based on ground water monitoring data of November 2022. From the perusal of the Table 7.1, it is observed that the overall depth to water level in area remains between 1.45 to 8.5 meters below ground level in core and buffer zone. The minimum post-monsoon depth to water level is observed at the village Banga and maximum at village Chandli. The post monsoon depth to water level map is given below Fig. 15.





**Fig: 15 Post Monsoon water Level map**

## 8. GROUND WATER FLUCTUATION:

The difference between pre and post monsoon water level of the year is most important seasonal fluctuation which gives a clear picture of ground water potential which can be utilized for various uses over succeeding year. The fluctuation is used to evaluate the dynamic ground water resources through the change in ground water storage. The water level fluctuation between pre and post monsoon period is generally is in the range of 0.5 to 3.0 m with an average fluctuation 1.2 m.

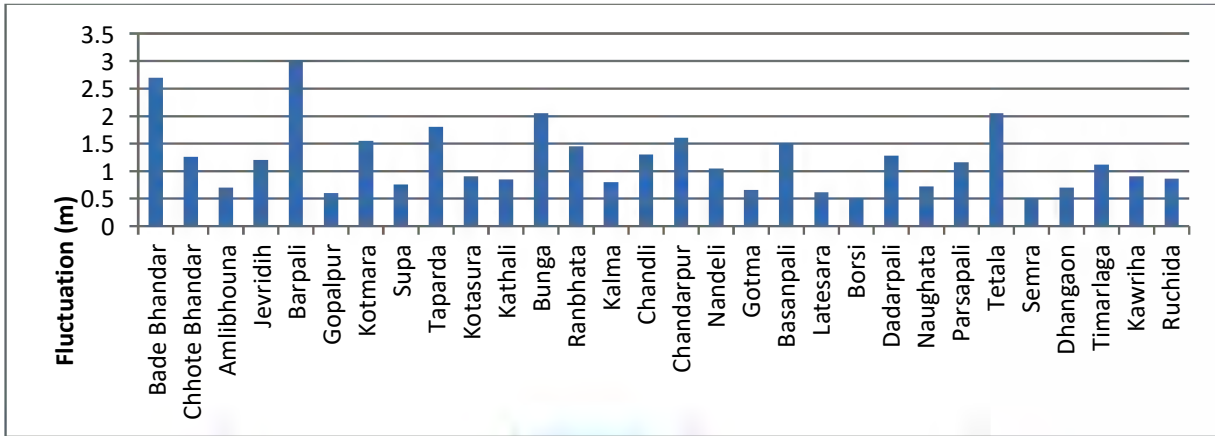


Fig. 16: Fluctuation (Raise/Fall) Analysis of the Study Area

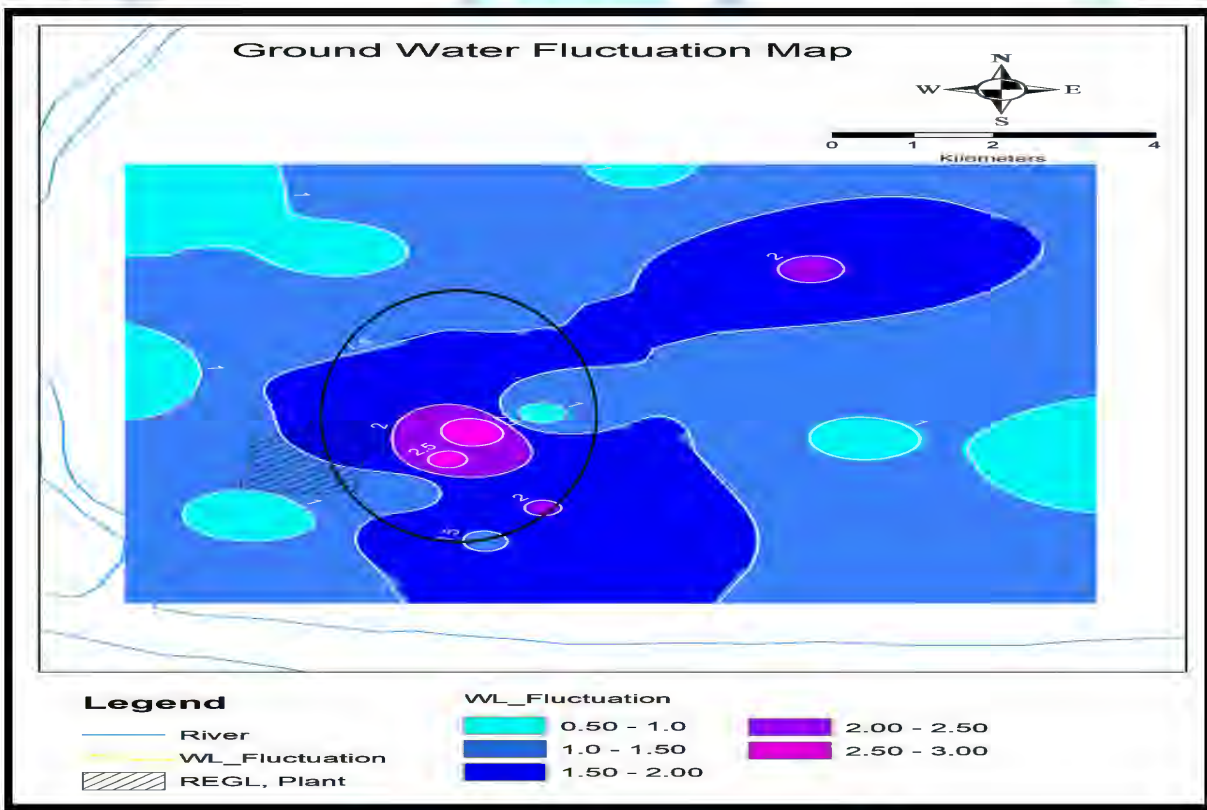


Fig. 17: Ground water Fluctuation Map

## 9. GEOPHYSICAL STUDY

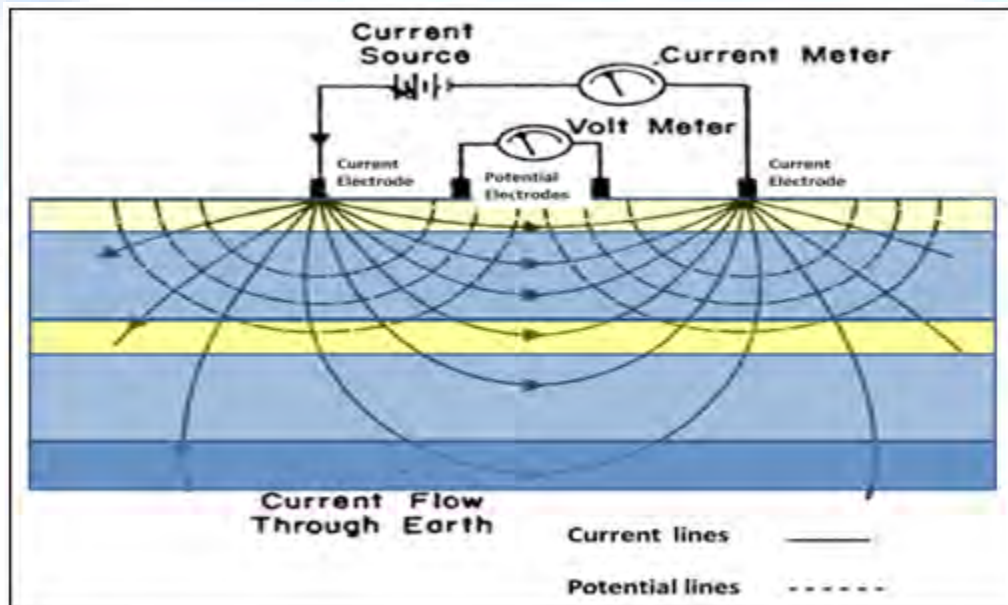
### 9.1 Introduction

To delineate the aquifer geometry Vertical Electrical Sounding (VES) by Schlumberger configuration are conducted in the plant area at village Bade Bhandar, Block Pussore, district Raigarh, Chhattisgarh. Location of VES is selected as per availability of open straight line workable space to cover the entire area. Depending upon the objectives the maximum current electrode spacing (AB) was kept 100 m. The spacing of the electrode controls the depth of investigation and the desired spacing facilitates to get the sub-surface information to the depths suitable for facilitating the rainwater harvesting. The observed resistance value from instrument was multiplied with geometric factor (K) to get the apparent resistivity values for each electrodes spacing. 'K' is the geometric factor and is calculated as per current and potential electrode spacing for each measurement. The field apparent resistivity data were plotted on log-log paper against the half current electrode separation to get the VES curves.

The method Vertical Electrical Sounding (VES) which reflects vertical distribution of electrical resistivity.

$$\rho = K \frac{\Delta V}{i}$$

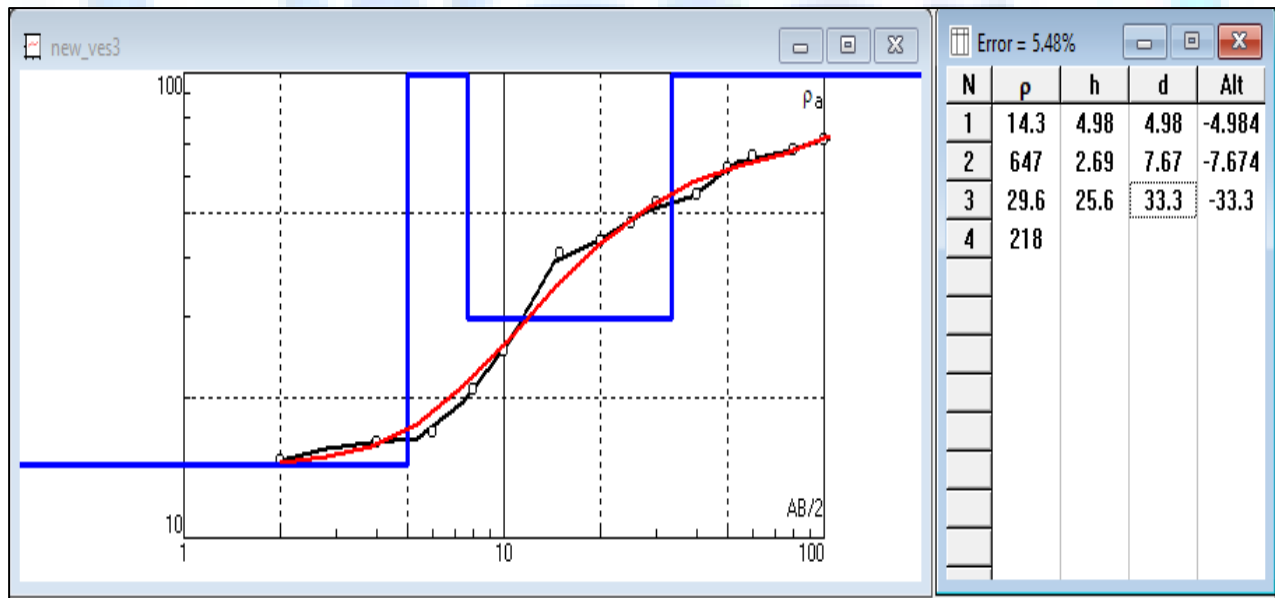
Schematic view of electrical resistivity method



VES-01

AB/2	MN/2	GEOLOGICAL FACTOR	RESISTANCE	APPARENT RESISTIVITY
2	0.5	11.79	1.08	12.7
4	0.5	49.5	0.28	13.9
6	0.5	112.36	0.13	14.6
8	0.5	200.36	0.09	18.0
10	2	313.5	0.07	21.9
15	2	706.36	0.05	35.3
20	2	1256.36	0.03	37.7
25	2	1963.5	0.021	41.2
30	2	2827.79	0.016	45.2
30	5	275	0.19	52.3
40	5	495	0.11	54.5
50	5	777.86	0.08	62.2
60	5	1123.57	0.059	66.3
80	5	2003.57	0.034	68.1
100	5	3135	0.023	72.1

Table No: 7

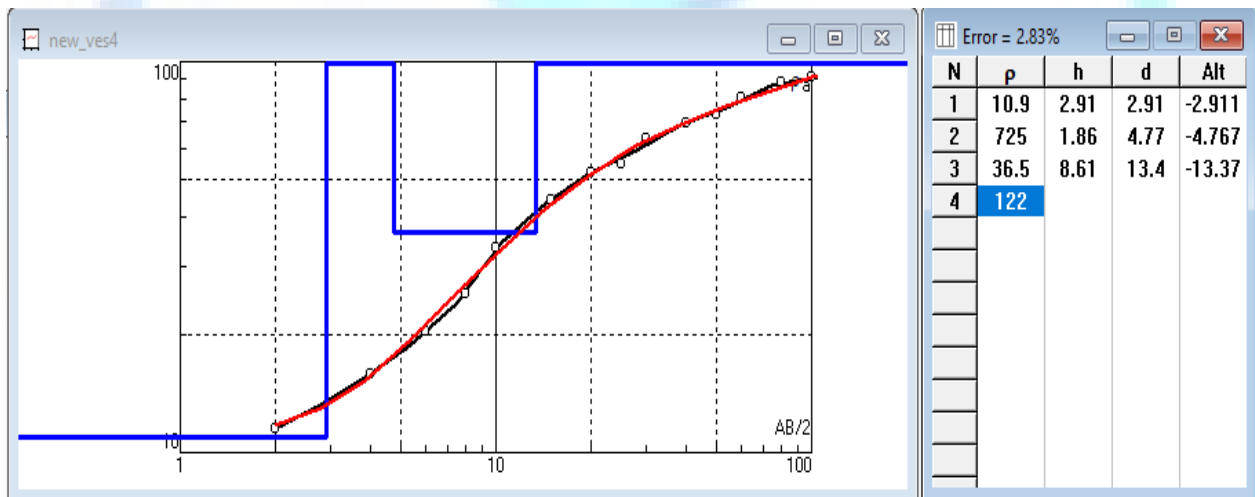


VES-02

AB/2	MN/2	GEOLOGICAL FACTOR	RESISTANCE	APPARENT RESISTIVITY
2	0.5	11.79	0.92	10.8

4	0.5	49.5	0.301	14.9
6	0.5	112.36	0.17	19.1
8	0.5	200.36	0.12	24.0
10	2	313.5	0.1	31.4
15	2	706.36	0.059	41.7
20	2	1256.36	0.039	49.0
25	2	1963.5	0.026	51.1
30	2	2827.79	0.021	59.4
30	5	275	0.23	63.3
40	5	495	0.14	69.3
50	5	777.86	0.094	73.1
60	5	1123.57	0.072	80.9
80	5	2003.57	0.044	88.2
100	5	3135	0.029	90.9

**Table No: 8**



After the close observation of VES curves and its interpretation it is very clear that the study area is having two to four layers earth model up-to depth of investigation. The thickness of topsoil is varying between 0.6 to 6.0 m with resistivity value 6 to 80 Ohm-m indicative of clayey to saturated sandy nature of soil. The lower value of resistivity indicates clayey nature of soil whereas the higher values indicate unsaturated shale nature of soil. The second layer at these locations is showing mixed nature of hydrogeological condition with depth range between 4.0 to 1.0 m and resistivity range between 6 Ohm-m to 160 Ohm-m. The lower value of resistivity (6 – 20 Ohm-m) indicates clay whereas the higher values (20 – 160 Ohm-m) indicate hard shale. The third layer at various locations is indicating again mixed nature of hydrogeology with depth range between 35.0 to 57.0 m and resistivity range between 10 Ohm-m to 2000 Ohm-m.

The resistivity value is varying due to lithological variation as limestone formation is intercalated with shale formation at limited locations. At majority of location this layer is encountered as last layer up to depth of investigation. The saturated zones occurring below water level contains potable formation water in this layer. The fourth and last layer at locations of VES1, VES4, VES5, VES8 and VES17 with resistivity values from 150 to 1800 Ohm-m is indicative of limestone formation. The lower value of resistivity (150 – 230 Ohm-m) indicates fractured limestone whereas the higher value (800 - 1800 Ohm-m) indicates hard and massive limestone. The potential aquifer in entire plant area is occurring within depth range from 20 to 57 m.

### **9.2 Scope of Study:**

The scope of study includes Environmental Services in respect of ambient air quality monitoring, noise level monitoring & Sampling and Analysis of ground water quality, surface water quality, treated effluent sewage, effluent water from ETP and soil.

### **9.3 Methodology:**

As mentioned in the scope of work covering the various Environmental components monitoring and sampling and its analysis was carried out based on the guidelines of Ministry of Environment Forest & Climate Control of Government of India & Chhattisgarh State Pollution Control Board. Sampling procedure method reference and Analysis procedure method reference are mentioned in monitoring reports.

### **9.4 Ambient Air Quality Monitoring:**

The ambient air quality has been carried out at various sources of air pollution surrounding and in the Plant. The prime objective of the ambient air quality monitoring is to assess the existing air quality of the area. The ambient air quality monitoring was carried out for 24 hours at each station. At all stations SO<sub>2</sub>, NO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, CO and Mercury were monitored. All the samples collected were analyzed for quantitative analysis of various pollutants. The ambient air quality sampling locations were identified by the Environmental Officer of Raigarh Energy Generation Ltd.

### **9.5 Water Environment:**

The ground water samples, surface water samples were collected from selected locations in two-liter sterilized plastic cans. These samples were analyzed as per IS 10500:2012. The domestic effluent and Industrial effluent samples were collected and analyzed for parameters: pH, Total suspended solids, Biochemical Oxygen Demand, Chemical Oxygen Demand and Oil & Grease.



## 9.6 Chemical quality

The water samples for the period of last five years (2010-2014) were collected and analyzed for both core and buffer zones. Comparison has been made to have an overall chemical quality and changes over the years within the study area. The chemical quality of ground water was evaluated by collection of 10 nos. of water samples from selected villages (core and buffer zone). The photographs of hand pumps are indicated in **plate - II**, which was taken during sampling of ground water. The year wise summarized results of Chemical quality of groundwater in the study area are presented in **Table no 9**

Para-Meters	Prescribed limits as per IS 10500		Observed values(Pre-monsoon)					
	Desirable limit	Permissible limit	2010	2011	2012	2013	2014	2022
pH	6.5-8.5	No Relaxation	7.4-8.0	7.5-8.2	7.4-8.1	7.5-8.3	7.4-8.3	7.3-8.1
TDS(Mg/l)	500	2000	409-606	400-620	395-610	388-600	395-615	395-615
TH as CaCo <sub>3</sub> (Mg/l)	200	600	193-437	202-445	199-440	200-450	205-459	199-489
Alkalinity (Mg/l)	200	600	203-290	210-305	208-312	210-318	215-325	217-330
Ca(Mg/l)	75	200	33-114	35-100	37-109	40-111	42-115	40-121
Mg(Mg/l)	30	100	18-62	22-68	20-70	24-74	28-80	27-78
Cl (Mg/l)	250	1000	23-46	25-50	22-54	25-58	24-62	23-58
Fe(Mg/l)	0.3	No Relaxation	0.12-0.27	0.14-0.28	0.13-0.31	0.13-0.37	0.14-0.41	0.13-0.39
SO <sub>4</sub> (Mg/l)	200	400	16-176	46-159	42-165	45-170	46-177	46-177
F(Mg/l)	1	1.5	0.21-0.36	0.25-0.55	0.23-0.52	0.25-0.60	0.22-0.58	0.24-0.57
NO <sub>3</sub> (Mg/l)	45	No Relaxation	5.6-29	11-32	9-35	12-42	10-40	11-42

**Table 9: Year wise summarized results of chemical quality of ground water in the study area**

The analysis of the chemical data shows that, the quality of ground water in the area (both core and buffer zone) is generally alkaline in nature. All major ions are within the limits of Bureau of Indian Standards for drinking purposes and meet the quality requirements of irrigation. Thus ground water is suitable for irrigation, domestic as well as drinking purposes and there is no remarkable change in chemical quality.

## CONCLUSION

The study has been carried out to assess the impact of ground water abstraction on ground water storage and to identify the potential areas that have registered change in ground water levels and quality which in turn would help in identifying the appropriate measures for adoption of artificial recharge to neutralize the negative impact of the envisaged ground water development in and around the project area located at village- Chote Bhandar, Pussor block, District Raigarh, Chhattisgarh.

In the present report, the monitored data has been presented and the overall picture of ground water storage behavior due to continuous abstraction of ground water has been analyzed for the January 2010 to Nov 2014. The ground water monitoring study and results of analysis of water levels carried out in and around plant area within core and buffer zone shows that, ground water development in the area has been reflected in the depth to water levels of pre- and post-monsoon period and long-term trend of water levels.

Overall, from the comparison of mean water levels of the year 2010 to 2013 with respect to the years 2014 in pre-monsoon period all the villages in core zone which are considered for analysis showing decline trend in the range of -0.36 to -0.74 m while in the buffer zone also all the villages are showing declining trend in the range of -0.12 to -0.51 m. except Amaldiha, Kansara&Kauriha village which are showing rise in water level (0.04 - 0.08m)and in post-monsoon period, it is found that all the villages in core zone considered for analysis showing decline trend in the range of - 0.34 to - 0.43 m while in the buffer zone all the villages showing decline trend in the range of - 0.12 to - 0.54 m except Amaldiha, Kansara and Kauriha which are showing rising trend in the range of 0.01 to 0.09 m. The water level trend in both the periods showing marginal decline i.e. <1.00 m over the period of five years which may also be attributed to various industrial development activities going on in the area.

The analysis of the chemical data shows that, the quality of ground water in the area (both core and buffer zone) is generally alkaline in nature. All major ions are within the limits of Bureau of Indian Standards for drinking purposes and meet the quality requirements of irrigation. Thus, ground water is suitable for irrigation, domestic as well as drinking purposes and there is no remarkable change in chemical quality of ground water in and around the area.

Results of long-term monitoring of water levels in the area has indicated declining trend of water levels which warrants for taking up suitable measures for artificial recharge to ground water system. This increasing stress on ground water needs preventive action for water harvesting and recharge to ground water.



## **SUGGESTIVE MEASURES**

To maintain the ground water balance in the area, few measures are suggested below.

The ground water regime (both core and buffer zone) should be regularly monitored, and the distribution of the observation stations should be denser in the core zone especially. Purpose-built piezometers can be installed at suitable locations to have a closer observation of ground water level behavior in the core zone.

Suitable additional ground water recharge mechanism needs to be adopted in the core zone of the project area. Additional ponds may be considered for enhancing the ground water recharge. The selection and proper design of artificial recharge and water harvesting structures should be based on proper understanding of hydrology, hydrogeology of the project area. Geophysical survey is suggested for knowing the areas suitable for recharge, exact depth of recharge wells and aquifer geometry in the area.

The long-term water level monitoring in and around the area for the pre-monsoon & post-monsoon period over the years, reveals that the villages of core zone have registered marginal decline which may be accorded priority for taking up of recharge measures. Such initiatives would ease out the long-term negative impact of any ground water decline.

The chemical quality of ground water for core and buffer zone indifferent seasons should be monitored properly and regularly to watch change in chemical quality of ground water in and around the area over the period of observation.

-End-

# ENVIRONMENTAL MONITORING REPORT



Submitted To:

**ADANI POWER LTD.**

Village- Chhote Bhandar, Post- Bade Bhandar, Dist.-  
Raigarh, Chhattisgarh 496100

By:



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Jaipur, Raj. 302020  
E-Mail:- [bd@vibranttechnolab.com](mailto:bd@vibranttechnolab.com)

**Project Name: M/s Adani Power Limited**

**Formerly M/s Raigarh Energy Generation Ltd. Located at Village Chhote Bhandar, Post office Bade Bhandar, Tehsil-Pussore, Dist.-Raigarh -496100 (Chhattisgarh)**

**2<sup>nd</sup> Half Yearly Environmental Monitoring Report**

## **PREFACE**

The growing concern for environment protection and the passing of various environmental legislations have increased the responsibilities of Ministry of Environment, Forest & Climate change, Pollution Control boards in many folds. Besides enforcing the various environmental legislations MoEF&CC, CPCB & SPCB strive to propagate the necessity awareness regarding the various legal provisions and environmental protection measures in the country.

Electric Power scenario has occupied a significant place in the development program of the country. Development and environment can neither be separated nor ignored. In fact, they are complimentary to each other. These issues have become a concern of the community, particularly the environment impact due to industries in the developing countries.

However, the prerequisite for sustainable development is judicious planning of environmental status, likely impacts of the approach adopted on the environment including inhabitants of the locality, availability of the eco-friendly technology, emerging waste disposal and waste utilization processes, techniques of land reclamation for the restoration of aesthetic beauty and soon.

M/s Adani Power Limited Formerly M/s Raigarh Energy Generation Ltd. Located at Village Chhote Bhandar, Post office Bade Bhandar, Tehsil-Pussore, Dist.-Raigarh -496100 (Chhattisgarh), India, has engaged **M/s Vibrant Techno lab Pvt. Ltd. (Raj.)** to provide Environmental services in respect of ambient air quality monitoring, stack emission, noise level monitoring & Sampling and Analysis of ground water quality, surface water quality, treated effluent sewage, effluent water from ETP, and soil for M/s Adani Power Limited, Raigarh district of Chhattisgarh, as per guidelines of MoEF & CC in CPCB Gazette Notification.

**M/s Vibrant Techno lab Pvt. Ltd. (Raj.)** has deployed entirely its own personnel, facilities and expertise for doing this service. Sampling/Monitoring Stations were identified by the Environmental Officer of M/s Adani Power Limited, Raigarh. The samples were analyzed Partly at site and partly at our MoEF Recognized laboratory situated at Jaipur (Rajasthan).

This report presents the data generated for the period from Oct 2023 to Mar 2024 i.e., for Second quarter which includes sampling locations, Methodology, testing procedure and compilation for the Environmental parameters i.e. Air, Water, Soil & Noise with a view to evaluate the impact due to the thermal power plant activities.

During the course of our operations for the above task, the staff and management of M/s Adani Power Limited, Raigarh were extremely co-operative. We are grateful to them for their invaluable support and assistance rendered to us during the course of the sampling and monitoring.

Date: 09.04.2023

Authorized Sign





Project Name: M/s Adani Power Limited

Formerly M/s Raigarh Energy Generation Ltd. Located at Village Chhote Bhandar, Post office Bade Bhandar, Tehsil-Pussore, Dist.-Raigarh -496100 (Chhattisgarh)

2<sup>nd</sup> Half Yearly Environmental Monitoring Report

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## **Chapter-1**

### **INTRODUCTION**

M/s Adani Power Limited, Raigarh a subsidiary of Adani Power, is a power generation company based at Raigarh in the State of Chhattisgarh. On 07-Sep-2019, “Adani Power Limited” got approval from NCLT to become new owner of this project M/s Adani Power Limited (Formerly “Raigarh Energy Generation Ltd.”), has commissioned its Thermal Power Plant first 600MW Unit at Village Chhote Bhandar, Post Office Bade Bhandar, Raigarh- 496100, India. The second unit of 600MW is under implementation.

**M/s Adani Power Limited**, is also committed towards the environment and the community it operates in. It has successfully implemented several community welfare schemes in the field of livelihood, infrastructure, community health and education which has so far benefited over 60,000 people from close to 75 villages.



**Fig 1: M/s Adani Power Limited**

## **Chapter-2**

### **PROJECT PROFILE**

#### **2.1 Topography & Drainage**

Topography of this area is generally undulating. The area is drained by Mand River approximately 3 km. away from plant in North direction and Mahanadi River approximately 5 km. away from plant in South direction.

#### **2.2 Location**

Plant is bounded by Northern Latitudes of 21° 44' 00" to 21° 44' 42" and Eastern Longitude of 83° 16' 30" to 83° 17' 18". This area falls in the survey of India toposheet no. 64 O/1, 64 O/2, 64 O/5 and 64 O/6. The location of the mine area is shown in **Fig. No. 2**

#### **2.3 Climate**

The climate of the area is Sub-tropical type. It is in the zone of humid tropic climate where temperature and humidity of air are very high. The temperature varies from the minimum - maximum temperature range between 29.5°C - 49 °C in summer, and 8°C - 25 °C in winter. The humidity varies from 35% to 82%. The annual average rainfall in the area is about 1300 mm.

#### **2.4 Communication**

The nearest railway station is Kirodimal, which is at a distance of ~23 Km towards North direction. The area is well connected with N.H. No. 216. Nearest Airport is Raipur ~250 km in SW direction. Nearest village is Bade Bhandar ~ 1 km. in North direction and nearest town is Raigarh ~21 km. in North-East direction

## **Chapter – 3.0**

### **SCOPE OF STUDY & METHODOLOGY**

#### **3.1 Scope of Study**

The scope of study includes Environmental Services in respect of ambient air quality monitoring, noise level monitoring & Sampling and Analysis of ground water quality, surface water quality, treated effluent sewage, effluent water from ETP and soil.

#### **3.2 Methodology**

As mentioned in the scope of work covering the various Environmental components monitoring and sampling and its analysis was carried out on the basis of guidelines of Ministry of Environment Forest & Climate Control of Government of India & Chhattisgarh State Pollution Control Board. Sampling procedure method reference and Analysis procedure method reference are mentioned in monitoring reports.

##### **3.2.1 Ambient Air Quality Monitoring**

The ambient air quality has been carried out at various sources of air pollution surrounding and in the Plant. The prime objective of the ambient air quality monitoring is to assess the existing air quality of the area.

The ambient air quality monitoring was carried out for 24 hours at each station. At all stations SO<sub>2</sub>, NO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, CO and Mercury were monitored. All the samples collected were analyzed for quantitative analysis of various pollutants. The ambient air quality sampling locations were identified by the Environmental Officer of M/s Adani Power Limited

##### **3.2.2 Water Environment**

The ground water samples, surface water samples were collected from selected locations in two-liter sterilized plastic cans. These samples were analyzed as per IS 10500:2012. The domestic effluent and Industrial effluent samples were collected and analyzed for parameters: pH, Total suspended solids, Biochemical Oxygen Demand, Chemical Oxygen Demand and Oil & Grease.

##### **3.2.3 Noise Environment**

Sound level meter was used to know the sound levels generated due to plant activities at different locations. The measurements were taken for Equivalent sound level over a time period for day and night which is expressed in dB(A).





# TEST REPORT



Sample Number : VTL/AA/01

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTL/A/2312230001/A  
Format No : 7.8 F-02  
Party Reference No : NIL  
Report Date : 29/12/2023  
Period of Analysis : 23/12/2023-29/12/2023  
Receipt Date : 23/12/2023

Sample Description : AMBIENT AIR QUALITY MONITORING

**General Information:-**

Sampling Location : Bade Bhandar  
Sample Collected By : VTL Team  
Sampling Equipment used : RDS/FPS  
Instrument Code : VTL/RDS/FPS/01  
Coordinates : 21°44'14" & 83°17'29"  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 18/12/2023 To 19/12/2023  
Time of Monitoring : 09:30 TO 09:30 Hrs.  
Ambient Temperature (°C) : Min. 12°C Max. 26°C  
Surrounding Activity : Human, Vehicular & Other Act.  
Scope of Monitoring : Regulatory Requirement  
Method of Sampling : IS :5182  
Sampling Duration : 24 Hrs.  
Parameter Required : As per work order

S.No.	Parameters	Test Method	Results	Units	NAAQS 2009
1	Particulate Matter (as PM10)	IS:5182 (P- 23)-2006, RA, 2017	61.8	µg/m³	100
2	Particulate Matter (as PM2.5)	IS:5182 (P- 24)-2019	28.0	µg/m³	60
3	Nitrogen Dioxide (as NO2)	IS:5182 (P- 6)-2006, RA, 2018	15.4	µg/m³	80
4	Sulphur Dioxide (as SO2)	IS:5182 (P- 2)-2001, RA, 2018	7.5	µg/m³	80

\*BLO-Below Limit Of Quantification, \*\*LOQ-Limit Of Quantification

\*\*\*End of Report\*\*\*



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## TEST REPORT

Sample Number : VTL/AA/01

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTL/A/2312230001/B  
Format No : 7.8 F-02  
Party Reference No : NIL  
Report Date : 29/12/2023  
Period of Analysis : 23/12/2023-29/12/2023  
Receipt Date : 23/12/2023

Sample Description : AMBIENT AIR QUALITY MONITORING

General Information:-  
Sampling Location : Bade Bhandar  
Sample Collected By : VTL Team  
Sampling Equipment used : RDS/FPS  
Instrument Code : VTL/RDS/FPS/01  
Coordinates : 21°44'14" & 83°17'29"  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 18/12/2023 To 19/12/2023  
Time of Monitoring : 09:30 TO 09:30 Hrs.  
Ambient Temperature (°C) : Min. 12°C Max. 26°C  
Surrounding Activity : Human, Vehicular & Other Act.  
Scope of Monitoring : Regulatory Requirement  
Method of Sampling : IS-5182  
Sampling Duration : 24 Hrs.  
Parameter Required : As per work order

S.No.	Parameters	Test Method	Results	Units	NAAQS 2009
1	Carbon Monoxide (as CO)	Lab SOP no. VTL/STP/02-2022, STP-08	0.66	mg/m <sup>3</sup>	4
2	Mercury (as Hg)	Methods of air sampling and analysis, 3rd ed., 1998, Method No.317	*BLQ (**LOQ 0.5)	µg/m <sup>3</sup>	-

\*BLQ-Below Limit Of Quantification, \*\*LOQ-Limit Of Quantification

\*\*\*End of Report\*\*\*

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## TEST REPORT



Sample Number : VTL/AA/03

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTL/A/2312230003/A  
Format No : 7.8 F-02  
Party Reference No : NIL  
Report Date : 29/12/2023  
Period of Analysis : 23/12/2023-29/12/2023  
Receipt Date : 23/12/2023

Sample Description : AMBIENT AIR QUALITY MONITORING

General Information:-  
Sampling Location : Near OHC  
Sample Collected By : VTL Team  
Sampling Equipment used : RDS/FPS  
Instrument Code : VTL/RDS/FPS/02  
Coordinates : --  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 18/12/2023 To 19/12/2023  
Time of Monitoring : 10:30 TO 10:30 Hrs.  
Ambient Temperature (°C) : Min. 12°C Max. 26°C  
Surrounding Activity : Human, Vehicular & Other Act.  
Scope of Monitoring : Regulatory Requirement  
Method of Sampling : IS-5182  
Sampling Duration : 24 Hrs.  
Parameter Required : As per work order

S.No.	Parameters	Test Method	Results	Units	NAAQS 2009
1	Particulate Matter (as PM10)	IS:5182 (P- 23)-2006, RA 2017	66.5	µg/m <sup>3</sup>	100
2	Particulate Matter (as PM2.5)	IS:5182 (P- 24)-2019	29.4	µg/m <sup>3</sup>	60
3	Nitrogen Dioxide (as NO2)	IS:5182 (P- 6)-2006, RA.2018	17.6	µg/m <sup>3</sup>	80
4	Sulphur Dioxide (as SO2)	IS:5182 (P- 2)-2001, RA. 2018	8.6	µg/m <sup>3</sup>	80

\*BLO-Below Limit Of Quantification, \*\*LOQ-Limit Of Quantification

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## TEST REPORT

Sample Number : VTL/AA/03

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTL/A/2312230003/B  
Format No : 7.8 F-02  
Party Reference No : NIL  
Report Date : 29/12/2023  
Period of Analysis : 23/12/2023-29/12/2023  
Receipt Date : 23/12/2023

Sample Description : AMBIENT AIR QUALITY MONITORING

General Information:-  
Sampling Location : Near OHC  
Sample Collected By : VTL Team  
Sampling Equipment used : RDS/FPS  
Instrument Code : VTL/RDS/FPS/02  
Coordinates : -  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 18/12/2023 To 19/12/2023  
Time of Monitoring : 10:30 TO 10:30 Hrs.  
Ambient Temperature (°C) : Min. 12°C Max. 26°C  
Surrounding Activity : Human, Vehicular & Other Act.  
Scope of Monitoring : Regulatory Requirement  
Method of Sampling : IS :5182  
Sampling Duration : 24 Hrs.  
Parameter Required : As per work order

S.No.	Parameters	Test Method	Results	Units	NAAQS 2009
1	Carbon Monoxide (as CO)	Lab SOP no. VTL/STP/02:2022, STP-08	0.61	mg/m <sup>3</sup>	4
2	Mercury (as Hg)	Methods of air sampling and analysis, 3rd ed., 1988, Method No.317	*BLQ (**LOQ 0.5)	µg/m <sup>3</sup>	--

\*BLQ-Below Limit Of Quantification, \*\*LOQ-Limit Of Quantification

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## TEST REPORT



Sample Number : VTL/AA/04

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTL/A/2312230004/A  
Format No : 7.8 F-02  
Party Reference No : NIL  
Report Date : 29/12/2023  
Period of Analysis : 23/12/2023-29/12/2023  
Receipt Date : 23/12/2023

Sample Description : AMBIENT AIR QUALITY MONITORING

**General Information:-**

Sampling Location : RO- MD  
Sample Collected By : VTL Team  
Sampling Equipment used : RDS/FPS  
Instrument Code : VTL/RDS/FPS/04  
Coordinates : 21°44'42" & 83°16'35"  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 18/12/2023 To 19/12/2023  
Time of Monitoring : 10:40 TO 10:40 Hrs.  
Ambient Temperature (°C) : Min. 12°C Max. 26°C  
Surrounding Activity : Human, Vehicular & Other Act.  
Scope of Monitoring : Regulatory Requirement  
Method of Sampling : IS-5182  
Sampling Duration : 24 Hrs.  
Parameter Required : As per work order

S.No.	Parameters	Test Method	Results	Units	NAAQS 2009
1	Particulate Matter (as PM10)	IS:5182 (P- 23)-2006, RA 2017	87.6	µg/m <sup>3</sup>	100
2	Particulate Matter (as PM2.5)	IS:5182 (P- 24)-2019	30.4	µg/m <sup>3</sup>	60
3	Nitrogen Dioxide (as NO2)	IS:5182 (P- 6)-2006, RA 2018	17.3	µg/m <sup>3</sup>	80
4	Sulphur Dioxide (as SO2)	IS:5182 (P- 2)-2001, RA 2018	9.8	µg/m <sup>3</sup>	80

\*BLQ-Below Limit Of Quantification, \*\*LOQ-Limit Of Quantification

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## TEST REPORT

Sample Number : VTL/AA/04

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTL/A/2312230004/B  
Format No : 7.8 F-02  
Party Reference No : NIL  
Report Date : 29/12/2023  
Period of Analysis : 23/12/2023-29/12/2023  
Receipt Date : 23/12/2023

Sample Description : AMBIENT AIR QUALITY MONITORING

General Information:-  
Sampling Location : RO- MD  
Sample Collected By : VTL Team  
Sampling Equipment used : RDS/FPS  
Instrument Code : VTL/RDS/FPS/04  
Coordinates : 21°44'42" & 83°16'35"  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 18/12/2023 To 19/12/2023  
Time of Monitoring : 10:40 TO 10:40 Hrs.  
Ambient Temperature (°C) : Min. 12°C Max. 26°C  
Surrounding Activity : Human, Vehicular & Other Act.  
Scope of Monitoring : Regulatory Requirement  
Method of Sampling : IS : 5182  
Sampling Duration : 24 Hrs.  
Parameter Required : As per work order

S.No.	Parameters	Test Method	Results	Units	NAAQS 2009
1	Carbon Monoxide (as CO)	Lab SOP no. VTL/STP/02-2022, STP-08	0.52	mg/m <sup>3</sup>	4
2	Mercury (as Hg)	Methods of air sampling and analysis, 3rd ed., 1988, Method No.317	*BLQ (**LOQ 0.5)	µg/m <sup>3</sup>	—

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## TEST REPORT



Sample Number : VTL/AA/05

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTL/A/2312230005/A  
Format No : 7.8 F-02  
Party Reference No : NIL  
Report Date : 29/12/2023  
Period of Analysis : 23/12/2023-29/12/2023  
Receipt Date : 23/12/2023

Sample Description : AMBIENT AIR QUALITY MONITORING

General Information:-  
Sampling Location : Village Kathli  
Sample Collected By : VTL Team  
Sampling Equipment used : RDS/FPS  
Instrument Code : VTL/RDS/FPS/01  
Coordinates : 21°43'26" & 83°16'24"  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 19/12/2023 To 20/12/2023  
Time of Monitoring : 09:45 TO 09:45 Hrs.  
Ambient Temperature (°C) : Min. 12°C Max. 25°C  
Surrounding Activity : Human, Vehicular & Other Act.  
Scope of Monitoring : Regulatory Requirement  
Method of Sampling : IS 5182  
Sampling Duration : 24 Hrs.  
Parameter Required : As per work order

S.No.	Parameters	Test Method	Results	Units	NAAQS 2009
1	Particulate Matter (as PM10)	IS:5182 (P- 23)-2006, RA. 2017	80.6	µg/m <sup>3</sup>	100
2	Particulate Matter (as PM2.5)	IS:5182 (P- 24)-2019	25.7	µg/m <sup>3</sup>	60
3	Nitrogen Dioxide (as NO2)	IS:5182 (P- 6)-2006, RA.2018	16.2	µg/m <sup>3</sup>	80
4	Sulphur Dioxide (as SO2)	IS:5182 (P- 2)-2001, RA. 2018	9.3	µg/m <sup>3</sup>	80

\*BLQ-Below Limit Of Quantification, \*\*LOQ-Limit Of Quantification

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## TEST REPORT

Sample Number : VTL/AA/05

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Village- Chhote Bhandar, Post- Bade Bhandar,  
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Report No. : VTL/A/2312230005/B  
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Sample Description : AMBIENT AIR QUALITY MONITORING

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Instrument Code : VTL/RDS/FPS/01  
Coordinates : 21°43'26" & 83°16'24"  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 19/12/2023 To 20/12/2023  
Time of Monitoring : 09:45 TO 09:45 Hrs.  
Ambient Temperature (°C) : Min. 12°C Max. 25°C  
Surrounding Activity : Human, Vehicular & Other Act.  
Scope of Monitoring : Regulatory Requirement  
Method of Sampling : IS :5182  
Sampling Duration : 24 Hrs.  
Parameter Required : As per work order

S.No.	Parameters	Test Method	Results	Units	NAAQS 2009
1	Carbon Monoxide (as CO)	Lab SOP no. VTL/STP/02:2022, STP-08	0.58	mg/m <sup>3</sup>	4
2	Mercury (as Hg)	Methods of air sampling and analysis, 3rd ed., 1988, Method No.317	*BLQ (**LOQ 0.5)	µg/m <sup>3</sup>	-

\*BLQ-Below Limit Of Quantification, \*\*LOQ-Limit Of Quantification

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## TEST REPORT



Sample Number : VTL/AA/07

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTL/A/2312230007/A  
Format No : 7.8 F-02  
Party Reference No : NIL  
Report Date : 29/12/2023  
Period of Analysis : 23/12/2023-29/12/2023  
Receipt Date : 23/12/2023

Sample Description : AMBIENT AIR QUALITY MONITORING

General Information:-  
Sampling Location : Truck Hopper  
Sample Collected By : VTL Team  
Sampling Equipment used : RDS/FPS  
Instrument Code : VTL/RDS/FPS/04  
Coordinates : --  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 19/12/2023 To 20/12/2023  
Time of Monitoring : 10:40 TO 10:40 Hrs.  
Ambient Temperature (°C) : Min. 12°C Max. 25°C  
Surrounding Activity : Human, Vehicular & Other Act.  
Scope of Monitoring : Regulatory Requirement  
Method of Sampling : IS :5182  
Sampling Duration : 24 Hrs.  
Parameter Required : As per work order

S.No.	Parameters	Test Method	Results	Units	NAAQS 2009
1	Particulate Matter (as PM10)	IS:5182 (P- 23)-2006, RA. 2017	66.9	µg/m <sup>3</sup>	100
2	Particulate Matter (as PM2.5)	IS:5182 (P- 24)-2019	37.3	µg/m <sup>3</sup>	60
3	Nitrogen Dioxide (as NO2)	IS:5182 (P- 6)-2006, RA.2018	18.7	µg/m <sup>3</sup>	80
4	Sulphur Dioxide (as SO2)	IS:5182 (P- 2)-2001, RA. 2018	9.8	µg/m <sup>3</sup>	80

\*BLQ-Below Limit Of Quantification, \*\*LOQ-Limit Of Quantification

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## TEST REPORT



Sample Number : VTL/AA/08

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTL/A/2312230008/A  
Format No : 7.8 F-02  
Party Reference No : NIL  
Report Date : 29/12/2023  
Period of Analysis : 23/12/2023-29/12/2023  
Receipt Date : 23/12/2023

Sample Description : AMBIENT AIR QUALITY MONITORING

General Information:-  
Sampling Location : Hydrobin Area  
Sample Collected By : VTL Team  
Sampling Equipment used : RDS/FPS  
Instrument Code : VTL/RDS/FPS/05  
Coordinates : --  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 19/12/2023 To 20/12/2023  
Time of Monitoring : 11:00 TO 11:00 Hrs.  
Ambient Temperature (°C) : Min 12°C Max. 25°C  
Surrounding Activity : Human, Vehicular & Other Act.  
Scope of Monitoring : Regulatory Requirement  
Method of Sampling : IS :5182  
Sampling Duration : 24 Hrs.  
Parameter Required : As per work order

S.No.	Parameters	Test Method	Results	Units	NAAQS 2009
1	Particulate Matter (as PM10)	IS:5182 (P- 23)-2006, RA. 2017	73.8	µg/m <sup>3</sup>	100
2	Particulate Matter (as PM2.5)	IS:5182 (P- 24)-2019	38.4	µg/m <sup>3</sup>	60
3	Nitrogen Dioxide (as NO2)	IS:5182 (P- 6)-2006, RA.2018	19.6	µg/m <sup>3</sup>	80
4	Sulphur Dioxide (as SO2)	IS:5182 (P- 2)-2001, RA. 2018	10.2	µg/m <sup>3</sup>	80

\*BLQ-Below Limit Of Quantification, \*\*LOQ-Limit Of Quantification

\*\*\*End of Report\*\*\*

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## TEST REPORT

Sample Number: VTL/FA/01  
Name & Address of the Party: M/s Adani Power Limited  
Village - Chhote Bhandar, Post - Bade  
Bandar, Tehsil Pussore, Dist- Raigarh  
496100 (Chhattisgarh)  
Sample Description: FLY ASH

Report No.: VTL/FA/2312230001  
Format No.: 7.8 F-01  
Party Reference No.: NIL  
Report Date: 29/12/2023  
Period of Analysis: 23/12/2320-  
29/12/2023  
Receipt Date: 23/12/2023  
Sampling Date: 19/12/2023  
Sampling Quantity: 250 gm.

S. No.	Parameter	Test-Method	Results	Unit
1.	Arsenic (as As)	BY AAS Method	BLQ	mg/kg
2.	Mercury (as Hg)	BY AAS Method	BLQ	mg/kg
3.	Chromium (as Cr)	BY AAS Method	0.54	mg/kg
4.	Lead (as Pb)	BY AAS Method	0.73	mg/kg
5.	Barium (as Ba)	BY AAS Method	0.30	mg/kg
6.	Cadmium (as Cd)	BY AAS Method	0.60	mg/kg
7.	Cobalt (as Co)	BY AAS Method	0.21	mg/kg
8.	Copper (as Cu)	BY AAS Method	0.54	mg/kg
9.	Fluoride (as F)	BY AAS Method	0.48	mg/kg
10.	Iron (as Fe)	BY AAS Method	0.61	mg/kg
11.	Mercury (as Hg)	BY AAS Method	0.26	mg/kg
12.	Manganese (as Mn)	BY AAS Method	0.19	mg/kg
13.	Nickel (as Ni)	BY AAS Method	0.27	mg/kg
14.	Zinc (as Zn)	BY AAS Method	0.38	mg/kg
15.	Silica (SiO <sub>2</sub> )	IS : 1727: 1967	55.00	%
16.	Ferric Oxide (Fe <sub>2</sub> O <sub>3</sub> )	IS : 1727: 1967	7.40	%
17.	Alumina Oxide (Al <sub>2</sub> O <sub>3</sub> )	IS : 1727: 1967	31.00	%
18.	Sulphuric Anhydride (SO <sub>3</sub> )	IS : 1727: 1967	0.28	%
19.	Sodium Oxide	IS : 1727: 1967	0.035	%
20.	Potassium Oxide	IS : 1727: 1967	0.053	%
21.	Calcium Oxide	IS : 1727: 1967	3.20	%
22.	Magnesia (MgO)	IS : 1727: 1967	0.81	%
23.	Titanium Dioxide (TiO <sub>2</sub> )	IS : 1727: 1967	0.08	%
24.	P <sub>2</sub> O <sub>5</sub>	IS : 1727: 1967	0.07	%

Checked By  
*R. Mishra*



RK Yadav  
Lab Incharge  
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## TEST REPORT

**Sample Number:** VTL/BA/01  
**Name & Address of the Party:** M/s Adani Power Limited  
Village - Chhote Bhandar, Post - Bade  
Bandar, Tehsil Pussore, Dist- Raigarh  
496100 (Chhattisgarh)  
**Sample Description:** Bottom ASH

**Report No.:** VTL/BA/2312230001  
**Format No.:** 7.8 F-01  
**Party Reference No.:** NIL  
**Report Date:** 29/12/2023  
**Period of Analysis:** 23/12/2320-  
29/12/2023  
**Receipt Date:** 23/12/2023  
**Sampling Date:** 19/12/2023  
**Sampling Quantity:** 250 gm.

