adani

Power

Ref: APL/APJL/EMD/EC/MoEFCC/206/11/23
Date- 24/11/2023

To,

Additional Principal Chief Conservator of Forest
Ministry of Environment, Forest and Climate Change
Regional Office, East Central Region
Second Floor, Headquarter-Jharkhand State Housing Board,
Harmu Chowk, Ranchi- 834 002, Jharkhand

Sub: Six Monthly Compliance Status of Environment Clearances for Godda Thermal Power Plant at Motia, Patwa & Adjacent Villages. Godda Tehsil, Godda District in Jharkhand.

Ref: Environment Clearance Letter no: **J-13012/01/2016-IA.I (T),** Dated: **31.08.2017** & Amendment dated 03.09.2019 & 27.02.2020.

Dear Sir,

With reference to above subject, please find enclosed herewith Six-Monthly Environment Clearances (EC) compliance status report along with Environmental monitoring results like Ambient Air Quality, Noise level, Water Quality, green belt & CSR progress report etc. for the period of **April'2023 to September'2023** in soft (**e-mail**).

This is for your kind information & record please.

Thanking You,
Yours faithfully,
for **Adani Power (Jharkhand) Limited**

(**Santosh Kumar Singh**)
Authorized Signatory

Encl: as above

cc:

Member Secretary
Central Pollution control Board
Parivesh Bhavan, East Arjun Nagar
New Delhi- 110 032.

Member Secretary,
Jharkhand Pollution Control Board
TA Division Building (Ground Floor), HEC,
Dhurwa, Ranchi-834 004 (JH)

The Regional Officer,
Jharkhand Pollution Control Board,
Dumka, Jharkhand

Adani Power (Jharkhand) Ltd
Adani Corporate House
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SIX MONTHLY COMPLIANCE REPORT OF ENVIRONMENT CLEARANCE (EC)

FOR

1600 (2x800) MW
Godda Thermal Power Plant

At

Godda Taluka, District- Godda
Jharkhand

Submitted to:

Integrated Regional Office, Ranchi
Ministry of Environment, Forest and Climate Change
Central Pollution Control Board, New Delhi &
Jharkhand State Pollution Control Board, Ranchi

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Power

Submitted by:

Environment Management Department

Adani Power (Jharkhand) Limited

Motia, Patwa & adjacent village,
Godda Taluka, Godda District
Jharkhand

Period: April'2023 to September'2023

CONTENTS

Introduction

Adani Power (Jharkhand) Ltd. AP(J)L, a wholly owned company of Adani Power Limited, is developing 1600 (2x800) MW Coal-based Ultra Supercritical Thermal Power Plant at Village Motia, Patwa and adjacent villages of Godda & Poraiyahaat Blocks of Godda District in Jharkhand. The power plant is based on ultra-supercritical, energy efficient & environment friendly technology.

AP(J)L has been granted Environmental Clearances & Consent to Establish by Ministry of Environment & Forest and Jharkhand state Pollution Control Board and AP(J)L has also obtained all necessary statutory / mandatory clearance respectively.

India and Bangladesh desire to enhance traditional ties of friendship, through economic cooperation. Realizing the ever-increasing demand of electricity for the socio-economic development and progress, the Government of India (GoI) and Government of Bangladesh (GoB) have signed a Memorandum of Understanding (MoU) on 11 January'2010.

As provided in the MoU, GoB and GoI shall inter-alia undertake to encourage and facilitate joint co-operation between the parties in Power generation, transmission, energy efficiency and development of various types of renewable energy.

Accordingly, Adani Power Limited (APL) on 11.08.2015 signed a MoU with Bangladesh Power Development Board (BPDB), to develop a 2X800 MW thermal power plant on BOO basis in India and supply the entire power generated to Bangladesh Power Development Board (BPDB) through a dedicated Transmission Line.

Status of the Project:

AP(J)L has been granted Environment Clearances (EC) vide Letter no: J13012/01/2016-IA.I (T) dated: 31.08.2017 and amendment in EC vide letter dated 03.09.2019 for changing the source of water form Chir River to Ganga River. AP(J)L has also been granted amended EC vide Letter No: J-13012/01/2016-IA.I (T) dated 27.02.2020 to incorporate sector specific Special Economic Zone for Power under SL.No.7(C) of Schedule as mentioned in EIA Notification, 2006.

"Consent to Operate" has been renewed from Jharkhand State Pollution Control Board vide letter no. JSPCB/HO/RNC/CTO- 16603125/2023/1463 dated 19.08.2023.

We are glad to inform that our unit 1 & 2 (2 x 800MW) has been successfully achieved COD on 00:00hrs on 6th April 2023 (midnight of 5th April 2023) and 23:30 Hrs on 25th June 2023 respectively, both units are operational.

ADANI POWER (JHARKHAND) LIMITED

Compliance status of Environmental Clearance

1600 MW (2×800 MW) Godda Thermal Power Plant

Environment Clearance Letter no: J-13012/01/2016-IA.I (T) dated: 31.08.2017 &

Its Subsequent Amendment Letter no. J-13012/01/2016-IA.I (T) dated 03.09.2019 and 27.02.2020

Si. No.	Specific Conditions	Compliance Status
(i)	Total Ash and Sulphur content in the imported coal shall not exceed 25% and 0.5% respectively.	Information towards change in Coal Source is already submitted to MoEFCC, CPCB & JSPCB. Intimation letter is enclosed as **Annexure - XI** COD of 1st Unit (800 MW) achieved on 00:00 Hrs of 6th April 2023 (mid night of 5th April 2023) and unit 2 on 23:30 Hrs of 25th June 2023.
(ii)	Land acquisition shall be carried out by the State Govt. in accordance with Santhal Pargana Tenancy Act, 1949, Right of Fair Compensation and Transparency in the Land Acquisition, Rehabilitation Act, 2013 and other prevailing laws. Documents in support of land acquisition after completion acquisition process shall be submitted to this Ministry as well as concerned Regional Office.	Complied. Land already acquired & Land possession documents has already been submitted.
(iii)	As per the Revised Tariff Policy notified by Minister of Power vide dated 28.01.2016, project proponent shall explore the use of treated sewage water from the Sewage treatment plant of Municipality / local / similar organization located within 50 km radius of the proposed power project to minimize the water drawl from surface water bodies.	There are no STPs of municipality/local bodies within 50 KM of the site.
(iv)	Compliance of EC conditions, E(P) Act 1986, Rules and MoEF&CC Notifications issued time to time shall be achieved by a qualified environment officer to be nominated by the Project Head of the company who shall be responsible for implementation and necessary compliance.	Compliance assured. We have already established Environment Management Department with Senior Management at Corporate level as well as at Site.
(v)	MoEF&CC Notification S.O. 3305 (E) dated 07.12.2015 and subsequent notifications issued time to time shall be implemented with respect to specific water consumption, zero liquid discharge and revised emission standards. The	Being complied. High efficiency Electrostatic Precipitators (ESP) are installed and operational to meet emission standard of <30 mg/ Nm^3 for PM.

	PM, SO_2, NOx and Hg emissions shall not exceed 30 mg/Nm^3, 100 mg/Nm^3, 100 mg/Nm^3 and 0.03 mg/Nm^3 respectively. The specific water consumption exceed shall not exceed 2.5 m^3/MWh and zero wastewater discharge shall be achieved.	We have installed wet limestone based FGD system to control SO_2 and provided SCR to limit NOx emission well within the stipulated norms. Specific Water consumption is < 2.5 m^3/MWh and zero wastewater discharge (ZLD) is implemented & being maintained.
(vi)	MoEF&CC Notifications on Fly ash utilization S.O. 763(E) dated 14.09.1999, S.O. 979(E) dated 27.08.2003, S.O. 2804 (E) dated 3.11.2009, S.O. 254(E) dated 25.01.2016 and subsequent amendments shall be complied with.	Compliance assured. COD of 1st Unit (800 MW) achieved on 00:00 Hrs of 6th April 2023 (mid night of 5th April 2023) and 2nd Unit on 23:30 Hrs of 25th June 2023. Implementation status of fly ash utilization is enclosed as **Annexure - V**
(vii)	Separate Environmental Clearance may be obtained for the proposed Township as applicable under EIA notification 2006.	Separate Environment Clearance has been granted by SEIAA, Jharkhand for Residential Township vide letter No. EC/SEIAA/2017-18/2070/2017/207 dated 31/08/2018.
(viii)	Solar rooftops shall be installed in the surrounding villages as part of CSR activities.	Being complied. Solar lights being installed in surrounding villages wherever feasible through Adani Foundation as part of CSR activity. Fifteen (15) Nos. of Solar Street Lights installed in 12 remotest villages and Road side points in 3 blocks namely Borio, Mandro and Sahebganj which benefiting more than 10,000 rural population.
(ix)	Skill mapping of the Project affected people (PAF) be carried out on a long-term basis for their livelihood generation. A report is to be submitted within 3 months to the Ministry from the date of issuance of environmental clearance.	Complied. Skill Mapping Report prepared by M/s Indian Institute of Social Welfare & Business Management (IISWBM) Kolkata has already been submitted to your good office along with compliance report. Skill Development Centre's are operational and total 4600 candidates are trained under different trades viz. Welder, Fitter, Mason and Bar bender, General Duty assistant, Hospitality, Electrical, industrial Sewing Machine Operator, and Digital Literacy classes. This year i.e., F.Y 23- 24, 143 trainee enrolled and benefited in various trades. Detailed CSR report is attached as **Annexure – VIII.**

(x)	Modern methods of agriculture organic forming, compost / vermiculture making and utilization, drip/direct to root irrigation to be promoted in and around the Project area.	Noted & being complied. Village level training (Theoretical & On-Field Demonstration) on Vermicomposting was conducted in 7 core, railway line and pipeline villages of Godda & Sahebganj district. Adani Foundation supported farming communities by promoting production of organic manure by installation of Vermi-Compost Bag/Vermibed across the core and pipeline village. So far 700 small & marginal farmers were supported to install 457 Vermicompost units. Detailed CSR report is enclosed **as Annexure- VIII.**
(xi)	While implementing CSR, • Women empowerment is important. Therefore, proper skill based training/long term livelihood revenue generation be created for all of them. • Computer facilities may be provided in the school along with a trained computer teacher to inculcate computer skill among the youths. • Water supply provisions shall be made for all the bio-toilets under Swachh Bharat Abhiyan. • Preventive health programme may be preferred than the curative health programme such as nutrition development of small children and around the project.	Being Complied. • Adani Foundation supported the Women Self Group- Phoolo Jhano Saksham Sakhi Mandal (PJSASM) in accomplishment of 1,16,713 Flags assigned by district administration under the National Campaign "Har Ghar Tiranga". More than 200 women earned income from Flag stitching work. • Adani Foundation in partnership with District Administration launched Gyanodaya project to promote e-learning through Smart Classes. Gyanodaya bagged **"Indian Chamber of Commerce (ICC) Social Impact Award -Promoting Education"** for providing quality education in remotest and untapped villages of Godda district through smart learning among more than 8000 students of 316 government schools. • Digital Literacy classes are operational which benefited 4600 candidates. • We have constructed model bathrooms with soak pit in various villages towards creating awareness for cleanliness and hygiene by our program named "SWACCHAGRIH". • Curative health program being taken care under "SuPoshan" program. Detailed CSR report is attached as **Annexure – VIII.**
(xii)	Vision document specifying prospective plan for the site shall be formulated and submitted to	Complied.

	the Regional Office of the Ministry within six months.	Vision document has already been submitted along with compliance report.
(xiii)	Harnessing solar power within the premises of the plant particularly at available roof tops shall be carried out and the status of implementation including actual generation of solar power shall be submitted along with half yearly monitoring report.	Noted and compliance assured. It is proposed to utilize the roof tops of buildings which are feasible for installation of solar panels. Solar street lights are under procurement and installation status will be informed to MoEFCC/CPCB/JSPCB in coming compliance report.
(xiv)	A long term study of radio activity and heavy metals content on coal to be used shall be carried out through a reputed institute and results thereof analyzed every two year and reported along with monitoring reports. 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.	Noted and Agreed. Radioactivity testing result/report of two Coal samples (testing done by Board of Radiation and Isotope technology, Mumbai) from the source area already submitted along with EIA Report. Further, Radioactivity Test and Heavy Metal study report will be submitted during the plant operation. COD of 1st Unit (800 MW) achieved on 00:00 Hrs of 6th April 2023 (mid night of 5th April 2023) and unit 2 on 23:30 Hrs of 25th June 2023 and so APJL proposed to long term study of radioactivity and heavy metals content on coal through a reputed institute as BARC and reports will be submitted along with coming compliance report. The technology and monitoring instruments for an in-built continuous monitoring is not available with the suppliers in the country and is not feasible to continuously monitor for radioactivity and heavy metal in coal and fly ash. There is no proven technology to monitor radioactivity at plant level on continuous basis. Periodic test report will be submitted. APJL will be amend in EC condition.
(xv)	Online continuous monitoring system for stack emission, ambient air and effluent shall be installed.	Complied. AP(J)L has already installed Online Continuous Emission Monitoring (CEMS) System (both stack) to monitor Stack Emission & Continuous

		Ambient Air Quality Monitoring Stations – 3 Nos. at three different locations within the plant premises (close to the boundary wall) and Effluent Quality monitoring System. Continuous emission monitoring (CEMS) & Continuous Ambient Air Quality monitoring (CAAQMS) report is enclosed **as Annexure II & III.**
(xvi)	High Efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that a particulate emission does not exceed 30 mg/Nm^3 as would be notified by the Ministry, whichever is stringent. 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 along with an environment friendly sludge disposal system.	Complied. High efficiency Electrostatic Precipitators (ESP) has been installed in each boiler to meet PM emission of less than 30 mg/Nm^3. Dust extraction system (Cyclone followed by bag filters) in coal crusher and coal transfer area (JNTs), rain gun type dust suppression system in coal yard and dry fog type dust suppression system in belt conveyor have been installed.
(xvii)	Adequate dust extraction system such as cyclones / bag filters and water spray system in dusty areas in coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided.	Dust extraction system with Bag filter in Crusher House and wagon tippler has been installed. Pneumatic ash handling system with bag filters for ash handling & rain gun type water sprinkling system provided in Coal yard.
(xviii)	Monitoring of surface water quantity and quality shall be regularly conducted and records maintained shall be submitted to the Ministry regularly. Further, monitoring system shall be placed between the plant and drainage in the direction of flow of ground water and records maintained. Monitoring for heavy metals in ground water shall also be undertaken and results/findings submitted along with half yearly monitoring report.	Being complied. Baseline data was collected during EIA study & Regular monitoring of Air, Water (surface & ground) is being carried out. Environmental Parameters monitoring results (including monitoring of Heavy Metals in Ground water) are being submitted periodically to RO, MoEFCC Ranchi, MS JSPCB, Ranchi & RO JSPCB, Dumka. Environmental monitoring reports are enclosed as **Annexure – I.**
(xix)	A well designed rain water harvesting system shall be put in place within six months, which shall comprise of rain water collection from the built up and open area in the plant premises and detailed report kept of the quantity of water harvested every year and its use.	Complied. Rain Water Harvesting (RWH) implemented and photographic evidence of the same submitted to Jharkhand State Pollution Control Board vide letter no. APJL/ENV/ JSPCB/CTO/22 dated 31.10.2022.
(xx)	No water bodies including natural drainage system in the area shall be distributed due to	Noted & compliance assured. There are some first order streams, which is altered. The drainage profile maintained from

	activities associated with the setting up/operation of the power plant.	SE to NW direction along the natural drainage profile. There is an unlined (kachcha) canal passing through the site, which is diverted along the Project boundary without disturbing flow and natural drainage pattern.
(xxi)	Additional soil for leveling 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.	Noted & agreed. Excavated Soil being utilized within the plant site to the extent possible for levelling and horticulture activities.
(xxii)	Fly ash shall be collected in dry form and storage facility (silos) shall be provided. Mercury and other heavy metals (As, Hg, Cr, Pb, etc.) shall be monitored in the bottom ash. No ash shall be disposed off in low lying area.	Monitoring of Mercury and other heavy metals in Fly Ash & bottom ash being carried out and analysis report is enclosed as **Annexure - VII** Dry Ash collection, pneumatic conveying and storage (silos) facilities are established. Unutilized ash being disposed off in the ash dyke through HCSD.
(xxiii)	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, prior 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-ordinate with the State Pollution Control Board.	Noted & agreed. In case of mine void filling option undertaken during operational phase of the plant, detailed study from reputed institute shall be undertaken, adequate lining will be done and pollution control board shall be consulted.
(xxiv)	Fugitive emission of fly ash (dry and wet) shall be controlled such that no agricultural or non-agricultural land is affected. Damage to any land shall be mitigated and suitable compensation provided with the local Panchayats.	Being complied. To control fugitive emission, Bag filters are installed at Silo. Conditioned (moist) ash loading provision is available in fly ash silo. TPP will provide suitable compensation if any damage in future.
(xxv)	Green belt consisting of three tiers of plantation of native species all around plant and at least 50 m width shall be raised. Wherever 50 m width is not feasible a 20 m width shall be raised and adequate justification shall be submitted to the Ministry. Tree density shall not be less than	Being complied. Green belt development / plantation and landscaping completed in 66.71 acre area consist of more than 1.2 lacs plantation and rest area is under progress.

	2500 per ha with survival rate not less than 80%.	In addition to plant area, 25000 Plantation has been done in current F.Y in nearby village through CSR activities. Our efforts are being made to develop more greenery in & around the plant with survival rate of more than 80%. Green Belt Development details are enclosed as **Annexure – IV**.
(xxvi)	Green belt shall also be developed around the Ash Pond over and above the Green Belt around the plant boundary.	Complied. Green Belt (Dense plantation) along the ash pond developed. Green Belt Development details is enclosed as **Annexure – IV**.
(xxvii)	The project proponent shall formulate a well laid Corporate Environment 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 laws and regulations.	Corporate HSE policy is placed & signed by the Chairman. IMS implementation & certification for the project will be implemented during plant operation.
(xxviii)	CSR schemes identified based on need assessment shall be implemented in consultation with the village Panchayat and the District Administration starting from the development of project itself. As part of CSR prior identification of local employable youth and eventual employment in the project after imparting relevant training shall be also undertaken. Company shall provide separate budget for community development activities and income generating programmes.	Being complied. CSR activities are implemented in consultation and collaboration with the community & community leaders as well as District Administration. Regular community meetings are organized in all the villages to understand the issues of community. Social development activities have been carried out for Need Based families under the CSR activities by **Adani Foundation.** Need Based Assessment Study and Development of CSR report has already been submitted along with compliance report. Detailed CSR report is enclosed as **Annexure-VIII.**
(xxix)	For proper and periodic monitoring of CSR activities, a CSR committee or a Social Audit committee or a suitable external agency shall be appointed. CSR activates shall be evaluated by an independent external agency. This evaluation shall be both concurrent and final.	Social development activities have been carried out for Need Based families under the CSR activities by **Adani Foundation.** Evaluation of CSR activities will be done during plant operation by external agency in every three years.

		However, an Annual Audit Plan is in place in the company which is conducted at all the sites. An internal Audit team undertakes review of the systems, process and also verifies on ground implementation of CSR activities as well as the systems. CSR report is enclosed as **Annexure- VIII.**
S.N	**General Conditions:**	**Compliance Status**
(i)	The treated effluents conforming to the prescribed standards only shall be re-circulated and reused within the plant. Arrangements shall be made that effluents and storm water do not get mixed.	Complied. Generated effluent being treated in ETP and treated effluent conforming to the prescribed standard being reused within the plant. Separate Storm Water Drainage has been established.
(ii)	A sewage treatment plant shall be provided (as applicable) and the treated sewage shall be used for raising greenbelt/plantation.	Compliance assured. Sewage Treatment Plants having capacity 2 x 10 m3/h provided and treated water shall be re-use suitably within the plant premises for green belt development.
(iii)	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.	Fire Safety Management Plan is prepared and implemented. Fire Safety Management Plan already submitted with compliance report of October 2018 to March 2019.
(iv)	Storage facilities for auxiliary liquid fuel such as LDO/ 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. LDO has been properly stored within plant premises and license for storage of LDO has been obtained from Petroleum and Explosive Organization (PESO). License of the same is enclosed as **Annexure – XII.** DMP already submitted with compliance report of October 2018 to March 2019.
(v)	First aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.	Complied. First aid facilities, drinking water facility, Sanitation facility, Wastewater disposal, solid

		wastes management and primary health facilities are being ensured at site.
(vi)	Noise levels emanating from turbine shall be so controlled such that the noise in the work zone shall be limited to 85 dB(A) from source. For people working in the high noise area, requisite personal protective equipment like earplugs / ear muffs etc. shall be provided. Workers engaged in noisy areas such as turbine area, air compressors etc shall periodically examined to maintain audiometric record and for treatment for any hearing loss including shifting to non-noisy/less noisy areas.	Necessary action/prevention measures have been taken care in design to maintain noise level within 85 dBA at source. High Noise areas are identified. Safety signage Boards has been provided with mandatory Personnel Protective Equipment (PPE's) at designated locations. A complete medical check-up with audiometric test of workers & employees is being carried out prior their joining in the organization.
(vii)	Regular monitoring of ambient air ground level concentration of SO_2, NOx, $PM_{2.5}$ and PM_{10} 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 limit, 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 the website of the company.	Being complied. Regular monitoring of ground level concentration of Ambient Air for SO2, NOx, PM2.5 and PM10 and Hg is being carried out and monthly reports are being submitted to the MS, SEIAA & JSPCB Ranchi & RO JSPCB, Dumka. For selection of monitoring location and monitoring frequency in consultation with JSPCB, intimation letter also been submitted to the board vide our letter no. APJL/ENV/JSPCB/RO/0308 dated 31.08.2022. Monitoring frequencies are as below: • Ambient Air Quality twice in a week, • Stack Emission Monitoring- Once a month • Water, wastewater quality & Noise once in Month and • Soil Quality once in a season (Except Monsoon). Periodic Environmental monitoring report is enclosed, Please refer **Annexure- I**. EC compliance report is uploaded on the company's website, www.adanipower.com
(viii)	Utilization of 100 % Fly ash generated shall be made from 4th year of operation. Status of implementation shall be reported to the regional office of the Ministry from time to time.	Being Complied. As COD of 1st Unit (800 MW) achieved on 00:00 Hrs of 6th April 2023 (mid night of 5th April 2023) and 2nd Unit on 23:00 Hrs of 25th

		June 2023. Fly ash generation and utilization Status enclosed as **Annexure - V**
(ix)	Provision shall be made for housing of the construction labour (as applicable) within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets. Mobile STPs, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the construction of the project.	Required hutment, drinking water, Mobile Toilets. Mobile STPs, Safe Drinking Water & Medical health care facilities, Medical health care facilities, Fuel for cooking and other infrastructure has been arranged on temporary basis during plant construction. Local manpower is preferred during Construction phase & hence, less necessity to build housing for the construction labour.
(x)	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 http://envfor.nic.in	Complied. Advertisement in 10 Local News Papers was published in Hindi & English. Copy of News Paper cutting already submitted along with Oct'17 to March'2018 compliance report.
(xi)	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. A copy of the Environment Clearance (EC) letter was provided to Panchayats, Zila Parisad and local Body. Acknowledgement already submitted along with compliance report. The clearance letter has been uploaded on the company website http://www.adanipower.com/
(xii)	The proponent shall upload the status of compliance of the stipulated environmental clearance 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 pollutants levels namely SPM, RSPM ($PM_{2.5}$ & PM_{10}), SO2, NOx (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. photographs	Being complied. Six monthly compliance status reports are being submitted to MoEFCC, CPCB & JSPCB. Last compliance report submitted for the period of October'22- March'23 vide letter no. APL/APJL/EMD/EC/MoEFCC/206/05/23 dated 20.05.2023. Compliance status uploaded on Company's website. Digital display board installed at the main gate of the power plant to display environmental monitoring parameters. Environmental monitoring report is enclosed as **Annexure- I.**

(xiii)	The environmental statement for each financial year ending 31st 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 Minister by e-mail.	Noted. Consent to Operate renewed by Jharkhand State Pollution Control Board vide letter no. JSPCB/HO/RNC/CTO- 16603125/2023/1463 dated 19.08.2023. Environment statement for the F.Y 22 – 23 was submitted to JSPCB vide our letter no. APJL/ENV/ES/JSPCB/0925 dated 25.09.2023 and the same is enclosed as **Annexure IX.**
(xiv)	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.	Six monthly compliance status reports are regularly submitted to MoEF&CC, CPCB & JSPCB. The same is sent by email also. Last Six-monthly compliance report for the period of October'22- March'23 submitted vide letter no. APL/APJL/EMD/EC/MoEFCC/206 /05/23 dated 20.05.2023. Compliance status updated on Company's website. https://www.adanipower.com
(xv)	The progress of the project shall be submitted to CEA on six monthly basis.	Report Submission to CEA is not applicable as Project is dedicated to Bangladesh Govt. and it is not connected to Indian Grid. However, both units i.e., unit 1 & 2 (2 x 800MW) has been successfully achieved COD on 00:00hrs on 6th April 2023 (midnight of 5th April 2023) and 23:30 Hrs on 25th June 2023 respectively. Now, both units are operational.
(xvi)	Regional Office of the MoEF&CC 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 reference during monitoring. Criteria pollutants levels including NO_x (from stack & ambient air) shall be displayed at the main gate of the power plant.	Noted. Copies of Environment Impact Assessment report (EIA) with Environment Management Plan already sent to Regional Office, Ranchi, vide our letter no. APJL/ENV/EC/SMR/175 /05/2018, dated-14.05.2018. Digital display board installed at the main gate of the power plant to display environmental monitoring parameters.
(xvii)	Separate funds shall be allocated for implementation of environmental protection	Separate budget has been already allocated for Environmental protection measures.

	measures along with item-wise break-up. These 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.	Fund for Environment management: Capital Cost: Rs. 2,225.68 Crores Expenditure for the period of April'23 to September'23 enclosed as **Annexure - X**
(xviii)	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.	Financial closures have been achieved and already disclosed. Construction works are completed. COD of 1st Unit (800 MW) achieved on 00:00 Hrs of 6th April 2023 (mid night of 5th April 2023) and unit 2 on 23:30 Hrs of 25th June 2023. Consent to Operate renewed by Jharkhand State Pollution Control Board vide letter no. JSPCB/HO/RNC/CTO- 16603125/2023/1463 dated 19.08.2023.
(xix)	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. Full co-operation shall be extended all time.
Conditions of EC Amendment		
(i)	Stage-I Forest Clearance for diversion of 13.3293 ha for laying pipeline shall be submitted. As per Ministry's guidelines, a formal amendment will be issued after furnishing the Stage-I Clearance.	The copy of stage –I submitted before amendment. This condition stands deleted as per amended EC Vide No. J -13012/01/2016-I.A.I (T) dated 27.02.2020.
(ii)	In line with Ministry's OM dated 11.3.2010 in regard to Oil and Gas pipelines, in a similar manner, 10 trees to be planted for every tree cut in the non-forest area.	Noted. We have consulted Divisional Forest Officer (DFO), Godda vide our letter no. AP(J)L/FC/ENV/227/05/20 date 28.05.2020 to provide plantation scheme with demand note for proposed plantation. Compliance of Stage – I has already been submitted and verified by nodal officer, MoEFCC and also issued the Stage – II FC approval on 29.01.2021.
(iii)	There will be storage reservoirs for storing 15 MCM water to cater during lean season.	Noted and agreed. Compliance assured.
(iv)	Daily quantity (Average, minimum and maximum) of fresh water withdrawn from Ganga River near	Noted & being followed.

	Sahebganj for the Power Plant shall be recorded and data base be preserved to ensure permissible drawl of fresh water from Ganga River. The source sustainability reports for withdrawal of water from Chir River and from the Ganga River shall be placed in the public domain by the proponent, either by uploading to the PARIVESH portal or its own website.	Source sustainability reports for withdrawal of water from Chir River and from the Ganga River has been uploaded and is already available on https://parivesh.nic.in/
(v)	As per the original EC, 33% greenbelt of plant area shall be developed. In case of any shortage of land, additional land shall be acquired to meet the condition.	Compliance assured. Green belt development / plantation and landscaping completed in area of 66.71 acre consist of more than 1.2 lacs plantation and rest area is under progress. In addition to plant area, 25000 Plantation has been done in current F.Y in nearby village are through CSR activities. Our efforts are being made to develop more greenery in & around the plant with survival rate of more than 80%. Green Belt Development details are enclosed as **Annexure – IV**.
(vi)	The conditions specified in the In-Principle (Stage-I) Forest Clearance dated 28.6.2019 shall be complied with. A compliance to these conditions shall also be submitted along with Six monthly compliance report. Further, copy of Formal (Stage-II) Approval shall be submitted as and when it is obtained.	Compliance of conditions mentioned in the In-Principle approval (Stage-I) Forest Clearance dated 28.06.2019 has been uploaded on https://parivesh.nic.in/. Compliance report of Stage – I Forest Clearance submitted along with EC compliance report for the period of Oct'19 to Mar'20. Stage II has been granted vide letter no. FP/JH/Others/32772/2018/4489 dated 29.01.2021. Copy of the same already submitted vide our previous compliance report for the period of October'20 – March'21.
(vii)	The total project area has now been reduced to 558 acres from 1255 acres. The remaining area (if acquired) shall be developed as greenbelt.	Noted. Power plant facilities have been reworked and total project area has now been optimized to 558 acres from 1255 acres.
(viii)	All the conditions prescribed in the permission granted by National Mission for Clean Ganga (NMCG), Ministry of Water Resources, River Development & Ganga Rejuvenation vide their	Noted and will be complied.

	letters dated 8.8.2018 and 16.11.2018 for withdrawal of 36 MCM of water from River Ganga during June to December, shall be complied with.	
Additional Conditions (EC Amendment)		
(i)	The area of 7.7 acres (originally proposed 558 acres & Notified SEZ land: 550.23 acres) shall be developed with greenbelt. Demarcation of this land with co-ordinates and progress of greenbelt is to be submitted in the compliance report.	Noted and agreed. Green belt development / plantation and landscaping is in progress and efforts will be made to develop more greenery in & around the plant with survival rate of more than 80%.
(ii)	In para 5 of amended EC dated 03.09.2019, the period of '6 months' be read as '07 months'.	Noted.

Annexure - I

IST HALF YEARLYS ENVIRONMENTAL MONITORING REPORT

(APRIL 2023 TO SEPT 2023)

of

ADANI POWER (JHARKHAND) LTD.

2*800 MW GODDA THERMAL POWER PROJECT

VILLAGE: MOTIA, DISTRICT-GODDA, JHARKHAND

CONDUCTED BY:

M/s Vibrant Techno Lab Pvt. Ltd.

Add: SC-40, 3rd Floor, Narayan Vihar S, Ajmer Road

Jaipur (Rajasthan)

(Recognized by MoEF & CC, NABL Government of India)

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.

Adani Power (Jharkhand) Ltd. 2*800 MW Godda Thermal Power Project Located at Village: Motia, District-Godda, Jharkhand, 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 as per guidelines of MoEF & CC an 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 Adani Power (Jharkhand) Ltd. The samples were analyzed Partly at site and partly at our MoEF Recognized laboratory situated a Jaipur (Rajasthan).

This report presents the data generated for the period from April 2023 to Sept 2023 i.e., for 1st Half Yearly 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 Adani Power (Jharkhand) Ltd. 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: 9.11.2023 **Authorized Signatory**

INDEX

SECTION 1: FOREWORD

The protection of environment plays a crucial role in maintain the local environment quality for any industry, throughout their production. Hence compliance of the statutory requirements becomes very important to conserve the ecological balance within and surrounding the plant area. Therefore, environment protection is becoming a prerequisite for sustainable development. In line with this requirement, the management of Adani power (Jharkhand) Ltd. has adopted a corporate responsibility of development and top priority is given for environment protection.

In order to comply with the Environment protection act, to fulfill statutory requirement and to be in tune with Environment Preservation and sustainable Adani Power (Jharkhand) Ltd. has retained M/s Vibrant Techno Lab Pvt. Ltd. As Environment Consultants and for various Environmental issues related to their Power Plant.

Environmental Quality Monitoring Report for the Month of April 23 to Sept 2023 has been collected by M/s Vibrant Techno Lab Pvt. Ltd.

We are thankful to Adani Power (Jharkhand) Ltd. for the opportunity provided to be associated in this endeavor.

SECTION 2: LIST OF EQUIPMENTS

The list of Equipments used in the project is delineated in the following table.

SR. No.	NAME OF EQUIPMENTS	MAKE/MODEL
1.	Respirable Dust Sampler	Enviro Instruments EI-142
2.	Fine Particulate Sampler	Enviro Instruments EI-133
3.	Gases Sampling Attachment	Enviro Instruments EI-061
4.	Sound Level Meter	Mextech
5.	Stack Monitoring kit	Enviro Instruments EI-106
6.	Combo Sampler	Enviro Instruments EI-205
7.	Digital Balance	Dig. Thermo Hygrometer
8.	UV Visible Spectrophotometer	Systronics.,117
9.	Hot Air Oven	Smita Scientific, Cat. No. SHAO-2S/G
10.	Bacteriological Incubator	Smita Scientific, Cat. No. SLBI-2
11.	pH Meter	Systronics.,361
12.	Dissolved Oxygen Test Kit	Lutron
13.	Autoclave Automatic	Smita Scientific, Cat. No. SAUV-2
14.	Horizontal Laminar Air Flow	Smita Scientific, Cat. No. SHLF-1 SG
15.	Muffie Furnace	**Smita Scientific, Cat. No. SMFF-3S/G**
16.	Conductivity Meter	Systronics, 304
17.	Phase Contrast Microscope	Kane International
18.	COD Digester	Smita Scientific, Cat. No. SCOD-3

SECTION 3: LIST OF PROJECT PERSONNEL

S.No.	Name	Qualification	Experience (Yrs.)	Designation
1.	Rajkumar Yadav	MSc. Agriculture	14	Lab Incharge QM
2.	Raja Manish	MSc. Organic Chemistry	2.5	Senior Analyst
3.	Rajiv Das	BSc. Chemistry	2.0	Senior Field Analyst
4.	Umesh Sharma	MSc. Pharmaceutical Chemistry	12.0	Technical Manager

SECTION 4: EXECUTIVE SUMMARY

Adani Power (Jharkhand) Ltd. 2*800 MW Godda Thermal Power Project Located at Village: Motia, District-Godda, Jharkhand, 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 as per guidelines of MoEF & CC an CPCB Gazette Notification.

Three Location of AAQM were selected for six months (i.e., April to Sept 2023). Pollutants (PM_{10}, $PM_{2.5}$, SO_X, NO_x) Concentration observed maximum during April to July then it started decreasing from July to Sept due to Monsson season. $PM_{2.5}$ varies from 18.74 to 47.4 $\mu g/m^3$ & PM_{10} varies from 35.94 to 70.97 $\mu g/m^3$. All the concentration of Air quality for all parameters was found within NAAQS. Stack monitoring was also done & results are within the limit **(Report has been attached as Annexure-3).**

Four number of Ground water sample, one Surface water sample & STP Treated & Untreated Water samples was collected to understand the overall water quality of the project area. The brief has been discussed in section 8 of the report. **(Report has been attached as Annexure-3).**

Ambient Noise Monitoring was done on 10 stations for day & night which is also within limit. The Summary of the result has been analyzed & interpretated in section 9. **(Report has been attached as Annexure-3).**

SECTION 5: CONCEPT & METHODOLOGY

5.1 Methodology

In the present study the following are the standard methods used for collection, analysis & interpretation of data:

AAQM Sampling & analysis: "Indian Standards (IS 5182)" "Guidelines for the measurement of Ambient Air Pollutants, Vol-i, CPCB" & "USEPA" methods were used for Ambient Air sampling and analysis to study the present pollution load around the Proposed Project location.

PARAMETERS OF AAQM	STANDARDS METHODS
PM10	IS 5182 (P-24):2019
PM2.5	IS: 5182 (P-23), 2006
Oxides of Nitrogen (NOx)	IS: 5182 (P-6), 2006
Oxides of Sulphur (Sox)	IS: 5182 (P-2), 2001
Carbon Monoxides	IS: 5182 (P-10)1999
Ammonia	3rd ed., 1988 Method No.401
Lead	IS: 5182 (P-22): 2004
Benzene	IS: 5182 (P-11), 2006
Benzo pyrene	IS: 5182(P-12), 2004
O3	IS: 5182(P-9):1974
Nickel	USEPA Compendium IO -3.2, 1999
Arsenic	3rd ed.,1988 Method No.302
Mercury	VTL/STP/02

PARAMETERS OF STACK MONITORING	STANDARDS METHODS
Particulate Matter (PM)	IS: 11255 (P-1): 1985, RA 2019
Oxide of Nitrogen (as NO2)	IS- 11255 (P-7);2005, RA- 2017
Sulphur Dioxide (as SO2)	IS: 11255(P- 2): 1985, RA 2019
Mercury (Hg)	USEPA 29::1996

Water Sampling & analysis: Similarly, "Indian Standards (IS 3025)", "USEPA" and "APHA 23rd Edition were used for water sample collection and analysis.

