

**SIX MONTHLY COMPLIANCE REPORT OF
ENVIRONMENTAL CLEARANCE (EC)**

For

**Residential Complex for
1600 (2x800) MW Thermal Power Plant**

At

**GODDA TALUKA, GODDA DISTRICT
JHARKHAND**

Submitted to:

**Regional Office, East Central Zone
Ministry of Environment, Forests & Climate Change,
State Level Environment Impact Assessment Authority
Central Pollution Control Board, New Delhi &
Jharkhand State Pollution Control Board, Ranchi**



Submitted By:

**Adani Power (Jharkhand) Limited
Motia and Patwa Village, Godda Taluka, Godda District,
Jharkhand**

PERIOD: April 2019 – September 2019

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Adani Power (Jharkhand) Limited

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 obtained Environmental Clearances & Consent to Establish from Ministry of Environment, Forest & Climate Change and Jharkhand state Pollution Control Board, 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.

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;

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.

Adani Power (Jharkhand) Ltd. has obtained granted Environment Clearances (EC) for Residential Complex from State Environment Impact Assessment Authority (SEIAA), Jharkhand vide letter no. EC/SEIAA/2017-18/2070/2017/207 dated 31.08.2018

APJL has also obtained Consent to Establish (CTE/NOC) for Residential Complex from Jharkhand State Pollution Control Board (JSPCB) vide letter no.: JSPCB/HO/RNC/CTE-3502450/2018/1117 dated: 01.11.2018

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Compliance status of Environmental Clearance

Residential Township for Godda Thermal Power Plant

Vide letter no: **EC/SEIAA/2017-18/2070/2017/207 dated 31.08.2018**

Si. No.	Specific Conditions	Compliance Status
PART – A. SPECIFIC CONDITIONS		
1	This Environmental Clearance is valid subject to the following condition below- That this project has - a. Obtained all legal rights to operate at concerned place. b. Complied with all existing concerned laws of the land and c. Complied with the decisions of SEIAA on the issue of Environmental Clearance till date.	Noted & agreed
PART B - GENERAL CONDITIONS		
1. Pre- Construction Phase		
i.	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel (kerosene/gas) for cooking, safe drinking water, medical health care, etc. The housing may be in the form of temporary structures to be removed after completion of the project.	Required hutment, drinking water, medical facilities and other infrastructure has been arranged.
ii.	Provision of drinking water, waste water disposal, solid wastes management and primary health facilities shall be ensured for labour force. Proper sanitation facilities shall be provided at the construction site to prevent health related problems. Domestic as well as sanitary wastes from construction camps shall be cleared regularly.	Being complied Drinking water facility, Sanitation facility, Waste water disposal, solid wastes management and primary health facilities are being ensured at site.
iii.	Adequate safety measures shall be adopted for the construction workers.	Being followed. Fire & Safety Management Plan has already been submitted along with compliance report for the period of October 2018 to March 2019
iv.	All the labourers to be engaged for construction works shall be screened for health and adequately treated before issue of work permits. The contractor shall ensure periodic health check-up of construction workers.	Being followed. Before deploying construction manpower at site, proper induction program on safety is being done. Periodic health check-up of construction workers is being done on regular basis.
v.	Fencing of the project boundary before start of construction activities.	Boundary wall of the project boundary is completed
vi.	Use of energy efficient construction materials shall be ensured to achieve the desired thermal comfort.	Being followed LED light and aerated concrete blocks are used.
vii.	Use of fly ash based bricks/blocks/tiles/products shall be	Being followed