S. No.	Parameter	Test-Method	Results	Unit
1.	Arsenic (as As)	BY AAS Method	BLQ	mg/kg
2.	Mercury (as Hg)	BY AAS Method	BLQ	mg/kg
3.	Chromium (as Cr)	BY AAS Method	12.16	mg/kg
4.	Lead (as Pb)	BY AAS Method	15.78	mg/kg
5.	Barium (as Ba)	BY AAS Method	0.49	mg/kg
6.	Cadmium (as Cd)	BY AAS Method	10.32	mg/kg
7.	Cobalt (as Co)	BY AAS Method	0.17	mg/kg
8.	Copper (as Cu)	BY AAS Method	13.78	mg/kg
9.	Fluoride (as F)	BY AAS Method	0.49	mg/kg
10.	Iron (as Fe)	BY AAS Method	0.66	mg/kg
11.	Mercury (as Hg)	BY AAS Method	0.31	mg/kg
12.	Manganese (as Mn)	BY AAS Method	0.27	mg/kg
13.	Nickel (as Ni)	BY AAS Method	0.33	mg/kg
14.	Zinc (as Zn)	BY AAS Method	0.85	mg/kg
15.	Silica (SiO <sub>2</sub> )	IS : 1727: 1967	56.00	%
16.	Ferric Oxide (Fe <sub>2</sub> O <sub>3</sub> )	IS : 1727: 1967	4.82	%
17.	Alumina Oxide (Al <sub>2</sub> O <sub>3</sub> )	IS : 1727: 1967	32.54	%
18.	Sulphuric Anhydride (SO <sub>3</sub> )	IS : 1727: 1967	0.28	%
19.	Sodium Oxide	IS : 1727: 1967	0.17	%
20.	Potassium Oxide	IS : 1727: 1967	0.22	%
21.	Calcium Oxide	IS : 1727: 1967	3.60	%
22.	Magnesia (MgO)	IS : 1727: 1967	0.91	%
23.	Titanium Dioxide (TiO <sub>2</sub> )	IS : 1727: 1967	0.18	%
24.	P2O5	IS : 1727: 1967	0.28	%

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## TEST REPORT



Sample Number : VTL/S/01

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTL/S/2312230001/A  
Format No : 7.8 F-03  
Party Reference No : NIL  
Report Date : 29/12/2023  
Period of Analysis : 23/12/2023-29/12/2023  
Receipt Date : 23/12/2023

Sample Description : Stack Emission Monitoring

**General Information:-**

Sampling Location : TPP  
Sample Collected By : VTL Team  
Date of Sampling : 18/12/2023  
Sampling duration (Minutes) : 42 min. (14:15 to 14:57 hrs.)  
Stack attached to : TPP  
Make of stack : RCC  
Diameter of stack(m) : 7.5 m  
Height of stack(m) : 275 m  
Instrument calibration status : Calibrated  
Meteorological Condition : Clear Sky  
Ambient Temperature - Ta (°C) : 30°C  
Temperature of Stack Gases - Ts (°C) : 129°C  
Velocity of Stack Gases (m/sec.) : 17.22  
Flow rate of PM (LPM) : 24  
Flow rate of Gas (LPM) : 2.0  
Sampling condition : OK  
Protocol used : IS 11255 & USEPA  
Coordinates : --

S.No.	Parameters	Test Method	Results	Units	Limits
1	Particulate Matter (PM)	IS: 11255 (P-1) : 1985, RA 2019	40.44	mg/Nm <sup>3</sup>	50
2	Sulphur Dioxide (SO <sub>2</sub> )	IS: 11255(P- 2): 1985, RA.2019	719.0	mg/Nm <sup>3</sup>	200
3	Oxide of Nitrogen (NO <sub>2</sub> )	IS-11255 (P-7), RA 2017	257.00	mg/Nm <sup>3</sup>	450
4	Mercury (Hg)	USEPA 29: 1996	*BLQ(**LOQ-0.001)	mg/Nm <sup>3</sup>	0.03

\*BLQ= Below Limit Of Quantification, \*\*LOQ= Limit Of Quantification

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## TEST REPORT



Sample Number : VTL/S/02

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTL/S/2312230002/A  
Format No : 7.8 F-03  
Party Reference No : Nil  
Report Date : 29/12/2023  
Period of Analysis : 23/12/2023-29/12/2023  
Receipt Date : 23/12/2023

Sample Description : Stack Emission Monitoring

**General Information:-**

Sampling Location : DG Set -03 1500 KVA  
Sample Collected By : VTL Team  
Date of Sampling : 18/12/2023  
Sampling duration (Minutes) : 33 min. (16:10 to 16:43 hrs.)  
Stack attached to : DG Set  
Make of stack : MS  
Diameter of stack(m) : 0.7 m  
Height of stack(m) : 30 m  
Instrument calibration status : Calibrated  
Meteorological Condition : Clear Sky  
Ambient Temperature - Ta (°C) : 27°C  
Temperature of Stack Gases - Ts (°C) : 95°C  
Velocity of Stack Gases (m/sec.) : 8.73  
Flow rate of PM (LPM) : 30  
Flow rate of Gas (LPM) : 2.0  
Sampling condition : OK  
Protocol used : IS 11255 & USEPA  
Coordinates : -

S.No.	Parameters	Test Method	Results	Units	Limits
1	Particulate Matter (PM)	IS: 11255 (P-1) 1985, RA 2019	62.16	mg/Nm3	75
2	Sulphur Dioxide (SO <sub>2</sub> )	IS: 11255(P- 2): 1985, RA 2019	84.00	mg/Nm3	-
3	Total Hydrocarbon (THC)	USEPA 18: 1996	15.07	mg/Nm3	100
4	Oxide of Nitrogen (NO <sub>2</sub> )	IS-11255 (P-7), RA 2017	391.00	ppmv	710

\*BLO= Below Limit Of Quantification, \*\*LOQ= Limit Of Quantification

\*\*\*End of Report\*\*\*

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## TEST REPORT

**Sample Number:** VTL/CA/01  
**Name & Address of the Party:** M/s Adani Power Limited  
Village - Chhote Bhandar, Post - Bade  
Bandar, Tehsil Pussore, Dist- Raigarh  
496100 (Chhattisgarh)  
**Sample Description:** Coal

**Report No.:** VTL/C/2312230001  
**Format No.:** 7.8 F-01  
**Party Reference No.:** NIL  
**Report Date:** 29/12/2023  
**Period of Analysis:** 23/12/2320-  
29/12/2023  
**Receipt Date:** 23/12/2023  
**Sampling Date:** 19/12/2023  
**Sampling Quantity:** 250 gm.

S. No.	Parameter	Test-Method	Results	Unit
1.	Arsenic (as As)	BY AAS Method	BLQ	mg/kg
2.	Mercury (as Hg)	BY AAS Method	BLQ	mg/kg
3.	Chromium (as Cr)	BY AAS Method	0.74	mg/kg
4.	Lead (as Pb)	BY AAS Method	0.61	mg/kg



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# TEST REPORT



## VIBRANT

Sample Number: VTL/AN/01

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist. - Raigarh 496100 Chhattisgarh

Report No. : VTL/N/2312230001/A  
Format No : 7.8 F-04  
Party Reference No : NIL  
Report Date : 29/12/2023  
Receipt Date : 23/12/2023  
Sampling Duration : 24 Hrs.  
Sample Collected : VTL Team  
Instrument : Calibrated  
Calibration Status :

Sample Description : Ambient Noise Level Monitoring  
Scope of Monitoring : Regulatory Requirement  
Protocol Used : IS 9989  
Instrument Used : SLM

### General Information:-

Sampling Location : Bade Bhandar  
Instrument Code : VTL/SLM/01  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 18/12/2023 To 19/12/2023  
Time of Monitoring : 06:00 TO 06:00 Hrs.  
Ambient Temperature (°C) : Min. 12°C Max. 26°C  
Surrounding Activity : Human, Vehicular & Plant Act.  
Parameter Required : As per work order  
Coordinates : NA

S.No.	Test Parameters	Protocol	Test Result dB(A)	
			Day Time	Night Time
1	Leq	IS 9989 - 1981 RA-2020	54.0	42.5

### Ambient Noise Quality Standards as per Noise Pollution (Regulation and Control) Rules, 2000

Area Code	Category of Area/Zone	Limits in dB(A) Leq*	
		Day Time	Night Time
A	Industrial area	75	70
B	Commercial area	65	55
C	Residential area	55	45
D	Silence Zone	50	40

- Day Time is from 6.00 AM to 10.00 PM.
  - Night Time is reckoned between 10.00 PM to 6.00 AM.
  - Silence Zone is defined as an area up to 100 m around premises of Hospitals, Educational and Courts. Use of vehicle horn, Loudspeaker and bursting of crackers is banned in these zones.
- Note: Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply

\*\*\*End of Report\*\*\*

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## TEST REPORT



Sample Number: VTL/AN/02

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTL/N/2312230002/A  
Format No : 7.8 F-04  
Party Reference No : NIL  
Report Date : 29/12/2023  
Receipt Date : 23/12/2023  
Sampling Duration : 24 Hrs.  
Sample Collected : VTL Team  
Instrument : Calibrated  
Calibration Status :

Sample Description : Ambient Noise Level Monitoring  
Scope of Monitoring : Regulatory Requirement  
Protocol Used : IS 9989  
Instrument Used : SLM

### General Information:-

Sampling Location : Chote Bhandar  
Instrument Code : VTL/SLM/02  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 18/12/2023 To 19/12/2023  
Time of Monitoring : 06:00 TO 06:00 Hrs.  
Ambient Temperature (°C) : Min. 12°C Max. 26°C  
Surrounding Activity : Human, Vehicular & Plant Act.  
Parameter Required : As per work order  
Coordinates : NA

S.No.	Test Parameters	Protocol	Test Result dB(A)	
			Day Time	Night Time
1	Leq	IS 9989 - 1981 RA:2020	50.2	37.8

### Ambient Noise Quality Standards as per Noise Pollution (Regulation and Control) Rules, 2000

Area Code	Category of Area/Zone	Limits in dB(A) Leq*	
		Day Time	Night Time
A	Industrial area	75	70
B	Commercial area	65	55
C	Residential area	55	45
D	Silence Zone	50	40

1. Day Time is from 6.00 AM to 10.00 PM.

2. Night Time is reckoned between 10.00 PM to 6.00 AM.

3. Silence Zone is defined as an area up to 100 m around premises of Hospitals, Educational and Courts. Use of vehicle horn, Loudspeaker and bursting of crackers is banned in these zones.

Note: Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply

\*\*\*End of Report\*\*\*

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## TEST REPORT



Sample Number: VTL/AN/03

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTL/N/2312230003/A  
Format No : 7.8 F-04  
Party Reference No : NIL  
Report Date : 29/12/2023  
Receipt Date : 23/12/2023  
Sampling Duration : 24 Hrs.  
Sample Collected : VTL Team  
Instrument : Calibrated  
Calibration Status

Sample Description : Ambient Noise Level Monitoring  
Scope of Monitoring : Regulatory Requirement  
Protocol Used : IS 9989  
Instrument Used : SLM

### General Information:-

Sampling Location : Near OHC  
Instrument Code : VTL/SLM/03  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 18/12/2023 To 19/12/2023  
Time of Monitoring : 06:00 TO 06:00 Hrs.  
Ambient Temperature (°C) : Min- 12°C Max. 26°C  
Surrounding Activity : Human, Vehicular & Plant Act.  
Parameter Required : As per work order  
Coordinates : NA

S.No.	Test Parameters	Protocol	Test Result dB(A)	
			Day Time	Night Time
1	Leq	IS 9989 - 1981 RA-2020	60.4	46.0

### Ambient Noise Quality Standards as per Noise Pollution (Regulation and Control) Rules, 2000

Area Code	Category of Area/Zone	Limits in dB(A) Leq*	
		Day Time	Night Time
A	Industrial area	75	70
B	Commercial area	65	55
C	Residential area	55	45
D	Silence Zone	50	40

1. Day Time is from 6.00 AM to 10.00 PM.

2. Night Time is reckoned between 10.00 PM to 6.00 AM.

3. Silence Zone is defined as an area up to 100 m around premises of Hospitals, Educational and Courts. Use of vehicle horn, Loudspeaker and bursting of crackers is banned in these zones.

Note: Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply

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# TEST REPORT



## VIBRANT

Sample Number: VTL/AN/04

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTL/N/2312230004/A  
Format No : 7.8 F-04  
Party Reference No : NIL  
Report Date : 29/12/2023  
Receipt Date : 23/12/2023  
Sampling Duration : 24 Hrs.  
Sample Collected : VTL Team  
Instrument : Calibrated  
Calibration Status

Sample Description : Ambient Noise Level Monitoring  
Scope of Monitoring : Regulatory Requirement  
Protocol Used : IS 9989  
Instrument Used : SLM

### General Information:-

Sampling Location : RO- MD  
Instrument Code : VTL/SLM/04  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 18/12/2023 To 19/12/2023  
Time of Monitoring : 06:00 TO 06:00 Hrs.  
Ambient Temperature (°C) : Min. 12°C Max. 26°C  
Surrounding Activity : Human, Vehicular & Plant Act.  
Parameter Required : As per work order  
Coordinates : NA

S.No.	Test Parameters	Protocol	Test Result dB(A)	
			Day Time	Night Time
1	Leq	IS 9989 - 1981 RA:2020	54.3	42.0

### Ambient Noise Quality Standards as per Noise Pollution (Regulation and Control) Rules, 2000

Area Code	Category of Area/Zone	Limits in dB(A) Leq*	
		Day Time	Night Time
A	Industrial area	75	70
B	Commercial area	65	55
C	Residential area	55	45
D	Silence Zone	50	40

1. Day Time is from 6.00 AM to 10.00 PM.  
2. Night Time is reckoned between 10.00 PM to 6.00 AM.  
3. Silence Zone is defined as an area up to 100 m around premises of Hospitals, Educational and Courts. Use of vehicle horn, Loudspeaker and bursting of crackers is banned in these zones.  
Note: Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply

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# TEST REPORT



Sample Number: VTL/AN/05

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTL/N/2312230005/A  
Format No : 7.8 F-04  
Party Reference No : NIL  
Report Date : 29/12/2023  
Receipt Date : 23/12/2023  
Sampling Duration : 24 Hrs.  
Sample Collected : VTL Team  
Instrument : Calibrated  
Calibration Status :

Sample Description : Ambient Noise Level Monitoring  
Scope of Monitoring : Regulatory Requirement  
Protocol Used : IS 9989  
Instrument Used : SLM

### General Information:-

Sampling Location : Village - Kathli  
Instrument Code : VTL/SLM/01  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 19/12/2023 To 20/12/2023  
Time of Monitoring : 06:00 TO 06:00 Hrs.  
Ambient Temperature (°C) : Min. 12°C Max. 25°C  
Surrounding Activity : Human, Vehicular & Plant Act.  
Parameter Required : As per work order  
Coordinates : NA

S.No.	Test Parameters	Protocol	Test Result dB(A)	
			Day Time	Night Time
1	Leq	IS 9989 - 1981 RA:2020	53.0	40.6

### Ambient Noise Quality Standards as per Noise Pollution (Regulation and Control) Rules, 2000

Area Code	Category of Area/Zone	Limits in dB(A) Leq*	
		Day Time	Night Time
A	Industrial area	75	70
B	Commercial area	65	55
C	Residential area	55	45
D	Silence Zone	50	40

1. Day Time is from 6.00 AM to 10.00 PM.  
2. Night Time is reckoned between 10.00 PM to 6.00 AM.  
3. Silence Zone is defined as an area up to 100 m around premises of Hospitals, Educational and Courts. Use of vehicle horn, Loudspeaker and bursting of crackers is banned in these zones.  
Note: Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply

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# TEST REPORT



Sample Number : VTL/AN/06

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTL/N/2312230006/A  
Format No : 7.8 F-04  
Party Reference No : NIL  
Report Date : 29/12/2023  
Receipt Date : 23/12/2023  
Sampling Duration : 24 Hrs.  
Sample Collected : VTL Team  
Instrument : Calibrated  
Calibration Status

Sample Description : Ambient Noise Level Monitoring  
Scope of Monitoring : Regulatory Requirement  
Protocol Used : IS 9989  
Instrument Used : SLM

### General Information:-

Sampling Location : Amlh Bhavan  
Instrument Code : VTL/SLM/02  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 19/12/2023 To 20/12/2023  
Time of Monitoring : 06:00 TO 06:00 Hrs.  
Ambient Temperature (°C) : Min. 12°C Max. 25°C  
Surrounding Activity : Human, Vehicular & Plant Act.  
Parameter Required : As per work order  
Coordinates : NA

S.No.	Test Parameters	Protocol	Test Result dB(A)	
			Day Time	Night Time
1	Leq	IS 9989 - 1981 RA:2020	54.1	39.6

### Ambient Noise Quality Standards as per Noise Pollution (Regulation and Control) Rules, 2000

Area Code	Category of Area/Zone	Limits in dB(A) Leq*	
		Day Time	Night Time
A	Industrial area	75	70
B	Commercial area	65	55
C	Residential area	55	45
D	Silence Zone	50	40

1. Day Time is from 6.00 AM to 10.00 PM.  
2. Night Time is reckoned between 10.00 PM to 6.00 AM.  
3. Silence Zone is defined as an area up to 100 m around premises of Hospitals, Educational and Courts. Use of vehicle horn, Loudspeaker and bursting of crackers is banned in these zones.  
Note: Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply

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# TEST REPORT



TC-11227

Sample Number: VTL/AN/07

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTL/N/2312230007/A  
Format No : 7.8 F-04  
Party Reference No : NIL  
Report Date : 29/12/2023  
Receipt Date : 23/12/2023  
Sampling Duration : 24 Hrs.  
Sample Collected : VTL Team  
Instrument : Calibrated  
Calibration Status

Sample Description : Ambient Noise Level Monitoring  
Scope of Monitoring : Regulatory Requirement  
Protocol Used : IS 9989  
Instrument Used : SLM

### General Information:-

Sampling Location : Truck Hopper  
Instrument Code : VTL/SLM/03  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 19/12/2023 To 20/12/2023  
Time of Monitoring : 06:00 TO 06:00 Hrs.  
Ambient Temperature (°C) : Min. 12°C Max. 25°C  
Surrounding Activity : Human, Vehicular & Plant Act.  
Parameter Required : As per work order  
Coordinates : NA

S.No.	Test Parameters	Protocol	Test Result dB(A)	
			Day Time	Night Time
1	Leq	IS 9989 - 1981 RA:2020	62.7	47.6

### Ambient Noise Quality Standards as per Noise Pollution (Regulation and Control) Rules, 2000

Area Code	Category of Area/Zone	Limits in dB(A) Leq*	
		Day Time	Night Time
A	Industrial area	75	70
B	Commercial area	65	55
C	Residential area	55	45
D	Silence Zone	50	40

1. Day Time is from 6.00 AM to 10.00 PM.

2. Night Time is reckoned between 10.00 PM to 6.00 AM.

3. Silence Zone is defined as an area up to 100 m around premises of Hospitals, Educational and Courts. Use of vehicle horn, Loudspeaker and bursting of crackers is banned in these zones.

Note: Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply

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## TEST REPORT



Sample Number: VTL/AN/08

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTL/N/2312230008/A  
Format No : 7.8 F-04  
Party Reference No : NIL  
Report Date : 29/12/2023  
Receipt Date : 23/12/2023  
Sampling Duration : 24 Hrs.  
Sample Collected : VTL Team  
Instrument : Calibrated  
Calibration Status :

Sample Description : Ambient Noise Level Monitoring  
Scope of Monitoring : Regulatory Requirement  
Protocol Used : IS 9989  
Instrument Used : SLM

### General Information:-

Sampling Location : Hydrobin Area  
Instrument Code : VTL/SLM/04  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 19/12/2023 To 20/12/2023  
Time of Monitoring : 06:00 TO 06:00 Hrs.  
Ambient Temperature (°C) : Min. 12°C Max. 25°C  
Surrounding Activity : Human, Vehicular & Plant Act.  
Parameter Required : As per work order  
Coordinates : NA

S.No.	Test Parameters	Protocol	Test Result dB(A)	
			Day Time	Night Time
1	Leq	IS 9989 - 1981 RA:2020	58.6	49.0

### Ambient Noise Quality Standards as per Noise Pollution (Regulation and Control) Rules, 2000

Area Code	Category of Area/Zone	Limits in dB(A) Leq*	
		Day Time	Night Time
A	Industrial area	75	70
B	Commercial area	65	55
C	Residential area	55	45
D	Silence Zone	50	40

1. Day Time is from 6.00 AM to 10.00 PM.

2. Night Time is reckoned between 10.00 PM to 6.00 AM.

3. Silence Zone is defined as an area up to 100 m around premises of Hospitals, Educational and Courts. Use of vehicle horn, Loudspeaker and bursting of crackers is banned in these zones.

Note: Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply

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Sample Number : VTLW/01

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist. - Raigarh 496100 Chhattisgarh

Sample Description : Water Sample  
Sampling Location : Amli Bhavan  
Sample Collected By : VTL Team  
Preservation : Suitable Preservation  
Method of sampling : IS :3025

**TEST REPORT**



ULR No. : TC1122723000000508F  
Report No. : VTLW/2312230001/A  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 29/12/2023  
Period of Analysis : 23/12/2023-29/12/2023  
Receipt Date : 23/12/2023  
Sampling Date : 19/12/2023  
Sampling Type : Grab  
Sample Quantity : 2 Ltr.  
Coordinates : NA

S.No.	Test Parameters	Test Method	Results	Unite	IS:10500-2012	
					Acceptable Limit	Permissible Limit
1	pH (at 25°C)	IS : 3025 (P-11) : 2022	7.67	--	6.5 to 8.5	No Relaxation
2	Turbidity	IS : 3025 (P-10)1984, RA 2017	*BLQ(**LOQ-1.0)	NTU	1	5
3	Total Hardness (as CaCO3)	IS: 3025 (P-21): 2009, RA 2019	198.00	mg/l	200	800
4	Calcium (as Ca)	IS: 3025 (P- 40): 1991 RA 2019	48.15	mg/l	75	200
5	Total Alkalinity (as CaCO3)	IS: 3025 (P-23): 1986, RA 2019	170.21	mg/l	200	600
6	Chloride (as Cl)	IS: 3025 (P-32): 1988, RA 2019	114.00	mg/l	250	1000
7	Magnesium (as Mg)	IS: 3025 (P-46): 1994, RA 2019	18.92	mg/l	30	100
8	Total Dissolved Solids	IS :3025 (P-16): 1984, RA 2017	462.00	mg/l	500	2000
9	Sulphate (as SO4)	IS: 3025 (P-24): 1986, RA 2022	31.13	mg/l	200	400
10	Fluoride (as F)	APHA 23rd Edition ,4500FD :2017	0.49	mg/l	1.0	1.5
11	Nitrate (as NO3)	IS: 3025 (P-34): 1988	22.00	mg/l	45.0	No Relaxation
12	Iron (as Fe)	APHA 23rd Edition , 3111B,2017	0.27	mg/l	1.0	No Relaxation
13	Aluminium (as Al)	IS 3025 (P-55): 2003, RA 2019	*BLQ(**LOQ-0.03 )	mg/l	0.03	0.2
14	Boron (as B)	APHA 23rd Edition, 4500B,2017	*BLQ(**LOQ-0.2)	mg/l	0.5	1.0
15	Phenolic Compounds (C6H5OH)	APHA 23rd Edition 5530C: 2017	*BLQ(**LOQ-0.001)	mg/l	0.001	0.002
16	Zinc (as Zn)	APHA 23rd Edition,3030D, 3113 B , 2017	0.36	mg/l	5.0	15.0
17	Copper (as Cu)	APHA 23rd Edition 3111B 2017	*BLQ(**LOQ-0.02)	mg/l	0.05	1.5



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# TEST REPORT



## VIBRANT

Sample Number : VTLW/01

ULR No. : TC1122723000000508F

Report No. : VTLW/2312230001/A

S.No.	Test Parameters	Test Method	Results	Units	IS:10500-2012	
					Acceptable Limit	Permissible Limit
18	Manganese (as Mn)	APHA 23rd Edition, 3030D, 3111 B, 2017	*BLQ(**LOQ-0.05)	mg/l	0.1	0.3
19	Selenium (as Se)	APHA 23rd Edition, 3114C, 2017	*BLQ(**LOQ-0.005)	mg/l	0.01	No Relaxation
20	Arsenic (as As)	APHA 23rd Edition, 3114C, 2017	*BLQ(**LOQ-0.005)	mg/l	0.01	0.05
21	Total Coliform	IS : 15185 : 2016	Absent	per 100 ml	Shall not be detectable in any 100 ml sample	--
22	E. Coli	IS : 15185 : 2016	Absent	per 100 ml	Shall not be detectable in any 100 ml sample	--
23	Ammonia (as N)	IS-3025 (P-34)- 1986, Sec. RA :2022	*BLQ(**LOQ-0.3)	mg/l	0.5	No Relaxation
24	Sulphide	IS 3025 (P-29) :1986 RA 2019 Idometric	*BLQ(**LOQ-0.1)	mg/l	0.05	No Relaxation
25	Free Residual Chlorine	IS 3025 (P-26):2021	*BLQ(**LOQ-0.2)	mg/l	0.2	1.0
26	Faecal Coliform	IS :1622 :1981 RA 2019	Absent	MPN	-	-

\*BLQ-Below Limit Of Quantification, \*\*LOQ- Limit of Quantification

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# TEST REPORT

## VIBRANT

Sample Number : VTLW/01

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTLW/2312230001/B  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 29/12/2023  
Period of Analysis : 23/12/2023-29/12/2023  
Receipt Date : 23/12/2023  
Sampling Date : 19/12/2023  
Sampling Type : Grab  
Sample Quantity : 2 Ltr.  
Coordinates : NA

Sample Description : Water Sample  
Sampling Location : Amli Bhavan  
Sample Collected By : VTL Team  
Preservation : Suitable Preservation  
Method of sampling : IS :3025

S.No.	Test Parameters	Test Method	Results	Units	IS:10500-2012	
					Acceptable Limit	Permissible Limit
1	Colour	IS : 3025:(P-4)1983. :RA 2017	*BLQ(**LOQ-5.0)	Hazen	5	15
2	Odour	IS : 3025 (P-5) : RA 2018	Agreeable	—	Agreeable	Agreeable
3	Taste	IS :3025 (P-8): 1984 RA 2017	Agreeable	—	Agreeable	Agreeable
4	Cyanide (as CN)	APHA 23rd Edition .4500D.2017	*BLQ(**LOQ-5.0)	mg/l	0.05	No Relaxation
5	Mineral Oil	IS 3025 (P-39) 1989	*BLQ(**LOQ-0.05)	mg/l	0.5	No Relaxation
6	Anionic Detergents (as MBAS)	APHA 23rd Edition . 5540C 2017	*BLQ(**LOQ-0.05)	mg/l	0.2	1.0
7	Barium as Ba	APHA 23rd Edition,3111B 2017	*BLQ(**LOQ-0.02)	mg/l	0.7	No relaxation

\*BLQ-Below Limit Of Quantification, \*\*LOQ- Limit of Quantification

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# TEST REPORT



Sample Number : VTLW/02

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist- Raigarh 496100 Chhattisgarh

Sample Description : Water Sample  
Sampling Location : Village - Kathli  
Sample Collected By : VTL Team  
Preservation : Suitable Preservation  
Method of sampling : IS :3025

ULR No. : TC112272300000509F  
Report No. : VTLW/2312230002/A  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 29/12/2023  
Period of Analysis : 23/12/2023-29/12/2023  
Receipt Date : 23/12/2023  
Sampling Date : 19/12/2023  
Sampling Type : Grab  
Sample Quantity : 2 Ltr.  
Coordinates : NA

S.No.	Test Parameters	Test Method	Results	Units	IS:10500-2012	
					Acceptable Limit	Permissible Limit
1	pH (at 25°C)	IS : 3025 (P-11) : 2022	7.63	--	6.5 to 8.5	No Relaxation
2	Turbidity	IS : 3025 (P-10):1984, RA 2017	*BLQ(**LOQ-1.0)	NTU	1	5
3	Total Hardness (as CaCO3)	IS: 3025 (P-21): 2009, RA 2019	173.00	mg/l	200	600
4	Calcium (as Ca)	IS: 3025 (P- 40): 1991 RA 2019	52.00	mg/l	75	200
5	Total Alkalinity (as CaCO3)	IS: 3025 (P-23): 1986, RA 2019	164.36	mg/l	200	600
6	Chloride (as Cl)	IS: 3025 (P-32): 1988, RA 2019	115.82	mg/l	250	1000
7	Magnesium (as Mg)	IS: 3025 (P-46): 1994, RA 2019	10.51	mg/l	30	100
8	Total Dissolved Solids	IS :3025 (P-18): 1984, RA 2017	443.00	mg/l	500	2000
9	Sulphate (as SO4)	IS: 3025 (P-24): 1986, RA 2022	34.55	mg/l	200	400
10	Fluoride (as F)	APHA 23rd Edition ,4500FD 2017	0.50	mg/l	1.0	1.5
11	Nitrate (as NO3)	IS: 3025 (P-34): 1988	22.00	mg/l	45.0	No Relaxation
12	Iron (as Fe)	APHA 23rd Edition , 3111B,2017	0.21	mg/l	1.0	No Relaxation
13	Aluminium (as Al)	IS 3025 (P-55): 2003, RA 2019	*BLQ(**LOQ-0.03 )	mg/l	0.03	0.2
14	Boron (as B)	APHA 23rd Edition, 4500B,2017	*BLQ(**LOQ-0.2)	mg/l	0.5	1.0
15	Phenolic Compounds (C6H5OH)	APHA 23rd Edition 5530C: 2017	*BLQ(**LOQ-0.001)	mg/l	0.001	0.002
16	Zinc (as Zn)	APHA 23rd Edition,3030D, 3113 B , 2017	0.37	mg/l	5.0	15.0
17	Copper (as Cu)	APHA 23rd Edition 3111B 2017	*BLQ(**LOQ-0.02)	mg/l	0.05	1.5



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# TEST REPORT



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Sample Number: VTLW/02

ULR No. : TC112272300000509F

Report No. : VTLW/2312230002/A

S.No.	Test Parameters	Test Method	Results	Units	IS:10500-2012	
					Acceptable Limit	Permissible Limit
18	Manganese (as Mn)	APHA 23rd Edition, 3030D, 3111 B. 2017	*BLQ(**LOQ-0.05)	mg/l	0.1	0.3
19	Selenium (as Se)	APHA 23rd Edition, 3114C, 2017	*BLQ(**LOQ-0.005)	mg/l	0.01	No Relaxation
20	Arsenic (as As)	APHA 23rd Edition, 3114C, 2017	*BLQ(**LOQ-0.005)	mg/l	0.01	0.05
21	Total Coliform	IS : 15185 : 2016	Absent	per 100 ml	Shall not be detectable in any 100 ml sample	--
22	E. Coli	IS : 15185 : 2016	Absent	per 100 ml	Shall not be detectable in any 100 ml sample	--
23	Ammonia (as N)	IS-3025 (P-34)- 1986, Sec. RA 2022	*BLQ(**LOQ-0.3)	mg/l	0.5	No Relaxation
24	Sulphide	IS 3025 (P-29) :1986 RA 2019 Idometric	*BLQ(**LOQ-0.1)	mg/l	0.05	No Relaxation
25	Free Residual Chlorine	IS 3025 (P-26):2021	*BLQ(**LOQ-0.2)	mg/l	0.2	1.0
26	Faecal Coliform	IS :1622 :1981 RA 2019	Absent	MPN	-	-

\*BLQ-Below Limit Of Quantification, \*\*LOQ- Limit of Quantification

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**Vibrant Techno Lab Pvt. Ltd.**

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# TEST REPORT

## VIBRANT

Exp. Sample Number: VTLW/02

Name & Address of the Party : M/s Adani Power Limited  
 Village- Chhote Bhandar, Post- Bade Bhandar,  
 Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTLW/2312230002/B  
 Format No : 7.8 F-01  
 Party Reference No : NIL  
 Report Date : 29/12/2023  
 Period of Analysis : 23/12/2023-29/12/2023  
 Receipt Date : 23/12/2023  
 Sampling Date : 19/12/2023  
 Sampling Type : Grab  
 Sample Quantity : 2 Ltr.  
 Coordinates : NA

Sample Description : Water Sample  
 Sampling Location : Village - Kathli  
 Sample Collected By : VTL Team  
 Preservation : Suitable Preservation  
 Method of sampling : IS :3025

S.No.	Test Parameters	Test Method	Results	Units	IS:10500-2012	
					Acceptable Limit	Permissible Limit
1	Colour	IS : 3025:(P-4)1983, RA 2017	*BLQ(**LOQ-5.0)	Hazen	5	15
2	Odour	IS : 3025 (P-5) : RA 2018	Agreeable	-	Agreeable	Agreeable
3	Taste	IS :3025 (P-8), 1984 RA 2017	Agreeable	-	Agreeable	Agreeable
4	Cyanide (as CN)	APHA 23rd Edition ,4500D,2017	*BLQ(**LOQ-5.0)	mg/l	0.05	No Relaxation
5	Mineral Oil	IS 3025 (P-39) 1989	*BLQ(**LOQ-0.05)	mg/l	0.5	No Relaxation
6	Anionic Detergents (as MBAS)	APHA 23rd Edition , 5540C 2017	*BLQ(**LOQ-0.05)	mg/l	0.2	1.0
7	Barium as Ba	APHA 23rd Edition,3111B 2017	*BLQ(**LOQ-0.02)	mg/l	0.7	No relaxation

\*BLQ-Below Limit Of Quantification, \*\*LOQ- Limit of Quantification

\*\*\*End of Report\*\*\*

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TEST REPORT

Sample Number : VTLW/03

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTLW/2312230003/B

Format No : 7.8 F-01

Party Reference No : NIL

Report Date : 29/12/2023

Period of Analysis : 23/12/2023-29/12/2023

Receipt Date : 23/12/2023

Sampling Date : 19/12/2023

Sampling Type : Grab

Sample Quantity : 2 Ltr.

Coordinates : NA

Sample Description : Water Sample  
Sampling Location : Chote Bhandar  
Sample Collected By : VTL Team  
Preservation : Suitable Preservation  
Method of sampling : IS :3025

S.No.	Test Parameters	Test Method	Results	Units	IS:10500-2012	
					Acceptable Limit	Permissible Limit
1	Colour	IS : 3025 (P-4)1983, :RA 2017	*BLQ(**LOQ-5.0)	Hazen	5	15
2	Odour	IS : 3025 (P-5) : RA 2018	Agreeable	-	Agreeable	Agreeable
3	Taste	IS :3025 (P-5): 1984 RA 2017	Agreeable	-	Agreeable	Agreeable
4	Cyanide (as CN)	APHA 23rd Edition ,4500D,2017	*BLQ(**LOQ-5.0)	mg/l	0.05	No Relaxation
5	Mineral Oil	IS 3025 (P-39) 1988	*BLQ(**LOQ-0.05)	mg/l	0.5	No Relaxation
6	Anionic Detergents (as MBAS)	APHA 23rd Edition , 5540C 2017	*BLQ(**LOQ-0.05)	mg/l	0.2	1.0
7	Barium as Ba	APHA 23rd Edition,3111B 2017	*BLQ(**LOQ-0.02)	mg/l	0.7	No relaxation

\*BLQ-Below Limit Of Quantification, \*\*LOQ- Limit of Quantification

\*\*\*End of Report\*\*\*

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**VIBRANT**

\*Exp Sample Number\* VTLW/04

**TEST REPORT**



TC-11227

**Name & Address of the Party** : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

**Sample Description** : Water Sample  
**Sampling Location** : Bade Bhandar  
**Sample Collected By** : VTL Team  
**Preservation** : Suitable Preservation  
**Method of sampling** : IS :3025

**ULR No.** : TC1122723000000511F  
**Report No.** : VTLW/2312230004/A  
**Format No** : 7.8 F-01  
**Party Reference No** : NIL  
**Report Date** : 29/12/2023  
**Period of Analysis** : 23/12/2023-29/12/2023  
**Receipt Date** : 23/12/2023  
**Sampling Date** : 19/12/2023  
**Sampling Type** : Grab  
**Sample Quantity** : 2 Ltr.  
**Coordinates** : NA

S.No.	Test Parameters	Test Method	Results	Units	IS:10500-2012	
					Acceptable Limit	Permissible Limit
1	pH (at 25°C)	IS : 3025 (P-11) : 2022	7.82	--	6.5 to 8.5	No Relaxation
2	Turbidity	IS : 3025 (P-10):1984, RA 2017	*BLQ(**LOQ-1.0)	NTU	1	5
3	Total Hardness (as CaCO3)	IS: 3025 (P-21): 2009, RA 2019	217.00	mg/l	200	600
4	Calcium (as Ca)	IS: 3025 (P- 40): 1991 RA 2019	62.10	mg/l	75	200
5	Total Alkalinity (as CaCO3)	IS: 3025 (P-23): 1986, RA 2019	160.72	mg/l	200	600
6	Chloride (as Cl)	IS: 3025 (P-32): 1988, RA 2019	153.00	mg/l	250	1000
7	Magnesium (as Mg)	IS: 3025 (P-46): 1994, RA 2019	15.08	mg/l	30	100
8	Total Dissolved Solids	IS :3025 (P-16): 1984, RA 2017	560.00	mg/l	500	2000
9	Sulphate (as SO4)	IS: 3025 (P-24): 1986, RA 2022	38.06	mg/l	200	400
10	Fluoride (as F)	APHA 23rd Edition ,4500FD 2017	0.51	mg/l	1.0	1.5
11	Nitrate (as NO3)	IS: 3025 (P-34): 1988	23.74	mg/l	45.0	No Relaxation
12	Iron (as Fe)	APHA 23rd Edition , 3111B,2017	0.25	mg/l	1.0	No Relaxation
13	Aluminium (as Al)	IS 3025 (P-55): 2003, RA 2019	*BLQ(**LOQ-0.03)	mg/l	0.03	0.2
14	Boron (as B)	APHA 23rd Edition, 4500B,2017	*BLQ(**LOQ-0.2)	mg/l	0.5	1.0
15	Phenolic Compounds (C6H5OH)	APHA 23rd Edition 5530C: 2017	*BLQ(**LOQ-0.001)	mg/l	0.001	0.002
16	Zinc (as Zn)	APHA 23rd Edition,3030D, 3113 B , 2017	0.42	mg/l	5.0	15.0
17	Copper (as Cu)	APHA 23rd Edition 3111B 2017	*BLQ(**LOQ-0.02)	mg/l	0.05	1.5



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Sample Number : VTLW/04

TEST REPORT



TC-11227

ULR No. : TC112272300000511F

Report No. : VTLW/2312230004/A

S.No.	Test Parameters	Test Method	Results	Units	IS:10500-2012	
					Acceptable Limit	Permissible Limit
18	Manganese (as Mn)	APHA 23rd Edition, 3030D, 3111 B, 2017	*BLQ(**LOQ-0.05)	mg/l	0.1	0.3
19	Selenium (as Se)	APHA 23rd Edition, 3114C, 2017	*BLQ(**LOQ-0.005)	mg/l	0.01	No Relaxation
20	Arsenic (as As)	APHA 23rd Edition, 3114C, 2017	*BLQ(**LOQ-0.005)	mg/l	0.01	0.05
21	Total Coliform	IS : 15185 : 2016	Absent	per 100 ml	Shall not be detectable in any 100 ml sample	--
22	E.Coli	IS : 15185 : 2016	Absent	per 100 ml	Shall not be detectable in any 100 ml sample	--
23	Ammonia (as N)	IS-3025 (P-34)- 1988,Sec. RA -2022	*BLQ(**LOQ-0.3)	mg/l	0.5	No Relaxation
24	Sulphide	IS 3025 (P-29) :1986 RA 2019 Idometric	*BLQ(**LOQ-0.1)	mg/l	0.05	No Relaxation
25	Free Residual Chlorine	IS 3025 (P-26):2021	*BLQ(**LOQ-0.2)	mg/l	0.2	1.0
26	Faecal Coliform	IS :1622 :1981 RA 2019	Absent	MPN	-	-

\*BLQ-Below Limit Of Quantification, \*\*LOQ- Limit of Quantification

\*\*\*End of Report\*\*\*

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# TEST REPORT

## VIBRANT

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Sample Number : VTLW/04

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTLW/2312230004/B

Format No : 7.8 F-01

Party Reference No : NIL

Report Date : 29/12/2023

Period of Analysis : 23/12/2023-29/12/2023

Receipt Date : 23/12/2023

Sampling Date : 19/12/2023

Sampling Type : Grab

Sample Quantity : 2 Ltr.