PARAMETERS OF WATER SAMPLE	STANDARD METHODS
pH (at 25 0C)	IS 3025 (P-11): 2022
Colour	IS 3025(P-4): 2021

Turbidity	IS 3025 (P-10): 1984, RA: 2017
Odour	IS 3025 (P-5)1983
Taste	IS 3025(P-8) 1984
Total Hardness as CaCO3	IS: 3025 (P-21): 2009, RA: 2019
Calcium as Ca	IS: 3025 (P-40): 1991, RA: 2019
Alkalinity as CaCO3	IS: 3025 (P-23): 1986, RA: 2019
Chloride as Cl	IS: 3025(Part 32):1988, RA:2019
Cyanide as CN	IS: 3025 (P-27)1986
Magnesium as Mg	IS: 3025 (P-46): 1994, RA: 2019
Total Dissolved Solids	IS 3025 (P-16): 1984RA: 2017
Sulphate as SO4	IS: 3025 (P-24): 1986 Sec.1 RA: 2022
Fluoride as F	APHA (23rd Edition), 4500FD:2017
Nitrate as NO3	IS: 3025 (P-34): 1988, (Chromotropic Method) RA: 2022
Iron as Fe	APHA (23rd Edition),3113B: 2017
Aluminum as Al	IS 3025 (P-55):2003, RA: 2019
Boron	APHA (23rd Edition) 4500B: 2017
Total Silica	IS: 3025 (P-35):1888,RA: 2003
Phenolic Compounds	APHA 23rd Edition,2017, 5530 C
Anionic Detergents as MBAS	APHA 23rd Edition,2017, 5530 C
Zinc as Zn	APHA (23rd Edition), 3030D,3113B: 2017
Copper as Cu	APHA (23rd Edition),3113B: 2017
Manganese as Mn	APHA (23rd Edition)3030D,3113B: 2017
Cadmium as Cd	APHA (23rd Edition)3030D,3113B: 2017
Lead as Pb	APHA (23rd Edition)3030D,3113B: 2017
Selenium as Se	APHA (23rd Edition)3114C,2017
Arsenic as As	APHA (23rd Edition),3114C,2017
Mercury as Hg	APHA (23rd Edition)3114C,2017
Hexa Valent Chromium	APHA (23rd Edition)3500 Cr B:2017
Residual Free Chloren	IS :3025(P-26): 2021
Temperature	IS :3025(P-9):1984, RA:2017
Total Coliform	IS:15185: 2016
E. coli	IS:15185: 2016

PARAMETERS OF STP TREATED & UNTREATED WATER	**STANDARD METHODS**
pH (at 25 0C)	IS 3025 (P-11): 2022
Total Dissolved Solids	IS 3025 (P-16): 1984RA: 2017
Total Suspended Solids	IS 3025 (P-17): 2022
Oil &Grease	IS 3025 (P-39):2021
BOD (3days at 27 °c)	IS 3025(P-44):1984, RA:2019
COD	IS: 3025 (P-58): 2006, RA: 2017

Noise Level Monitoring: "Protocol for Ambient Level Noise Monitoring, IS 9989: RA 2001" was followed to monitor the Ambient Noise level surrounding the Project Site.

PARAMETERS	STANDARD METHODS
Leq	IS 9989-1981 RA: 2020

A brief account of the methodologies and matrices followed in the present study is given under different headings. All the methods were structured for the identification, collection and organization of environmental impacts data. The information, thus gathered, had been analyzed and presented in the form of a number of visual formats for easy interpretation and decision making.

SECTION 6: PLAN FOR SAMPLING LOCATIONS

Site selection criteria play an important role in the initiation of "baseline data generation" as it provides an outlook on the type of environmental compliance and management to be adopted by the project proponent. The locations were selected on the basis of "joint site survey", "examination of toposheet of the project area", "secondary micro-meteorological data analysis" and "availability of resources" for ambient air quality monitoring & micro-meteorological monitoring.

A synopsis about the locations is as follows:

AAQM LOCATION

- Near Nayabad Village (Close to plant boundary)
- Near Mali Village (Close to plant boundary)
- Near Motia Village (Close to plant boundary)

STACK MONITORING LOCATION

- Unit-01
- Unit-02
- D.G Set Township

GROUND WATER SAMPLE'S LOCATION

- Mali Village
- Motiya Village
- Naya Bad Village
- Patwa Village

SURFACE WATER LOCATION

- Ganga River

STP TREATED & UN-TREATED WATER REPORTS LOCATIONS

- STP Outlets (Township)
- STP Outlets (Plant)
- STP Inlet (Township)
- STP Inlets (Plant)

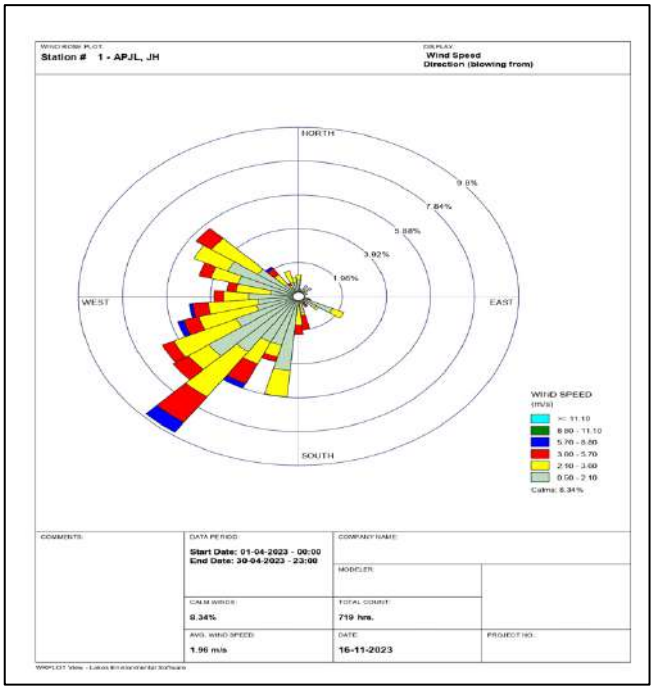
SECTION-7: METEOROLOGICAL DATA

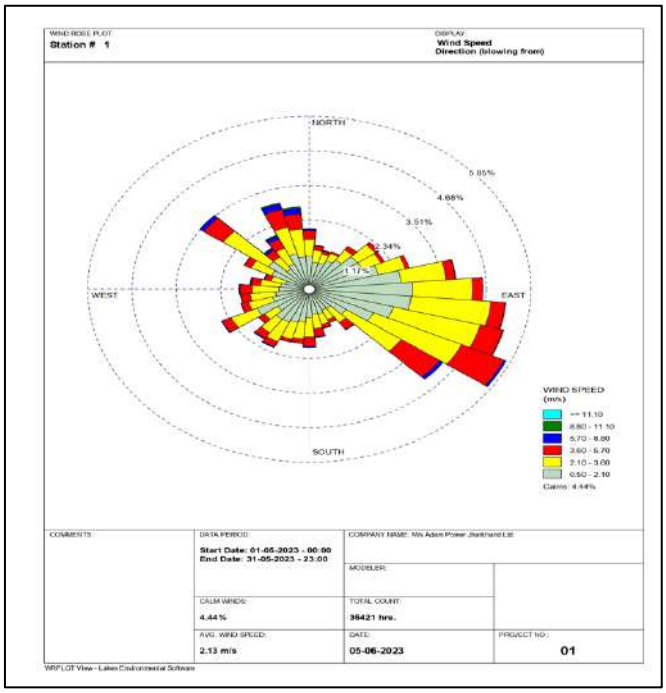
Weather monitoring would help in keeping track of different parameters like temperature, humidity, rainfall, wind direction, wind speed &barometric pressure. Real time meteorological data is used to support a number of programs including public aviation, agricultural activity, disaster management etc.

In the present study we monitored the "ambient temperature, relative humidity, windspeed, wind direction, barometric pressure, rainfall etc.

Meteorological Data (April-2023 to Sept-2023)

Month	Air Temperature (^{0}C)		Humidity (%)	Mean Wind Speed (Kmph)
	Daily Max.	Daily Min.		
April	38.29	23.83	37.64	2.04
May	38.61	24.82	52.92	2.16
June	40.09	28.33	57.89	2.76
July	35.32	27.26	78.40	3.28
Aug	33.16	26.42	66.13	2.15
Sept	33.30	26.26	84.68	1.70





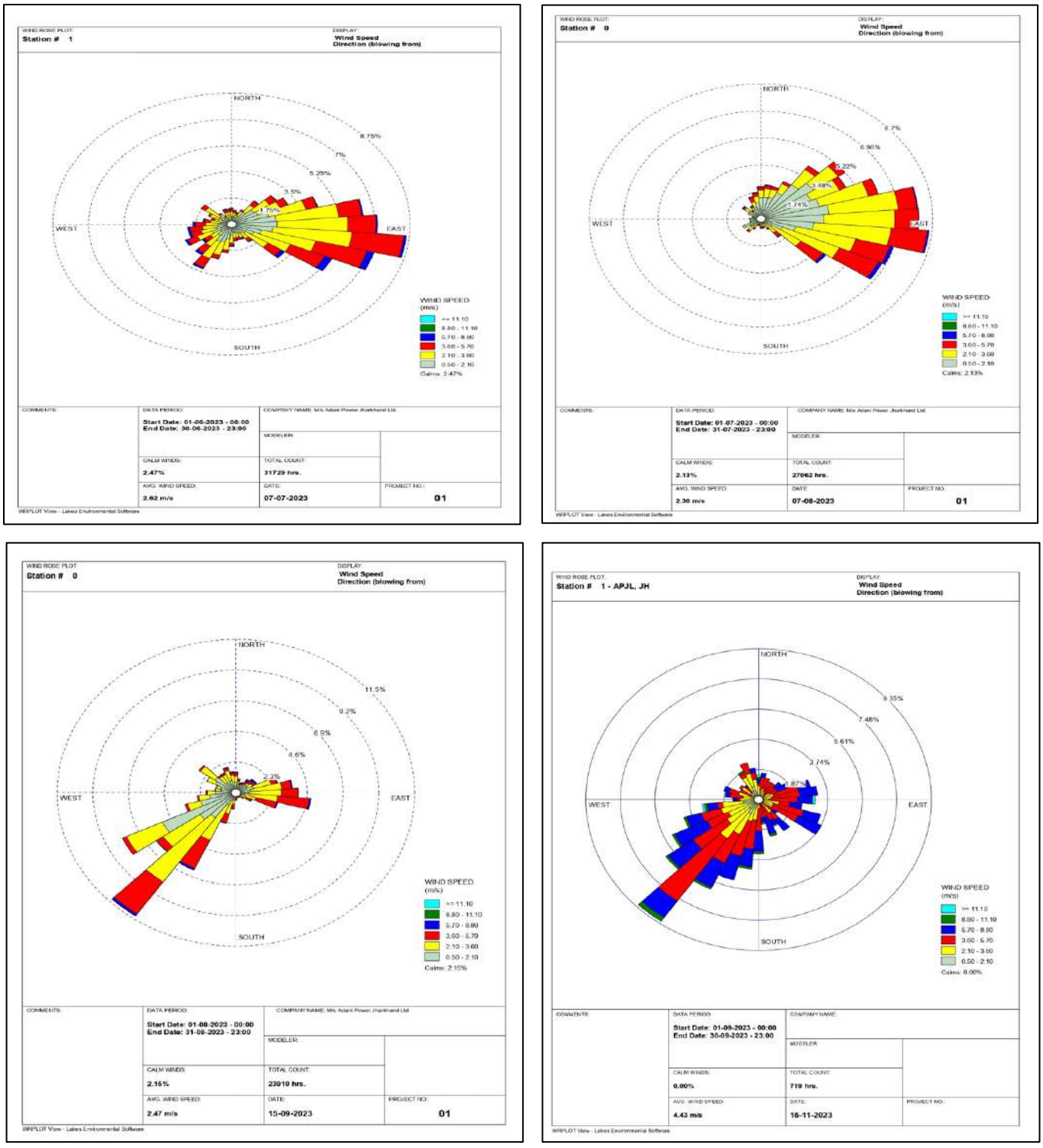


Fig 1: Wind Rose Diagram

SECTION 8: AMBIENT AIR MONITORING REPORT

8.1 Concept & Scope

The Ambient Air monitoring encompasses the results and statistical evaluation of the at three data monitored different locations.

Different parameters like PM_{10}, $PM_{2.5}$, Oxides of Sulphur, Oxides of Nitrogen and Mercury are monitored for representing the ambient air quality within the study area.

8.2 Frequency of Sampling

The frequency of the sampling for AAQM was as follows:

PARAMETERS	FREQUENCY OF EACH LOCATIONS
PM_{10}, $PM_{2.5}$, Oxides of Sulphur, Oxides of Nitrogen	Twice in a week
Mercury	Once in a month

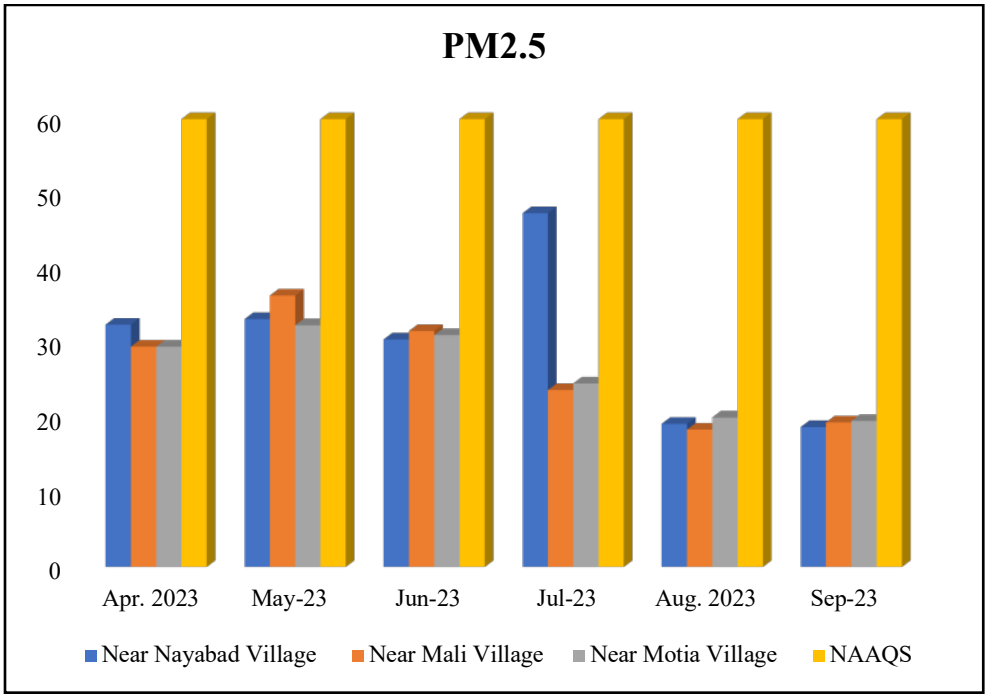
7.3 SAMPLING DURATION AS PER NAAQMS 2009

S. No.	Parameters	Sampling Duration (Hr.)
1.	Particulate Matter (PM_{10})	**24**
2.	Particulate Matter ($PM_{2.5}$)	**24**
3.	Oxides of Sulphur (SO_X)	**24**
4.	Oxides of Nitrogen (NO_X)	**24**
5.	Mercury	**24**

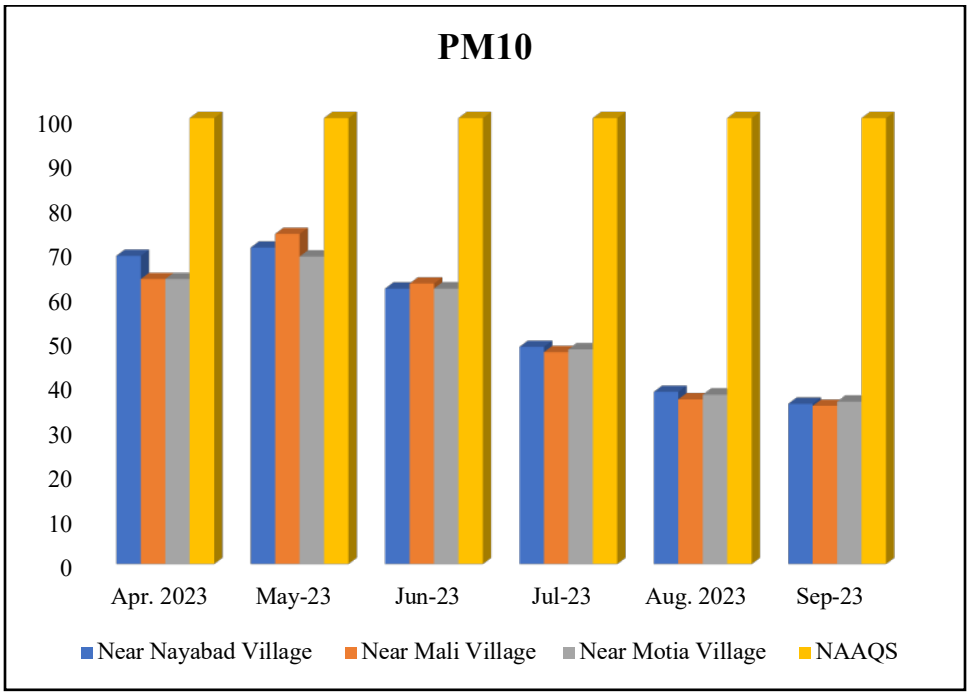
8.4 AAQM METHODOLOGY

PARAMETERS	METHODOLOGY/PRINCIPLE
Particulate Matter (PM_{10})	Air is drawn through a size-selective inlet and through a 20.3 X 25.4 cm (8 X 10 in) filter at a flow rate, which is typically 1132 L/min. Particles with aerodynamic diameter less than the cut-point of the inlet are collected, by the filter. The mass of these particles is determined by the difference in filter weights prior to and after sampling. The Concentration of PM_{10} in the designated size range is calculated by dividing the weight gain of the filter by the volume of air sampled.
Particulate Matter ($PM_{2.5}$)	An electrically powered air sampler draws ambient air at a constant volumetric flow rate (16.7 Ipm) maintained by a mass flow volumetric flow controller coupled to a microprocessor into specially designed inertial particle-size separator (i.e., cyclones or impactors) where the suspended particulate matter in the PM2.s size ranges is separated for collection on a 47 mm polytetrafluoroethylene (PTFE) filter over a specified sampling period. Each filter is weighed before and after sample collection to determine the net gain due to the particulate matter. The mass concentration in the ambient air is Computed as the total mass of collected particles in the $PM_{2.5}$ S0ze ranges divided by the actual volume of air sampled, and is expressed in ug/m°. The microprocessor reads averages and stores five-minute averages of ambient temperature, ambient pressure, filter temperature and volumetric flow rate.
Sulphur Dioxide (SO_2)	Sulphur dioxide from air is absorbed in a solution of potassium tetrachloromercurate (TCM). The impingers setup for the absorbance of Sulphur Dioxide from air is shown in Figure 15. A dichlorosulphitomercurate complex, which resists oxidation by the Oxygen in the air, is formed. Once formed, this complex is stable to strong Oxidants such as ozone and oxides of nitrogen and therefore, the absorber solution may be stored for some time prior to analysis. The complex is made to react with para-rosaniline and formaldehyde to form the intensely colored pararosaniline methyl sulphonic acid. The absorbance of the solution is measured by means of a suitable spectrophotometer.
Nitrogen Dioxide (NO_2)	Ambient nitrogen dioxide (NO_2) is collected by bubbling air through a solution of sodium hydroxide and sodium Arsenite. The concentration of nitrite ion (NO) produced during sampling is determined calorimetrically by reacting the nitrite ion with phosphoric acid, sulfanilamide, and N-(1-naphthyl)-ethylenediamine dihydrochloride (NEDA) and measuring the absorbance of the highly colored azo dye at 540 nm.

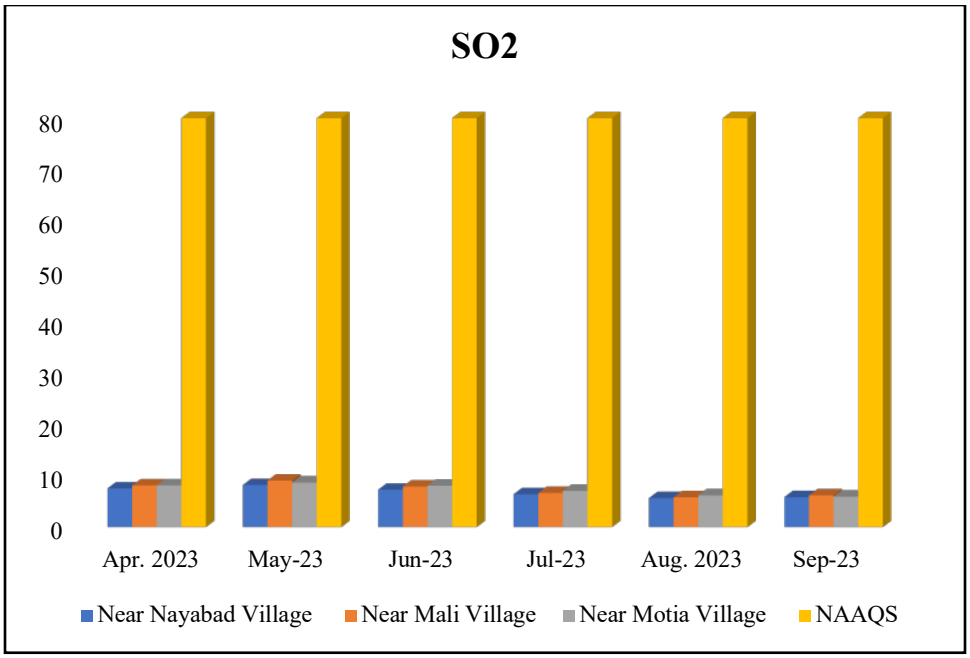
8.5 Graphical Representation



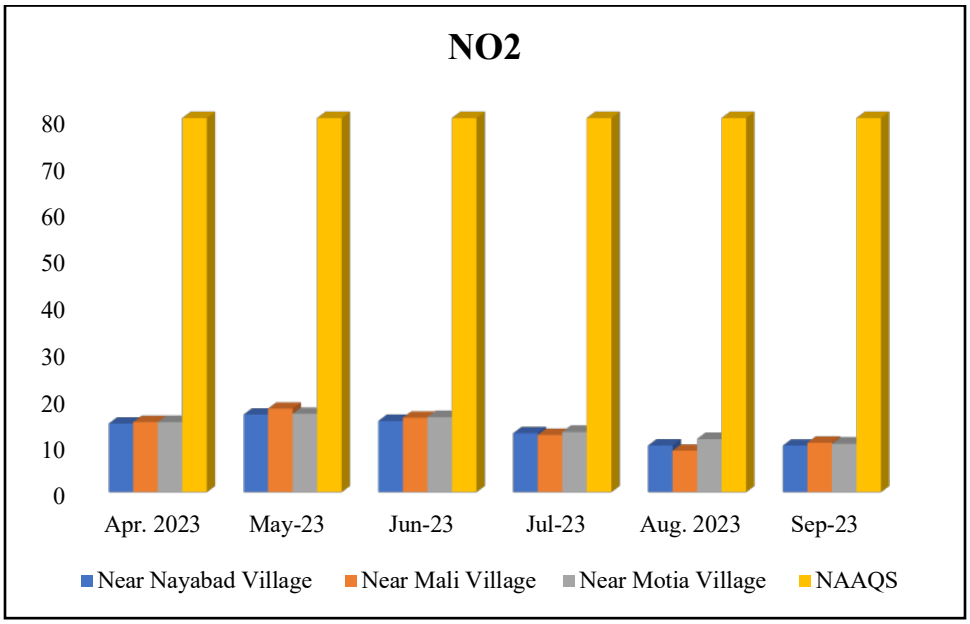
Graph 1: Particulate Matter ($PM_{2.5}$)



Graph 2: Particulate Matter (PM_{10})



Graph 3: Particulate Matter (SO_2)



Graph 4: Particulate Matter (NO_2)

8.6 Summary

From all the above graphical representation it is clearly interpreted that all the values of PM_{10}, $PM_{2.5}$, SO_2 and NOx were lower than the prescribed limits for all the stated locations.

Fugitive Emission, Fly Ash & Bottom Ash **Reports has been attached as Annexure-3**

SECTION 9: WATER ANALYSIS

Ground water Sample was collected for Four Location & One Surface water Sample Location.

Analysis results of ground water reveal the following:

- pH- 7.07 to 7.42
- TDS- 310 to 558 mg/l
- Fluoride (F) - 0.23 to 0.35 mg/l
- Total Hardness as CaCO3 – 190 to 295 mg/l
- Chlorides- 25.0 to 64.61 mg/l
- Nitrates – 19.32 to 27.4 mg/l
- Iron – 0.21 to 0.29 mg/l

Analysis results of Surface Water reveal the following:

- pH 7.26 to 7.30
- Total Hardness 125 to 132 mg/L.
- Total Dissolved Solids 258 to 310 mg/L.
- Chlorides 35.61 to 38.6 mg/L
- Fluoride 0.29 to 0.36 mg /L
- Nitrate 5.12 to 6.20 mg L
- Iron 0.20 mg/L
  - Ground & surface water sample were found to be slightly Neutral to basic in nature at all location.
  - In study area, water quality has been observed to vary considerably between the sampling locations. Mostly the parameters fall within the permissible limits of drinking water standards (IS 10500:2012).

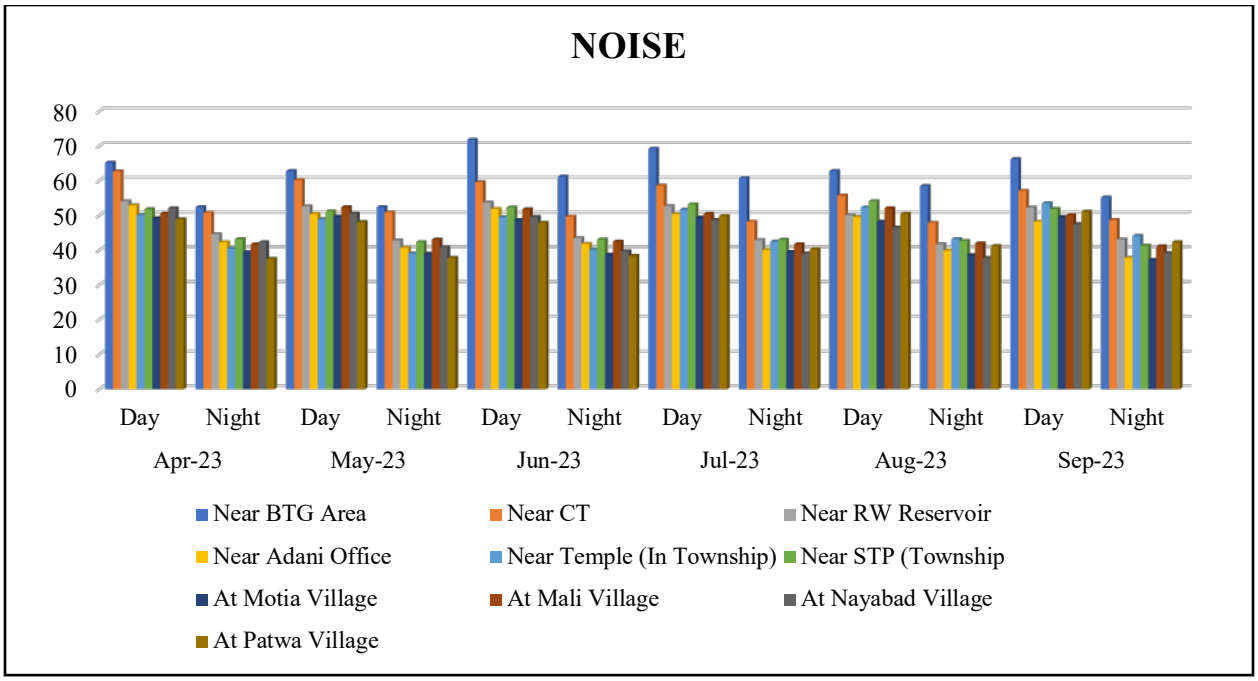
SECTION 10: NOISE MONITORING ANALYSIS

Summary Report from April to Sept 2023

S.NO.	Location	April 2023		May - 2023		June - 2023		July - 2023		Aug-2023		Sep-2023	
		Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night
1.	Near BTG Area	65.2	52.4	62.8	52.4	71.8	61.2	69.2	60.8	62.8	58.5	66.2	55.2
2.	Near CT	62.7	50.8	60.2	50.9	59.6	49.7	58.6	48.2	55.7	47.9	57.1	48.7
3.	Near RW Reservoir	54.1	44.6	52.6	42.8	53.7	43.5	52.7	42.9	50.1	41.7	52.3	43.1
4.	Near Adani Office	52.9	42.3	50.4	40.7	51.9	41.8	50.4	40.1	49.6	39.9	48.2	37.8
5.	Near Temple (In Township)	50.1	40.5	48.9	39.1	49.5	40.2	51.7	42.5	52.3	43.2	53.5	44.1
6.	Near STP (Township	51.8	43.2	51.2	42.3	52.3	43.1	53.2	43.0	54.1	42.7	51.9	41.3
7.	At Motia Village	49.2	39.4	49.7	39.0	48.7	38.7	49.4	39.5	48.2	38.6	49.6	37.2
8.	At Mali Village	50.6	41.7	52.4	43.1	51.8	42.5	50.5	41.7	52.1	42.0	50.1	41.1
9.	At Nayabad Village	52.1	42.3	50.6	40.9	49.6	39.7	48.7	39.1	46.5	37.8	47.5	39.2
10.	At Patwa Village	48.9	37.5	48.1	37.8	47.9	38.4	49.9	40.3	50.5	41.2	51.1	42.3

Interpretation

- The (Leq) noise levels at all sites are found to be 46.5 to 71.8 Leq. (dB) A for day and 37.2 to 61.2 Leq. (dB) A night time respectively. The values are found to be fairly low w.r.t. Industrial.
- The noise levels at all location are well below the NAAQS standards w.r.t noise.



Graph 5: Ambient Noise Monitoring data

Category of Zones	Leq in dB (A)	
	Day	Night
Industrial	75	70
Commercial	65	55
Residential	55	45
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 o 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 sh apply

Fig 3: Ambient Noise Standards

SECTION 11: WASTE WATER ANALYSIS

Summary Report from April to Sept 2023

S.NO.	Parameter	Apr. 2023				May 2023			June 2023		
		STP Outlet (Townsh p)	STP Outl (Plant)	STP Inle (Townsh)	STP Inle (Plant)	STP Outlet (Townsh p)	STP Outlet (Plant)	ETP Outlet	STP Outlet (Township	STP Outlet (Plant)	ETP Outle
1.	pH	6.98	7.06	6.71	7.13	7.22	7.26	7.40	7.29	7.32	7.45
2.	TDS	682.5	645.7	671	630	726.8	682.7	690.0	745.1	698.7	675.0
3.	TSS	26.1	21.6	62.9	57.6	26.1	22.3	15.2	27.2	21.9	14.7
4.	O&O	4.3	4.1	8.9	7.6	5.2	4.1	BLQ	5.8	4.6	BLQ
5.	BOD	21.10	18.6	52.9	45.6	23.10	18.14	9.0	25.12	19.42	8.0
6.	COD	70.2	62.9	265.4	238.7	80.6	75.5	40.08	90.0	70.0	40.0

S.NO	Parameter	July. 2023						Aug. 2023			Sep. 2023		
		ETP Outlet	ETP Inle	STP Outlet (Townsh)	STP Outlet (Plant)	STP Inl (Townsh p)	STP Inl (Plant)	ETP Outlet	STP Outlet (Townsh p)	STP Outle (Plant)	ETP Outlet	STP Outlet (Townsh)	STP Outlet (Plant)
1.	pH	7.42	7.14	7.32	7.29	7.69	7.10	7.39	7.29	7.25	7.92	7.32	7.31
2.	TDS	697.0	585.0	758.9	684.2	725.0	652.0	712.0	742.8	652.1	698.0	752.2	643.1
3.	TSS	15.1	56.6	30.4	19.8	58.6	55.1	14.5	29.5	17.5	13.9	32.1	15.8
4.	O&O	BLQ	BLQ	6.2	4.3	9.3	7.9	BLQ	5.9	4.1	BLQ	6.1	3.9
5.	BOD	8.1	12.2	27.4	18.1	57.1	48.1	7.8	26.4	16.4	7.5	27.4	15.1
6.	COD	50.0	80.6	92.8	65.9	275.2	260.0	48.2	91.8	72.4	46.5	92.3	75.7

Interpretation

- pH- 6.98 to 7.92
- TSS – 13.9 to 62.9 mg/l
- BOD -7.5 to 57.1 mg/l
- COD – 40.0 to 275.2 mg/l

SECTION 12: STACK MONITORING ANALYSIS

Summary Report from April to Sept 2023

S.NO.	Month	Unit -I				Unit -II				DG Set Township				
		PM	NO2	SO2	Hg	PM	NO2	SO2	Hg	PM	NOX	SO2	HC	CO
1.	Apr. 2023	16.20	73.14	BLQ	BLQ	--	--	--	--	--	--	--	--	--
2.	May 2023	16.11	49.60	58.10	BLQ	--	--	--	--	0.18	1.21	0.41	1.82	0.27
3.	June 2023	15.28	48.42	62.4	BLQ	13.4	66.0	84.0	BLQ	--	--	--	--	--
4.	July 2023	16.21	52.63	66.1	BLQ	12.3	63.9	86.0	BLQ	--	--	--	--	--
5.	Aug. 2023	15.24	50.86	63.8	BLQ	11.9	64.7	83.0	BLQ	--	--	--	--	--
6.	Sep 2023	18.90	46.58	60.53	BLQ	21.50	62.31	79.0	BLQ	--	--	--	--	--

From all the above monitoring results, it is clearly interpreted that all the values of PM, SO_2 and NO_2 were lower than the prescribed limits for all the stated locations.

SECTION 13: SOIL QUALITY ANALYSIS

Soil Analysis Report

Sr	Parameter	Village- Motia	Village- Mali	Village- Patwa	Unit
1.	pH	7.78	7.65	7.82	--
2.	Conductivity	0.298	0.274	0.314	mS/cm
3.	Chloride as Cl	210.00	189.12	235.21	mg/kg
4.	Calcium as Ca	385.42	355.31	407.25	mg/kg
5.	Sodium as Na	42.58	38.72	48.92	mg/kg
6.	Potassium as K	155.1	127.9	175.4	kg/hec
7.	Organic Matter	0.72	0.62	0.78	%
8.	Magnesium as Mg	145.10	92.98	165.78	mg/kg
9.	Available Nitrogen as N	256.03	195.04	288.43	kg/hec.
10.	Available Phosphorus	25.27	19.56	29.47	kg/hec.

Summary

All the results showing above for 3 Locations are within limit.

- pH -7.65 to 7.82
- Conductivity – 0.274 to 0.314 mS/cm
- Organic Matter – 0.62 to 0.78 %
- Nitrogen – 195.04 to 288.43 kg/hec.

CALIBRATION CERTIFICATE

VTL/FPS/01

Certificate / ULR no : CC3548230000000051F

Duc Details		DUC Fitted in instument	
Instrument Name :	Data Logger (Flow)	Name:	Fine Particulate Sampler
Make:	Atsel/SP112	Make:	Thermo
Model:	------	Mode:	TEI-121MFC
Serial No :	260-E-22	Serial No :	FPST-260-E-22
I.D No. :	VTL/FPS/01	Location	Lab
Range :	16.67 lpl (±2%)	Parameter	Fluid Flow
Least Count	0.01 lpm	Visual Insp.	ok

Standard(S) used,Associated Uncertainty & traceability of Standard(s) Used:

S.no.	Name	S.no/ID no.	Range	Uncertainty (± %)	Traceabiity	Validity
1	Gas Flow Calibrator	2170	1 - 100 lpm	1.15 & 1.10	CC3444220000 00760F	13-09-2023
2	Digital Temp.Indicator	NCL/FF/TI/08	0 - 50 °C	0.45°C	CC3421220000 00066F	07-08-2023

Environmental Condition:	Temperature 25±3°C	Humidity 50±15%rh	B.Pressure	Reference Standard	Calibration Procedure number
	22.8	51	735.4	ASTM D3195-90	CI (FF)-03

CALIBRATION RESULTS

S.no.	Average Duc Reading (lpm)	Average Standard Readings (lpm)	Error (±% F.S)	Expanded Uncertainty (±%)
1	16.68	16.66	0.12	2.50
2	16.66	16.63	0.19	2.50
3	16.65	16.62	0.18	2.50
4	16.68	16.66	0.13	2.50
5	16.67	16.65	0.13	2.50

Note:

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3. Results Reported are valid at the time of and under the stated conditions of measurement.
4. Laboratory Standards are traceable to National Standards.
5. The Estimated Expanded Uncertainty has been calculated at 95% Confidence level with Coverage factor k =2.
6. Decision Rule : Not Required

Calibration Engineer's Signature

Approved by : sushil kumar Quality/Technical Manager

NOIDA CALTECH LAB Dadri (G.B. Nagar)

CC-3542

NOIDA CALTECH LAB

Calibration Certificate

Formate No: 22 F
Page No. 1 of 2

CERTIFICATE ISSUED TO :		
M/S Vibrant Techno Lab Pvt. Ltd. SC-40, 3rd Floor, Narayan Vihar, Blocks, Ajmer Road, Jaipur 302020.	Calibration Certificate /ULR No. :	CC354823000000051F
	Service Request number :	NCL23/08
	Date of Receive:	04.05.2023
	Calibration Date :	04.05.2023
	Calibration Due Date :	04.05.2024
	Date of Issue :	10.05.2023

Equipment

Fine Particulate Sampler

CUSTOMER REFERENCE NO :

Kind Attention : ----- **Contact No:** ±91 --------

E- Mail: ----------

Certificate Issued By:

sushil kumar Quality Technical Manager

NOIDA CALTECH LAB ★ Dadri (G.B. Nagar) ★

Noida Caltech Lab Arya Nagar Puliya No.3rd, Behind the Indian Petrol Pump
Near Surjan Farm Dadri (G.B.Nagar) U.P. 203207 (India)
Phone No. : +91- 7579332243, 9810547890, Email : noidacaltech@gmail.com | noidacaltech1@gmail.com

ENVIRO INSTRUMENTS

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E-mail: enviroinstruments@gmail.com | **Website :** www.enviroinstrument.com

CC-3581

XTL/FPS/04

Calibration Certificate

Certificate No:	EI/FF/212	Page	1 of 1
SRF No:	2023/13	Field:	Fluid Flow
SRF Date	29.05.2023	ULR No.:	CC358123000000455F
Company Name & Address		Calibration Date:	29.05.2023
M/S, Vibrant Techno Lab Private Limited 3rd Floor, Plot No.:-SC 40, Narayan Vihar, Block S, Ajmer Road, Jaipur - 302020 Rajsthan (India)		Due Date :	28.05.2024
		Issue Date :	10.06.2023

DUC Details		DUC Fitted in Instrument	
Instrument Name	Rotameter	NAME / Sr. No	PM2.5 Sampler / 365 - C - 23
Make	-	Make / Model No.	Enviro Instruments / EI - 133
Model	-	ID. No.	-
Sl. No.	J22157	DUC Condition	Ok
Range	0 - 30 lpm	Location	Lab
Resolution	0.5 lpm	Calibration Performed at	Site

Standard Equipments Used (Traceable to National Standard)

Sr. No.	Instrument Name	Calibrated By	Sl.No. / ID.No.	URL No. / Cal. Certificate No.	Date of Calibration	Due. On date
1	Flow Calibrator	CSIR, NPL, New Delhi	4519 / EI/FF/02	23031822/D1.08/C-117	31.03.2023	31.03.2024

Environment Condition

Temperature (°C)	B.Pressure (mmHg)	Humidity %RH	Reference Standard	Calibration Procedure No.
25.1	740.5	60	ASTM D 5337-04, 3195-90	EI/WI/FF/05

Calibration Results For Flow of Rotameter

S.No.	Test Meter Measured Flow (lpm)	Reference True Measured flow (lpm)	Error (%)
1	16.5	16.861	-2.14
2	16.5	16.870	-2.19
3	16.5	16.881	-2.26
4	16.5	16.890	-2.31
5	16.5	16.885	-2.28

Expanded Uncertainty ± 2.59 % at 95% confidence Level (*K* = 2)

Notes :-

1. The Calibration results reported in this certificate valid at the time of and under the stated conditions of measurement
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3. This Certificate shall not be reproduced except in full , without written approval of the laboratory.
4. This certificate is intended of only for guidance and not for legal purpose or for advertisement.
5. The Results Reported are Only for the Item Under Calibration.
6. The Reported Results are Traceable to National Stardard.