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	explored to the maximum extent possible.	
viii.	Layout of proposed buildings and roads within premises etc. shall be made in such a way that it shall cause minimum disturbance to existing flora and fauna. Appropriate green belt shall developed to compensate the habitat loss of tree cutting (if any) from competent authority as per prevailing Act/Rules. The exotic species existing within the existing premises, if any, shall be protected. The greening programme shall include plantation of both exotic and indigenous species.	As such there was no major flora and fauna in the project however layout has been designed keeping greenbelt requirement to the maximum extent possible.
ix.	Dedicated pedestrian paths shall be provided along the proposed Buildings. Appropriate access shall be provided for physically challenged people in the Pedestrian Paths.	Compliance assured Required access has been considered in the project layout.
x.	The design of service roads and the entry and exit from the buildings shall conform to the norms & standards prescribed by the State Public Works Department.	Compliance assured Construction is being carried out as per town planning guidelines
xi.	The road system shall have the road cross sections for general traffic, exclusive ways for public mass transport (bus) system, pedestrian paths and ways, utility corridors and green strip.	Compliance assured Construction is being carried out as per town planning guidelines.
xii.	Topsoil excavated during construction activities should be stored for use in horticulture/landscape development within the project site. Balance top soil should be disposed at in planned manner for use elsewhere adequate erosion and sediment control measures to be adopted before ensuing construction activities.	Being Complied
xiii.	Prior permission should be obtained from the competent authority for demolition of the existing structure, if any. Waste recycling plans including top soil should be developed prior to beginning of demolition and construction activity. The plans should identify wastes to be generated and designate handling, recycling and disposal method to be followed.	Complied There was no establishment at the project site
xiv.	Disposal of muck including excavated material during construction phase should not create any adverse effects in the neighborhood and the same shall be disposed of taking the necessary precautions for general safety and health aspects.	All the suitable measures are being taken to manage the muck / excavated material. All the precautionary actions are being taken to take care of health and safety aspects.
xv.	The project proponent should advertise in	Complied.

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	<p>at least two local newspapers widely circulated in the region, one of which should in the vernacular language, informing that the project has been accorded Environmental Clearance and copies of clearance letters are available with the State Environment Impact Assessment Authority, Jharkhand and the same matter also be sent to Jharkhand State Pollution Control Board (J.S.P.C.B.), Ranchi. The advertisement should be made within 10 days from the date of receipt of the Clearance letter and a copy of the same should be forwarded to the Regional Office of this Ministry at Ranchi.</p>	<p>EC advertisement has already been circulated in below mentioned Newspapers</p> <table border="1" data-bbox="831 365 1423 562"> <thead> <tr> <th>Name of Newspaper</th> <th>Dated</th> <th>Pg. no.</th> </tr> </thead> <tbody> <tr> <td>Dainik Jagaran Godda, Bhagalpur</td> <td>11-9-2018</td> <td>04</td> </tr> <tr> <td>The Times of India, Ranchi</td> <td>11-9-2018</td> <td>03</td> </tr> <tr> <td>Hindustan Devghar</td> <td>11-9-2018</td> <td>05</td> </tr> <tr> <td>Prabhat Khabar Devghar</td> <td>11-9-2018</td> <td>05</td> </tr> </tbody> </table> <p>Copy of EC advertisement has already been submitted along with compliance report for the period of October 2018 to March 2019</p>	Name of Newspaper	Dated	Pg. no.	Dainik Jagaran Godda, Bhagalpur	11-9-2018	04	The Times of India, Ranchi	11-9-2018	03	Hindustan Devghar	11-9-2018	05	Prabhat Khabar Devghar	11-9-2018	05
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xvi.	<p>Risk assessment study along with Disaster Management Plan (DMP) shall be prepared. The mitigate measures for disaster prevention and control shall be prepared and get approval from competent authority. All other statutory clearances/licenses/permissions from concerned State Governments Departments, Boards and Corporations shall be obtained for directions issued by Central Government/State Government, Central Pollution Control Board/Jharkhand State Pollution Control Board.</p>	<p>NOC from Fire department and other necessary clearances & permissions has been taken.</p> <p>Fire & Safety Plan & Disaster Management Plan (DMP) has already been submitted along with compliance report for the period of October 2018 to March 2019</p>															
xvii.	<p>Baseline Environmental Condition of Project area i.e. Monitoring of AAQ as per NAAQS 2009, Monitoring of Ambient Noise Level & Analysis of Ground Water Samples should be conducted and report should be submitted to State Environment Impact Assessment Authority (SEIAA), Jharkhand and Jharkhand State Pollution Control Board (JSPCB), Ranchi prior to start of construction activities.</p>	<p>Being Complied.</p> <p>Baseline Environmental Monitoring Report as per NAAQS 2009, for Ambient Noise Level & Analysis of Ground Water Samples is being submitted to SEIAA, Jharkhand on monthly basis, also submitting along with EC compliance report.</p> <p>Monthly Monitoring report is being submitted Regularly to State Environment Impact Assessment Authority (SEIAA), Jharkhand and Jharkhand State Pollution Control Board (JSPCB), Ranchi and JSPCB, Dumka.</p> <p>Environmental monitoring report is enclosed as Annexure -I</p>															
II. Construction Phase																	
i.	<p>It shall be ensured that the construction debris is properly stored on the site prior to disposal. Such requirements shall be made part of the contractor agreement.</p>	<p>Compliance assured</p>															
ii.	<p>All the top soil excavated during construction activities shall be stored for use in horticulture/landscape development within the project site. Proper erosion control and sediment control measures shall be adopted.</p>	<p>Being Followed</p>															