Coordinates : NA

Sample Description : Water Sample  
Sampling Location : Bade Bhandar  
Sample Collected By : VTL Team  
Preservation : Suitable Preservation  
Method of sampling : IS :3025

S.No.	Test Parameters	Test Method	Results	Units	IS:10500-2012	
					Acceptable Limit	Permissible Limit
1	Colour	IS : 3025 (P-4)1983, :RA 2017	*BLQ(**LOQ-5.0)	Hazan	5	15
2	Odour	IS : 3025 (P-5) : RA 2018	Agreeable	-	Agreeable	Agreeable
3	Taste	IS :3025 (P-5): 1984 RA 2017	Agreeable	-	Agreeable	Agreeable
4	Cyanide (as CN)	APHA 23rd Edition 4500D,2017	*BLQ(**LOQ-5.0)	mg/l	0.05	No Relaxation
5	Mineral Oil	IS 3025 (P-39) 1989	*BLQ(**LOQ-0.05)	mg/l	0.5	No Relaxation
6	Anionic Detergents (as MBA5)	APHA 23rd Edition , 5540C 2017	*BLQ(**LOQ-0.05)	mg/l	0.2	1.0
7	Barium as Ba	APHA 23rd Edition,3111B 2017	*BLQ(**LOQ-0.02)	mg/l	0.7	No relaxation

\*BLQ-Below Limit Of Quantification, \*\*LOQ- Limit of Quantification

\*\*\*End of Report\*\*\*

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**VIBRANT**

Sample Number: VTLW/05

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Sample Description : Water Sample  
Sampling Location : Tracle Hopper  
Sample Collected By : VTL Team  
Preservation : Suitable Preservation  
Method of sampling : IS :3025

**TEST REPORT**



ULR No. : TC1122723000000512F  
Report No. : VTLW/2312230005/A  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 29/12/2023  
Period of Analysis : 23/12/2023-29/12/2023  
Receipt Date : 23/12/2023  
Sampling Date : 19/12/2023  
Sampling Type : Grab  
Sample Quantity : 2 Ltr.  
Coordinates : NA

S.No.	Test Parameters	Test Method	Results	Units	IS:10500-2012	
					Acceptable Limit	Permissible Limit
1	pH (at 25°C)	IS : 3025 (P-11) : 2022	7.42	—	6.5 to 8.5	No Relaxation
2	Turbidity	IS : 3025 (P-10):1984, RA 2017	*BLQ(**LOQ-1.0)	NTU	1	5
3	Total Hardness (as CaCO3)	IS: 3025 (P-21): 2009, RA 2019	74.00	mg/l	200	600
4	Calcium (as Ca)	IS: 3025 (P- 40): 1991 RA 2019	17.48	mg/l	75	200
5	Total Alkalinity (as CaCO3)	IS: 3025 (P-23): 1986, RA 2019	49.22	mg/l	200	600
6	Chloride (as Cl)	IS: 3025 (P-32): 1988, RA 2019	21.00	mg/l	250	1000
7	Magnesium (as Mg)	IS: 3025 (P-48): 1994, RA 2019	7.38	mg/l	30	100
8	Total Dissolved Solids	IS :3025 (P-16): 1984, RA 2017	167.00	mg/l	500	2000
9	Sulphate (as SO4)	IS: 3025 (P-24): 1986, RA 2022	10.87	mg/l	200	400
10	Fluoride (as F)	APHA 23rd Edition ,4500FD :2017	*BLQ(**LOQ-0.2)	mg/l	1.0	1.5
11	Nitrate (as NO3)	IS: 3025 (P-34): 1988	4.25	mg/l	45.0	No Relaxation
12	Iron (as Fe)	APHA 23rd Edition , 3111B,2017	*BLQ(**LOQ-0.1)	mg/l	1.0	No Relaxation
13	Aluminium (as Al)	IS 3025 (P-55): 2003, RA 2019	*BLQ(**LOQ-0.03 )	mg/l	0.03	0.2
14	Boron (as B)	APHA 23rd Edition, 4500B,2017	*BLQ(**LOQ-0.2)	mg/l	0.5	1.0
15	Phenolic Compounds (C6H5OH)	APHA 23rd Edition 5530C: 2017	*BLQ(**LOQ-0.001)	mg/l	0.001	0.002
16	Zinc (as Zn)	APHA 23rd Edition,3030D, 3113 B , 2017	*BLQ(**LOQ-0.2)	mg/l	5.0	15.0
17	Copper (as Cu)	APHA 23rd Edition 3111B 2017	*BLQ(**LOQ-0.02)	mg/l	0.05	1.5



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Sample Number : VTLW/05

ULR No. : TC1122723000000512F

Report No. : VTLW/2312230005/A

S.No.	Test Parameters	Test Method	Results	Units	IS:10500-2012	
					Acceptable Limit	Permissible Limit
18	Manganese (as Mn)	APHA 23rd Edition, 3030D, 3111 B, 2017	*BLQ(**LOQ-0.05)	mg/l	0.1	0.3
19	Selenium (as Se)	APHA 23rd Edition, 3114C, 2017	*BLQ(**LOQ-0.005)	mg/l	0.01	No Relaxation
20	Arsenic (as As)	APHA 23rd Edition, 3114C, 2017	*BLQ(**LOQ-0.005)	mg/l	0.01	0.05
21	Total Coliform	IS : 15185 : 2016	Absent	per 100 ml	Shall not be detectable in any 100 ml sample	--
22	E Coli	IS : 15185 : 2016	Absent	per 100 ml	Shall not be detectable in any 100 ml sample	-
23	Ammonia (as N)	IS-3025 (P-34)-1988, Sec. RA :2022	*BLQ(**LOQ-0.3)	mg/l	0.5	No Relaxation
24	Sulphide	IS 3025 (P-29) :1988 RA 2019 Idometric	*BLQ(**LOQ-0.1)	mg/l	0.05	No Relaxation
25	Free Residual Chlorine	IS 3025 (P-26):2021	*BLQ(**LOQ-0.2)	mg/l	0.2	1.0
26	Faecal Coliform	IS :1622 :1981 RA 2019	Absent	MPN	-	-

\*BLQ-Below Limit Of Quantification, \*\*LOQ- Limit of Quantification

\*\*\*End of Report\*\*\*

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TEST REPORT

Sample Number : VTL/W/05  
Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTL/W/2312230005/B  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 29/12/2023  
Period of Analysis : 23/12/2023-29/12/2023  
Receipt Date : 23/12/2023  
Sampling Date : 19/12/2023  
Sampling Type : Grab  
Sample Quantity : 2 Ltr.  
Coordinates : NA

Sample Description : Water Sample  
Sampling Location : Tracle Hopper  
Sample Collected By : VTL Team  
Preservation : Suitable Preservation  
Method of sampling : IS :3025

S.No.	Test Parameters	Test Method	Results	Units	IS:10500-2012	
					Acceptable Limit	Permissible Limit
1	Colour	IS : 3025 (P-4) 1983, :RA 2017	*BLQ(**LOQ-5.0)	Hazen	5	15
2	Odour	IS : 3025 (P-5) : RA 2018	Agreeable	--	Agreeable	Agreeable
3	Taste	IS :3025 (P-8): 1984 RA 2017	Agreeable	--	Agreeable	Agreeable
4	Cyanide (as CN)	APHA 23rd Edition .4500D,2017	*BLO(**LOQ-5.0)	mg/l	0.05	No Relaxation
5	Mineral Oil	IS 3025 (P-39) 1989	*BLO(**LOQ-0.05)	mg/l	0.5	No Relaxation
6	Anionic Detergents (as MBAS)	APHA 23rd Edition , 5540C 2017	*BLO(**LOQ-0.05)	mg/l	0.2	1.0
7	Barium as Ba	APHA 23rd Edition,3111B 2017	*BLO(**LOQ-0.02)	mg/l	0.7	No relaxation

\*BLO-Below Limit Of Quantification, \*\*LOQ- Limit of Quantification

\*\*\*End of Report\*\*\*

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Sample Number : VTLW/08  
Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTLW/2312230008/B  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 29/12/2023  
Period of Analysis : 23/12/2023-29/12/2023  
Receipt Date : 23/12/2023  
Sampling Date : 18/12/2023  
Sampling Type : Grab  
Sample Quantity : 2 Ltr.  
Coordinates : NA

Sample Description : Water Sample  
Sampling Location : Field Hostel  
Sample Collected By : VTL Team  
Preservation : Suitable Preservation  
Method of sampling : IS :3025

S.No.	Test Parameters	Test Method	Results	Units	IS:10500-2012	
					Acceptable Limit	Permissible Limit
1	Colour	IS - 3025 (P-4) 1983, RA 2017	*BLQ(**LOQ-5.0)	Hazen	5	15
2	Odour	IS : 3025 (P-5) : RA 2018	Agreeable	-	Agreeable	Agreeable
3	Taste	IS :3025 (P-6): 1984 RA 2017	Agreeable	-	Agreeable	Agreeable
4	Cyanide (as CN)	APHA 23rd Edition, 4500D, 2017	*BLQ(**LOQ-5.0)	mg/l	0.05	No Relaxation
5	Mineral Oil	IS 3025 (P-39) 1989	*BLQ(**LOQ-0.05)	mg/l	0.5	No Relaxation
6	Anionic Detergents (as MBAS)	APHA 23rd Edition, 5540C 2017	*BLQ(**LOQ-0.05)	mg/l	0.2	1.0
7	Barium as Ba	APHA 23rd Edition, 3111B 2017	*BLQ(**LOQ-0.02)	mg/l	0.7	No relaxation

\*BLO-Below Limit Of Quantification, \*\*LOQ- Limit of Quantification

\*\*\*End of Report\*\*\*

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Sample Number : VTLW/11  
Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

ULR No. : TC1122723000000518F  
Report No. : VTLW/2312230011/A  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 29/12/2023  
Period of Analysis : 23/12/2023-29/12/2023  
Receipt Date : 23/12/2023  
Sampling Date : 19/12/2023  
Sampling Type : Grab  
Sample Quantity : 2 Ltr.  
Coordinates : NA

Sample Description : Water Sample  
Sampling Location : Piezometer -3  
Sample Collected By : VTL Team  
Preservation : Suitable Preservation  
Method of sampling : IS :3025

S.No.	Test Parameters	Test Method	Results	Units	IS:10500-2012	
					Acceptable Limit	Permissible Limit
1	pH (at 25°C)	IS: 3025 (P-11): 2022	7.68	-	6.5 to 8.5	No Relaxation
2	Turbidity	IS: 3025 (P-10):1984, RA 2017	*BLQ(**LOQ-1.0)	NTU	1	5
3	Total Hardness (as CaCO3)	IS: 3025 (P-21): 2009, RA 2019	242.00	mg/l	200	600
4	Calcium (as Ca)	IS: 3025 (P-40): 1991 RA 2019	66.40	mg/l	75	200
5	Total Alkalinity (as CaCO3)	IS: 3025 (P-23): 1986, RA 2019	173.00	mg/l	200	600
6	Chloride (as Cl)	IS: 3025 (P-32): 1988, RA 2019	144.15	mg/l	250	1000
7	Magnesium (as Mg)	IS: 3025 (P-46): 1994, RA 2019	16.54	mg/l	30	100
8	Total Dissolved Solids	IS: 3025 (P-16): 1984, RA 2017	571.00	mg/l	500	2000
9	Sulphate (as SO4)	IS: 3025 (P-24): 1986, RA 2022	42.11	mg/l	200	400
10	Fluoride (as F)	APHA 23rd Edition, 4500FD, 2017	0.47	mg/l	1.0	1.5
11	Nitrate (as NO3)	IS: 3025 (P-34): 1988	27.10	mg/l	45.0	No Relaxation
12	Iron (as Fe)	APHA 23rd Edition, 3111B, 2017	0.28	mg/l	1.0	No Relaxation
13	Aluminium (as Al)	IS 3025 (P-55): 2003, RA 2019	*BLQ(**LOQ-0.03)	mg/l	0.03	0.2
14	Boron (as B)	APHA 23rd Edition, 4500B, 2017	*BLQ(**LOQ-0.2)	mg/l	0.5	1.0
15	Phenolic Compounds (C6H5OH)	APHA 23rd Edition 5530C: 2017	*BLQ(**LOQ-0.001)	mg/l	0.001	0.002
16	Zinc (as Zn)	APHA 23rd Edition, 3030D, 3113 B, 2017	0.40	mg/l	5.0	15.0
17	Copper (as Cu)	APHA 23rd Edition 3111B 2017	*BLQ(**LOQ-0.02)	mg/l	0.05	1.5



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Sample Number : VTLW/11

ULR No. : TC1122723000000518F

Report No. : VTLW/2312230011/A

S.No.	Test Parameters	Test Method	Results	Units	IS:10500-2012	
					Acceptable Limit	Permissible Limit
18	Manganese (as Mn)	APHA 23rd Edition, 3030D, 3111 B, 2017	*BLQ(**LOQ-0.05)	mg/l	0.1	0.3
19	Selenium (as Se)	APHA 23rd Edition, 3114C, 2017	*BLQ(**LOQ-0.005)	mg/l	0.01	No Relaxation
20	Arsenic (as As)	APHA 23rd Edition, 3114C, 2017	*BLQ(**LOQ-0.005)	mg/l	0.01	0.05
21	Total Coliform	IS : 15185 : 2016	Absent	per 100 ml	Shall not be detectable in any 100 ml sample	--
22	E.Coli	IS : 15185 : 2016	Absent	per 100 ml	Shall not be detectable in any 100 ml sample	--
23	Ammonia (as N)	IS-3025 (P-34)- 1988,Sec. RA .2022	*BLQ(**LOQ-0.3)	mg/l	0.5	No Relaxation
24	Sulphide	IS 3025 (P-29) :1986 RA 2019 Idometric	*BLQ(**LOQ-0.1)	mg/l	0.05	No Relaxation
25	Free Residual Chlorine	IS 3025 (P-26):2021	*BLQ(**LOQ-0.2)	mg/l	0.2	1.0
26	Faecal Coliform	IS :1622 :1981 RA 2019	Absent	MPN	-	+

\*BLQ-Below Limit Of Quantification, \*\*LOQ- Limit of Quantification

\*\*\*End of Report\*\*\*

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Sample Number : VTLW/11  
Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTLW/2312230011/B  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 29/12/2023  
Period of Analysis : 23/12/2023-29/12/2023  
Receipt Date : 23/12/2023  
Sampling Date : 19/12/2023  
Sampling Type : Grab  
Sample Quantity : 2 Ltr.  
Coordinates : NA

Sample Description : Water Sample  
Sampling Location : Piezometer -3  
Sample Collected By : VTL Team  
Preservation : Suitable Preservation  
Method of sampling : IS :3025

S.No.	Test Parameters	Test Method	Results	Units	IS:10500-2012	
					Acceptable Limit	Permissible Limit
1	Colour	IS : 3025:(P-4)1983, RA 2017	*BLQ(**LOQ-5.0)	Hazen	5	15
2	Odour	IS : 3025 (P-5) : RA 2018	Agreeable	--	Agreeable	Agreeable
3	Taste	IS :3025 (P-8), 1984 RA 2017	Agreeable	--	Agreeable	Agreeable
4	Cyanide (as CN)	APHA 23rd Edition ,4500D,2017	*BLQ(**LOQ-5.0)	mg/l	0.05	No Relaxation
5	Mineral Oil	IS 3025 (P-39) 1989	*BLQ(**LOQ-0.05)	mg/l	0.5	No Relaxation
6	Anionic Detergents (as MBAS)	APHA 23rd Edition , 5540C 2017	*BLQ(**LOQ-0.05)	mg/l	0.2	1.0
7	Barium as Ba	APHA 23rd Edition,3111B 2017	*BLQ(**LOQ-0.02)	mg/l	0.7	No relaxation

\*BLQ-Below Limit Of Quantification, \*\*LOQ- Limit of Quantification

\*\*\*End of Report\*\*\*

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Sample Number : VTLW/12  
Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

ULR No. : TC112272300000519F  
Report No. : VTLW/2312230012/A  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 29/12/2023  
Period of Analysis : 23/12/2023-29/12/2023  
Receipt Date : 23/12/2023  
Sampling Date : 19/12/2023  
Sampling Type : Grab  
Sample Quantity : 2 Ltr.  
Coordinates : NA

Sample Description : Water Sample  
Sampling Location : Piezometer -4  
Sample Collected By : VTL Team  
Preservation : Suitable Preservation  
Method of sampling : IS :3025

S.No.	Test Parameters	Test Method	Results	Units	IS:10500-2012	
					Acceptable Limit	Permissible Limit
1	pH (at 25°C)	IS : 3025 (P-11) : 2022	7.80	—	6.5 to 8.5	No Relaxation
2	Turbidity	IS : 3025 (P-10)1984, RA 2017	*BLQ(**LOQ-1.0)	NTU	1	5
3	Total Hardness (as CaCO <sub>3</sub> )	IS: 3025 (P-21): 2009, RA 2019	222.00	mg/l	200	600
4	Calcium (as Ca)	IS: 3025 (P- 40): 1991 RA 2019	62.17	mg/l	75	200
5	Total Alkalinity (as CaCO <sub>3</sub> )	IS: 3025 (P-23): 1986, RA 2019	160.00	mg/l	200	600
6	Chloride (as Cl)	IS: 3025 (P-32): 1988, RA 2019	136.18	mg/l	250	1000
7	Magnesium (as Mg)	IS: 3025 (P-46): 1994, RA 2019	16.25	mg/l	30	100
8	Total Dissolved Solids	IS :3025 (P-16): 1984, RA 2017	556.40	mg/l	500	2000
9	Sulphate (as SO <sub>4</sub> )	IS: 3025 (P-24): 1986, RA 2022	38.27	mg/l	200	400
10	Fluoride (as F)	APHA 23rd Edition ,4500FD :2017	0.46	mg/l	1.0	1.5
11	Nitrate (as NO <sub>3</sub> )	IS: 3025 (P-34): 1988	30.18	mg/l	45.0	No Relaxation
12	Iron (as Fe)	APHA 23rd Edition , 3111B,2017	0.31	mg/l	1.0	No Relaxation
13	Aluminium (as Al)	IS 3025 (P-55): 2003, RA 2019	*BLQ(**LOQ-0.03 )	mg/l	0.03	0.2
14	Boron (as B)	APHA 23rd Edition, 4500B,2017	*BLQ(**LOQ-0.2)	mg/l	0.5	1.0
15	Phenolic Compounds (C <sub>6</sub> H <sub>5</sub> OH)	APHA 23rd Edition 5530C: 2017	*BLQ(**LOQ-0.001)	mg/l	0.001	0.002
16	Zinc (as Zn)	APHA 23rd Edition,3030D, 3113 B , 2017	0.38	mg/l	5.0	15.0
17	Copper (as Cu)	APHA 23rd Edition 3111B 2017	*BLQ(**LOQ-0.02)	mg/l	0.05	1.5



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Sample Number : VTLW/12

ULR No. : TC1122723000000519F

Report No. : VTLW/2312230012/A

S.No.	Test Parameters	Test Method	Results	Units	IS:10500-2012	
					Acceptable Limit	Permissible Limit
18	Manganese (as Mn)	APHA 23rd Edition, 3030D, 3111 B, 2017	*BLQ(**LOQ-0.05)	mg/l	0.1	0.3
19	Selenium (as Se)	APHA 23rd Edition, 3114C, 2017	*BLQ(**LOQ-0.005)	mg/l	0.01	No Relaxation
20	Arsenic (as As)	APHA 23rd Edition, 3114C, 2017	*BLQ(**LOQ-0.005)	mg/l	0.01	0.05
21	Total Coliform	IS : 15185 : 2016	Absent	per 100 ml	Shall not be detectable in any 100 ml sample	--
22	E.Coli	IS : 15185 : 2016	Absent	per 100 ml	Shall not be detectable in any 100 ml sample	--
23	Ammonia (as N)	IS-3025 (P-34)- 1988,Sec. RA :2022	*BLQ(**LOQ-0.3)	mg/l	0.5	No Relaxation
24	Sulphide	IS 3025 (P-29) :1986 RA 2019 Idometric	*BLQ(**LOQ-0.1)	mg/l	0.05	No Relaxation
25	Free Residual Chlorine	IS 3025 (P-26):2021	*BLQ(**LOQ-0.2)	mg/l	0.2	1.0
26	Faecal Coliform	IS :1622 :1981 RA 2019	Absent	MPN	-	-

\*BLQ-Below Limit Of Quantification, \*\*LOQ- Limit of Quantification

\*\*\*End of Report\*\*\*

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Sample Number : VTLW/12  
Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTLW/2312230012/B  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 29/12/2023  
Period of Analysis : 23/12/2023-29/12/2023  
Receipt Date : 23/12/2023  
Sampling Date : 19/12/2023  
Sampling Type : Grab  
Sample Quantity : 2 Ltr.  
Coordinates : NA

Sample Description : Water Sample  
Sampling Location : Piezometer -4  
Sample Collected By : VTL Team  
Preservation : Suitable Preservation  
Method of sampling : IS :3025

S.No.	Test Parameters	Test Method	Results	Units	IS:10500-2012	
					Acceptable Limit	Permissible Limit
1	Colour	IS : 3025:(P-4)1983, RA 2017	*BLQ(**LOQ-5.0)	Hazen	5	15
2	Odour	IS : 3025 (P-5) : RA 2018	Agreeable	--	Agreeable	Agreeable
3	Taste	IS :3025 (P-8): 1984 RA 2017	Agreeable	--	Agreeable	Agreeable
4	Cyanide (as CN)	APHA 23rd Edition ,4500D,2017	*BLQ(**LOQ-5.0)	mg/l	0.05	No Relaxation
5	Mineral Oil	IS 3025 (P-39) 1999	*BLQ(**LOQ-0.05)	mg/l	0.5	No Relaxation
6	Anionic Detergents (as MBAS)	APHA 23rd Edition , 5540C 2017	*BLQ(**LOQ-0.05)	mg/l	0.2	1.0
7	Barium as Ba	APHA 23rd Edition,3111B 2017	*BLQ(**LOQ-0.02)	mg/l	0.7	No relaxation

\*BLO-Below Limit Of Quantification, \*\*LOQ- Limit of Quantification

\*\*\*End of Report\*\*\*

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Sample Number : VTL/SW/01  
Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Sample Description : SURFACE WATER  
Sampling Location : Mahanadi Up Stream  
Sample Collected By : VTL Team  
Preservation : Suitable Preservation  
Method of sampling : IS :3025

ULR No. : TC1122723000000520F  
Report No. : VTLW/2312230013/A  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 29/12/2023  
Period of Analysis : 23/12/2023-29/12/2023  
Receipt Date : 23/12/2023  
Sampling Date : 20/12/2023  
Sampling Type : Grab  
Sample Quantity : 2 Ltr.  
Coordinates : NA

S.No.	Test Parameters	Test Method	Results	Unit
1	pH value	IS : 3025 (P-11) : 2022	7.33	--
2	Turbidity	IS : 3025 (P- 10) : 1984, RA 2017	2.74	NTU
3	Total Dissolved Solids (TDS)	IS : 3025 (P-16) : 1984, RA 2017	282.00	mg/l
4	Chloride (as Cl)	IS: 3025 (P-32) : 1988, RA 2019	54.18	mg/l
5	Sulphate as (SO <sub>4</sub> )	IS: 3025 (P- 24) : 1986, Sec.RA 2022	26.11	mg/l
6	Total Alkalinity (as CaCO <sub>3</sub> )	IS: 3025 (P- 23) : 1986, RA 2019	105.12	mg/l
7	Total Hardness (CaCO <sub>3</sub> )	IS: 3025 (P- 21) : 2009, RA 2019	168.17	mg/l
8	Calcium (as Ca)	IS : 3025 (P-40) : 1991 RA 2019	46.13	mg/l
9	Magnesium (as Mg)	IS : 3025 (P- 46) : 1994, RA 2019	12.90	mg/l
10	Fluoride ( as F)	APHA 23rd Edition, 4500D, 2017	0.39	mg/l
11	Nitrate (as NO <sub>3</sub> )	IS: 3025 (P- 34) : 1988 RA 2022	18.88	mg/l
12	Phenolic compounds	APHA 23rd Edition, 5530C, 2017	*BLQ(**LOQ-0.001)	mg/l
13	Faecal Coliform	IS:1622 :2009	Present	MPN
14	Total Coliform	IS 15185 : 2016	Present	MPN
15	Iron (as Fe)	APHA 23rd Edition,3111B, 2017	0.21	mg/l
16	Zinc (as Zn)	APHA 23rd Edition, 3030D,3113B, 2017	0.35	mg/l
17	Copper (as Cu)	APHA 23rd edition, 3111B, 2017	*BLQ(**LOQ-0.02)	mg/l
18	Manganese (as Mn)	APHA 23rd Edition, 3030D,3113B, 2017	*BLQ(**LOQ-0.05)	mg/l
19	Arsenic (as As)	APHA 23rd Edition, 3030D,3114C, 2017	*BLQ(**LOQ-0.005)	mg/l
20	E Coli	IS :15185 : 2016	Present	P-A/100 ML
21	Boron (as B)	APHA 23rd Edition, 4500D, 2017	*BLQ(**LOQ-0.2)	mg/l
22	Selenium (as Se)	APHA 23rd Edition,3114C, 2017	*BLQ(**LOQ-0.005)	mg/l



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## TEST REPORT

Sample Number : VTL/SW/01  
Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTLW/2312230013/B  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 29/12/2023  
Period of Analysis : 23/12/2023-29/12/2023  
Receipt Date : 23/12/2023  
Sampling Date : 20/12/2023  
Sampling Type : Grab  
Sample Quantity : 2 Ltr.  
Coordinates : NA

Sample Description : SURFACE WATER  
Sampling Location : Mahanadi Up Stream  
Sample Collected By : VTL Team  
Preservation : Suitable Preservation  
Method of sampling : IS :3025

S.No.	Test Parameters	Test Method	Results	Unit
1	Colour	IS : 3025 (P-4) : 2021	*BLQ(**LOQ-5.0)	Hazen
2	Odour	IS : 3025 (P-5) : 2018	Agreeable	--
3	Taste	IS : 3025 (P-8) : 1984 RA 2017	Agreeable	--
4	Residual Free Chlorine (RFC)	IS : 3025 (P-26) :2021	*BLQ(**LOQ-0.2)	mg/l
5	Cyanide (as CN)	APHA 23rd Edition, 4500D, 2017	*BLQ(**LOQ-5.0)	mg/l
6	Aluminium (as Al)	IS : 3025 : (P-55 ) 2003, RA 2019	*BLQ(**LOQ-0.03)	mg/l
7	Ammonia (as NH3)	IS : 3025 (P-34) 1988, Sec 4 RA 2019	*BLQ(**LOQ-0.3)	mg/l
8	Anionic Detergents (MBAS)	APHA 23rd ed., 2017, 5530C	*BLQ(**LOQ 0.05)	mg/l

\*BLQ Blow limit of Quantification \*\*LOQ Limit of Quantification

\*\*\*End of Report\*\*\*

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Sample Number : VTL/SW/02  
Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Sample Description : SURFACE WATER  
Sampling Location : Mahanadi Down Stream  
Sample Collected By : VTL Team  
Preservation : Suitable Preservation  
Method of sampling : IS :3025

ULR No. : TC1122723000000521F  
Report No. : VTLW/2312230014/A  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 29/12/2023  
Period of Analysis : 23/12/2023-29/12/2023  
Receipt Date : 23/12/2023  
Sampling Date : 20/12/2023  
Sampling Type : Grab  
Sample Quantity : 2 Ltr.  
Coordinates : NA

S.No.	Test Parameters	Test Method	Results	Unit
1	pH value	IS : 3025 (P-11) : 2022	7.48	--
2	Turbidity	IS : 3025 (P- 10) : 1984, RA 2017	1.50	NTU
3	Total Dissolved Solids (TDS)	IS : 3025 (P-16) : 1984, RA 2017	311.00	mg/l
4	Chloride (as Cl)	IS: 3025 (P-32) : 1988, RA 2019	61.00	mg/l
5	Sulphate as (SO4)	IS: 3025 (P- 24) : 1986, Sec.RA 2022	30.16	mg/l
6	Total Alkalinity (as CaCO3)	IS: 3025 (P- 23) : 1986, RA 2019	117.00	mg/l
7	Total Hardness (CaCO3)	IS: 3025 (P- 21) : 2009, RA 2019	136.00	mg/l
8	Calcium (as Ca)	IS : 3025 (P-40) : 1991 RA 2019	34.16	mg/l
9	Magnesium (as Mg)	IS : 3025 (P- 46) : 1994, RA 2019	12.33	mg/l
10	Fluoride ( as F)	APHA 23rd Edition, 4500D, 2017	0.47	mg/l
11	Nitrate (as NO3)	IS: 3025 (P- 34) : 1988 RA 2022	22.16	mg/l
12	Phenolic compounds	APHA 23rd Edition, 5530C, 2017	*BLQ(**LOQ-0.001)	mg/l
13	Fecal Coliform	IS:1622 :2009	Present	MPN
14	Total Coliform	IS 15185: 2016	Present	MPN
15	Iron (as Fe)	APHA 23rd Edition,3111B, 2017	0.23	mg/l
16	Zinc (as Zn)	APHA 23rd Edition, 3030D,3113B, 2017	0.32	mg/l
17	Copper (as Cu)	APHA 23rd edition, 3111B, 2017	*BLQ(**LOQ-0.02)	mg/l
18	Manganese (as Mn)	APHA 23rd Edition, 3030D,3113B, 2017	*BLQ(**LOQ-0.05)	mg/l
19	Arsenic (as As)	APHA 23rd Edition, 3030D,3114C, 2017	*BLQ(**LOQ-0.005)	mg/l
20	E Coli	IS :15185 : 2016	Present	P-A/100 ML
21	Boron (as B)	APHA 23rd Edition, 4500D, 2017	*BLQ(**LOQ-0.2)	mg/l
22	Selenium (as Se)	APHA 23rd Edition,3114C, 2017	*BLQ(**LOQ-0.005)	mg/l



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## TEST REPORT

Sample Number : VTL/SW/02  
Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTLW/2312230014/B  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 29/12/2023  
Period of Analysis : 23/12/2023-29/12/2023  
Receipt Date : 23/12/2023  
Sampling Date : 20/12/2023  
Sampling Type : Grab  
Sample Quantity : 2 Ltr.  
Coordinates : NA

Sample Description : SURFACE WATER  
Sampling Location : Mahanadi Down Stream  
Sample Collected By : VTL Team  
Preservation : Suitable Preservation  
Method of sampling : IS :3025

S.No.	Test Parameters	Test Method	Results	Unit
1	Colour	IS : 3025 (P-4) : 2021	*BLQ(**LOQ-5.0)	Hazen
2	Odour	IS : 3025 (P-5) : 2018	Agreeable	--
3	Taste	IS : 3025 (P-8) : 1984 RA 2017	Agreeable	--
4	Residual Free Chlorine (RFC)	IS : 3025 (P-26) .2021	*BLQ(**LOQ-0.2)	mg/l
5	Cyanide (as CN)	APHA 23rd Edition, 4500D, 2017	*BLQ(**LOQ-5.0)	mg/l
6	Aluminium (as Al)	IS : 3025 : (P-55 ) 2003, RA 2019	*BLQ(**LOQ-0.03)	mg/l
7	Ammonia (as NH3)	IS : 3025 (P-34) 1988, Sec.4 RA 2019	*BLQ(**LOQ-0.3)	mg/l
8	Anionic Detergents (MBAS)	APHA 23rd ed., 2017, 5530C	*BLQ(**LOQ 0.05)	mg/l

\*BLQ Blow limit of Quantification \*\*LOQ Limit of Quantification

\*\*\*End of Report\*\*\*

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Lab Incharge  
Authorized Signatory

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Sample Number : VTL/SW/03  
Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Sample Description : SURFACE WATER  
Sampling Location : Mand River Down Stream  
Sample Collected By : VTL Team  
Preservation : Suitable Preservation  
Method of sampling : IS :3025

ULR No. : TC1122723000000522F  
Report No. : VTL/W/2312230015/A  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 29/12/2023  
Period of Analysis : 23/12/2023-29/12/2023  
Receipt Date : 23/12/2023  
Sampling Date : 20/12/2023  
Sampling Type : Grab  
Sample Quantity : 2 Ltr.  
Coordinates : NA

S.No.	Test Parameters	Test Method	Results	Unit
1	pH value	IS : 3025 (P-11) : 2022	7.63	--
2	Turbidity	IS : 3025 (P- 10) : 1984, RA 2017	4.07	NTU
3	Total Dissolved Solids (TDS)	IS : 3025 (P-16) : 1984, RA 2017	310.15	mg/l
4	Chloride (as Cl)	IS : 3025 (P-32) : 1986, RA 2019	66.97	mg/l
5	Sulphate as (SO <sub>4</sub> )	IS : 3025 (P- 24) : 1986, Sec, RA 2022	31.06	mg/l
6	Total Alkalinity (as CaCO <sub>3</sub> )	IS : 3025 (P- 23) : 1986, RA 2019	100.00	mg/l
7	Total Hardness (CaCO <sub>3</sub> )	IS : 3025 (P- 21) : 2009, RA 2019	167.20	mg/l
8	Calcium (as Ca)	IS : 3025 (P-40) : 1991 RA 2019	44.15	mg/l
9	Magnesium (as Mg)	IS : 3025 (P- 46) : 1994, RA 2019	13.86	mg/l
10	Fluoride ( as F)	APHA 23rd Edition, 4500D, 2017	0.55	mg/l
11	Nitrate (as NO <sub>3</sub> )	IS : 3025 (P- 34) : 1988 RA 2022	26.11	mg/l
12	Phenolic compounds	APHA 23rd Edition, 5530C, 2017	*BLQ(**LOQ-0.001)	mg/l
13	Fecal Coliform	IS:1622 :2009	Present	MPN
14	Total Coliform	IS 15185 : 2016	Present	MPN
15	Iron (as Fe)	APHA 23rd Edition, 3111B, 2017	0.28	mg/l
16	Zinc (as Zn)	APHA 23rd Edition, 3030D, 3113B, 2017	0.37	mg/l
17	Copper (as Cu)	APHA 23rd edition, 3111B, 2017	*BLQ(**LOQ-0.02)	mg/l
18	Manganese (as Mn)	APHA 23rd Edition: 3030D, 3113B, 2017	*BLQ(**LOQ-0.05)	mg/l
19	Arsenic (as As)	APHA 23rd Edition, 3030D, 3114C, 2017	*BLQ(**LOQ-0.005)	mg/l
20	E Coli	IS : 15185 : 2016	Present	P-A/100 ML
21	Boron (as B)	APHA 23rd Edition, 4500D, 2017	*BLQ(**LOQ-0.2)	mg/l
22	Selenium (as Se)	APHA 23rd Edition, 3114C, 2017	*BLQ(**LOQ-0.005)	mg/l



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## TEST REPORT

Sample Number : VTL/SW/03  
Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTL/W/2312230015/B  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 29/12/2023  
Period of Analysis : 23/12/2023-29/12/2023  
Receipt Date : 23/12/2023  
Sampling Date : 20/12/2023  
Sampling Type : Grab  
Sample Quantity : 2 Ltr.  
Coordinates : NA

Sample Description : SURFACE WATER  
Sampling Location : Mand River Down Stream  
Sample Collected By : VTL Team  
Preservation : Suitable Preservation  
Method of sampling : IS :3025

S.No.	Test Parameters	Test Method	Results	Unit
1	Colour	IS : 3025 (P-4) : 2021	*BLQ(**LOQ-5.0)	Hazen
2	Odour	IS : 3025 (P-5) : 2018	Agreeable	--
3	Taste	IS : 3025 (P-8) : 1984 RA 2017	Agreeable	--
4	Residual Free Chlorine (RFC)	IS : 3025 (P-26) : 2021	*BLQ(**LOQ-0.2)	mg/l
5	Cyanide (as CN)	APHA 23rd Edition, 4500D, 2017	*BLQ(**LOQ-5.0)	mg/l
6	Aluminium (as Al)	IS : 3025 : (P-55) 2003, RA 2019	*BLQ(**LOQ-0.03)	mg/l
7	Ammonia (as NH <sub>3</sub> )	IS : 3025 (P-34) 1988, Sec.4 RA 2019	*BLQ(**LOQ-0.3)	mg/l
8	Anionic Detergents (MBAS)	APHA 23rd ed., 2017, 5530C	*BLQ(**LOQ 0.05)	mg/l

\*BLQ Blow limit of Quantification \*\*LOQ Limit of Quantification

\*\*\*End of Report\*\*\*

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Sample Number : VTL/SW/04  
Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Sample Description : SURFACE WATER  
Sampling Location : Mand River Up Stream  
Sample Collected By : VTL Team  
Preservation : Suitable Preservation  
Method of sampling : IS :3025

ULR No. : TC112272300000523F  
Report No. : VTL/W/2312230016/A  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 29/12/2023  
Period of Analysis : 23/12/2023-29/12/2023  
Receipt Date : 23/12/2023  
Sampling Date : 20/12/2023  
Sampling Type : Grab  
Sample Quantity : 2 Ltr.  
Coordinates : NA

S.No.	Test Parameters	Test Method	Results	Unit
1	pH value	IS : 3025 (P-11) : 2022	7.50	--
2	Turbidity	IS : 3025 (P- 10) : 1984, RA 2017	1.53	NTU
3	Total Dissolved Solids (TDS)	IS : 3025 (P-16) : 1984, RA 2017	224.00	mg/l
4	Chloride (as Cl)	IS: 3025 (P-32) : 1988, RA 2019	48.00	mg/l
5	Sulphate as (SO <sub>4</sub> )	IS: 3025 (P- 24) : 1986, Sec. RA 2022	24.12	mg/l
6	Total Alkalinity (as CaCO <sub>3</sub> )	IS: 3025 (P- 23) : 1986, RA 2019	80.07	mg/l
7	Total Hardness (CaCO <sub>3</sub> )	IS: 3025 (P- 21) : 2009, RA 2019	124.00	mg/l
8	Calcium (as Ca)	IS : 3025 (P-40) : 1991 RA 2019	33.71	mg/l
9	Magnesium (as Mg)	IS : 3025 (P- 46) : 1994, RA 2019	9.70	mg/l
10	Fluoride ( as F)	APHA 23rd Edition, 4500D, 2017	0.33	mg/l
11	Nitrate (as NO <sub>3</sub> )	IS: 3025 (P- 34) : 1988 RA 2022	20.00	mg/l
12	Phenolic compounds	APHA 23rd Edition, 5530C, 2017	*BLQ(**LOQ-0.001)	mg/l
13	Fecal Coliform	IS:1622 :2009	Present	MPN
14	Total Coliform	IS 15185: 2016	Present	MPN
15	Iron (as Fe)	APHA 23rd Edition,3111B, 2017	0.21	mg/l
16	Zinc (as Zn)	APHA 23rd Edition, 3030D,3113B, 2017	0.25	mg/l
17	Copper (as Cu)	APHA 23rd edition, 3111B, 2017	*BLQ(**LOQ-0.02)	mg/l
18	Manganese (as Mn)	APHA 23rd Edition, 3030D,3113B, 2017	*BLQ(**LOQ-0.05)	mg/l
19	Arsenic (as As)	APHA 23rd Edition, 3030D,3114C, 2017	*BLQ(**LOQ-0.005)	mg/l
20	E Coli	IS :15185 : 2016	Present	P-A/100 ML
21	Boron (as B)	APHA 23rd Edition, 4500D, 2017	*BLQ(**LOQ-0.2)	mg/l
22	Selenium (as Se)	APHA 23rd Edition,3114C, 2017	*BLQ(**LOQ-0.005)	mg/l



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Sample Number : VTL/SW/04  
Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTLW/2312230016/B  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 29/12/2023  
Period of Analysis : 23/12/2023-29/12/2023  
Receipt Date : 23/12/2023  
Sampling Date : 20/12/2023  
Sampling Type : Grab  
Sample Quantity : 2 Ltr.  
Coordinates : NA

Sample Description : SURFACE WATER  
Sampling Location : Mand River Up Stream  
Sample Collected By : VTL Team  
Preservation : Suitable Preservation  
Method of sampling : IS :3025

S.No.	Test Parameters	Test Method	Results	Unit
1	Colour	IS : 3025 (P-4) : 2021	*BLQ(**LOQ-5.0)	Hazen
2	Odour	IS : 3025 (P-5) : 2018	Agreeable	--
3	Taste	IS : 3025 (P-8) : 1984 RA 2017	Agreeable	--
4	Residual Free Chlorine (RFC)	IS : 3025 (P-26) :2021	*BLQ(**LOQ-0.2)	mg/l
5	Cyanide (as CN)	APHA 23rd Edition, 4500D, 2017	*BLQ(**LOQ-5.0)	mg/l
6	Aluminium (as Al)	IS : 3025 : (P-55) 2003, RA 2019	*BLQ(**LOQ-0.03)	mg/l
7	Ammonia (as NH3)	IS : 3025 (P-34) 1988, Sec.4 RA 2019	*BLQ(**LOQ-0.3)	mg/l
8	Anionic Detergents (MBAS)	APHA 23rd ed., 2017; 5530C	*BLQ(**LOQ 0.05)	mg/l

\*BLQ Blow limit of Quantification \*\*LOQ Limit of Quantification

\*\*\*End of Report\*\*\*

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Sample Number : VTL/WW/01

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Sample Description : Waste Water  
Sampling Location : ETP Inlet  
Sample Collected By : VTL Team  
Preservation : Suitable Preservation  
Method of sampling : IS :3025

**TEST REPORT**



ULR No. : TC112272300000500F  
Report No. : VTL/WW/2312230001/A  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 29/12/2023  
Period of Analysis : 23/12/2023-29/12/2023  
Receipt Date : 23/12/2023  
Sampling Date : 18/12/2023  
Sampling Type : Grab  
Sample Quantity : 2 Ltr.  
Coordinates : NA

S.No.	Test Parameters	Test Method	Result	Unit
1	pH	IS: 3025 (P-11): 2022	7.60	-
2	Total Suspended Solids (TSS)	IS: 3025 (P-17): 2022	47.00	mg/l
3	Oil & Grease	IS:3025 (P-39): 2021	4.68	mg/l
4	Biochemical Oxygen Demand (BOD) (3 days @ 27°C )	IS: 3025 (P-44): 1993, RA: 2019	24.15	mg/l
5	Chemical oxygen Demand (COD)	IS : 3025 (P-58) : 2006 RA: 2017	169.20	mg/l

\*BLQ-Below Limit OF Quantification, \*\*LOQ- Limit Of Detection

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## TEST REPORT



Sample Number : VTL/WW/02

M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Name & Address of the Party :

Sample Description : Waste Water  
Sampling Location : ETP Outlet  
Sample Collected By : VTL Team  
Coordinates : NA

ULR No. : TC112272300000501F  
Report No. : VTL/WW/2312230002/A  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 29/12/2023  
Period of Analysis : 23/12/2023-29/12/2023  
Receipt Date : 23/12/2023  
Sampling Date : 18/12/2023  
Parameter Required : As per work order

S.No.	Test Parameters	Test Method	Result	Unit	Limits
1	pH	IS: 3025 (P-11): 2022	7.67	-	5.5 to 9.0
2	Total Suspended Solids (TSS)	IS: 3025 (P-17): 2022	23.98	mg/l	100
3	Oil & Grease	IS:3025 (P-39): 2021	*BLQ(**LOQ-4.0)	mg/l	10
4	Biochemical Oxygen Demand (BOD) (3 days @ 27°C )	IS: 3025 (P-44): 1993, RA: 2019	18.00	mg/l	30
5	Chemical oxygen Demand (COD)	IS : 3025 (P-58) 2006 RA: 2017	79.61	mg/l	250

\*BLQ-Below Limit OF Quantification, \*\*LOQ- Limit Of Detection

\*\*\*End of Report\*\*\*



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# TEST REPORT



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Sample Number : VTL/WW/03

M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist. - Raigarh 496100 Chhattisgarh

Name & Address of the Party :

Sample Description : Waste Water  
Sampling Location : STP Outlet  
Sample Collected By : VTL Team  
Coordinates : NA

ULR No. : TC112272300000502F  
Report No. : VTL/WW/2312230003/A  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 29/12/2023  
Period of Analysis : 23/12/2023-29/12/2023  
Receipt Date : 23/12/2023  
Sampling Date : 18/12/2023  
Parameter Required : As per work order

S.No.	Test Parameters	Test Method	Result	Unit	Limits
1	pH	IS: 3025 (P-11): 2022	7.41	-	5.5 to 9.0
2	Total Suspended Solids (TSS)	IS: 3025 (P-17): 2022	22.27	mg/l	100
3	Oil & Grease	IS:3025 (P-39): 2021	*BLQ(**LOQ-4.0)	mg/l	10
4	Biochemical Oxygen Demand (BOD) (3 days @ 27°C )	IS: 3025 (P-44): 1993, RA: 2019	16.00	mg/l	30
5	Chemical oxygen Demand (COD)	IS : 3025 (P-58) : 2006 RA: 2017	42.88	mg/l	250

\*BLQ-Below Limit OF Quantification, \*\*LOQ- Limit Of Detection

\*\*\*End of Report\*\*\*



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Sample Number : VTL/WW/04

TEST REPORT



TC-11227

M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Name & Address of the Party :

Sample Description : Waste Water  
Sampling Location : Cooling Tower Blow Down  
Sample Collected By : VTL Team  
Coordinates : NA

ULR No. : TC112272300000503F  
Report No. : VTL/WW/2312230004/A  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 29/12/2023  
Period of Analysis : 23/12/2023-29/12/2023  
Receipt Date : 23/12/2023  
Sampling Date : 18/12/2023  
Parameter Required : As per work order

S.No.	Test Parameters	Test Method	Result	Unit	Limits
1	Chromium (as Cr)	APHA 23rd Edition 3113 B, 2017	*BLQ(**LOQ-0.1)	mg/l	2
2	Zinc (as Zn)	APHA 23rd Edition-3030D, 3113 B, 2017	*BLQ(**LOQ-0.2)	mg/l	5
3	Residual Free Chlorine	IS: 3025 (P-26):2021	0.28	mg/l	1.0

\*BLQ-Below Limit Of Quantification. \*\*LOQ- Limit Of Detection

\*\*\*End of Report\*\*\*



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## TEST REPORT



**VIBRANT**  
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Sample Number : VTL/WW/05

M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist- Raigarh 496100 Chhattisgarh

Name & Address of the Party :

Sample Description : Waste Water  
Sampling Location : Boiler Blow Down  
Sample Collected By : VTL Team  
Coordinates : NA

ULR No. : TC1122723000000504F  
Report No. : VTL/WW/2312230005/A  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 29/12/2023  
Period of Analysis : 23/12/2023-29/12/2023  
Receipt Date : 23/12/2023  
Sampling Date : 18/12/2023  
Parameter Required : As per work order

S.No.	Test Parameters	Test Method	Result	Unit	Limits
1	Chromium (as Cr)	APHA 23rd Edition 3113 B, 2017	*BLQ(**LOQ-0.1)	mg/l	2
2	Zinc (as Zn)	APHA 23rd Edition-3030D, 3113 B, 2017	*BLQ(**LOQ-0.2)	mg/l	5
3	Residual Free Chlorine	IS: 3025 (P-26):2021	0.35	mg/l	1.0

\*BLQ-Below Limit OF Quantification. \*\*LOQ- Limit Of Detection

\*\*\*End of Report\*\*\*



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Sample Number:  
Name & Address of the Party:

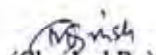
VTL/WL/01  
M/s Adani Power Limited  
Village - Chhote Bhandar, Post - Bade  
Bandar, Tehsil Pussore, Dist- Raigarh  
496100 (Chhattisgarh)

Report No.: VTL/WL/2312230001-03  
Format No.: 7.8 F-01  
Party Reference No.: NIL  
Report Date: 29/12/2023  
Receipt Date: 23/12/2023  
Date of Monitoring: 19/12/2023

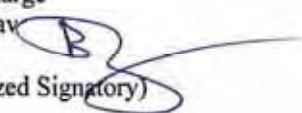
Sample Collected By  
Sample Description:

VTL Team  
Ground Water Level Monitoring

S.No.	Location	Depth (In meter)
1.	Piezometer Well No.- 02	1.28
2.	Piezometer Well No.- 03	1.82
3.	Piezometer Well No.- 04	3.26

  
(Checked By)



Lab Incharge  
RK Yadav   
(Authorized Signatory)

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**Vibrant Techno Lab Pvt. Ltd.**

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9929108691, 9810205356, 8005707098, 9549956601

0141-2954638

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Sample Number : VTL/S0/01

M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Name & Address of the Party :

Sample Description : SOIL  
Sampling Location : Amlī Bhavan  
Sample Collected By : VTL Team  
Parameter Required : As per work order  
Method of sampling : IS : 2720

ULR No. : TC112272300000006F  
Report No. : VTL/S0/2312230001/A  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 29/12/2023  
Period of Analysis : 23/12/2023-29/12/2023  
Receipt Date : 23/12/2023  
Sampling Date : 19/12/2023  
Sampling Type : Composite  
Sample Quantity : 2 Kg  
Packing Status : Temp. Sealed  
Coordinates : --

S.No.	Parameters	Test Method	Results	Units
1	pH	IS : 2720 (P- 26); 1987, RA: 2021	7.66	-
2	Electrical Conductivity	IS 14767; 2000, RA:2021	0.348	mS/cm
3	Bulk density	USDA:1954 (Page-121), RA: 2014	1.33	gm/c.c.
4	Chloride (as Cl)	USDA:1954 Method 13 (Page-98), RA: 2010	95.00	mg/kg
5	Calcium (as Ca)	Lab SOP No. VTL/STP/03: 2022, STP-06	325.50	mg/kg
6	Sodium (as Na)	USEPA:3050 B:1996	87.18	mg/kg
7	Potassium (as K)	USEPA 3050 B: 1996	109.00	kg/hect.
8	Organic Matter	IS 2720 (P-22) 1972, RA:2020	0.64	%
9	Magnesium (as Mg)	Lab SOP No. VTL/STP/03: 2022, STP-06	85.00	mg/kg
10	Available Nitrogen (N)	IS :14584,1999 RA: 2019	204.14	kg/ha
11	Available Phosphorus (as P)	Lab SOP No. VTL/STP/03: 2022, STP-10	32.44	kg/ha
12	Zinc (as Zn)	USEPA 3050 B: 1996	16.00	mg/kg
13	Manganese (as Mn)	USEPA 3050 B: 1996	124.70	mg/kg
14	Total Lead (as Pb)	USEPA 3050 B: 1996	3.20	mg/kg
15	Total Cadmium (as Cd)	USEPA 3050 B:1996	0.91	mg/kg
16	Copper (as Cu)	USEPA 3050 B: 1996	12.30	mg/kg

\*BLO=Below Limit of Quantification,\*\*LOQ=Limit of Quantification

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**Vibrant Techno Lab Pvt. Ltd.**

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## TEST REPORT

Sample Number : VTL/S0/01

M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Name & Address of the Party :

Sample Description : SOIL  
Sampling Location : Amlil Bhavan  
Sample Collected By : VTL Team  
Parameter Required : As per work order  
Method of sampling : IS :2720

Report No. : VTL/S0/2312230001/B  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 29/12/2023  
Period of Analysis : 23/12/2023-29/12/2023  
Receipt Date : 23/12/2023  
Sampling Date : 19/12/2023  
Sampling Type : Composite  
Sample Quantity : 2 Kg.  
Packing Status : Temp. Sealed  
Coordinates : --

S.No.	Parameters	Test Method	Results	Units
1	Colour	USDA:1954-Reaffirmed, 2010	Yellowish Red	-
2	Water holding capacity	USDA:1954-Reaffirmed, 2010	36.14	%
3	Total Chromium (as Cr)	USEPA 3050 B:1996	1.83	mg/kg

\*BLQ=Below Limit of Quantification,\*\*LOQ=Limit of Quantification

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Sample Number : VTL/S0/02

M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Name & Address of the Party :

Sample Description : SOIL  
Sampling Location : Village - Kathli  
Sample Collected By : VTL Team  
Parameter Required : As per work order  
Method of sampling : IS :2720

Report No. : VTL/S0/2312230002/A  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 29/12/2023  
Period of Analysis : 23/12/2023-29/12/2023  
Receipt Date : 23/12/2023  
Sampling Date : 19/12/2023  
Sampling Type : Composite  
Sample Quantity : 2 Kg.  
Packing Status : Temp. Sealed  
Coordinates : --

S.No.	Parameters	Test Method	Results	Units
1	pH	IS : 2720 (P- 26): 1987, RA: 2021	7.60	-
2	Electrical Conductivity	IS 14767: 2000, RA:2021	0.346	mS/cm
3	Bulk density	USDA:1954 (Page-121), RA: 2014	1.34	gm/c.c
4	Chloride (as Cl)	USDA:1954 Method 13 (Page-98), RA: 2010	93.00	mg/kg
5	Calcium (as Ca)	Lab SOP No. VTL/STP/03: 2022, STP-06	319.20	mg/kg
6	Sodium (as Na)	USEPA:3050 B:1996	86.00	mg/kg
7	Potassium (as K)	USEPA 3050 B: 1996	107.00	kg/hect.
8	Organic Matter	IS 2720 (P-22) 1972, RA:2020	0.62	%
9	Magnesium (as Mg)	Lab SOP No. VTL/STP/03: 2022, STP-06	83.00	mg/kg
10	Available Nitrogen (N)	IS :14684,1999 RA: 2019	202.10	kg/ha
11	Available Phosphorus (as P)	Lab SOP No. VTL/STP/03: 2022, STP-10	30.21	kg/ha
12	Zinc (as Zn)	USEPA 3050 B: 1996	14.00	mg/kg
13	Manganese (as Mn)	USEPA 3050 B: 1996	122.06	mg/kg
14	Total Lead (as Pb)	USEPA 3050 B: 1996	3.15	mg/kg
15	Total Cadmium (as Cd)	USEPA 3050 B:1996	0.86	mg/kg
16	Copper (as Cu)	USEPA 3050 B: 1996	12.16	mg/kg

\*BLQ=Below Limit of Quantification,\*\*LOQ=Limit of Quantification

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**Vibrant Techno Lab Pvt. Ltd.**

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## TEST REPORT

Sample Number : VTL/S0/02

M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist. - Raigarh 496100 Chhattisgarh

Name & Address of the Party :

Sample Description : SOIL  
Sampling Location : Village - Kathli  
Sample Collected By : VTL Team  
Parameter Required : As per work order  
Method of sampling : IS :2720