ENVIRO INSTRUMENTS EI Gr. Noida

Checked By	Authorized By
GAURAG NIGAM (Technical Manager)	DEVENDRA SINGH (Quality Manager)

ENVIRO INSTRUMENTS

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Head Office : A-04, Sigma-IV, Greater Noida (Gautam Buddh Nagar) U.P.-201310 (India)

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E-mail: enviroinstruments@gmail.com | **Website :** www.enviroinstrument.com

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Calibration Certificate

Certificate No:	**EI/ET/88**	**Page**	**1 of 1**
SRF No:	**2023/13**	**Field:**	**Electro-Technical**
SRF Date	**29.05.2023**	**ULR No.:**	**CC358123000000456F**
Company Name & Address		**Calibration Date:**	**29.05.2023**
M/S, Vibrant Techno Lab Private Limited **3rd Floor, Plot No.:-SC 40, Narayan Vihar, Block S,** **Ajmer Road, Jaipur - 302020 Rajsthan (India)**		**Due Date :**	**28.05.2024**
		Issue Date :	**10.06.2023**

DUC Details

Instrument Name	Time Totalizer	**Name / Sr. No.**	PM2.5 Sampler / 365 - C - 23
Sr. No.	T - 365	**Make / Model**	Enviro Instruments / EI - 133
Make		**ID. No.**	-
Model No.	-	**DUC Condition**	Ok
Range	0 - 99999.99 hr.	**Location**	Lab
Resolution	0.01 hr.	**Calibration Performed at**	Site

Standard Equipments Used (Traceable to National Standard)

Sr. No.	Instrument Name	Calibrated By	SINo./IDNo.	URL No. /Cal. Certificate No.	Date of Calibration	Due. On date
1	Universal Digital Timer	A.V Industries, Faridabad	01-DTA - 2019 EICL/ET/01	CC322323000000025F / 0025	27.01.2023	26.01.2024

Environment Condition

Temperature °C	B.Pressure (mmHg)	Humidity %RH	Reference Standard	Calibration Procedure No.
24.1	740.5	54	IS 10996	EI/WI/ET/02

Calibration Results

DUC has been calibrated for following Parameter (S) ranges (S)

S.No.	Displayed Value on DUC (min)	Std. Reading Time (min.)	Error (min.)	Expanded Uncertainty at 95 % of Confidence Level (k =2) ±
1	0.50 (30.00)	30.005	-0.005	23.26 Sec

Notes :-

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5. The Results Reported are Only for the Item Under Calibration.

6. The Reported Results are Traceable to National Stardard.

Checked By	Authorized By
GAURAG NIGAM (Technical Manager)	DEVENDRA SINGH (Quality Manager)

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Mobile : +91-7982443735, +91-8287938780, +91-9412833339 | **Phone :** 0120-2395648

E-mail : enviroinstruments@gmail.com | **Website :** www.enviroinstruments.com

CC-3184

XTL/NM/03

Calibration Certificate

Certificate No:	**EI/ME/565**	**Page**	1 of 1
SRF No:	**2022/352**	**Field:**	Mechanical
SRF Date	**02.11.2022**	**ULR No.:**	CC318422000007214F
Company Name & Address		**Calibration Date:**	02.11.2022
M/s,Vibrant Techno Lab Private Limited **3rd Floor, Plot No. SC - 40, Narayan Vihar,** **Blocks, Ajamer Road Jaipur - 302010 Rajasthan India**		**Due Date :**	01.11.2023
		Issue Date :	04.11.2022

DUC Details

Instrument Name	Sound Level Meter	**Sr. No.**	202115020
Make	HTC	**ID No.**	-
Model No.	SL - 1352	**Location**	Lab
Range	30-130 dB	**DUC Condition**	OK
Resolution	0.1 dB	**Calibration Performed at**	Lab

Standard Equipments Used (Traceable to National Standard)

Sr. No.	Instrument Name	Calibrated By	SlNo./IDNo.	URL No. /Cal. Certificate No.	Date of Calibration	Due. On date
1	Sound Level Calibrator	FCRI Palakkad (Kerala)	Q630250 EICL/ME/01	CC239522110000465F / FCRI/EQL/22-23/232	18.10.2022	---

Environment Condition	Temp.	Humidity	B.Pressure	Reference Standard	Calibration Procedure No.
	24.6 °C	60 %RH	741.3 mmHg	IS:15575(2):2005/ IEC61672-2(2003)	EI/WI-Mech-03

Calibration Results :

S.No.	DUC Reading (dBA)	Std. Reading (dBA)	Error(%)	Expanded Uncertainty(±)
1	93.7	93.9	-0.21	0.22 dB
2	113.6	114.1	-0.44	0.22 dB

The Reported Uncertainty is at the coverage factor k = 1.96 which corresponds to a coverage probability of approximately 95% for a normal distribution.

Notes :-

1. The Calibration results reported in this certificate valid at the time of and under the stated conditions of measurement
2. The Laboratory accepts responsibility for content of this certificate.
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5. Any complaint about this certificate should be communicated in writing within 7 days of its issue.
6. Total liability of enviro instrument will be limited to the invoiced amount only.
7. In case of feedback/complaints please send an email at enviroinstruments@gmail.com

Authorized By

ENVIRO INSTRUMENTS Gr. Noida

Ashish Kumar Verma
(Chief Executive Officer)

ENVIRO INSTRUMENTS

(An ISO 9001:2015 Certified Company)

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E-mail: enviroinstruments@gmail.com | **Website :** www.enviroinstrument.com

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VTL/NM/04

Calibration Certificate

Certificate No:	**EI/ET/97**	**Page**	**1 of 1**
SRF No:	**2023/13**	**Field:**	**Mechanical**
SRF Date	**29.05.2023**	**ULR No.:**	**CC358123000000477F**
Company Name & Address		**Calibration Date:**	**29.05.2023**
M/S, Vibrant Techno Lab Private Limited **3rd Floor, Plot No.:-SC 40, Narayan Vihar, Block S,** **Ajmer Road, Jaipur - 302020 Rajsthan (India)**		**Due Date :**	**28.05.2024**
		Issue Date :	**10.06.2023**

DUC Details			
Instrument Name	Sound Level Meter	**Sr. No.**	-
Make	Mextech	**ID No.**	-
Model No.	SL - 4012	**Location**	Lab
Range	30 - 130 Db	**DUC Condition**	OK
Resolution	0.1 dB	**Calibration Performed at**	Site

Standard Equipments Used (Traceable to National Standard)

Sr. No.	Instrument Name	Calibrated By	SINo./IDNo.	URL No. /Cal. Certificate No.	Date of Calibration	Due. On date
1	Sound Level Calibrator	FCRI Palakkad (Kerala)	Q630250 EICL/ME/01	CC239522110000465F / FCRI/EQL/22-23/232	18.10.2022	---

Environment Condition

Temperature °C	B.Pressure (mmHg)	Humidity %RH	Reference Standard	Calibration Procedure No.
25.1	740.5	60	IS:15575(2):2005/ IEC61672-2(2003)	EI/WI/MECH/01

Calibration Results :

S.No.	DUC Reading (dBA)	Std. Reading (dBA)	Error(%)	Expanded Uncertainty(±)
1	93.2	93.9	-0.75	0.22 dB
2	113.3	114.1	-0.70	0.22 dB

The Reported Uncertainty is at the coverage factor k = 1.96 which corresponds to a coverage probability of approximately 95% for a normal distribution.

Notes :-

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6. The Reported Results are Traceable to National Stardard.

ENVIRO INSTRUMENTS EI Gr. Noida

Checked By	Authorized By
GAURAG NIGAM (Technical Manager)	DEVENDRA SINGH (Quality Manager)

CALIBRATION CERTIFICATE

Certificate / ULR no : CC354823000000057F

Duc Details		DUC Fitted in instument	
Instrument Name :	Orifice Manometer Flow	Name:	Respirable Dust Sampler
Make:	Thermo	Make:	Thermo
Mode:	TEL-108NL	Mode:	TEI-108NL
Serial No :	RDST-268-E-22	Serial No :	RDST-268-E-22
I.D No. :	VTL/RDS/01	Location	Lab
Range :	0.6 - 1.4 m3/min	Parameter	Flow
Least Count :	As Per Instrument	Visual Insp.	OK

Standard(S) used,Associated Uncertainty & traceability of Standard(s) Used:

S.no.	Name	S.no/ID no.	Range	Uncertainty (±)	Traceabiity	Validity
1	Top Loading Calibrator	26-E-22	0.6-1.4 m3/min	2.5 % m3/min	CC3184220000005601F	12.08.2023
2	Pressure Indicator	PI- 27	0 - 1000 mmwc	15 pa	CC3184220000005603F	12.08.2023
3	Digital Temp.Indicator	NCL/FF/TI/08	0 - 50 °C	0.45°C	CC342122000000066F	07-08-2023

Environmental Condition:	Temperature 25±3°C	Humidity 50±15%rh	B.Pressure	Reference Standard	Calibration Procedure number
	22.3	51	735.3	IS 5182 (Part -4)1999 IS:5182(Part-23)2006	CI (FF)-01

CALIBRATION REULTS

SL.No.	Test piece measured Indicated flow rate (m3/min)	Reference True Measured flow rate in Calibration Curve (m3/min)	Error (±% F.S)	Expanded Uncertainty (±%)rdg.
1	0.725	0.716	0.643	3.80
2	0.850	0.838	0.857	3.80
3	0.920	0.907	0.929	3.80
4	1.200	1.188	0.857	3.80
5	1.300	1.279	1.500	3.80

Note:

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3. Results Reported are valid at the time of and under the stated conditions of measurement.
4.Laboratory Standards are traceable to National Standards.
5.The Estimated Expanded Uncertainty has been calculated at 95% Confidence level with Coverage factor k =2.
6. Decision Rule : Not Required

Calibration Engineer's Signature

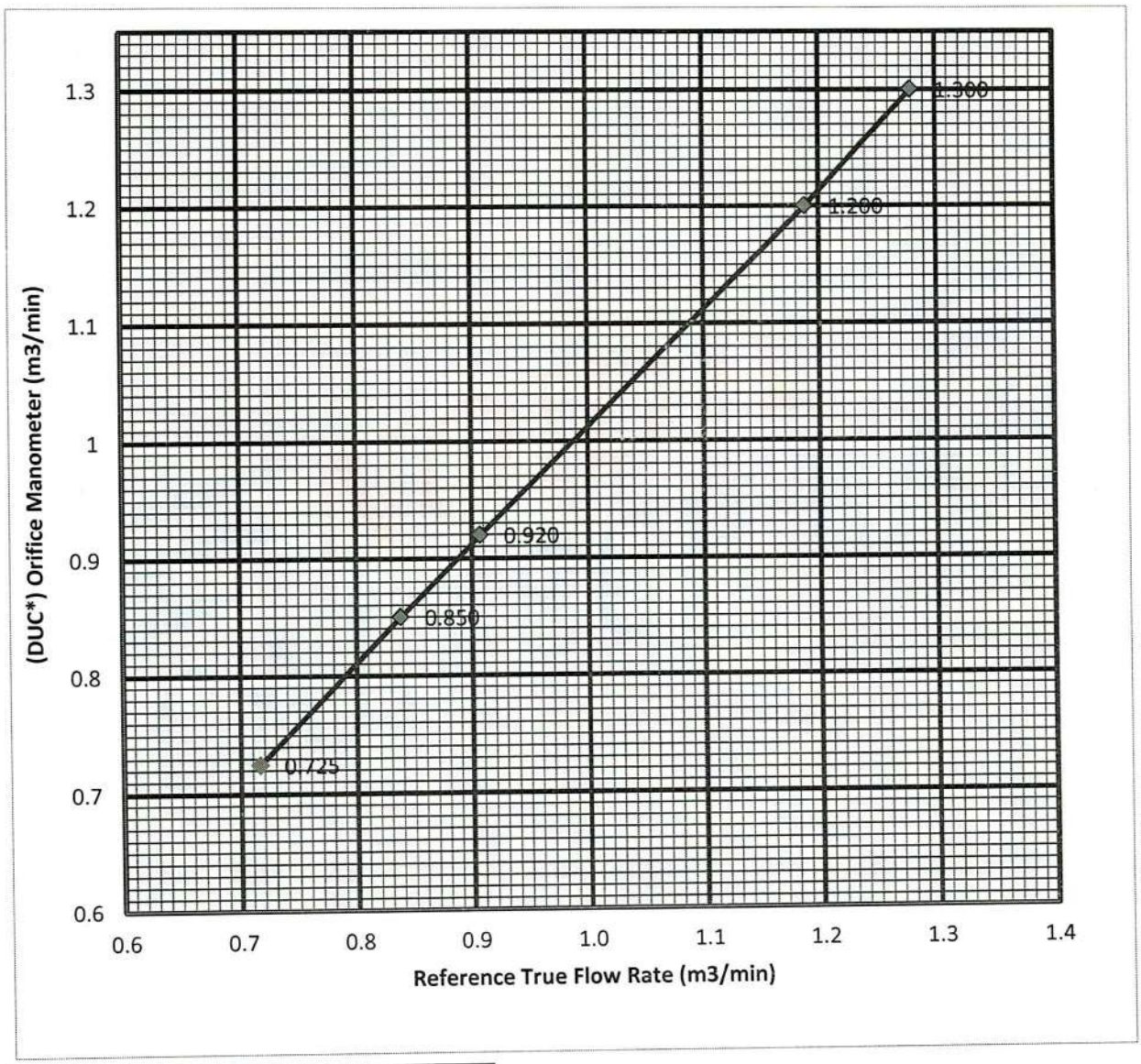
Approved by
sushil kumar
Quality Technical
Manager

NOIDA CALTECH LAB ★ Dadri (G.B. Nagar) ★

CALIBRATION CERTIFICATE

Certificate / ULR no : CC354823000000057F

CALIBRATION CURVE FOR ORIFICE MANOMETER



Sl.No.	Reference True Flow Rate (m^3/min)	(DUC*) Orifice Manometer (m^3/min)
1	0.716	0.725
2	0.838	0.850
3	0.907	0.920
4	1.188	1.200
5	1.279	1.300

Calibration Engineer's Signature

NOIDA CALTECH LAB ★ Dadri (G.B. Nagar) ★

Approved by : sushil kumar
Quality Technical Manager

CC-3548

NOIDA CALTECH LAB

Calibration Certificate

Formate No: 22 F
Page 1 of 3

CERTIFICATE ISSUED TO :		
M/S Vibrant Techno Lab Pvt. Ltd. SC-40, 3rd Floor, Narayan Vihar, Blocks, Ajmer Road, Jaipur 302020.)	Calibration Certificate /ULR No. :	CC354823000000057F
	Service Request number :	NCL23/08
	Date of Receive:	04.05.2023
	Calibration Date :	04.05.2023
	Calibration Due Date :	04.05.2024
	Date of Issue :	10.05.2023

Equipment
Respirable Dust Sampler

CUSTOMER REFERENCE NO :

Kind Attention : ----- Contact No: ±91 --------

E- Mail: ----------

Certificate Issued By
Sushil kumar
Quality/Technical Manager

NOIDA CALTECH LAB ★ Dadri (G.B. Nagar) ★

Noida Caltech Lab Arya Nagar Puliya No.3rd, Behind the Indian Petrol Pump
Near Surjan Farm Dadri (G.B.Nagar) U.P. 203207 (India)
Phone No. : +91- 7579332243, 9810547890, Email : noidacaltech@gmail.com | noidacaltech1@gmail.com

ENVIRO INSTRUMENTS

(An ISO 9001:2015 Certified Company)

Head Office : A-04, Sigma-IV, Greater Noida (Gautam Buddh Nagar) U.P.-201310 (India)

Mobile: +91-7982443735, +91-7701969007, +9412833339 | **Phone :** 0120-2395648

E-mail: enviroinstruments@gmail.com | **Website :** www.enviroinstrument.com

CC-3581

Calibration Certificate

Certificate No:	**EI/FF/574**	**Page**	**1 of 2**
SRF No:	**2023/96**	**Field:**	**Fluid Flow**
SRF Date	**19.06.2023**	**ULR No.:**	**CC358123000001204F**
Company Name & Address		**Calibration Date:**	**21.06.2023**
M/S, Vibrant TECHNO Lab Private Limited. 3rd Floor, Plot no: - SC 40, Narayan Vihar, Block s, Ajmer road, Jaipur-302020 Rajasthan (India)		**Due Date :**	**20.06.2024**
		Issue Date :	**30.06.2023**
DUC Details		**DUC Fitted in Instrument**	
Instrument Name	Orifice Manometer Flow	**Name / Sl. No.**	R.D.S. / 349 - C - 23
Make	Enviro Instruments	**Make / Model No.**	Enviro Instruments / EI - 142 BL
Range	0.6 - 1.5 m^3/min	**ID. No.**	-
Resolution	0.01 & 0.025 m^3/min	**Location**	Lab
		Calibration Performed at	Site

Standard Equipments Used (Traceable to National Standard)

Sr. No.	Instrument Name	Calibrated By	Sl.No. / ID.No.	URL No. /Cal. Certificate No.	Date of Calibration	Due. On date
1	Top Loading Calibrator	FCRI, Palakkad, Kerla	04-E-17 / EICL/TLC/05	CC23952300000000226F / CA 23 2304 06	06.04.2023	--
2	Digital Altimeter	Delhi Calibration Labotatory	EICL/FF/05	CC202221000006449F	16.03.2023	16.03.2024

Environment Condition

Temperature °C	B.Pressure (mmHg)	Humidity %RH	Reference Standard	Calibration Procedure No.
24.4	740.5	54	IS 5182 (Part -4)1999 IS:5182(Part-23) 2006	EI/WI/FF/02

Calibration Results For Orifice Manometer Flow

S.No.	Test piece measured Indicated flow rate (m3/min)	Reference True Measured flow rate in Calibration Curve (m3/min)	Error(%)
1	1.350	1.340	0.746
2	1.200	1.190	0.840
3	1.050	1.030	1.942
4	0.850	0.840	1.190
5	0.650	0.630	3.175

(Curve Enclosed)

Expanded Uncertainty at Range 0.6 - 1.4 m^3/min ± 3.25 % at 95% confidence Level (K=2)

Notes :-

1.The Calibration results reported in this certificate valid at the time of and under the stated conditions of measurement

2.The Laboratory accepts responsibility for content of this certificate.

3.This Certificate shall not be reproduced except in full , without written approval of the laboratory.

4.This certificate is intended of only for guidance and not for legal purpose or for advertisement.

5. The Results Reported are Only for the Item Under Calibration.

6. The Reported Results are Traceable to National Stardard.

Authorized By

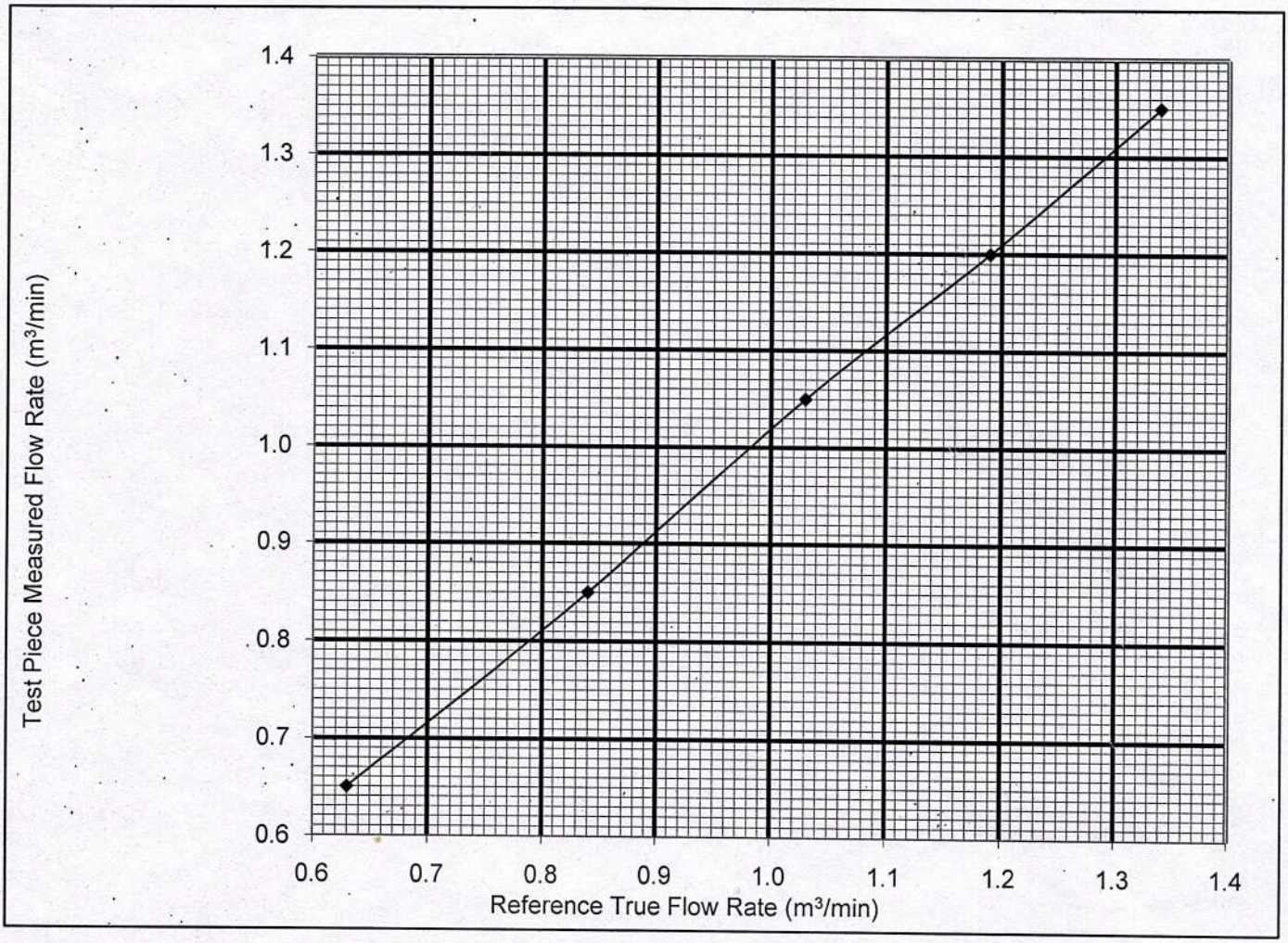
GAURAG NIGAM
(Technical Manager)

ENVIRO INSTRUMENTS * Gr. Noida *

Enviro Instruments

Certificate No. **EI/FF/574**
Date of Calibration :- 21.06.2023

CALIBRATION CURVE FOR ORIFICE MANOMETER FLOW



Sl.No.	Reference True Flow Rate (m^3/min)	Test Piece Measured Flow Rate (m^3/min)
1	1.340	1.350
2	1.190	1.200
3	1.030	1.050
4	0.840	0.850
5	0.630	0.650

Name of the Instrument/ Sr. No.	R.D.S. / 349 - C - 23
Make / Model No.	Enviro Instruments / EI - 142 BL
Name of the unit calibrated	Orifice Manometer Flow
Name of the Party	**M/S, Vibrant TECHNO Lab Private Limited. 3rd Floor, Plot no: - SC 40, Narayan Vihar, Block s, Ajmer road, Jaipur-302020 Rajasthan (India)**

Notes :-
1. The Calibration results reported in this certificate valid at the time of and under the stated conditions of measurement
2. The Laboratory accepts responsibility for content of this certificate.
3. This Certificate shall not be reproduced except in full , without written approval of the laboratory.
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5. The Results Reported are Only for the Item Under Calibration.
6. The Reported Results are Traceable to National Stardard.

Authorized By

GAURAG NIGAM
(Technical Manager)

ENVIRO INSTRUMENTS * Gr. Noida *

CALIBRATION CERTIFICATE

VTL/SMK/01

Certificate / ULR no : CC354823000000060F

Duc Details		DUC Fitted in instument	
Instrument Name :	Rotameter	Name:	Stack Sampler
Make:	-----	Make:	Thermo
Model:	TEI-135	Mode:	TEI-130
Serial No :	F20232	Serial No :	SMKT-184-E-22
I.D No. :	VTL/SMK/01	Location	Lab
Range :	0 - 6 lpm	Pararneter	Fluid Flow
Least Count :	0.1 lpm	Visual Insp.	ok

Standard(S) used,Associated Uncertainty & traceability of Standard(s) Used:

S.no.	Name	S.no/ID no.	Range	Uncertainty (± %)	Traceabiity	Validity
1	Gas Flow Calibrator	2170	1 - 100 lpm	1.15 & 1.10	CC34442200000 0760F	13-09-2023
2	Digital Temp.Indicator	NCL/FF/TI/08	0 - 50 °C	0.45°C	CC34212200000 0066F	07-08-2023

Environmental Condition:	Temperature 25±3°C	Humidity 50±15%rh	B.Pressure	Reference Standard	Calibration Procedure number
	22.1	51	735.1	ASTM D3195-90	CI (FF)-03

CALIBRATION RESULTS

S.no.	Duc Reading (lpm)	Average Standard Readings (lpm)	Error (±% F.S)	Expanded Uncertainty (±%)rdg.
1	1.0	1.11	-1.90	7.91
2	3.0	3.14	-2.37	5.65
3	4.0	4.12	-2.03	5.50
4	5.0	5.15	-2.53	5.38
5	6.0	6.21	-3.43	5.38

Note:
1.This Certificate refers only to the particular item submitted for calibration.
2.This Certificate shall not be reproduced,except in full,without the written permission of Chief Executive Noida Caltech Lab Dadri Noida
3. Results Reported are valid at the time of and under the stated conditions of measurement.
4.Laboratory Standards are traceable to National Standards.
5.The Estimated Expanded Uncertainty has been calculated at 95% Confidence level with Coverage factor k =2
6.Decision Rule : Not Required

Calibration Engineer's Signature
Rakesh

NOIDA CALTECH LAB ★ NOIDA CALTECH LAB ★ Dadri (G.B. Nagar)

Approved by : sushil kumar
Quality/Technical Manager

CC-3548

NOIDA CALTECH LAB

Calibration Certificate

Formate No: 22 F
Page No. 1 of 2

CERTIFICATE ISSUED TO :		
M/S Vibrant Techno Lab Pvt. Ltd. SC-40, 3rd Floor, Narayan Vihar, Blocks, Ajmer Road, Jaipur 302020.	Calibration Certificate /ULR No. :	CC354823000000060F
	Service Request number :	NCL23/08
	Date of Receive:	04.05.2023
	Calibration Date :	05.05.2023
	Calibration Due Date :	05.05.2024
	Date of Issue :	10.05.2023

Equipment

Rotameter

CUSTOMER REFERENCE NO :

Kind Attention : ----- **Contact No:** ±91 --------

E- Mail: ----------

Certificate Issued By:
sushil kumar Quality/Technical Manager

NOIDA CALTECH LAB ★ Dadri (G.B. Nagar) ★

Noida Caltech Lab Arya Nagar Puliya No.3rd, Behind the Indian Petrol Pump
Near Surjan Farm Dadri (G.B.Nagar) U.P. 203207 (India)
Phone No. : +91- 7579332243, 9810547890, Email : noidacaltech@gmail.com | noidacaltech1@gmail.com

CALIBRATION CERTIFICATE

Certificate / ULR no : CC354823000000058F

Duc Details		DUC Fitted in instument	
Instrument Name :	Rotameter	Name:	Stack Sampler
Make:	-----	Make:	Thermo
Model:	TEI-130	Mode:	TEI-130
Serial No :	L21249	Serial No :	SMKT-184-E22
I.D No. :	VTL/SMK/01	Location	Lab
Range :	0 - 60 lpm	Parameter	Fluid Flow
		Visual Insp.	ok

Standard(S) used,Associated Uncertainty & traceability of Standard(s) Used:

S.no.	Name	S.no/ID no.	Range	Uncertainty (± %)	Traceabiity	Validity
1	Gas Flow Calibrator	2170	1 - 100 lpm	1.15 & 1.10	CC34442200000 0760F	13-09-2023
2	Digital Temp.Indicator	NCL/FF/TI/08	0 - 50 °C	0.45°C	CC34212200000 0066F	07-08-2023

Environmental Condition:	Temperature 25±3°C	Humidity 50±15%rh	B.Pressure	Reference Standard	Calibration Procedure number
	22.1	52	735.4	ASTM D3195-90	CI (FF)-03

CALIBRATION RESULTS

S.no.	Duc Reading (lpm)	Average Standard Readings (lpm)	Error (±% F.S)	Expanded Uncertainty (±%)rdg.
1	5.0	5.22	-0.28	2.77
2	10.0	10.36	-0.45	2.57
3	30.0	30.46	-0.58	2.54
4	50.0	50.65	-0.82	2.50
5	60.0	60.61	-0.76	2.50

Note:
1.This Certificate refers only to the particular item submitted for calibration.
2.This Certificate shall not be reproduced,except in full,without the written permission of Chief Executive Noida Caltech Lab Dadri Noida.
3. Results Reported are valid at the time of and under the stated conditions of measurement.
4.Laboratory Standards are traceable to National Standards.
5.The Estimated Expanded Uncertainty has been calculated at 95% Confidence level with Coverage factor k =2.
6.Decision Rule : Not Required

Calibration Engineer's Signature
Rakesh

NOIDA CALTECH LAB ★ Dadri (Gautam Buddha Nagar) ★

Approved by : sushil kumar
Quality/Technical Manager

CC-3548

NOIDA CALTECH LAB

Calibration Certificate

Formate No: 22 F
Page No. 1 of 2

CERTIFICATE ISSUED TO :		
M/S Vibrant Techno Lab Pvt. Ltd. SC-40, 3rd Floor, Narayan Vihar, Blocks, Ajmer Road, Jaipur 302020.	Calibration Certificate /ULR No. :	CC354823000000058F
	Service Request number :	NCL23/08
	Date of Receive:	04.05.2023
	Calibration Date :	05.05.2023
	Calibration Due Date :	05.05.2024
	Date of Issue :	10.05.2023

Equipment

Rotameter

CUSTOMER REFERENCE NO :

Kind Attention : ----- **Contact No:** ±91 --------

E- Mail: ----------

Certificate Issued By:
sushil kumar Quality/Technical Manager

NOIDA CALTECH LAB ★ Dadri (G.B. Nagar) ★

Noida Caltech Lab Arya Nagar Puliya No.3rd, Behind the Indian Petrol Pump
Near Surjan Farm Dadri (G.B.Nagar) U.P. 203207 (India)
Phone No. : +91- 7579332243, 9810547890, Email : noidacaltech@gmail.com | noidacaltech1@gmail.com

CALIBRATION CERTIFICATE

Certificate / ULR no : CC354823000000059F

Duc Details	
Name of the Equipment/Instrument	S- Type Pitot Tube
Make	-----
Model	-----
Serial Number	PT-65
I.D No.	VTL/S/01
Range :	3 - 20 m/sec.
Length	0.6 + 0.6 mtr.
Location	Lab

Standard(S) used,Associated Uncertainty & traceability of Standard(s) Used:

S.no.	Name	S.no/ID no.	Range	Uncertainty (± %)	Traceabiity	Validity
1	S Type Pitot Tube	EI-26	0.6 Metere	2.70%	CC318422000005604F	12.08.2023
2	Temperature Indicator	NCL/FF/TI/08	0 - 50 °C	± 0.45 °C	CC342122000000066F	07.08.2023
3	Diffrential Indicator	PI- 26	0 to 100 mmwc	15 pa	CC318422000005605F	12.08.2023

Environmental Condition:	Temperature 25±3°C	Humidity 50±15%rh	B.Pressure	Reference Standard	Calibration Procedure number
	22.5	54	735.2	ASTM 3796-90 (Reapproved 2004)	CI (FF)-02

CALIBRATION REULTS

S.no.	Standard 'S' Type Pitot Tube K = 0.8664		'S' Type Pitot Tube Dynamic Pressure	Factor	Expanded Uncertainty
	Dynamic Pressure (mmWc)	Air Velocity (m/s)	(mmWc)	K	(± %)
1	2.0	5.07	2.1	0.8434	5.7
2	5.6	8.42	5.5	0.8734	5.7
3	13.5	13.04	13.5	0.8627	5.7
4	19.4	15.66	19.3	0.8663	5.7
5	32.3	20.19	32.2	0.8654	5.7
			Averaged Coefficient (K)	0.8622	

Note:

1.This Certificate refers only to the particular item submitted for calibration.
2.This Certificate shall not be reproduced,except in full,without the written permission of Chief Executive Noida Caltech Lab Dadri Noida.
3. Results Reported are valid at the time of and under the stated conditions of measurement.
4.Laboratory Standards are traceable to National Standards.
5.The Estimated Expanded Uncertainty has been calculated at 95% Confidence level with Coverage factor k =2.
6.Decision Rule : Not Required

Calibration Engineer's Signature

NOIDA CALTECH LAB ★ Dadri (Arya Nagar) ★

Approved by : sushil kumar
Quality/Technical Manager

CC-3548

NOIDA CALTECH LAB

Calibration Certificate

Formate No: 22 F

Page No. 1 of 2

CERTIFICATE ISSUED TO :	Calibration Certificate /ULR No. :	CC354823000000059F
M/S Vibrant Techno Lab Pvt. Ltd. SC-40, 3rd Floor, Narayan Vihar, Blocks, Ajmer Road, Jaipur 302020.	Service Request number :	NCL23/08
	Date of Receive:	04.05.2023
	Calibration Date :	05.05.2023
	Calibration Due Date :	05.05.2024
	Date of Issue :	10.05.2023

Equipment

S - Type Pitot Tube

CUSTOMER REFERENCE NO : ------

Kind Attention : ------ Contact No: ±91

E- Mail: -------

Certificate Issued By:
sushil kumar Quality/Technical Manager

NOIDA CALTECH LAB ★ Dadri (G.B.Nagar) ★

Noida Caltech Lab Arya Nagar Puliya No.3rd, Behind the Indian Petrol Pump
Near Surjan Farm Dadri (G.B.Nagar) U.P. 203207 (India)
Phone No. : +91- 7579332243, 9810547890, Email : noidacaltech@gmail.com | noidacaltech1@gmail.com

National Accreditation Board for Testing and Calibration Laboratories

CERTIFICATE OF ACCREDITATION

VIBRANT TECHNO LAB PRIVATE LIMITED

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2017

"General Requirements for the Competence of Testing & Calibration Laboratories"

for its facilities at

PLOT NO. SC 40, 3RD FLOOR, NARAYAN VIHAR S, AJMER ROAD, JAIPUR, RAJASTHAN, INDIA

in the field of

TESTING

Certificate Number: TC-11227

Issue Date: 20/12/2022 **Valid Until:** 19/12/2024

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.
(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Name of Legal Identity : VIBRANT TECHNO LAB PRIVATE LIMITED

Signed for and on behalf of NABL

N. Venkateswaran
Chief Executive Officer

केन्द्रीय प्रदूषण नियंत्रण बोर्ड
CENTRAL POLLUTION CONTROL BOARD
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय भारत सरकार
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE GOVT. OF INDIA

F.No. LB/99/7/2021-INST LAB-HO-CPCB-HO/Pvt./ 1013 **Dated: 28th March 2023**

Provisional Certificate

To,

Head of Laboratory,
M/s Vibrant Techno Lab Private Limited,
Plot No. SC 40, 3rd Floor, Narayan Vihar S,
Ajmer Road, Jaipur- 302020, Rajasthan,

Subject: Recognition of M/s Vibrant Techno Lab Private Limited, Plot No. SC 40, 3rd Floor, Narayan Vihar S, Ajmer Road, Jaipur- 302020, Rajasthan, as Environmental laboratory under the Environmental (Protection) Act- 1986.