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iii.	Earth material generated from excavation shall be reused to the maximum possible extent as filling material during site development. The construction debris and surplus excavated material shall be disposed off by mechanical transport through the Ranchi Municipal Corporation.	All the excavated soil is being reused within project premises.
iv.	Disposal of muck, including excavated material during construction phase, shall not create any adverse effects on the neighbouring communities and shall be disposed off taking the necessary precautions for general safety and health aspects.	Suitable measures are being taken to manage the muck / excavated material. Necessary precautionary actions are being taken to take care of health and safety aspects.
v.	Low Sulphur diesel generator sets should be used during construction phase. Diesel generator sets during construction phase shall have acoustic enclosures and shall conform to Environment (Protection) Rules, 1986 prescribed for noise emission standards.	Being Complied.
vi.	All vehicles/equipment deployed during construction phase shall be ensured in good working condition and shall conform to applicable air and noise emission standards. These shall be operated only during non-peaking hours.	Complied. PUC records of deployed vehicles are being maintained.
vii.	Ambient noise levels shall confirm to the standards prescribed by MoEF&CC, Govt. of India.	Being Complied. Environmental monitoring report is enclosed as Annexure -I
viii.	The protective equipment such as nose mask, earplugs etc. shall be provided to construction personnel exposed to high noise levels.	Being complied Use of safety PPEs / gadgets are being ensured.
ix.	Construction spoils, including bituminous material and other hazardous materials including oil from construction equipment must not be allowed to contaminate soil/ground water. The dumpsites for such material must be secured so that they shall not leach into the ground water.	Being followed Necessary precautionary actions are being taken. Excavated Soil and Construction debris generated from construction activities are being stored within the project site. It is ensured that construction spoils, including bituminous material and other hazardous materials including oil etc. construction equipment are not allowed to contaminate watercourses. The dumpsites for such material will be secured so that it will not leaching into the ground water. Secondary containments will be provided to check the contamination. The storage Diesel drums will be being kept on the Secondary Containments to protect waste of natural resource
x.	Proper and prior planning, sequencing and	Agreed & being followed

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	scheduling of all major construction activities shall be done. Construction material shall be stored in covered sheds. Truck carrying soil, sand and other construction materials shall be duly covered to prevent spilling and dust emission. Adequate dust suppression measures shall be undertaken to control fugitive dust emission. Regular water sprinkling for dust suppression shall be ensured.	
xi.	Use of Ready-Mix concrete is recommended for the project.	Being followed. Ready-Mix concrete is used for concreting
xii.	Accumulation/stagnation of water shall be avoided ensuring vector control.	Necessary drainage system has been created to avoid accumulation / stagnation of water.
xiii.	Regular supervision of the above and other measures shall be in place all through the construction phase so as to avoid disturbance to the surroundings.	Being followed
xiv.	Water during construction phase should be preferred from Municipal supply.	Being followed WRD, Govt. of Jharkhand has granted water allocation from Liljhi River.
xv.	All directions of the Airport Authority, Director of Explosives and Fire Department etc. shall be complied.	Compliance assured.
xvi.	Unskilled construction labourers shall be recruited from the local areas.	Being followed
xvii.	Provisions shall be made for the integration of solar water heating system.	Noted & Compliance assured Provisions being kept.
xviii.	Provision of vermin-composting for the biodegradable solid wastes generated from the proposed extension buildings as well as the large amount of biomass that shall be available from the tree plantation shall be made.	Compliance assured Will explore the feasibility for implementing vermin-composting and use of biomass in different areas.
xix.	Monitoring of ground water table and quality once in three months shall be carried out. Construction of tube wells, bore wells shall be strictly regulated.	Noted & Agreed Ground water monitoring is being carried out third party consultant, monitoring report is enclosed as Annexure-I
xx.	Permeable (porous) paving in the parking areas, and walkways should be used to control surface runoff by allowing storm water to infiltrate the soil and return to ground water.	Permeable (porous) Paving in parking areas has been considered in design.
xxi.	All intersections shall be designed and developed as roundabouts.	Being followed
xxii.	All utility lines (electricity, telephone, cable, water supply, sewage, drainage, etc. shall be laid below ground level. Ducts shall be provided along and across the roads to lay the utility lines. Major trunk (water/sewerage) lines are to be laid along	Being followed