Report No. : VTL/S0/2312230002/B  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 29/12/2023  
Period of Analysis : 23/12/2023-29/12/2023  
Receipt Date : 23/12/2023  
Sampling Date : 19/12/2023  
Sampling Type : Composite  
Sample Quantity : 2 Kg.  
Packing Status : Temp. Sealed  
Coordinates : --

S.No.	Parameters	Test Method	Results	Units
1	Colour	USDA:1954-Reaffirmed, 2010	Yellowish Red	-
2	Water holding capacity	USDA:1954-Reaffirmed, 2010	36.10	%
3	Total Chromium (as Cr)	USEPA 3050 B:1996	1.80	mg/kg

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Sample Number : VTL/S0/03  
M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Name & Address of the Party :

Sample Description : SOIL  
Sampling Location : Bade Bhandar  
Sample Collected By : VTL Team  
Parameter Required : As per work order  
Method of sampling : IS :2720

Report No. : VTL/S0/2312230003/A  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 29/12/2023  
Period of Analysis : 23/12/2023-29/12/2023  
Receipt Date : 23/12/2023  
Sampling Date : 19/12/2023  
Sampling Type : Composite  
Sample Quantity : 2 Kg.  
Packing Status : Temp. Sealed  
Coordinates : --

S.No.	Parameters	Test Method	Results	Units
1	pH	IS : 2720 (P- 26): 1987, RA: 2021	7.58	-
2	Electrical Conductivity	IS 14767: 2000, RA:2021	0.340	mS/cm
3	Bulk density	USDA:1954 (Page-121), RA: 2014	1.30	gm/c.c.
4	Chloride (as Cl)	USDA:1954 Method 13 (Page-98), RA: 2010	34.00	mg/kg
5	Calcium (as Ca)	Lab SOP No. VTL/STP/03: 2022, STP-06	322.05	mg/kg
6	Sodium (as Na)	USEPA:3050 B:1996	88.11	mg/kg
7	Potassium (as K)	USEPA 3050 B: 1996	112.00	kg/hect.
8	Organic Matter	IS 2720 (P-22) 1972, RA:2020	0.65	%
9	Magnesium (as Mg)	Lab SOP No. VTL/STP/03: 2022, STP-06	84.00	mg/kg
10	Available Nitrogen (N)	IS :14684,1999 RA: 2019	204.16	kg/ha
11	Available Phosphorus (as P)	Lab SOP No. VTL/STP/03: 2022, STP-10	32.00	kg/ha
12	Zinc (as Zn)	USEPA 3050 B: 1996	16.07	mg/kg
13	Manganese (as Mn)	USEPA 3050 B: 1996	124.00	mg/kg
14	Total Lead (as Pb)	USEPA 3050 B: 1996	4.00	mg/kg
15	Total Cadmium (as Cd)	USEPA 3050 B:1996	0.88	mg/kg
16	Copper (as Cu)	USEPA 3050 B: 1996	13.40	mg/kg

\*BLQ=Below Limit of Quantification,\*\*LOQ=Limit of Quantification

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TEST REPORT

Sample Number : VTL/S0/03

M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Name & Address of the Party :

Sample Description : SOIL  
Sampling Location : Bade Bhandar  
Sample Collected By : VTL Team  
Parameter Required : As per work order  
Method of sampling : IS :2720

Report No. : VTL/S0/2312230003/B  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 29/12/2023  
Period of Analysis : 23/12/2023-29/12/2023  
Receipt Date : 23/12/2023  
Sampling Date : 19/12/2023  
Sampling Type : Composite  
Sample Quantity : 2 Kg.  
Packing Status : Temp. Sealed  
Coordinates : --

S.No.	Parameters	Test Method	Results	Units
1	Colour	USDA:1954-Reaffirmed, 2010	Yellowish Red	-
2	Water holding capacity	USDA:1954-Reaffirmed, 2010	38.00	%
3	Total Chromium (as Cr)	USEPA 3050 B:1995	1.84	mg/kg

\*BLQ=Below Limit of Quantification,\*\*LOQ=Limit of Quantification

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Sample Number : VTL/S0/04  
 M/s Adani Power Limited  
 Village- Chhote Bhandar, Post- Bade Bhandar,  
 Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Name & Address of the Party :

Sample Description : SOIL  
 Sampling Location : Chote Bhandar  
 Sample Collected By : VTL Team  
 Parameter Required : As per work order  
 Method of sampling : IS :2720

Report No. : VTL/S0/2312230004/A  
 Format No : 7.8 F-01  
 Party Reference No : NIL  
 Report Date : 29/12/2023  
 Period of Analysis : 23/12/2023-29/12/2023  
 Receipt Date : 23/12/2023  
 Sampling Date : 19/12/2023  
 Sampling Type : Composite  
 Sample Quantity : 2 Kg.  
 Packing Status : Temp. Sealed  
 Coordinates : --

S.No.	Parameters	Test Method	Results	Units
1	pH	IS : 2720 (P- 26): 1987, RA: 2021	7.56	-
2	Electrical Conductivity	IS 14767: 2000, RA:2021	0.347	mS/cm
3	Bulk density	USDA:1954 (Page-121), RA: 2014	1.28	gm/c.c.
4	Chloride (as Cl)	USDA:1954 Method 13 (Page-98), RA: 2010	36.00	mg/kg
5	Calcium (as Ca)	Lab SOP No. VTL/STP/03: 2022, STP-06	330.16	mg/kg
6	Sodium (as Na)	USEPA:3050 B:1996	90.12	mg/kg
7	Potassium (as K)	USEPA 3050 B: 1996	116.00	kg/hect.
8	Organic Matter	IS 2720 (P-22) 1972, RA:2020	0.68	%
9	Magnesium (as Mg)	Lab SOP No. VTL/STP/03: 2022, STP-06	87.00	mg/kg
10	Available Nitrogen (N)	IS :14684,1999 RA: 2019	214.00	kg/ha
11	Available Phosphorus (as P)	Lab SOP No. VTL/STP/03: 2022, STP-10	34.51	kg/ha
12	Zinc (as Zn)	USEPA 3050 B: 1996	17.88	mg/kg
13	Manganese (as Mn)	USEPA 3050 B: 1996	127.00	mg/kg
14	Total Lead (as Pb)	USEPA 3050 B: 1996	4.01	mg/kg
15	Total Cadmium (as Cd)	USEPA 3050 B: 1996	0.89	mg/kg
16	Copper (as Cu)	USEPA 3050 B: 1996	14.72	mg/kg

\*BLQ=Below Limit of Quantification,\*\*LOQ=Limit of Quantification

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Sample Number : VTL/S0/04

TEST REPORT

M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Name & Address of the Party :

Sample Description : SOIL  
Sampling Location : Chote Bhandar  
Sample Collected By : VTL Team  
Parameter Required : As per work order  
Method of sampling : IS :2720

Report No. : VTL/S0/2312230004/B  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 29/12/2023  
Period of Analysis : 23/12/2023-29/12/2023  
Receipt Date : 23/12/2023  
Sampling Date : 19/12/2023  
Sampling Type : Composite  
Sample Quantity : 2 Kg.  
Packing Status : Temp. Sealed  
Coordinates : --

S.No.	Parameters	Test Method	Results	Units
1	Colour	USDA:1954-Reaffirmed, 2010	Yellowish Red	-
2	Water holding capacity	USDA:1954-Reaffirmed, 2010	40.00	%
3	Total Chromium (as Cr)	USEPA 3050 B:1996	1.68	mg/kg

\*BLO=Below Limit of Quantification,\*\*LOQ=Limit of Quantification

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M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Name & Address of the Party :

Sample Description : SOIL  
Sampling Location : Village - Siha  
Sample Collected By : VTL Team  
Parameter Required : As per work order  
Method of sampling : IS :2720

Report No. : VTL/S0/2312230005/A  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 29/12/2023  
Period of Analysis : 23/12/2023-29/12/2023  
Receipt Date : 23/12/2023  
Sampling Date : 20/12/2023  
Sampling Type : Composite  
Sample Quantity : 2 Kg.  
Packing Status : Temp. Sealed  
Coordinates : --

S.No.	Parameters	Test Method	Results	Units
1	pH	IS : 2720 (P- 26): 1987, RA: 2021	7.52	-
2	Electrical Conductivity	IS 14767: 2000, RA:2021	0.347	mS/cm
3	Bulk density	USDA:1954 (Page-121), RA: 2014	1.34	gm/c. c.
4	Chloride (as Cl)	USDA:1954 Method 13 (Page-98), RA: 2010	30.12	mg/kg
5	Calcium (as Ca)	Lab SOP No. VTL/STP/03: 2022, STP-06	315.00	mg/kg
6	Sodium (as Na)	USEPA:3050 B: 1996	85.00	mg/kg
7	Potassium (as K)	USEPA 3050 B: 1996	99.61	kg/hect.
8	Organic Matter	IS 2720 (P-22) 1972, RA:2020	0.54	%
9	Magnesium (as Mg)	Lab SOP No. VTL/STP/03: 2022, STP-06	80.14	mg/kg
10	Available Nitrogen (N)	IS :14684, 1999 RA: 2019	209.17	kg/ha
11	Available Phosphorus (as P)	Lab SOP No. VTL/STP/03: 2022, STP-10	30.68	kg/ha
12	Zinc (as Zn)	USEPA 3050 B: 1996	17.00	mg/kg
13	Manganese (as Mn)	USEPA 3050 B: 1996	125.00	mg/kg
14	Total Lead (as Pb)	USEPA 3050 B: 1996	3.87	mg/kg
15	Total Cadmium (as Cd)	USEPA 3050 B:1996	0.85	mg/kg
16	Copper (as Cu)	USEPA 3050 B: 1996	14.60	mg/kg

\*BLQ=Below Limit of Quantification,\*\*LOQ=Limit of Quantification

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TEST REPORT

Sample Number : VTL/S0/04

M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Name & Address of the Party :

Sample Description : SOIL  
Sampling Location : Village - Siha  
Sample Collected By : VTL Team  
Parameter Required : As per work order  
Method of sampling : IS :2720

Report No. : VTL/S0/2312230005/B  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 29/12/2023  
Period of Analysis : 23/12/2023-29/12/2023  
Receipt Date : 23/12/2023  
Sampling Date : 20/12/2023  
Sampling Type : Composite  
Sample Quantity : 2 Kg.  
Packing Status : Temp. Sealed  
Coordinates : --

S.No.	Parameters	Test Method	Results	Units
1	Colour	USDA:1954-Reaffirmed, 2010	Yellowish Red	-
2	Water holding capacity	USDA:1954-Reaffirmed, 2010	38.14	%
3	Total Chromium (as Cr)	USEPA 3050 B:1996	1.78	mg/kg

\*BLQ=Below Limit of Quantification,\*\*LOQ=Limit of Quantification

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M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Name & Address of the Party :

Sample Description : SOIL  
Sampling Location : Bilaigarh  
Sample Collected By : VTL Team  
Parameter Required : As per work order  
Method of sampling : IS :2720

Report No. : VTL/S0/2312230006/A  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 29/12/2023  
Period of Analysis : 23/12/2023-29/12/2023  
Receipt Date : 23/12/2023  
Sampling Date : 20/12/2023  
Sampling Type : Composite  
Sample Quantity : 2 Kg.  
Packing Status : Temp. Sealed  
Coordinates : --

S.No.	Parameters	Test Method	Results	Units
1	pH	IS : 2720 (P- 26): 1987, RA: 2021	7.65	-
2	Electrical Conductivity	IS 14767: 2000, RA:2021	0.350	mS/cm
3	Bulk density	USDA:1954 (Page-121), RA: 2014	1.26	gm/cc
4	Chloride (as Cl)	USDA:1954 Method 13 (Page-98). RA: 2010	115.07	mg/kg
5	Calcium (as Ca)	Lab SOP No. VTL/STP/03: 2022, STP-06	336.70	mg/kg
6	Sodium (as Na)	USEPA:3050 B:1996	95.64	mg/kg
7	Potassium (as K)	USEPA 3050 B: 1996	120.00	kg/hect.
8	Organic Matter	IS 2720 (P-22) 1972, RA:2020	0.72	%
9	Magnesium (as Mg)	Lab SOP No. VTL/STP/03: 2022, STP-06	93.00	mg/kg
10	Available Nitrogen (N)	IS :14684,1999 RA: 2019	223.06	kg/ha
11	Available Phosphorus (as P)	Lab SOP No. VTL/STP/03: 2022, STP-10	36.00	kg/ha
12	Zinc (as Zn)	USEPA 3050 B: 1996	18.17	mg/kg
13	Manganese (as Mn)	USEPA 3050 B: 1996	130.00	mg/kg
14	Total Lead (as Pb)	USEPA 3050 B: 1996	4.08	mg/kg
15	Total Cadmium (as Cd)	USEPA 3050 B:1996	0.93	mg/kg
16	Copper (as Cu)	USEPA 3050 B: 1996	15.62	mg/kg

\*BLQ=Below Limit of Quantification,\*\*LOQ=Limit of Quantification

\*\*\*End of Report\*\*\*



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**Vibrant Techno Lab Pvt. Ltd.**

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Sample Number : VTL/S0/06

TEST REPORT

M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Name & Address of the Party :

Sample Description : SOIL  
Sampling Location : Bilaiagarh  
Sample Collected By : VTL Team  
Parameter Required : As per work order  
Method of sampling : IS :2720

Report No. : VTL/S0/2312230006/B  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 29/12/2023  
Period of Analysis : 23/12/2023-29/12/2023  
Receipt Date : 23/12/2023  
Sampling Date : 20/12/2023  
Sampling Type : Composite  
Sample Quantity : 2 Kg.  
Packing Status : Temp. Sealed  
Coordinates : --

S.No.	Parameters	Test Method	Results	Units
1	Colour	USDA:1954-Reaffirmed, 2010	Yellowish Red	-
2	Water holding capacity	USDA:1954-Reaffirmed, 2010	43.00	%
3	Total Chromium (as Cr)	USEPA 3050 B-1998	1.90	mg/kg

\*BLQ=Below Limit of Quantification,\*\*LOQ=Limit of Quantification

\*\*\*End of Report\*\*\*



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## TEST REPORT



Sample Number : VTL/AA/05  
Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTL/A/2403230001/A  
Format No : 7.8 F-02  
Party Reference No : NIL  
Report Date : 28/03/2024  
Period of Analysis : 23/03/2024-28/03/2024  
Receipt Date : 23/03/2024

Sample Description : AMBIENT AIR QUALITY MONITORING

**General Information:-**  
Sampling Location : Village Kathli  
Sample Collected By : VTL Team  
Sampling Equipment used : RDS/FPS  
Instrument Code : VTL/RDS/FPS/03  
Coordinates : 21°43'25" & 83°16'26"  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 19/03/2024 To 20/03/2024  
Time of Monitoring : 11:00 TO 11:00 Hrs.  
Ambient Temperature (°C) : Min. 17°C Max. 30°C  
Surrounding Activity : Human, Vehicular & Other Act.  
Scope of Monitoring : Regulatory Requirement  
Method of Sampling : IS :5182  
Sampling Duration : 24 Hrs.  
Parameter Required : As per work order

S.No.	Parameters	Test Method	Results	Units	NAAQS 2009
1	Particulate Matter (as PM10)	IS:5182 (P- 23)-2006, RA. 2017	66.7	µg/m <sup>3</sup>	100
2	Particulate Matter (as PM2.5)	IS:5182 (P- 24)-2019	27.4	µg/m <sup>3</sup>	60
3	Nitrogen Dioxide (as NO2)	IS:5182 (P- 6)-2006, RA.2016	18.01	µg/m <sup>3</sup>	50
4	Sulphur Dioxide (as SO2)	IS:5182 (P- 2)-2001, RA. 2016	10.1	µg/m <sup>3</sup>	80

\*BLQ-Below Limit Of Quantification, \*\*LOQ-Limit Of Quantification

\*\*\*End of Report\*\*\*

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TEST REPORT

Sample Number : VTL/AA/05  
Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTL/A/2403230001/B  
Format No : 7.8 F-02  
Party Reference No : NIL  
Report Date : 28/03/2024  
Period of Analysis : 23/03/2024-28/03/2024  
Receipt Date : 23/03/2024

Sample Description : AMBIENT AIR QUALITY MONITORING

General Information:-  
Sampling Location : Village Kathli  
Sample Collected By : VTL Team  
Sampling Equipment used : RDS/FPS  
Instrument Code : VTL/RDS/FPS/03  
Coordinates : 21°43'25" & 83°16'26"  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 19/03/2024 To 20/03/2024  
Time of Monitoring : 11:00 TO 11:00 Hrs.  
Ambient Temperature (°C) : Min. 17°C Max. 30°C  
Surrounding Activity : Human, Vehicular & Other Act.  
Scope of Monitoring : Regulatory Requirement  
Method of Sampling : IS :5182  
Sampling Duration : 24 Hrs.  
Parameter Required : As per work order

S.No.	Parameters	Test Method	Results	Units	NAAQS 2009
1	Carbon Monoxide (as CO)	Lab SOP no. VTL/STP/02/2022, STP-08	0.62	mg/m <sup>3</sup>	4
2	Mercury (as Hg)	Methods of air sampling and analysis, 3rd ed., 1988, Method No.317	*BLQ (**LOQ 0.5)	µg/m <sup>3</sup>	--

\*BLQ-Below Limit Of Quantification, \*\*LOQ-Limit Of Quantification

\*\*\*End of Report\*\*\*

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## TEST REPORT



Sample Number : VTL/AA/01  
Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTL/A/2403230002/A  
Format No : 7.8 F-02  
Party Reference No : NIL  
Report Date : 28/03/2024  
Period of Analysis : 23/03/2024-28/03/2024  
Receipt Date : 23/03/2024

Sample Description : AMBIENT AIR QUALITY MONITORING

General Information:-  
Sampling Location : RO- DM  
Sample Collected By : VTL Team  
Sampling Equipment used : RDS/FPS  
Instrument Code : VTL/RDS/FPS/04  
Coordinates : 21°44'42" & 83°16'35"  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 18/03/2024 To 19/03/2024  
Time of Monitoring : 10:30 TO 10:30 Hrs.  
Ambient Temperature (°C) : Min. 35°C Max. 15°C  
Surrounding Activity : Human, Vehicular & Plant Act.  
Scope of Monitoring : Regulatory Requirement  
Method of Sampling : IS :5182  
Sampling Duration : 24 Hrs.  
Parameter Required : As per work order

S.No.	Parameters	Test Method	Results	Units	NAAQS 2009
1	Particulate Matter (as PM10)	IS:5182 (P- 23)-2008, RA. 2017	61.81	µg/m <sup>3</sup>	100
2	Particulate Matter (as PM2.5)	IS:5182 (P- 24)-2019	27.32	µg/m <sup>3</sup>	60
3	Nitrogen Dioxide (as NO2)	IS:5182 (P- 6)-2008, RA. 2018	15.87	µg/m <sup>3</sup>	80
4	Sulphur Dioxide (as SO2)	IS:5182 (P- 2)-2001, RA. 2018	9.24	µg/m <sup>3</sup>	80

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## TEST REPORT

Sample Number : VTL/AA/01

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTL/A/2403230002/B  
Format No : 7.8 F-02  
Party Reference No : NIL  
Report Date : 28/03/2024  
Period of Analysis : 23/03/2024-28/03/2024  
Receipt Date : 23/03/2024

Sample Description : AMBIENT AIR QUALITY MONITORING

**General Information:-**  
Sampling Location : RO- DM  
Sample Collected By : VTL Team  
Sampling Equipment used : RDS/FPS  
Instrument Code : VTL/RDS/FPS/04  
Coordinates : 21°44'42" & 83°16'35"  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 18/03/2024 To 19/03/2024  
Time of Monitoring : 10:30 TO 10:30 Hrs.  
Ambient Temperature (°C) : Min. 35°C Max. 15°C  
Surrounding Activity : Human, Vehicular & Plant Act.  
Scope of Monitoring : Regulatory Requirement  
Method of Sampling : IS :5182  
Sampling Duration : 24 Hrs.  
Parameter Required : As per work order

S.No.	Parameters	Test Method	Results	Units	NAAQS 2009
1	Carbon Monoxide (as CO)	Lab SOP no. VTL/STP/02:2022, STP-08	0.57	mg/m <sup>3</sup>	4
2	Mercury (as Hg)	Methods of air sampling and analysis, 3rd ed., 1988, Method No.317	*BLQ (**LOQ 0.5)	µg/m <sup>3</sup>	

\*BLQ-Below Limit Of Quantification, \*\*LOQ-Limit Of Quantification

\*\*\*End of Report\*\*\*

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## TEST REPORT



TC-11/2021

Sample Number : VTL/AA/02  
Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 498100 Chhattisgarh

Report No. : VTL/A/2403230003/A  
Format No : 7.8 F-02  
Party Reference No : NIL  
Report Date : 28/03/2024  
Period of Analysis : 23/03/2024-28/03/2024  
Receipt Date : 23/03/2024

Sample Description : AMBIENT AIR QUALITY MONITORING

General Information:-  
Sampling Location : OLD Site Office  
Sample Collected By : VTL Team  
Sampling Equipment used : RDS/FPS  
Instrument Code : VTL/RDS/FPS/03  
Coordinates : 21°44'27" & 83°16'33"  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 18/03/2024 To 19/03/2024  
Time of Monitoring : 10:00 TO 10:00 Hrs.  
Ambient Temperature (°C) : Min, 35°C Max. 18°C  
Surrounding Activity : Human, Vehicular & Plant Act.  
Scope of Monitoring : Regulatory Requirement  
Method of Sampling : IS :5182  
Sampling Duration : 24 Hrs.  
Parameter Required : As per work order

S.No.	Parameters	Test Method	Results	Units	NAAQS 2009
1	Particulate Matter (as PM10)	IS:5182 (P- 23)-2006, RA. 2017	83.53	µg/m <sup>3</sup>	100
2	Particulate Matter (as PM2.5)	IS:5182 (P- 24)-2019	28.29	µg/m <sup>3</sup>	60
3	Nitrogen Dioxide (as NO2)	IS:5182 (P- 6)-2006, RA.2018	16.10	µg/m <sup>3</sup>	80
4	Sulphur Dioxide (as SO2)	IS:5182 (P- 2)-2001, RA. 2018	9.98	µg/m <sup>3</sup>	80

\*BLQ-Below Limit Of Quantification, \*\*LOQ-Limit Of Quantification

\*\*\*End of Report\*\*\*

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## TEST REPORT

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Sample Number : VTL/AA/02

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTL/A/2403230003/B  
Format No : 7.8 F-02  
Party Reference No : NIL  
Report Date : 28/03/2024  
Period of Analysis : 23/03/2024-28/03/2024  
Receipt Date : 23/03/2024

Sample Description : AMBIENT AIR QUALITY MONITORING

**General Information:-**

Sampling Location : OLD Site Office  
Sample Collected By : VTL Team  
Sampling Equipment used : RDS/FPS  
Instrument Code : VTL/RDS/FPS/03  
Coordinates : 21°44'27" & 83°16'33"  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 18/03/2024 To 19/03/2024  
Time of Monitoring : 10:00 TO 10:00 Hrs.  
Ambient Temperature (°C) : Min. 35°C Max. 18°C  
Surrounding Activity : Human, Vehicular & Plant Act.  
Scope of Monitoring : Regulatory Requirement.  
Method of Sampling : IS :5182  
Sampling Duration : 24 Hrs.  
Parameter Required : As per work order

S.No.	Parameters	Test Method	Results	Units	NAAQS 2009
1	Carbon Monoxide (as CO)	Lab SOP no. VTL/STP/02-2022, STP-08	0.62	mg/m <sup>3</sup>	4
2	Mercury (as Hg)	Methods of air sampling and analysis, 3rd ed., 1988, Method No.317	*BLQ (**LOQ 0.5)	µg/m <sup>3</sup>	—

\*BLQ-Below Limit Of Quantification, \*\*LOQ-Limit Of Quantification

\*\*\*End of Report\*\*\*

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**Vibrant Techno Lab Pvt. Ltd.**

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## TEST REPORT



Sample Number : VTL/AA/02

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTL/A/2403230004/A  
Format No : 7.8 F-02  
Party Reference No : NIL  
Report Date : 28/03/2024  
Period of Analysis : 23/03/2024-28/03/2024  
Receipt Date : 23/03/2024

Sample Description : AMBIENT AIR QUALITY MONITORING

General Information:-  
Sampling Location : Chote Bhandar  
Sample Collected By : VTL Team  
Sampling Equipment used : RDS/FPS  
Instrument Code : VTL/RDS/FPS/01  
Coordinates : 21°43'57" & 83°17'00"  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 18/03/2024 To 19/03/2024  
Time of Monitoring : 09:00 TO 09:00 Hrs.  
Ambient Temperature (°C) : Min. 18°C Max. 35°C  
Surrounding Activity : Human, Vehicular & Other Act.  
Scope of Monitoring : Regulatory Requirement  
Method of Sampling : IS :5182  
Sampling Duration : 24 Hrs.  
Parameter Required : As per work order

S.No.	Parameters	Test Method	Results	Units	NAAQS 2009
1	Particulate Matter (as PM10)	IS:5182 (P- 23)-2006, RA, 2017	65.87	µg/m <sup>3</sup>	100
2	Particulate Matter (as PM2.5)	IS:5182 (P- 24)-2019	31.23	µg/m <sup>3</sup>	60
3	Nitrogen Dioxide (as NO2)	IS:5182 (P- 6)-2006, RA,2018	17.51	µg/m <sup>3</sup>	80
4	Sulphur Dioxide (as SO2)	IS:5182 (P- 2)-2001, RA, 2018	10.25	µg/m <sup>3</sup>	80

\*BLQ-Below Limit Of Quantification, \*\*LOQ-Limit Of Quantification

\*\*\*End of Report\*\*\*

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**Vibrant Techno Lab Pvt. Ltd.**

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Q 0141-2954638  
Q bd@vibranttechnolab.com  
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## TEST REPORT

Sample Number : VTL/AA/02

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 498100 Chhattisgarh

Report No. : VTL/A/2403230004/B  
Format No : 7.8 F-02  
Party Reference No : NIL  
Report Date : 28/03/2024  
Period of Analysis : 23/03/2024-28/03/2024  
Receipt Date : 23/03/2024

Sample Description : AMBIENT AIR QUALITY MONITORING

**General Information:-**

Sampling Location : Chote Bhandar  
Sample Collected By : VTL Team  
Sampling Equipment used : RDS/FPS  
Instrument Code : VTL/RDS/FPS/01  
Coordinates : 21°43'57" & 83°17'00"  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 18/03/2024 To 19/03/2024  
Time of Monitoring : 09:00 TO 09:00 Hrs.  
Ambient Temperature (°C) : Min. 18°C Max. 35°C  
Surrounding Activity : Human, Vehicular & Other Act.  
Scope of Monitoring : Regulatory Requirement  
Method of Sampling : IS :5182  
Sampling Duration : 24 Hrs.  
Parameter Required : As per work order

S.No.	Parameters	Test Method	Results	Units	NAAQS 2009
1	Carbon Monoxide (as CO)	Lab SOP no. VTL/STP/02:2022, STP-08	0.66	mg/m <sup>3</sup>	4
2	Mercury (as Hg)	Methods of air sampling and analysis, 3rd ed., 1988, Method No.317	*BLQ (**LOQ 0.5)	µg/m <sup>3</sup>	--

\*BLQ-Below Limit Of Quantification, \*\*LOQ-Limit Of Quantification

\*\*\*End of Report\*\*\*

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**VIBRANT**

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**TEST REPORT**



Sample Number : VTL/AA/01

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTL/A/2403230005/A  
Format No : 7.8 F-02  
Party Reference No : NIL  
Report Date : 28/03/2024  
Period of Analysis : 23/03/2024-28/03/2024  
Receipt Date : 23/03/2024

Sample Description : AMBIENT AIR QUALITY MONITORING

**General Information:-**

Sampling Location : Bade Bhandar  
Sample Collected By : VTL Team  
Sampling Equipment used : RDS/FPS  
Instrument Code : VTL/RDS/FPS/02  
Coordinates : 21°44'21" & 83°17'21"  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 18/03/2024 To 19/03/2024  
Time of Monitoring : 09:30 TO 09:30 Hrs,  
Ambient Temperature (°C) : Min. 18°C Max. 35°C  
Surrounding Activity : Human, Vehicular & Other Act.  
Scope of Monitoring : Regulatory Requirement  
Method of Sampling : IS :5182  
Sampling Duration : 24 Hrs.  
Parameter Required : As per work order

S.No.	Parameters	Test Method	Results	Units	NAAQS 2009
1	Particulate Matter (as PM10)	IS:5182 (P- 23)-2006, RA. 2017	66.76	µg/m <sup>3</sup>	100
2	Particulate Matter (as PM2.5)	IS:5182 (P- 24)-2019	29.03	µg/m <sup>3</sup>	60
3	Nitrogen Dioxide (as NO2)	IS:5182 (P- 6)-2006, RA. 2018	16.21	µg/m <sup>3</sup>	60
4	Sulphur Dioxide (as SO2)	IS:5182 (P- 2)-2001, RA. 2018	8.41	µg/m <sup>3</sup>	80

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\*\*\*End of Report\*\*\*

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## TEST REPORT

Sample Number : VTL/AA/01

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTL/A/2403230005/B  
Format No : 7.8 F-02  
Party Reference No : NIL  
Report Date : 28/03/2024  
Period of Analysis : 23/03/2024-28/03/2024  
Receipt Date : 23/03/2024

Sample Description : AMBIENT AIR QUALITY MONITORING

General Information:-  
Sampling Location : Bade Bhandar  
Sample Collected By : VTL Team  
Sampling Equipment used : RDS/FPS  
Instrument Code : VTL/RDS/FPS/02  
Coordinates : 21°44'21" & 83°17'21"  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 18/03/2024 To 19/03/2024  
Time of Monitoring : 09:30 TO 09:30 Hrs.  
Ambient Temperature (°C) : Min. 16°C Max. 35°C  
Surrounding Activity : Human, Vehicular & Other Act  
Scope of Monitoring : Regulatory Requirement  
Method of Sampling : IS :5182  
Sampling Duration : 24 Hrs.  
Parameter Required : As per work order

S.No.	Parameters	Test Method	Results	Units	NAAQS 2009
1	Carbon Monoxide (as CO)	Lab SOP no. VTL/STP/02.2022. STP-08	0.61	mg/m <sup>3</sup>	4
2	Mercury (as Hg)	Methods of air sampling and analysis, 3rd ed., 1986, Method No.317	*BLQ (**LOQ 0.5)	µg/m <sup>3</sup>	

\*BLQ-Below Limit Of Quantification, \*\*LOQ-Limit Of Quantification

\*\*\*End of Report\*\*\*

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## TEST REPORT



TC-11227

Sample Number : VTL/AA/04

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTL/A/2403230006/A  
Format No : 7.8 F-02  
Party Reference No : NIL  
Report Date : 28/03/2024  
Period of Analysis : 23/03/2024-28/03/2024  
Receipt Date : 23/03/2024

Sample Description : AMBIENT AIR QUALITY MONITORING

**General Information:-**

Sampling Location : Track Hopper  
Sample Collected By : VTL Team  
Sampling Equipment used : RDS/FPS  
Instrument Code : VTL/RDS/FPS/01  
Coordinates : 21°44'17" & 83°16'44"  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 19/03/2024 To 20/03/2024  
Time of Monitoring : 09:30 TO 09:30 Hrs.  
Ambient Temperature (°C) : Min. 17°C Max. 30°C  
Surrounding Activity : Human, Vehicular & Other Act.  
Scope of Monitoring : Regulatory Requirement  
Method of Sampling : IS :5182  
Sampling Duration : 24 Hrs.  
Parameter Required : As per work order

S.No.	Parameters	Test Method	Results	Units	NAAQS 2009
1	Particulate Matter (as PM10)	IS:5182 (P- 23)-2006, RA. 2017	58.72	µg/m <sup>3</sup>	100
2	Particulate Matter (as PM2.5)	IS:5182 (P- 24)-2019	26.36	µg/m <sup>3</sup>	60
3	Nitrogen Dioxide (as NO2)	IS:5182 (P- 6)-2006, RA.2018	16.42	µg/m <sup>3</sup>	80
4	Sulphur Dioxide (as SO2)	IS:5182 (P- 2)-2001, RA. 2018	9.43	µg/m <sup>3</sup>	80

\*BLO-Below Limit Of Quantification, \*\*LOQ-Limit Of Quantification

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**VIBRANT**

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Sample Number : VTL/AA/04

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

**TEST REPORT**

Report No. : VTL/A/2403230006/B  
Format No : 7.8 F-02  
Party Reference No : NIL  
Report Date : 28/03/2024  
Period of Analysis : 23/03/2024-28/03/2024  
Receipt Date : 23/03/2024

Sample Description : AMBIENT AIR QUALITY MONITORING

**General Information:-**

Sampling Location : Track Hopper  
Sample Collected By : VTL Team  
Sampling Equipment used : RDS/FPS  
Instrument Code : VTL/RDS/FPS/01  
Coordinates : 21°44'17" & 83°16'44"  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 19/03/2024 To 20/03/2024  
Time of Monitoring : 09:30 TO 09:30 Hrs.  
Ambient Temperature (°C) : Min. 17°C Max. 30°C  
Surrounding Activity : Human, Vehicular & Other Act.  
Scope of Monitoring : Regulatory Requirement  
Method of Sampling : IS -5182  
Sampling Duration : 24 Hrs.  
Parameter Required : As per work order

S.No.	Parameters	Test Method	Results	Units	NAAQS 2009
1	Carbon Monoxide (as CO)	Lab SOP no. VTL/STP/02.2022, STP-08	0.60	mg/m <sup>3</sup>	4
2	Mercury (as Hg)	Methods of air sampling and analysis, 3rd ed., 1986, Method No.317	*BLQ (**LOQ 0.5)	µg/m <sup>3</sup>	-

\*BLQ-Below Limit Of Quantification, \*\*LOQ-Limit Of Quantification

\*\*\*End of Report\*\*\*

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Sample Number : VTL/AA/01

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

**TEST REPORT**



Report No. : VTL/A/2403230007/A  
Format No : 7.8 F-02  
Party Reference No : NIL  
Report Date : 28/03/2024  
Period of Analysis : 23/03/2024-28/03/2024  
Receipt Date : 23/03/2024

Sample Description : AMBIENT AIR QUALITY MONITORING

General Information:-  
Sampling Location : OHC Building  
Sample Collected By : VTL Team  
Sampling Equipment used : RDS/FPS  
Instrument Code : VTL/RDS/FPS/04  
Coordinates : 21°43'45" & 83°16'41"  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 19/03/2024 To 20/03/2024  
Time of Monitoring : 11:30 TO 11:30 Hrs.  
Ambient Temperature (°C) : Min. 17°C Max. 30°C  
Surrounding Activity : Human, Vehicular & Plant Act.  
Scope of Monitoring : Regulatory Requirement  
Method of Sampling : IS :5182  
Sampling Duration : 24 Hrs.  
Parameter Required : As per work order

S.No.	Parameters	Test Method	Results	Units	NAAQS 2009
1	Particulate Matter (as PM10)	IS:5182 (P- 23)-2006, RA. 2017	61.59	µg/m <sup>3</sup>	100
2	Particulate Matter (as PM2.5)	IS:5182 (P- 24)-2019	27.22	µg/m <sup>3</sup>	60
3	Nitrogen Dioxide (as NO2)	IS:5182 (P- 6)-2006, RA. 2018	14.89	µg/m <sup>3</sup>	80
4	Sulphur Dioxide (as SO2)	IS:5182 (P- 2)-2001, RA. 2018	9.66	µg/m <sup>3</sup>	80

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## TEST REPORT

Sample Number : VTL/AA/01

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTL/A/2403230007/B  
Format No : 7.8 F-02  
Party Reference No : NIL  
Report Date : 28/03/2024  
Period of Analysis : 23/03/2024-28/03/2024  
Receipt Date : 23/03/2024

Sample Description : AMBIENT AIR QUALITY MONITORING

**General Information:-**  
Sampling Location : OHC Building  
Sample Collected By : VTL Team  
Sampling Equipment used : RDS/FPS  
Instrument Code : VTL/RDS/FPS/04  
Coordinates : 21°43'45" & 83°16'41"  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 19/03/2024 To 20/03/2024  
Time of Monitoring : 11:30 TO 11:30 Hrs.  
Ambient Temperature (°C) : Min. 17°C Max. 30°C  
Surrounding Activity : Human, Vehicular & Plant Act.  
Scope of Monitoring : Regulatory Requirement  
Method of Sampling : IS :5182  
Sampling Duration : 24 Hrs.  
Parameter Required : As per work order

S.No.	Parameters	Test Method	Results	Units	NAAQS 2009
1	Carbon Monoxide (as CO)	Lab SOP no. VTL/STP/02:2022, STP-08	0.76	mg/m <sup>3</sup>	4
2	Mercury (as Hg)	Methods of air sampling and analysis, 3rd ed., 1988, Method No.317	*BLQ (**LOQ 0.5)	µg/m <sup>3</sup>	-

\*BLQ-Below Limit Of Quantification, \*\*LOQ-Limit Of Quantification

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## TEST REPORT



TC-11027

Sample Number : VTL/AA/06

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTL/A/2403230008/A  
Format No : 7.8 F-02  
Party Reference No : NIL  
Report Date : 28/03/2024  
Period of Analysis : 23/03/2024-28/03/2024  
Receipt Date : 23/03/2024

Sample Description : AMBIENT AIR QUALITY MONITORING

**General Information:-**

Sampling Location : Amla Bhavan  
Sample Collected By : VTL Team  
Sampling Equipment used : RDS/FPS  
Instrument Code : VTL/RDS/FPS/01  
Coordinates : 21°43'26" & 83°16'11"  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 20/03/2024 To 21/03/2024  
Time of Monitoring : 10:30 TO 10:30 Hrs.  
Ambient Temperature (°C) : Min. 17°C Max. 30°C  
Surrounding Activity : Human, Vehicular & Other Act.  
Scope of Monitoring : Regulatory Requirement  
Method of Sampling : IS :5182  
Sampling Duration : 24 Hrs.  
Parameter Required : As per work order

S.No.	Parameters	Test Method	Results	Units	NAAQS 2009
1	Particulate Matter (as PM10)	IS:5182 (P- 23)-2006, RA. 2017	56.3	µg/m <sup>3</sup>	100
2	Particulate Matter (as PM2.5)	IS:5182 (P- 24)-2019	33.2	µg/m <sup>3</sup>	50
3	Nitrogen Dioxide (as NO2)	IS:5182 (P- 6)-2006, RA.2018	19.6	µg/m <sup>3</sup>	80
4	Sulphur Dioxide (as SO2)	IS:5182 (P- 2)-2001, RA. 2018	11.8	µg/m <sup>3</sup>	80

\*BLO-Below Limit Of Quantification, \*\*LOQ-Limit Of Quantification

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Sample Number : VTL/AA/06

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

TEST REPORT

Report No. : VTL/A/2403230008/B  
Format No : 7.8 F-02  
Party Reference No : NIL  
Report Date : 26/03/2024  
Period of Analysis : 23/03/2024-25/03/2024  
Receipt Date : 23/03/2024

Sample Description : AMBIENT AIR QUALITY MONITORING

General Information:-

Sampling Location : Amlı Bhavan  
Sample Collected By : VTL Team  
Sampling Equipment used : RDS/FPS  
Instrument Code : VTL/RDS/FPS/01  
Coordinates : 21°43'26" & 83°16'11"  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 20/03/2024 To 21/03/2024  
Time of Monitoring : 10:30 TO 10:30 Hrs.  
Ambient Temperature (°C) : Min. 17°C Max. 30°C  
Surrounding Activity : Human, Vehicular & Other Act.  
Scope of Monitoring : Regulatory Requirement  
Method of Sampling : IS :5182  
Sampling Duration : 24 Hrs.  
Parameter Required : As per work order

S.No.	Parameters	Test Method	Results	Units	NAAQS 2009
1	Carbon Monoxide (as CO)	Lab SOP no. VTL/STP/02:2022, STP-08	0.64	mg/m <sup>3</sup>	4
2	Mercury (as Hg)	Methods of air sampling and analysis, 3rd ed., 1988, Method No.317	*BLQ (**LOQ 0.5)	µg/m <sup>3</sup>	—

\*BLQ-Below Limit Of Quantification, \*\*LOQ-Limit Of Quantification

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Sample Number : VTL/AA/06

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist- Raigarh 496100 Chhattisgarh

**TEST REPORT**



Report No. : VTL/A/2403230009/A  
Format No : 7.8 F-02  
Party Reference No : NIL  
Report Date : 28/03/2024  
Period of Analysis : 23/03/2024-28/03/2024  
Receipt Date : 23/03/2024

Sample Description : AMBIENT AIR QUALITY MONITORING

General Information:-  
Sampling Location : Industrial Canteen  
Sample Collected By : VTL Team  
Sampling Equipment used : RDS/FPS  
Instrument Code : VTL/RDS/FPS/02  
Coordinates : 21°44'42" & 83°16'39"  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 19/03/2024 To 20/03/2024  
Time of Monitoring : 10:30 TO 10:30 Hrs.  
Ambient Temperature (°C) : Min. 17°C Max. 30°C  
Surrounding Activity : Human, Vehicular & Other Act.  
Scope of Monitoring : Regulatory Requirement  
Method of Sampling : IS :5182  
Sampling Duration : 24 Hrs.  
Parameter Required : As per work order

S.No.	Parameters	Test Method	Results	Units	NAAQS 2009
1	Particulate Matter (as PM10)	IS:5182 (P- 23)-2006, RA. 2017	65.3	µg/m³	100
2	Particulate Matter (as PM2.5)	IS:5182 (P- 24)-2019	27.2	µg/m³	60
3	Nitrogen Dioxide (as NO2)	IS:5182 (P- 6)-2006, RA.2018	17.9	µg/m³	80
4	Sulphur Dioxide (as SO2)	IS:5182 (P- 2)-2001, RA. 2018	9.7	µg/m³	80

\*BLQ-Below Limit Of Quantification, \*\*LOQ-Limit Of Quantification

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**VIBRANT**

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Sample Number : VTL/AA/06

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

**TEST REPORT**

Report No. : VTL/A/2403230009/B  
Format No : 7.8 F-02  
Party Reference No : NIL  
Report Date : 28/03/2024  
Period of Analysis : 23/03/2024-28/03/2024  
Receipt Date : 23/03/2024

Sample Description : AMBIENT AIR QUALITY MONITORING

**General Information:-**

Sampling Location : Industrial Canteen  
Sample Collected By : VTL Team  
Sampling Equipment used : RDS/FPS  
Instrument Code : VTL/RDS/FPS/02  
Coordinates : 21°44'42" & 83°16'39"  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 19/03/2024 To 20/03/2024  
Time of Monitoring : 10:30 TO 10:30 Hrs.  
Ambient Temperature (°C) : Min. 17°C Max. 30°C  
Surrounding Activity : Human, Vehicular & Other Act.  
Scope of Monitoring : Regulatory Requirement  
Method of Sampling : IS :5182  
Sampling Duration : 24 Hrs.  
Parameter Required : As per work order

S.No.	Parameters	Test Method	Results	Units	NAAQS 2009
1	Carbon Monoxide (as CO)	Lab SOP no. VTL/STP/02:2022. STP-08	0.55	mg/m <sup>3</sup>	4
2	Mercury (as Hg)	Methods of air sampling and analysis, 3rd ed., 1988, Method No.317	*BLQ (**LOQ 0.5)	µg/m <sup>3</sup>	-

\*BLQ-Below Limit Of Quantification, \*\*LOQ-Limit Of Quantification

\*\*\*End of Report\*\*\*

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## TEST REPORT



Sample Number : VTL/AA/06

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bada Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTL/A/2403230010/A  
Format No : 7.8 F-02  
Party Reference No : NIL  
Report Date : 28/03/2024  
Period of Analysis : 23/03/2024-28/03/2024  
Receipt Date : 23/03/2024

Sample Description : AMBIENT AIR QUALITY MONITORING

**General Information:-**

Sampling Location : Supa Village  
Sample Collected By : VTL Team  
Sampling Equipment used : RDS/FPS  
Instrument Code : VTL/RDS/FPS/02  
Coordinates : 21°45'9" & 83°18'4"  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 20/03/2024 To 21/03/2024  
Time of Monitoring : 11:00 TO 11:00 Hrs.  
Ambient Temperature (°C) : Min. 17°C Max. 30°C  
Surrounding Activity : Human, Vehicular & Other Act.  
Scope of Monitoring : Regulatory Requirement  
Method of Sampling : IS :5182  
Sampling Duration : 24 Hrs.  
Parameter Required : As per work order

S.No.	Parameters	Test Method	Results	Units	NAAQS 2009
1	Particulate Matter (as PM10)	IS:5182 (P- 23)-2006, RA, 2017	65.8	µg/m <sup>3</sup>	100
2	Particulate Matter (as PM2.5)	IS:5182 (P- 24)-2019	27.6	µg/m <sup>3</sup>	60
3	Nitrogen Dioxide (as NO2)	IS:5182 (P- 6)-2006, RA,2018	18.1	µg/m <sup>3</sup>	80
4	Sulphur Dioxide (as SO2)	IS:5182 (P- 2)-2001, RA, 2018	9.1	µg/m <sup>3</sup>	80

\*BLQ-Below Limit Of Quantification, \*\*LOQ-Limit Of Quantification

\*\*\*End of Report\*\*\*

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## TEST REPORT

Sample Number : VTL/AA/08

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTL/A/2403230010/B  
Format No : 7.8 F-02  
Party Reference No : NIL  
Report Date : 28/03/2024  
Period of Analysis : 23/03/2024-28/03/2024  
Receipt Date : 23/03/2024

Sample Description : AMBIENT AIR QUALITY MONITORING

**General Information:-**

Sampling Location : Supa Village  
Sample Collected By : VTL Team  
Sampling Equipment used : RDS/FPS  
Instrument Code : VTL/RDS/FPS/02  
Coordinates : 21°45'9" & 83°18'4"  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 20/03/2024 To 21/03/2024  
Time of Monitoring : 11:00 TO 11:00 Hrs.  
Ambient Temperature (°C) : Min. 17°C Max. 30°C  
Surrounding Activity : Human, Vehicular & Other Act.  
Scope of Monitoring : Regulatory Requirement  
Method of Sampling : IS :5182  
Sampling Duration : 24 Hrs.  
Parameter Required : As per work order

S.No.	Parameters	Test Method	Results	Units	NAAQS 2009
1	Carbon Monoxide (as CO)	Lab SOP no. VTL/STP/02:2022, STP-08	0.49	mg/m <sup>3</sup>	4
2	Mercury (as Hg)	Methods of air sampling and analysis, 3rd ed., 1988, Method No.317	*BLQ (**LOQ 0.5)	µg/m <sup>3</sup>	—

\*BLQ-Below Limit Of Quantification, \*\*LOQ-Limit Of Quantification

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Sample Number: VTL/FA/01  
Name & Address of the Party: M/s Adani Power Limited  
Village - Chhote Bhandar, Post - Bade  
Bandar, Tehsil Pussore, Dist- Raigarh  
496100 (Chhattisgarh)  
Sample Description: FLY ASH

Report No.: VTL/FA/2403230001  
Format No.: 7.8 F-01  
Party Reference No.: NIL  
Report Date: 28/03/2024  
Period of Analysis: 23/03/2024-  
28/03/2024  
Receipt Date: 23/03/2024  
Sampling Date: 20/03/2024  
Sampling Quantity: 250 gm.