Sir,

I am directed to refer the online application, dated 24/01/2023 for the recognition of your laboratory under Environmental (Protection) Act, 1986. Based on the recommendations of the concerned Division, approval of Competent Authority for recognition of Environmental laboratories and your acceptance of the revised terms and conditions at Annexure-III & IV of the guidelines for recognition of environmental laboratories, CPCB approves the recognition **M/s Vibrant Techno Lab Private Limited, Plot No. SC 40, 3rd Floor, Narayan Vihar S, Ajmer Road, Jaipur- 302020, Rajasthan** and shall be notified in the Gazette of India. Considering the current requirement of mandatory accreditation/ certifications of the laboratory, **this recognition shall be valid up to 19/12/2024.**

2. As sought in the aforementioned application, **M/s Vibrant Techno Lab Private Limited, Plot No. SC 40, 3rd Floor, Narayan Vihar S, Ajmer Road, Jaipur- 302020, Rajasthan** may undertake the following tests:

   i. **Physical Tests-**Conductivity, Colour, pH, Fixed & Volatile Solids, Total Solids, Total Dissolved Solids, Total Suspended Solids, Turbidity, Temperature, Velocity & Discharge Measurement of Industrial Effluent Stream, Flocculation Test (Jar test), Settleable Solids and Sludge Volume Index.
   ii. **Inorganic (General and Non-metallic):** Acidity, Alkalinity, Ammonical Nitrogen, Chloride, Chlorine Residual, Dissolved Oxygen, Fluoride, Total Hardness, Total Kjeldahl Nitrogen (TKN), Nitrite Nitrogen, Nitrate Nitrogen, Phosphate, Sulphate, Carbon Dioxide, Iodine, Sulphite, Silica and Sulphide.
   iii. **Inorganic (Trace Metals):** Boron, Cadmium, Calcium, Total Chromium, Chromium Hexavalent, Copper, Iron, Lead, Magnesium, Mercury, Nickel, Potassium, Sodium, Sodium Absorption Ratio, Zinc, Arsenic, Aluminium, Manganese and Selenium.
   iv. **Organics (General) and Trace Organics:** Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), Oil and Grease, Phenolic Compounds, Pesticides (each) (Organo-Chlorine and Organo Nitrogen-Phosphorus), Surfactant, Poly-Nuclear Aromatic Hydrocarbon (PAH) each, Organic Carbon) in solid) and Carbon/Nitrogen Ratio.
   v. **Microbiological Test:** Total Coliform, Faecal Coliform, *E. coli, Faecal Streptococci* and Total Plate Count.
   vi. **Toxicological Tests:** Bioassay Method for Evaluation of Toxicity Using Fish and Measurement of Toxicity Factor Using Zebra Fish (Dimensionless Toxicity Test).
   vii. **Biological Tests:** Benthic Organism Identification and Count, Chlorophyll and Primary Productivity
   viii. **Characterization of Hazardous Waste:** Preparation of Leachate (TCLP Extract/Water Extract), Toxicity and Measurement of Heavy Metals/Pesticides in the Waste/Leachate.
   ix. **Soil/Sludge/Sediment and Solid Waste:** Boron, Cation Exchange Capacity (CEC), Electrical Conductivity, Nitrogen (Available), Organic Carbon/Matter (Chemical Method), pH, Phosphorous (Available), Phosphate (Ortho), Phosphate (Total), Potassium, SAR in Soil

Contd.

Extract, Sodium, Soil moisture, TKN, Calorific Value, Ammonia, Bicarbonate, Calcium, Calcium Carbonate, Chloride, Exchangeable Sodium Percentage (ESP), Heavy Metals, Magnesium, Nitrate, Nitrite, PAH, Potash (available), Total Water Soluble Salt and Water Holding Capacity.

x. **Ambient Air/ Fugitive Emissions:** Nitrogen Dioxide (NO_2), Sulphur Dioxide (SO_2), Total Suspended Particulate Matter, Respirable Suspended Particulate Matter PM_{10}, Ammonia, Carbon monoxide, Chlorine, Fluoride, Non-Methane Hydrocarbon, Lead, Methane, Ozone, Polycyclic Aromatic Hydrocarbon (PAH) Benzo-a-Pyrine & others and $PM_{2.5}$.

xi. **Stack Gases/ Source Emission:** Particulate Matter, Sulphur Dioxide, Velocity & Flow, Carbon Dioxide, Carbon Monoxide, Temperature, Oxygen, Oxides of Nitrogen, Acid Mist, Ammonia, Chlorine, Fluoride (Gaseous), Total Hydrocarbon, Carbon Disulphide and Hydrogen Sulphide.

xii. **Noise Level:** Noise Level Measurement (20-140 dBa) and Ambient Noise and Source Specific Noise.

xiii. **Meteorological:** Ambient Temperature, Wind Direction, Wind Speed, Relative Humidity and Rainfall.

3. Further, the following analysts have been approved as Government Analysts.

   i. Sh. Raj Kumar Yadav
   ii. Sh. Nemichand
   iii. Sh. Umesh Kumar Sharma

4. The laboratory shall compulsorily participate in the Analytical Quality Exercise conducted by the Central Pollution Control Board (CPCB) to ascertain the capability of the laboratory and analysis carried out and shall submit quarterly progress report to CPCB.

5. The surprise inspection/periodic surveillance of the recognized environment laboratory will be undertaken by CPCB to assess its proper functioning systematic operation and reliability of data generated at the laboratory.

6. It is also mandatory for the laboratory to have requisite accreditations of the ISO: 17025 and ISO:45001 and its renewal as per accreditation rules. This recognition is subject to such accreditations and renewals as applicable. The laboratory is required to apply online for further renewal of recognition through CPCB web portal after renewal of the mandatory accreditations / certifications concerned.

7. The laboratory should compulsorily follow the accepted terms and conditions. In case of serious non-compliance of any of the terms and conditions, the laboratory may be black listed for a minimum period of two years and civil/criminal proceedings, as applicable, may be initiated for performing functions on behalf of the Government in an unauthorized manner.

Yours faithfully,

K. Rg 28/3/23

(Dr. K. Ranganathan)
Scientist-E & Divisional Head
Instrumentation laboratory

डॉ. के. रंगनाथन / Dr. K. Ranganath
वैज्ञानिक 'ई' / Scientist 'E'
प्रभारी जल एवं उपकरणीय प्रयोगशाला
Div. Head-Water & Instrumentation Laboratory
केंद्रीय प्रदूषण नियंत्रण बोर्ड
Central Pollution Control Board
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार
(Min. Environment, Forest & Climate Change, Govt. of India)
परिवेश भवन, पूर्वी अर्जुन नगर, दिल्ली-110032
Parivesh Bhawan, East Arjun Nagar, Delhi-110032

VIBRANT
"Experience the unimaginable"

TEST REPORT

Name & Address of the Party	M/s Adani Power Jharkhand Ltd. 2 × 800 MW Thermal Power Plant, Village: Motia, Dist: Godda, Jharkhand	**Format No.:**	7.8 F 02
		Party Reference No.:	NIL
Analysis Protocol:	IS-5182 & CPCB Guidelines	**Period of Analysis:**	April To Sep. 2023
Parameter Required:	As per work order		
Sample Description :	Ambient Air Quality Monitoring		

Month	PM2.5 µg/m3 IS 5182 (P-24):2019	PM10 µg/m3 IS: 5182 (P-23), 2006	NO2 µg/m3 IS: 5182(P-6),2006	SO2 µg/m3 IS: 5182(P-2),2001
Near Nayabad Village (Close to Plant Boundary)				
03-04/04/2023	33.6	67.5	14.7	8.21
06-07/04/2023	31.2	70.9	16.4	8.72
10-11/04/2023	34.1	69.2	15.2	7.25
13-14/04/2023	30.8	67.1	12.7	7.01
17-18/04/2023	32.3	71.2	16.6	8.12
20-21/04/2023	28.6	66.8	13.5	6.92
24-25/04/2023	36.2	71.5	12.4	7.80
27-28/04/2023	32.9	68.7	15.8	6.58
01-02/05/2023	35.5	72.8	18.2	8.64
04-05/05/2023	34.1	70.9	17.8	8.21
08-09/05/2023	31.6	68.4	13.5	7.26
11-12/05/2023	33.8	71.2	19.1	9.12
15-16/05/2023	36.2	76.7	18.5	9.68
18-19/05/2023	28.7	69.6	14.1	7.10
22-23/05/2023	32.8	67.9	16.4	8.64
29-30/05/2023	33.0	70.3	15.1	7.25
01-02/06/2023	36.8	75.1	19.1	9.12
05-06/06/2023	35.4	72.5	17.4	8.26
08-09/06/2023	33.9	67.3	16.1	7.58
12-13/06/2023	31.7	65.2	15.7	6.98
15-16/06/2023	37.2	73.6	18.2	9.48
19-20/06/2023	22.2	44.8	11.9	5.10
22-23/06/2023	33.2	69.1	15.1	7.56
26-27/05/2023	21.3	42.7	11.5	5.58
29-30/06/2023	22.7	43.0	12.1	6.24
03-04/07/2023	21.1	42.5	11.9	5.82
06-07/07/2023	22.6	44.3	12.1	6.00
10-11/07/2023	27.9	55.7	14.2	7.11
13-14/07/2023	20.7	40.7	10.8	5.98
17-18/07/2023	26.7	52.1	13.4	7.14
20-21/07/2023	26.7	58.9	13.2	6.58
24-25/07/2023	28.2	56.2	14.8	7.24
27-28/07/2023	21.7	42.8	11.1	5.98
30-31/07/2023	23.1	45.1	12.0	6.00
01-02/08/2023	17.7	33.9	9.2	5.12
04-05/08/2023	21.3	43.8	9.8	5.10
07-08/08/2023	16.9	32.6	9.0	5.08
10-11/08/2023	18.5	34.2	10.0	5.45
14-15/08/2023	23.6	55.7	12.8	6.85
17-18/08/2023	16.3	31.9	8.9	5.58

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21-22/08/2023	15.5	30.2	7.8	5.00
24-25/08/2023	18.1	34.9	10.2	6.52
28-29/08/2023	24.8	50.4	12.1	6.36
01-02/09/2023	17.2	32.8	9.8	5.86
04-05/09/2023	18.8	34.6	10.0	6.10
07-08/09/2023	16.3	29.9	9.0	5.20
11-12/09/2023	21.3	42.1	9.8	5.86
14-15/09/2023	16.8	33.8	9.9	5.98
18-19/09/2023	23.4	46.0	11.8	6.89
21-22/09/2023	15.3	28.9	8.7	5.02
25-26/09/2023	17.1	31.7	9.3	5.76
28-29/09/2023	22.5	43.7	11.4	6.08

Month	PM2.5 µg/m3 IS 5182 (P-24):2019	PM10 µg/m3 IS: 5182 (P-23), 2006	NO2 µg/m3 IS: 5182(P-6),2006	SO2 µg/m3 IS: 5182(P-2),2001
Near Near Mali Village (Close to plant boundary)				
03-04/04/2023	34.2	64.6	15.1	9.10
06-07/04/2023	37.8	68.1	17.2	8.90
10-11/04/2023	36.4	66.9	16.4	7.11
13-14/04/2023	32.6	64.2	15.1	7.07
17-18/04/2023	35.1	65.8	14.2	9.04
20-21/04/2023	37.2	64.8	15.7	8.10
24-25/04/2023	34.9	66.2	14.6	7.80
27-28/04/2023	36.2	67.6	13.8	8.74
01-02/05/2023	36.4	72.8	16.1	8.12
04-05/05/2023	39.1	79.5	18.4	9.14
08-09/05/2023	35.2	71.7	15.9	7.48
11-12/05/2023	33.8	69.4	17.4	8.68
15-16/05/2023	35.9	73.1	18.6	9.87
18-19/05/2023	37.5	75.3	19.1	10.02
22-23/05/2023	38.6	77.8	19.9	10.25
29-30/05/2023	34.4	72.7	17.5	8.95
01-02/06/2023	35.2	70.5	18.1	9.10
05-06/06/2023	38.9	77.8	19.6	9.86
08-09/06/2023	36.4	72.4	17.2	8.75
12-13/06/2023	34.6	68.9	16.8	7.95
15-16/06/2023	35.9	71.7	17.0	8.21
19-20/06/2023	19.8	39.9	10.7	5.48
22-23/06/2023	38.0	76.2	19.7	9.98
26-27/05/2023	23.3	45.6	12.4	6.21
29-30/06/2023	22.3	43.1	11.7	5.98
03-04/07/2023	23.8	48.7	11.9	6.87
06-07/07/2023	20.7	41.4	10.8	5.76
10-11/07/2023	26.1	51.3	13.2	7.23
13-14/07/2023	22.5	44.5	11.6	6.25
17-18/07/2023	27.5	53.1	13.8	7.10

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20-21/07/2023	26.4	55.3	13.0	6.62
24-25/07/2023	25.0	50.1	13.4	7.24
27-28/07/2023	21.2	42.7	11.5	6.98
30-31/07/2023	20.1	40.6	10.9	5.89
01-02/08/2023	17.4	33.1	9.1	5.89
04-05/08/2023	21.4	42.5	11.5	5.98
07-08/08/2023	16.2	30.8	8.8	5.12
10-11/08/2023	16.0	32.7	9.0	5.86
14-15/08/2023	25.3	50.7	14.1	7.75
17-18/08/2023	16.0	32.2	9.0	5.68
21-22/08/2023	15.0	30.9	8.0	5.03
24-25/08/2023	18.6	34.1	10.2	6.08
28-29/08/2023	19.7	45.6	9.8	5.11
01-02/09/2023	18.8	35.8	10.7	6.20
04-05/09/2023	20.1	31.9	11.7	7.84
07-08/09/2023	22.9	34.5	11.9	6.68
11-12/09/2023	19.7	37.7	10.0	6.11
14-15/09/2023	17.2	33.8	9.9	5.23
18-19/09/2023	17.1	34.2	9.0	5.35
21-22/09/2023	16.2	30.4	8.6	5.05
25-26/09/2023	17.4	32.9	10.0	6.21
28-29/09/2023	25.0	48.2	13.4	7.21

Month	PM2.5 µg/m3 IS 5182 (P-24):2019	PM10 µg/m3 IS: 5182 (P-23), 2006	NO2 µg/m3 IS: 5182(P-6),2006	SO2 µg/m3 IS: 5182(P-2),2001
Near Motia village (Close to plant boundary)				
03-04/04/2023	30.1	65.3	14.4	8.15
06-07/04/2023	27.8	67.5	12.9	7.08
10-11/04/2023	34.3	62.2	16.5	8.10
13-14/04/2023	26.2	61.5	14.8	9.12
17-18/04/2023	32.4	66.9	15.7	8.71
20-21/04/2023	29.5	59.6	16.2	7.92
24-25/04/2023	26.8	63.8	13.2	7.68
27-28/04/2023	29.1	64.5	16.2	8.4
01-02/05/2023	33.2	69.5	17.1	9.12
04-05/05/2023	30.5	66.1	16.8	8.62
08-09/05/2023	34.2	71.6	17.9	9.69
11-12/05/2023	29.1	65.7	14.2	7.24
15-16/05/2023	32.6	68.4	16.2	9.10
18-19/05/2023	34.5	70.8	18.7	9.56
22-23/05/2023	36.1	74.5	19.3	9.21
29-30/05/2023	28.9	65.0	13.8	7.17
01-02/06/2023	35.7	70.5	18.2	9.25
05-06/06/2023	34.2	68.9	17.9	8.45
08-09/06/2023	36.5	72.4	19.1	9.10
12-13/06/2023	35.1	69.7	16.8	8.42

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15-16/06/2023	33.7	65.2	15.2	7.56
19-20/06/2023	23.1	46.3	13.5	7.21
22-23/06/2023	36.6	76.1	19.2	9.89
26-27/05/2023	21.1	42.9	11.2	5.99
29-30/06/2023	23.6	44.1	13.5	7.10
03-04/07/2023	23.7	45.7	12.7	7.89
06-07/07/2023	22.1	43.2	11.4	6.75
10-11/07/2023	26.3	51.6	13.8	7.53
13-14/07/2023	20.5	40.0	10.5	5.87
17-18/07/2023	28.2	56.8	14.7	7.75
20-21/07/2023	26.7	53.1	13.2	7.02
24-25/07/2023	29.6	58.1	15.1	8.10
27-28/07/2023	21.9	41.4	11.9	6.12
30-31/07/2023	22.3	43.5	12.5	6.85
01-02/08/2023	17.8	33.2	9.6	6.12
04-05/08/2023	24.1	45.2	12.7	7.25
07-08/08/2023	16.2	30.9	8.9	5.56
10-11/08/2023	18.5	34.2	11.5	6.83
14-15/08/2023	26.2	52.3	14.2	7.23
17-18/08/2023	16.5	30.2	10.2	5.23
21-22/08/2023	19.5	34.7	12.8	6.24
24-25/08/2023	17.3	32.9	9.8	5.11
28-29/08/2023	24.1	48.1	12.6	6.47
01-02/09/2023	15.1	28.9	8.8	5.01
04-05/09/2023	17.6	31.7	10.1	6.12
07-08/09/2023	20.3	34.5	10.5	5.25
11-12/09/2023	22.6	43.6	11.2	6.65
14-15/09/2023	19.3	29.9	9.3	5.87
18-19/09/2023	24.1	47.2	12.1	6.84
21-22/09/2023	17.2	33.8	9.2	5.71
25-26/09/2023	16.2	31.5	10.0	5.23
28-29/09/2023	23.7	46.7	12.0	6.89

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TEST REPORT

Name & Address of the Party	M/s Adani Power Jharkhand Ltd. 2 × 800 MW Thermal Power Plant, Village: Motia, Dist: Godda, Jharkhand	Format No.: Party Reference No.:	7.8 F 02 NIL
Analysis Protocol:	IS-5182 & CPCB Guidelines	Period of Analysis:	April To Sep. 2023
Parameter Required:	As per work order	Report Date :	30/09/2023
Sample Description :	Fugitive Emission Monitoring		

Summary Reports

S.NO.	Month	Fly - Ash Silo	Wagon Tippler
1.	May. 2023	455.0	475.0

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TEST REPORT

Name & Address of Party: M/s Adani Power Jharkhand Ltd.
2 × 800 MW Thermal Power Plant,
Village: Motia, Dist: Godda, Jharkhand

Format No.: 7.8 F 01
Party Reference No.: Na
Report Date: 30/09/2023
Period of Analysis: April To Sep. 2023

Sample Description:: Ground Water
Sampling & Analysis Protocol: IS-10500-2012

Test Results

S. No.	Parameter	Test Method	Mali Village Apr. -23	Motiya Village Apr. -23	Naya Bad Village Apr. -23	Patwa Village. Apr. -23	Unit	IS: 10500-2012	
								Acceptable Limit	Permissible Limit
1.	pH (at 25 °C)	IS 3025 (P-11): 2022	7.24	7.19	7.26	7.07	--	6.5 to 8.5	No Relaxation
2.	Colour	IS 3025(P-4): 2021	*BLQ(**LOQ-5.0)	*BLQ(**LOQ-5.0)	*BLQ(**LOQ-5.0)	*BLQ(**LOQ-5.0)	Hazen	5	15
3.	Turbidity	IS 3025 (P-10): 1984,RA: 2017	*BDL(**LOQ-1.0)	*BDL(**LOQ-1.0)	*BDL(**LOQ-1.0)	*BDL(**LOQ-1.0)	NTU	1	5
4.	Odour	IS 3025 (P-5)1983	Agreeable	Agreeable	Agreeable	Agreeable	--	Agreeable	Agreeable
5.	Taste	IS 3025(P-8) 1984	Agreeable	Agreeable	Agreeable	Agreeable	--	Agreeable	Agreeable
6.	Total Hardness as $CaCO_3$	IS: 3025 (P-21): 2009,RA: 2019	175.0	162.0	190	190	mg/l	200	600
7.	Calcium as Ca	IS: 3025 (P-40): 1991, RA: 2019	52.10	42.63	54.11	46.09	mg/l	75	200
8.	Alkalinity as $CaCO_3$	IS: 3025 (P-23): 1986,RA: 2019	142.0	162.5	182.7	196.1	mg/l	200	600
9.	Chloride as Cl	IS: 3025(Part 32):1988, RA:2019	28.71	64.61	26.32	40.68	mg/l	250	1000
10.	Cyanide as CN	IS: 3025 (P-27)1986	*BLQ(**LOQ-0.02)	*BLQ(**LOQ-0.02)	*BLQ(**LOQ-0.02)	*BLQ(**LOQ-0.02)	mg/l	0.05	No Relaxation
11.	Magnesium as Mg	IS: 3025 (P-46): 1994, RA: 2019	10.93	13.52	13.36	18.23	mg/l	30	100
12.	Total Dissolved Solids	IS 3025 (P-16): 1984RA: 2017	357.0	389.0	402.0	440.0	mg/l	500	2000
13.	Sulphate as SO_4	IS: 3025 (P-24): 1986 Sec.1 RA: 2022	49.6	56.3	46.85	54.2	mg/l	200	400
14.	Fluoride as F	APHA (23rd Edition), 4500FD:2017	0.31	0.35	0.23	0.29	mg/l	1.0	1.5
15.	Nitrate as NO_3	IS: 3025 (P-34): 1988,(Chromotropic Method) RA: 2022	23.6	24.6	19.32	22.3	mg/l	45	No Relaxation
16.	Iron as Fe	APHA (23rd Edition),3113B: 2017	0.29	0.26	0.24	0.21	mg/l	0.3	No Relaxation

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17.	Aluminium as Al	IS 3025 (P-55):2003,RA: 2019	*BLQ(**LOQ-0.03)	*BLQ(**LOQ-0.03)	*BLQ(**LOQ-0.03)	*BLQ(**LOQ-0.03)	mg/l	0.03	0.2
18.	Boron	APHA (23rd Edition) 4500B: 2017	*BLQ(**LOQ-0.2)	*BLQ(**LOQ-0.2)	*BLQ(**LOQ-0.2)	*BLQ(**LOQ-0.2)	mg/l	0.5	1.0
19.	Total Silica	IS : 3025 (P-35):1888,RA: 2003	2.40	2.67	2.44	2.52	mg/l	--	--
20.	Phenolic Compounds	APHA 23rd Edition,2017, 5530 C	*BLQ(**LOQ-0.001)	*BLQ(**LOQ-0.001)	*BLQ(**LOQ-0.001)	*BLQ(**LOQ-0.001)	mg/l	0.001	0.002
21.	Anionic Detergents as MBAS	APHA 23rd Edition,2017, 5530 C	*BLQ(**LOQ-0.02)	*BLQ(**LOQ-0.02)	*BLQ(**LOQ-0.02)	*BLQ(**LOQ-0.02)	mg/l	0.2	1.0
22.	Zinc as Zn	APHA (23rd Edition), 3030D,3113B: 2017	0.34	0.36	0.32	0.29	mg/l	5.0	15.0
23.	Copper as Cu	APHA (23rd Edition),3113B: 2017	*BLQ(**LOQ-0.02)	*BLQ(**LOQ-0.02)	*BLQ(**LOQ-0.02)	*BLQ(**LOQ-0.02)	mg/l	0.05	1.5
24.	Manganese as Mn	APHA (23rd Edition)3030D,3113B: 2017	*BLQ(**LOQ-0.05)	*BLQ(**LOQ-0.05)	*BLQ(**LOQ-0.05)	*BLQ(**LOQ-0.05)	mg/l	0.1	0.3
25.	Cadmium as Cd	APHA (23rd Edition)3030D,3113B: 2017	*BLQ(**LOQ-0.002)	*BLQ(**LOQ-0.002)	*BLQ(**LOQ-0.002)	*BLQ(**LOQ-0.002)	mg/l	0.003	No Relaxation
26.	Lead as Pb	APHA (23rd Edition)3030D,3113B: 2017	*BLQ(**LOQ-0.005)	*BLQ(**LOQ-0.005)	*BLQ(**LOQ-0.005)	*BLQ(**LOQ-0.005)	mg/l	0.01	No Relaxation
27.	Selenium as Se	APHA (23rd Edition)3114C,2017	*BLQ(**LOQ-0.005)	*BLQ(**LOQ-0.005)	*BLQ(**LOQ-0.005)	*BLQ(**LOQ-0.005)	mg/l	0.01	No Relaxation
28.	Arsenic as As	APHA (23rd Edition),3114C,2017	*BLQ(**LOQ-0.005)	*BLQ(**LOQ-0.005)	*BLQ(**LOQ-0.005)	*BLQ(**LOQ-0.005)	mg/l	0.01	0.05
29.	Mercury as Hg	APHA (23rd Edition)3114C,2017	*BLQ(**LOQ-0.001)	*BLQ(**LOQ-0.001)	*BLQ(**LOQ-0.001)	*BLQ(**LOQ-0.001)	mg/l	0.001	No Relaxation
30.	Hexa Valent Chromium	APHA (23rd Edition)3500 Cr B:2017	*BLQ(**LOQ-0.01)	*BLQ(**LOQ-0.01)	*BLQ(**LOQ-0.01)	*BLQ(**LOQ-0.01)	mg/l		
31.	Residual Free Chloren	IS :3025(P-26): 2021	*BLQ(**LOQ-0.2)	*BLQ(**LOQ-0.2)	*BLQ(**LOQ-0.2)	*BLQ(**LOQ-0.2)	mg/l		
32.	Temperature	IS :3025(P-9):1984,RA:2017	25.3	24.9	24.6	25.1	°C	--	--
33.	Total Coliform	IS:15185: 2016	Absent	Absent	Absent	Absent	Per 100 ml	Shall not be detectable in any 100 ml sample	
34.	E.Coli	IS:15185: 2016	Absent	Absent	Absent	Absent	Per 100 ml	Shall not be detectable in any 100 ml sample	

Note: - *BLQ-Below Limit Quantification, *LOQ- Limit of Quantification

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TEST REPORT

Name & Address of Party:	M/s Adani Power Jharkhand Ltd. 2 × 800 MW Thermal Power Plant, Village: Motia, Dist: Godda, Jharkhand	**Format No.:**	7.8 F 01
		Party Reference No.:	Na
		Report Date:	30/09/2023
		Period of Analysis:	April To Sep. 2023
Sample Description::	Ground Water		
Sampling & Analysis Protocol:	IS-10500-2012		

Test Results

S. No.	Parameter	Test Method	Mali Village July. -23	Motiya Village July. -23	Naya Bad Village July. -23	Patwa Village. July. -23	Unit	IS: 10500-2012	
								Acceptable Limit	Permissible Limit
1.	pH (at 25 °C)	IS 3025 (P-11): 2022	7.38	7.29	7.36	7.42	--	6.5 to 8.5	No Relaxation
2.	Colour	IS 3025(P-4): 2021	*BLQ(**LOQ-5.0)	*BLQ(**LOQ-5.0)	*BLQ(**LOQ-5.0)	*BLQ(**LOQ-5.0)	Hazen	5	15
3.	Turbidity	IS 3025 (P-10): 1984,RA: 2017	*BDL(**LOQ-1.0)	*BDL(**LOQ-1.0)	*BDL(**LOQ-1.0)	*BDL(**LOQ-1.0)	NTU	1	5
4.	Odour	IS 3025 (P-5)1983	Agreeable	Agreeable	Agreeable	Agreeable	--	Agreeable	Agreeable
5.	Taste	IS 3025(P-8) 1984	Agreeable	Agreeable	Agreeable	Agreeable	--	Agreeable	Agreeable
6.	Total Hardness as $CaCO_3$	IS: 3025 (P-21): 2009,RA: 2019	195.0	178.0	201.0	185.0	mg/l	200	600
7.	Calcium as Ca	IS: 3025 (P-40): 1991, RA: 2019	58.1	45.7	59.2	52.4	mg/l	75	200
8.	Alkalinity as $CaCO_3$	IS: 3025 (P-23): 1986,RA: 2019	177.0	152.0	177.0	163.0	mg/l	200	600
9.	Chloride as Cl	IS: 3025(Part 32):1988, RA:2019	52.3	48.9	29.70	25.00	mg/l	250	1000
10.	Cyanide as CN	IS: 3025 (P-27)1986	*BLQ(**LOQ-0.02)	*BLQ(**LOQ-0.02)	*BLQ(**LOQ-0.02)	*BLQ(**LOQ-0.02)	mg/l	0.05	No Relaxation
11.	Magnesium as Mg	IS: 3025 (P-46): 1994, RA: 2019	12.16	15.54	12.95	13.18	mg/l	30	100
12.	Total Dissolved Solids	IS 3025 (P-16): 1984RA: 2017	362.0	310.0	352.0	310.0	mg/l	500	2000
13.	Sulphate as SO_4	IS: 3025 (P-24): 1986 Sec.1 RA: 2022	66.2	51.0	62.1	53.2	mg/l	200	400
14.	Fluoride as F	APHA (23rd Edition), 4500FD:2017	0.32	0.29	0.33	0.27	mg/l	1.0	1.5
15.	Nitrate as NO_3	IS: 3025 (P-34): 1988,(Chromotropic Method) RA: 2022	27.4	21.6	23.4	21.7	mg/l	45	No Relaxation
16.	Iron as Fe	APHA (23rd Edition),3113B: 2017	0.27	0.25	0.28	0.23	mg/l	0.3	No Relaxation

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17.	Aluminium as Al	IS 3025 (P-55):2003,RA: 2019	*BLQ(**LOQ-0.03)	*BLQ(**LOQ-0.03)	*BLQ(**LOQ-0.03)	*BLQ(**LOQ-0.03)	mg/l	0.03	0.2
18.	Boron	APHA (23rd Edition) 4500B: 2017	*BLQ(**LOQ-0.2)	*BLQ(**LOQ-0.2)	*BLQ(**LOQ-0.2)	*BLQ(**LOQ-0.2)	mg/l	0.5	1.0
19.	Total Silica	IS : 3025 (P-35):1888,RA: 2003	2.75	2.35	3.12	2.62	mg/l	--	--
20.	Phenolic Compounds	APHA 23rd Edition,2017, 5530 C	*BLQ(**LOQ-0.001)	*BLQ(**LOQ-0.001)	*BLQ(**LOQ-0.001)	*BLQ(**LOQ-0.001)	mg/l	0.001	0.002
21.	Anionic Detergents as MBAS	APHA 23rd Edition,2017, 5530 C	*BLQ(**LOQ-0.02)	*BLQ(**LOQ-0.02)	*BLQ(**LOQ-0.02)	*BLQ(**LOQ-0.02)	mg/l	0.2	1.0
22.	Zinc as Zn	APHA (23rd Edition), 3030D,3113B: 2017	0.32	0.28	0.37	0.32	mg/l	5.0	15.0
23.	Copper as Cu	APHA (23rd Edition),3113B: 2017	*BLQ(**LOQ-0.02)	*BLQ(**LOQ-0.02)	*BLQ(**LOQ-0.02)	*BLQ(**LOQ-0.02)	mg/l	0.05	1.5
24.	Manganese as Mn	APHA (23rd Edition)3030D,3113 B: 2017	*BLQ(**LOQ-0.05)	*BLQ(**LOQ-0.05)	*BLQ(**LOQ-0.05)	*BLQ(**LOQ-0.05)	mg/l	0.1	0.3
25.	Cadmium as Cd	APHA (23rd Edition)3030D,3113 B: 2017	*BLQ(**LOQ-0.002)	*BLQ(**LOQ-0.002)	*BLQ(**LOQ-0.002)	*BLQ(**LOQ-0.002)	mg/l	0.003	No Relaxation
26.	Lead as Pb	APHA (23rd Edition)3030D,3113 B: 2017	*BLQ(**LOQ-0.005)	*BLQ(**LOQ-0.005)	*BLQ(**LOQ-0.005)	*BLQ(**LOQ-0.005)	mg/l	0.01	No Relaxation
27.	Selenium as Se	APHA (23rd Edition)3114C,2017	*BLQ(**LOQ-0.005)	*BLQ(**LOQ-0.005)	*BLQ(**LOQ-0.005)	*BLQ(**LOQ-0.005)	mg/l	0.01	No Relaxation
28.	Arsenic as As	APHA (23rd Edition),3114C,2017	*BLQ(**LOQ-0.005)	*BLQ(**LOQ-0.005)	*BLQ(**LOQ-0.005)	*BLQ(**LOQ-0.005)	mg/l	0.01	0.05
29.	Mercury as Hg	APHA (23rd Edition)3114C,2017	*BLQ(**LOQ-0.001)	*BLQ(**LOQ-0.001)	*BLQ(**LOQ-0.001)	*BLQ(**LOQ-0.001)	mg/l	0.001	No Relaxation
30.	Hexa Valent Chromium	APHA (23rd Edition)3500 Cr B:2017	*BLQ(**LOQ-0.01)	*BLQ(**LOQ-0.01)	*BLQ(**LOQ-0.01)	*BLQ(**LOQ-0.01)	mg/l		
31.	Residual Free Chloren	IS :3025(P-26): 2021	*BLQ(**LOQ-0.2)	*BLQ(**LOQ-0.2)	*BLQ(**LOQ-0.2)	*BLQ(**LOQ-0.2)	mg/l		
32.	Temperature	IS :3025(P-9):1984,RA:2017	25.2	25.1	25.4	25.2	°C	--	--
33.	Total Coliform	IS:15185: 2016	Absent	Absent	Absent	Absent	Per 100 ml	Shall not be detectable in any 100 ml sample	
34.	E.Coli	IS:15185: 2016	Absent	Absent	Absent	Absent	Per 100 ml	Shall not be detectable in any 100 ml sample	

Note: - *BLQ-Below Limit Quantification, *LOQ- Limit of Quantification

Checked By

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TEST REPORT

Name & Address of Party:	**M/s Adani Power Jharkhand Ltd. 2 × 800 MW Thermal Power Plant, Village: Motia, Dist: Godda, Jharkhand**	**Format No.:**	**7.8 F 01**
		Party Reference No.:	**NA**
		Report Date:	**30/09/2023**
Sample Description::	**Surface Water**	**Period of Analysis:**	**April to Sep. 2023**
Sampling & Analysis Protocol:	**IS-10500-2012**		

Test Results

S. No.	Parameter	Test Method	April 2023	July 2023	Unit
1.	pH (at 25 ^{0}C)	IS 3025 (P-11): 2022	7.26	7.30	--
2.	Colour	IS 3025(P-4): 2021	*BLQ(**LOQ-5.0)	*BLQ(**LOQ-5.0)	Hazen
3.	Turbidity	IS 3025 (P-10): 1984,RA: 2017	2.01	2.3	NTU
4.	Odour	IS 3025 (P-5)1983	Agreeable	Agreeable	--
5.	Taste	IS 3025(P-8) 1984	Agreeable	Agreeable	--
6.	Total Hardness as $CaCO_3$	IS: 3025 (P-21): 2009,RA: 2019	125	132	mg/l
7.	Calcium as Ca	IS: 3025 (P-40): 1991, RA: 2019	39.68	40.0	mg/l
8.	Alkalinity as $CaCO_3$	IS: 3025 (P-23): 1986,RA: 2019	145	152	mg/l
9.	Chloride as Cl	IS: 3025(Part 32):1988, RA:2019	35.61	38.6	mg/l
10.	Cyanide as CN	IS: 3025 (P-27)1986	*BLQ(**LOQ-0.02)	*BLQ(**LOQ-0.02)	mg/l
11.	Magnesium as Mg	IS: 3025 (P-46): 1994, RA: 2019	6.32	7.82	mg/l
12.	Total Dissolved Solids	IS 3025 (P-16): 1984RA: 2017	310	258.0	mg/l
13.	Sulphate as SO_4	IS: 3025 (P-24): 1986 Sec.1 RA: 2022	32.98	33.9	mg/l
14.	Fluoride as F	APHA (23rd Edition), 4500FD:2017	0.36	0.29	mg/l
15.	Nitrate as NO_3	IS: 3025 (P-34): 1988,(Chromotropic Method) RA: 2022	5.12	6.20	mg/l
16.	Iron as Fe	APHA (23rd Edition),3113B: 2017	0.19	0.22	mg/l
17.	Aluminium as Al	IS 3025 (P-55):2003,RA: 2019	*BLQ(**LOQ-0.03)	*BLQ(**LOQ-0.03)	mg/l
18.	Boron	APHA (23rd Edition) 4500B: 2017	*BLQ(**LOQ-0.2)	*BLQ(**LOQ-0.2)	mg/l
19.	Total Silica	IS : 3025 (P-35):1888,RA: 2003	4.72	5.1	mg/l
20.	Phenolic Compounds	APHA 23rd Edition,2017, 5530 C	*BLQ(**LOQ-0.001)	*BLQ(**LOQ-0.001)	mg/l
21.	Anionic Detergents as MBAS	APHA 23rd Edition,2017, 5530 C	*BLQ(**LOQ-0.02)	*BLQ(**LOQ-0.02)	mg/l
22.	Zinc as Zn	APHA (23rd Edition), 3030D,3113B: 2017	0.21	0.23	mg/l
23.	Copper as Cu	APHA (23rd Edition),3113B: 2017	*BLQ(**LOQ-0.02)	*BLQ(**LOQ-0.02)	mg/l
24.	Manganese as Mn	APHA (23rd Edition)3030D,3113B: 2017	*BLQ(**LOQ-0.05)	*BLQ(**LOQ-0.05)	mg/l
25.	Cadmium as Cd	APHA (23rd Edition)3030D,3113B: 2017	*BLQ(**LOQ-0.002)	*BLQ(**LOQ-0.002)	mg/l
26.	Lead as Pb	APHA (23rd Edition)3030D,3113B: 2017	*BLQ(**LOQ-0.005)	*BLQ(**LOQ-0.005)	mg/l
27.	Selenium as Se	APHA (23rd Edition)3114C,2017	*BLQ(**LOQ-0.005)	*BLQ(**LOQ-0.005)	mg/l
28.	Arsenic as As	APHA (23rd Edition),3114C,2017		*BLQ(**LOQ-0.005)	mg/l

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29.	Mercury as Hg	APHA (23rd Edition)3114C,2017	*BLQ(**LOQ-0.001)	*BLQ(**LOQ-0.001)	mg/l
30.	Hexa Valent Chromium	APHA (23rd Edition)3500 Cr B:2017	*BLQ(**LOQ-0.01)	*BLQ(**LOQ-0.01)	mg/l
31.	Residual Free Chloren	IS :3025(P-26): 2021	*BLQ(**LOQ-0.2)	*BLQ(**LOQ-0.2)	mg/l
32.	Temperature	IS :3025(P-9):1984,RA:2017	24.8	25.0	°C
33.	Total Coliform	IS:15185: 2016	Present	Present	Per 100 ml
34.	E.Coli	IS:15185: 2016	Present	Present	