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	the utility corridor.	
xxiii.	The road drainage shall be designed to enable quick runoff of surface water and prevent water logging.	Being followed In layout provision kept & designed for quick runoff.
xxiv.	Adequate provision shall be made to cater the parking needs. Parking spaces standards as given in "Manual on Norms and Standards for Environmental Clearance of Large Construction Projects" issued by Ministry of Environment and Forests, Government of India shall be adopted.	Agreed & compliance assured. Adequate parking space provision has been provided in the Residential Township layout.
xxv.	Rest room facilities shall be provided for service population.	Being followed. Adequate number of rest rooms are constructed for service population
xxvi.	Monitoring of AAQ as per NAAQS 2009, Monitoring of Ambient Noise Level & Analysis of Ground Water Samples, should be conducted and report should be submitted on monthly basis to SEIAA, Jharkhand & Jharkhand State Pollution Control Board (J.S.P.C.B.), Ranchi.	Being Complied. Baseline Environmental Monitoring Report as per NAAQS 2009, for Ambient Noise Level & Analysis of Ground Water Samples is being submitted to SEIAA, Jharkhand on monthly basis, also submitting along with EC compliance report. Monthly Environmental Monitoring report is being submitted to State Environment Impact Assessment Authority (SEIAA), Jharkhand and Jharkhand State Pollution Control Board (JSPCB), Ranchi and JSPCB, Dumka. Monitoring Report Attached as Annexure -I
Water Body Conservation :-		
i.	Water body falling within premises (if any) shall not be lined or no embankment shall be cemented. The water bodies, if any, shall be kept in natural conditions without disturbing the ecological habitat.	There is no water body within premises of plant layout.
ii.	Improvement or rehabilitation of existing nallas (if any) shall be carried out without disturbing the ecological habitat.	There is no nalla within residential complex premises.
III. Post Construction/Operation Phase		
i.	The environmental safeguards and mitigation measures contained in the application shall be implemented in letter and spirit.	Compliance assured during Operation stage.
ii.	All the conditions, liabilities and legal provisions contained in the Environmental Clearance shall be equally applicable to the successor management of the project in the event of the project proponent transferring the ownership, maintenance of management of the project to any other entity. Ground water shall not be abstracted without prior permission from the competent authority.	Compliance assured during Operation stage.

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iii.	The storm water management plan shall be implemented in such a manner that the storm water is discharged through an existing dedicated Storm Water Outfall only.	Compliance assured during Operation stage.
iv.	The height of the stack of the DG sets should be as per norms of Central Pollution Control Board (C.P.C.B.), New Delhi.	Compliance assured during Operation stage.
v.	Medical (First-Aid) facility must be provided for visitors & employees. Para-medical staff should be attached as Medical facility provider.	Compliance assured during Operation stage.
vi.	Plantation along the side of the buildings & roads and in the open spaces shall be developed to act as sinks of air pollutants. The plantation of trees shall be completed in the construction stage. The plantations shall consist of mixture of available indigenous, fast growing and sturdy species of trees, shrubs and herbs. Preferential plantation of flowering trees with less timber and fruits value shall be carried out.	Noted. Compliance Assured
vii.	Two chambered container or two separate containers (one for recyclable wastes and other for all organic and compostable wastes) shall be placed at appropriate distance on the roadsides and inside the building. Covered dustbins/garbage collector in convenient places to collect the Municipal solid wastes shall be provided.	Compliance assured.
viii.	Proper composting / vermi-composting of municipal solid wastes shall be carried out. All municipal solid wastes shall be segregated, collected, transported, treated and disposed as per provisions of the Municipal Solid Wastes (Management and Handling) Rules, 2000 (As amended).	Noted. Compliance assured.
ix.	The use of hand gloves, shoes and safety dress for all waste collectors and sorters shall be enforced	Noted. Compliance assured.
IV. Entire Life of the Project		
i.	The project proponent should implement Environmental Monitoring Programme as per details submitted in EMP.	Being Complied
ii.	No expansion/modification activity should be carried out obtaining prior Environmental Clearance as per EIA Notification 2006.	Noted & Agreed Clearance & permission will be taken from respective authority before making, if any changes any modification/expansion.
iii.	Monitoring of AAQ as per NAAQS 2009,	Being Complied.