S. No.	Parameter	Test-Method	Results	Unit
1.	Arsenic (as As)	BY AAS Method	BLQ	mg/kg
2.	Mercury (as Hg)	BY AAS Method	BLQ	mg/kg
3.	Chromium (as Cr)	BY AAS Method	0.57	mg/kg
4.	Lead (as Pb)	BY AAS Method	0.76	mg/kg
5.	Barium (as Ba)	BY AAS Method	0.34	mg/kg
6.	Cadmium (as Cd)	BY AAS Method	0.66	mg/kg
7.	Cobalt (as Co)	BY AAS Method	0.24	mg/kg
8.	Copper (as Cu)	BY AAS Method	0.59	mg/kg
9.	Fluoride (as F)	BY AAS Method	0.53	mg/kg
10.	Iron (as Fe)	BY AAS Method	0.68	mg/kg
11.	Mercury (as Hg)	BY AAS Method	0.32	mg/kg
12.	Manganese (as Mn)	BY AAS Method	0.25	mg/kg
13.	Nickel (as Ni)	BY AAS Method	0.33	mg/kg
14.	Zinc (as Zn)	BY AAS Method	0.47	mg/kg
15.	Silica (SiO <sub>2</sub> )	IS : 1727: 1967	57.31	%
16.	Ferric Oxide (Fe <sub>2</sub> O <sub>3</sub> )	IS : 1727: 1967	7.85	%
17.	Alumina Oxide (Al <sub>2</sub> O <sub>3</sub> )	IS : 1727: 1967	29.52	%
18.	Sulphuric Anhydride (SO <sub>3</sub> )	IS : 1727: 1967	0.34	%
19.	Sodium Oxide	IS : 1727: 1967	0.041	%
20.	Potassium Oxide	IS : 1727: 1967	0.058	%
21.	Calcium Oxide	IS : 1727: 1967	3.34	%
22.	Magnesia (MgO)	IS : 1727: 1967	0.89	%
23.	Titanium Dioxide (TiO <sub>2</sub> )	IS : 1727: 1967	0.06	%
24.	P205	IS : 1727: 1967	0.09	%

Checked By 



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Lab Incharge   
Authorized Signatory

Sample Number:	VTL/BA/01	Report No.:	VTL/BA/2403230001
Name & Address of the Party:	M/s Adani Power Limited Village - Chhote Bhandar, Post - Bade Bandar, Tehsil Pussore, Dist- Raigarh 496100 (Chhattisgarh)	Format No.:	7.8 F-01
Sample Description:	Bottom ASH	Party Reference No.:	NIL
		Report Date:	28/03/2024
		Period of Analysis:	23/03/2024- 28/03/2024
		Receipt Date:	23/03/2024
		Sampling Date:	20/03/2024
		Sampling Quantity:	250 gm.

S. No.	Parameter	Test-Method	Results	Unit
1.	Arsenic (as As)	BY AAS Method	BLQ	mg/kg
2.	Mercury (as Hg)	BY AAS Method	BLQ	mg/kg
3.	Chromium (as Cr)	BY AAS Method	6.26	mg/kg
4.	Lead (as Pb)	BY AAS Method	8.10	mg/kg
5.	Barium (as Ba)	BY AAS Method	0.56	mg/kg
6.	Cadmium (as Cd)	BY AAS Method	1.28	mg/kg
7.	Cobalt (as Co)	BY AAS Method	0.21	mg/kg
8.	Copper (as Cu)	BY AAS Method	14.36	mg/kg
9.	Fluoride (as F)	BY AAS Method	0.54	mg/kg
10.	Iron (as Fe)	BY AAS Method	0.71	mg/kg
11.	Mercury (as Hg)	BY AAS Method	0.38	mg/kg
12.	Manganese (as Mn)	BY AAS Method	0.32	mg/kg
13.	Nickel (as Ni)	BY AAS Method	0.39	mg/kg
14.	Zinc (as Zn)	BY AAS Method	0.92	mg/kg
15.	Silica (SiO <sub>2</sub> )	IS: 1727: 1967	58.00	%
16.	Ferric Oxide (Fe <sub>2</sub> O <sub>3</sub> )	IS: 1727: 1967	4.91	%
17.	Alumina Oxide (Al <sub>2</sub> O <sub>3</sub> )	IS: 1727: 1967	30.34	%
18.	Sulphuric Anhydride (SO <sub>3</sub> )	IS: 1727: 1967	0.32	%
19.	Sodium Oxide	IS: 1727: 1967	0.21	%
20.	Potassium Oxide	IS: 1727: 1967	0.29	%
21.	Calcium Oxide	IS: 1727: 1967	3.83	%
22.	Magnesia (MgO)	IS: 1727: 1967	0.86	%
23.	Titanium Dioxide (TiO <sub>2</sub> )	IS: 1727: 1967	0.23	%
24.	P2O5	IS: 1727: 1967	0.24	%

  
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## TEST REPORT



Sample Number : VTL/S/01

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTL/S/2403230001/A  
Format No : 7.8 F-03  
Party Reference No : NIL  
Report Date : 28/03/2024  
Period of Analysis : 23/03/2024-28/03/2024  
Receipt Date : 23/03/2024

Sample Description : Stack Emission Monitoring

### General Information:-

Sampling Location : TPP  
Sample Collected By : VTL Team  
Date of Sampling : 18/03/2024  
Sampling duration (Minutes) : 50 min. (14:30 to 15:20 hrs.)  
Stack attached to : TPP  
Make of stack : RCC  
Diameter of stack(m) : 7.5 m  
Height of stack(m) : 275 m  
Instrument calibration status : Calibrated  
Meteorological Condition : Clear Sky  
Ambient Temperature - Ta (°C) : 25°C  
Temperature of Stack Gases - Ts (°C) : 115°C  
Velocity of Stack Gases (m/sec.) : 13.57  
Flow rate of PM (LPM) : 20  
Flow rate of Gas (LPM) : 2.0  
Sampling condition : OK  
Protocol used : IS 11255 & USEPA  
Coordinates : --

S.No.	Parameters	Test Method	Results	Units
1	Particulate Matter (PM)	IS: 11255 (P-1) : 1985, RA 2019	43.14	mg/Nm <sup>3</sup>
2	Sulphur Dioxide (SO <sub>2</sub> )	IS: 11255(P- 2): 1985, RA 2019	736.69	mg/Nm <sup>3</sup>
3	Oxide of Nitrogen (NO <sub>2</sub> )	IS-11255 (P-7), RA 2017	301.02	mg/Nm <sup>3</sup>
4	Mercury (Hg)	USEPA 29: 1996	*BLQ(**LOQ-0.001)	mg/Nm <sup>3</sup>

\*BLQ= Below Limit Of Quantification, \*\*LOQ= Limit Of Quantification

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## TEST REPORT



Sample Number : VTL/S/02

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTL/S/2403230002/A  
Format No : 7.8 F-03  
Party Reference No : NIL  
Report Date : 28/03/2024  
Period of Analysis : 23/03/2024-28/03/2024  
Receipt Date : 23/03/2024

Sample Description : Stack Emission Monitoring

### General Information:-

Sampling Location : DG Set -03 1500 KVA  
Sample Collected By : VTL Team  
Date of Sampling : 19/03/2024  
Sampling duration (Minutes) : 34 min. (11:00 to 11:34 hrs.)  
Stack attached to : DG Set  
Make of stack : MS  
Diameter of stack(m) : 0.7 m  
Height of stack(m) : 30 m  
Instrument calibration status : Calibrated  
Meteorological Condition : Clear Sky  
Ambient Temperature - Ta (°C) : 23°C  
Temperature of Stack Gases - Ts (°C) : 104°C  
Velocity of Stack Gases (m/sec.) : 8.55  
Flow rate of PM (LPM) : 29  
Flow rate of Gas (LPM) : 2.0  
Sampling condition : OK  
Protocol used : IS 11255 & USEPA  
Coordinates : --

S.No.	Parameters	Test Method	Results	Units	Limits
1	Particulate Matter (PM)	IS: 11255 (P-1) : 1985, RA 2019	67.59	mg/Nm <sup>3</sup>	75
2	Sulphur Dioxide (SO <sub>2</sub> )	IS: 11255(P- 2): 1985, RA.2019	90.34	mg/Nm <sup>3</sup>	—
3	Total Hydrocarbon (THC)	USEPA 18: 1996	19.22	mg/Nm <sup>3</sup>	100
4	Oxide of Nitrogen (NO <sub>2</sub> )	IS-11255 (P-7), RA 2017	458.72	ppmv	710

\*BLO= Below Limit Of Quantification, \*\*LOQ= Limit Of Quantification

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Form A (online) P/10

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## TEST REPORT

Sample Number:  
Name & Address of the  
Party:

VTL/CA/01  
M/s Adani Power Limited  
Village - Chhote Bhandar, Post - Bade  
Bandar, Tehsil Pussore, Dist- Raigarh  
496100 (Chhattisgarh)

Sample Description:

Coal

Report No.: VTL/C/2403230001  
Format No.: 7.8 F-01

Party Reference No.: NIL  
Report Date: 28/03/2024

Period of Analysis: 23/03/2024-  
28/03/2024

Receipt Date: 23/03/2024

Sampling Date: 20/03/2024


Sampling Quantity: 250 gm.

S. No.	Parameter	Test-Method	Results	Unit
1.	Arsenic (as As)	BY AAS Method	BLQ	mg/kg
2.	Mercury (as Hg)	BY AAS Method	BLQ	mg/kg
3.	Chromium (as Cr)	BY AAS Method	0.87	mg/kg
4.	Lead (as Pb)	BY AAS Method	0.71	mg/kg



  
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Sample Number: VTL/AN/04

**TEST REPORT**



EC-11227

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

ULR No. : TC1122724000000498F  
Report No. : VTL/N/2403230001/A  
Format No : 7.8 F-04  
Party Reference No : NIL  
Report Date : 28/03/2024  
Receipt Date : 23/03/2024  
Sampling Duration : 24 Hrs.  
Sample Collected : VTL Team  
Instrument : Calibrated  
Calibration Status

Sample Description : Ambient Noise Level Monitoring  
Scope of Monitoring : Regulatory Requirement  
Protocol Used : IS 9989  
Instrument Used : SLM

**General Information:-**

Sampling Location : Track Hopper  
Instrument Code : VTL/SLM/01  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 19/03/2024 To 20/03/2024  
Time of Monitoring : 06:00 TO 06:00 Hrs.  
Ambient Temperature (°C) : Min. 17°C Max. 30°C  
Surrounding Activity : Human, Vehicular & Plant Act.  
Parameter Required : As per work order  
Coordinates : NA

S.No.	Test Parameters	Protocol	Test Result dB(A)	
			Day Time	Night Time
1	Leq	IS 9989 - 1981 RA:2020	56.5	43.8

Ambient Noise Quality Standards as per Noise Pollution (Regulation and Control) Rules, 2000

Area Code	Category of Area/Zone	Limits in dB(A) Leq*	
		Day Time	Night Time
A	Industrial area	75	70
B	Commercial area	65	55
C	Residential area	55	45
D	Silence Zone	50	40

1. Day Time is from 6:00 AM to 10:00 PM.  
2. Night Time is reckoned between 10:00 PM to 6:00 AM.  
3. Silence Zone is defined as an area up to 100 m around premises of Hospitals, Educational and Courts. Use of vehicle horn, Loudspeaker and bursting of crackers is banned in these zones.  
Note: Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply

\*\*\*End of Report\*\*\*



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Sample Number: VTL/AN/01

**TEST REPORT**



Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTL/N/2403230002/A  
Format No : 7.8 F-04  
Party Reference No : NIL  
Report Date : 28/03/2024  
Receipt Date : 23/03/2024  
Sampling Duration : 24 Hrs.  
Sample Collected : VTL Team  
Instrument : Calibrated  
Calibration Status

Sample Description : Ambient Noise Level Monitoring  
Scope of Monitoring : Regulatory Requirement  
Protocol Used : IS 9989  
Instrument Used : SLM

**General Information:-**

Sampling Location : Bade Bhandar  
Instrument Code : VTL/SLM/02  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 18/03/2024 To 19/03/2024  
Time of Monitoring : 06:00 TO 06:00 Hrs.  
Ambient Temperature (°C) : Min. 18°C Max. 35°C  
Surrounding Activity : Human, Vehicular & Plant Act.  
Parameter Required : As per work order  
Coordinates : NA

S.No.	Test Parameters	Protocol	Test Result dB(A)	
			Day Time	Night Time
1	Leq	IS 9989 - 1981 RA:2020	55.1	44.3

**Ambient Noise Quality Standards as per Noise Pollution (Regulation and Control) Rules, 2000**

Area Code	Category of Area/Zone	Limits in dB(A) Leq*	
		Day Time	Night Time
A	Industrial area	75	70
B	Commercial area	65	55
C	Residential area	55	45
D	Silence Zone	50	40

- Day Time is from 6.00 AM to 10.00 PM.
  - Night Time is reckoned between 10.00 PM to 6.00 AM.
  - Silence Zone is defined as an area up to 100 m around premises of Hospitals, Educational and Courts. Use of vehicle horn, Loudspeaker and bursting of crackers is banned in these zones.
- Note: Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply

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Sample Number: VTL/AN/02

**TEST REPORT**



IC-11227

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTL/N/2403230003/A  
Format No : 7.8 F-04  
Party Reference No : NIL  
Report Date : 28/03/2024  
Receipt Date : 23/03/2024  
Sampling Duration : 24 Hrs.  
Sample Collected : VTL Team  
Instrument : Calibrated  
Calibration Status

Sample Description : Ambient Noise Level Monitoring  
Scope of Monitoring : Regulatory Requirement  
Protocol Used : IS 9989  
Instrument Used : SLM

**General Information:-**

Sampling Location : Chote Bhandar  
Instrument Code : VTL/SLM/03  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 18/03/2024 To 19/03/2024  
Time of Monitoring : 06:00 TO 06:00 Hrs.  
Ambient Temperature (°C) : Min. 18°C Max. 35°C  
Surrounding Activity : Human, Vehicular & Plant Act.  
Parameter Required : As per work order  
Coordinates : NA

S.No.	Test Parameters	Protocol	Test Result dB(A)	
			Day Time	Night Time
1	Leq	IS 9989 - 1981 RA:2020	54.2	41.5

**Ambient Noise Quality Standards as per Noise Pollution (Regulation and Control) Rules, 2000**

Area Code	Category of Area/Zone	Limits in dB(A) Leq*	
		Day Time	Night Time
A	Industrial area	75	70
B	Commercial area	65	55
C	Residential area	55	45
D	Silence Zone	50	40

1. Day Time is from 6.00 AM to 10.00 PM.  
2. Night Time is reckoned between 10.00 PM to 6.00 AM.  
3. Silence Zone is defined as an area up to 100 m around premises of Hospitals, Educational and Courts. Use of vehicle horn, Loudspeaker and bursting of crackers is banned in these zones.  
Note: Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply

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# TEST REPORT



Sample Number: VTL/AN/06

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTL/N/2403230004/A  
Format No : 7.8 F-04  
Party Reference No : NIL  
Report Date : 28/03/2024  
Receipt Date : 23/03/2024  
Sampling Duration : 24 Hrs.  
Sample Collected : VTL Team  
Instrument : Calibrated  
Calibration Status :

Sample Description : Ambient Noise Level Monitoring  
Scope of Monitoring : Regulatory Requirement  
Protocol Used : IS 9989  
Instrument Used : SLM

### General Information:-

Sampling Location : Amla Bhavan  
Instrument Code : VTL/SLM/04  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 19/03/2024 To 20/03/2024  
Time of Monitoring : 06:00 TO 08:00 Hrs.  
Ambient Temperature (°C) : Min. 17°C Max. 30°C  
Surrounding Activity : Human, Vehicular & Plant Act.  
Parameter Required : As per work order  
Coordinates : NA

S.No.	Test Parameters	Protocol	Test Result dB(A)	
			Day Time	Night Time
1	Leq	IS 9989 - 1981 RA:2020	55.5	41.3

### Ambient Noise Quality Standards as per Noise Pollution (Regulation and Control) Rules, 2000

Area Code	Category of Area/Zone	Limits in dB(A) Leq*	
		Day Time	Night Time
A	Industrial area	75	70
B	Commercial area	65	55
C	Residential area	55	45
D	Silence Zone	50	40

- Day Time is from 6.00 AM to 10.00 PM.
  - Night Time is reckoned between 10.00 PM to 6.00 AM.
  - Silence Zone is defined as an area up to 100 m around premises of Hospitals, Educational and Courts. Use of vehicle horn, Loudspeaker and bursting of crackers is banned in these zones.
- Note: Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply

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# TEST REPORT



## VIBRANT

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Sample Number: VTL/AN/05

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhole Bhandar, Post- Bada Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTL/N/2403230005/A  
Format No : 7.8 F-04  
Party Reference No : NIL  
Report Date : 28/03/2024  
Receipt Date : 23/03/2024  
Sampling Duration : 24 Hrs.  
Sample Collected : VTL Team  
Instrument : Calibrated  
Calibration Status :

Sample Description : Ambient Noise Level Monitoring  
Scope of Monitoring : Regulatory Requirement  
Protocol Used : IS 9989  
Instrument Used : SLM

### General Information:-

Sampling Location : Village - Kathli  
Instrument Code : VTL/SLM/03  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 19/03/2024 To 20/03/2024  
Time of Monitoring : 06:00 TO 06:00 Hrs.  
Ambient Temperature (°C) : Min. 17°C Max. 30°C  
Surrounding Activity : Human, Vehicular & Plant Act.  
Parameter Required : As per work order  
Coordinates : NA

S.No.	Test Parameters	Protocol	Test Result dB(A)	
			Day Time	Night Time
1	Leq	IS 9989 - 1981 RA:2020	52.4	40.9

### Ambient Noise Quality Standards as per Noise Pollution (Regulation and Control) Rules, 2000

Area Code	Category of Area/Zone	Limits in dB(A) Leq*	
		Day Time	Night Time
A	Industrial area	75	70
B	Commercial area	65	55
C	Residential area	55	45
D	Silence Zone	50	40

1. Day Time is from 6.00 AM to 10.00 PM.

2. Night Time is reckoned between 10.00 PM to 6.00 AM.

3. Silence Zone is defined as an area up to 100 m around premises of Hospitals, Educational and Courts. Use of vehicle horn, loudspeaker and bursting of crackers is banned in these zones.

Note: Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply.

\*\*\*End of Report\*\*\*



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**VIBRANT**

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Sample Number: VTL/AN/03

**TEST REPORT**



TC-11227

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTL/N/2403230006/A  
Format No : 7.8 F-04  
Party Reference No : NIL  
Report Date : 28/03/2024  
Receipt Date : 23/03/2024  
Sampling Duration : 24 Hrs.  
Sample Collected : VTL Team  
Instrument : Calibrated  
Calibration Status :

Sample Description : Ambient Noise Level Monitoring  
Scope of Monitoring : Regulatory Requirement  
Protocol Used : IS 9989  
Instrument Used : SLM

**General Information:-**

Sampling Location : Near OHC  
Instrument Code : VTL/SLM01  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 20/03/2024 To 21/03/2024  
Time of Monitoring : 06:00 TO 06:00 Hrs.  
Ambient Temperature (°C) : Min. 17°C Max. 30°C  
Surrounding Activity : Human, Vehicular & Plant Act  
Parameter Required : As per work order  
Coordinates : NA

S.No.	Test Parameters	Protocol	Test Result dB(A)	
			Day Time	Night Time
1	Leq	IS 9989 - 1981 RA:2020	64.1	46.3

**Ambient Noise Quality Standards as per Noise Pollution (Regulation and Control) Rules, 2000**

Area Code	Category of Area/Zone	Limits in dB(A) Leq*	
		Day Time	Night Time
A	Industrial area	75	70
B	Commercial area	65	55
C	Residential area	55	45
D	Silence Zone	50	40

- Day Time is from 6.00 AM to 10.00 PM.
  - Night Time is reckoned between 10.00 PM to 6.00 AM.
  - Silence Zone is defined as an area up to 100 m around premises of Hospitals, Educational and Courts. Use of vehicle horn, Loudspeaker and bursting of crackers is banned in these zones.
- Note: Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply

**\*\*\*End of Report\*\*\***



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# TEST REPORT



TC-11227

Sample Number: VTL/AN/08

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist- Raigarh 496100 Chhattisgarh

Report No. : VTL/N/2403230007/A  
Format No : 7.6 F-04  
Party Reference No : Nil  
Report Date : 28/03/2024  
Receipt Date : 23/03/2024  
Sampling Duration : 24 Hrs.  
Sample Collected : VTL Team  
Instrument : Calibrated  
Calibration Status

Sample Description : Ambient Noise Level Monitoring  
Scope of Monitoring : Regulatory Requirement  
Protocol Used : IS 9989  
Instrument Used : SLM

### General Information:-

Sampling Location : Switch Yard  
Instrument Code : VTL/SLM/04  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 18/03/2024 To 19/03/2024  
Time of Monitoring : 06:00 TO 06:00 Hrs.  
Ambient Temperature (°C) : Min. 18°C Max. 35°C  
Surrounding Activity : Human, Vehicular & Plant Act  
Parameter Required : As per work order  
Coordinates : NA

S.No.	Test Parameters	Protocol	Test Result dB(A)	
			Day Time	Night Time
1	Leq	IS 9989 - 1981 RA:2020	61.1	49.1

### Ambient Noise Quality Standards as per Noise Pollution (Regulation and Control) Rules, 2000

Area Code	Category of Area/Zone	Limits in dB(A) Leq*	
		Day Time	Night Time
A	Industrial area	75	70
B	Commercial area	65	55
C	Residential area	55	45
D	Silence Zone	50	40

- Day Time is from 6.00 AM to 10.00 PM.
  - Night Time is reckoned between 10.00 PM to 6.00 AM.
  - Silence Zone is defined as an area up to 100 m around premises of Hospitals, Educational and Courts. Use of vehicle horn, Loudspeaker and bursting of crackers is banned in these zones.
- Note: Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply

\*\*\*End of Report\*\*\*



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# TEST REPORT



Sample Number: VTL/AN/09

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTL/N/2403230008/A  
Format No : 7.6 F-04  
Party Reference No : NIL  
Report Date : 28/03/2024  
Receipt Date : 23/03/2024  
Sampling Duration : 24 Hrs.  
Sample Collected : VTL Team  
Instrument : Calibrated  
Calibration Status

Sample Description : Ambient Noise Level Monitoring  
Scope of Monitoring : Regulatory Requirement  
Protocol Used : IS 9989  
Instrument Used : SLM

### General Information:-

Sampling Location : Industrial Canteen Area  
Instrument Code : VTL/SLM/02  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 19/03/2024 To 20/03/2024  
Time of Monitoring : 06:00 TO 06:00 Hrs.  
Ambient Temperature (°C) : Min. 17°C Max. 30°C  
Surrounding Activity : Human, Vehicular & Plant Act.  
Parameter Required : As per work order  
Coordinates : NA

S.No.	Test Parameters	Protocol	Test Result dB(A)	
			Day Time	Night Time
1	Leq	IS 9989 - 1981 RA:2020	66.6	50.1

### Ambient Noise Quality Standards as per Noise Pollution (Regulation and Control) Rules, 2000

Area Code	Category of Area/Zone	Limits in dB(A) Leq*	
		Day Time	Night Time
A	Industrial area	75	70
B	Commercial area	65	55
C	Residential area	55	45
D	Silence Zone	50	40

- Day Time is from 6:00 AM to 10:00 PM.
  - Night Time is reckoned between 10:00 PM to 6:00 AM.
  - Silence Zone is defined as an area up to 100 m around premises of Hospitals, Educational and Courts. Use of vehicle horn, Loudspeaker and bursting of crackers is banned in these zones.
- Note: Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply

\*\*\*End of Report\*\*\*



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# TEST REPORT



TC-11227

Sample Number: VTL/AN/09

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTL/N/2403230009/A  
Format No : 7.8 F-04  
Party Reference No : NIL  
Report Date : 28/03/2024  
Receipt Date : 23/03/2024  
Sampling Duration : 24 Hrs.  
Sample Collected : VTL Team  
Instrument : Calibrated  
Calibration Status

Sample Description : Ambient Noise Level Monitoring  
Scope of Monitoring : Regulatory Requirement  
Protocol Used : IS 9989  
Instrument Used : SLM

### General Information:-

Sampling Location : Old Site Office  
Instrument Code : VTL/SLM/01  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 18/03/2024 To 19/03/2024  
Time of Monitoring : 06:00 TO 06:00 Hrs.  
Ambient Temperature (°C) : Min. 18°C Max. 35°C  
Surrounding Activity : Human, Vehicular & Plant Act.  
Parameter Required : As per work order  
Coordinates : NA

S.No.	Test Parameters	Protocol	Test Result dB(A)	
			Day Time	Night Time
1	Leq	IS 9989 - 1981 RA-2020	57.8	48.5

### Ambient Noise Quality Standards as per Noise Pollution (Regulation and Control) Rules, 2000

Area Code	Category of Area/Zone	Limits in dB(A) Leq*	
		Day Time	Night Time
A	Industrial area	75	70
B	Commercial area	65	55
C	Residential area	55	45
D	Silence Zone	50	40

- Day Time is from 6.00 AM to 10.00 PM.
  - Night Time is reckoned between 10.00 PM to 6.00 AM.
  - Silence Zone is defined as an area up to 100 m around premises of Hospitals, Educational and Courts. Use of vehicle horn, Loudspeaker and bursting of crackers is banned in these zones.
- Note: Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply

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**VIBRANT**

Sample Number: VTL/AN/010

**TEST REPORT**



Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTLN/2403230010/A  
Format No : 7.6 F-04  
Party Reference No : NIL  
Report Date : 28/03/2024  
Receipt Date : 23/03/2024  
Sampling Duration : 24 Hrs.  
Sample Collected : VTL Team  
Instrument : Calibrated  
Calibration Status :

Sample Description : Ambient Noise Level Monitoring  
Scope of Monitoring : Regulatory Requirement  
Protocol Used : IS 9989  
Instrument Used : SLM

**General Information:-**

Sampling Location : Village - Supa  
Instrument Code : VTL/SLM/02  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 20/03/2024 To 21/03/2024  
Time of Monitoring : 06:00 TO 06:00 Hrs.  
Ambient Temperature (°C) : Min. 17°C Max. 30°C  
Surrounding Activity : Human, Vehicular & Plant Act.  
Parameter Required : As per work order  
Coordinates : NA

S.No.	Test Parameters	Protocol	Test Result dB(A)	
			Day Time	Night Time
1	Leq	IS 9989 - 1981 RA:2020	58.3	49.1

**Ambient Noise Quality Standards as per Noise Pollution (Regulation and Control) Rules, 2000**

Area Code	Category of Area/Zone	Limits in dB(A) Leq*	
		Day Time	Night Time
A	Industrial area	75	70
B	Commercial area	65	55
C	Residential area	55	45
D	Silence Zone	50	40

- Day Time is from 6.00 AM to 10.00 PM.
  - Night Time is reckoned between 10.00 PM to 6.00 AM.
  - Silence Zone is defined as an area up to 100 m around premises of Hospitals, Educational and Courts. Use of vehicle horn, Loudspeaker and bursting of crackers is banned in these zones.
- Note: Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply

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Sample Number : VTLW/01

Name & Address of the Party : M/s Adani Power Limited  
 Village- Chhote Bhandar, Post- Bade Bhandar,  
 Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Sample Description : Water Sample  
 Sampling Location : Amla Bhavan  
 Sample Collected By : VTL Team  
 Preservation : Suitable Preservation  
 Method of sampling : IS :3025

**TEST REPORT**

ULR No. : TC112272400000476F  
 Report No. : VTLW/2403230001/A  
 Format No : 7.8 F-01  
 Party Reference No : NIL  
 Report Date : 28/03/2024  
 Period of Analysis : 23/03/2024-28/03/2024  
 Receipt Date : 23/03/2024  
 Sampling Date : 20/03/2024  
 Sampling Type : Grab  
 Sample Quantity : 2 Ltr.  
 Coordinates : NA

S.No.	Test Parameters	Test Method	Results	Units	IS:10500-2012	
					Acceptable Limit	Permissible Limit
1	pH (at 25°C)	IS : 3025 (P-11) : 2022	7.58	--	6.5 to 8.5	No Relaxation
2	Turbidity	IS : 3025: (P-10)1984, RA 2017	*BLQ(**LOQ-1.0)	NTU	1	5
3	Total Hardness (as CaCO <sub>3</sub> )	IS: 3025 (P-21): 2006, RA 2019	228.34	mg/l	200	500
4	Calcium (as Ca)	IS: 3025 (P-40): 1991 RA 2019	55.41	mg/l	75	200
5	Total Alkalinity (as CaCO <sub>3</sub> )	IS: 3025 (P-23): 1986, RA 2019	192.46	mg/l	200	500
6	Chloride (as Cl)	IS: 3025 (P-32): 1988, RA 2019	123.72	mg/l	250	1000
7	Magnesium (as Mg)	IS: 3025 (P-48): 1994, RA 2019	21.86	mg/l	30	100
8	Total Dissolved Solids	IS:3025 (P-16): 1984, RA 2017	554.07	mg/l	500	2000
9	Sulphate (as SO <sub>4</sub> )	IS: 3025 (P-24): 1986, RA 2022	34.21	mg/l	200	400
10	Fluoride (as F)	APHA 23rd Edition, 4500FD, 2017	0.62	mg/l	1.0	1.5
11	Nitrate (as NO <sub>3</sub> )	IS: 3025 (P-34): 1988	21.03	mg/l	40.0	No Relaxation
12	Iron (as Fe)	APHA 23rd Edition, 3111B, 2017	0.35	mg/l	1.0	No Relaxation
13	Aluminium (as Al)	IS 3025 (P-55): 2003, RA 2019	*BLQ(**LOQ-0.03)	mg/l	0.03	0.2
14	Boron (as B)	APHA 23rd Edition, 4500B, 2017	*BLQ(**LOQ-0.2)	mg/l	0.5	1.0
15	Phenolic Compounds (C <sub>6</sub> H <sub>5</sub> OH)	APHA 23rd Edition 5530C: 2017	*BLQ(**LOQ-0.001)	mg/l	0.001	0.002
16	Zinc (as Zn)	APHA 23rd Edition, 3030D, 3113 B, 2017	0.42	mg/l	5.0	15.0
17	Copper (as Cu)	APHA 23rd Edition 3111B 2017	*BLQ(**LOQ-0.02)	mg/l	0.05	1.5



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# TEST REPORT



## VIBRANT

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Sample Number : VTLW/01

ULR No. : TC112272400000476F

Report No. : VTLW/2403230001/A

S.No.	Test Parameters	Test Method	Results	Units	IS:10500-2012	
					Acceptable Limit	Permissible Limit
18	Manganese (as Mn)	APHA 23rd Edition, 3030D, 3111 B, 2017	*BLQ(**LOQ-0.05)	mg/l	0.1	0.3
19	Selenium (as Se)	APHA 23rd Edition, 3114C, 2017	*BLQ(**LOQ-0.005)	mg/l	0.01	No Relaxation
20	Arsenic (as As)	APHA 23rd Edition, 3114C, 2017	*BLQ(**LOQ-0.005)	mg/l	0.01	0.05
21	Total Coliform	IS : 15185 : 2016	Absent	per 100 ml	Shall not be detectable in any 100 ml sample	--
22	E.Coli	IS : 15185 : 2016	Absent	per 100 ml	Shall not be detectable in any 100 ml sample	--
23	Ammonia (as N)	IS-3025 (P-34)- 1988, Sec. RA :2022	*BLQ(**LOQ-0.3)	mg/l	0.5	No Relaxation
24	Sulphide	IS 3025 (P-29) :1986 RA 2019 Idornetro	*BLQ(**LOQ-0.1)	mg/l	0.05	No Relaxation
25	Free Residual Chlorine	IS 3025 (P-26):2021	*BLQ(**LOQ-0.2)	mg/l	0.2	1.0
26	Faecal Coliform	IS :1622 :1981 RA 2019	Absent	MPN		

\*BLQ-Below Limit Of Quantification, \*\*LOQ- Limit of Quantification

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Sample Number : VTLW/01

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Sample Description : Water Sample  
Sampling Location : Amla Bhavan  
Sample Collected By : VTL Team  
Preservation : Suitable Preservation  
Method of sampling : IS :3025

Report No. : VTLW/2403230001/B  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 28/03/2024  
Period of Analysis : 23/03/2024-28/03/2024  
Receipt Date : 23/03/2024  
Sampling Date : 20/03/2024  
Sampling Type : Grab  
Sample Quantity : 2 Ltr.  
Coordinates : NA

**TEST REPORT**

S.No.	Test Parameters	Test Method	Results	Units	IS:10500-2012	
					Acceptable Limit	Permissible Limit
1	Colour	IS : 3025:(P-4)1983, :RA 2017	*BLO(**LOQ-5.0)	Hazen	5	15
2	Odour	IS : 3025 (P-5) : RA 2016	Agreeable	-	Agreeable	Agreeable
3	Taste	IS :3025 (P-8): 1984 RA 2017	Agreeable	-	Agreeable	Agreeable
4	Cyanide (as CN)	APHA 23rd Edition ,AS600,2017	*BLO(**LOQ-5.0)	mg/l	0.05	No Relaxation
5	Mineral Oil	IS 3025 (P-39) 1989	*BLO(**LOQ-0.05)	mg/l	0.5	No Relaxation
6	Anionic Detergents (as MBAS)	APHA 23rd Edition , 5540C 2017	*BLO(**LOQ-0.05)	mg/l	0.2	10
7	Barium (as Ba)	APHA 23rd Edition,3111B 2017	*BLO(**LOQ-0.02)	mg/l	0.7	No relaxation

\*BLO-Below Limit Of Quantification, \*\*LOQ- Limit of Quantification

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**VIBRANT**

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Sample Number : VTLW/02

Name & Address of the Party : M/s Adani Power Limited  
 Village- Chhote Bhandar, Post- Bade Bhandar,  
 Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Sample Description : Water Sample  
 Sampling Location : Village - Kathli  
 Sample Collected By : VTL Team  
 Preservation : Suitable Preservation  
 Method of sampling : IS :3025

**TEST REPORT**

ULR No. : TC112272400000477F  
 Report No. : VTLW/2403230002/A  
 Format No : 7.8 F-01  
 Party Reference No : NIL  
 Report Date : 28/03/2024  
 Period of Analysis : 23/03/2024-28/03/2024  
 Receipt Date : 23/03/2024  
 Sampling Date : 20/03/2024  
 Sampling Type : Grab  
 Sample Quantity : 2 Ltr.  
 Coordinates : NA

S.No.	Test Parameters	Test Method	Results	Units	IS:10500-2012	
					Acceptable Limit	Permissible Limit
1	pH (at 25°C)	IS : 3025 (P-11) : 2022	7.67	—	6.5 to 8.5	No Relaxation
2	Turbidity	IS : 3025 (P-10) 1984, RA 2017	*BLQ(**LOQ-1.0)	NTU	1	5
3	Total Hardness (as CaCO <sub>3</sub> )	IS: 3025 (P-21): 2009, RA 2019	175.82	mg/l	300	500
4	Calcium (as Ca)	IS: 3025 (P- 40): 1991 RA 2019	64.39	mg/l	75	200
5	Total Alkalinity (as CaCO <sub>3</sub> )	IS: 3025 (P-23): 1986, RA 2019	164.73	mg/l	300	500
6	Chloride (as Cl)	IS: 3025 (P-32): 1986, RA 2019	117.51	mg/l	250	1000
7	Magnesium (as Mg)	IS: 3025 (P-48): 1994, RA 2019	9.98	mg/l	30	100
8	Total Dissolved Solids	IS :3025 (P-18) 1984, RA 2017	514.00	mg/l	500	>1000
9	Sulphate (as SO <sub>4</sub> )	IS: 3025 (P-24): 1986, RA 2022	31.22	mg/l	200	400
10	Fluoride (as F)	APHA 23rd Edition 4500FD-2017	0.49	mg/l	1.0	1.5
11	Nitrate (as NO <sub>3</sub> )	IS: 3025 (P-34): 1986	21.18	mg/l	45.0	No Relaxation
12	Iron (as Fe)	APHA 23rd Edition, 3111B, 2017	0.31	mg/l	1.0	No Relaxation
13	Aluminium (as Al)	IS 3025 (P-55): 2003, RA 2019	*BLQ(**LOQ-0.03)	mg/l	0.03	0.2
14	Boron (as B)	APHA 23rd Edition, 4500B, 2017	*BLQ(**LOQ-0.2)	mg/l	0.5	1.0
15	Phenolic Compounds (C <sub>6</sub> H <sub>5</sub> O <sub>2</sub> )	APHA 23rd Edition 5530C: 2017	*BLQ(**LOQ-0.001)	mg/l	0.001	0.002
16	Zinc (as Zn)	APHA 23rd Edition, 3030D, 3113 B, 2017	0.44	mg/l	5.0	15.0
17	Copper (as Cu)	APHA 23rd Edition 3111B 2017	*BLQ(**LOQ-0.02)	mg/l	0.05	1.5



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Sample Number : VTLW/02

**TEST REPORT**

ULR No. : TC112272400000477F

Report No. : VTLW/2403230002/A

S.No.	Test Parameters	Test Method	Results	Units	IS:10500-2012	
					Acceptable Limit	Permissible Limit
18	Manganese (as Mn)	APHA 23rd Edition, 3030D, 3111 B, 2017	*BLQ(**LOQ-0.05)	mg/l	0.1	0.3
19	Selenium (as Se)	APHA 23rd Edition, 3114C, 2017	*BLQ(**LOQ-0.005)	mg/l	0.01	No Relaxation
20	Arsenic (as As)	APHA 23rd Edition, 3114C, 2017	*BLQ(**LOQ-0.005)	mg/l	0.01	0.05
21	Total Coliform	IS : 15185 : 2016	Absent	per 100 ml	Shall not be detectable in any 100 ml sample	--
22	E.Coli	IS : 15185 : 2016	Absent	per 100 ml	Shall not be detectable in any 100 ml sample	--
23	Ammonia (as N)	IS-3025 (P-34)- 1988,Sec. RA 2022	*BLQ(**LOQ-0.3)	mg/l	0.5	No Relaxation
24	Sulphide	IS 3025 (P-29) :1986 RA 2019 Idometric	*BLQ(**LOQ-0.1)	mg/l	0.05	No Relaxation
25	Free Residual Chlorine	IS 3025 (P-26) 2021	*BLQ(**LOQ-0.2)	mg/l	0.2	1.0
26	Faecal Coliform	IS :1622 :1981 RA 2019	Absent	MPN	--	--

\*BLQ-Below Limit Of Quantification, \*\*LOQ- Limit of Quantification

\*\*\*End of Report\*\*\*

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Sample Number : VTLW/02

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Sample Description : Water Sample  
Sampling Location : Village - Kathli  
Sample Collected By : VTL Team  
Preservation : Suitable Preservation  
Method of sampling : IS :3025

Report No. : VTLW/2403230002/B  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 28/03/2024  
Period of Analysis : 23/03/2024-28/03/2024  
Receipt Date : 23/03/2024  
Sampling Date : 20/03/2024  
Sampling Type : Grab  
Sample Quantity : 2 Ltr.  
Coordinates : NA

**TEST REPORT**

S.No.	Test Parameters	Test Method	Results	Units	IS:10500-2012	
					Acceptable Limit	Permissible Limit
1	Colour	IS : 3025 (P-4) 1983, RA 2017	*BLQ(**LOQ-5.0)	Hazen	5	15
2	Odour	IS : 3025 (P-5) : RA 2018	Agreeable	--	Agreeable	Agreeable
3	Taste	IS :3025 (P-4): 1984 RA 2017	Agreeable	--	Agreeable	Agreeable
4	Cyanide (as CN)	APHA 23rd Edition ,4500D,2017	*BLQ(**LOQ-5.0)	mg/l	0.05	No Relaxation
5	Mineral Oil	IS 3025 (P-39) 1989	*BLQ(**LOQ-0.05)	mg/l	0.5	No Relaxation
6	Anionic Detergents (as MBAS)	APHA 23rd Edition , 5540C 2017	*BLQ(**LOQ-0.05)	mg/l	0.5	1.0
7	Barium as Ba	APHA 23rd Edition,3111B 2017	*BLQ(**LOQ-0.02)	mg/l	0.7	No relaxation

\*BLQ-Below Limit Of Quantification. \*\*LOQ- Limit of Quantification

\*\*\*End of Report\*\*\*

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Sample Number : VTLW/03

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Sample Description : Water Sample  
Sampling Location : Chote Bhandar  
Sample Collected By : VTL Team  
Preservation : Suitable Preservation  
Method of sampling : IS :3025

**TEST REPORT**



ULR No : TC1122724900000878F  
Report No. : VTLW/2403230003/A  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 28/03/2024  
Period of Analysis : 23/03/2024-28/03/2024  
Receipt Date : 23/03/2024  
Sampling Date : 20/03/2024  
Sampling Type : Grab  
Sample Quantity : 2 Ltr.  
Coordinates : NA

S.No.	Test Parameters	Test Method	Results	Units	IS:10500-2012	
					Acceptable Limit	Permissible Limit
1	pH (at 25°C)	IS : 3025 (P-11) : 2022	7.63	--	6.5 to 8.5	No Relaxation
2	Turbidity	IS : 3025 (P-10) 1984, RA 2017	*BLQ(**LOQ-1.0)	NTU	1	5
3	Total Hardness (as CaCO3)	IS: 3025 (P-21): 2008, RA 2019	198.82	mg/l	200	500
4	Calcium (as Ca)	IS: 3025 (P-40): 1991 RA 2019	62.23	mg/l	75	350
5	Total Alkalinity (as CaCO3)	IS: 3025 (P-23): 1986, RA 2019	172.25	mg/l	200	500
6	Chloride (as Cl)	IS: 3025 (P-32): 1988, RA 2019	141.32	mg/l	250	1000
7	Magnesium (as Mg)	IS: 3025 (P-46): 1984, RA 2019	10.53	mg/l	30	100
8	Total Dissolved Solids	IS 3025 (P-16): 1984, RA 2017	728.0	mg/l	500	2000
9	Sulphate (as SO4)	IS: 3025 (P-24): 1986, RA 2022	42.36	mg/l	200	400
10	Fluoride (as F)	APHA 23rd Edition, 4500/FD, 2017	0.52	mg/l	1.0	1.5
11	Nitrate (as NO3)	IS: 3025 (P-34): 1988	26.22	mg/l	45.0	No Relaxation
12	Iron (as Fe)	APHA 23rd Edition, 3111B, 2017	0.28	mg/l	1.0	No Relaxation
13	Aluminium (as Al)	IS 3025 (P-55): 2003, RA 2019	*BLQ(**LOQ-0.05)	mg/l	0.05	0.1
14	Boron (as B)	APHA 23rd Edition, 4500B, 2017	*BLQ(**LOQ-0.2)	mg/l	0.5	1.0
15	Phenolic Compounds (C6H5OH)	APHA 23rd Edition 5530C, 2017	*BLQ(**LOQ-0.001)	mg/l	0.001	0.002
16	Zinc (as Zn)	APHA 23rd Edition, 3030D, 3113 B, 2017	0.38	mg/l	5.0	15.0
17	Copper (as Cu)	APHA 23rd Edition 3111B, 2017	*BLQ(**LOQ-0.02)	mg/l	0.05	1.5



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# TEST REPORT



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Sample Number : VTLW/03

ULR No. : TC1122724000000478F

Report No. : VTLW/2403230003/A

S.No.	Test Parameters	Test Method	Results	Units	IS:10500-2012	
					Acceptable Limit	Permissible Limit
18	Manganese (as Mn)	APHA 23rd Edition, 3030D, 3111 B, 2017	*BLQ(**LOQ-0.05)	mg/l	0.1	0.3
19	Selenium (as Se)	APHA 23rd Edition, 3114C, 2017	*BLQ(**LOQ-0.005)	mg/l	0.01	No Relaxation
20	Arsenic (as As)	APHA 23rd Edition, 3114C, 2017	*BLQ(**LOQ-0.005)	mg/l	0.01	0.05
21	Total Coliform	IS : 15185 : 2016	Absent	per 100 ml	Shall not be detectable in any 100 ml sample	--
22	E.Coli	IS : 15185 : 2016	Absent	per 100 ml	Shall not be detectable in any 100 ml sample	--
23	Ammonia (as N)	IS-3025 (P-34)- 1986, Sec. RA :2022	*BLQ(**LOQ-0.3)	mg/l	0.5	No Relaxation
24	Sulphide	IS 3025 (P-29) 1986 RA 2019 Idometric	*BLQ(**LOQ-0.1)	mg/l	0.05	No Relaxation
25	Free Residual Chlorine	IS 3026 (P-20):2021	*BLQ(**LOQ-0.2)	mg/l	0.2	1.0
26	Faecal Coliform	IS :1022 :1991 RA 2019	Absent	MPN		

\*BLQ-Below Limit Of Quantification, \*\*LOQ- Limit of Quantification

\*\*End of Report\*\*

# VIBRANT

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## TEST REPORT

### VIBRANT

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Sample Number : VTLW/03

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTLW/2403230003/B

Format No : 7.8 F-01

Party Reference No : NIL

Report Date : 28/03/2024

Period of Analysis : 23/03/2024-28/03/2024

Receipt Date : 23/03/2024

Sampling Date : 20/03/2024

Sampling Type : Grab

Sample Quantity : 2 Ltr.