Note: - *BLQ-Below Limit Quantification, *LOQ- Limit of Quantification

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TEST REPORT

Sample Number:	**VTL/BA/01**	**Report No.:**	**VTL/BA/2308290001/B**
Name & Address of the Party:	**M/s Adani Power Jharkhand Ltd. 2 × 800 MW Thermal Power Plant, Village: Motia, Dist: Godda, Jharkhand**	**Format No.:**	**7.8 F-01**
		Party Reference No.:	**NIL**
		Report Date:	**02/09/2023**
Sampling Description:	**BOTTOM ASH**	**Receipt Date:**	**29/08/2023-02/09/2023**
		Sampling Date:	**29/08/2023**

TEST RESULTS

S. No.	Parameter	Result
1.	Arsenic as As (mg/kg)	BDL
2.	Lead as Pb (mg/kg)	5.20
3.	Mercury as Hg (mg/kg)	BDL
4.	Chromium as Cr (mg/kg)	2.98

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VIBRANT TECHNO LAB PRIVATE LIMITED ★ JAIPUR

Lab Incharge
RK Yadav

(Authorized Signatory)

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TEST REPORT

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Sample Number:	**VTL/FA/01**	**Report No.:**	**VTL/FA/2308290001/B**
Name & Address of the Party:	**M/s Adani Power Jharkhand Ltd. 2 × 800 MW Thermal Power Plant, Village: Motia, Dist: Godda, Jharkhand**	**Format No.:**	**7.8 F-01**
		Party Reference No.:	**NIL**
		Report Date:	**02/09/2023**
Sampling Description:	**FLY ASH**	**Receipt Date:**	**29/08/2023-02/09/2023**
		Sampling Date:	**29/08/2023**

TEST RESULTS

S. No.	Parameter	Result
1.	Arsenic as As (mg/kg)	BDL
2.	Lead as Pb (mg/kg)	0.89
3.	Mercury as Hg (mg/kg)	BDL
4.	Chromium as Cr (mg/kg)	0.77

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Lab Incharge
RK Yadav

(Authorized Signatory)

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ADANI POWER (JHARKHAND) LIMITED											
2x800MW Thermal Power Plant Godda,Jharkhand											
Site Specific Micro - Meteorlogical Data											
Station		APJL-GODDA		Temperature (° C)			Humidity (%)			Month	Apr-23
Recording Time		00:00:00-23:00Hr								Barometric Pressure	ainfall (mm
Date	Wind Direction (	Wind Speed(m/s)									
		Max .	Avg .	Max	Min	Avg .	Max	Min	Avg	(Average)	
01.04.23	SSW	7.6	2.3	34.5	22.2	27.6	74.9	38.7	58.9	747.7	0
02.04.23	WSW	7.5	2	32.6	24	28	59.8	35.2	49.1	747	0
03.04.23	SSW	9	2.1	36.1	22.1	30.8	47.4	22.8	32.6	747.2	0
04.04.23	SSW	3.9	1.5	36.5	25.6	31.1	60.1	23.7	39.7	746.8	0
05.04.23	SW	10.3	2.8	36.3	23.3	30.5	62.7	16.1	32.8	748.2	0
06.04.23	SSW	8.6	1.5	37.7	21.6	30.7	46.5	16.8	29.4	750.1	0
07.04.23	SSW	7.4	1.8	37.8	20.5	31	53.2	17.3	29.8	751.4	0
08.04.23	SW	6.4	1.9	38.7	21.9	31.2	50.7	16.1	30.6	752.5	0
09.04.23	SW	7.1	1.8	39.3	22.8	32.3	54.1	19.1	30.6	751.6	0
10.04.23	SW	8.5	2.1	38.9	22.2	32.4	55.9	17.1	28.8	750.4	0
11.04.23	SSW	8	2.2	39.4	22.8	32.3	47.9	14.3	25.9	750.2	0
12.04.23	SW	7.6	1.7	39.4	21	32.5	52.8	15.8	28.1	749.2	0
13.04.23	SW	10.6	2.3	40.7	26	34.3	41.7	18.2	28.9	748.1	0
14.04.23	SSW	9.8	1.9	41.9	25.1	34.5	50.3	30.3	18.6	748.3	0
15.04.23	SSW	5.4	1.5	41.9	24.7	33.5	55.4	18.1	34.5	748.5	0
16.04.23	SSW	8.7	2.2	37	26	32	48.1	24.1	32	744.9	0
17.04.23	SSW	9.6	2.4	43.3	27.6	37.7	43.7	13.9	22.9	747.1	0
18.04.23	SW	6.1	1.7	43.3	27.5	36	42.7	26.5	15.2	746.6	0
19.04.23	SSW	8.9	2.5	43	25.5	36.8	45	14.6	24	744.7	0
20.04.23	SSW	9.3	3.1	43.1	28.6	37.3	34.5	15.1	22.7	743.2	0
21.04.23	SSW	8.6	2.5	37.8	26	32.9	48.1	24.1	32.7	744.9	0
22.04.23	SSW	8.6	2.2	38.8	21.9	29.8	75.1	23.5	45.7	746.1	11.3
23.04.23	SW	13.6	2.5	34.6	24.7	29.2	70.6	31.5	50.1	748.3	0.1
24.04.23	ESE	5.6	2.2	34.5	21.3	26.5	83.1	39.6	65.1	751.2	0
25.04.23	SE	8.7	1.5	37.2	21.6	29.8	83.7	30.5	51.7	750.6	0
26.04.23	SSE	4.4	1.2	37.9	24.3	30.9	72.9	27.5	49.9	748.7	0
27.04.23	SSW	6.8	1.2	33.8	22.5	27.8	78.8	43.6	61.8	749.2	0
28.04.23	SE	8	2.2	37.7	22.2	31.3	81.8	30	49.2	748.9	0
29.04.23	SSE	6	2.2	37.4	25.6	30.7	75.8	30.6	50	748.3	0
30.04.23	SW	6.8	2.1	37.6	23.9	29.6	79.4	33	57.9	748.1	0

Total Rainfall in mm	11.4
Rainfall from 01.01.2023	26.2
Rainfall from 01.06.2023	NA

MICRO-METEORLOGICAL PARAMETERS ARE COLLECTED BY -APJL

ADANI POWER (JHARKHAND) LIMITED											
2x800MW Thermal Power Plant Godda,Jharkhand											
Site Specific Micro - Meteorlogical Data											
Station		APJL-GODDA		Temperature (° C)			Humidity (%)			Month	May-23
Recording Time		00:00:00-23:00Hrs								Barometric Pressure	ainfall (mm
Date	Wind Direction (Blowing	Wind Speed(m/s)									
		Max .	Avg .	Max	Min	Avg .	Max	Min	Avg	(Average)	
02.05.23	SSE	6.6	1.7	31.9	22.9	27.3	79	44.3	63.9	749.3	0
03.05.23	S	9.8	1.9	36.2	21.5	27.8	83	33.9	62.4	749.3	0
03.05.23	S	5.6	1.4	36	23.4	29.4	85.6	37.3	62.6	749.6	0
04.05.23	SW	11.7	2.4	36.5	25.1	29.3	81.8	39.6	64	748.9	0
05.05.23	SW	6	1.7	36.8	22.5	29.4	85.9	30	57.7	747.4	0
06.05.23	SW	7.9	1.8	39.1	24	31.6	72.7	20.3	40.6	746.1	0
07.05.23	SSW	7.7	1.9	40	25.1	32.7	70.6	25.6	41.1	745.9	0
08.05.23	WSW	8.2	2	41.5	27.1	33.7	66.2	16.8	34.1	745.7	0
09.05.23	SW	8.2	2.1	41.4	28.2	34.7	64.8	14.9	29.7	745.9	0
10.05.23	SW	7.3	2.3	41.9	26.9	34.3	57.9	11.7	28	746.1	0
11.05.23	S	7.5	1.5	41.8	23.7	33	49.1	12	31.3	747.3	0
12.05.23	SE	7.1	2.1	38.2	25.3	31.1	79.3	34.7	55.6	747.5	0
13.05.23	WSW	10.6	2.3	40.7	26	34.3	41.7	18.2	28.9	748.1	0
14.05.23	SW	9.8	1.9	41.9	25.1	34.5	50.3	18.6	30.3	748.3	0
15.05.23	SE	15.3	3.2	38.6	22.8	30.8	74.3	37.1	53.7	744.5	0
16.05.23	S	8.7	2.8	42.5	25.5	33.2	67.9	23.3	48.2	745.2	0
17.05.23	E	10.4	2.9	36.9	27.5	31.1	84	43.3	66.3	747.2	0
18.05.23	SE	22.2	2.5	34.1	19.4	28	89.3	40.5	70.6	748.4	19.9
19.05.23	SSE	6.3	2.3	39.8	25.4	31.7	87	36.1	65.1	746.7	0
20.05.23	S	6	2.3	40.9	26	33.5	72.6	22.8	49.3	746	0
21.05.23	SE	12.3	2.4	41.1	27.3	33.3	77.9	30	55.9	746.4	0
22.05.23	E	6.3	2.5	37.3	25.8	31.2	75.7	46.1	60.6	747.8	0
23.05.23	SE	11.4	2.8	35.9	22.5	27.4	83.5	51.1	74.7	748.1	1.9
24.05.23	mm SE	4.8	1.7	37.8	21.6	28.6	86.9	37.9	64.6	747.5	0
25.05.23	ESE	9.8	2.7	35.6	23.9	29.1	88.6	54.2	71.9	746.5	17.8
26.05.23	SW	7.9	2.3	37.4	23	28	85.1	43.5	68	747.3	1.1
27.05.23	W	5.7	1.8	34.4	23.4	28.9	82.4	45.3	64.3	747.3	0
28.05.23	SW	8.6	2	37.4	25.3	31.1	85.3	62.3	40.4	747.9	0
29.05.23	SSW	6.1	1.7	40.2	26.5	33.1	81.2	34.5	55.9	748.5	0
30.05.23	s	5.8	1.8	41	27	34.3	74.9	31.4	51	747.4	0
31.05.23	s	5.6	2,4	42	29.7	36	72.5	30.6	49.9	746	0

Total Rainfall in mm	40.7
Rainfall from 01.01.2023	66.9
Rainfall from 01.06.2023	NA

ADANI POWER (JHARKHAND) LIMITED

2x800MW Thermal Power Plant Godda,Jharkhand

Site Specific Micro - Meteorlogical Data

Station		APJL-GODDA								Month	Jun-23
Recording Time		00:00:00-23:00Hrs		Temperature (° C)			Humidity (%)			Barometric Pressure	nfall (m
Date	Wind Direction (Blowing	Wind Speed(m/s) Max .	Avg .	Max	Min	Avg .	Max	Min	Avg	(mmHg) (Average)	
02.06.23	SW	8.2	2.4	41.7	28.6	35.2	50.1	24	35.3	744.8	0
03.06.23	SW	6.7	1.7	42.1	27.3	34.6	71.1	19.4	40.2	745.7	0
04.06.23	S	6.1	1.8	43.6	25.8	35.7	58.5	17.3	37.6	745.2	0
05.06.23	SW	6.6	2.1	42.9	28	35.3	73.6	19.7	46.2	744.5	0
06.06.23	SW	7.5	2	42.8	29	36.5	64.9	41.1	24.3	743.9	0
07.06.23	SE	3.7	1.7	38.4	32.1	34.9	58	36.2	46.9	743.2	0
08.06.23	SW	6.1	2.2	44	29,2	36.8	70.4	20.8	44.2	743	0
09.06.23	SE	9.9	3.2	43.7	29.5	34.9	79.5	20.1	56.8	751.9	0
10.06.23	S	10	3.5	44	32	38	60	25	42.9	740	0
11.06.23	ESE	6.7	2.9	44.1	28.2	34	79.1	30	58.4	740.9	0
12.06.23	SE	7.1	2.9	41	29.2	34.1	75.8	37.4	61.1	740.9	0
13.06.23	SSE	8.6	3	43.6	28.2	34.5	71.7	28.1	54.9	740.3	0
14.06.23	S	10.4	3.5	44.4	33.6	38	61	25	42.9	740.3	0
15.06.23	SW	12.9	3.3	43.8	33.7	38.8	47.2	26.8	35.8	740.8	0
16.06.23	SW	12.9	3.7	43.8	33.8	38.6	47.2	26.8	36.6	741.1	0
17.06.23	SSW	10.1	3	44.5	31.6	37.2	73.3	26.2	49.5	742.3	0
18.06.23	SE	8.1	3.5	42.1	26.8	32.1	84.9	39.9	70.6	753.1	7.3
19.06.23	ESE	8.9	3.5	38.9	27.5	32.1	81.8	46.6	69.1	743.1	3.7
20.06.23	ESE	9	3.4	37.8	32.4	28.6	85.7	51.7	71.2	743	1.4
21.06.23	SSE	9.4	3.3	40.5	27.8	32.1	85.9	43.9	70.1	743.5	0.3
22.06.23	SE	7.3	2.7	39.1	26.8	32.6	78.7	45.2	64.9	744	0
23.06.23	E	6.9	2.9	36.8	28.7	32.5	81.9	52.2	66.7	744	0
24.06.23	ENE	7.4	2.6	36.8	28.3	32.3	81.1	51.9	67	743.6	0
25.06.23	ENE	7.6	3.3	35.3	28.5	31.4	79.8	54.1	68.7	743.4	0.5
26.06.23	ENE	9.5	2.9	34	26.4	28.9	89.5	61.8	79.1	743.4	12.3
27.06.23	ENE	7.1	2.9	31.6	25.6	27.8	91.1	68.8	82	743.3	12.4
28.06.23	E	7.5	2.4	33.6	26	27.8	92.2	63.3	84	744.8	4.4
29.06.23	ESE	6.8	2.2	32	25.7	27.2	92.7	70.6	87.6	745.1	11.8
30.06.23	SE	4.1	1.6	35.7	26	28.8	93.9	60.4	84.3	744.5	4.1

Total Rainfall in mm	58.2
Rainfall from 01.01.2023	125.1
Rainfall from 01.06.2023	58.2

ADANI POWER (JHARKHAND) LIMITED											
2x800MW Thermal Power Plant Godda,Jharkhand											
Site Specific Micro - Meteorlogical Data											
Station		APJL-GODDA		Temperature (° C)			Humidity (%)			Month	Jul-23
Recording Time		00:00:00-23:00Hrs								Barometric Pressure	Rainfall (mm
Date	Wind Direction	Wind Speed(m/s)									
		Max .	Avg .	Max	Min	Avg .	Max	Min	Avg	(Average)	
01.07.23	SE	5.8	1.8	34	27.7	29.5	89	66.7	82.5	744.5	1.2
02.07.23	SSE	9.2	1.9	36.9	25.4	29.7	93.2	57.6	82.6	744.2	19.9
03.07.23	SE	5.6	1.8	33.6	24.9	27.2	94.2	68.1	88	744.5	21.2
04.07.23	SSE	8.5	2.2	35.9	26.7	29.5	90.6	57.4	81.8	743.8	0.4
05.07.23	ESE	9.4	2.2	35.2	27	30	91.7	58.4	81	743.3	1.5
06.07.23	E	8.9	2.1	35.6	27.3	29.8	90.6	59.9	80.9	744	0
07.07.23	E	7.2	2.6	34.1	25.7	29.6	93.1	64.6	80.9	745	7.2
08.07.23	ENE	5.3	2	34.7	27.2	29.9	89.1	62.1	80.2	745.9	0.2
09.07.23	ESE	5.6	2.4	36.8	26.9	31.7	91.4	53.7	73.4	745.1	0
10.07.23	SE	6.3	2.2	37.8	29.2	32.7	85.5	50.9	70.3	744.5	0
11.07.23	SE	7.8	3.2	37.2	29.3	32.7	85.3	54.1	71.5	744.3	0
12.07.23	ENE	7.3	3.1	35.6	28.5	31.5	86.7	57.6	75.2	744.8	1.4
13.07.23	ESE	8.6	2.7	36.2	25.5	29.3	93	58.4	81.8	745	6.8
14.07.23	SE	6.9	1.8	34.7	26.7	29.9	92.4	62.3	80.7	744.3	1.3
15.07.23	NE	6.2	2.1	32.1	26.8	28.7	91	69.8	82.3	743.4	3.3
16.07.23	SE	6.5	2	34.7	26.7	30	92.4	60.3	80.7	740.3	0
17.07.23	ENE	6.5	2.4	33.7	26.8	29.5	91.1	63.6	79.8	743.2	0
18.07.23	NE	6.4	2.2	34.9	27.2	31	88	59.4	74.7	743	0
19.07.23	POWER FAILURE										
20.07.23											
21.07.23											
22.07.23											
23.07.23											
24.07.23											
25.07.23	ENE	6.67.2	28	36.3	28.8	33	79.3	54.1	65.5	745.2	0
26.07.23	ENE	7.2	2.7	35.5	30.6	27.1	85.5	57.6	73.6	745.5	1.1
27.07.23	ENE	8.3	2.4	35.4	27,5	30.7	87.3	57.1	75.2	744.5	1.7
28.07.23	ENE	6.8	1.8	35.4	27.2	30.4	88.5	59.3	78.3	742.5	3.7
29.07.23	SSE	5.88.2	1.9	36.1	27,7	30.9	90	60.2	78.9	742	1.2
30.07.23	SSE	8.2		34,1	27.7	29.7	88.6	67.8	81.2	741.7	0.9
31.07.23	SE	7.6	1.3	38,4	27,6	30.7	91.4	55.4	79.2	741	0
									Total Rainfall in mm		73
									Rainfall from 01.01.2023		198.1
									Rainfall from 01.06.2023		131.2

ADANI POWER (JHARKHAND) LIMITED											
2x800MW Thermal Power Plant Godda,Jharkhand											
Site Specific Micro - Meteorlogical Data											
Station		APJL-GODDA								Month	Aug-23
Recording Time		00:00:00-23:00Hrs									
Date	Wind Direction (Blowing From)	Wind		Temperature (°C)			Humidity (%)		BarometricPressure(		rainfall (mm)
01.08.23	WSW	13.4	2.3	37	26	30.3	93.7	56.6	82.1	739.4	29.6
02.08.23	ESE	11.8	4	32.2	26.7	29.1	93.3	69	80.9	738.9	42
03.08.23	W	7.3	3.3	32.7	25.9	29.2	91.1	66.7	79.8	741	2.2
04.08.23	ESE	6.8	3.2	33.5	27.5	30.1	88.8	63.3	76.4	743.5	0
05.08.23	SW	6	2.2	31.4	26.8	28.1	93.3	69.5	81.2	743.6	0
06.08.23	SW	8.5	1.6	30.6	26.2	27.9	96.3	80.1	91.9	741.3	5.2
07.08.23	SW	11.5	2.9	29.3	26.4	27.4	95.8	84.2	93.1	740	9.2
08.08.23	WSW	8.1	2.4	27.3	25.9	26.6	97.6	87.2	93	741,4	14,4
09.0 3.23	WSW	9	2.3	28.8	25	26.9	98.2	81.7	91	743.9	43.6
10.08.23	SSW	9.3	1.9	32.9	26.5	28.7	92.6	70	84.3	745.2	1.6
11.08.23	S	9	1.9	33.6	25.4	28.7	96.6	70.8	87	744.6	48.2
12.08.23	SW	10.7	2.3	32.2	26.1	29.1	95.1	70.7	85.5	743.1	0
13.08.23	SW	5	1.5	32.2	27.1	29.3	92.5	69.8	83.6	743.9	0
14.08.23	SW	6.1	1.6	34.2	26.4	29.4	92.7	62.8	81.5	745	0
15.08.23	SSW	5.9	1.6	34.6	27.2	29.9	90.9	62.4	80.8	744,7	0
16.08.23	SW	12.1	1.8	35	25.1	30.2	96.1	60.5	80.8	744.3	26
17.08.23	SSE	10.6	1.6	34.2	25.7	28.3	96.7	63.4	86.9	744.2	25.6
18.08.23	SSE	9.9	2.2	35.5	26.1	30.7	95.9	54.3	76.8	743.8	0,0
19.08.23	S	8.5	2.4 Vr	34.1	27.4	29.9	87.1	61.9	77.8	744.7	0
20.08.23	SW	10.4	3.1	34.4	27.3	30	91.3	56.4	78.6	745.2	0
21.08.23	SSW	7.1	2.1	35.6	26.9	30.3	91.2	58	79.8	744,4	0
22.08.23	SW	13.4	2.1	32.8	25.8	28.4	96.4	71.7	87.5	744.2	28
23.08.23	S	11.5	1.9	33.1	25.9	28.2	96.3	66.9	87.3	743.4	5.2
24.08.23	SSW	8.1	1.6	35.3	26	27.7	96	60.1	88.8	741.8	12
25.08.23	WSW	12.2	2.1	29.7	25.4	27.4	95.5	79.2	89.7	742.2	2.6
26.08.23	WSW	9.4	2.3	32.2	26.2	28.6	96.2	68.6	84.2	742.4	4.6
27.08.23	SW	11	2.5	33.9	27.2	30.3	85.2	59.3	74.6	742.3	0
28.08.23	SW	10	2.4	33.6	26.7	30	83.8	56.4	73.9	743.1	0
29.08.23	SSW	6	1.6	34.6	27	30.6	91.3	56.2	75.3	744.4	0
30.08.23	SE	5.1	1.2	35.8	27.3	30.9	90.1	54.3	76.4	745.4	0
31.08.23	SSE	5	1.1	35.6	27.9	31.3	89.3	57.9	76.1	745.9	0

Total Rainfall in mm	262.2
Rainfall from 01.01.2023	460.3
Rainfall from 01.06.2023	393.4

ADANI POWER (JHARKHAND) LIMITED											
2x800MW Thermal Power Plant Godda,Jharkhand											
Site Specific Micro - Meteorlogical Data											
Station		APJL-GODDA		Temperature (° C)			Humidity (%)			Month	Sep-23
Recording Time		00:00:00-23:00Hrs								Barometric Pressure	ainfall (mm
Date	Wind Direction	Wind Speed(m/s)									
		Max .	Avg .	Max	Min	Avg .	Max	Min	Avg	(Average)	
01.09.23	WSW	5.1	1.3	36.2	28.4	32	89.7	53.2	75.2	745.4	0
02.09.23	WSW	10.7	1.5	35.6	25.5	29.7	94	59.6	84.2	744.5	48
03.09.23	S	11.8	1.5	33.5	25.3	28.5	95.9	68.1	86.7	743.6	35.6
04.09.23	SSE	8.1	1.2	30.4	26	27.4	95.3	79	89.6	743.3	14.8
05.09.23	SSW	12.7	1.3	36	24	29.2	94.3	57	83	743.6	3.8
06.09.23	SSW	10.7	1.7	33.8	24.5	28.6	95.1	69.5	86	744.3	20.8
07.09.23	SSE	8.6	1.5	33.4	26.6	29.4	95.1	65.3	83.2	744.3	5.4
08.09.23	SE	7.9	1.8	30.9	25.5	27.2	95.8	75.6	90.3	744.7	29.2
09.09.23	SW	7.6	2.8	33.4	26.8	29.5	91.9	65.1	82.6	744.9	0
10.09.23	SW	7.1	2.1	35.4	27.1	30.5	94.8	54.5	79.5	743.7	0
11.09.23	SW	7.6	2.3	35.2	26.9	30.6	94.7	65.4	78.3	743	0
12.09.23	SW	6.6	1.7	36.7	27.5	30.3	94.2	52.8	80.1	743.3	0.4
13.09.23	S	8	1.8	35.5	27.1	30.7	90.7	53.5	77.3	743.4	0
14.09.23	SSE	11.8	1.7	33.7	26.6	29.5	93.8	62.2	80.4	744.1	25.6
15.09.23	SSE	8.7	2	33.3	27.2	29.7	65	80.7	80.7	745.4	0
16.09.23	SSW	7.9	1.9	34.9	27.1	29.8	91.9	61.2	82.1	745.7	3
17.09.23	S	4.7	1.2	36	27.1	31.2	95.2	56.7	77.2	744.6	0
18.09.23	SSE	8.3	1.4	35.3	27.4	29.7	93.7	60.9	81.4	744.6	0.2
19.09.23	SE	7.5	1.7	33.2	26.5	29.1	93.1	63.1	81.2	746	0
20.09.23	SE	8.1	2.5	30.9	26.3	29.7	92.5	72.3	85.7	745.8	5.6
21.09.23	SE	6.5	2.1	29.7	25.9	27	96.7	79	91.9	745.5	56
22.09.23	SE	9.3	1.9	27.8	25	26.6	97.4	87.5	93.3	745.8	64
23.09.23	SSE	9.9	3	31.2	25.2	27.1	96.4	73	90.9	746.1	32.8
24.09.23	SW	7.3	1.4	31.7	25.7	27.1	96.4	74.6	91.7	745.7	1.2
25.09.23	S	6.6	1.3	31.3	25	26.8	96.4	76.3	92	746.5	13.8
26.09.23	S	5.7	1	32.9	25.5	27.2	97.7	69.9	91.1	746.8	4.2
27.09.23	SSW	4	0.9	33.2	26.1	29.2	97.5	69.4	86.2	746.4	0.2
28.09.23	SW	4.4	1	34.4	26.8	29.7	96.7	64.2	85.1	746.1	0
29.09.23	S	9.2	1.3	34.2	26	29.9	95.7	66.1	83.1	745.7	29.4
30.09.23	SSW	9.5	2.1	29.4	24.1	26.5	96.5	76.5	90.4	745.5	0
									Total Rainfall in mm		394.4
									Rainfall from 01.01.2023		854.7
									Rainfall from 01.06.2023		787.8

ANNEXURE - II

adani

ADANI POWER (JHARKHAND) LIMITED, GODDA

2X800 MW Godda Thermal Power Plant

Continuous Emission Monitoring Report

Stack: Unit - 1

S.No.	Date	SPM mg/Nm3 (Avg)	Sox mg/Nm3 (Avg)	Nox mg/Nm3 (Avg)
1	01-Apr-23	7.16	93.71	85.91
2	02-Apr-23	8.14	94.65	86.85
3	03-Apr-23	8.15	93.78	85.98
4	04-Apr-23	8.22	94.35	86.93
5	05-Apr-23	9.29	95.43	87.21
6	06-Apr-23	8.79	94.76	87.08
7	07-Apr-23	8.02	93.65	86.81
8	08-Apr-23	10.21	97.22	88.34
9	09-Apr-23	8.48	94.78	87.02
10	10-Apr-23	9.50	94.70	87.12
11	11-Apr-23	9.27	95.42	87.77
12	12-Apr-23	8.42	94.85	86.97
13	13-Apr-23	9.79	95.79	87.74
14	14-Apr-23	9.25	94.92	87.17
15	15-Apr-23	8.31	94.69	87.31
16	16-Apr-23	10.61	96.33	88.07
17	17-Apr-23	10.43	95.65	87.97
18	18-Apr-23	8.53	94.74	86.86
19	19-Apr-23	9.13	94.89	87.04
20	20-Apr-23	9.74	95.54	88.08
21	21-Apr-23	8.56	94.98	87.10
22	22-Apr-23	10.14	95.44	87.39
23	23-Apr-23	9.63	94.80	86.92
24	24-Apr-23	10.42	96.64	88.92
25	25-Apr-23	9.44	96.03	88.44
26	26-Apr-23	8.36	93.83	85.95
27	27-Apr-23	9.89	95.10	87.18
28	28-Apr-23	9.30	94.64	86.88
29	29-Apr-23	10.39	96.77	88.93
30	30-Apr-23	10.19	95.70	87.89

ANNEXURE - II

adani

ADANI POWER (JHARKHAND) LIMITED, GODDA

2X800 MW Godda Thermal Power Plant

Continuous Emission Monitoring Report

Stack: Unit - 1

S.No.	Date	SPM mg/Nm3 (Avg)	Sox mg/Nm3 (Avg)	Nox mg/Nm3 (Avg)
1	01-May-23	13.37	43.00	35.70
2	02-May-23	13.20	37.07	52.07
3	03-May-23	13.19	37.24	56.86
4	04-May-23	12.65	46.52	45.28
5	05-May-23	12.59	45.95	33.99
6	06-May-23	11.92	67.79	38.01
7	07-May-23	11.96	75.42	38.53
8	08-May-23	11.29	72.00	41.13
9	09-May-23	11.35	66.14	42.62
10	10-May-23	12.16	60.76	40.70
11	11-May-23	11.42	55.03	32.07
12	12-May-23	11.28	47.23	17.81
13	13-May-23	10.77	40.35	16.62
14	14-May-23	10.62	34.49	19.84
15	15-May-23	10.11	39.72	21.99
16	16-May-23	9.94	37.08	24.16
17	17-May-23	9.35	35.71	24.85
18	18-May-23	7.21	39.19	25.27
19	19-May-23	10.17	33.98	27.11
20	20-May-23	11.58	31.28	29.37
21	21-May-23	9.56	45.58	49.88
22	22-May-23	11.24	81.39	73.56
23	23-May-23	14.76	67.28	68.86
24	24-May-23	17.67	43.33	31.17
25	25-May-23	10.86	18.53	21.45
26	26-May-23	10.71	15.88	27.15
27	27-May-23	10.37	8.86	37.52
28	28-May-23	10.11	43.58	53.76
29	29-May-23	9.44	73.97	79.65
30	30-May-23	5.23	72.62	71.18
31	31-May-23	5.30	79.95	68.87

ANNEXURE - II

adani

ADANI POWER (JHARKHAND) LIMITED, GODDA

2X800 MW Godda Thermal Power Plant

Continuous Emission Monitoring Report

Stack: Unit - 1

S.No.	Date	SPM mg/Nm3 (Avg)	Sox mg/Nm3 (Avg)	Nox mg/Nm3 (Avg)
1	01-Jun-23	5.8	81.6	43.5
2	02-Jun-23	6.2	81.1	40.3
3	03-Jun-23	8.1	79.6	50.0
4	04-Jun-23	28.0	83.8	40.5
5	05-Jun-23	28.2	85.3	38.0
6	06-Jun-23	27.9	83.6	43.7
7	07-Jun-23	28.6	86.2	35.1
8	08-Jun-23	22.8	80.5	34.2
9	09-Jun-23	13.5	76.1	22.2
10	10-Jun-23	15.0	79.3	50.0
11	11-Jun-23	18.3	82.8	50.0
12	12-Jun-23	18.4	65.7	49.6
13	13-Jun-23	17.8	93.6	50.0
14	14-Jun-23	16.8	66.3	79.2
15	15-Jun-23	18.5	91.7	63.9
16	16-Jun-23	5.2	60.8	38.1
17	17-Jun-23	5.9	71.6	51.2
18	18-Jun-23	7.5	81.5	41.3
19	19-Jun-23	7.1	48.6	68.2
20	20-Jun-23	10.7	35.6	79.8
21	21-Jun-23	16.8	38.4	71.2
22	22-Jun-23	14.6	79.1	59.8
23	23-Jun-23	13.9	92.5	69.6
24	24-Jun-23	13.7	82.6	59.5
25	25-Jun-23	16.1	89.3	61.5
26	26-Jun-23	12.8	58.4	35.7
27	27-Jun-23	15.5	27.2	48.9
28	28-Jun-23	13.3	67.9	37.5
29	29-Jun-23	12.6	81.3	47.3
30	30-Jun-23	12.4	71.4	37.2

ANNEXURE - II

adani

ADANI POWER (JHARKHAND) LIMITED, GODDA

2X800 MW Godda Thermal Power Plant

Continuous Emission Monitoring Report

Stack: Unit - 1

S.No.	Date	SPM mg/Nm3 (Avg)	Sox mg/Nm3 (Avg)	Nox mg/Nm3 (Avg)
1	01-Jul-23	14.11	75.98	58.63
2	02-Jul-23	13.16	82.35	36.75
3	03-Jul-23	13.94	84.56	31.08
4	04-Jul-23	13.23	88.71	40.62
5	05-Jul-23	12.64	89.69	39.55
6	06-Jul-23	15.05	90.28	42.44
7	07-Jul-23	15.02	91.67	47.65
8	08-Jul-23	14.54	81.92	32.28
9	09-Jul-23	15.61	85.74	23.07
10	10-Jul-23	15.78	61.03	38.10
11	11-Jul-23	22.57	80.46	53.71
12	12-Jul-23	27.88	80.24	42.32
13	13-Jul-23	7.51	28.41	16.66
14	14-Jul-23	Unit Shut Down		
15	15-Jul-23			
16	16-Jul-23			
17	17-Jul-23			
18	18-Jul-23			
19	19-Jul-23			
20	20-Jul-23			
21	21-Jul-23			
22	22-Jul-23			
23	23-Jul-23			
24	24-Jul-23			
25	25-Jul-23			
26	26-Jul-23			
27	27-Jul-23			
28	28-Jul-23			
29	29-Jul-23			
30	30-Jul-23			
31	31-Jul-23			

ANNEXURE - II

adani

ADANI POWER (JHARKHAND) LIMITED, GODDA

2X800 MW Godda Thermal Power Plant

Continuous Emission Monitoring Report

Stack: Unit - 2

S.No.	Date	SPM mg/Nm3 (Avg)	Sox mg/Nm3 (Avg)	Nox mg/Nm3 (Avg)
1	01-Jul-23	Unit Shut Down		
2	02-Jul-23			
3	03-Jul-23			
4	04-Jul-23			
5	05-Jul-23			
6	06-Jul-23			
7	07-Jul-23			
8	08-Jul-23			
9	09-Jul-23			
10	10-Jul-23			
11	11-Jul-23			
12	12-Jul-23	10.12	25.74	23.56
13	13-Jul-23	15.19	40.04	45.32
14	14-Jul-23	14.62	40.06	36.75
15	15-Jul-23	14.48	40.14	35.70
16	16-Jul-23	14.60	40.23	43.71
17	17-Jul-23	14.41	40.03	40.48
18	18-Jul-23	14.70	40.30	43.14
19	19-Jul-23	14.37	40.22	44.68
20	20-Jul-23	13.95	40.29	46.93
21	21-Jul-23	14.85	40.38	40.10
22	22-Jul-23	14.50	40.19	44.36
23	23-Jul-23	14.78	40.23	45.35
24	24-Jul-23	15.06	40.28	42.84
25	25-Jul-23	14.71	40.36	43.31
26	26-Jul-23	14.06	46.39	45.78
27	27-Jul-23	15.08	70.68	63.75
28	28-Jul-23	15.75	73.98	63.76
29	29-Jul-23	16.61	75.41	63.77
30	30-Jul-23	16.44	75.19	63.77
31	31-Jul-23	14.22	67.21	74.90

ANNEXURE - II

adani

ADANI POWER (JHARKHAND) LIMITED, GODDA

2X800 MW Godda Thermal Power Plant

Continuous Emission Monitoring Report

Stack: Unit - 1

S.No.	Date	SPM mg/Nm3 (Avg)	Sox mg/Nm3 (Avg)	Nox mg/Nm3 (Avg)
1	01-Aug-23	27.9	81.0	53.0
2	02-Aug-23	16.4	62.9	52.2
3	03-Aug-23	18.3	75.6	38.7
4	04-Aug-23	18.3	81.0	38.5
5	05-Aug-23	28.0	80.4	33.3
6	06-Aug-23	28.0	78.7	35.3
7	07-Aug-23	32.2	77.1	33.1
8	08-Aug-23	27.9	80.3	48.6
9	09-Aug-23	26.2	81.3	50.0
10	10-Aug-23	10.8	85.0	50.0
11	11-Aug-23	12.0	84.5	49.6
12	12-Aug-23	11.6	83.8	49.9
13	13-Aug-23	12.7	86.0	48.8
14	14-Aug-23	11.4	85.0	48.8
15	15-Aug-23	12.7	86.7	50.0
16	16-Aug-23	12.6	86.5	49.5
17	17-Aug-23	12.6	85.3	49.6
18	18-Aug-23	12.3	84.4	47.3
19	19-Aug-23	13.4	82.9	47.4
20	20-Aug-23	13.9	83.9	50.0
21	21-Aug-23	13.7	84.9	50.0
22	22-Aug-23	14.1	85.6	49.9
23	23-Aug-23	14.7	87.1	50.0
24	24-Aug-23	16.5	84.5	50.0
25	25-Aug-23	19.9	95.0	50.0
26	26-Aug-23	19.9	57.2	50.0
27	27-Aug-23	12.7	95.0	50.0
28	28-Aug-23	12.5	57.2	45.2
29	29-Aug-23	12.5	57.2	45.2
30	30-Aug-23	13.5	83.1	45.7
31	31-Aug-23	11.9	67.2	52.4

ANNEXURE - II

adani

ADANI POWER (JHARKHAND) LIMITED, GODDA

2X800 MW Godda Thermal Power Plant

Continuous Emission Monitoring Report

Stack: Unit - 2

S.No.	Date	SPM mg/Nm3 (Avg)	Sox mg/Nm3 (Avg)	Nox mg/Nm3 (Avg)
1	01-Aug-23	16.16	82.34	63.82
2	02-Aug-23	14.91	81.27	65.00
3	03-Aug-23	11.87	86.06	65.00
4	04-Aug-23	2.99	83.81	63.82
5	05-Aug-23	3.49	84.72	64.99
6	06-Aug-23	2.86	80.85	65.00
7	07-Aug-23	2.22	79.47	65.00
8	08-Aug-23	2.59	60.84	63.76
9	09-Aug-23	2.36	40.86	65.00
10	10-Aug-23	5.08	40.94	61.09
11	11-Aug-23	3.64	40.01	54.90
12	12-Aug-23	3.80	7.82	56.35
13	13-Aug-23	5.80	12.98	62.64
14	14-Aug-23	4.46	40.01	62.64
15	15-Aug-23	5.65	40.01	62.65
16	16-Aug-23	6.33	39.67	62.65
17	17-Aug-23	11.09	44.29	58.34
18	18-Aug-23	13.18	40.49	49.96
19	19-Aug-23	10.11	40.07	49.86
20	20-Aug-23	14.73	40.32	41.75
21	21-Aug-23	14.53	40.28	43.02
22	22-Aug-23	14.76	42.20	46.49
23	23-Aug-23	9.44	19.96	64.98
24	24-Aug-23	5.59	22.98	53.19
25	25-Aug-23	5.97	55.36	46.14
26	26-Aug-23	13.60	71.17	65.00
27	27-Aug-23	11.52	74.05	65.00
28	28-Aug-23	16.12	73.01	65.00
29	29-Aug-23	16.88	73.58	64.99
30	30-Aug-23	14.33	75.06	64.99
31	31-Aug-23	12.19	62.91	72.22