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	Monitoring of Ambient Noise Level & Analysis of Ground Water Samples, Monitoring of Stock Emissions & Testing of emission from DG sets should be conducted and report should be submitted on monthly basis to SEIAA, Jharkhand & JSPCB, Ranchi.	Monthly monitoring of AAQ as per NAAQS 2009, Monitoring of Ambient Noise Level & Analysis of Ground Water Samples is being carried out by third party NABL approved Lab consultant. Monitoring Report Attached as Annexure -I
PART C- SPECIFIC CONDITIONS		
I. Pre-Construction Phase		
i.	Project Proponent should obtain prior consent to establish (NOC) under Section 25 & 26 of the Water (Prevention & Control of Pollution) Act' 1974 and under Section 21 of the Air (Prevention & Control of Pollution) Act' 1981 from State Pollution Control Board before start of construction activities.	Complied. JSPCB has granted CTE/NOC vide letter No. JSPCB/HO/RNC/CTE-3502450/ 2018/ 1117 dated : 01.11.2018
ii.	It was also advised that CSR activity of the Project Proponent should be measurable and quantifiable, and it should be visible even after the completion of the project. The Project Proponent was also directed to deposit 10% of the CSR cost (2.5% of the total project cost). The security deposit is imposed to ensure the proper performance/ implementation of the committed CSR activities.	Being complied. CSR implementation Report with details of CSR activities is enclosed as Annexure -II
iii.	Project Proponent should obtain prior permission for ground water withdrawal from CCWA/CGWB if applicable.	Ground water is not proposed for construction & operation purpose.
iv.	Construction shall conform to the requirements of local seismic regulations. The project proponent shall obtain permission for the plans and designs including structural design, standards and specifications of all construction work from concerned authority.	Being followed Designed of buildings as per seismic regulations.
v.	Use of energy efficient construction materials to achieve the desired thermal comfort shall be incorporated. The desired level of roof assembling "U" factor and insulation "R" value must be achieved. Roof assembling "U" factor for the top roof shall not exceed 0.4 watt/sq.m./degree centigrade with appropriate modifications of specifications and building technologies. The provisions of National Building Code 2005 shall be strictly followed.	Being followed Buildings are designed as per National Building code 2005 provision for thermal comfort and roof insulation done with provision for better energy efficiency.
vi.	Street/Corridor lighting shall be energy efficient. The High Pressure Sodium Vapour (HPSV) Lamps & Compact Fluorescent Lamps (CFL) along Building	Noted. Compliance assured

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	premises shall be provided. High intensity, high mast lights to be installed at few strategic points. Solar energy may be used for outdoor lighting.	
vii.	Reduction of hard paving-onsite (Open area surrounding all buildings) and/or provision of shades on hard paved surfaces to minimize heat island effect and imperviousness of the site should be undertaken.	Being followed
viii.	All proposed air/conditioned buildings should follow the norms proposed in the ECBC regulations framed by the Bureau of Energy Efficiency.	Compliance assured
ix.	Monitoring of AAQ as per NAAQs 2009, Monitoring of Ambient Noise Level & Analysis of Ground Water Samples, Monitoring of Stack Emissions from DO sets should be conducted, and reports should be submitted on monthly basis to State Pollution Control Board (SPCB).	Being complied Monthly Environmental Monitoring report being submitted on regular basis (Monthly) to State Environment Impact Assessment Authority (SEIAA), Jharkhand and Jharkhand State Pollution Control Board (JSPCB), Ranchi and JSPCB, Dumka. Monitoring is enclosed as Annexure -I
x.	Project proponent shall install Wind Augmentation and Air Purifying Unit (4 Units at one location in Godda) on Pilot basis to deal with particulate matter pollution.	Will be followed. At present water sprinkling is being done to control dust and particulate matter at site. Options shall be explored for Wind Augmentation and Air Purifying Units on pilot basis to deal with particulate matter.
II. Construction Phase		
i.	All the conditions laid down in NOC issued by SPCB should be strictly complied with during entire construction cycle of the Project.	Being followed
ii.	The water treatment plant shall be provided for treatment of water. The treatment shall include screening, sedimentation, filtration and disinfections. Appropriate arrangement shall be made for treatment and reuse of backwash water of filtration plant.	Noted & Compliance assured. Water Treatment plant & Sewage treatment plant is proposed to establish along with Power plant construction. It is envisaged to utilize waste water generated from Sewage Treatment Plant for horticulture/ plantation etc. The concept of Zero Discharge shall be implemented
iii.	Project proponent shall 'provide adequate measuring arrangement at the inlet point of water uptake and at the discharge point for the measurement of water utilized in different categories and monitoring daily water consumption.	Being complied. Water permission obtained from River Liljhi issued by WRD, Govt of Jharkhand and water metering arrangement is being ensured
iv.	Regular water sprinkling shall be done all around the site to minimize fugitive dust emission during construction activities.	Being followed
v.	Rain water harvesting structures should be provided as per submitted Plan.	Noted Compliance assured.