Coordinates : NA

Sample Description : Water Sample  
Sampling Location : Chote Bhandar  
Sample Collected By : VTL Team  
Preservation : Suitable Preservation  
Method of sampling : IS :3025

S.No.	Test Parameters	Test Method	Results	Units	IS:10500-2012	
					Acceptable Limit	Permissible Limit
1	Colour	IS : 3025:(P-4)1993, IFA 2017	*BLQ(**LOQ-5.0)	Hazen	5	15
2	Odour	IS : 3025 (P-5) : RA 2016	Agreeable	-	Agreeable	Agreeable
3	Taste	IS :3025 (P-6)- 1984 RA 2017	Agreeable	-	Agreeable	Agreeable
4	Cyanide (as CN)	APHA 23rd Edition 4500C,2017	*BLQ(**LOQ-5.0)	mg/l	0.05	No Relaxation
5	Mineral Oil	IS 3025 (P-39) 1989	*BLQ(**LOQ-0.05)	mg/l	0.5	No Relaxation
6	Anionic Detergents (as MBAS)	APHA 23rd Edition , 5540C 2017	*BLQ(**LOQ-0.05)	mg/l	0.2	1.0
7	Barium as Ba	APHA 23rd Edition 3111B 2017	*BLQ(**LOQ-0.02)	mg/l	0.1	No relaxation

\*BLQ-Below Limit Of Quantification, \*\*LOQ- Limit of Quantification

\*\*\*End of Report\*\*\*

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**VIBRANT**

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Sample Number : VTLW/04

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Sample Description : Water Sample  
Sampling Location : Bade Bhandar  
Sample Collected By : VTL Team  
Preservation : Suitable Preservation  
Method of sampling : IS :3025

**TEST REPORT**



ULR No. : TC112272400000479F  
Report No. : VTLW/2403230004/A  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 28/03/2024  
Period of Analysis : 23/03/2024-28/03/2024  
Receipt Date : 23/03/2024  
Sampling Date : 20/03/2024  
Sampling Type : Grab  
Sample Quantity : 2 Ltr.  
Coordinates : NA

S.No.	Test Parameters	Test Method	Results	Units	IS:10500-2012	
					Acceptable Limit	Permissible Limit
1	pH (at 25°C)	IS : 3025 (P-11) : 2022	7.78	--	6.5 to 8.5	No Relaxation
2	Turbidity	IS : 3025 (P-10):1984, RA 2017	*BLQ(**LOQ-1.0)	NTU	1	5
3	Total Hardness (as CaCO3)	IS: 3025 (P-21): 2009, RA 2019	235.52	mg/l	300	300
4	Calcium (as Ca)	IS: 3025 (P-40): 1991 RA 2019	63.29	mg/l	75	100
5	Total Alkalinity (as CaCO3)	IS: 3025 (P-23): 1986, RA 2019	173.55	mg/l	200	300
6	Chloride (as Cl)	IS: 3025 (P-32): 1988, RA 2019	161.91	mg/l	250	1000
7	Magnesium (as Mg)	IS: 3025 (P-46): 1994, RA 2019	18.85	mg/l	40	100
8	Total Dissolved Solids	IS :3025 (P-16): 1984, RA 2017	611.0	mg/l	500	2000
9	Sulphate (as SO4)	IS: 3025 (P-24): 1986, RA 2022	34.98	mg/l	300	400
10	Fluoride (as F)	APHA 23rd Edition ,4500FD-2017	0.48	mg/l	1.0	1.5
11	Nitrate (as NO3)	IS: 3025 (P-34): 1988	21.84	mg/l	45.0	No Relaxation
12	Iron (as Fe)	APHA 23rd Edition ,3111B,2017	0.23	mg/l	1.0	No Relaxation
13	Aluminium (as Al)	IS 3025 (P-55): 2003, RA 2019	*BLQ(**LOQ-0.03)	mg/l	0.03	0.2
14	Boron (as B)	APHA 23rd Edition, 4500B,2017	*BLQ(**LOQ-0.2)	mg/l	0.5	1.0
15	Phenolic Compounds (C6H5OH)	APHA 23rd Edition 5530C: 2017	*BLQ(**LOQ-0.001)	mg/l	0.001	0.002
16	Zinc (as Zn)	APHA 23rd Edition,3030D, 3113 B , 2017	0.39	mg/l	5.0	15.0
17	Copper (as Cu)	APHA 23rd Edition 3111B 2017	*BLQ(**LOQ-0.02)	mg/l	0.05	1.5



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Sample Number : VTLW/04

**TEST REPORT**



ULR No. : TC112272400000479F

Report No. : VTLW/2403230004/A

S.No.	Test Parameters	Test Method	Results	Units	IS:10500-2012	
					Acceptable Limit	Permissible Limit
18	Manganese (as Mn)	APHA 23rd Edition, 3030D, 3111 B, 2017	*BLQ(**LOQ-0.05)	mg/l	0.1	0.3
19	Selenium (as Se)	APHA 23rd Edition, 3114C, 2017	*BLQ(**LOQ-0.005)	mg/l	0.01	No Relaxation
20	Arsenic (as As)	APHA 23rd Edition, 3114C, 2017	*BLQ(**LOQ-0.005)	mg/l	0.01	0.05
21	Total Coliform	IS : 15185 : 2016	Absent	per 100 ml	Shall not be detectable in any 100 ml sample	--
22	E.Coli	IS : 15185 : 2016	Absent	per 100 ml	Shall not be detectable in any 100 ml sample	--
23	Ammonia (as N)	IS-3025 (P-34)-1988, S&C RA :2022	*BLQ(**LOQ-0.3)	mg/l	0.5	No Relaxation
24	Sulphide	IS 3025 (P-29):1986 RA 2019 Idometric	*BLQ(**LOQ-0.1)	mg/l	0.05	No Relaxation
25	Free Residual Chlorine	IS 3025 (P-26):2021	*BLQ(**LOQ-0.2)	mg/l	0.2	1.0
26	Faecal Coliform	IS :1822 :1981 RA 2018	Absent	MPN		

\*BLQ-Below Limit Of Quantification, \*\*LOQ- Limits of Quantification

\*\*\*End of Report\*\*\*

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Sample Number : VTLW/04

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist- Raigarh 496100 ChhattisgarhSample Description : Water Sample  
Sampling Location : Bade Bhandar  
Sample Collected By : VTL Team  
Preservation : Suitable Preservation  
Method of sampling : IS :3025Report No. : VTLW/2403230004/B  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 28/03/2024  
Period of Analysis : 23/03/2024-28/03/2024  
Receipt Date : 23/03/2024  
Sampling Date : 20/03/2024  
Sampling Type : Grab  
Sample Quantity : 2 Ltr.  
Coordinates : NA**TEST REPORT**

S.No.	Test Parameters	Test Method	Results	Units	IS:10500-2012	
					Acceptable Limit	Permissible Limit
1	Colour	IS : 3025 (P-4)1983, RA 2017	*BLQ(**LOQ-5.0)	Hazen	5	15
2	Odour	IS : 3025 (P-5) : RA 2018	Agreeable	-	Agreeable	Agreeable
3	Taste	IS :3025 (P-8): 1984 RA 2017	Agreeable	-	Agreeable	Agreeable
4	Cyanide (as CN)	APHA 23rd Edition 4500D,2017	*BLQ(**LOQ-5.0)	mg/l	0.05	No Relaxation
5	Mineral Oil	IS 3025 (P-39) 1989	*BLQ(**LOQ-0.05)	mg/l	0.5	No Relaxation
6	Anionic Detergents (as MBAS)	APHA 23rd Edition , 5540C 2017	*BLQ(**LOQ-0.05)	mg/l	0.2	1.0
7	Barium as Ba	APHA 23rd Edition,3111B 2017	*BLQ(**LOQ-0.02)	mg/l	0.7	No relaxation

\*BLQ-Below Limit Of Quantification, \*\*LOQ- Limit of Quantification

\*\*\*End of Report\*\*\*

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## TEST REPORT

Sample Number : VTLW/10

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTLW/2403230010/B

Format No : 7.8 F-01

Party Reference No : NIL

Report Date : 28/03/2024

Period of Analysis : 23/03/2024-28/03/2024

Receipt Date : 23/03/2024

Sampling Date : 20/03/2024

Sampling Type : Grab

Sample Quantity : 2 Ltr.

Coordinates : NA

Sample Description : Water Sample  
Sampling Location : Piezometer -2  
Sample Collected By : VTL Team  
Preservation : Suitable Preservation  
Method of sampling : IS :3025

S.No.	Test Parameters	Test Method	Results	Units	IS:10500-2012	
					Acceptable Limit	Permissible Limit
1	Colour	IS : 3025 (P-4)1983, RA 2017	*BLO(**LOQ-5.0)	Hazen	5	15
2	Odour	IS : 3025 (P-5) : RA 2016	Agreeable	—	Agreeable	Agreeable
3	Taste	IS :3025 (P-5) : 1984 RA 2017	Agreeable	—	Agreeable	Agreeable
4	Cyanide (as CN)	APHA 23rd Edition, 8500D, 2017	*BLO(**LOQ-5.0)	mg/l	0.05	No Relaxation
5	Mineral Oil	IS 3025 (P-39) 1989	*BLO(**LOQ-0.05)	mg/l	0.5	No Relaxation
6	Anionic Detergents (as MBAS)	APHA 23rd Edition, 5540C 2017	*BLO(**LOQ-0.05)	mg/l	0.5	1.0
7	Barium as Ba	APHA 23rd Edition, 3111B 2017	*BLO(**LOQ-0.02)	mg/l	0.7	No relaxation

\*BLO-Below Limit Of Quantification, \*\*LOQ- Limit of Quantification

\*\*\*End of Report\*\*\*

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Sample Number : VTLW/11

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Sample Description : Water Sample  
Sampling Location : Piezometer -3  
Sample Collected By : VTL Team  
Preservation : Suitable Preservation  
Method of sampling : IS :3025

**TEST REPORT**



ULR No. : TC112272400000488F  
Report No. : VTLW/2403230011/A  
Formal No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 28/03/2024  
Period of Analysis : 23/03/2024-28/03/2024  
Receipt Date : 23/03/2024  
Sampling Date : 20/03/2024  
Sampling Type : Grab  
Sample Quantity : 2 Ltr.  
Coordinates : NA

S.No.	Test Parameters	Test Method	Results	Units	IS:10500-2012	
					Acceptable Limit	Permissible Limit
1	pH (at 25°C)	IS : 3025 (P-11) : 2022	7.74	--	6.5 to 8.5	No Relaxation
2	Turbidity	IS : 3025 (P-10) 1984, RA 2017	*BLQ(**LOQ-1.0)	NTU	1	5
3	Total Hardness (as CaCO3)	IS: 3025 (P-21): 2009, RA 2019	295.0	mg/l	200	500
4	Calcium (as Ca)	IS: 3025 (P- 40) 1991 RA 2019	72.31	mg/l	75	200
5	Total Alkalinity (as CaCO3)	IS: 3025 (P-23): 1986, RA 2019	177.49	mg/l	200	500
6	Chloride (as Cl)	IS: 3025 (P-32) 1988, RA 2019	162.39	mg/l	250	1000
7	Magnesium (as Mg)	IS: 3025 (P-46): 1994, RA 2019	27.84	mg/l	30	100
8	Total Dissolved Solids	IS :3025 (P-16) 1984, RA 2017	612.0	mg/l	500	2000
9	Sulphate (as SO4)	IS: 3025 (P-24): 1986, RA 2022	42.71	mg/l	200	400
10	Fluoride (as F)	APHA 23rd Edition, 4500FD, 2017	0.55	mg/l	1.0	1.0
11	Nitrate (as NO3)	IS: 3025 (P-34): 1988	28.49	mg/l	45.0	No Relaxation
12	Iron (as Fe)	APHA 23rd Edition, 3113 B, 2017	0.35	mg/l	1.0	No Relaxation
13	Aluminium (as Al)	IS 3025 (P-55): 2003, RA 2019	*BLQ(**LOQ-0.03)	mg/l	0.03	0.2
14	Boron (as B)	APHA 23rd Edition, 4500B, 2017	*BLQ(**LOQ-0.2)	mg/l	0.5	1.0
15	Phenolic Compounds (C6H5OH)	APHA 23rd Edition 5530C: 2017	*BLQ(**LOQ-0.001)	mg/l	0.001	0.002
16	Zinc (as Zn)	APHA 23rd Edition, 3030D, 3113 B, 2017	0.48	mg/l	5.0	15.0
17	Copper (as Cu)	APHA 23rd Edition 3111B 2017	*BLQ(**LOQ-0.02)	mg/l	0.05	1.5



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# TEST REPORT



## VIBRANT

Sample Number : VTLW/11

DLR No. : TC112272400000485F  
Report No. : VTLW/2403230011/A

S.No.	Test Parameters	Test Method	Results	Units	IS:10500-2012	
					Acceptable Limit	Permissible Limit
18	Manganese (as Mn)	APHA 23rd Edition, 3030D, 3111 B, 2017	*BLQ(**LOQ-0.05)	mg/l	0.1	0.3
19	Selenium (as Se)	APHA 23rd Edition, 3114C, 2017	*BLQ(**LOQ-0.005)	mg/l	0.01	No Relaxation
20	Arsenic (as As)	APHA 23rd Edition, 3114C, 2017	*BLQ(**LOQ-0.005)	mg/l	0.01	0.05
21	Total Coliform	IS : 15185 : 2016	Absent	per 100 ml	Shall not be detectable in any 100 ml sample	--
22	E. Coli	IS : 15185 : 2016	Absent	per 100 ml	Shall not be detectable in any 100 ml sample	--
23	Ammonia (as N)	IS-3025 (P-34)- 1986 Sec RA 2022	*BLQ(**LOQ-0.3)	mg/l	0.5	No Relaxation
24	Sulphide	IS 3025 (P-26) : 1986 RA 2016 Idometric	*BLQ(**LOQ-0.1)	mg/l	0.05	No Relaxation
25	Free Residual Chlorine	IS 3025 (P-26):2021	*BLQ(**LOQ-0.2)	mg/l	0.2	1.0
26	Faecal Coliform	IS :1622 :1981 RA 2019	Absent	MPN	--	--

\*BLQ Below Limit Of Quantification, \*\*LOQ- Limit of Quantification

\*\*\*End of Report\*\*\*

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# TEST REPORT

## VIBRANT

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Sample Number : VTLW/11

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTLW/2403230011/B

Format No : Y.B.F-01

Party Reference No : NIL

Report Date : 28/03/2024

Period of Analysis : 23/03/2024-28/03/2024

Receipt Date : 23/03/2024

Sampling Date : 20/03/2024

Sampling Type : Grab

Sample Quantity : 2 Ltr.

Coordinates : NA

Sample Description : Water Sample  
Sampling Location : Piezometer -3  
Sample Collected By : VTL Team  
Preservation : Suitable Preservation  
Method of sampling : IS :3025

S.No.	Test Parameters	Test Method	Results	Units	IS:10500-2012	
					Acceptable Limit	Permissible Limit
1.	Colour	IS : 3025:(P-4)1983, RA 2017	*BLQ(**LOQ-5.0)	Hazen	5	15
2.	Odour	IS : 3025 (P-5) RA 2018	Agreeable	—	Agreeable	Agreeable
3.	Taste	IS :3025 (P-8): 1984 RA 2017	Agreeable	—	Agreeable	Agreeable
4.	Cyanide (as CN)	APHA 23rd Edition, 4500C, 2017	*BLQ(**LOQ-5.0)	mg/l	0.05	No Relaxation
5.	Mineral Oil	IS 3025 (P-39) 1989	*BLQ(**LOQ-0.05)	mg/l	0.5	No Relaxation
6.	Anionic Detergents (as MBA5)	APHA 23rd Edition, 5540C 2017	*BLQ(**LOQ-0.05)	mg/l	0.2	1.0
7.	Barium as Ba	APHA 23rd Edition, 3111B 2017	*BLQ(**LOQ-0.02)	mg/l	0.2	No relaxation

\*BLQ-Below Limit Of Quantification, \*\*LOQ- Limit of Quantification

\*\*\*End of Report\*\*\*

# VIBRANT

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**VIBRANT**

Sample Number : VTLW/12

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist- Raigarh 496100 Chhattisgarh

Sample Description : Water Sample  
Sampling Location : Piezometer -4  
Sample Collected By : VTL Team  
Preservation : Suitable Preservation  
Method of sampling : IS :3025

**TEST REPORT**



ULR No. : TC112272400000487F  
Report No. : VTLW/2403230012/A  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 28/03/2024  
Period of Analysis : 23/03/2024-28/03/2024  
Receipt Date : 23/03/2024  
Sampling Date : 20/03/2024  
Sampling Type : Grab  
Sample Quantity : 2 Ltr.  
Coordinates : NA

S.No.	Test Parameters	Test Method	Results	Units	IS:10500-2012	
					Acceptable Limit	Permissible Limit
1	pH (at 25°C)	IS : 3025 (P-11) : 2022	7.84	-	6.5 to 8.5	No Relaxation
2	Turbidity	IS : 3025 (P-10)1084, RA 2017	*BLQ(**LOG-1.0)	NTU	1	5
3	Total Hardness (as CaCO3)	IS: 3025 (P-21): 2009, RA 2019	246.0	mg/l	200	500
4	Calcium (as Ca)	IS: 3025 (P-40): 1991 RA 2019	64.03	mg/l	75	200
5	Total Alkalinity (as CaCO3)	IS: 3025 (P-23): 1986, RA 2019	152.38	mg/l	200	500
6	Chloride (as Cl)	IS: 3025 (P-32): 1888, RA 2019	146.53	mg/l	200	1000
7	Magnesium (as Mg)	IS : 3025 (P-46): 1994, RA 2019	20.95	mg/l	50	100
8	Total Dissolved Solids	IS :3025 (P-16): 1984, RA 2017	590.0	mg/l	500	2000
9	Sulphate (as SO4)	IS: 3025 (P-24): 1986, RA 2022	36.43	mg/l	200	400
10	Fluoride (as F)	APHA 23rd Edition, 4500FD, 2017	0.69	mg/l	1.0	1.5
11	Nitrate (as NO3)	IS: 3025 (P-34): 1986	22.28	mg/l	45.0	No Relaxation
12	Iron (as Fe)	APHA 23rd Edition, 3111B, 2017	0.42	mg/l	1.0	No Relaxation
13	Aluminium (as Al)	IS 3025 (P-55): 2003, RA 2019	*BLQ(**LOG-0.03)	mg/l	0.03	0.2
14	Boron (as B)	APHA 23rd Edition, 4500B, 2017	*BLQ(**LOG-0.2)	mg/l	0.5	1.0
15	Phenolic Compounds (CGHSOH)	APHA 23rd Edition 6530C, 2017	*BLQ(**LOG-0.001)	mg/l	0.001	0.002
16	Zinc (as Zn)	APHA 23rd Edition, 3030D, 3113 B, 2017	0.69	mg/l	5.0	15.0
17	Copper (as Cu)	APHA 23rd Edition 3111B, 2017	*BLQ(**LOG-0.02)	mg/l	0.05	1.5



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Sample Number : VTLW/12

**TEST REPORT**ULR No. : TC112272400000487F  
Report No. : VTLW/2403230012/A

S.No.	Test Parameters	Test Method	Results	Units	IS:10500-2012	
					Acceptable Limit	Permissible Limit
18	Manganese (as Mn)	APHA 23rd Edition, 3030D, 3111 B, 2017	*BLQ(**LOQ-0.05)	mg/l	0.1	0.3
19	Selenium (as Se)	APHA 23rd Edition, 3114C, 2017	*BLQ(**LOQ-0.005)	mg/l	0.01	No Relaxation
20	Arsenic (as As)	APHA 23rd Edition, 3114C, 2017	*BLQ(**LOQ-0.005)	mg/l	0.01	0.05
21	Total Coliform	IS : 15185 : 2016	Absent	per 100 ml	Shall not be detectable in any 100 ml sample	--
22	E.Coli	IS : 15185 : 2016	Absent	per 100 ml	Shall not be detectable in any 100 ml sample	--
23	Ammonia (as N)	IS-3025 (P-34)- 1986, Sec. RA :2022	*BLQ(**LOQ-0.3)	mg/l	0.5	No Relaxation
24	Sulphide	IS 3025 (P-39) 1986 RA 2019 Isometric	*BLQ(**LOQ-0.1)	mg/l	0.05	No Relaxation
25	Free Residual Chlorine	IS 3025 (P-25):2021	*BLQ(**LOQ-0.2)	mg/l	0.2	1.0
26	Faecal Coliform	IS :1522 :1981 RA 2019	Absent	MPN		

\*BLQ Below Limit Of Quantification; \*\*LOQ -Limit of Quantification

\*\*\*End of Report\*\*\*

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Sample Number : VTLW/12

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist- Raigarh 496100 Chhattisgarh

Sample Description : Water Sample  
Sampling Location : Piezometer -4  
Sample Collected By : VTL Team  
Preservation : Suitable Preservation  
Method of sampling : IS :3025

Report No. : VTLW/2403230012/B  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 28/03/2024  
Period of Analysis : 23/03/2024-28/03/2024  
Receipt Date : 23/03/2024  
Sampling Date : 20/03/2024  
Sampling Type : Grab  
Sample Quantity : 2 Ltr  
Coordinates : NA

TEST REPORT

S.No.	Test Parameters	Test Method	Results	Units	IS:10500-2012	
					Acceptable Limit	Permissible Limit
1	Colour	IS : 3025 (P-4)1983, RA 2017	*BLQ(**LOQ-5.0)	Hazen	5	15
2	Odour	IS : 3025 (P-5) RA 2018	Agreeable	—	Agreeable	Agreeable
3	Taste	IS :3025 (P-8) 1984 RA 2017	Agreeable	—	Agreeable	Agreeable
4	Cyanide (as CN)	APHA 23rd Edition ,4600D,2017	*BLQ(**LOQ-0.0)	mg/l	0.05	No Relaxation
5	Mineral Oil	IS 3025 (P-39) 1989	*BLQ(**LOQ-0.05)	mg/l	0.5	No Relaxation
6	Anionic Detergents (as MBAS)	APHA 23rd Edition , 5540C 2017	*BLQ(**LOQ-0.05)	mg/l	0.1	1 ft
7	Barium as Ba	APHA 23rd Edition,3111B 2017	*BLQ(**LOQ-0.02)	mg/l	0.7	No relaxation

\*BLQ-Below Limit Of Quantification, \*\*LOQ- Limit of Quantification

\*\*\*End of Report\*\*\*

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## TEST REPORT

Sample Number: VTL/WL/01  
Name & Address of the Party: M/s Adani Power Limited  
Village - Chhote Bhandar, Post - Bade  
Bandar, Tehsil Pussore, Dist- Raigarh  
496100 (Chhattisgarh)


Report No.: VTL/WL/2403230001-03  
Format No.: 7.8 F-01  
Party Reference No.: NIL  
Report Date: 28/03/2024  
Receipt Date: 23/03/2024  
Date of Monitoring: 20/03/2024

Sample Collected By: VTL Team  
Sample Description: Ground Water Level Monitoring

S.No.	Location	Depth (In meter)
1.	Piezometer Well No.- 02	1.42
2.	Piezometer Well No.- 03	1.91
3.	Piezometer Well No.- 04	3.86

  
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Sample Number : VTL/SW/01

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 ChhattisgarhSample Description : SURFACE WATER  
Sampling Location : Mahanadi Down Stream  
Sample Collected By : VTL Team  
Preservation : Suitable Preservation  
Method of sampling : IS :3025**TEST REPORT**ULR No. : TC112272400000488F  
Report No. : VTL/W/2403230013/A  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 28/03/2024  
Period of Analysis : 23/03/2024-28/03/2024  
Receipt Date : 23/03/2024  
Sampling Date : 20/03/2024  
Sampling Type : Grab  
Sample Quantity : 2 Ltr.  
Coordinates : NA

S.No.	Test Parameters	Test Method	Results	Unit
1	pH value	IS : 3025 (P-11) : 2022	7.49	--
2	Turbidity	IS : 3025 (P- 10) : 1984, RA 2017	3.37	NTU
3	Total Dissolved Solids (TDS)	IS : 3025 (P-16) : 1984, RA 2017	452.0	mg/l
4	Chloride (as Cl)	IS: 3025 (P-32) : 1988, RA 2019	56.84	mg/l
5	Sulphate as (SO4)	IS: 3025 (P- 24) : 1986, RA 2019	26.34	mg/l
6	Total Alkalinity (as CaCO3)	IS: 3025 (P- 23) : 1986, RA 2019	118.92	mg/l
7	Total Hardness (CaCO3)	IS: 3025 (P- 21) : 2008, RA 2019	171.31	mg/l
8	Calcium (as Ca)	IS : 3025 (P-40) : 1991 RA 2019	47.85	mg/l
9	Magnesium (as Mg)	IS : 3025 (P- 45) : 1994, RA 2019	12.50	mg/l
10	Fluoride ( as F)	APHA 23rd Edition, 4500D, 2017	0.46	mg/l
11	Nitrate (as NO3)	IS: 3025 (P- 34) : 1988 RA 2022	17.66	mg/l
12	Phenolic compounds	APHA 23rd Edition, 5530C, 2017	*BLQ(**LOQ-0.001)	mg/l
13	Fecal Coliform	IS:1522 :2009	Present	MPN
14	Total Coliform	IS 15185 : 2016	Present	MPN
15	Iron (as Fe)	APHA 23rd Edition, 3111B, 2017	0.31	mg/l
16	Zinc (as Zn)	APHA 23rd Edition, 3030D,3113B, 2017	0.47	mg/l
17	Copper (as Cu)	APHA 23rd edition, 3111B, 2017	*BLQ(**LOQ-0.02)	mg/l
18	Manganese (as Mn)	APHA 23rd Edition, 3030D,3113B, 2017	*BLQ(**LOQ-0.05)	mg/l
19	Arsenic (as As)	APHA 23rd Edition, 3030D,3114C, 2017	*BLQ(**LOQ-0.005)	mg/l
20	E Coli	IS :15185 : 2016	Present	P-A/100 ML
21	Boron (as B)	APHA 23rd Edition, 4500D, 2017	*BLQ(**LOQ-0.2)	mg/l
22	Selenium (as Se)	APHA 23rd Edition,3114C, 2017	*BLQ(**LOQ-0.005)	mg/l



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## TEST REPORT

# VIBRANT

*"Experience the unimaginable"*

Sample Number : VTL/SW/01

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist- Raigarh 496100 Chhattisgarh

Report No. : VTL/W/2403230013/B

Format No : 7.8 F-01

Party Reference No : NIL

Report Date : 28/03/2024

Period of Analysis : 23/03/2024-28/03/2024

Receipt Date : 23/03/2024

Sampling Date : 20/03/2024

Sampling Type : Grab

Sample Quantity : 2 Ltr.

Coordinates : NA

Sample Description : SURFACE WATER  
Sampling Location : Mahanadi Down Stream  
Sample Collected By : VTL Team  
Preservation : Suitable Preservation  
Method of sampling : IS :3025

S.No.	Test Parameters	Test Method	Results	Unit
1	Colour	IS : 3025 (P-4) : 2021	*BLQ(**LOQ-5.0)	Hazen
2	Odour	IS : 3025 (P-5) : 2018	Agreeable	-
3	Taste	IS : 3025 (P-8) : 1984 RA 2017	Agreeable	-
4	Residual Free Chlorine (RFC)	IS : 3025 (P-26) :2021	*BLQ(**LOQ-0.2)	mg/l
5	Cyanide (as CN)	APHA 23rd Edition, 4500C, 2017	*BLQ(**LOQ-5.0)	mg/l
6	Aluminium (as Al)	IS : 3025 : (P-55 ) 2003, RA 2018	*BLQ(**LOQ-0.03)	mg/l
7	Ammonia (as NH3)	IS : 3025 (P-34) 1988, Sec 4 RA 2019	*BLQ(**LOQ-0.3)	mg/l
8	Anionic Detergents (MBAS)	APHA 23rd ed., 2017, 5530C	*BLQ(**LOQ 0.05)	mg/l

\*BLQ Blow limit of Quantification \*\*LOQ Limit of Quantification

\*\*\*End of Report\*\*\*

# VIBRANT

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**VIBRANT**

"Experience the unimaginable"

Sample Number : VTL/SW/02

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Sample Description : SURFACE WATER  
Sampling Location : Mahanadi Up Stream  
Sample Collected By : VTL Team  
Preservation : Suitable Preservation  
Method of sampling : IS :3025

**TEST REPORT**



ULR No. : TC 112272400000489F  
Report No. : VTL/W/2403230014/A  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 28/03/2024  
Period of Analysis : 23/03/2024-28/03/2024  
Receipt Date : 23/03/2024  
Sampling Date : 20/03/2024  
Sampling Type : Grab  
Sample Quantity : 2 Ltr.  
Coordinates : NA

S.No.	Test Parameters	Test Method	Results	Unit
1	pH value	IS : 3025 (P-11) : 2022	7.73	--
2	Turbidity	IS : 3025 (P- 10) : 1984, RA 2017	4.69	NTU
3	Total Dissolved Solids (TDS)	IS : 3025 (P-16) : 1984, RA 2017	387.0	mg/l
4	Chloride (as Cl)	IS: 3025 (P-32) : 1988, RA 2019	66.38	mg/l
5	Sulphate as (SO4)	IS: 3025 (P- 24) : 1988, Sec.RA 2022	33.12	mg/l
6	Total Alkalinity (as CaCO3)	IS: 3025 (P- 23) : 1988, RA 2019	134.28	mg/l
7	Total Hardness (CaCO3)	IS: 3025 (P- 21) : 2008, RA 2019	199.63	mg/l
8	Calcium (as Ca)	IS : 3025 (P-40) : 1991 RA 2019	34.18	mg/l
9	Magnesium (as Mg)	IS : 3025 (P- 46) : 1994, RA 2019	17.09	mg/l
10	Fluoride ( as F)	APHA 23rd Edition, 4500D, 2017	0.58	mg/l
11	Nitrate (as NO3)	IS: 3025 (P- 34) : 1988 RA 2022	24.57	mg/l
12	Phenolic compounds	APHA 23rd Edition, 5530C, 2017	*BLQ>(*LOQ-0.001)	mg/l
13	Fecal Coliform	IS:1622 :2009	Present	MPN
14	Total Coliform	IS 15166: 2016	Present	MPN
15	Iron (as Fe)	APHA 23rd Edition,3111B, 2017	0.37	mg/l
16	Zinc (as Zn)	APHA 23rd Edition, 3030D,3113B, 2017	0.52	mg/l
17	Copper (as Cu)	APHA 23rd edition, 3111B, 2017	*BLQ>(*LOQ-0.02)	mg/l
18	Manganese (as Mn)	APHA 23rd Edition, 3030D,3113B, 2017	*BLQ>(*LOQ-0.05)	mg/l
19	Arsenic (as As)	APHA 23rd Edition, 3030D,3114C, 2017	*BLQ>(*LOQ-0.005)	mg/l
20	E.Coli	IS :15166 : 2016	Present	P-A/100 ML
21	Boron (as B)	APHA 23rd Edition, 4500D, 2017	*BLQ>(*LOQ-0.2)	mg/l
22	Selenium (as Se)	APHA 23rd Edition,3114C, 2017	*BLQ>(*LOQ-0.005)	mg/l



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## TEST REPORT

### VIBRANT

"Experience the unimaginable"

Sample Number : VTL/SW/02

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Report No. : VTL/W/2403230014/B

Format No : 7.8 F-01

Party Reference No : NIL

Report Date : 28/03/2024

Period of Analysis : 23/03/2024-28/03/2024

Receipt Date : 23/03/2024

Sampling Date : 20/03/2024

Sampling Type : Grab

Sample Quantity : 2 Ltr.

Coordinates : NA

Sample Description : SURFACE WATER  
Sampling Location : Mahanadi Up Stream  
Sample Collected By : VTL Team  
Preservation : Suitable Preservation  
Method of sampling : IS :3025

S.No.	Test Parameters	Test Method	Results	Unit
1	Colour	IS : 3025 (P-4) : 2021	*BLQ(**LOQ-5.0)	Hazen
2	Odour	IS : 3025 (P-5) : 2018	Agreeable	--
3	Taste	IS : 3025 (P-8) : 1984 RA 2017	Agreeable	--
4	Residual Free Chlorine (RFC)	IS : 3025 (P-26) : 2021	*BLQ(**LOQ-0.2)	mg/l
5	Cyanide (as CN)	APHA 23rd Edition, 4500D, 2017	*BLQ(**LOQ-5.0)	mg/l
6	Aluminum (as Al)	IS : 3025 : (P-55) 2003, RA 2010	*BLQ(**LOQ-0.03)	mg/l
7	Amononia (as NH3)	IS : 3025 (P-34) 1985, Sec.4 RA 2019	*BLQ(**LOQ-0.3)	mg/l
8	Anionic Detergents (MBAS)	APHA 23rd ed., 2017, 5530C	*BLQ(**LOQ-0.05)	mg/l

\*BLQ Blow limit of Quantification \*\*LOQ Limit of Quantification

\*\*\*End of Report\*\*\*

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**VIBRANT**

"Experience the unimaginable"

Sample Number: VTL/SW/03

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Sample Description : SURFACE WATER  
Sampling Location : Mand River Down Stream  
Sample Collected By : VTL Team  
Preservation : Suitable Preservation  
Method of sampling : IS :3025

**TEST REPORT**



TC-11227

ULR No. : TC112272400000490F  
Report No. : VTL/W/2403230015/A  
Format No : 7 & F-01  
Party Reference No : NIL  
Report Date : 28/03/2024  
Period of Analysis : 23/03/2024-28/03/2024  
Receipt Date : 23/03/2024  
Sampling Date : 20/03/2024  
Sampling Type : Grab  
Sample Quantity : 2 Ltr.  
Coordinates : NA

S.No.	Test Parameters	Test Method	Results	Unit
1	pH value	IS : 3025 (P-11) : 2022	7.79	--
2	Turbidity	IS : 3025 (P- 10) : 1984, RA 2017	5.31	NTU
3	Total Dissolved Solids (TDS)	IS : 3025 (P-16) : 1984, RA 2017	401.36	mg/l
4	Chloride (as Cl)	IS: 3025 (P-32) : 1988, RA 2019	67.53	mg/l
5	Sulphate (as SO4)	IS: 3025 (P- 24) : 1986, Sec.RA 2022	35.73	mg/l
6	Total Alkalinity (as CaCO3)	IS: 3025 (P- 23) : 1986, RA 2019	114.77	mg/l
7	Total Hardness (CaCO3)	IS: 3025 (P- 21) : 2009, RA 2019	189.64	mg/l
8	Calcium (as Ca)	IS : 3025 (P-40) : 1991 RA 2019	51.08	mg/l
9	Magnesium (as Mg)	IS : 3025 (P- 46) : 1994, RA 2019	15.12	mg/l
10	Fluoride ( as F)	APHA 23rd Edition, 4500D, 2017	0.78	mg/l
11	Nitrate (as NO3)	IS: 3025 (P- 34) : 1986 RA 2022	29.89	mg/l
12	Phenolic compounds	APHA 23rd Edition, 5530C, 2017	*BLQ(**LOQ-0.007)	mg/l
13	Fecal Coliform	IS:1022 :2009	Present	MPN
14	Total Coliform	IS 15185:2016	Present	MPN
15	Iron (as Fe)	APHA 23rd Edition,3111B, 2017	0.43	mg/l
16	Zinc (as Zn)	APHA 23rd Edition, 3030D,3113B, 2017	0.67	mg/l
17	Copper (as Cu)	APHA 23rd edition, 3111B, 2017	*BLQ(**LOQ-0.02)	mg/l
18	Manganese (as Mn)	APHA 23rd Edition, 3030D,3113B, 2017	*BLQ(**LOQ-0.05)	mg/l
19	Arsenic (as As)	APHA 23rd Edition, 3030D,3114C, 2017	*BLQ(**LOQ-0.005)	mg/l
20	E Coli	IS :15185 :2016	Present	P-A/100 ML
21	Boron (as B)	APHA 23rd Edition, 4500D, 2017	*BLQ(**LOQ-0.2)	mg/l
22	Selenium (as Se)	APHA 23rd Edition,3114C, 2017	*BLQ(**LOQ-0.005)	mg/l



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**VIBRANT**

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Sample Number : VTL/SW/03

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhole Bhandar, Post- Bade Bhandar.  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Sample Description : SURFACE WATER  
Sampling Location : Mand River Down Stream  
Sample Collected By : VTL Team  
Preservation : Suitable Preservation  
Method of sampling : IS :3025

Report No. : VTL/W/2403230015/B  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 25/03/2024  
Period of Analysis : 23/03/2024-26/03/2024  
Receipt Date : 23/03/2024  
Sampling Date : 20/03/2024  
Sampling Type : Grab  
Sample Quantity : 2 Lit.  
Coordinates : NA

S.No.	Test Parameters	Test Method	Results	Unit
1	Colour	IS : 3025 (P-4) : 2021	*BLQ(**LOQ-5.0)	Hazen
2	Odour	IS : 3025 (P-5) : 2018	Agreeable	--
3	Taste	IS : 3025 (P-8) : 1984 RA 2017	Agreeable	--
4	Residual Free Chlorine (RFC)	IS : 3025 (P-26) :2021	*BLQ(**LOQ-0.2)	mg/l
5	Cyanide (as CN)	APHA 33rd Edition, 4500D, 2017	*BLQ(**LOQ-5.0)	mg/l
6	Aluminium (as Al)	IS : 3025 : (P-65) 2003, RA 2019	*BLQ(**LOQ-0.03)	mg/l
7	Ammonia (as NH3)	IS : 3025 (P-34) 1988, Sec.4 RA 2019	*BLQ(**LOQ-0.5)	mg/l
8	Anionic Detergents (MBAS)	APHA 23rd ed., 2017, 5630C	*BLQ(**LOQ 0.05)	mg/l

\*BLQ Blow limit of Quantification \*\*LOQ Limit of Quantification

\*\*\*End of Report\*\*\*

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**VIBRANT**

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Sample Number : VTL/SW/04

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

**TEST REPORT**



ULR No. : TC112272400000491F  
Report No. : VTLW/2403230016/A  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 26/03/2024  
Period of Analysis : 23/03/2024-28/03/2024  
Receipt Date : 23/03/2024  
Sampling Date : 20/03/2024  
Sampling Type : Grab  
Sample Quantity : 2 Lit.  
Coordinates : NA

Sample Description : SURFACE WATER  
Sampling Location : Mand River Up Stream  
Sample Collected By : VTL Team  
Preservation : Suitable Preservation  
Method of sampling : IS :3025

S.No.	Test Parameters	Test Method	Results	Unit
1	pH value	IS : 3025 (P-11) : 2022	7.67	--
2	Turbidity	IS : 3025 (P- 10) : 1984, RA 2017	3.02	NTU
3	Total Dissolved Solids (TDS)	IS : 3025 (P-16) : 1984, RA 2017	284.0	mg/l
4	Chloride (as Cl)	IS: 3025 (P.32) : 1988, RA 2019	44.06	mg/l
5	Sulphate as (SO4)	IS: 3025 (P- 24) : 1986, Sec RA 2022	25.13	mg/l
6	Total Alkalinity (as CaCO3)	IS: 3025 (P- 23) : 1986, RA 2010	83.16	mg/l
7	Total Hardness (CaCO3)	IS: 3025 (P- 21) : 2009, RA 2019	121.06	mg/l
8	Calcium (as Ca)	IS : 3025 (P-40) : 1981 RA 2016	39.22	mg/l
9	Magnesium (as Mg)	IS : 3025 (P- 46) : 1994, RA 2019	7.45	mg/l
10	Fluoride ( as F)	APHA 23rd Edition, 4500D, 2017	0.44	mg/l
11	Nitrate (as NO3)	IS: 3025 (P- 34) : 1988 RA 2022	22.19	mg/l
12	Phenolic compounds	APHA 23rd Edition, 5530C, 2017	*BLO(**LOQ-0.011)	mg/l
13	Fecal Coliform	IS:1622:2009	Present	MPN
14	Total Coliform	IS 15185, 2016	Present	MPN
15	Iron (as Fe)	APHA 23rd Edition,3111B, 2017	0.31	mg/l
16	Zinc (as Zn)	APHA 23rd Edition, 3030D,3113B, 2017	0.46	mg/l
17	Copper (as Cu)	APHA 23rd edition, 3111B, 2017	*BLO(**LOQ-0.02)	mg/l
18	Manganese (as Mn)	APHA 23rd Edition, 3030D,3113B, 2017	*BLO(**LOQ-0.05)	mg/l
19	Arsenic (as As)	APHA 23rd Edition, 3030D,3114C, 2017	*BLO(**LOQ-0.005)	mg/l
20	E Coli	IS :15185 : 2016	Present	P-A/100 ML
21	Boron (as B)	APHA 23rd Edition, 4500D, 2017	*BLO(**LOQ-0.2)	mg/l
22	Selenium (as Se)	APHA 23rd Edition,3114C, 2017	*BLO(**LOQ-0.005)	mg/l



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Sample Number : VTL/SW/04

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Sample Description : SURFACE WATER  
Sampling Location : Mand River Up Stream  
Sample Collected By : VTL Team  
Preservation : Suitable Preservation  
Method of sampling : IS :3025

Report No. : VTL/W/2403230016/B  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 28/03/2024  
Period of Analysis : 23/03/2024-28/03/2024  
Receipt Date : 23/03/2024  
Sampling Date : 20/03/2024  
Sampling Type : Grab  
Sample Quantity : 2 Ltr.  
Coordinates : NA

S.No.	Test Parameters	Test Method	Results	Unit
1	Colour	IS : 3025 (P-4) : 2021	*BLQ(**LOQ-5.0)	Hazen
2	Odour	IS : 3025 (P-5) : 2018	Agreeable	--
3	Taste	IS : 3025 (P-8) : 1984 RA 2017	Agreeable	--
4	Residual Free Chlorine (RFC)	IS : 3025 (P-26) :2021	*BLQ(**LOQ-0.2)	mg/l
5	Cyanide (as CN)	APHA 23rd Edition, 4500D, 2017	*BLQ(**LOQ-0.0)	mg/l
6	Aluminium (as Al)	IS : 3025 : (P-55) 2003, RA 2019	*BLQ(**LOQ-0.03)	mg/l
7	Ammonia (as NH3)	IS : 3025 (P-34) 1988, Sec.4 RA 2019	*BLQ(**LOQ-0.3)	mg/l
8	Anionic Detergents (MBA8)	APHA 23rd ed., 2017; 5530C	*BLQ(**LOQ 0.05)	mg/l

\*BLQ Blow limit of Quantification \*\*LOQ Limit of Quantification

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Sample Number : VTL/SW/04

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhole Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Sample Description : SURFACE WATER

Sampling Location : Supa Village

Sample Collected By : VTL Team

Preservation : Suitable Preservation

Method of sampling : IS :3025

**TEST REPORT**



ULR No. : TC112272400000492F  
Report No. : VTL/W/2403230017/A  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 28/03/2024  
Period of Analysis : 23/03/2024-28/03/2024  
Receipt Date : 23/03/2024  
Sampling Date : 20/03/2024  
Sampling Type : Grab  
Sample Quantity : 2 Lt  
Coordinates : NA

S.No.	Test Parameters	Test Method	Results	Unit
1	pH value	IS : 3025 (P-11) : 2022	7.70	--
2	Turbidity	IS : 3025 (P- 10) : 1984, RA 2017	3.16	NTU
3	Total Dissolved Solids (TDS)	IS : 3025 (P-16) : 1984, RA 2017	288.81	mg/l
4	Chloride (as Cl)	IS: 3025 (P-32) : 1988, RA 2019	44.72	mg/l
5	Sulphate as (SO4)	IS: 3025 (P- 24) : 1988,Sec.RA, 2022	23.88	mg/l
6	Total Alkalinity (as CaCO3)	IS: 3025 (P- 23) : 1988, RA 2019	85.64	mg/l
7	Total Hardness (CaCO3)	IS: 3025 (P- 21) : 2008, RA 2019	124.36	mg/l
8	Calcium (as Ca)	IS : 3025 (P-40) : 1991 RA 2019	37.41	mg/l
9	Magnesium (as Mg)	IS : 3025 (P- 46) : 1994, RA 2019	7.53	mg/l
10	Fluoride ( as F)	APHA 23rd Edition, 4500D, 2017	0.50	mg/l
11	Nitrate (as NO3)	IS: 3025 (P- 34) : 1988 RA 2022	22.86	mg/l
12	Phenolic compounds	APHA 23rd Edition, 8530C, 2017	*BLQ>(*LOQ-0.001)	mg/l
13	Fecal Coliform	IS:1622 :2009	Present	MPN
14	Total Coliform	IS 15185: 2016	Present	MPN
15	Iron (as Fe)	APHA 23rd Edition,3111B, 2017	0.36	mg/l
16	Zinc (as Zn)	APHA 23rd Edition, 3030D,3113B, 2017	0.60	mg/l
17	Copper (as Cu)	APHA 23rd edition, 3111B, 2017	*BLQ>(*LOQ-0.02)	mg/l
18	Manganese (as Mn)	APHA 23rd Edition, 3030D,3113B, 2017	*BLQ>(*LOQ-0.05)	mg/l
19	Arsenic (as As)	APHA 23rd Edition, 3030D,3114C, 2017	*BLQ>(*LOQ-0.005)	mg/l
20	E Coli	IS :15185 : 2016	Present	P-A/100 ML
21	Boron (as B)	APHA 23rd Edition, 4500D, 2017	*BLQ>(*LOQ-0.2)	mg/l
22	Selenium (as Se)	APHA 23rd Edition,3114C, 2017	*BLQ>(*LOQ-0.005)	mg/l



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Sample Number : VTL/SW/04

Name & Address of the Party : M/s Adani Power Limited  
 Village- Chhote Bhandar, Post- Bade Bhandar,  
 Tehsil- Pussore Dist - Raigarh 496100 Chhattisgarh

Sample Description : SURFACE WATER

Sampling Location : Supa Village

Sample Collected By : VTL Team

Preservation : Suitable Preservation

Method of sampling : IS :3025

**TEST REPORT**

Report No. : VTL/W/2403230017/B

Format No : 7.8 F-01

Party Reference No : NIL

Report Date : 28/03/2024

Period of Analysis : 23/03/2024-28/03/2024

Receipt Date : 23/03/2024

Sampling Date : 20/03/2024

Sampling Type : Grab

Sample Quantity : 2 Ltr.