ANNEXURE - II

adani

ADANI POWER (JHARKHAND) LIMITED, GODDA

2X800 MW Godda Thermal Power Plant

Continuous Emission Monitoring Report

Stack: Unit - 1

S.No.	Date	SPM mg/Nm3 (Avg)	Sox mg/Nm3 (Avg)	Nox mg/Nm3 (Avg)
1	01-Sep-23	19.52	83.72	40.16
2	02-Sep-23	23.46	84.87	34.72
3	03-Sep-23	23.96	84.87	34.71
4	04-Sep-23	21.17	84.87	34.71
5	05-Sep-23	22.23	84.93	38.69
6	06-Sep-23	15.12	66.30	38.56
7	07-Sep-23	14.48	23.97	49.34
8	08-Sep-23	14.53	23.56	41.56
9	09-Sep-23	14.56	28.22	39.38
10	10-Sep-23	14.59	23.83	39.75
11	11-Sep-23	14.17	31.59	48.34
12	12-Sep-23	14.61	32.22	47.30
13	13-Sep-23	14.93	38.51	35.92
14	14-Sep-23	16.97	77.33	19.83
15	15-Sep-23	16.95	78.37	21.25
16	16-Sep-23	17.05	84.53	30.97
17	17-Sep-23	17.05	87.31	20.40
18	18-Sep-23	17.19	82.50	29.99
19	19-Sep-23	16.79	73.77	36.37
20	20-Sep-23	14.67	38.70	49.86
21	21-Sep-23	14.70	21.10	46.55
22	22-Sep-23	14.71	16.49	49.71
23	23-Sep-23	14.75	15.32	49.99
24	24-Sep-23	14.77	11.32	50.00
25	25-Sep-23	14.36	34.65	49.99
26	26-Sep-23	14.69	46.06	49.99
27	27-Sep-23	14.79	40.04	48.39
28	28-Sep-23	14.79	21.68	38.85
29	29-Sep-23	14.81	27.61	41.34
30	30-Sep-23	14.83	44.50	45.55

ANNEXURE - II

adani

ADANI POWER (JHARKHAND) LIMITED, GODDA

2X800 MW Godda Thermal Power Plant

Continuous Emission Monitoring Report

Stack: Unit - 2

S.No.	Date	SPM mg/Nm3 (Avg)	Sox mg/Nm3 (Avg)	Nox mg/Nm3 (Avg)
1	01-Sep-23	15.74	46.94	70.92
2	02-Sep-23	15.99	52.52	67.25
3	03-Sep-23	6.43	45.49	69.47
4	04-Sep-23	12.53	46.00	59.76
5	05-Sep-23	22.19	47.84	60.00
6	06-Sep-23	19.91	45.90	61.28
7	07-Sep-23	22.04	73.54	52.75
8	08-Sep-23	19.20	71.15	51.98
9	09-Sep-23	20.92	69.33	48.37
10	10-Sep-23	20.36	65.18	48.50
11	11-Sep-23	24.32	68.87	51.16
12	12-Sep-23	27.88	70.30	53.13
13	13-Sep-23	25.94	67.38	47.71
14	14-Sep-23	26.78	61.56	44.93
15	15-Sep-23	27.60	64.21	46.79
16	16-Sep-23	27.51	65.83	46.00
17	17-Sep-23	27.57	47.24	37.82
18	18-Sep-23	27.92	54.18	44.38
19	19-Sep-23	27.84	50.98	41.36
20	20-Sep-23	27.96	41.91	36.16
21	21-Sep-23	25.07	40.60	35.75
22	22-Sep-23	22.71	40.04	36.10
23	23-Sep-23	24.02	40.16	36.74
24	24-Sep-23	27.95	40.38	36.14
25	25-Sep-23	27.88	40.14	36.78
26	26-Sep-23	27.83	40.29	36.80
27	27-Sep-23	27.96	40.02	36.75
28	28-Sep-23	25.81	40.06	36.75
29	29-Sep-23	17.30	41.02	36.43
30	30-Sep-23	15.02	17.41	57.69

Annexure - III

adani

Adani Power (Jharkhand) Limited, Godda

Summary of Continues Ambient Air Quality Monitoring System Reports (April'2023 TO September'2023)

Parameters		CAAQMS 1: Near Residential Township				CAAQMS 2: Near Cooling Tower				CAAQMS 3: Near Raw Water Reservoir			
		PM10	**PM2.5**	**SO2**	**NO2**	**PM10**	**PM2.5**	**SO2**	**SO2**	**PM10**	**PM2.5**	**SO2**	**NO2**
UNIT		ug/m³	ug/m³	ug/m³	ug/m³	ug/m³	ug/m³	ug/m³	ug/m³	ug/m³	ug/m³	ug/m³	ug/m³
MONTH	CPCB LIMIT	**100**	**60**	**80**	**80**	**100**	**60**	**80**	**80**	**100**	**60**	**80**	**80**
Apr'23	Minimum	55.5	24.1	6.2	10.9	56.5	24.2	6.3	10.3	60.2	25.5	6.7	11.2
	Maximum	70.8	33.7	11.1	18.7	68.2	31.8	10.6	17.5	74.9	34.3	10.7	18.9
	Average	65.9	29.0	9.2	15.4	63.8	28.2	8.9	14.5	69.2	30.3	9.1	15.5
May'23	Minimum	63.8	25.0	7.6	11.3	61.6	25.1	5.6	9.7	62.8	26.0	4.8	9.1
	Maximum	78.4	35.3	12.3	19.1	72.2	33.2	9.8	16.9	75.7	34.0	9.1	16.3
	Average	72.0	30.0	10.4	15.4	68.5	29.9	7.9	13.7	71.0	30.2	7.1	12.5
Jun'23	Minimum	56.9	25.5	6.8	11.9	57.3	25.4	6.0	9.2	59.5	25.0	6.7	9.9
	Maximum	72.4	35.2	12.2	20.3	73.4	33.3	10.5	17.8	71.7	33.1	11.3	18.5
	Average	67.4	30.5	10.1	16.8	68.1	30.2	8.5	14.1	65.5	29.4	9.4	15.2
Jul'23	Minimum	46.2	20.9	4.9	10.0	48.9	23.1	3.9	9.5	46.2	20.9	4.9	10.2
	Maximum	58.7	29.5	10.4	18.3	62.2	32.7	8.3	17.4	58.7	29.5	10.4	18.3
	Average	53.4	25.9	6.8	13.2	56.6	28.6	5.4	12.5	52.2	25.4	7.3	13.8
Aug'23	Minimum	20.4	12.9	5.9	6.5	21.6	10.3	4.1	6.1	22.7	11.8	3.3	6.3
	Maximum	54.3	25.5	9.0	21.9	51.1	22.2	7.5	16.6	51.8	25.3	9.0	11.6
	Average	43.7	21.0	7.1	12.9	40.1	17.7	6.3	9.8	41.9	18.6	5.9	9.8
Sep'23	Minimum	22.3	7.9	10.2	11.3	12.9	6.9	5.7	10.9	11.8	6.2	5.6	10.0
	Maximum	58.2	30.4	18.2	24.9	54.8	27.9	10.2	19.4	50.4	25.1	10.2	17.7
	Average	37.3	18.3	15.0	19.8	31.9	14.3	7.4	15.3	29.3	12.9	7.6	14.0

adani	Adani Power (Jharkhand) Limited, Godda Green Belt Development Details	Annexure - IV

Greenbelt Details:

Green belt Area developed (Acre)	66.71

PLANTED SPECIES IN AND AROUND PLANT PREMISES

Sr. No.	Scientific Name	Common Name
	Tress	
1.	Azadirachta indica	Neem
2.	Bauhinia blakeana	Kachnar
3.	Callistemon viminalis	Pink Bottle brush
4.	Casuarina equisetifolia	Saru/Casuarina
5.	Delonix regia	Gulmohar
6.	Anthocephalus cadamba	Kadam
7.	Ficus Benjamina	Golden leaf
8.	Bismarckia nobilis	Bismarckia nobilis
9.	Ficus benghalensis	Banyan/Bargad Tree
10.	Mangifera indica	Aam/ Mango
11.	Polyalthia longifolia	Ashok/ False Ashok
12.	Plumeria alba	Plumeria alba
13.	Syzygium cumini	Jamun
14.	Washingtonia filifera	Washingtonia Palm
15.	Wodyetia bifurcata	Palm
16.	Cassia seamia	Cassia
17.	Albizzia leebeck	Siris
18.	Pongamia pinnata	Karanj
19.	Cordia longifolia	Lasoora
20.	Aegle Marmelos	Bel
21.	Dalbergia sissoo	Shisham
22.	Ficus religiosa	Peepal
23.	Cassia renigera	Cassia
24.	Parkinsonia sp.	Parkinsonia
25.	Cassia fistula	Amaltas
26.	Alstonia scholaris	Satparni
27.	Swietenia mahagoni	Mahogany
28.	Mimusoaps illengii	Mimusoaps illengii
29.	Casuarina equisetifolia	Casurina
30.	Peltophorum pterocarpum	yellow flame
	Shrubs	
31.	Allamanda	Yellow Bell
32.	Bougainvillea spectabilis	Bougainvillea/ Booganbel
33.	Clerodendrum inerme	Wild Jasmine
34.	Cycas circinalis	Cycas
35.	Euphorbia milii	Christ Thorn
36.	Ficus panda	Fig Tree
37.	Hymenocallis caroliniana	Spider Lily
38.	Ixora hybrida	Ixora
39.	Jasminum molle	Jui
40.	Jatropha curcas	Ratanjyot,
41.	Nerium indicum	Kaner
42.	Nerium odoratum	Kaner
43.	Plumeria alba	Champa
44.	Tecoma	Yellow Trumpetbush

adani	**Adani Power (Jharkhand) Limited, Godda**	**Annexure - IV**
	Green Belt Development Details	

Green Belt Development

adani	**Adani Power (Jharkhand) Limited, Godda**	**Annexure - IV**
	Green Belt Development Details	

Green Belt Development

adani	**Adani Power (Jharkhand) Limited, Godda**	**Annexure - IV**
	Green Belt Development Details	

Green Belt Development

adani	ADANI POWER (JHARKHAND) LIMITED	Annexure - V
	2X800 MW GODDA THERMAL POWER PLANT	
	Ash Generation, Utilization and Disposal Details	

Month	Ash Generation			Ash Utilization							Dispoals to Dyke (MT)
	Ash Generation (MT)	Fly Ash (MT)	Bottom Ash (MT)	Cement Plant (MT)	Road Project (MT)	Brick Plant (MT)	Export (MT)	Other (MT)	Total Ash Utilization	Ash Utilization %	
April'23	66673	53338.3	13334.6	6317.6	0.0	0.0	0.0	0.0	6317.6	9.5	60355.3
May'23	43301	34640.5	8660.1	30106.0	99.5	29.7	0.0	0.0	30235.2	69.8	13065.5
Jun'23	53403	42722.5	10680.6	42325.9	101.1	187.0	0.0	0.0	42614.0	79.8	10789.2
Jul'23	50525	40420.0	10105.0	36124.9	0.0	441.3	0.0	0.0	36566.2	72.4	13958.8
Aug'23	135323	108258.7	27064.7	65162.4	1780.9	359.1	0.0	0.0	67302.3	49.7	68021.0
Sep'23	141743	113394.7	28348.7	85969.3	19659.3	1054.7	0.0	0.0	106683.3	75.3	35060.1
Total	**4,90,968**	**392774.8**	**98193.7**	**266006.0**	**21640.8**	**2071.7**	**0.0**	**0.0**	**289718.5**	**59.0**	**201250.0**

adani
Power

Annexure - VI

Ref: APJL/ENV/FLYASH/23177/23
Date: 15.07.2023

To,
The Additional Principal Chief Conservator of Forest
Ministry of Environment, Forest & Climate Change
Integrated Regional Office, East Central Region
Bungalow No- A-2, Shyamali Colony, Doranda
Ranchi- 834 002, Jharkhand

Subject: Advisory regarding implementation of Notification No. G.S.R. 02 (E) dated 2nd January 2014 and subsequent amendment in 21.05.2020 for supply and use of coal with ash content-regarding.

Ref: File No. L-11011/21/2014-IA, I (T), dated: 13.04.2015.

Dear Sir,

With reference to above subject matter, we are submitting herewith compliance of said notification.

COD of Unit – 1 (800 MW) achieved on 00:00hrs on dated 6th April 2023 (midnight of 5th April 2023) and Unit – 2 (800 MW) achieved on 23:30 hrs. (Indian Standard Time) of 25th June 2023 of Godda Ultra Supercritical Thermal Power Plant at Godda, Jharkhand.

We are enclosing herewith the monthly as well as **Quarterly Average Ash Content** in the coal for the period of **April'2023 to June'2023** as Annexure-1.

Total Capacity of TPP: 1600 (2x800) MW

This is for your kind information and record please.

Thanking You,

Yours faithfully,

for **Adani Power (Jharkhand) Limited**

(R N Shukla)
Head- Environment
Encl.: As above

Adani Power (Jharkhand) Limited
Adani Corporate House
Shantigram, S G Highway,
Ahmedabad 382 421
Gujarat, India
CIN: U40100GJ2015PLC085448
Registered Office: Adani Corporate House, Shantigram, S G Highway, Ahmedabad 382 421, Gujarat, India

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info@adani.com
www.adanipower.com

Annexure – 1

ASH PERCENTAGE IN COAL

(From April'2023 to June'2023)

Month	Coal Consumption (MT)	Ash Content in Coal (%)
April'2023	242800	27.46
May'2023	253814	17.06
June'2023	313767	17.02
Quarterly Average:		**20.51**

MT-Metric Tone

Ref: APJL/ENV/FLYASH/506/23
Date: 11.10.2023

To,
Additional Principal Chief Conservator of Forest
Ministry of Environment, Forest & Climate Change
Integrated Regional Office East Central Region
Bungalow No- A-2, Shyamali Colony, Doranda
Ranchi- 834 002, Jharkhand

Subject: Advisory regarding implementation of Notification No. G.S.R. 02 (E) dated 2nd January 2014 and subsequent amendment in 21.05.2020 for supply and use of coal with ash content-regarding.

Ref: File No. L-11011/21/2014-IA, I (T), dated: 13.04.2015.

Dear Sir,

With reference to above subject, we are submitting herewith the compliance of said notification.

We are enclosing herewith monthly as well as **quarterly Average Ash Content** in the Coal for the period of **July'2023 to September'2023** as Annexure-1.

Total Capacity of TPP: 1600 (2x800) MW

This is for your kind information and record please.

Thanking You,

Yours faithfully,

for **Adani Power (Jharkhand) Limited**

(R N Shukla)
Head- Environment & Forest
Encl.: As above

Adani Power (Jharkhand) Limited
Adani Corporate House
Shantigram, S G Highway,
Ahmedabad, PIN 382 421
Gujarat, India
CIN: U40100GJ2015PLC085448

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Annexure – 1

ASH PERCENTAGE IN COAL

(From July'2023 to September'2023)

Month	Coal Consumption (MT)	Ash Content in Coal (%)
July'2023	2,73,349	18.48
August'2023	5,06,829	26.7
September'2023	5,00,860	28.3
Quarterly Average (%):		**24.49%**

MT-Metric Tone

TEST REPORT

VIBRANT
"Experience the unimaginable"

Sample Number:	**VTL/FA/01**	**Report No.:**	**VTL/FA/2308290001/B**
Name & Address of the Party:	**M/s Adani Power Jharkhand Ltd. 2 × 800 MW Thermal Power Plant, Village: Motia, Dist: Godda, Jharkhand**	**Format No.:**	**7.8 F-01**
		Party Reference No.:	**NIL**
		Report Date:	**02/09/2023**
Sampling Description:	**FLY ASH**	**Receipt Date:**	**29/08/2023-02/09/2023**
		Sampling Date:	**29/08/2023**

TEST RESULTS

S. No.	Parameter	Result
1.	Arsenic as As (mg/kg)	BDL
2.	Lead as Pb (mg/kg)	0.89
3.	Mercury as Hg (mg/kg)	BDL
4.	Chromium as Cr (mg/kg)	0.77

(Checked By)

VIBRANT TECHNO LAB PRIVATE LIMITED JAIPUR

Lab Incharge
RK Yadav

(Authorized Signatory)

Term & conditions PTO

Vibrant Techno Lab Pvt. Ltd.
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VIBRANT
"Experience the unimaginable"

TEST REPORT

Sample Number:	**VTL/BA/01**	**Report No.:**	**VTL/BA/2308290001/B**
Name & Address of the Party:	**M/s Adani Power Jharkhand Ltd. 2 × 800 MW Thermal Power Plant, Village: Motia, Dist: Godda, Jharkhand**	**Format No.:**	**7.8 F-01**
		Party Reference No.:	**NIL**
		Report Date:	**02/09/2023**
Sampling Description:	**BOTTOM ASH**	**Receipt Date:**	**29/08/2023-02/09/2023**
		Sampling Date:	**29/08/2023**

TEST RESULTS

S. No.	Parameter	Result
1.	Arsenic as As (mg/kg)	BDL
2.	Lead as Pb (mg/kg)	5.20
3.	Mercury as Hg (mg/kg)	BDL
4.	Chromium as Cr (mg/kg)	2.98

(Checked By)

VIBRANT TECHNO LAB PRIVATE LIMITED ★ JAIPUR

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HALF YEARLY REPORT 2023-24

(APRIL 2023- SEPTEMBER 2023)

INTRODUCTION

The Adani Foundation, the CSR arm of Adani Group of Companies, executes Corporate Social Responsibility projects for Thermal Power Plant, Motia in four main core areas– Education, Community Health, Sustainable Livelihood Development and Community Infrastructure Development. With a people centric approach, the Foundation responds towards the emerging needs at the grass roots level aligning its activities with the 'Sustainable Development Goals (SDGs)' with a vision to end poverty, protect and preserve planet and bring solidarity and peace among all individuals and society. Adani Foundation aims to walk with the communities, empower people to look ahead by making the right choices and securing a bright and beautiful future, together. The total population of Godda district is 13.13 lakhs, out of which population of our intervention villages is 80000 approximately. We have been able to benefit 5 lakhs people directly and 13.77 lakhs people indirectly across the stretch of 91 Kms ranged from Godda district to Sahebganj district passing through more than hundreds of projects affected villages by organizing various community development activities in Education, Community Health, Sustainable Livelihood and Rural Infrastructure Development verticals.

Gyanodaya, a digital learning program swiftly met the needs of spreading the light of education which has transformed lives of over 90,000 students of 337 Govt. Schools of Godda district to continue building their career in a new normal. The Godda district stood at **13th rank** in **2023** as compared to 21st rank (2018) in **Class 10th** attaining **94.98%** passing percentage in **2023** as compared to 2018 (50%). Adani Foundation has also achieved another feather in CSR cap with a significant improvement in the passing percentage of girls' students from lower 46.65 % (2018) to **99.14% (2023)** in standard 10th studying in 9 KGBVs in district. Defeating all the odds and hurdles, the Foundation had identified **51 Dropout children** of TPP Core area and linked them with Aadhar card and their enrollment in school for completion of Primary education.

In health vertical, on **12th July 2023** at Ranchi district, Adani Power (Jharkhand) Limited, Godda was felicitated by **Ministry of Health and Ministry of Labour and Employment** for contributing towards **Eradication of TB** in Godda district in association with District administration. Similarly, on dated **12th September 2023**, the Adani CSR was graced with **"Jharkhand Samajik Utkrishtta Award 2023"** for

contributing to upliftment and development of the society in Godda district of Jharkhand.

Under Sustainable Livelihood Programme, Adani Foundation will be implementing a major project called - **Vruksh Se Vikas / Vruksh Se Samrudhi / Vruksh for Vikas (V4V)** to contribute towards a global commitment to plant '100 million trees' by end of **2030** there by contributing to 'one trillion tree campaign'. Total target of plantation in Godda is **22 Lakh plants** by year **2030**. In this year 2023-24, a total of **25,000 plantations** as per target have been done till September 2023 of horticulture fruit plants, medicinal and timber plants at household, panchayat, and other institutional level. Similarly, the community was supported with basic village infrastructure facilities such as drinking water facilities, model bathroom, seating places, etc. to make their living a better place at par with urban households.

The robust team of Adani Foundation at Jharkhand comprises of dedicated professionals including Unit CSR Head, Senior Project Officer, Project Officers, and a Medical team comprises of a doctor and four Para medicos.

The progress of CSR projects/interventions from **April 2023 to September 2023** is described in detail as under: -

DETAILED DESCRIPTION OF CSR ACTIVITIES

EDUCATION & RURAL SPORTS

Gyan Jyoti Tuition Programme (Providing Quality Education in Society)

1. **Adani Gyan Jyoti Yojana (Group 30): -** Education plays a vital role in development of society economically, socially, and financially, it also helps them to strengthen, so 'Adani Gyan Jyoti Yojana- Super 30 Program' was initiated in 2018-19 in Motia Village in which 30 students each of 8^{th}, 9^{th} & 10^{th} standard studies at the coaching centre for their concept building. They can prepare for their upcoming examination through concept building and remedial classes provided in Gyan Jyoti Kendra. During Previous year 2022-23, **56 children** were enrolled from class 9^{th}- 10^{th} standard (30- Class 9^{th} and 26- Class 10^{th}) in Super 30 coaching program in Motia village.

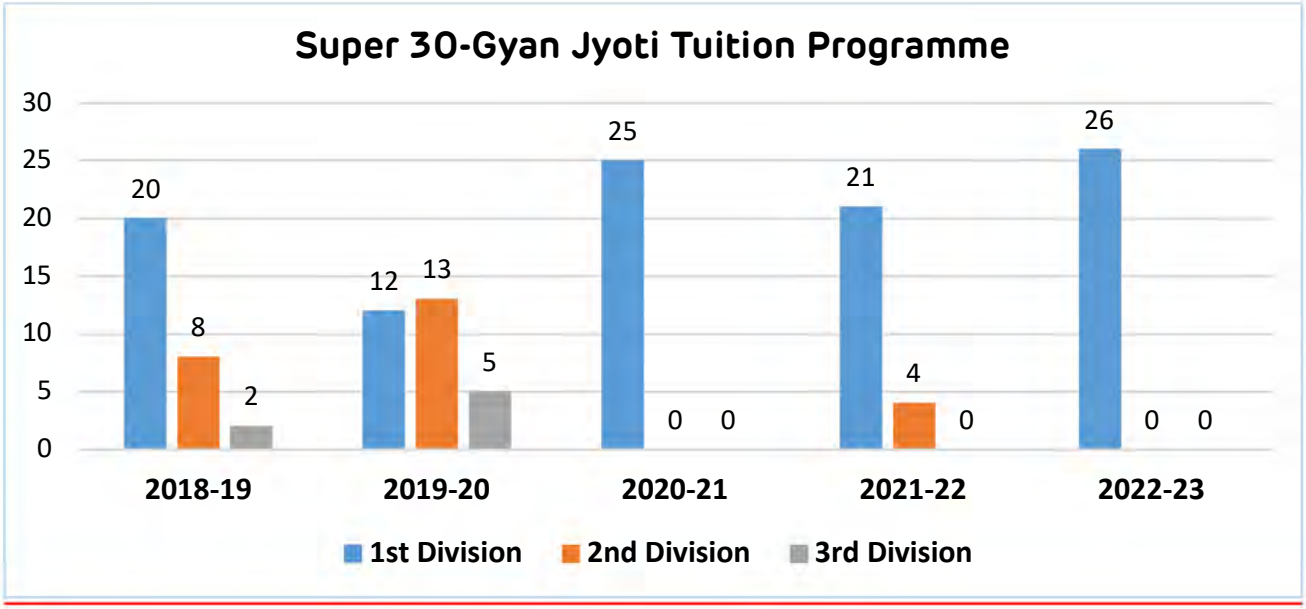
Programme Outcome

- **Enrollment in Super 30- Class 10th:** During the last year **2022-23**, a total of 50 students were screened after doing assessment of their performance based on their abilities and awareness after taking examination. Out of which, **26** meritorious students of **Class 10th** were selected and enrolled in Gyan Jyoti Tuition Programme- Super 30, Motia Center.

- **Academic Performance (Session 2022-23):** The students learning under Super 30 program in Gyan Jyoti Kendra, Motia have performed extremely well and passed with high grades of Academic Session 2022-23. The students succeeded with improved marks and passed with flying colours in their 10th board examination. All **26 students** have passed the exam **(100% passing percent)** with **1st division marks**. **4 students** have passed with **distinction marks above 75%.**

Super 30- Class 10th Results- Gyan Jyoti Tuition Programme

Academic Session	Gyan Jyoti Kendra	Students			Students			Overall Passing %
		Enrolled	Appeared	Passed	1st Division	2nd Division	3rd Division	
2018-19	Motia	30	30	30	20	8	2	100
2019-20	Motia	30	30	30	12	13	5	100
2020-21	Motia	25	25	25	25	0	0	100
2021-22	Motia	25	25	25	21	4	0	100
2022-23	Motia	26	26	26	26	0	0	100



- **<u>Success Story</u>: Aakash Shivam**, a student of Super 30- Gyan Jyoti Tuition Programme from High School, Motia has performed phenomenal and succeeded in Class 10th board examination with flying colours. The champ has secured **90.40% with first division marks** with the support provided by Adani Foundation with regular coaching classes, support of teaching learning materials and proper guidance.

- **<u>Enrollment in Year 2023-24:</u>** In this session, **55 students (30 students- 9th class and 25 students- 10th class)** are enrolled in Super 30 Coaching centre, Motia for preparation of Jharkhand 10th board examination to secure higher grades in exams in district and state level advancing them to a better future.

2. Gyanodaya Project:

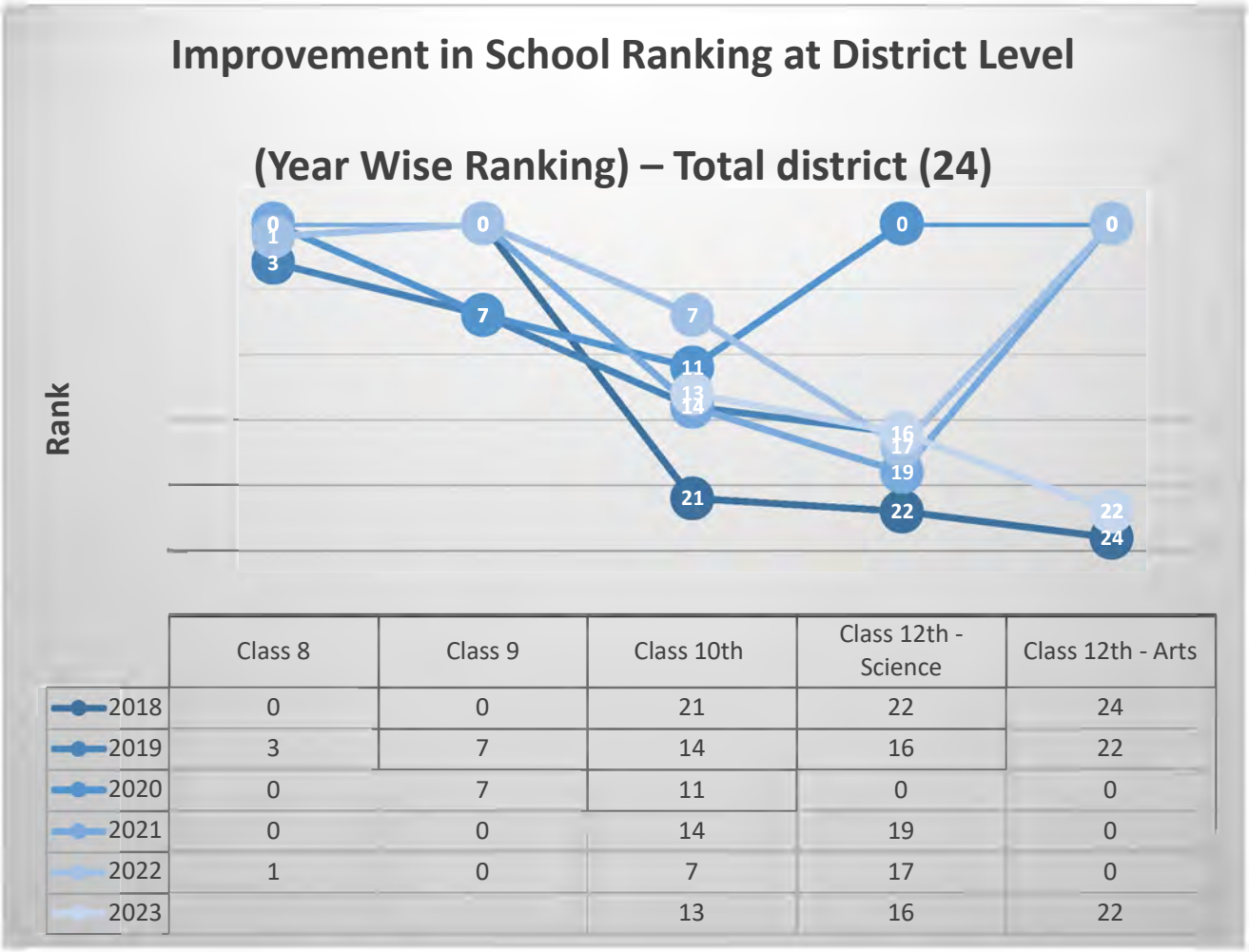
GYANODAYA, a step towards enlightening the human lives', was launched by Adani Foundation in partnership with District Administration in August 2018 to promote e-learning through Smart Classes in Middle and Higher Secondary Government Schools for students of 6th-12th standard of Godda district. Gyanodaya project has abled to create its learning space and improved the diverse spectrum of education through digital learning in **337 Govt. Schools** with its outreach in more than **236 remote and untapped villages** of **9 blocks** of Godda district of Jharkhand. In the tenure of less than 5 years, the program has leveraged its services facilitated by over **1872 skilled teachers** and benefiting more than **90,000 students directly**. Transformation in their lives has been observed through multiple benefits of digital learning such as - digital skills, decision making capabilities, visual learning, cultural awareness, improved academic performance and creativity. Gyanodaya model is filling the gap of teachers' shortage by enabling students to access smart classes with a simple touch of TV remote.

<u>Outreach of Gyanodaya</u>: Gyanodaya program has created its impact in **185** Middle Schools**, 111** High Schools, **10** Plus 2 Schools, **18** KGBVs, **7** Welfare Association Schools, and **6** JEE/NEET Centres, respectively.

Block	Middle schools	High Schools	Plus2 Schools	KGBVs	Welfares	JEE/NEET Centres	Aggregate
Godda	56	27	3	2	0	3	91
Sunderpahari	3	5	0	2	3	NA	13
Podaiyahat	31	17	3	2	0	NA	53
Pathargama	36	7	1	2	0	1	47
Basantrai	16	5	0	2	0	NA	23
Mahagama	15	17	2	2	0	1	37
Boarijore	7	10	0	2	4	1	24
Mehrama	11	12	0	2	0	NA	25
Thakurgangti	10	11	1	2	0	NA	24
Total	**185**	**111**	**10**	**18**	**7**	**6**	**337**

Programme Outcome

1. **Improvement in School Ranking at District Level:** The magnificent attempt of Gyanodaya program has improved the education system of Godda district and created an ecosystem of education by tapping up the government schools and strengthening the institutions as model school through operation of Digital learning program. Similarly, the intervention has enhanced the learning outcomes in the district significantly as compared to the baseline statistics of education since year 2018. Gyanodaya- E- Learning program has left remarkable footprint with significant increase in the school rankings at district level in the **year 2023** as compared to preceding five consecutive years' performance.



	Class 8	Class 9	Class 10th	Class 12th - Science	Class 12th - Arts
2018	0	0	21	22	24
2019	3	7	14	16	22
2020	0	7	11	0	0
2021	0	0	14	19	0
2022	1	0	7	17	0
2023			13	16	22

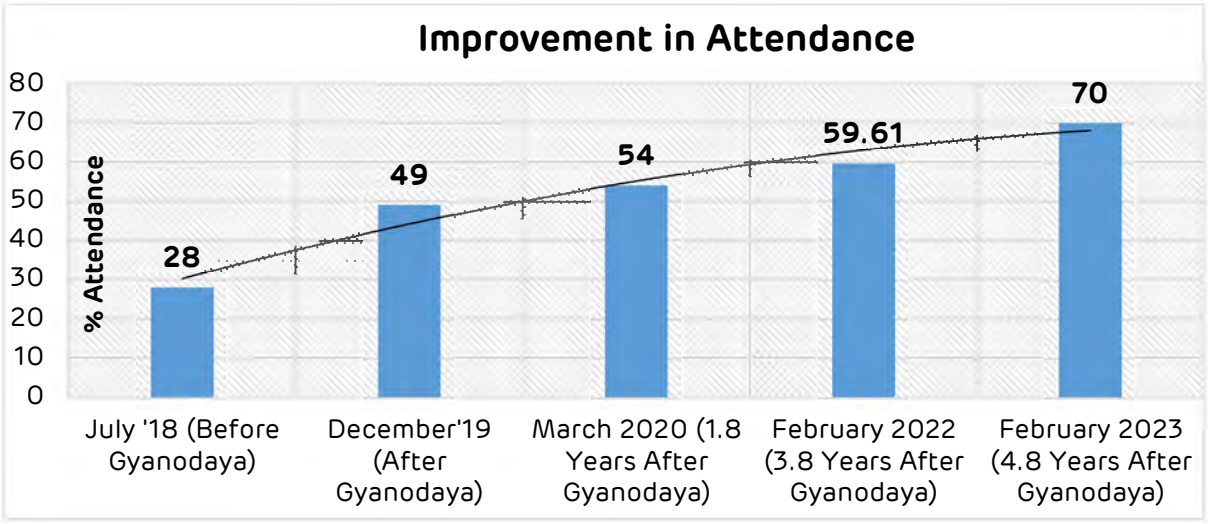
** Source- Education department, Godda*
**No Examination held of Class 8th and Class 9th in 2018*
**No Examination held of Class 8th due to COVID 19 in 2020 & 2021*

a) **Class 8th** stands at **1st rank (2022)** as compared to **3rd** rank (2019) among 24 districts of Jharkhand state.
b) **Class 9th** standard upholds **7th** rank position in the year 2019 & **2020** as compared to **21st position** in the year 2018-19
c) The ranking position of **Class 10th** has improved from 21st rank (2018) to 14th rank (2019) to **11th** rank (2020) to **14th** rank (2021) to a significant achievement by securing **7th rank position in the year 2022** and **13th rank** in **2023**.
d) 22nd rank (2018) to 16th rank **(2019)** to 19th rank (2021) to 17th rank in 2022 to **16th** rank in **2023** in **class 12th (Science)** and
e) 24th rank (2018) to **22nd** rank **(2023)** in **class 12th (Arts)**

2. **Increase in Attendance Rate of Students:** The visually appealing, easy-to-grasp and retainable concepts covered in the study materials has led to **increase** in the class-wise attendance comparing the figures of past years **(July 18)** from **20% low attendance rate** to a rise in **54%** in March 2020 to **59.61%** in February 2022 to an exemplary growth to **70% in February 2023.**

   A significant reduction in dependency on tuition classes has been observed across the blocks which will thereby increase the faith of students and parents likewise on government schools. The growth in the class-wise attendance has been a result of making learning engaged and interactive using conceptualized and animated concept videos being taught under the Gyanodaya model.