Coordinates : NA

S.No.	Test Parameters	Test Method	Results	Unit
1	Colour	IS : 3025 (P-4) : 2021	*BLQ(**LOQ-5.0)	Hazen
2	Odour	IS : 3025 (P-5) : 2018	Agreeable	--
3	Taste	IS : 3025 (P-8) : 1984 RA 2017	Agreeable	--
4	Residual Free Chlorine (RFC)	IS : 3025 (P-26) :2021	*BLQ(**LOQ-0.2)	mg/l
5	Cyanide (as CN)	APHA 23rd Edition, 4500D, 2017	*BLQ(**LOQ-5.0)	mg/l
6	Aluminium (as Al)	IS : 3025 : (P-55) 2005, RA 2019	*BLQ(**LOQ-0.03)	mg/l
7	Ammonia (as NH3)	IS : 3025 (P-34) 1988, Sec.4 RA 2019	*BLQ(**LOQ-0.3)	mg/l
8	Anionic Detergents (MBAS)	APHA 23rd ed., 2017, 8530C	*BLQ(**LOQ 0.05)	mg/l

\*BLQ Blow limit of Quantification \*\*LOQ Limit of Quantification

\*\*\*End of Report\*\*\*

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Page 3 of 3 (continued)





# TEST REPORT



**VIBRANT**  
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Sample Number : VTL/WW/01

Name & Address of the Party : M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

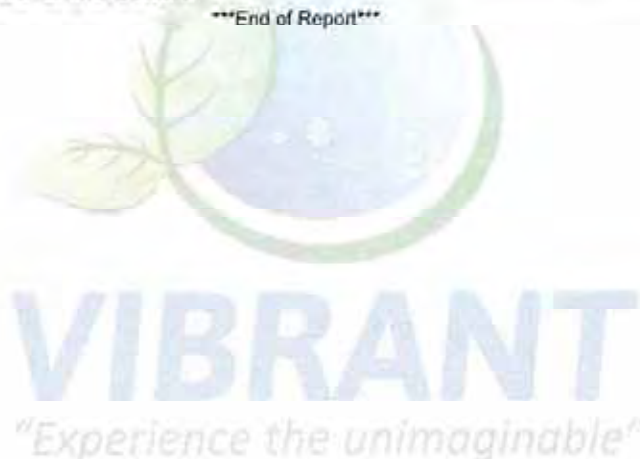
Sample Description : Waste Water  
Sampling Location : ETP Inlet  
Sample Collected By : VTL Team  
Preservation : Suitable Preservation  
Method of sampling : IS :3025

ULR No. : TC1122724000000493F  
Report No. : VTL/WW/2403230001/A  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 28/03/2024  
Period of Analysis : 23/03/2024-28/03/2024  
Receipt Date : 23/03/2024  
Sampling Date : 20/03/2024  
Sampling Type : Grab  
Sample Quantity : 2 Ltr  
Coordinates : NA

S.No.	Test Parameters	Test Method	Result	Unit
1	pH	IS: 3025 (P-11): 2022	7.79	-
2	Total Suspended Solids (TSS)	IS: 3025 (P-17): 2022	51.24	mg/l
3	Oil & Grease	IS:3025 (P-39): 2021	5.43	mg/l
4	Biochemical Oxygen Demand (BOD) (3 days @ 27°C )	IS: 3025 (P-44): 1993, RA: 2019	30.08	mg/l
5	Chemical oxygen Demand (COD)	IS - 3025 (P-58) - 2008 RA: 2017	185.39	mg/l

\*BLQ-Below Limit OF Quantification, \*\*LOQ- Limit Of Detection

\*\*\*End of Report\*\*\*



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# TEST REPORT



TC-11227

## VIBRANT

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Sample Number : VTL/WW/02

M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist. - Raigarh 498100 Chhattisgarh

Name & Address of the Party :

Sample Description : Waste Water  
Sampling Location : ETP Outlet  
Sample Collected By : VTL Team  
Coordinates : NA

ULR No. : TC1122724000000494F  
Report No. : VTL/WW/Z403230002/A  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 28/03/2024  
Period of Analysis : 23/03/2024-26/03/2024  
Receipt Date : 23/03/2024  
Sampling Date : 20/03/2024  
Parameter Required : As per work order

S.No.	Test Parameters	Test Method	Result	Unit	Limits
1	pH	IS: 3025 (P-11): 2022	7.95	-	5.5 to 9.0
2	Total Suspended Solids (TSS)	IS: 3025 (P-17): 2022	22.73	mg/l	100
3	Oil & Grease	IS:3025 (P-39): 2021	*BLQ(**LOQ-4.0)	mg/l	10
4	Biochemical Oxygen Demand (BOD) (3 days @ 27°C )	IS: 3025 (P-44): 1993, RA: 2019	18.37	mg/l	30
5	Chemical oxygen Demand (COD)	IS : 3025 (P-58) : 2006 RA: 2017	74.92	mg/l	250

\*BLQ-Below Limit OF Quantification, \*\*LOQ- Limit Of Detection

\*\*\*End of Report\*\*\*



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## TEST REPORT



TC-11227

Sample Number : VTL/WWW/03

M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Name & Address of the Party :

Sample Description : Waste Water  
Sampling Location : STP Outlet  
Sample Collected By : VTL Team  
Coordinates : NA

ULR No. : TC112272400000495F  
Report No. : VTL/WWW/2403230003/A  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 28/03/2024  
Period of Analysis : 23/03/2024-28/03/2024  
Receipt Date : 23/03/2024  
Sampling Date : 20/03/2024  
Parameter Required : As per work order

S.No.	Test Parameters	Test Method	Result	Unit	Limits
1	pH	IS: 3025 (P-11): 2022	7.54	-	5.5 to 9.0
2	Total Suspended Solids (TSS)	IS: 3025 (P-17): 2022	21.22	mg/l	100
3	Oil & Grease	IS:3025 (P-39): 2021	*BLQ(**LOQ-4.0)	mg/l	10
4	Biochemical Oxygen Demand (BOD) (3 days @ 27°C )	IS: 3025 (P-44): 1993, RA: 2019	17.16	mg/l	30
5	Chemical oxygen Demand (COD)	IS : 3025 (P-58) : 2006 RA: 2017	43.88	mg/l	250

\*BLQ-Below Limit OF Quantification, \*\*LOQ- Limit Of Detection

\*\*\*End of Report\*\*\*

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**VIBRANT**

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Sample Number : VTL/WW/04

**TEST REPORT**



TC-1122T

M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 498100 Chhattisgarh

Name & Address of the Party :

Sample Description : Waste Water  
Sampling Location : Cooling Tower Blow Down  
Sample Collected By : VTL Team  
Coordinates : NA

ULR No. : TC1122724000000496F  
Report No. : VTL/WW/2403230004/A  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 28/03/2024  
Period of Analysis : 23/03/2024-28/03/2024  
Receipt Date : 23/03/2024  
Sampling Date : 20/03/2024  
Parameter Required : As per work order

S.No.	Test Parameters	Test Method	Result	Unit	Limits
1	Chromium (as Cr)	APHA 23rd Edition 3113 B, 2017	*BLQ(**LOQ-0.1)	mg/l	2
2	Zinc (as Zn)	APHA 23rd Edition-3030D, 3113 B, 2017	*BLQ(**LOQ-0.2)	mg/l	5
3	Residual Free Chlorine	IS: 3025 (P-26):2021	0.38	mg/l	1.0

\*BLQ-Below Limit OF Quantification, \*\*LOQ- Limit Of Detection

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**VIBRANT**

"Experience the unimaginable"

Sample Number : VTL/WW/04

TEST REPORT

M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Name & Address of the Party :

Sample Description : Waste Water  
Sampling Location : Cooling Tower Blow Down  
Sample Collected By : VTL Team  
Coordinates : NA

Report No. : VTL/WW/2403230004/B  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 28/03/2024  
Period of Analysis : 23/03/2024-28/03/2024  
Receipt Date : 23/03/2024  
Sampling Date : 20/03/2024  
Parameter Required : As per work order

S.No.	Test Parameters	Test Method	Result	Unit	Limits
1	Phosphate (as PO4)	IS:3025 (P-31):1988, ( stannous Chloride Method) Sec.3 RA: 2022	*BLQ(**LOQ-0.2)	mg/l	5

\*BLQ-Below Limit OF Quantification, \*\*LOQ- Limit Of Detection

\*\*\*End of Report\*\*\*



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RK Yadav   
Lab Incharge  
Authorized Signatory

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## TEST REPORT



Sample Number : VTL/WW/05

M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Name & Address of the Party :

Sample Description : Waste Water  
Sampling Location : Boiler Blow Down  
Sample Collected By : VTL Team  
Coordinates : NA

ULR No. : TC1122724000000497F  
Report No. : VTL/WW/2403230005/A  
Format No : 7.8 F-01  
Party Reference No : NIL  
Report Date : 28/03/2024  
Period of Analysis : 23/03/2024-28/03/2024  
Receipt Date : 23/03/2024  
Sampling Date : 20/03/2024  
Parameter Required : As per work order

S.No.	Test Parameters	Test Method	Result	Unit	Limits
1	Chromium (as Cr)	APHA 23rd Edition 3113 B, 2017	*BLQ(**LOQ-0.1)	mg/l	2
2	Zinc (as Zn)	APHA 23rd Edition-3030D, 3113 B, 2017	*BLQ(**LOQ-0.2)	mg/l	5
3	Residual Free Chlorine	IS: 3026 (P-26):2021	0.44	mg/l	1.0

\*BLQ-Below Limit OF Quantification, \*\*LOQ- Limit Of Detection

\*\*\*End of Report\*\*\*



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**VIBRANT**

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Sample Number : VTL/WW/05

TEST REPORT

M/s Adani Power Limited  
Village- Chhote Bhandar, Post- Bade Bhandar,  
Tehsil- Pussore Dist.- Raigarh 496100 Chhattisgarh

Name & Address of the Party :

Sample Description : Waste Water  
Sampling Location : Boiler Blow Down  
Sample Collected By : VTL Team  
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Sampling Date : 20/03/2024  
Parameter Required : As per work order

S.No.	Test Parameters	Test Method	Result	Unit	Limits
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\*BLQ-Below Limit OF Quantification, \*\*LOQ- Limit Of Detection

\*\*\*End of Report\*\*\*



Checked by



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## Chapter-5

### CONCLUSION

M/s Adani Power Limited., authorities have been taken successful steps in controlling environmental pollution in and around the project. This fact is clear from analytical results of different environmental parameters. A brief conclusion is as follows:

S.No.	Environmental Parameters	Conclusion
1.	<b>Air Environment</b>	After analysis of the samples from five different locations it is observed that both the individuals and average concentration of air pollutants in respect of SO <sub>2</sub> , NO <sub>2</sub> , PM <sub>10</sub> , PM <sub>2.5</sub> , CO and Mercury are well within the prescribed limits of NAAQM standards. People of township and of surrounding villages do not have any problems regarding the air quality and have no grievances because of Thermal Power Plant activities.
2.	<b>Water Environment</b>	The analytical result of the samples from the ground water of villages, surface water from river, and domestic & industrial effluent after treatment shows that the concentrations of different water parameters are well within prescribed limits and will not cause any adverse impact on human health and on surrounding area. People of surrounding areas express satisfaction about the water quality of that area.
3.	<b>Noise Environment</b>	The observations taken at four village location during day and night time shows that the noise level is well within prescribed limits of CPCB. Hence there is no possibility of any adverse effect of noise generated due to Thermal Power Plant activities on peoples of Surrounding areas.

All the above details show that Thermal Power Plant of M/s Adani Power Limited is not causing any adverse impact on the human health and ecological balance.

## CSR - Annual Progress Report





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## Preface

Adani Power Limited (APL) Raigarh erstwhile Raigarh Energy Generation Limited, is a 1X600 MW coal based thermal power plant. The plant is located at village- Chhote Bhandar, PO- Bade Bhandar, Tehsil- Pussore, District- Raigarh, Chhattisgarh. 15 KM from Pussore tehsil and 25 KM from Raigarh district headquarter. The plant is on the National Highway- 153 (erstwhile NH- 216), east end Raigarh and west end Sarangarh connecting to Raipur, the state capital. The nearest railhead is at Raigarh. The airport is at Jharsuguda 105 KM and Raipur airport is 225 KM.

This is a green field power plant initiated in the year 2008 and commissioned in the year 2014. The total land acquired for the plant is 897 acres from the four villages of Pussore tehsil. The plant is out of the Abadi area, hence there is no displacement of the houses. The CSR initiatives in peripheral villages began along with the initiation of land acquisition in late 2008. During the project time CSR project and activities were spread over in 75 villages within 10 KM radius of the project.

In the year 2019, Adani Power Limited acquired erstwhile Korba West Power company Limited through Hon. NCLT, Ahmedabad and renamed Raigarh Energy Generation Limited (REGL).

With the enactment of the Companies Act, 2013 a broad framework of CSR has been provided in section 135, schedule VIII of the Act and CSR Rules effected from January 2014. Thereafter various amendments were made in the CSR Rules. To this, the CSR policy of APL approved by the Board of Directors on 6th August 2014.

ADANI Foundation (AF) is the CSR arm of Adani Group of companies implementing CSR projects and activities at different locations in India focusing on Health, Education, Livelihood, Community Infrastructure Development, and Skill Development of the youths.

A MoU executed with AF on dated 22nd, December 2020 for implementation of CSR projects at REGL. AF is implementing various CSR projects in 15 peripheral villages including 4 core villages of plant since FY 2021-22 focusing on Health, Education, Sustainable Livelihood, Community Infrastructure Development, and Skill Development of the youths. The four core villages are Bade Bhandar, Chhote Bhandar, Amalibhouna and Sarwani.

This was the third year of CSR implementation from AF. All CSR initiatives were aligned with Sustainable Development Goals (SDGs). This year we took up many new initiatives like Adani Competitive Coaching Center, Utthan Project in 8 Govt. schools, Kabaddi Training for girls, Kamdhenu- Dairy Development Project in partnership with BAIF. 100 girls were trained in tailoring course, micro-entrepreneurial development with SHGs for mushroom and vegetable cultivation. Constructed Community center and shed at village Bade Bhandar and Kalma.

## Message from Business Head



It gives me great pleasure to present our annual CSR Report for the FY 2023-24. Adani Power Limited is a responsible company and has found its purpose giving back to the community, and it is an inherent part of Adani philosophy. This was the third year of CSR project implementation from Adani Foundation after takeover of the plant. Over the past year, we have continued to focus on our core values of courage, trust, and commitment.

Our efforts have resulted in significant progress in achieving our strategic goals and a positive on the communities we serve.

One of the components of Adani Power vision is to “empower lives” by positively impacting the community through sustainable livelihoods and education. It gives me immense pleasure to know that the local women have formed Self Help Groups and are engaged in various farm, off-farm, and non-farm activities, and they are becoming self-reliant under our CSR sustainable livelihood development projects. And dairy farmers are getting benefits from livestock development projects. As the nation builds strength from its young population, we are enhancing our comprehensive Education initiative through our flagship Project “Utthan” aligned with NEP 2020. Encouraged school children and local youths to participate in sports and games for overall development.

Samajik Suraksha Labh Abhiyan was one of the unique initiatives, where people were mobilized to uptake govt schemes, a total of 1068 people benefitted from this initiative.

I am confident that we will be able to make a difference in the lives of the communities by improving their access to quality education, health care services, livelihood opportunities and improved infrastructure.

As we step into another year of new initiatives – we look at expanding the depth and intensity of our reach across our various themes of work. We also look to build strong stakeholder relationships and warm partnerships, so that we help to contribute to nation building.

Best Wishes,  
Samir Kumar Mitra  
Station Head



## Demographic Profile

Chhattisgarh, which came into existence as a state on November 1, 2000, was formed following the coming together of 16 districts of undivided Madhya Pradesh. It shares its borders with seven states – Orissa in the east, Jharkhand in the north-east, Madhya Pradesh in the west and north-west, Uttar Pradesh in the north, Maharashtra in the south-west, Telangana, and Andhra Pradesh in the south-east. Chhattisgarh can be divided into three distinct regions:

1. Northern region
2. Central plain region
3. Southern region



Raigarh district falls in northern region and eastern part of state bordering Odisha. The district is known for its rich natural resources and rivers Kelo, Mahandi and Mand, which flows through and across the district.



DEMOGRAPHIC INDICATORS	CHHATTISGARH	RAIGARH	PUSSORE	CSR INTERVENTION VILLAGES
<b>Population</b>	25545198	1493984	139799	19734
<b>Male</b>	1,28,32,895	750278	70261	9886
<b>Female</b>	1,27,12,303	743706	69538	9849
<b>Schedule Caste</b>	12.81%	15.06%	14.35%	15.76%
<b>Schedule Tribe</b>	15.16%	37.86%	20.58%	23.68%
<b>Number of Households</b>	5640620	367701	36644	5221
<b>Total Villages</b>	20335	1485	148	20
<b>Total Panchayat</b>	9770	774	88	13
<b>Sex Ratio</b>	991	991	990	991
<b>Population Density</b>	189	218	349	---
<b>Literacy</b>				
<b>Total</b>	71.04%	73.26%	70.48%	75.75%
<b>Male</b>	81.45%	83.49%	88.71%	86.87%
<b>Female</b>	60.59%	63.02%	70.26%	64.08%

Note: - We expanded our CSR activities to Pusalda, Shankarpali and Amalipali villages during July 23 and subsequently added Jatri and Tilgi villages to our programs during February 2024. At present, we are covering a total of 20 peripheral villages.



## Executive Summary: -

Year 2023-24 was the third year of CSR project implementation from Adani Foundation after takeover of the plant. The CSR projects were identified in consultation with the community and need of the area in alignment with Adani Power Limited CSR policy and Strategic Direction set by Hon. Chairperson Adani Foundation. Project Design Document (PDD) developed with the clear understanding on rationale for the project, goal and objectives, outcome indicators with project implementation timeline and budget.

The project implementation strategy was to ensure community participation and, where possible, coordinate with the govt. line departments for convergence to create greater impact. Digital Monitoring, Evaluation and Learning (DMEAL) was tried out and adopted by the field team for recording of activities and for further use for programmatic decisions.

CSR projects in the thematic area of Education, Health, Livelihood and Community Infrastructure Development were implemented in 20 peripheral villages including four core villages of the plant.

## Key Highlights

### 1. Education:

- **Project Utthan-** is being operationalized to provide an enabling environment to 467 children across 8 government schools to improve reading, writing and numeracy (Basic Literacy and Numeracy) abilities. Schools- 5 primary and 3 middle schools to achieve the objectives of Nipun Bharat Mission.
  - Placed four volunteers named Utthan Sahayak to facilitate the project activities in the schools and organized monthly mothers meeting in schools. More than 150 mothers actively participated.
  - Organized and participated in 17 nos. special day celebrations like National Science Day, World Environment Day, International Yoga Day, National Child Girl Day, National Youth Day, National Mathematics Day, Childrens Day, International Women Day, Independence Day, Republic Day etc. in the schools.
  - Distributed library books in 03 Primary & 05 Middle Schools for enhance the reading capacity to students.
  - Organized interschool competition in collaboration with govt. education department of Pussore. More than 700 students from 26 schools were actively participated from Bade Bhandar, Supa and Bunga Cluster.
- **Adani Khel Kumbh-** Trained 50 girls for Kabaddi from qualified coaches to play at district and state level tournaments. Total eleven girls have been selected to play at state level federation/School tournaments. One Girl selected for "Khleo India Rural Indigenous National Games at Odisha. Won the district level Kabaddi Tournament in Chakradhar Samaroh-Raigarh. Also sponsored youth clubs for Kabaddi and Cricket tournament.

## 2. Community Health:

- Mobile Healthcare Unit conducted 21235 free health check-ups and treatments through 671 camps at the doorsteps to the people residing in 20 peripheral villages.
- More than 800 people received medical aid in the health camp organized during Navratri at Maa Chandrahasini temple, Chandrapur, Dabhra, Dist-Sakti.
- One outreach multispecialty health camp organized at village Jatri and conducted 250 free health check-ups and distributed free medicines to patients.
- Provided patients waiting chairs, RO water cooler and constructed male/female toilet at Bade Bhandar primary health center.

## 3. Sustainable Livelihood Development:

### *Adani's Mahila Movement for Advancement (AMMA)-*

- Support to 41 Self Help Groups (SHGs) for undertaking on-farm, off-farm, and non-farm activities to generate additional income for enhance their living standards.
  - 11 SHGs earned Rs 1.77 lakhs from mushroom cultivation,
  - 19 SHGs earned Rs 9.47 lakhs from vegetable cultivation,
  - Facilitated to form a group (named DARJI) of 10 to 15 trained girls engaged in cutting and stitching of cloths on market orders and provided 12 new commercial electric machine to strengthen and engage more than 50 women in the business. They earned Rs. 1,84 Lakh,
  - Two-months training program organized on terracotta art for 28 nos. SHG members and potters of Tupakdhar and Chandli villages.
- Adani Foundation celebrated International Women's Day where more than 150 women from peripheral villages actively participated.

### *Samajik Surkhsa Labh Abhiyan-*

- Organized 22 camps in 18 peripheral villages to uptake govt schemes, total 1068 people have been benefited under this campaign, out of which a total of PMJAY- 627 nos., PMSBY-41 nos., PMJJY-27 nos., Sukanya Samridhhi Yojana-06 nos, PMJDY-30 nos., Labor Card -10, Sharm Card - 06, PM Vishwakarma -319 and Voter ID (02) have availed the benefit of these govt. schemes.

### ***Vriksh Se Vikas-***

- 5056 fruit and forestry tree Mango (845 Sapling), Neem, Karanj, Arjun, Peepal, Bargad etc. were distributed to individual and planted in community places/Gothan /Schools in 18 peripheral villages.

### ***Adani Saksham-***

- 100 girls trained in tailoring skills, self-employed in tailoring business.

### ***Kamdhenu-Dairy Development-***

- Livestock development project implemented for cattle breed improvement, vaccination, treatment, fodder development and training program to enhance productivity-
  - Total 652 SS (463 nos.) and CS (189 nos.) AI conducted through one LDC,
  - Organized 6 cattle health camps in which 773 cattle treated, and 165 farmers benefitted from 6 villages
  - 533 farmers from 14 villages attended in 15 training on improved livestock health management.
  - Distributed Fodder to 74 livestock farmers in 17 peripheral villages. Demonstrate hybrid Napier (30000 cuttings) in 10 acres, Maize (540 KG), pearl millets (120 KG) in 18.13-acres and similarly berseem (130 KG) and Oats (200 KG) demonstrated in 24.44 Acres. Total 52.57 fodder area developed during the FY 23-24.
  - 357 Pregnancy Diagnosis – 213 animals found pregnant. Total 61 female calves are born out of 89 calving in cows including sex sorted semen.

## **4. Community Infrastructure Development:**

- Constructed cement concrete road (900 meter) from Birhabhata to Sarwani village.
- Constructed community center at village Sarwani and village community utilized for community purpose.
- Constructed school boundary wall at Govt. Primary School – Bade Bhandar.
- Constructed community shed near Shani Mandir – Bade Bhandar village.
- Constructed Toilet at Primary health center at Bade Bhandar village.
- Constructed playground at Amlibhouna village.
- Pond deepening work was done in Bunga, Ruchida and Putkapuri villages, which increased the total water capacity by 16262 cubic meters.

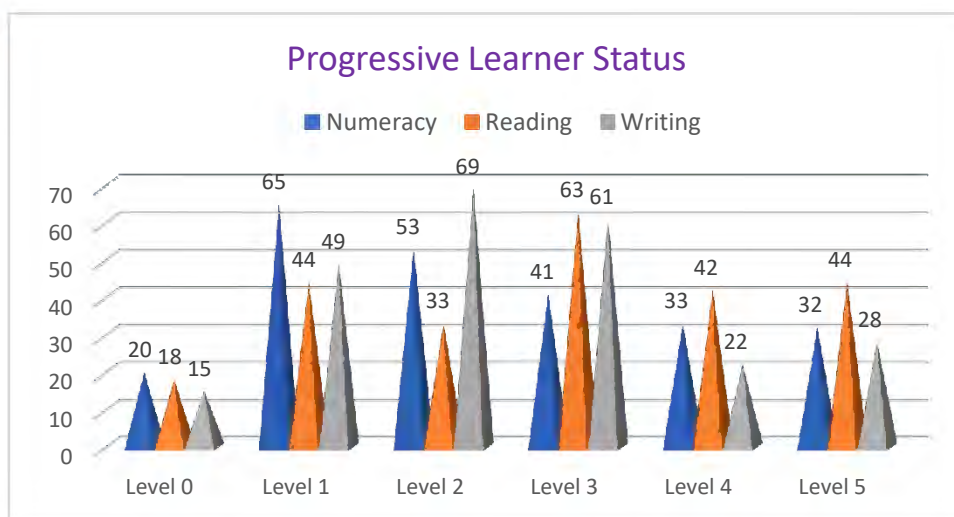


## Main section:

### 1.1 Education

#### Project Utthan

launched by Adani Foundation in the month of January-2023 in Supa village, Pussore tahsil of Raigarh with objective of enhancing learning outcomes in elementary



education and handhold the "Priya Vidyarthi's' (Progressive Learners). Block Education Office- Pussore, Dist. Raigarh consented for implementation of Project Utthan in 08 Government Schools.

#### **This comprehensive intervention entails:**

- Enhancing the teaching learning outcomes
- Empowering 'Priya Vidyarthi's' (Progressive Learners)
- Introducing English as a third language in class 1 to 4
- Arresting dropout rates
- Collaborating for teachers' capacity building
- Creating joyful learning spaces

#### **Outreach of Utthan:**

Sl	School name	Village Name	School Strength			Details of Deprived Community				
			Boys	Girls	Total	SC	ST	OBC	GEN	OTH
1	Primary School	Bade Bhandar	24	21	45	21	8	15	1	-
2	Primary School	Sarwani	23	28	51	5	45	1	-	-
3	Primary School	Amlibhouna	19	28	47	0	44	3	-	-
4	Primary School	Jevridih	15	7	22	4	4	14	-	-
5	Primary School	Supa	34	26	60	23	11	26	-	-
6	Middle School	Bade Bhandar	57	51	108	31	26	51	-	-
7	Middle School	Kathli	23	12	35	1	18	16	-	-
8	Middle School	Supa	54	45	99	31	31	37	-	-
	<b>Total</b>	<b>08</b>	<b>249</b>	<b>218</b>	<b>467</b>	<b>116</b>	<b>187</b>	<b>163</b>	<b>1</b>	<b>0</b>

In the year-2023-24, baseline assessment had undertaken to know the learning level of Govt. Primary & Middle schools. A total of 8 nos. of Govt. Schools covered in the assessment.

### ***Special Day Celebration in Govt School:***

Observed 17 nos. of special day celebrations like National Science Day, World Environment Day, International Yoga Day, National Child Girl Day, National Youth Day, National Mathematics Day, Childrens Day, International Women Day, Independence Day, Republic Day etc. in the schools under project Utthan and covered 467 students of them 244 were progressive learners. Various competition organized during the days like quiz, poster, essay writing, speech, poem, slogan writing, science fest and mathematical games etc. it was observed that involvement of teachers increased in celebration of the activities and parents and stakeholder also actively participated in the day celebrations.



### ***Enriched reading corner to develop reading habits - facilitated 467 students:***

Stories and reading are an important part of child growth and development. Reading encourages:

- Children to build vocabulary.
- Derives connections between stories and their own lives.
- Understand how different people think about different things.
- Encourage students to express themselves more freely.

### ***Installed E learning module for smart classes in 06 Schools:***

The students engage with curriculum via animations and videos as this smart class projects are installed with 1 to 8<sup>th</sup> class subjects in 06 schools, using this advanced smart class teachers can quickly analyze and measure the students' progress and success. Total 323 students are provided Navneet Topper Apps at Primary School of Bade Bhandar, Supa, Amlibhouna, Sarwani and Middle School of Kathli and Bade Bhandar villages.



### Organized Inter School Sports Tournament:



Organized interschool competition in collaboration with govt. education department of Pussore. More than 700 students from 26 schools were actively participated from Bade Bhandar, Supa and Bunga Cluster. Various sports events like 100-meter race, 50-meter race, long jump, high jump, Kabaddi, Kho -Kho, musical

chair, Bag Race and Cultural Events were organized and It is helpful in increasing the participation level of students and developing sports skills. Parents and stakeholder also actively participated in this sports meet.

### Summer Camp in Govt. School:

Organized summer camp in 08 Govt. schools to ensure that the students continue to practice learning and keep their interest in school during the month of May and June 2023. A total of more than 290 students/progressive learners participated. During the camp scholastic and non-scholastic activities like story writing, group reading, cross word, sudoku, origami, greeting card, drawing, Yoga etc. carried out by Utthan Sahayak for Joyful learning with more fun and creativity of students.



The school management committee, parents and gram panchayat representative appreciated this





initiative. The Department of education was providing support to organize this camp and involvement of schoolteacher is most vital reason for success of this initiative under the project Utthan.

### *Preparation of JNV exam:*

A total of 49 students were selected and enrolled for JNV exam of FY 2023-24 from 05 Govt. Primary School of Bade Bhandar, Sarwani, Amlibhouna, Supa and Jevridih villages under project Utthan. The main objectives of this program are to provide educational support to selected students for preparation of Jawahar Navodaya Vidyalaya (JNV) exam.



### *Distribution of Notebooks and Library Books in Schools:*

Notebook distribution program was organized at Govt. Middle school – Supa village on dated 22nd July 2023 Under Utthan Project. A total of 486 students gets benefitted from 08



schools. The main objective of this program was to ensure that students continue to practice learning and improve their writing skills. school teachers, SMC members & Panchayat representatives appreciated this program, and it is becoming a medium to improve the writing skills of 244 progressive learners. Similar Library books set also distributed to 08 Govt. School under the project Utthan. The main objective of distribution of library books is to create an enjoyable reading environment/culture for the students and to develop their reading ability.

### Water Purifier RO cum cooler provided to 02 High Schools:

Installed two 80 Liters RO water filter to provide safe and clean drinking water facility in Government Higher Secondary School-Bade Bhandar. More than 250 students and school staffs are accessing clean and safe drinking water.

### Constructed School Boundary wall:

The boundary wall was constructed for the school premises of Government Primary School, Bade Bhandar. A total of 45 students are enrolled in this school and our Utthan project is



being implemented in this school. This boundary wall was constructed at the request of the school committee for the safety and cleanliness of the school campus. Parents and panchayat members appreciated boundary wall construction.

### Industry Partner for ITI Sariya:

Organized power plant exposure to 40 students and teachers of electrical, welder and fitter trade from Government Industrial Training Institute (ITI) Sariya. Total



two nos. meetings of Institute Management Committee (IMC) held during the year 2023-24 and where various decisions taken for improvement of ITI Sariya and awareness session also organized for national electrical safety week during July 23 and world environment day during the June 2023.



## 1.2 Community Health: - Mobile Health Care Unit (MHU):

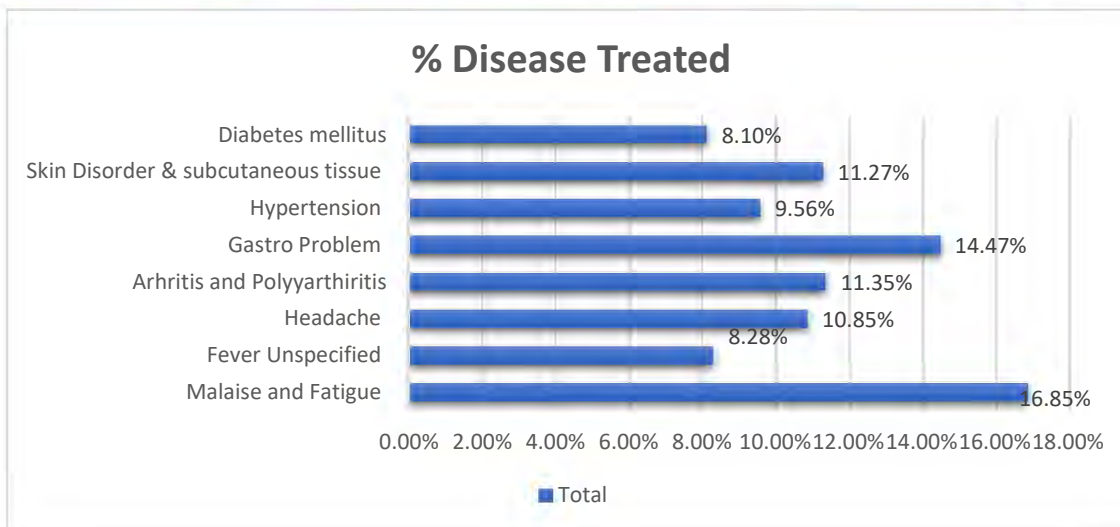
To provide quality health care services free of cost and promote preventive and curative services at the doorsteps of villagers is one of the objectives of the Mobile Healthcare Unit (MHU). The project is operational in 20 peripheral villages, visits villages on fixed schedule.



A Total 671 nos. rural health camps were organized in 20 villages through Mobile Medical Health Care Unit (MHCU). Total of 21235 beneficiary took benefits from this camp. in which 10982 female and 10253 males were health checked and free medicines were distributed. Mostly patients related to heat, fever, cold, Ortho related, anemia, constipation, skin diseases, worm infection, constipation, osteoporosis, body ache, worms, infection etc. are getting benefited. Free diagnosis for diabetes and blood pressure is also being done in the camp.

Sr. No.	Name of Villages	Male	Female	Total
1	Bade Bhandar	730	745	1475
2	Chhote Bhandar	863	1046	1909
3	Amlibhouna	676	646	1322
4	Jevridih	311	495	806
5	Sarwani	578	682	1260
6	Barpali	533	361	894
7	Kathli	919	770	1689
8	Tupakdhar	373	516	889
9	Bunga	920	1081	2001
10	Ranbhatha	589	818	1407
11	Taparda	662	588	1250
12	Supa	416	534	950
13	Kotmara	453	305	758
14	Kalma	329	345	674
15	Chandli	329	395	724
16	Amlipali	478	552	1030
17	Shankarpali	245	290	535
18	Pusalda	626	553	1179
19	Jatri	98	117	215
20	Tilgi	125	143	268
	<b>Total</b>	<b>10253</b>	<b>10982</b>	<b>21235</b>





### Awareness sessions for preventive healthcare:

MHU team conducted total 11 awareness sessions during the village visit for health camp. The primary objective of these awareness sessions is to generate awareness among the community on various health issues like lifestyle diseases, skin, water born disease, care for COVID 19, Tuberculosis (TB), schemes run by the government and facilitate villagers to link with Ayushman Bharat Yojana etc. in which 2457 persons participated from 20 nearby villages. Conducted 40 Home visits by the MHCU team for patients unable to reach the health camp site and 11 patients were referred for secondary treatment.

Sr. No.	Village Name	Awareness Session	Person Participated
1	Bade Bhandar	7	121
2	Chhote Bhandar	8	161
3	Amlibhouna	7	105
4	Jevridih	6	106
5	Sarwani	11	194
6	Barpali	6	109
7	Kathli	8	168
8	Tupakdhar	9	117
9	Bunga	9	244
10	Ranbhatha	9	184
11	Taparda	7	130
12	Supa	8	188
13	Kotmara	7	147
14	Kalma	6	96
15	Chandli	7	124
16	Amlipali	7	117
17	Shankarpali	3	44
18	Pusalda	3	79
19	Jatri	1	23
20	Tilgi	0	0
<b>Total</b>		<b>129</b>	<b>2457</b>

## School health and awareness camps:

School health camps organized in 5 govt. schools for providing quality health care services to school students and to create awareness on cleanliness, personal health, and menstrual hygiene to adolescent girls of high and higher secondary school. Total 06 such camps organized where 375 students were benefitted with treatment to 106 students by our MHU team. This was appreciated by girl students, teachers, and parents. Total 136 HB test has been done during the school camps.



## Important Day's Celebration: Celebration of Nutrition Month (Poshan Mah)



National Nutrition Month is celebrated every year from 1 to 30 September, the purpose is to create awareness about importance of nutrition and to act and address the issues of malnutrition among children, adolescent girls, pregnant women, and nursing mothers. with the above objectives, various

activities like Anna Prashan, God Bharai (Baby Shower), Rangoli, display of nutritional diet and awareness session was organized in coordination with District Women and Child Development department- Raigarh. Covered total 34 AWC from 18 villages, 1500+ women participated. On this occasion honored to 147 AWC worker, Mitanin and Supervisor.

Observed world breast feeding week in 18 peripheral villages for creating awareness about importance of breastfeeding, remove their misconception and promoting breastfeeding. Total 10 awareness sessions organized, 165 lactating and pregnant women participated from 10 villages.



**Medical Camp:**

Organized free Medical Camp at Maa Chandrahasini Temple, Chandrapur from 15.10.2023 to 23.10.2023 during Navratri. A very big fair is being organized here every year on the eve of Navratri. It is also famous as a tourist place. During the festival of Navratri more than 1000 people per day visit the temple from nearby area and surrounding states. The people come from far places and wait for a day and two to visit and worship in the temple. It is observed and feedback received from the key stakeholders that many visitors need attention for first aid



medical services and treatment for common ailment like cough and fever and they are unserved. During the camp free medical consultation, check-up, free medicines were distributed to the devotees and patients more than 800 people were treated during the health camp.



**Outreach Health Camp:**

Organized 01 nos. outreach multispecialty health camp at village Jatri and conducted 250 free health check-ups and distributed free medicines to patients. General medicine, ENT, Orthopedics, and gynecologist doctors provided services to patients.



### Infrastructure Support to Health Center:

Primary health center – Bade Bhandar is one of the health service providers in 35 villages in Pussore block of Raigarh district. Daily 40-45 OPD patients come here to health check-ups and many Govt. health program will implementation and monitor through this health center. As per request of Primary health center – Bade Bhandar provided infrastructural support like constructed one toilet for patient at inside campus of health center. Similarly provided patient waiting chair (06 no.) and One Water Purifier cum RO for providing safe drinking water facilities to patient.

### 1.3 Sustainable Livelihood Development: -

#### Kamdhenu Dairy Development Project:

The Kamdhenu- dairy Development Project launched on 22.10.2022, the following services provided through one Livestock Development Center (LDC) established at village Chhote Bhandar. Covered total 1599 cattle of 789 livestock farmers from 26 nearby villages.

- Breed development by artificial insemination (AI)- conventional semen and sorted semen by trained AI technician, pregnancy diagnosis.
- Training to farmers on cattle management-improved practices for rearing
- Veterinary camp and vaccination
- Fodder development- distribution of fodder for demonstration.
- Awareness generation on animal husbandry

#### Artificial insemination (AI):

Total 652 artificial inseminations were done in 27 peripheral villages, out of which 463 were sorted semen and 189 were conventional semen was done from April 2023 to March 2024.

- Total 357 Pregnancy diagnosis conducted after three months of AI and 213 cattle found pregnant and 89 new improved calves born.
- The highest number of AI was done in village Karichhapar- 68(10.43%) followed by Tilgi- 67(10.28%) and Bunga- 47(7.67%).

SL.	Name of Villages	Farmers Benefitted	Sorted Semen	Conventional Semen	Total
1	Bade Bhandar	18	12	12	24
2	Chhote Bhandar	24	17	11	28
3	Amlibhouna	4	0	5	5
4	Jevridih	2	2	0	2
5	Sarwani	7	8	0	8
6	Barpali	6	2	4	6
7	Kathli	20	17	10	27
8	Tupakdhar	0	0	0	0
9	Bunga	34	25	25	50
10	Ranbhatha	14	13	8	21

SL.	Name of Villages	Farmers Benefitted	Sorted Semen	Conventional Semen	Total
11	Taparda	16	14	3	17
12	Supa	29	21	16	37
13	Kotmara	10	6	15	21
14	Kalma	16	12	5	17
15	Chandli	6	4	4	8
16	Amlipali	27	22	10	32
17	Sankarpali	13	5	12	17
18	Pusaldsa	32	17	24	41
19	Tilgi	51	58	9	67
20	Thengagudi	4	6	2	8
21	Badimal	1	1	3	4
22	Jatari	27	39	6	45
23	Karichapar	25	66	2	68
24	Chikhali	18	25	3	28
25	Ruchida	39	60	0	60
26	Raibar	5	7	0	7
27	Birhabhata	0	4	0	4
	<b>Total</b>	<b>448</b>	<b>463</b>	<b>189</b>	<b>652</b>

### *Livestock Management Training:*

To provide knowledge on improved livestock management- feeding, calf upkeep, clean milk production and healthcare, a total of 15 training successfully organized in 14 villages. Total 533 farmers participated in the training.





in village Amblihanu, under CDC Chitabhadar REGL, Raigarh

Powered by Aarti

### Free Livestock Vet. Health camps:

Veterinary health camps were organized in six villages namely Barpali, Tilgi, Amlibhouna, Amlipali, Kalma and Sarwani village in which total 773 cattle were treated free of cost including deworming, sterilization and vaccination were done. Total 165 farmers were directly benefited from the camp. 15 nos. cattle treated for infertility cases in these camps.

### Fodder demonstration:

To sensitize importance of fodder to increase productivity fodder named Hybrid Napier, Berseem and Cactus distributed to 27 farmers of six villages. Cropping done in total 1.44 acres. Berseem is known as the king of fodder because of the high content of protein (18-20%) similarly Napier contains crude protein 8-10%, crude fiber 26-28%, vitamin and minerals helps cattle to produce more milk and remain healthy throughout their milking cycle.



Latitude: 21.756635  
Longitude: 83.317897  
Elevation: 128.7±111 m  
Accuracy: 5.9 m  
Timestamp: 03-07-2024 13:05  
Location: gram karichhapri me Bhagel Ram Patel ghar me ka ghas lgaye h

Powered by Aarti

### Wall Painting work:



Wall painting done at identified public places in 15 villages for to create awareness among the farmers on the services provided by the LDC and points to remember for cattle rearing.



*Adani's Mahila Movement for Advancement (AMMA):*

*Vegetable Cultivation:*

Adani Foundation is continuously empowering women to improve their livelihood. Total 33 women members from 19 SHGs involved in vegetable cultivation through drip irrigation in total 3.50 acre of land of Supa, Barpali and Jevridih village.



Total 13 SHG; Supa (8 SHG- 17 members) and Barpali (5 SHG-8 members) received 2.80 acres of land from village Gauthan Samiti free of cost for 3 years and Similarly in Jveridih (6 SHG-8 members) received land from Mr. Lalit Pradhan- Bade Bhandar village an annual ledge basis. They started vegetable cultivation Tomato (variety- Saho) from Sep. 2023 with support and guidance



from Adani Foundation. Adani Foundation supported for supply and installation of mulching, manure, fertilizers, pesticides, and improved seeds/seedlings. They sold tomatoes of Rs 9.47 lakhs till March 2024; the crop is still in the field hence the amount will be more by end of the crop.

One day workshop was attended by the 08 SHG members in Hotel Shrestha at Raigarh district during June 2023. The workshop is based on modern drip irrigation techniques and challenges on tomato cultivation.

Govt. Contribution: 55% Govt. subsidy received for supply and installation of mulching fertilizer and land preparation work under Rastriya Bagwani Mission.

Community Contribution:40% towards their labour, manure, staking materials, pump maintenance, electricity etc.

### Women in Micro Enterprises- Mushroom Farming



Among the different off farm income generation enterprises, the mushroom farming plays a crucial role in case of enhancing income of the women. During the period organized two-days training workshop on paddy straw and oyster mushroom farming for 65 SHG members of 12 SHGs from 09 villages. Also provided information on cost benefit and marketing strategy for mushroom farming. After Training 06 SHGs started paddy straw mushroom farming and sold mushroom of Rs.0.96 Lakh by producing 320.15 kg of paddy straw mushroom and similarly, 12 SHGs sold mushroom of Rs.1.38 Lakh by producing 1187.70 Kg oyster mushrooms. These groups sold mushroom of total Rs 2.34 lakhs from



mushroom farming.

Community Contribution: 30% contributed from the project participants.

### Exposure Visit:



One day exposure visit at Jamtikra village of Bargad district of Odisha State during the October 23 for understand the advanced and natural methodology of mushroom farming. 06 SHG women participated in this exposure visit and implement this natural technology for paddy straw mushroom farming.



### *Apparel Making Unit (Darji Project):*

An effort made to form a group of 10 to 15 girls who have received tailor training start group business by taking order from individual and market. Adani foundation helped in providing basic infrastructure support like commercial electric sewing machine, raw materials, marketing, and product selling. Group has formed namely Mahila Udyam



Vikas Smiti and tri-party agreement has been done between Gram Gauthan Samiti, Mahila Udyam Vikas Samiti and AF. Materialistic and technical support provided by AF and Under RIPA Project, Village Gauthan Samiti -SUPA has provided a working shed to this group for 25 years for business expansion.

At present team was expert on making in School dresses, Salwar Suit, Designer Blouse, Petticoat, Gown, Mask, School Bag, Mobile Carry Bag, Travel Bag, Shirt Paint etc. and stitched total of Rs. 1.84 lakhs till March 2024.

### *Rural Artisan Pottery (Terracotta Art):*



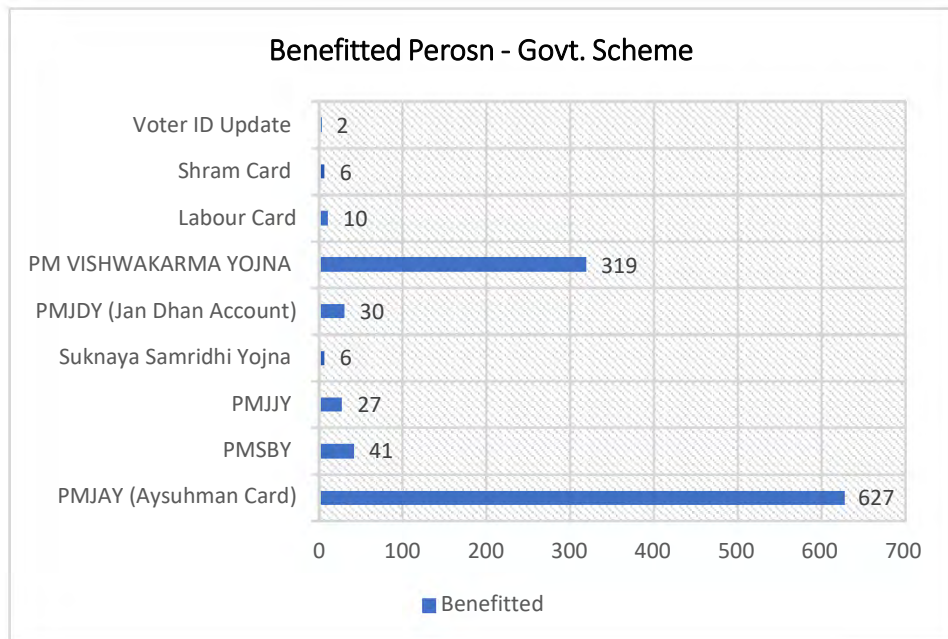
A two-month training program was organized for local artisans/potters on modern terracotta art in Chandli and Tupakdhar villages. A total of 28 potters were trained to make decorative items like Lord Ganesh idol, Bastar idol, flowerpot, waterpot, hanging flowerpot, wall hanging designs and home use items like cooker, glass, plate, designer claves,

pots. 15 potters were visited the terracotta training cum production centers of Barpali district of Odisha state during December 23. Focus of the visit is to know about the modern artefacts there, to get information about the equipment used in manufacturing and the marketing process.



### Samajik Suraksha Labh Abhiyan:

Launched Samjaik Suraksha Labh Abhiyan to reach out the people who are eligible under various scheme but have not availed benefit. Main objective of this campaign is to identify needy people and leverage with govt. schemes.



Organized 22 camps in 18 peripheral villages and total 1068 people have been benefited under this campaign, out of which a total of PMJAY- 627 nos., PMSBY- 41 nos., PMJJY-27 nos., Sukanya Samriddhi Yojana-06 nos, PMJDY-30 nos., Labor Card -10, Sharm Card - 06, PM Vishwakarma -319 and Voter ID (02) have availed the benefit of these govt. schemes.



*International Women's Day organized at Supa:*

On the eve of International Women's Day, an event organized at village Supa on 7th March. The theme for International Women's Day 2024 was "Invest in Women: Accelerate Progress" with a focus on addressing economic disempowerment across all sectors of society.



Through this campaign, there is a strong emphasis on recognizing the importance of diversity and empowerment in various spheres of society and advancing gender equality. Program organized in coordination with Bihan (SRLM) Pussore. Various activities like paper dance, musical chair and fun based games were organized to encourage women. SHG members performed Chhattisgarhi Folk dance and environment-based drama. Women were honored by giving memento for their contribution in society. Stall was also set up for the exhibition and sale of products manufactured by self-help groups. In which SHG members displayed and sold their manufactured products like - organic rice, homemade snacks items, mushroom, and different types of terracotta items. More than 150 Women actively participated in the event.

*Participated in Hamara Sankalp Viksit Bharat Camp:*

Participated in HAMARA SANKALP VIKSIT BHARAT state level camp at Taparada village on 26th December 2023. The camp was organized for the implementation of public welfare schemes of the Government of India. items. During the event, district





administration honored our 9 Kabaddi trainees who performed at the state level. More than 500 people actively participated in the event.

#### 1.4 Community Infrastructure: - *Vriksha Se Vikas*

895 Mango tree saplings distributed to 234 farmers for backyard plantation and 4161 forestry tree saplings (Bargad, Peepal, Neem, Arjun, Karanj etc.) planted at community places to increase green coverage. Observed World Environment Day on 5th June in 03 Govt. Middle School namely Bade



Bhandar, Supa and Kathli. SHG members, parents, & panchayat representative were actively participated in plantation drive, Selfie with Saplings, took an oath to protect the environment by students, parents and panchayat representative and awareness rally organized from Bade Bhandar School to Plant Main Gate and more than 160 students participated from 03 schools.

Similarly, at ITI Saria, tree planted inside campus and various activities organized on this day. Total 5056 tree saplings planted under "Vriksha Se Vikas".

#### *Pond Deeping:*



Excavated three ponds of Bunga, Ruchida and Putkapuri villages to increase rainwater retention capacity by total 16262 CUM. This will help in water conservation / ground water recharge and stop the overflow of the water. Villagers of these three are using the

water from this pond for various daily routine works.



*Construction of community Center:*

*Sarwani village:*

Adani foundation took up work to complete balance work of community center at village Sarwani. The construction work is completed in July 2023. The area of the center is 15.500m X 6.50m. Around 460 people of Sarwani can take benefit of the center. The center can



be utilized for organizing social functions, meetings, and training programs etc.

*Bade Bhandar village:*



In Bade Bhandar, the villagers organize their social, cultural programs and gatherings throughout the year. As per request of gram panchayat community shed constructed near Shani Mandir for community use to perform various social and religious programs and activities the area of the center is 12.0m X

21.0m. Total 1198 people of Bade Bhandar benefitted of the shed.

### *Construction of CC road:*

Gram Panchayat Birhabhata and villagers had requested to construct CC road from Sarwani to Birhabhata approach road. Road condition was damaged in all rainy session villagers and students were face many problems to travel on this Road. Adani foundation constructed this approach CC road (900 meter) from Sarwani to Birhabhata village. At present, road transportation has become easier for villagers and school going students. People of both the villages will be benefited and will use this road for transportation.



### *Playground Construction:*

Constructed playground at Amlibhouna village to promote local youth for games. The playground construction area is 120.0 m x 90.0 m. More than 150 local youth can take benefits from this ground and use for daily practice, organizing local tournaments like cricket, football, and volleyball etc. It's helpful to create sports environment and participation level in local youth for sports.

and volleyball etc. It's helpful to create sports environment and participation level in local youth for sports.

### *Girls Kabaddi Training Program:*



The main objective of training program is training local girls' youth for participate in state and national level Kabaddi tournament and developing as a most valuable player. After pre-selection test total 50 girls out of 90 were selected from 09 different schools and 15 nearby villages.

Total 60 Kabaddi training session were organized. Training provided by state level kabaddi coaches. Total 11 girls trainee from Kabaddi training program has





participated in the state level Kabaddi tournament held at Bhaod and Raipur. One Girl selected for "Khleo India Rural Indigenous National Games at Odisha. Won the district level Kabaddi Tournament in Chakradhar Samarth-Raigarh. Girls Kabaddi team also participated in various block, district and open Kabaddi Tournament and perform well.

### Celebration of National Sports Day:

National Sports Day is celebrated every year on 29 August 2022. To make this day memorable and to encourage youth specially girls towards sports, a girl marathon was organized in village Bade Bhandar. More than 100 schoolgirls from 05 villages enthusiastically participated in this event. The program was inaugurated by the Mrs. Moharmati Sidar (Sarpanch-Bade Bhandar) in the presence of panchayat representatives, school staff, students, sports teachers, and dignitaries from peripheral villages.



### 1.5 Special Programs: – Adani Saksham:

Girls and women living in the peripheries of plant are deprived of opportunities to be engaged in gainful employment and financial independence. They lack employable skills due to lack of skill building institutions in nearby area and support systems for skill



development. Lack of awareness equipped with low levels of knowledge is also identified as one of the root causes of the existing situation. Tailoring is age old



professions and liked most by the girls and women. With this, self-employed tailor (SET) course started through Adani Saksham. 100 girls trained in cutting and stitching of the cloths from 21 peripheral villages. Many of them are self-employed and working from their home. This is a three months course, during the course many extra-curricular activities were organized to keep them motivated and overall personality development.

Sr. No.	Gram Panchayat	Village Name	Total
1	Bade Bhandar	Bade Bhandar	5
2	Chhote Bhandar	Jevridih	4
3	Bunga	Bunga	21
4	Barpali	Barpali	4
5	Supa	Supa	2
6	Charpali	Charpali	3
7	Chikhli	Chikhli	3
8	Tilgi	Tilgi	15
9	Tetla	Tetla	1
10	Puslada	Pusalda	13
11	Badimal	Badimal	1
12	Karichapar	Karichapar	1
13	Taparda	Taparda	1
14	Chhote Bhandar	Amlibhouna	2
15	Chandli	Chandli	12
16	Barhaguda	Barhaguda	5
17	Kalma	Kalma	2
18	Hirri	Hirri	1
19	Belpali	Belpali	1
20	Siha	Siha	2
21	Nawapara	Sitadi	1
		<b>Total</b>	<b>100</b>

## 1.6 Case stories: -

### The Rise of Bhumika Sidar: A Story of Perseverance and Success in Kabaddi



Kumari Bhumika Sidar, a young tribal girl from the small village of Bunga in Raigarh district Chhattisgarh, received kabaddi training through the Adani Foundation's "Utthan Khelkumbh Kabaddi Training Programme." Her talent, relentless dedication and support of Adani Foundation paid off as she was selected to represent Chhattisgarh in the Khelo India Rural Indigenous National Games 2023 held from 9 to 12 June. The tournament, organized by the Government of India and the Ministry of Culture, showcased indigenous athletes' skills. Kumari Bhumika played a vital role in her team's success,

helping them secure third place. Her inspiring journey from a small village to national recognition demonstrates the transformative power of sports and serves as a source of inspiration for aspiring athletes.

About the National Game:

Khelo India Rural and Indigenous National Games 2023 is being organized by Government of India, Ministry of Culture, New Delhi in collaboration with Kalinga Institute of Social Science Bhubaneswar from 9 to 12 June 2023 in Bhubaneswar.

### Empowering Women through Group Farming - The Success Story of Shiv Shakti Sahayata Samuh:



In the small village of Supa, the lives of Madhuri Sidar, Chandrika Ratre, Arathbai Sidar, and several other members of the Shiv Shakti Sahayata Samuh were transformed when the Adani Foundation team introduced them to the concept of group farming during a Self-Help Group (SHG) meeting. This success story showcases how their journey from struggling to make ends meet to becoming successful vegetable farmers has brought about a positive change in their lives and the lives of their families.

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Before the intervention of the AF team, Madhuri, Chandrika, Arathbai, and the other women of the group faced numerous challenges in their agricultural pursuits. Limited knowledge, lack of resources, and financial constraints restricted their farming potential, hindering their ability to generate sufficient income. Their aspirations were curtailed, and their families' faced hardships, especially regarding education and financial support.

Introduction to Group Farming and Transformation: The AF team recognized the potential of the Shiv Shakti Sahayata Samuh and introduced them to the concept of group farming. Equipped with basic training and financial support, the women embarked on their journey to cultivate tomatoes on 1.40 acres of land. With dedication and perseverance, they nurtured their crops and were rewarded with a bountiful harvest.

The efforts of Madhuri, Chandrika, Arathbai, and their fellow members of the group bore fruit, both literally and figuratively. They successfully sold tomatoes worth an impressive Rs 4.79 lakh, earning an average income of Rs 4000.00 to Rs 5000.00 each. This newfound financial stability has enabled them to support their children's education and extend vital financial assistance to their families, thereby breaking the cycle of poverty and creating a brighter future.

Buoyed by their success and the financial independence they achieved through tomato cultivation; the women of Shiv Shakti Sahayata Samuh are now eager to further expand their agricultural ventures. Encouraged by the profitability of their tomato farming, they aspire to cultivate various other vegetables, broadening their product range and potential customer base. Their determination and ambition reflect their commitment to sustaining their newfound success and improving their overall livelihood.

The success story of Madhuri Sidar, Chandrika Ratre, Arathbai Sidar, and the members of Shiv Shakti Sahayata Samuh exemplifies the transformative power of group farming and women empowerment. Through the guidance of the AF team and their collective efforts, these women have not only become successful vegetable farmers but also catalysts for change in their community. Their hard work, resilience, and desire for progress have not only improved their lives but also instilled hope and inspiration in others, setting a shining example for future generations. With their eyes set on a prosperous future, they continue to embrace opportunities for growth and pave the way for a brighter tomorrow.



## 1.7 Media coverage

### राष्ट्रीय युवा दिवस: अदाणी फाउंडेशन ने उत्थान प्रोजेक्ट के तहत आयोजित किये विशेष कार्यक्रम



**रायगढ़।** सुदूर पूर्वी क्षेत्र के अदाणी फाउंडेशन द्वारा प्राप्त के संस्कारों के अंतर्गत उत्थान प्रोजेक्ट के तहत आयोजित किये विशेष कार्यक्रम। कार्यक्रम का आयोजन अदाणी फाउंडेशन (एफडीए) द्वारा आयोजित किया गया। कार्यक्रम का आयोजन उत्थान प्रोजेक्ट के तहत किया गया।

रायगढ़ के प्रतिभाशाली बच्चों को उत्थान प्रोजेक्ट के तहत आयोजित किया गया। कार्यक्रम का आयोजन उत्थान प्रोजेक्ट के तहत किया गया।

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### अदाणी फाउंडेशन ने स्कूलों में मनाया बाल दिवस



**रायगढ़।** अदाणी फाउंडेशन ने 'अदाणी' परियोजना के तहत उत्थान प्रोजेक्ट के अंतर्गत स्कूलों और हीरो आंगणवाड़ी केंद्रों में बच्चों को खुशी बढ़ाते हुए बाल दिवस मनाया। अदाणी फाउंडेशन, रायगढ़ के सामाजिक कार्यकर्ता के अंतर्गत उत्थान प्रोजेक्ट के अंतर्गत स्कूलों और हीरो आंगणवाड़ी केंद्रों में बच्चों को खुशी बढ़ाते हुए बाल दिवस मनाया।

अदाणी फाउंडेशन, रायगढ़ के सामाजिक कार्यकर्ता के अंतर्गत उत्थान प्रोजेक्ट के अंतर्गत स्कूलों और हीरो आंगणवाड़ी केंद्रों में बच्चों को खुशी बढ़ाते हुए बाल दिवस मनाया।

### अदाणी फाउंडेशन ने 50 बालिकाओं को कबड्डी किट्स का किया वितरण



बालिकाओं में कबड्डी खेल के पोसाहन हेतु कबड्डी प्रतियोगिता कार्यक्रम चलाना

अदाणी फाउंडेशन ने 50 बालिकाओं को कबड्डी किट्स का किया वितरण। कार्यक्रम का आयोजन उत्थान प्रोजेक्ट के तहत किया गया।

### कबड्डी प्रतियोगिता के महिला वर्ग में अदाणी फाउंडेशन ने दिखाया अपना जौहर



अदाणी फाउंडेशन ने अतिरिक्त प्रतियोगिता के महिला वर्ग में अपना जौहर दिखाया। कार्यक्रम का आयोजन उत्थान प्रोजेक्ट के तहत किया गया।

अदाणी फाउंडेशन ने अतिरिक्त प्रतियोगिता के महिला वर्ग में अपना जौहर दिखाया। कार्यक्रम का आयोजन उत्थान प्रोजेक्ट के तहत किया गया।

### राष्ट्रीय खेल दिवस: अदाणी फाउंडेशन ने क्षेत्र की बालिकाओं में खेलों के प्रोत्साहन के लिए किया दौड़ का आयोजन

**प्राथमिक तथा मीडिल स्कूलों की छात्राओं सहित 100 से अधिक लोग हुए शामिल**



राष्ट्रीय खेल दिवस के अवसर पर अदाणी फाउंडेशन द्वारा क्षेत्र की बालिकाओं में खेलों को प्रोत्साहित करने हेतु दौड़ का आयोजन किया। कार्यक्रम का आयोजन उत्थान प्रोजेक्ट के तहत किया गया।

राष्ट्रीय खेल दिवस के अवसर पर अदाणी फाउंडेशन द्वारा क्षेत्र की बालिकाओं में खेलों को प्रोत्साहित करने हेतु दौड़ का आयोजन किया। कार्यक्रम का आयोजन उत्थान प्रोजेक्ट के तहत किया गया।

### मनोरंजात्मक और समग्र शैक्षणिक विकास हेतु अदाणी फाउंडेशन निःशुल्क समर कैंप से 150 विद्यार्थी लाभांविता

**रायगढ़, 14 पर्ये।** अदाणी फाउंडेशन द्वारा गर्मी को सहायकों द्वारा बच्चों को कहानी लेखन, समूह पाठन, क्रायि वर्क, कापी प्रकृतिक कार्य, इत्यादि पाठ्यक्रम संबंधी विषयों के साथ ही उच्च विभिन्न प्रकार के पाठ्यपत्र गतिविधियों जैसे चित्रकला, पेपर बॉग, आर्टिस्टिक के किया जा रहा है।

प्रोजेक्ट उद्यम के तहत दो चरणों में आयोजित इस निःशुल्क प्रोथम कालीन कैंप में प्रथम चरण का शुभारंभ प्राथमिक शाला, सरवानी में किया गया। जिसमें 1 से 13 पर्ये तक अदाणी पावर लिमिटेड (एपीएल) रायगढ़ के पास के ग्राम अमलीभीना, सरवानी, बड़े भंडार, जेकरीडीह और सुपा सहित पाँच शासकीय प्राथमिक शालाओं के 150 से अधिक विद्यार्थियों ने भाग लिया।

इस शिविर का मुख्य उद्देश्य शिक्षा के क्षेत्र में गुणात्मक सुधार और मनोरंजात्मक तरीके से विद्यार्थियों के समग्र शैक्षणिक विकास को गति प्रदान है। इसके द्वितीय चरण का आयोजन 01 से 07 जून 2023 तक ग्राम बड़े भंडार, सुपा और कटनी के पूर्वी माध्यमिक शालाओं में किया जाना प्रस्तावित है।

तेरह दिनों तक चलाये जा रहे इस समर कैंप में उद्यम सहायकों द्वारा बच्चों को कहानी लेखन, समूह पाठन, क्रायि वर्क, कापी प्रकृतिक कार्य, इत्यादि पाठ्यक्रम संबंधी विषयों के साथ ही उच्च विभिन्न प्रकार के पाठ्यपत्र गतिविधियों जैसे चित्रकला, पेपर बॉग, आर्टिस्टिक के किया जा रहा है।



समर कैंप में बच्चों का भाग लेना

इस दौरान कैंप में सभी छात्र एवं छात्राएं अत्यधिक उत्साहित होकर हर क्रिया कलाप में भाग ले रहे हैं, वहीं उनके परिवार भी इस आयोजन से खुश नजर आ रहे हैं। कैंप के प्रथम चरण के शुभारंभ समारोह में मुख्य अतिथि के तौर पर ग्राम पंचायत बरपाटी एवं छोटे भंडार की सरपंच करुणा श्रीमती शशि सिंह और श्रीमती सररुपा चौहान शामिल हुई।



## जल संचय के लिए अदाणी फाउंडेशन ने किया तालाबों का गहरीकरण

राजपुर। तालाब प्रयोजनों के दीर्घकालीन विकास के अंतर्गत आते हैं, जिसका उपयोग किसानों द्वारा विभिन्न प्रयोजनों के लिए किया जाता है। जहाँ जलिन के पुसौर विकासखण्ड में पू-अल के तालाबों का गहरीकरण अनेक प्रयोजनों में उपयोग में पू-अल स्तर दिन प्रतिदिन होता जा रहा है। साथ ही विद्युत के तालाबों के कारण मौजूदा तालाबों में जल संकटाव भी कम होता जा रहा है, जिससे क्षेत्र में जल की समस्या बढ़ती जा रही है। अदाणी फाउंडेशन ने इस समस्या को दूर करने के लिए एक संचयन योजना के तहत पू-अल स्तर के लिए तालाबों का गहरीकरण कार्य प्रारंभ कर दिया है।



अदाणी फाउंडेशन, राजपुर के संचयन कार्यक्रमों के तहत पू-अल स्तर के तालाबों का गहरीकरण किया गया है। इस कार्य में पू-अल स्तर के तालाबों की गहरीकरण का कार्य प्रारंभ किया जा रहा है। अदाणी फाउंडेशन ने इस कार्य में पू-अल स्तर के तालाबों का गहरीकरण कार्य प्रारंभ कर दिया है।

अदाणी फाउंडेशन द्वारा तालाब प्रस्तावना एवं अनुमतिपत्रों के अंतर्गत पू-अल स्तर पर गहरीकरण का कार्य प्रारंभ किया जा रहा है। अदाणी फाउंडेशन ने इस कार्य में पू-अल स्तर के तालाबों का गहरीकरण कार्य प्रारंभ कर दिया है।

## विश्व स्तनपान सप्ताह : अदाणी फाउंडेशन पुसौर ब्लॉक के ग्रामों में आयोजित कर रहा जागरूकता कार्यक्रम



राजपुर। विश्व स्तनपान सप्ताह के अंतर्गत अदाणी फाउंडेशन द्वारा ब्लॉक के पुसौर क्षेत्र में जागरूकता कार्यक्रम आयोजित किया जा रहा है। इस कार्यक्रम में अदाणी फाउंडेशन के अधिकारी, शिक्षक, स्वयंसेवक और ग्रामीणों का सहभागिता है। कार्यक्रम का उद्देश्य है कि माताओं को स्तनपान करने के फायदे और तरीके के बारे में जानकारी मिले। कार्यक्रम में अदाणी फाउंडेशन के अधिकारी, शिक्षक, स्वयंसेवक और ग्रामीणों का सहभागिता है।

## सामाजिक सहभागिता के विभिन्न जनसरोकारों को अंजाम दे रहा अदाणी फाउंडेशन

चंद्रपुर में श्रद्धालुओं के लिए नौ दिवसीय निःशुल्क चिकित्सा शिविर का आयोजन, तमनार तहसील में किशोरों के लिए तीरंदाजी प्रशिक्षण व विश्व हस्त प्रकलन दिवस



राजपुर। जिनके पुसौर और तमनार विकासखण्ड में अदाणी फाउंडेशन द्वारा सामाजिक सरोकारों के विभिन्न कार्यक्रमों का आयोजन किया जा रहा है। जहाँ समाज-समाज पर सामाजिक नजर पर भी पर्याप्त ध्यान देते हुए कार्यक्रमों का आयोजन किया जा रहा है। अदाणी फाउंडेशन ने इस कार्य में पू-अल स्तर के तालाबों का गहरीकरण कार्य प्रारंभ कर दिया है।

राजपुर। विश्व हस्त प्रकलन दिवस का आयोजन किया जा रहा है। इस कार्यक्रम में अदाणी फाउंडेशन के अधिकारी, शिक्षक, स्वयंसेवक और ग्रामीणों का सहभागिता है। कार्यक्रम का उद्देश्य है कि लोगों को हस्त प्रकलन के फायदे और तरीके के बारे में जानकारी मिले।

राजपुर। विश्व स्तनपान सप्ताह के अंतर्गत अदाणी फाउंडेशन द्वारा ब्लॉक के पुसौर क्षेत्र में जागरूकता कार्यक्रम आयोजित किया जा रहा है। इस कार्यक्रम में अदाणी फाउंडेशन के अधिकारी, शिक्षक, स्वयंसेवक और ग्रामीणों का सहभागिता है।

राजपुर। विश्व स्तनपान सप्ताह के अंतर्गत अदाणी फाउंडेशन द्वारा ब्लॉक के पुसौर क्षेत्र में जागरूकता कार्यक्रम आयोजित किया जा रहा है। इस कार्यक्रम में अदाणी फाउंडेशन के अधिकारी, शिक्षक, स्वयंसेवक और ग्रामीणों का सहभागिता है।

## अदाणी फाउंडेशन की एमएमएचसीयू से वृद्धजनों को घर बैठे मिल रहीं निःशुल्क स्वास्थ्य सेवाएं



राजपुर। जिनके पुसौर ब्लॉक में अदाणी फाउंडेशन द्वारा चालीस चारों तहसीलों में निःशुल्क चिकित्सा शिविर का आयोजन किया जा रहा है। इस कार्यक्रम में अदाणी फाउंडेशन के अधिकारी, शिक्षक, स्वयंसेवक और ग्रामीणों का सहभागिता है।



राजपुर। विश्व स्तनपान सप्ताह के अंतर्गत अदाणी फाउंडेशन द्वारा ब्लॉक के पुसौर क्षेत्र में जागरूकता कार्यक्रम आयोजित किया जा रहा है। इस कार्यक्रम में अदाणी फाउंडेशन के अधिकारी, शिक्षक, स्वयंसेवक और ग्रामीणों का सहभागिता है।

## मां चन्द्रहासिनी मंदिर में नौ दिवसीय निःशुल्क चिकित्सा शिविर का आयोजन

अदाणी फाउंडेशन कर रहा आयोजन



राजपुर। अदाणी फाउंडेशन द्वारा चालीस चारों तहसीलों में निःशुल्क चिकित्सा शिविर का आयोजन किया जा रहा है। इस कार्यक्रम में अदाणी फाउंडेशन के अधिकारी, शिक्षक, स्वयंसेवक और ग्रामीणों का सहभागिता है।



## अभियान बनते जा रहे जन आंदोलन सार्वजनिक स्थलों पर लगा रहे पौधे



नवभारत खुरी। राधाराइ।

अदाणी पीवर लिमिटेड द्वारा जिले के पुर्वी विकासखंड में विभिन्न पर्यावरण दिवस पर पर्यावरण संरक्षण के लिए किए गए लक्ष्य को कार्यान्वित करने के लिए अदाणी पीवर लिमिटेड ने नवभारत खुरी, राधाराइ में एक अभियान शुरू किया। इसमें हजारों लोगों ने सक्रिय रूप से भाग लिया।

विस्तार तथा कोविड नियंत्रण में मदद के लिए अदाणी पीवर लिमिटेड ने जन आंदोलन सार्वजनिक स्थलों पर लगा रहे पौधे। इनके माध्यम से पर्यावरण को सुरक्षित रखने और स्थानीय जनता को शिक्षित करने का उद्देश्य है। इस अभियान में अदाणी पीवर लिमिटेड के कर्मचारियों, वॉलंटर्स, और स्थानीय लोगों ने सक्रिय रूप से भाग लिया।

इस अभियान के तहत अदाणी पीवर लिमिटेड ने नवभारत खुरी, राधाराइ में एक अभियान शुरू किया। इसमें हजारों लोगों ने सक्रिय रूप से भाग लिया।

**अदाणी पीवर लिमिटेड**  
अदाणी पीवर लिमिटेड  
अदाणी पीवर लिमिटेड

## नौवां अंतर्राष्ट्रीय योग दिवस: अदाणी समूह ने छ.ग. में आयोजित किये सामूहिक योग के कार्यक्रम

अदाणी फाउंडेशन ने राज्य में स्थित अपने सभी कार्यालयों सहित ग्रामों में भी लगाए योग सत्र



नवीन शर्मा / मुंबई  
अदाणी ने नवौं अंतर्राष्ट्रीय योग दिवस के अवसर पर अदाणी समूह द्वारा आयोजित योग सत्रों में भाग लिया।

अदाणी ने नवौं अंतर्राष्ट्रीय योग दिवस के अवसर पर अदाणी समूह द्वारा आयोजित योग सत्रों में भाग लिया।

अदाणी ने नवौं अंतर्राष्ट्रीय योग दिवस के अवसर पर अदाणी समूह द्वारा आयोजित योग सत्रों में भाग लिया।

अदाणी ने नवौं अंतर्राष्ट्रीय योग दिवस के अवसर पर अदाणी समूह द्वारा आयोजित योग सत्रों में भाग लिया।

अदाणी ने नवौं अंतर्राष्ट्रीय योग दिवस के अवसर पर अदाणी समूह द्वारा आयोजित योग सत्रों में भाग लिया।

## कोतमारा में मोबाइल हेल्थकेयर यूनिट शुरू दो गांवों में यूनिट की शुरुआत 10 को



हरिद्वीप ब्यूरो / राधाराइ  
अदाणी फाउंडेशन ने जिले के पुर्वी विकासखंड के ग्राम पंचायत कोतमारा में मोबाइल हेल्थकेयर यूनिट का वितरण किया है।

युनिटों का लाभ मिल रहा है। इनके अंतर्गत ही पंचायत एवं शकरी गांवों में क्रमशः दिनांक 10 एवं 11 जुलाई को मोबाइल हेल्थकेयर यूनिटों का वितरण किया जा रहा है।

इस क्रम में ग्रामीणों की जरूरतों और उनके अंतर्गत ही पंचायत एवं शकरी गांवों में क्रमशः दिनांक 10 एवं 11 जुलाई को मोबाइल हेल्थकेयर यूनिटों का वितरण किया जा रहा है।

## अदाणी फाउंडेशन द्वारा प्रोजेक्ट उत्थान के तहत 600 बच्चों को कॉपियों का वितरण

इसके अलावा बच्चों के पाठ्यपुस्तक गतिविधियों के लिए खेलकूद, लेखन, पठन, पाठन, संगीत वाद्ययंत्र इत्यादि सामग्रियों उपलब्ध कराई

सबसे शिखर सारदादा  
राधाराइ। एनईएच प्रकल्प के तहत अदाणी फाउंडेशन द्वारा प्रोजेक्ट उत्थान के तहत 600 बच्चों को कॉपियों का वितरण किया गया।



अदाणी फाउंडेशन द्वारा प्रोजेक्ट उत्थान के तहत 600 बच्चों को कॉपियों का वितरण किया गया।

अदाणी फाउंडेशन द्वारा प्रोजेक्ट उत्थान के तहत 600 बच्चों को कॉपियों का वितरण किया गया।

अदाणी फाउंडेशन द्वारा प्रोजेक्ट उत्थान के तहत 600 बच्चों को कॉपियों का वितरण किया गया।

अदाणी फाउंडेशन द्वारा प्रोजेक्ट उत्थान के तहत 600 बच्चों को कॉपियों का वितरण किया गया।

## अदाणी समूह के कर्मचारियों ने प्लास्टिक प्रदूषण को हराने का लिया संकल्प

राधाराइ। जिले के पुर्वी एवं आदिवासी बाहुल्य क्षेत्र तमनर विकासखंड में अदाणी समूह की कर्मचारियों, वॉलंटर्स, और स्थानीय लोगों ने एक अभियान शुरू किया। इसमें हजारों लोगों ने सक्रिय रूप से भाग लिया।



अभियान के तहत अदाणी समूह की कर्मचारियों, वॉलंटर्स, और स्थानीय लोगों ने एक अभियान शुरू किया।

इसके बाद एपीएल के पास के ग्राम बड़े धंखर, मुया, कळरी, सरिया तथा एडुल-एनआर के ग्राम मिल्पारा, दोलनार, रोटीगोली, दोसारा, कुंजुपुरा गांव के स्कूलों तथा आर्टीआई केंद्र में जागरूकता पोस्टर वितरित किए गए।

अभियान के तहत अदाणी समूह की कर्मचारियों, वॉलंटर्स, और स्थानीय लोगों ने एक अभियान शुरू किया।

अभियान के तहत अदाणी समूह की कर्मचारियों, वॉलंटर्स, और स्थानीय लोगों ने एक अभियान शुरू किया।

## क्षेत्र में इस वर्ष 2 लाख से अधिक पौधरोपण करने का लिया गया लक्ष्य

राधाराइ। जिले के पुर्वी एवं आदिवासी बाहुल्य क्षेत्र तमनर विकासखंड में अदाणी समूह की कर्मचारियों, वॉलंटर्स, और स्थानीय लोगों ने एक अभियान शुरू किया।

अभियान के तहत अदाणी समूह की कर्मचारियों, वॉलंटर्स, और स्थानीय लोगों ने एक अभियान शुरू किया।

अभियान के तहत अदाणी समूह की कर्मचारियों, वॉलंटर्स, और स्थानीय लोगों ने एक अभियान शुरू किया।



## 1.8 Appreciation letter from stakeholder(s) :-

कार्यालय ग्राम पंचायत छोटेभण्डार, जनपद पंचायत पुसौर, जिला रायगढ़ (छ.ग.)

श्रीमती शतरूपा चौहान

अदाणी फाउंडेशन  
ग्राम पंचायत - छोटेभण्डार



विद्या  
राज-नेपाली/भारत-व्यवस्था  
कार्य सं. सं. - पुणे  
मिड- रायगढ़ (छ.ग.)  
फोन - 9466488716

क्रमांक :-

दिनांक :-

धन्यवाद पत्र:-

प्रति,

अदाणी फाउंडेशन  
अदाणी फावर लिमिटेड  
ग्राम - छोटे भंडार, पो. - बड़े भंडार, तहसील- पुसौर  
जिला - रायगढ़ (छ. ग.)

विषय - ग्राम अमलीभौना में खेल मैदान (फुटबॉल) का निर्माण कार्य पूर्ण होने के संदर्भ में।

महोदय,

उपरोक्त विषयान्वित लेख है कि हमारे ग्राम पंचायत के ग्राम अमलीभौना में सीएसआर मद से अधिसंरचना विकास कार्यक्रम के अंतर्गत ग्राम में खेलकूद को प्रोत्साहन देने हेतु खेल मैदान का निर्माण किया गया है। कार्य की गुणवत्ता संतोषप्रद है। इस खेल मैदान के बनने से ग्राम के युवा खिलाड़ियों एवं बच्चों को नियमित खेल अभ्यास हेतु सुविधा होगी और उनके खेल प्रतिभा में भी विकास संभव हो सकेगा। इसके साथ ही ग्राम स्तरीय खेल प्रतियोगिताओं के आयोजन में भी सहायक होगा। इस कार्य हेतु ग्राम अमलीभौना के समस्त युवा खिलाड़ी एवं ग्रामवासी अदाणी फाउंडेशन को धन्यवाद ज्ञापित करते हैं।

S. Chauhan  
[Signature]

# सरपंच ग्राम पंचायत पुटकापुरी

तह. पुसौर, जिला रायगढ़ (छ.ग.)

सं.क्र. ....

दिनांक- .....

धन्यवाद पत्र

प्रति,

अदाणी फाउंडेशन,  
अदाणी फावर लिमिटेड,  
ग्राम-छोटे भंडार, पोस्ट-बड़े भंडार, तहसील- पुसौर,  
जिला-रायगढ़ (छ.ग.)

विषय :- ग्राम पुटकापुरी में तालाब गहरीकरण का कार्य पूर्ण होने के संदर्भ में।

महोदय,

उपरोक्त विषयान्वित लेख है कि हमारे ग्राम पंचायत पुटकापुरी में सी.एस.आर. मद से अधिसंरचना विकास कार्यक्रम के अंतर्गत ग्राम में तालाब गहरीकरण का कार्य किया गया है। कार्य की गुणवत्ता संतोषप्रद है। तालाब गहरीकरण कार्य के पूर्ण होने से समस्त ग्रामवासियों को दैनिक निष्पारी और सिंचाई हेतु लाभ प्राप्त होगा। इस कार्य हेतु ग्राम पंचायत पुटकापुरी एवं समस्त ग्रामवासी धन्यवाद ज्ञापित करते हैं।

[Signature]  
श्रीमती नीरजा मंडल  
[Signature]

Date  
18/10/2023

कार्यालय ग्राम पंचायत - बड़े भण्डार

संपर्क  
बोम्बेई पोस्टाफी ऑफिस  
ब्लॉक नं. - 7879910990

विकासखण्ड - पुनौर, जिला - रायगढ़ (छ.ग.)



जिला  
ग्राम/पो. - बड़े भण्डार  
पिन नं. - 256100

-: धन्यवाद पत्र :-

कमांक

-: धन्यवाद पत्र :-

दिनांक

प्रति,

अदाणी फाउंडेशन  
अदाणी वॉटर लिमिटेड  
ग्राम - छोटे भंडार, पो. - बड़े भंडार, तमसील- पुनौर  
जिला - रायगढ़ (छ. ग. )

विषय - ग्राम पंचायत बड़े भंडार के शासकीय प्राथमिक शाला में बाजडूवाल का निर्माण कार्य पूर्ण होने के संदर्भ में।

महोदय,

उपरोक्त विषयान्वगत लेख है कि हमारे ग्राम पंचायत बड़े भंडार के अनुरोध पर सीएसआर मद से अपोलिचना विकास कार्यक्रम के अंतर्गत ग्राम के शासकीय प्राथमिक शाला में बाजडूवाल का निर्माण किया गया है। निर्माण कार्य की गुणवत्ता संतोषप्रद है। बाजडूवाल के बनने से शाला परिसर स्वच्छ एवं सुंदर होने के साथ ही छात्रों हेतु सुक्षित हो गया है। इस कार्य हेतु ग्राम पंचायत बड़े भंडार एवं समस्त ग्रामवासी धन्यवाद ज्ञापित करते हैं।

  
धन शर्मा  
ग्राम पंचायत बड़े भंडार  
पुनौर, जिला-रायगढ़ (छ.ग.)

प्रो. रमती  
समवेत  
ग्राम पंचायत बड़े भंडार

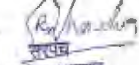
प्रति

अदाणी फाउंडेशन  
अदाणी वॉटर लिमिटेड  
ग्राम - छोटे भंडार, पो. - बड़े भंडार, तमसील- पुनौर  
जिला - रायगढ़ (छ. ग. )

विषय - ग्राम बिरहाभौटा में सीमेंट फाउंडेशन ( 900 मीटर/का) निर्माण कार्य पूर्ण होने के संदर्भ में।

महोदय,

उपरोक्त विषयान्वगत लेख है कि हमारे ग्राम बिरहाभौटा में सीएसआर मद से अधोसंरचना विकास कार्यक्रम के अंतर्गत ग्राम बिरहाभौटा से ग्राम सरवानी पहुँच मार्ग में सीमेंट फाउंडेशन रोड (900 मीटर) का निर्माण किया गया है। कार्य की गुणवत्ता संतोषप्रद है। सीमेंट फाउंडेशन रोड (सी. सी. रोड) के बनने से समस्त ग्रामीणों को आवागमन में सुविधा प्राप्त होगी। इस कार्य हेतु ग्राम बिरहाभौटा के समस्त ग्रामवासी अदाणी फाउंडेशन को धन्यवाद ज्ञापित करते हैं।

  
सुरेश  
ग्राम पंचायत बिरहाभौटा  
जिला - रायगढ़-पुनौर  
जिला-रायगढ़ (छ.ग.)

कार्यालय प्राचार्य झा. हाई स्कूल बुनगा  
ब. ३३७... दिनांक 19.02.2024

प्रति  
श्रीमान्  
अजानी फाउण्डेशन  
ग्राम-होटे भण्डार, पोस्ट बडेभण्डार

विषय: धन्यवाद ज्ञापन वापस

महोदय, विषयान्तर्गत लेख है कि शासकीय हाई स्कूल बुनगा के मांग अनुरोध आदेश पेय व्यवस्था हेतु आर.ओ. प्युरीफायर की गयी थी। जिसे अजानी फाउण्डेशन द्वारा प्रदान किया गया है। (इस योजना अंतर्गत शाळा परिवार के सभी काठ छला लाञ्छित हो रहा है। इस कल्याणकारी कार्य के लिए शाळा प्रबंधन समिति प्रशासन के माध्यम से आपको अक्षर व्यक्त करते हैं। धन्यवाद ज्ञापित करते हैं। प्रदाय किए गए वाटर प्युरीफायर के मॉडेलिंग की आवश्यकता पड़े पर शाळा प्रबंधन स्कॉल करेगी।

धन्यवाद

  
PRINCIPAL  
Govt. High School Bunge  
Block-Pussore, Dist.-Raigarh (C.P.)

संस्था कोड - 351139

यूआईस कोड - 22041409503

कार्यालय प्राचार्य शासकीय हाई स्कूल सूपा

पि.खं.- पुरौर, जिला - रायगढ़ (छ.ग.)

पत्र क्र. 08/RO/WATER/2024

सूपा दिनांक 26/02/2024

प्रति,  
अजानी फाउण्डेशन  
ग्राम-होटे भण्डार पोस्ट बडेभण्डार  
विषय :- धन्यवाद ज्ञापन प्रदाय करने विषय में।

महोदय,  
उपरोक्त विषयान्तर्गत लेख है कि शासकीय हाई स्कूल सूपा पि.खं.-पुरौर जिला-रायगढ़ (छ.ग.) के अनुरोध पर पेय जल हेतु आर.ओ. वाटर प्युरीफायर प्रदान किया गया। जिसका रखरखाव का कार्य शाळा प्रबंधन द्वारा किया जाएगा। उपरोक्त पुनित कार्य हेतु अजानी फाउण्डेशन को धन्यवाद ज्ञापन प्रेषित करते हैं।

  
PRINCIPAL  
Govt. High School Supa  
Block-Pussore, Dist.-Raigarh (C.P.)



## 1.9 Beneficiaries count: -

S. No.	Activity Description	Direct	Indirect	Access
<b>A.</b>	<b>Education</b>			
1	Utthan Project	244	976	
2	Water purifier cum RO	250		
3	Constructed school boundary wall	45	180	
<b>B.</b>	<b>Community Health</b>			
1	Mobile Healthcare Unit	13813	5921	19734
2	Medical Camp	837	3348	
3	Water purifier cum RO/Patient waiting Chair	59	236	
4	Toilet Construction -01 Nos	59	236	
<b>C.</b>	<b>Sustainable Livelihood Development</b>			
1	Adani Mahila Movement for Advancement	134	536	
2	Kamdhenu- Dairy Development project	789	3156	
<b>D.</b>	<b>Community Infrastructure Development/Climate Action</b>			
1	Community Shed – Bade Bhandar			1198
2	Community Center – Sarwani			460
3	CC road – Sarwani to Birhabhata			1097
4	Football Playground – Amlibhouna			577
6	Pond Deepening work – Bunga			2660
7	Pond Deepening work – Ruchida			1655
8	Pond Deepening work – Putkapuri			1320
9	Vriksha Se Vikas	234		8837

## 2 Adani Foundation team

SL	Name	Position
1.	Purnendu Kumar	Head CSR – APL, Raigarh
2.	Vivek Pandey	Sr. Project Officer- AF
3.	Nilesh Kumar Mahana	Community Mobilizer -AF
4.	Somprabha Goswami	Community Mobilizer -AF
5.	Parmeshwar Gupta	Sr. Asst. -APL, Raigarh



**Site office address:**

Adani Power Limited  
Village- Chhote Bhandar  
Post office- Bade Bhandar  
Tehsil – Pussore  
District- Raigarh  
State- Chhattisgarh, India  
Pin Code- 496100



# Green Belt Development

Plantation on 36% land of 487 acre	195 acre	Species
Density of plantation	2500 plants/ Hectare	Casurina, peltaform, chitwan, akasia, Mahagoni, Mango,etc
Area required per plant	4.0 SQM	
Total no. of plantation completed	310000 Nos.	
2022-23	20026 Nos.	
2023-24	40500 Nos.	
Survival rate maintained	> 80%	

## Annexure-V

<b>Ash Generation and Utilization Details (October'2023 to March'2024)</b>						
<b>Month</b>	<b>Ash Generation (MT)</b>	<b>Ash Utilization</b>			<b>Total Ash Utilization</b>	<b>% age Utilization</b>
		<b>Cement Industries (MT)</b>	<b>Filling of low-lying area (MT)</b>	<b>Filling of Mine Void (MT)</b>		
<b>October'2023</b>	106851	0	38971	16702	55673	52.10
<b>November'2023</b>	101408	0	120463	51627	172091	169.70
<b>December'2023</b>	111301	0	79781	34192	113973	102.40
<b>January'2024</b>	127680	0	67998	29142	97141	76.05
<b>February'2024</b>	97673	0	75266	32257	107524	110.09
<b>March'2024</b>	114841	0	149800	109500	259300	225.79
<b>Total</b>	<b>659757</b>	<b>0</b>	<b>532281</b>	<b>273420</b>	<b>805702</b>	<b>122.69</b>

# adani

Power

**Ref: APL/RAIGARH/ENV/CECB/23-24/40**

**Date: 09.09.2023**

**To**

**The Member Secretary  
Chhattisgarh Environment Conservation Board  
Paryavas Bhavan, North Block, Sector- 19  
Atal Nagar, Nawa Raipur, Raipur  
Chhattisgarh – 492002.**

**Sub:** Submission of Environmental Statement Report (Form-V) for Adani Power Limited Raigarh TPP 600 MW (1×600 MW)

**Ref:** Point no. XVI of General Point. Environmental Clearance No: F. No. J 13012/57/2008-IA. II (T), dated: 20.05.2010 and its subsequent amendment vide letter dated: 16.04.2015 and extension dated 26.11.2019 & 17 & 30.07.2020 & 24.04.2023. MoEF & CC, New Delhi.

Dear Sir,

This has reference to the above subject and General Conditions of the Environment Clearance Letter above cited issued by MoEF & CC, New Delhi. We are hereby submitting Environment Statement Report (Form-V) for the period of April'2022 to March'2023.

Thanking You,

Yours' faithfully,

**Adani Power Limited, Raigarh TPP**

Digitally signed  
by Arindam Rout  
Date: 2023.09.09  
16:58:03 +05'30'

**Arindam Rout  
Head Environment**

**Encl: As cited above**

CC - Regional Officer, Chhattisgarh Environment Conservation Board, TV Tower Road, Raigarh.

**Adani Power Limited**  
"Adani Corporate House"  
Shantigram, Near Vaishno Devi Circle,  
S. G. Highway, Khodiyar,  
Ahmedabad-382421, Gujarat India  
CIN: L40100GJ1996PLC030533

Tel +91 79 2656 7555  
Fax +91 79 2555 7177  
info@adani.com  
www.adanipower.com





**Adani Power Limited, Raigarh TPP**  
**1 X 600 MW (600 MW) Coal Based Thermal Power Plant**  
At Village- Chhote Bhandar, PO- Bade Bhandar, Tehsil-Pussore,  
District. – Raigarh, Chhattisgarh

**Environmental Statement Report,**  
**2022-2023**



# **ENVIRONMENTAL STATEMENT REPORT FOR ADANI POWER LIMITED, RAIGARH TPP**

**Financial Year 2022-23**



**Submitted to:**

**Chhattisgarh Environment Conservation Board,  
Raipur, Chhattisgarh**



**Adani Power Limited, Raigarh TPP,**  
**Environment Department,**  
**Bade & Chhote Bhandar Village, Pussore Tehsil**  
**Raigarh District, Chhattisgarh**

**ENVIRONMENT STATEMENT FORM-V**

**(See rule 14)**

Environmental Statement for the financial year ending on 31<sup>st</sup> March, 2023 as per condition stipulated under clause no. xvi of General Conditions in Environmental Clearance granted by Ministry of Environment & Forest vide letter no. J 13012/57/2008-IA.II (T) dated 20<sup>th</sup> May, 2010.

**PART- A**

i.	Name and address of the owner/occupier of the industry Operation or Under process.	Mr. Samir Kumar Mitra Station Head Vill – Chhote Bhandar, PO – Bade Bhandar, Tehsil – Pussore, Distt – Raigarh, Chhattisgarh – 496 100
ii.	Industry category Primary-(STC Code) Secondary – (STC Code)	Red Category
iii.	Production Capacity – Units	1 x 600 MW (600 MW)
iv.	Year of establishment	March'2014
v.	Date of the last environmental statement submitted.	08 <sup>th</sup> September'2022

**PART - B**

i. Water and raw Material Consumption: -

i.	Water consumption in m <sup>3</sup> /day	m <sup>3</sup> /day
a	Process	150
b	Cooling	28000
c	Domestic	219
	<b>Total</b>	<b>28,369</b>

S. No.	Name of the Products	water consumption per unit of products	
		During the previous financial year 2021-22	During the current financial year 2022-23
1.	Electricity	2.347 M3/ MWh	2.43 m3/MWh

ii. Raw material consumption

Name of the Raw materials	Name of the Products	Process water consumption per unit of products	
		During the previous financial year 2021-22	During the current financial year 2022-23
Coal	Electricity	0.747 MT/MW	0.747 MT/MW
LDO	Electricity	0.00034KL/MW	0.000184KL/MW

**PART – C**

**Pollution discharged to environment/unit of output**

(Parameter as specified in the consent issued)

SN	Pollutants	Quantity of pollutants discharged (Ton/day)	Concentrations of pollutants in discharges (mg/Nm <sup>3</sup> )	Percentage of variation from prescribed standards with reason
a	Water	0.00	0.00	Plant designed is based on Zero Liquid Discharge
b	Air: PM	1.88	37.5	Within the standards of CECB/CPCB
	SO <sub>2</sub>	48.83	989	Communicated with MoEF & CC regarding time of alignment with CEA phasing plan for achievement of new emission standards.
	NO <sub>x</sub>	17.38	358	Communicated with MoEF & CC regarding time of alignment with CEA phasing plan for achievement of new emission standards.

- Water- No discharge of wastewater.

Note- 100% effluent is treated and recycled back. Hence, there is no discharge of effluent in the environment.



**PART - D**

**HAZARDOUS WASTES**

(As specified under Hazardous Wastes (Management & Handling Rules, 1989 and amendments)

S. No.	Hazardous Wastes	Total Quantity (MT)	
		During the previous financial year 2021-22	During the current financial year 2022-23
a.	From Process Used Oil	6.00 KL	34.13 KL
b.	From Pollution Control Facilities	Nil	Nil

**PART - E**

**SOLID WASTES**

S. No.	Solid Wastes	Total Quantity (MT)	
		During the previous financial year 2021-22	During the current financial year 2022-23
a.	From Process (Ash)	1095000 MT	1246303 MT
b.	From Pollution Control Facility	Nil	Nil
c.	Quantity recycled or reutilized within the unit.	Nil	Nil
	Sold	Nil	Nil
	Disposal (In low lying areas and backfilling of stone quarries)	410445 MT	1297979 MT

Remarks: **104% Ash Utilized on (FY 2022-23).**

## **PART - F**

**Please specify the characteristics (in terms of concentration and quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.**

1) Hazardous Waste:

Hazardous waste (Used/Spent oil) is sold to authorized vender. (Please Refer Part - D for Hazardous waste generation and disposal)

2) Non Hazardous Solid Waste:

a) Bottom Ash

b) Fly Ash

Disposal Practices: The Ash generated has been utilized in nearby low-lying areas/ stone quarries as per Fly Ash notification and amendments. Exploring approaches for utilization avenues like infrastructure, highways, cement industries etc.

## **PART - G**

**Impact of the pollution control measures taken on conservation of natural resources and consequently on the cost production.**

- 1) The stack emissions from the plant are controlled by Electrostatic Precipitator with efficiency of 99.938% for reducing the emission.
- 2) Other pollution control equipment's like Dust Extraction System & Dust Suppression System are installed at various material transfer points to control the fugitive emissions.
- 3) Real time monitoring system for both EQMS & CEMS installed as per the direction of CPCB/RSPCB issued, under Air & Water Act.
- 4) Utilization of rainwater collected during monsoon in Rainwater Harvesting Pond
- 5) We had Installed Effluent Treatment Plant for treating the Industrial Effluent & reusing it.
- 6) We had Installed Sewage Treatment Plants for treating the Domestic sewage and reusing the treating water.
- 7) Installation of Hydro bins has been installed at ash water recovery system.

- 8) Regular monitoring of ambient air quality, ground & surface water, noise level quality has been carried out to evaluate the quality of environment in and around the plant premises.
- 9) Installation of Bag Filters, Dry fog dust suppression systems are installed throughout coal handling chain.

#### **PART - H**

#### **Additional measures/ investment proposal for environmental protection including abatement of pollution.**

Last (FY 2022-23) Environmental Protection cost details are given below:

<b>Sl. No</b>	<b>Expenditure head</b>	<b>Actual Expenditure FY 2022-23 (In Lakh)</b>
1	Environmental protection O&M	31.25
a	ESP	31.21
b	Stack	2.94
c	CHP	12.9
d	Silo annual Maintenances	26.4
2	Environmental Monitoring Cost	5.2
3	Legal & consent Fee	30.1
4	CSR	120.87
3	Environmental Lab Setup	27.0
4	Fly Ash Management	7.73
a	Brick plant operation Cost	44.1
b	Fly ash Transportation	2166.2
5	Greenbelt Development	90.9
a	Nursery Development	25.1
b	Tree Plantation	18.4
c	Social Forestry	23.8
6	Environmental Awareness Training	0.1
7	World Environment Day	0.4
8	Waste Management at Site	12.59
<b>Total</b>		<b>2,677.32</b>



## **PART - I**

### **Any other Particulars for improving the quality of the environment.**

- 1) Water sprinkling in dust prone areas in and around plant premises.
- 2) Increasing the density of plants in and around plant premises development of local plant species has been preferred for the plantation having following characteristics.
  - Fast growing with thick canopy cover.
  - Adequate height with longer duration of foliage.
  - Perennial and evergreen
- 3) Integrated housekeeping management is undertaken at top priority to maintain neat, clean, and safe working environment in the plant area.
- 4) Organic waste is being converted to manure and being used in green belt development activities.
- 5) Rain guns and water sprinkling system has been provided in CHP.
- 6) Having certificate from CII to Single Use Plastic (SUP) free organization.
- 7) ISO 9001:2015, ISO 14001:2015, ISO 45001:2018, ISO 50001 :2018, ISO 55001:2014, ISO 46001:2019 has been implemented for betterment of environment.

-End-



Certificate Tracking ID / CTID : 2305262  
Date of Issue / DOI : 23-Mar-2023  
Certificate Serial No. / CSN : ULR-TC666523000003474P



TC-6665



### RADIOACTIVITY TEST CERTIFICATE

Ref : BRIT/RAL/DOM/1162-1167/MISC/877-882/22-23

To :  
M/S. RAIGARH ENERGY GENERATION LIMITED (ADANI POWER LTD)  
VILLAGE CHOTE BHANDAR  
P O BADE BHANDAR  
RAIGARH 496100  
C.G

This is regarding the samples of "COAL, FLY ASH AND POND ASH/BOTTOM ASH" sent for radioactivity analysis vide your letter dt. 01.02.2022 which as per above letter is drawn from consignment with the following markings, as shown in italics:

**SAMPLE DESCRIPTION** : **COAL, FLY ASH AND POND ASH/BOTTOM ASH**

Sr. No	SAMPLE NO.	TYPE OF SAMPLE	PLACE	DATE OF SAMPLE
1	SAMPLE #1	COAL SAMPLE	ADANI, RAIGARH	01.02.2023
2	SAMPLE #2	FLY ASH SAMPLE	ADANI, RAIGARH	01.02.2023
3	SAMPLE# 3	POND/BOTTOM ASH SAMPLE	ADANI, RAIGARH	01.02.2023

DATE OF RECEIPT OF SAMPLE: 02.02.2023

DATE OF COMPLETION OF TEST: 21.02.2023

The Samples provided were analysed for U-238 and Th-232 radioactivity content by HPGe gamma spectrometry and the values obtained are as follows :

Sr. No	TYPE OF SAMPLE	U-238 (Bq/Kg)	Th-232 (Bq/Kg)
1	COAL SAMPLE	32 ± 1.4	38.2 ± 5.3
2	FLY ASH SAMPLE	82.3 ± 2.8	116.3 ± 11.1
3	POND/BOTTOM ASH SAMPLE	76.4 ± 3.3	99.4 ± 10.3

Opinion: The measurement values are below the clearance level for radionuclides of natural origin in bulk solid materials, as per AERB directive 01/2010 (table-3) dated 26/11/2010

Note: (i) The report pertains to the given sample only. (ii) The sample will be retained in this laboratory for a period of 1 month from certificate date and thereafter it will be disposed off. (iii) This report shall not be reproduced except in full, without written approval of the laboratory. (iv) The sampling is not done by this laboratory.

**Checked by:**  
SHEEBA S.W.  
Assistant

**Authorized Signatory:**  
AJAY NANA THAMKE  
OIC, RAL

\*\*\*\*\* End of Report \*\*\*\*\*

The authenticity of this certificate is verifiable. Please scan the QR code using a QR scanning application on any mobile devices. Upon redirection you must enter the necessary information in landing page <https://portal.britatom.gov.in>. We will then revert you back with a digital copy of the certificate in your verified e-mail ID. In accordance to IT Act 2000 (21 of 2000), this document is generated electronically through a validated s/w and need no physical/ digital signature(s).