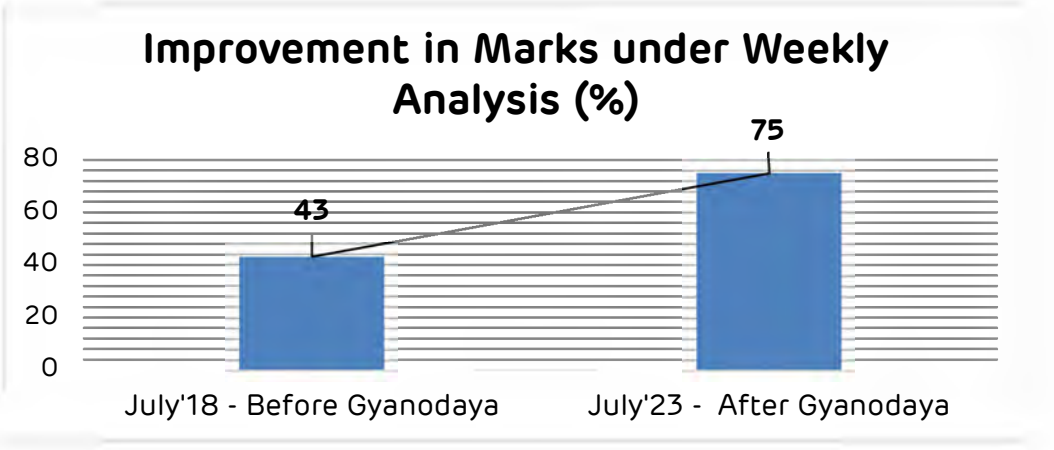
Improvement in Attendance after implementation of Gyanodaya			
July-18 (Before Gyanodaya)	**March 2020 (1.8 Years After Gyanodaya)**	**February 2022 (3.8 Years After Gyanodaya)**	**February 2023 (After 4.8 Year after Gyanodaya)**
20-30%	54%	59.61%	**70%**



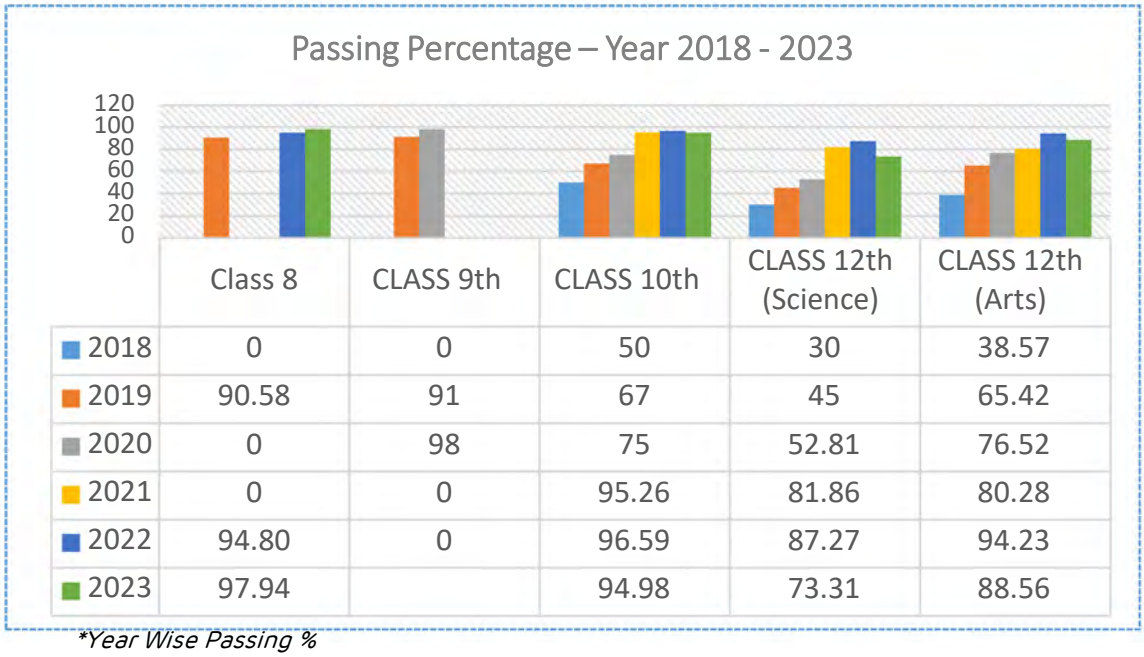
3. **Improvement in Marks of Students:** Prior to educational initiative of Gyanodaya, the students used to fall under 30-40% marks bracket which has now shifted to **70-75%** marks bracket on an average due to better understanding and retention of basic concepts and a daily quiz after every video.

Impact of Gyanodaya project on Results is as given below:

July-18 (Before Gyanodaya)	July-23 (After Gyanodaya)
Improvement in Marks under Weekly Analysis	
30% - 40%	70-75 %



4. **Increase in Passing Percentages:** With the advent of Gyanodaya, the passing percentage of students of Class 8th, Class 10th and Class 12th has increased progressively in the year 2023 as compared to previous five consecutive years 2022, 2021, 2020, 2019 and 2018.



	Class 8	CLASS 9th	CLASS 10th	CLASS 12th (Science)	CLASS 12th (Arts)
2018	0	0	50	30	38.57
2019	90.58	91	67	45	65.42
2020	0	98	75	52.81	76.52
2021	0	0	95.26	81.86	80.28
2022	94.80	0	96.59	87.27	94.23
2023	97.94		94.98	73.31	88.56

**Year Wise Passing %*

i. **Class 10th:** The passing percentage of Class 10th students has increased in **2023 (94.98%),** and **2022 (96.59%)** as compared to status of 2021 (95.26%), 2020 (75%), 2019 (67%) & 2018 (50%).

ii. **Class 12th (Science):** The passing % of Intermediate students has improved significantly as compared to figures of 30% in the year 2018, 45% (2019), 52.81% (2020), 81.86% (2021) to major improvement of **87.27% (2022)** and **73.31% (2023)** in Intermediate (Science)

iii. **Class 12th (Arts):** The passing % has also improved from 38.57% (2018) to 65.42% (2019) to 76.52% (2020) to 80.28% (2021) **to 94.23% (2022) and 88.56% in 2023** in Intermediate (Arts) Stream.

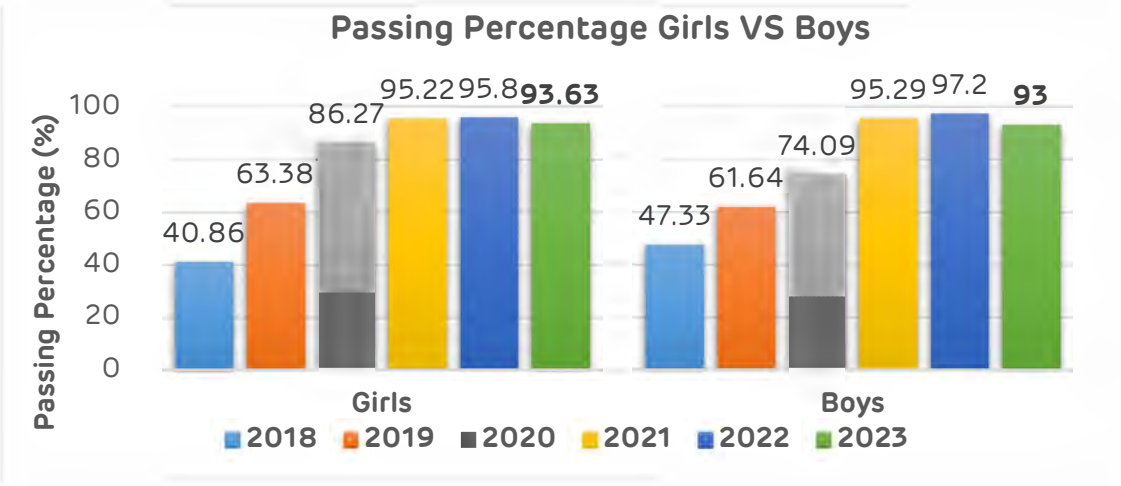
iv. **Class 9th:** Passing percentage increased from 91% (2019) to **98%** in the year **2020.**

v. Similarly, the passing percentage of **JAC 8th Board** students has improved from **90.58%** in the year 2019 **to 94.80% in the year 2022 to 97.94% in the year 2023**.

Class-wise Improvement in Passing Percentages					
Academic Year	**Class 8th**	**Class 9th**	**Class 10th**	**Class 12th Science**	**Class 12th Arts**
2017-2018	0	0	50	30	38.57
2018-2019	90.58	91	67	45	65.42
2019-2020	NA	98	75	52.81	76.52
2020-2021	NA	NA	95.26	81.86	80.28
2021-2022	94.80	NA	96.59	87.27	94.23
2022-2023	97.94	NA	94.98	73.31	88.56
% Increase	**8.13**	**7.69**	**89.96**	**144.37**	**129.61**

**Exams were not conducted of class 8th & 9th in 2018*
***% increase figure from 2018 to 2023 of class 10 & 12*
****% increase figure from 2019 to 2023 of class 8*

5. **Passing Percentages of Girls Vs Boys:** The graph presents a sharp increase in the passing percentage of girls and boys as compared with the last 5 years. In the session 2017-18, girls passing percent was 40.86% which increased to **95.8% in 2021-22 and 93.63%** in the **session 2022-23**. Simultaneously, the boys' passing percentage in the session 2017-18 was 47.33% which increased to **97.2% in 2021-22 and 93%** in the **session 2022-23.**



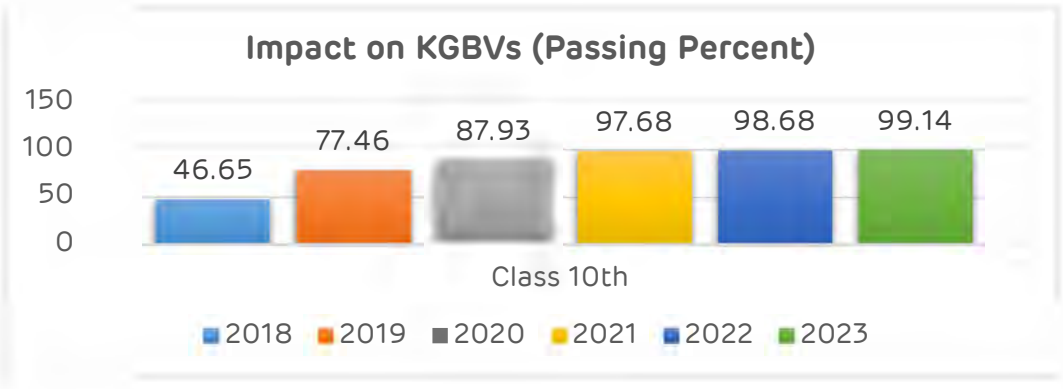
Passing Percentages of Girls Vs Boys						
Students	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
Girls	40.86	63.38	86.27	95.22	95.8	93.63
Boys	47.33	61.64	74.09	95.29	97.2	93

Source: Education department of Godda district

6. **The Kasturba Gandhi Balika Vidyalaya (KGBV)** scheme was launched by the Government of India in August 2004 for setting up residential schools at upper primary level for girls belonging predominantly to the SC, ST, OBC and minorities dwelling in difficult and untapped rural areas. The scheme was applicable, in Educationally Backward Blocks (EBBs) where the rural female literacy is below the national average (46.13%: Census 2001) and gender gap in literacy is more than the national average (21.59%: Census 2001).

Impact on Kasturba Gandhi Bal Vidyalaya (KGBVs) in Godda district

There are 9 KGBVs in the district where a total of 2663 girl students have studied in 10th standard since 2018. The intervention of Adani Foundation has led to a significant improvement in the **passing percentage of girls' students** from lower 46.65 % (2018) to **99.14% (2023)** of standard 10th.



- **Gyanodaya YouTube Channel: Gyanodaya YouTube Live class** for the students studying in class 10th and 12th. Live class benefits can be availed by the students of any district of Jharkhand state. The syllabus of live class is based on Jharkhand Board. So far, **44,050 views from April 2023 to September 2023.**

❑ **Delivery of Gyanodaya Equipment & Handholding to New Gyanodaya Schools:** During the year 2023-24, Gyanodaya Smart Class equipment was delivered to **18 new Schools** of 8 blocks of Godda district namely, Godda, Podaiyahat, Basantrai, Boarijore, Mahagama, Pathargama, Thakurgangti and Mehrama. A detailed Handholding session was also conducted in each new Gyanodaya school to operate Smart Classes properly. In addition, teachers are being trained for the proper use of the content to ensure that the students can utilize it in the best possible manner. A nodal teacher is appointed with the help of Headmaster of the school. With help of other teacher at the school, nodal teacher keeps the record of various activities like total class conducted, student's attendance, daily test, and analysis test marks. The parents of the students are also involved, and they are made aware of the Gyanodaya Smart Class and the benefits of attending the Gyanodaya Class for their children.

3. KGBV Project: Adani Foundation envision to ensure access and quality education to the girls of disadvantaged groups of society, reduce gender disparities, promote gender equality, retention of girls in schools, arresting girls' dropout rate, improving girls' enrolment in KGBVs and other govt schools and enhance the academic performance of girl students. The thrust of the project is to empower the Girl children in fields of education along with life skills by creating a learning ecosystem through addressing the educational challenges prevalent in KGBVs. The primary target group of KGBV project will be **4500+ Female students** (500 average students

in each KGBV) (SC, ST, OBC, BPL, marginalized and weaker sections of society) of 9 KGBVs from Class 6th to 12th. In the 1st year, 2023-24, 6 KGBVs will be covered (KGBV Godda, KGBV Sunderpahari, KGBV Pathargama, KGBV Mahagama, KGBV Thakurgangti and KGBV Basantrai) and remaining 3 KGBVs (KGBV Poreyahat, KGBV Boarijore, and KGBV Mehrama) in succeeding project duration.

- **KGBV School Assessment:** An assessment was done of total **9 KGBV (Kasturba Gandhi Balika Vidyalaya)** schools at Godda in support with Eckovation Team and it had been seen that KGBV's face several challenges in providing quality education to girls from marginalized and disadvantaged communities.
  Some of the key challenges found during the assessment were:
  - Inadequate infrastructure,
  - Shortage of trained teachers,
  - Dropout rate,
  - Social and cultural barriers,
  - Limited access to technology, etc.

Gyanodaya Initiatives for Capacity building:

- **Monthly Parents Teacher Meeting:** Gyanodaya team participated and conducted PTMs in all **9 blocks** including **13 schools** of TPP core villages and discussed the importance and value of education and made them aware about Gyanodaya simulation and how the initiative is helping and will be helpful for their children. Over **200** Parents Teacher Meetings (PTMs) were conducted, and **1200+ Parents** participated.

4. Coaching Program for Jawahar Navodaya Vidyalaya (JNV)- Class 6 Entrance Examination,

an initiative of Utthan program of Adani Foundation was begun in January 2020 with an objective to address educational needs of poorer, rural, and tribal children, provide opportunities to bring them at par with others in the development of conducive environment and build their bright and secured career from right schooling by qualifying Navodaya entrance examination.

Methodology Adopted

a. Identification of students studying in govt schools for securing selection from rural quota (Enrolment Policy of JNV-75% rural quota, 25% urban quota, Total number of seats -80)

b. Enrollment of students for preparation of entrance examination in coaching centres followed by registration of students for appearing in entrance examination.
c. Special coaching classes by teachers (Offline mode) are conducted at different locations at village level and online access to learning materials by students (self-study and smart classes) are adhered.
d. The preparation of the examination includes arrangement of learning materials, stationery items and miscellaneous items.
e. Weekly Grand tests are conducted by teachers for evaluation of students' performance and proper follow-up of students is done for improvement area.

- **Enrollment for Session 2024-25:** The program is operational in **8 coaching centres** located in 8 core and pipeline villages of Godda district benefitting over **89 students** for preparation and qualifying the examination of Navodaya entrance examination for Academic Session 2024-25. The program is facilitated by **eight skilled Utthan Sahayaks (teachers),** adequate infrastructure and educational resources (bags, books, Stationary Materials, etc.)

5. Education Support to Palni

- **Story of Palni Kumari:** Palni Kumari of Simdega, Jharkhand is a teenager nurtured by her only mother in family. At her minor age of 1.5 years, she lost her father. However, Palni and her mother did not lose the courage and showed remarkable resilience in dealing with the difficult situations. It is righty said, age is just a number if we envision to achieve our ambitions debarring all the obstacles and hurdles in the path.

  Her perseverance and tenacity, led to pass the class 6^{th} examination with 75% distinction marks and currently studying in 7^{th} class standard. With a dream to fly high, she aspires to become Nurse and serve the poorer people along with the responsibilities of her mother in her shoulder. Together, Palni and her mother earn their bread and butter and paying school fees by selling chickpeas at the roadside of her locality.

- **Adani Foundation Support for Palni's Education:** The Chairman of Adani Group, Hon'ble, Shri Gautam Adani has taken up the Noble work by taking the responsibilities of educating Palni, girl from a small town, Simdega to fulfil her dream of becoming a Nurse. For five years of duration, Adani Foundation will discharge the duty of Educating Palni Kumari and nurture her in a healthy environment.

6. Mainstreaming Rural children into Formal Education System

The Adani Foundation aims to mainstream the poor and marginalized children into formal education system who are deprived of quality education in core, railway line and pipeline villages. It focuses on mitigating the gap between educational resources and inability to access quality learning.

The Foundation had identified **51 Dropout children** of Amrakamat village of TPP core area who were earlier deprived of schooling. The factors associated were bridged by initiating the **Students Enrollment Campaign** in which children, parents and community were sensitized and educated on importance of schooling, Aadhar card, its registration and enrollment in the school. All children got issued with their **Aadhar card** and they are now enrolled in **Primary education (Class 1 to Class 4)** in **Upgraded Middle School (UMS), Amrakamat**.

Apart from that, **Regular coaching classes** to a total of **58 children** are given by the Foundation in Coaching center, Amrakanoli and continuous monitoring of 51 children's status going to schools, its outcome and participation of parents is also done.

7. Dustbin distribution under Swachhata Abhiyan in Schools of TPP Core area:

The Adani Foundation initiated Swachhata Abhiyan in Schools of TPP Core area in which Dustbins were provided to schools located in TPP Core area, and railway line area. Around 21 schools were supported with Dustbin for promoting culture of cleanliness and hygiene in campus area under the campaign. It will also ensure incorporation of self-mechanism of maintenance and cleanliness of school area by students and creating an ecosystem of conducive learning environment.

The children, teachers and community were educated and sensitized on importance of waste management practices including biodegradable and non-biodegradable wastes, its disposal, scope of waste recycle and adoption of sanitation practices in home, schools, and workplaces. AF supported with total 23 dustbins in 21 schools of Godda district.

8. Support to Improve School Infrastructure

1. **Support of Safe Drinking water facility:** Adani provided support to improve School Infrastructure of **Upgraded Middle School (UMS), Bhatdiha** located in Godda district with **1 Kent RO Water filter (20 LPH) on 22nd June 2023** benefiting over **300 students** in a year with an objective to improve Health, Nutrition, and Wellness of children and thereby, increase the attendance rate of students and academic performance.

2. **Support of Kitchen Materials for Health & wellness:** Adani Foundation provided support of **Kitchen Utilities** for Health & Wellness of rural school going children in **Primary School, Petbi Santhali, Podaiyahat block, Godda district** on **7th August 2023** for better rural infrastructure and enable access to educational institutions for more than **200 tribal children**. The Kitchen materials comprised of total 8 items for preparation of Mid-Day Meal and its storage with safety, hygiene and maintaining quality of food. Currently, 32 students are enrolled in the Primary School, Petbi Santhali.

Capacity Building & Awareness Programme

1. **Celebration of International Yoga Day 2023: International Yoga Day** was celebrated on **21st June 2023** at Officer Club, Shantivihar Township and community level in core and railway line villages. Over 200 members including employees and their family members had attended the yoga workshop organized at APJL site. Similarly, more than **800 students from 8 schools and 6 Anganwadi centres** of TPP core area had actively participated during the occasion and inculcated various Yoga asanas and their benefits to keep healthy and understood the importance of Yoga in holistic development of their life.

2. **Support to Mahila Mahavidyalaya, Godda to Organize One Day National Seminar:** Adani provided support to **Mahila Mahavidyalaya, Godda** to organize **One Day National Seminar & Student Faculty Exchange program** which was held on **15th July 2023.** During the program, the main topics which was covered are: - **"Career opportunities through Skill Development"** under which subtopics comprised of Lifelong Learning for Skill Development, Skill Development and Employability, Up-Skilling and Re-Skilling, Digitalization and Future of Work. Along with other activities, Cultural program, Debates, Antyakshari and Rangoli Competition were also conducted.

   This opportunity helped the students to enrich their learning, and skills, improve employee morale, achieving educational goals and benefitted more than **3000 students, teachers, and community** significantly.

3. **Support to S.B.S.S.P.S.J College, Pathargama for One Day National Seminar:** Adani provided support to Education committee members of S.B.S.S.P.S.J College, Pathargama to organize One Day National Seminar which was held in the college premise on **16th July 2023**. During the program, the main topics which was covered are: - "Importance of AQAR, Action taken on PEER Team Suggestion Report and Role of IQAC for subsequent cycle of NAAC Accreditation".

The chief dignitaries of the program were Principal, Lecturer and N.S.S. Coordinator from 3 states who had attended the seminar in S.B.S.S.P.S.J College, Pathargama. This opportunity helped teacher and the students to enrich their learning, and skills, improve employee morale, achieving educational goals and leading to upgradation of overall education system of Godda district. The program benefitted more than **500 students, teachers, and community** significantly.

Supporting Sports & Cultural Events

1. **Support to Godda District Netball Association:** Adani endeavours to promote Youth & Sports Development Programme and encourage the youths to lead and perform in athletics at District, State and National Level. Talent of aspiring youths are explored, and they are further groomed & sharpen their skills in their domain sports field. In the last 13 years, more than 1300 players of Netball Sports from district are playing and have won medals by participating in 150 State Level and National Level Netball Sports tournament.

   At this juncture, Adani had supported the 'Godda District Netball Association' with grocery items for conducting **"9th Summer Residential Netball Training Camp"** participated by **300 players** at Gandhi Maidan, Godda. The outstanding players of the competition will be selected for further grooming & training session to participate in upcoming State Level and National Level Netball Sports tournament.

COMMUNITY HEALTH PROGRAMME

1. Mobile Health Care Unit (MHCU)

In the half financial year 2023-2024 (April'23- Sep'23), **Mobile Health Care Units** have together catered to **28,624 patients including 8673 male, 11938 female and 8013 children** from around **121+** Core, Periphery, Railway line and Pipeline villages of Godda and Sahebganj district. AF supported mobile medical facilities goes a long way to ensure access of poor people to quality primary health care services at their doorstep.

2.Specialized Medical Camps: During the Half Year (2023-24), Adani Foundation endeavored to cater health needs in a specific health issue of the masses amidst Epidemic outbreak by adhering to safety protocols. The Foundation strives to be a catalyst to 'Sustainable human development' and serves the deprived and marginalized human mankind and community with means of rendering appropriate services at grassroots. The triggers adopted for development encompass health as one of the major elements for holistic development of an individual. Moreover, the drive aligns with **Sustainable Development Goals (SDG) 3, 'Ensure healthy lives and promote well-being for all at all ages.**

Adani Foundation has organized **56 Specialized Health Camps in specializations namely, Ophthalmic, Paediatrics, Gynec, Cardio, Osteo at Health & Wellness Centre, Motia** & **General Health Camps** was conducted in **6** intervention villages of core, and railway line area of Godda district. **Total 1057 patients** including **284 males, 537 females and 236 children from over 6 villages** were screened, treated, and provided with free medicines.

Specialized Medical Camps was organized with an objective to provide critical and specialized health care services in villages to cater untreated illness/ medical issues concerning women/ girls and children, elders, and community for whom access to safe and standard health services remains a challenge.

Details of Specialized Medical Camps & Mega Health Camps

SN	Specialization	Patients treated			
		Male	Female	Children	Total
1	Gynec	0	125	0	**125**
2	Pediatric	0	0	167	**167**
3	Cardio	80	74	4	**158**
4	Eye	46	59	8	**113**
5	Ortho	65	90	17	**172**
6	General Health Camp	93	189	40	**322**
	Total	**284**	**537**	**236**	**1057**

3. **Support to District Health department for Measles (Rubella) Awareness Program**: Adani provided support to District Health department, Godda with IEC materials (School Poster, Anganwadi Poster and Hand Bill) on 19th April 2023 to organize Awareness program cum Vaccination campaign on Prevention and Curative Measures of Measles (Rubella) diseases in children aged 9 Months to 15 years old. The intervention was carried out in schools, Anganwadi Centre, and hospitals which aided the frontline health workers, social activist, village leaders to educate, inform and aware the children, parents, and community about Rubella Vaccination for children. It will benefit around 3000+ children.

SN	Particulars	Unit
1	School Poster	750
2	Anganwadi Poster	500
3	Hand Bill	10000
	Total	**11250**

4. **Blood Donation Drive:** The Adani Power (Jharkhand) Limited, Godda and Adani Foundation, Godda organized the **Blood Donation Camp** under joint aegis of Medical CSR and OHC to mark the **61st Birthday of Sh. Gautam Adani, Chairman of the Group** on **2023 June 24th** at Officer's Club, Motia site. The Site Head, APJL, Mr. Naresh Goel, Mr. Ramesh Jha, Chief Business Officer, Operations & Maintenance (O & M), and Mr. Prasun Kumar Chakraborty, Vice President - Operations & Maintenance (O & M) greeted the medical officers from District Health department, Godda with a flower bouquet and jointly inaugurated the Blood Donation Camp by performing the lamp lighting rituals. All the dignitaries recognized the good work of the blood donors and gave away the certificates to boost the morale of donors. More than **370** employees, contractors' staff and workers donated blood on this occasion creating an indelible mark of the highest collection on a day in the district.

The occasion witnessed the enthusiasm and passion among the blood donors to serve the cause of humanity. The idea was to save human lives at the time of emergency. The Adani Foundation played a major role in organizing the camp and the efforts of all the organizers including the HR-Administration and OHC were appreciated by all. T- Shirts, Certificates, Selfie point, Banner, Dangler, Prizes (Umbrella & Cap), juice, and snacks were arranged for the donors and the organizers on the occasion. Donors were also awarded certificates of appreciation duly signed off by the **Adani Foundation Chairperson, Mrs. Priti G. Adani**, that provided a sense of elevation to all. It turned out to be a memorable moment.

5. **Plantation on the eve of 61st Birthday of Chairman of the Group:**

On **61st Birthday of Honourable Sh. Gautam Adani, Chairman** of the Group on **June 24th, 2023, Plantation Drive** was organized in **High School, Baksara of TPP Core area.** Over **250 students** and School Management Committees (SMCs) had volunteered in plantation activity who planted more than **150 fruit and non-fruit plants** in the campus of school premises.

The ownership of plantation of each plant was taken up by every student. The program was led by students and School Management Committees (SMCs) who expressed their heartfelt gratitude and noble gesture to Sh. Gautam Adani on the special day and embarked an ambitious project **-Vruksha se Vikash (Planting 100 million tree)** of Adani Foundation.

The day marked a significance towards environment protection, afforestation, enhancement of greenery, social and economic development by spreading the message among school children, PRI members, and community.
The program was presided by esteemed dignitaries who graced the auspicious occasion with their presence and motivated the children to become the changemaker of the society.

6. **Awareness Drive on Specialized Health Camps:** Health Camp Awareness Drive has been initiated to inform, aware and educate the villagers and community of 17 core and railway line areas of the intervention of Adani Foundation of providing free Specialized Health Care services at PHC Motia, instrumental in safeguarding the life of approx. **2000** economically backward and marginalized rural population of the society.

Door to door household visit and awareness campaign is conducted in each village in which the target households are informed about Doctors' schedule, specialization of diseases diagnosed, and sensitized about the importance of good health and productive life for a happy living. Five doctors of concerned specialization namely, Gynec, Pediatrics, Osteo, Cardio, & Ophthalmic are deputed at PHC, Motia on respective days and time duration in monthly and fortnightly manner where the patients reach to the health centre along with their health card for diagnosis of their health complication and follow-up as per doctor's prescription.

Health Awareness Programmes

Medical Services

- **Health Awareness:** with collaborative efforts of Adani Foundation, Helpage India and Wockhardt Foundation in Peripheral, Pipeline & Railway Line village area to provide support for better community health. Health Awareness Program are organised in area to aware rural people about harmful diseases, maintenance of cleanliness, direction for balance diet which help them to fight from diseases and the COVID 19 virus affecting the populations at large scale followed by all safety norms. School children and community persons have become more vocal with active approach towards curbing diseases and sharing of such valuable information among community. **10000+ villagers** benefitted.

- **Critical Health cases:** Diagnosis of critical cases of laborers working in TPP (site office) is done by CSR Medical Team regularly in an emergency manner.

- **Ambulance Facility to Poor Patients**: Families from 13 core villages have been benefitted from this initiative of Adani whose families remain loyal and grateful to company for the support provided by us in times of distress. Ambulance service is given to poor people belonging to TPP area in times of medical emergency or for transfer of critical patients to higher centre and for COVID health check-up, doing home quarantine and quarantine center and treatment like Bhagalpur, Deoghar, Ranchi, and Patna & Other nearby hospitals. **10+ patients benefitted from ambulance facility.**

Seasonal Assistance

- **Support of Musical instruments for Cultural program:** In May 2023, on dated 18th May 2023, Adani Foundation provided **Musical instruments (Dholak-1, Harmonium-1, & 2 pairs of Kartal instrument- Hand Cymbals Manjira Pair)** support to community members of Tardiha village of Pathargama block in Godda district. The support will aid the village committee members to organize cultural program of their traditions benefitting over **2000 rural population** in villages.

- **Relief Materials Support to Affected Families from Natural Hazards**
  i. **Tarpaulin Assistance for Natural Disaster Management:** Under 'Poorer Welfare & Assistance' program, Adani supported the poorer and weaker sections of society affected from natural calamities or uncertain disasters such as fire, flood, cyclone, thunderstorm, etc.

Adani instantly supported **19** affected families of **7** core, railway line and periphery villages with 19 Tarpaulin sheets in August and September 2023 for addressing the issue and safeguarding over **90 beneficiaries** in Godda district.

ii. **Poor Assistance Programme: Mosquito Net Distribution:** Adani Foundation believes in assisting the community who are marginalized and deprived of basic facilities for survival. The health of the villagers is made secure and protected from several diseases which leads to fatalities and death cases in the villages. Assistance of Mosquito Net to the poorer households will help them to be prevented from any vector-borne epidemic and common occurring water borne diseases such as Dengue, Malaria, etc. On dated 29th August 2023 and 30th August 2023, around **190 tribal households** were assisted with 190 Mosquito nets in tribal village namely Nayabad (61), Gangta (96), Mali Gangta (20) and Basmitikar (13) of Motia panchayat, Godda block of TPP Core area, Godda.

ii. **Team Participation in cultural event:** Adani supported the local villagers in organizing festivals and social events to strengthen ties and build relation with community. It emphasizes to celebrate the cultural program with huge joy and enthusiasm among the rural people. Social occasion program such as Sawan Mahotsav, Bhagwad Katha, International Day of Indigenous Peoples, Ganesh Chaturthi, Janmashtami, Vishwakarma Puja, etc. was celebrated in the villages benefitting more than **2000 rural and tribal communities**.

Welfare Support

i. **Assistance in Health, Marriage, and Death:** Adani provides financial support to poor people for such events which require huge expense such as marriage ceremony, educational needs, major illness including hospitalization of patient, death of a person. **844** beneficiaries from more than 10 villages have been extended financial support to the tune of **Rs. 24,64,492/-**

Support Cause	FY 2023-24 (April 2023- September 2023)	
	No. of Beneficiaries	Supported Amount
Health Support	16	178300
Others Support	4	12000
Marriage Support	12	146500
Death Support	8	79000
Education Support	4	140000
Social Occasion Support	800	1908692
Total	**844**	**2464492**

Awards & Accolades

- **Recognition from Health Ministry on Eradication of TB:** On **12th July 2023** at Ranchi district, Adani Power (Jharkhand) Limited, Godda has been felicitated by **Ministry of Health and Ministry of Labour and Employment** for contributing towards **Eradication of TB in Godda district** in association with District administration.

- **Felicitation with Jharkhand Samajik Utkrishtta (Social Excellence) Award 2023:** On dated **12th September 2023**, the Adani Power (Jharkhand) Limited was graced with **Jharkhand Samajik Utkrishtta Award 2023** for contributing to upliftment and development of the society in Godda district of Jharkhand. The Adani Foundation's service towards upliftment of community in social, economic, and environmental sphere has impacted around lakhs of the poorer and marginalized groups of society of Godda district.

SUSTAINABLE LIVELIHOODS

1. **Adani Skill Development Centre:** Adani Skill Development Centre- ASDC, Godda was inaugurated by Executive Director AF- Education and Skills on 27th September 2018. Total Eight trades viz. Welder, Fitter, Mason and Bar bender, General Duty assistant, Hospitality, Electrical, industrial Sewing Machine Operator, and Digital Literacy classes is operational in which over **4600** candidates were trained and benefitted till last Financial Year 2022-23.

- **Enrollment in New Batch in 2023-24:** In the current year 2023-24, a new training batch of Domain Business trades was started from April 2023 onwards. **So far, a total of 143 candidates** are enrolled including **11** candidates in **Fitter Mechanical Assembly, 34 in Digital Literacy trade and 98 admissions done in SMO trade** in new session **2023-24.** The Self-learning model enables the candidate to build repository of knowledge through access of learning materials provided in the link and after the completion of course, the candidates appear on examination to self-evaluate their performance followed by certification duly provided by NSDC.

- **SAKSHAM Certificates distribution to SMO Women trainees: 46 SMO trainees** in Motia Sewing Center (16), Dumaria Sewing Center (20), Sarba Sewing Center (10) on successful completion of training of last year batch in April 2023.

2. Handloom Upskilling Training Centre in Bhagaiya, Thakurgangti:

Adani endeavour to promote Bhagaiya Silk Cluster located in Bhagaiya village at Thakurgangti block, Godda district, Jharkhand, known for traditional handloom silk manufacturing and weaving, also known as Resham Nagar. More than 1,000 households from Bhagaiya village (100%) and Manikpur village (30%) belonging to OBCs, and minority community are linked to the initiative and earning their living judiciously. The process involves, reeling, unwinding, spinning, and weaving of silk. The Handloom Up-skilling Training program has been started to promote and stabilize such groups by bridging the existing gaps with respect to capacity building (Skilling) in varied segments including advanced method of silk production, making value added products, supply chain management, marketing skills and others.

The **Inauguration Program** was conducted in **May 2023 at Handloom Bhagaiya Silk Training Centre, Thakurgangti** with active participation of around **150 guests and trainees** during the ceremony and made the event successful. In new session 2023-24, a total of **3 Batch of Bhagaiya Silk training trade** with 30 trainees in each batch, are enrolled benefiting over **90 candidates** under training program. A new training batch will be started from October month.

3. Celebration of World Environment Day (5th June 2023) at TPP Core Area:

On the occasion of **World Environment Day on June 5**, Adani Foundation had organized series of community engagement activities such as **Awareness Rally, Plantation drive, oath-taking ceremony and school level competitions (drawing and paintings)** in several TPP Core area location including 10 schools, Primary Health Centers (PHCs), 4 Anganwadi, Panchayat Bhawan, and public places with participation of more than 5 Mukhiyas, 1200+ students, 400+ local people, 80 schoolteachers, and 35 SMC Adhyaksh & team members.

The program was inaugurated in the presence of Village Head, PRI members, schoolteachers, students, and community who delivered speeches and motivated the students on importance of Environment Day and conservation of environment. Various environmental & global issues such as deforestation, environmental pollution, soil erosion, land degradation, health issues and global warming based on sign boards, posters, placards, etc. were informed to the community within radius of 2 km in their villages.

During the plantation drive, more than **100 plants** (Ashoka & Neem) were planted at different community places such as schools, Anganwadi centers, PHC, Panchayat Bhawan, and other public places. The program had a significant response from the participants which sharpened the art and craft skills of students, their imaginations

and prospectives towards environment and preservation of biodiversity was well conveyed.

Total Number of Plantation: 50 plants in schools, 10 each in Primary Health Centers (PHCs), Anganwadi centers, Panchayat Bhawan, and 21 in Public Places.

4. Vruksh Se Vikas or Vruksha Se Samrudhi or Vruksha for Vikas (V4V) - Planting 100 million trees: Promote Environment Conservation, Ecological Restoration, Conservation of Biodiversity, and Income generation of farmers.

Adani Foundation will be implementing a project called - Vruksh Se Vikas / Vruksh Se Samrudhi / Vruksh for Vikas (V4V) to contribute towards a global commitment to plant 100 million trees by end of **2030** there by contributing to one trillion tree campaign. Hence, Adani Foundation, Godda within its ambit and intervention areas would be implementing the Plantation project with objectives of income generation, increasing areas covered by trees, and ecological restoration.

Community Awareness was started in intervention villages of Godda and Sahebganj district about Program, its objectives, importance, and the benefits of plantation. The Vision of Adani Foundation on Survival of Plantation was also spread and instilled among the community to a Shared Vision. Every individual and community beneficiary will take ownership and responsibility of the survival of plantation.

The essentials of plantation related to place selection, water requirements, fencing, bio-fertilizer, pits digging, cluster plantation, etc., was properly communicated during the interaction and meetings held with interested Households, Community Based Organisation and PRI members.

- Total target of plantation in Godda is **22 Lakh plants** by year **2030**. In the year **2023-24**, **a total of 25,000 plantations** as per target have been made of Mango, Neem, Ashoka, Guava, Citrus (Lemon), Gulmohar, Saptaparni, Peepal, Jamun, Jackfruit, and Ficus (Banyan tree) saplings at household, school, AWC, and other institution level. It is assured 95% survival of total 25,000 plantation.

5. Skill Development & Employment Generation for Youths at Women's College at ITI, Godda

Under Public Private Partnership (PPP) Model, an MoU was signed between Directorate of Employment and Training, Department of Labor, Employment, Training and Skill Development, Government of Jharkhand, and Adani Skill Development Centre (ASDC), Ahmedabad on dated 6th April 2022 to commence Vocational training program under affiliation of NCVT at Women's ITI, Siktia (Godda).

The Vocational training program is operational in Women's ITI, Siktia (Godda) in two trades, 1. Sewing Technology and 2. Fashion Design & Technology since FY 2022-23. A total of **35 students** from intervention villages are attending training courses in each training timeline for **1 year in ITI in two trades namely, Sewing Technology & Fashion Design trade**. The opportunities provided by the Skilling program have paved way for the rural youths to achieve their ambitions, become self-reliant, generate local employment, and become economically stable in Godda region.
The Work is in Progress for addition of 2 more NCVT Trades under ITI Training program this year 2023-24.

6. **Adani Annapurna -Vermicomposting in villages:** Adani Annapurna - Vermicomposting program was started with an objective to enable farmers to become Vermi-Entrepreneurs to boost their income and uplift their socio-economic condition and promotion of Sustainable Livelihood practices among farmers in more than 13 TPP core, railway line and pipeline villages.

   From last year 2022-23 till date, **20 small & marginal farmers** were supported with **25 units** of Vermibed along with training on organic farming and Vermicomposting in 6 core villages namely, Motia, Baliakitta, Baksara, Dumaria, Jajalpur and Sarwa village of Godda district. It resulted in a positive response by farmers for doing organic based farming and entrepreneurship.

   The farmers have cultivated the culture of organic farming by application of vermicompost and other organic fertilizers in agriculture and plantation of horticulture plants which has increased the crop yields and productivity of the farm produces by 15%. While, the remaining produce is sold to other progressive farmers, vegetable growers, etc. in nearby villages and rural markets which has augmented their livelihood due to increase in earnings by minimum Rs. 2000- Rs. 5000 on an average per farmer per annum.

7. Chief Guest Visits & Important Days Celebration

- **Celebration of 74th Van Mahotsava Program:** Van Mahotsav is a pan-India tree planting festival celebrated in July every year. This initiative was nationally

recognized in 1950 by Dr K M Munshi, who was the Union Minister for Agriculture and Food during that period. **On 26th July 2023, 74th Van Mahotsava Program** was organized at Dighi village of pipeline area, Godda district in participation with chief dignitaries from local administration, PRI members, Adani's staff, and community.

During the program, importance of celebrating Van Mahotsav, afforestation, its benefits, and shared vision of environment protection, ecological restoration and biological diversities was informed to the participants. It was succeeded by planting saplings in the vicinity by the chief guests.

- **27th Adani Foundation Day Celebration: Adani Foundation Day** was celebrated on **11th August 2023** to earmark **27 years** of the Adani Foundation's work at site level. The message of Adani Foundation was spread among the community by joining hands with the masses and instilling values and spirit which signifies Unity, Peace, Solidarity and Holistic Development.

The 27th Adani Foundation Day was celebrated at **Baksara and Amrakanoli village** of Poreyahat block, Godda district by site team and stakeholders including rural beneficiaries, PRI members, and community. It was a festive occasion to celebrate with great joy and enthusiasm by filling the colours of hope and dreams of success, worshiping the human identity and integrity, and encouraging the values of everyone. On the occasion Tribal Puja Celebration, tribal dance representing the culture of Santhal Pargana community, Plantation activity near Pond and playful activities by children was organized followed by message from Mukhiya with a gesture to showcase the legacy of Adani Foundation. All community members put forth their well wishes and expressed their heartlet gratitude to Adani Foundation on breaking the taboos and hurdles of their lives and becoming the foundation for the development of human mankind.

RURAL INFRASTRUCTURE DEVELOPMENT

Water Conservation, Ground water recharge

1. **Construction of Stairs at 6 Ponds:** Pond plays a crucial role in the functioning of natural cycle with enhancement of livelihood of human mankind, and natural species of flora and fauna. It enhances the soil moisture in the agricultural land, increases the water storage capacity of other harvesting structures and recharges ground water level in catchment area enabling access to drinking water namely wells, community wells and hand pumps.

   In this mid- year **April'23- September'23, Construction of Stairs at 6 Ponds** was done in **6 villages** of Godda and Sahebganj district. It will enable around **70 farmers** dependent on these ponds to conveniently irrigate their land in **25-30 acres** prominently during Kharif season. It will also provide an opportunity for them to initiate integrated farming including agriculture, pisciculture, livestock development, etc. which will generate multiple sources of income and boost their income by minimum Rs. 5,000 in a year. This initiative will also aid around **500-600** community members in doing their domestic work in their daily routine and conduct cultural and religious programs with great joy and festivity.

Drinking Water Facility

1. **Drinking water facility in villages –Borewell, Community Well etc.:** In this mid-year 2023-24, drinking water facilities was provided with respect to installation of Water tank, Boring and Tap water in Primary School, Chota Tetariya, Sahebganj district (100 students and school staffs per month), 2 Borewell installation at two public places in Sahebganj and 6 wells renovation in 6 villages of core, railway line and pipeline area benefitting more than **1000 population** directly.

   The work will facilitate the villagers, students, and community during the summer season and all the year for drinking, domestic and religious purposes. While 2 Borewell installations at Niyamatchak School, Thakurgangti and Chand Bhairav Residential School, Dakaita, Lalmatia for Tribals (Santhal and Paharia- 200 students- Class Nursery- Class 1) are Ongoing.

2. **Installation, Renovation & Repairing Work of Hand pump:** Hand pumps are primary source for drinking water and other domestic needs in the TPP area. Adani Foundation has taken up the hand pumps maintenance and repairing work of hand pumps, its installation and construction of hand pump platform in core, railway line and pipeline villages of Godda and Sahebganj district. With this work, we are ensuring 100% functionality of the hand pumps and water availability in the area.

   This year **2 hand pumps** were installed in 2 periphery villages benefiting more than **500 rural population** of Godda district. The branding of hand pumps installed by Adani Foundation has also been done for its recognition among the community and better monitoring system.

Educational infrastructure Development

1. **1 School Infrastructure Development in TPP Core area:** The School Infrastructure of High School located in Motia village of TPP Core area, was strengthened including **Construction work of Boundary Wall and Main Gate** which is Ongoing. It will bridge the infrastructural gap in pursuing education for more than 500 poorer and rural children every year in a proper space with a safe and conducive learning environment.

2. **Strengthening 4 Educational institutions in Godda district:** Adani carried out infrastructure development work in the educational institutions comprising of schools and colleges enabling the children of Godda district residing near to periphery and pipeline area to complete their education till minimum higher level. The renovation work was carried out in Mahila Vidyalaya, Godda consisting of Gate work, Circle shaped seating place, renovation of boundary wall, etc., Fencing Boundary at SBSSPSJ College, Pathargama, Renovation of Pravat Tara Mission School at Pipra Village, Meherama Block and Building Renovation work of Inter College, Mahagama. The intervention will cater to adequate educational infrastructure needs for **2000+ poorer, tribal children and youths** of Godda district to complete at least higher-level education till graduation level.

Other Village development structures

1. **Construction of 3 Model Bathroom & Soak pit near Handpump:** Model Bathroom and Soakpit/ Recharge pit has become a critical component in the socio-economic development of rural people and ecological restoration. It serves the objective of providing access to amenities like health, hygiene and sanitation for women, children, and tribal community. Some time ago people had no bathroom

facility in their village, and they were using open places for toilet as well as bathing purpose which invites unhygienic condition and diseases among the people and makes the women more vulnerable to several social issues.

Construction of **3 Model Bathroom and Soakpit** in **2 villages** of core and periphery area of Godda district has addressed the needs of around **300 women, girls and the community** who lived in vulnerable condition. It has reduced their drudgery and safeguarded dignity of women and girls fostering social inclusion and equity. Development of such structures in rural habitation has also ensured alignment with Sustainable Development Goals, namely, 'Goal 3- Ensure healthy lives and promote well-being for all at all ages' and 'Goal 6. Ensure availability and sustainable management of water and sanitation for all'.

2. **Construction of 14 Seating Place (Chabutra) in villages:** Construction of **14 Seating place** (1 ongoing) has been done in **9 core and pipeline villages** benefiting more than **4300 rural and tribal population**. Normally villages do not have common places in the village for seating purposes mainly for elders, senior citizens and devotees coming to worship in temples situated in villages. This is being used by the common people in the village for seating purposes and for conducting village level meetings, SHG meetings and cultural activities at a small level.

3. **Construction of Conference Hall** at cultural heritage sites in Sahebganj to provide adequate infrastructure to held meetings, seminars, and cultural events for tribals students & community (1st Part Completed and 2nd Part Ongoing).

4. **Construction of Community Hall at TPP area for Community Programs** for Promotion of cultural activity and local events at village level for community. It helps share peace and harmony among the community. As we are committed to providing better community structures to the village, we have constructed 1 community hall in Motia village of TPP core area. This hall is also being used for community purposes.

5. **Renovation of Boundary wall at Motia Panchayat Bhawan:** Aim to provide better rural infrastructure in the villages. It will address the needs of PRI members and villagers to conduct panchayat and village level meetings on developmental programs of government, registration of beneficiaries to the govt. schemes, awareness generation among right beneficiary, conduction of SHGs meeting, cultural activities, etc. The boundary wall renovation will enable safety in panchayat Bhawan premises, its beautification and promote horticulture plantation activities with maximum survival count resulting conservation of natural resources and ecology.

6. **Construction of 2 Drains** was carried out in various core villages, namely **150m Drain at Petbi Village**, and **110m drain at Patwa Village,** for proper drainage system and sanitation in the rural area benefiting over **3500 rural population**.

7. **Development of Workshop unit at Women's ITI Siktia, Godda:** To provide better training infrastructure facilities to the students of Skill development program operational in Women's ITI Siktia, Godda.

8. **Renovation and construction of 9 community structures:** We have taken up the renovation & upgradation of old, defunct, and dilapidated community structures and cultural heritage structures in 9 intervention villages to restore, adapt and conserve structures of heritage and cultural value benefiting more than **15,000 beneficiaries.** Moreover, it enables the villagers to organize local festivals, perform puja rites and conduct village level meetings such as SHG meeting, Gram Sabha, Sports Committee meeting, etc.

9. **Repairing of 1 Village Road** at Basantpur village of TPP Core area, Podaiyahat block of Godda district to provide better rural infrastructure facilities benefiting **3000+ villagers** for safe and smooth commuting**.**

10. **Construction of Pathway at Bhavanipur Village, Vikram Shila-** Aim to provide better rural infrastructure in the villages. This connecting path will benefit the tourists who visit Vikramshila, an archaeological site of National importance benefiting **5000+ visitors every year.** This will also promote tourism and economic empowerment in the region. **Ongoing.**

11. **Renovation of Shivaji statue shed at Godda:** Aim to provide better infrastructure to the public of Godda district

adani
Power

Ref. No. APJL/ENV/ES/JSPCB/0925
Date: 25.09.2023

To,
The Member Secretary
Jharkhand State Pollution Control Board
T.A Building, H.E.C, Dhurwa
Ranchi – 834004

Sub: Environmental Statement of Adani Power (Jharkhand) Limited for 2 x 800 MW Godda Thermal Power Plant for the FY 2022-2023.

Ref: Condition No. 8, (B) General condition, Consent to Operate vide no. JSPCB HO/ RNC/ CTO- 16603125/2023/1463 dated 19.08.2023

Dear Sir,

With reference to the above subject, please find enclosed herewith **"Environmental Statement"** for 2x 800 MW Adani Power (Jharkhand) Limited located at Dist. Godda, Jharkhand for the FY 2022 – 2023 duly filled in the prescribed format (Form – V).

For your kind information and record please.

Thanking you

Yours truly,

for **Adani Power (Jharkhand) Limited**

(Authorized Signatory)
Encl: As above

CC: **Regional Officer,**
Jharkhand State Pollution Control Board
Dudhani, Dumka, Jharkhand - 814110

Adani Power (Jharkhand) Limited
Adani Corporate House
Shantigram, S G Highway,
Ahmedabad, PIN 382 421
Gujarat, India
CIN: U40100GJ2015PLC085448

Tel +91 79 2656 7555
Fax +91 79 2555 7177
info@adani.com
www.adanipower.com

Registered Office: Adani House, Shantigram, S G Highway, Ahmedabad 382 421, Gujarat, India

Received
29/09/2023
Regional Office - Dumka
Jharkhand State Pollution Control
Tower Chowk, Dudhani, Du...

ENVIRONMENTAL STATEMENT

For 2 x 800 MW Thermal Power Plant of Godda TPP

For FY: 2022-23

SUBMITTED TO:

JHARKHAND STATE POLLUTION CONTROL BOARD

SUBMITTED BY:

adani

Power

Adani Power (Jharkhand) Limited
District Godda, Jharkhand

FORM – V

ENVIRONMENTAL STATEMENT

Environmental Statement for the financial year ending with 31st March 2023

PART-A

General:

I. Name and address of the owner/ Occupier of the industry Operation or process.	Shri Jayadeb Nanda Chief Operating Officer **Adani Power (Jharkhand) Ltd.** Godda, Jharkhand
ii. Industry category	Thermal Power Plant
iii. Production capacity	Electricity Generation: 1600 MW (2 x 800 MW)
iv. Year of establishment	2023
v. Date of the last environmental Statement submitted.	**First Submission**

PART – B

WATER AND RAW MATERIAL CONSUMPTION

i. Water consumption in m^3/day

Process: Nil

Cooling: Nil

Domestic: 189 m^3/day (avg.) during construction period

Name of the product	**Process water consumption per unit of product Output**	
	During the previous Financial Year 2021-2022 (m3/MWh)	**During the current Financial Year 2022-2023 (m3/MWh)**
Electricity Generation	Nil	Nil

**Plant is commissioned in April 2023, COD of Unit 1 & 2 (2 x 800MW) has been achieved on 00:00hrs on 6th April 2023 (midnight of 5th April 2023) and 23:30 Hrs on 25th June 2023 respectively.*

ii. Raw material consumption:

Name of Raw Material#	**Name of Product**	**Consumption of raw material**	
		During the previous Financial Year 2021-2022	**During the current Financial Year 2022-2023**
Coal (MT)	Power Generation	**Nil**	**Nil**
LDO (KL)		**Nil**	**Nil**

** Plant is commissioned in April 2023*

PART-C

Pollution discharged to environment/unit of output:
(Parameter as specified in the consent issued)

Pollutants	**Quantity of Pollutants discharged (mass/day)**	**Concentration of Pollutants Discharged (mass/volume)**	**Percentage of variation from Prescribed standards with reasons.**
(a) Water	• **Adopted Zero Discharge Concepts**: ETP and STP installed for treatment of trade and sewage effluent respectively and treated water to reuse suitably in green belt development, water sprinkling and FGD to conserve water resources.		
(b) Air	Nil	Nil	Nil

**Plant is commissioned in April 2023*

PART-D

HAZARDOUS WASTES:

(As specified under Hazardous and Other Wastes (Management & Transboundary Movements) Amended Rules, 2016)

Hazardous Wastes	Authorized Qty	Total Disposal Quantity (Kg)	
		During the previous financial year (2021-2022)	During the current financial year (2022-2023)
From Process:			
Used/Spent Oil	200 KL/Annum	Nil	Nil
Discarded containers / barrels / liners contaminated with hazardous wastes/chemicals	25 T/Annum	Nil	Nil
Spent ion exchange resin containing toxic metal	100 KL/Annum	Nil	Nil
Chemical containing residue arising from decontamination	0.5 T/Annum	Nil	Nil

** Plant is commissioned in April 2023*

PART. E

SOLID WASTE:

Solid Waste	Total Waste Generated	
	During the previous Financial Year 2021-2022	During the current Financial Year 2022-2023
Fly Ash*	Nil	Nil
Bottom Ash *	Nil	Nil
Domestic Solid Waste	360 kg /day (average)	449.8 kg /day (average)

** Plant is commissioned in April 2023*

PART. F

Characteristics of Hazardous as well as Solid wastes and their method of disposal:

Description of Wastes	Characteristics	Quantity	Method of disposal
Fly Ash	Nil	Nil	Generated Fly ash will be utilized through Cement Plant & Brick Plants. Generated Bottom ash shall be utilized in Road construction through NHAI
Bottom Ash	Nil	Nil	
Domestic Solid Waste	Solid (Biodegradable and non-biodegradable waste)	164179 Kg	Disposed off through secured Solid Waste Management Facility Set up at Godda District.

PART-G

Impact of the pollution abatement measures taken on conservation of natural resources and on the cost of production

- Water sprinkling system has been provided control fugitive dust emission and Pucca Roads also been developed within the plant premises for better vehicular movement ad reduction of fugitive dust.

- Railway Wagon loading facility available beneath Fly Ash Silo for fly ash transportation through Rail to Cement plants in environment sound manner.

- Along with highly efficient ESP, FGD and SCR implemented to reduce SO2 & NOx emission.

- ETP and STP installed for treatment of trade and sewage effluent respectively and treated water reuse suitably in green belt development, water sprinkling and FGD to conserve water resources.

- Plant designed is based on Zero Liquid Discharge (ZLD)

- Drip irrigation system is being used for the lawn and green areas. Drip irrigation saves water use, compared with other watering techniques.

PART. H

(Additional measures/investment proposal for environmental protection including abatement of pollution)

- 3 Nos. of Continuous Ambient Air Quality Monitoring Station (CAAQMS), Continuous Effluent and Emission Monitoring System has been installed.

- Solar based Weather Monitoring System installed to save electricity.

- D.G Sets are equipped with acoustic enclosure to reduce the noise & provided with stacks of adequate height and retrofitted filters to control the stack emission for abating air pollution.

- Energy efficient equipment's like CFL and LED lights have been installed and solar streetlights are also proposed to installed for energy conservation method.

- Green Belt – Greenbelt is being developed in and around the Plant with local species in 55 Acre approx. to reduce noise pollution, air

pollution and also increasing the scenic beauty. More than 60,000 Trees along with shrubs and carpet lawns planted to enhance green cover. Photographs are attached as **Annexure- II**.

PART. I

Any other particulars for improving the quality of the Environment.

We have made sincere efforts to maintain the environmental management system. Some highlights are mentioned below:

1. World Environment Day was Celebrated on 5th June with mass plantation drive.
2. Two (02) Nos of Rainwater Harvesting Pond with recharge structure installed for conservation of rainwater.
3. Disposal of solid waste (Biodegradable and Non-Biodegradable) being ensured at APJL. Collected solid waste is dispose of through secured Waste management set up at Godda by third party. At the secured facility, wastes are segregated as per their nature and Biodegradable waste are converted into compost and non-biodegradable waste managed through recyclers.
4. Apart from Green Belt development within the plant, plantation also being carried along the roads out side the plant premises and in nearby villages through CSR activities.

Sign:

Name: **R N Shukla**

Designation: Head- Environment & Forest
Adani Power (Jharkhand) Ltd.

Address : Adani Corporate House
Shantigram, Nr. Vaishnodevi Circle
SG Highway, Ahmedabad-382 421

adani	Adani Power (Jharkhand) Limited, Godda Expenditure for Environmental Protection & CSR (Period: April 2023 – September 2023)	Annexure - X

Expenditure for Environmental Protection & CSR		
		(Fig. in Rs. Lacs)
Sr. No.	**Particular**	**Expenditure from (Apr-23 to Sep-23)**
1.	Rural Development/CSR Activities (Education, community health, Sustainable Livelihood, community Infrastructure development etc.)	316.23
2.	Green belt Development (Horticulture)	208.31
3.	Legal, Consent fees	3.67
4.	Third party monitoring, Services and Equipment & Instruments maintenance, Communication cost.	4.40
5.	Cost involved in emission treatment and disposal (AHP, FGD, SCR, STP, ETP, CHP etc.)	495.9
Total		**1028.55**

Annexure - XI

Nilkanth Prajapati

From: R N Shukla
Sent: 16 September 2023 13:07
To: Nilkanth Prajapati; Manish Kumar
Cc: Ramesh Jha
Subject: FW: Information towards the change in Coal Source by Adani Power Jharkhand Limited, Jharkhand.
Attachments: Godda TPP Coal Source Change Information Letter.pdf

FYIP.

Regards,
R N SHUKLA
079-25557022
09426600976

From: R N Shukla
Sent: Friday, September 15, 2023 7:25 PM
To: Yogendra Pal Singh <yogendra78@nic.in>; saurabh.upadhyay85@gov.in; ROR MoEFCC <ro.ranchi-mef@gov.in>; ranchijspcb@gmail.com; Regional Office <jspcbdumka@gmail.com>
Cc: Santosh Kumar Singh <Santosh.Singh1@adani.com>; Sanjeev Munjal <Sanjeev.Munjal@adani.com>
Subject: Information towards the change in Coal Source by Adani Power Jharkhand Limited, Jharkhand.

R/Sir's

Kindly find enclosed herewith pointwise information towards the change in Coal Source by Godda TP of Adani Power Jharkhand Ltd. Jharkhand, The APJL is proposed to use domestic Coal through e-auction and hereby submits information as per **para 7 of the MoEFCC OM dated 11.11.2020.**

Regards,
R N SHUKLA
079-25557022
09426600976

adani

Power

Ref: APL/APJL/ENV/MoEFCC/521/23
Date: 13.09.2023

To,
The Director – IA, II (T)
Ministry of Environment, Forest, and Climate Change
Government of India, Indira Paryavaran Bhavan,
Vayu Wing, Jor Bagh Road,
New Delhi - 110 003

Sub.: Information towards the change in Coal Source by Adani Power Jharkhand Limited, Godda (APJL), Jharkhand.

Ref.:
1. Environmental Clearance vide File vide Letter no: J13012/01/2016-IA.I (T) dated: 31.08.2017 and amendments dated 03.09.2019 & 27.02.2020.
2. MoEFCC Office Memorandom vide Letter No: J-13012/8/2009-IA.I (T) dated 11.11.2020

Dear Sir,

With reference to above subject, it is our pleasure to inform that we have successfully completed COD of 1st Unit of Godda Ultra Supercritical Thermal Power Plant at Jharkhand, on 00:00 Hrs of 6th April 2023 (mid night of 5th April 2023) and COD of Unit – 2 completed on 23:30 Hrs (Indian Standard Time) of 25th June 2023. Now, both units (2 x 800MW) are fully operational.

The EC was issued to Godda TPP on the basis of Imported Coal and APJL is proposed to use domestic Coal through e-auction and in compliance of para 7 of the OM dated 11.11.2020 we are submitting point wise compliance status report.

As per the Office Memorandum, MoEFCC dated; 11.11.2020, all the Thermal Power Plants (including Captive Power Plants) having Environmental Clearance can **change the Coal Source** (from imported to domestic, domestic to domestic, and domestic to imported) including Lignite, directly through e-auctions/short term linkage/long term linkage/other linkage options of Ministry of Coal or any organization recognized for allotting coal linkages, **without seeking the amendment in Environmental Clearance.**

Adani Power (Jharkhand) Ltd
Adani Corporate House
Shantigram, S G Highway
Ahmedabad 382 421
Gujarat, India
CIN: U40100GJ2015PLC085448

Tel +91 79 2555 4444
Fax +91 79 2555 7177
www.adanipower.com

Registered Office: Adani Corporate House, Shantigram, Near Vaishno Devi Circle, S G Highway, Khodiyar, Ahmedabad 382 421, Gujarat, India

adani

Power

We are submitting herewith pointwise information towards the change in Coal Source by Godda TPP of Adani Power Jharkhand Ltd.

Sl. No.	Conditions	Information
1.	Details required regarding change in Source of Coal. o Location of the source, o Proposed quantity, o Distance from the power plant and o Mode of transportation o Quality (Ash, Sulphur, Moisture content and Calorific value)	Details regarding change in Source of Coal are attached in **Annexure-I**
2.	The quantity of Coal transported from each source along with the mode of transportation shall be submitted as part of EC Compliance Report.	The quantity of coal transported from source along with the mode of transportation is mentioned in **Annexure-I**
3.	The applicable flue gas emissions standards for Particulate Matter, Sulphur Dioxide, Oxides of Nitrogen and Mercury shall be complied in line with Ministry's Notification vide S.O. 3305(E) dated 7.12.2015 and subsequent emissions. A progress of implementation undertaking, and its compliance shall be submitted as part of Compliance Report.	High Efficiency Electrostatic Precipitators (ESP) has already installed to meet PM emission as per prescribed limit. FGD & SCR are installed to meet prescribed standard of SOx & NOx emission respectively. Emission monitoring results/report will be submitted along with half yearly EC compliance report to the concern authority on regular basis.
4	Ash content in the Coal and Coal transportation is governed by the Ministry's Notification vide S.O. 1561(E) dated 21.51.2020. As far as possible, Coal transportation shall be done by Rail/ Conveyor or other eco-friendly modes.	Ash content will be complied as per Gazette Notification dated 21,05.2020. Coal transportation from the loading railway siding of mines to the Power Plant will be by Rail/Road.
5	Additional ash pond is also not allowed.	No additional ash pond required.

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adani

Power

We hope you will find the above information in order. We assured to the Ministry that Adani Power Jharkhand Ltd. is committed to pollution prevention and will always operate and maintain the plant as per applicable environmental standards.

Thanking You,

Yours faithfully

for **Adani Power Jharkhand Ltd.**

(Santosh Kumar Singh)
Authorized Signatory

Encl: As above

CC **Integrated Regional Office,**
Ministry of Environment Forest & Climate Change
Second Floor, Headquarter- Jharkhand State Housing Board, Ranchi, Jharkhand

The Regional Officer,
Jharkhand State Pollution Control Board
Dudhani, Dumka, Jharkhand – 814110

The Member Secretary,
Jharkhand State Pollution Control Board
TA Division Building (Ground Floor, HEC Dhurwa, Ranchi – 843 004 (JH)

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Registered Office: Adani Corporate House, Shantigram, Near Vaishno Devi Circle, S G Highway, Khodiyar, Ahmedabad 382 421, Gujarat, India

Annexure-I

Particulars	Suliyari, MP				CCL (Magadh & Amrapali, Jharkhand)				ECL (West Bengal)				ECL			
Tentative coal receipt Projections for the period of Sep'23 to Dec'23	Sep'23	Oct'23	Nov'23	Dec'23	Sep'23	Oct'23	Nov'23	Dec'23	Sep'23	Oct'23	Nov'23	Oec'23	Sep'23	Oct'23	Nov'23	Oec'23
Proposed Qty	40,000	60,000	60,000	60,000	20,000	32,000	40,000	40,000	16,000	10,000	10,000	10,000	16,000	16,000	16,000	16,000
Grade	G6				G12				G5				G4			
Mode of transportation	Rail				Rail				Road				Rail			
Rail/Road Distance	745				550				180				240			
Grade	G-6				G-12				G-5				G-4			
Calorific Value Range (Eq basis) Kcal/Kg	5500-5800				3700-4000				5800-6100				6100-6400			
ASH %	25%-30%				40%-45%				20%-35%				20%-35%			
Sulphur %	0.5%-1%				0.5%-1%				0.5%-1%				0.5%-1%			
Moisture %	TM 12%-15%				TM 10%-12%				TM 12%-13%				TM 12%-13%			
	IM 5%-6%				IM 5%-6%				IM 7%-8%				IM 7%-8%			

Nilkanth Prajapati

From: R N Shukla
Sent: 28 October 2023 13:13
To: Regional Office; dumka jspcb
Cc: Nilkanth Prajapati
Subject: FW: Information towards the change in Coal Source by Adani Power Jharkhand Limited, Jharkhand.
Attachments: Godda TPP Coal Source Change Information Letter Oct - Dec'23.pdf; OM-Amendment-in-Environmental-Clearance-for-change-in-coal-source, 11 NOV 2020.pdf

PFA.

Regards,
R N SHUKLA
079-25557022
09426600976

From: R N Shukla
Sent: Monday, October 9, 2023 11:15 PM
To: 'Yogendra Pal Singh' <yogendra78@nic.in>; 'saurabh.upadhyay85@gov.in' <saurabh.upadhyay85@gov.in>; 'ROR MoEFCC' <ro.ranchi-mef@gov.in>; 'ranchijspcb@gmail.com' <ranchijspcb@gmail.com>; 'Regional Office' <jspcbdumka@gmail.com>
Cc: Santosh Kumar Singh <Santosh.Singh1@adani.com>; Sanjeev Munjal <Sanjeev.Munjal@adani.com>
Subject: Information towards the change in Coal Source by Adani Power Jharkhand Limited, Jharkhand.

R/Sir's

Kindly find enclosed herewith pointwise information towards the change in Coal Source for the period of October'23 to December'2023 by Godda TP of Adani Power Jharkhand Ltd. Jharkhand, The APJL is proposed to use domestic Coal through e-auction and hereby submits information as per **para 7 of the MoEFCC OM dated 11.11.2020.**

Regards,
R N SHUKLA
079-25557022
09426600976

adani

Power

Ref: APL/APJL/ENV/MoEFCC/525/23
Date: 09.10.2023

To,
The Director – IA, II (T)
Ministry of Environment, Forest, and Climate Change
Government of India, Indira Paryavaran Bhavan,
Vayu Wing, Jor Bagh Road
New Delhi - 110 003

Sub.: **Information towards the change in Coal Source (Amendment) as earlier communicated by Adani Power Jharkhand Limited, Godda (APJL), Jharkhand.**

Ref.:
1. Environmental Clearance vide File vide Letter no: J13012/01/2016-IA.I (T) dated: 31.08.2017 and amendments dated 03.09.2019 & 27.02.2020.
2. MoEFCC Office Memorandum vide Letter No: J-13012/8/2009-IA.I (T) dated 11.11.2020
3. Our letter to MoEFCC vide no. APL/APJL/ENV/MoEFCC/521/23 dated 13.09.2023

Dear Sir,

With reference to above subject and in continuation of our letter vide no. APL/APJL/ENV/MoEFCC/521/23 dated 13.09.2023, we are hereby submitting further information towards change in Coal Source for the period of **October'2023 – December'2023** by Godda TPP of Adani Power Jharkhand Limited.

The EC vide reference 1 was issued to APJL on the basis of Imported Coal. APJL propose to use domestic Coal through e-auction & market Coal and hereby submit information as per para 7 of the OM dated 11.11.2020.

As per the Office Memorandum, MoEFCC dated; 11.11.2020, all the Thermal Power Plants (including Captive Power Plants) having Environmental Clearance can **change the Coal Source** (from imported to domestic, domestic to domestic, and domestic to imported) including Lignite, directly through e-auctions/short term linkage/long term linkage/other linkage options of Ministry of Coal or any organization recognized for allotting coal linkages, **without seeking the amendment in Environmental Clearance.**

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Fax +91 79 2555 7177
www.adanipower.com

Registered Office: Adani Corporate House, Shantigram, Near Vaishno Devi Circle, S G Highway, Khodiyar, Ahmedabad 382 421, Gujarat, India

adani

Power

Pointwise information towards the change in Coal Source by Godda TPP of Adani Power Jharkhand Ltd presented below:

Sl. No.	Conditions	Information
1.	Details required regarding change in Source of Coal. o Location of the source, o Proposed quantity, o Distance from the power plant and o Mode of transportation o Quality (Ash, Sulphur, Moisture content and Calorific value)	Details regarding change in Source of Coal are attached in **Annexure-I**
2.	The quantity of Coal transported from each source along with the mode of transportation shall be submitted as part of EC Compliance Report.	The quantity of coal transported from source along with the mode of transportation is mentioned in **Annexure-I**
3.	The applicable flue gas emissions standards for Particulate Matter, Sulphur Dioxide, Oxides of Nitrogen and Mercury shall be complied in line with Ministry's Notification vide S.O. 3305(E) dated 7.12.2015 and subsequent emissions. A progress of implementation undertaking, and its compliance shall be submitted as part of Compliance Report.	High Efficiency Electrostatic Precipitators (ESP) has already installed to meet PM emission as per prescribed limit. FGD & SCR are installed to meet prescribed standard of SOx & NOx emission respectively. Emission monitoring results/report will be submitted along with half yearly EC compliance report to the concern authority on regular basis.
4.	Ash content in the Coal and Coal transportation is governed by the Ministry's Notification vide S.O. 1561(E) dated 21.51.2020. As far as possible, Coal transportation shall be done by Rail/ Conveyor or other eco-friendly modes.	Ash content will be in compliance with Gazette Notification dated 21.05.2020. Coal transportation from the loading railway siding of mines to the Power Plant will be by Rail/Road.
5.	Additional ash pond is also not allowed.	No additional ash pond required.

We hope you will find the above information in order. We assured to the Ministry that Adani Power Jharkhand Ltd. is committed to pollution prevention and will always operate and maintain the plant as per applicable environmental standards.

Adani Power (Jharkhand) Ltd
Adani Corporate House
Shantigram, S G Highway
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Fax +91 79 2555 7177
www.adanipower.com

adani

Power

Thanking You,

Yours faithfully

for **Adani Power Jharkhand Ltd.**

(Santosh Kumar Singh)
Authorized Signatory

Encl: As above

CC **Integrated Regional Office,**
Ministry of Environment Forest & Climate Change
Second Floor, Headquarter- Jharkhand State Housing Board, Ranchi, Jharkhand

The Regional Officer,
Jharkhand State Pollution Control Board
Dudhani, Dumka, Jharkhand – 814110

The Member Secretary,
Jharkhand State Pollution Control Board
TA Division Building (Ground Floor, HEC
Dhurwa, Ranchi – 843 004 (JH)

Adani Power (Jharkhand) Ltd
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Ahmedabad 382 421
Gujarat, India
CIN: U40100GJ2015PLC085448

Tel +91 79 2555 4444
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Annexure-I

Particulars	**SECL**			**PKCL**		
Tentative coal receipt Projections for the period of Oct'23 to Dec'23	Oct'23	Nov'23	Dec'23	Oct'23	Nov'23	Dec'23
Proposed Qty	24,000	24,000	24,000	60,000	60,000	60,000
Grade	G12	G12	G12	Washery Reject	Washery Reject	Washery Reject
Mode of transportation	Rail			Rail		
Rail/Road Distance (Km)	751			1211		
Calorific Value Range (Eq basis) Kcal/Kg	3700-4000			1500-1800		
ASH %	45%-50%			55%-60%		
Sulphur %	0.5%-1%			0.5%-1%		
Moisture %	TM 10%-12%			TM 11%-13%		
	IM 5%-6%			IM 3%-4%		

Annexure - XII

भारत सरकार
Government of India
वाणिज्य और उद्योग मंत्रालय
Ministry of Commerce & Industry
पेट्रोलियम तथा विस्फोटक सुरक्षा संगठन (पेसो)
Petroleum & Explosives Safety Organisation (PESO)
8-एस्प्लेनेड पूर्व, पहली मंजिल
कोलकाता (प.बं.)- 700069
8, Esplanade East, 1st floor,
Kolkata - 700069

E-mail : jtccekolkata@explosives.gov.in
Phone/Fax No : 033 - 22486600,22480427

संख्या /No. : P/EC/JH/15/1104 (P489744) / 3236

दिनांक /Dated : 13/07/2022

सेवा में /To,

M/s. ADANI POWER (JHARKHAND) LIMITED,
Power Plant Unit, Village-Gangta Govindpur, Gayegh,
Gangta Govindpur,
Godda,
District: GODDA,
State: Jharkhand
PIN: 814133

13 JUL 2022

विषय /Sub : Plot No, 58,60,61,62,69 & 88,No./Khata No- 46, 55, 38 & 47,, Vill. - GANGTA GOVINDPUR, GANGTA GOVINDPUR, Godda, Taluka: Godda, District: GODDA, State: Jharkhand, PIN: 814133 में पेट्रोलियम वर्ग C का अधिष्ठापन -अनुज्ञप्ति जारी करने के बारे में ।

Petroleum Class C Installation at Plot No, 58,60,61,62,69 & 88,No./Khata No- 46, 55, 38 & 47,, Vill. - GANGTA GOVINDPUR, GANGTA GOVINDPUR, Godda, Taluka: Godda, District: GODDA, State: Jharkhand, PIN: 814133 Grant of License regarding.

महोदय /Sir (s),

कृपया आपके पत्र क्रमांक OIN1101139 दिनांक 12/07/2022 का अवलोकन करें ।

Please refer to your letter No. OIN1101139 dated 12/07/2022

विषयान्तर्गत अधिष्ठापन में निम्नलिखित पेट्रोलियम पदार्थों के वर्ग तथा मात्रा के भंडारण के लिए पेट्रोलियम नियम, 2002 के अधीन प्ररूप - XV में स्वीकृत, दिनांक 31/12/2024 तक वैध अनुज्ञप्ति संख्या P/EC/JH/15/1104 (P489744) दिनांक 13/07/2022 भेजी जा रही है ।

Licence No. P/EC/JH/15/1104 (P489744) dated 13/07/2022 granted in Form XV under the Petroleum Rules, 2002 and valid till 31/12/2024 for the storage of the following kinds and quantities of Petroleum at the subject installation is forwarded herewith.

पेट्रोलियम का विवरण /Description of Petroleum	किलोलीटरों में अनुज्ञप्त क्षमता /Quantity licenced in KL
वर्ग क प्रपुंज पेट्रोलियम /Petroleum Class A in bulk	NIL
वर्ग क प्रपुंज पेट्रोलियम से भिन्न /Petroleum Class A, otherwise than in bulk	NIL
वर्ग ख प्रपुंज पेट्रोलियम /Petroleum Class B in bulk	NIL
वर्ग ख प्रपुंज पेट्रोलियम से भिन्न /Petroleum Class B, otherwise than in bulk	NIL
वर्ग ग प्रपुंज पेट्रोलियम /Petroleum Class C in bulk	4067.20 KL
वर्ग ग प्रपुंज पेट्रोलियम से भिन्न /Petroleum Class C,otherwise than in bulk	NIL
कुल क्षमता /Total Capacity	4067.20 KL

कृपया पेट्रोलियम नियम 2002 के अधीन बनाए गए नियम 148 में दी गई प्रक्रिया का कडाई से पालन करें और अनुज्ञप्ति के नवीकरण हेतु समस्त् दस्तावेजों को अनुज्ञप्ति की वैधता समाप्ती की तारीख या उससे पूर्व Dy. Chief Controller of Explosives, Ranchi को प्रेषित करें ।

Please follow the procedure strictly as laid down in rule 148 of the Petroleum Rules, 2002 and submit complete documents for the Renewal of the licence to Dy. Chief Controller of Explosives, Ranchi, so as to reach his office on or before the date on which Licence expires.

यह अनुमोदन/ अनुमति अन्य प्राधिकारियों से आवश्यक अनुमति/क्लीयरन्स प्राप्त करने से या यथा लागू अन्य विधियों से छूट नही देती है ।

This approval/permission, however, does not absolve from obtaining necessary permission/clearance from other authorities or under other statutes as applicable.

भवदीय /Yours faithfully,

((सुबाशिस रे))
(Subasis Ray))
उप मुख्य विस्फोटक नियंत्रक
Dy. Chief Controller of Explosives
कृते संयुक्त मुख्य विस्फोटक नियंत्रक
For Jt. Chief Controller of Explosives
कोलकाता (प.बं.)/Kolkata

Copy forwarded to :-
1. The Dy. Commissioner, GODDA(Jharkhand) with reference to his NOC No NOC DRAWING DULY ENDORSED BY DM Dated 10/06/2022
2. The Dy. Chief Controller of Explosives, Ranchi (J.H.). A Copy of the licence along with approved plan is enclosed.

For Jt. Chief Controller of Explosives
Kolkata

(अधिक जानकारी जैसे आवेदन की स्थिति, शुल्क तथा अन्य विवरण के लिए हमारी वेबसाइट http://peso.gov.in देखें)
(For more information regarding status,fees and other details please visit our website http://peso.gov.in)

Note:-This is system generated document does not require signature.