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		Rain water harvesting will be implemented along with project construction & operation phase.
III. Post Construction/Operation Phase		
i.	Project Proponent should obtain prior consent to operate under Air Act, 1981 & Water Act, 1974 from State Pollution Control Board before commissioning of the project.	Noted. Consent to Operate will be obtained prior commissioning of project.
ii.	Water saving practices such as usage of water saving devices/fixtures, low flushing systems, sensor based fixtures, auto control walls, pressure reducing devices etc. should be adopted.	Noted. As a water saving practices, we have opted for water saving fixtures and low flushing system.
iii.	Water budget should be adopted as per the plan submitted in the supplementary Form-I A & EMP.	Noted. Compliance assured during operation.
iv.	All the generated domestic effluent should be sent to ETP/STP for treatment & further recycling & reuse.	Noted. Compliance assured during operation.
v.	Treated water recovered from STP would be used for flushing the toilets, gardening purpose, make up water in air conditioning systems, etc. As proposed, Fluidized Bed Reactor (FBR) type sewage treatment plant should be installed. The Sewage Treatment Plant shall be ensured before the completion of Building Complex.	Noted. FBR type STP is proposed for the township. Dual Flushing system / plumbing is provided. Treated water from STP has been planned to be used for flushing. Gardening & in ash handling system etc.
vi.	Rainwater from open spaces shall be collected and reused for landscaping and other purposes. Rooftop rainwater harvesting shall be adopted for the proposed Buildings. Every building of proposed extension project shall have rainwater-harvesting facilities. Before recharging the surface runoff, pre-treatment must be done to remove suspended matter and oil and grease.	RWH plan will be implemented along with project construction as well as operation.
vii.	Municipal solid wastes generated in the proposed extension buildings shall be managed and handled in accordance with the compliance criteria and procedure laid down in Schedule- II of the Municipal Wastes (Management and handling) Rules, 2000 (As amended).	Noted Compliance assured.
viii.	The standard for composting & treated leachates as mentioned in Schedule-IV of the Municipal Wastes (Management and handling) Rules, 2000 (As amended) shall be followed.	Noted Compliance assured.
ix.	All hazardous wastes shall be segregated, collected, transported, treated and	Noted Compliance assured.

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	disposed as per provisions of the Hazardous Wastes (Management and Handling) Rules, 1989 (As amended).	
x.	Recycling of all recyclable wastes such as newspaper, aluminium cans, glass bottles, iron scrap and plastics etc. shall be encouraged through private participation. Project proponent shall take appropriate action to ensure minimum utilization of plastic carry bags and plastic small containers etc. within the proposed buildings shall be ensured.	Noted Compliance assured.
xi.	Project proponent shall operate and maintain the sewage collection/conveyance system, sewage pumping system and sewage treatment system regularly to ensure the treated water quality within the standards prescribed by Ministry of Environment and Forests, Government of India.	Noted Compliance assured.
xii.	Properly treated and disinfected (Ultra Violet Treatment) sewage shall be utilized in flushing the toilets, gardening purpose, make up water in air conditioning systems etc.	Noted Compliance assured.
xiii.	Non-mixing of faecal matter with the municipal solid wastes shall be strictly ensured.	Noted Compliance assured.
xiv.	Non-mixing of sewage/sludge with rainwater shall be strictly ensured.	Noted Compliance assured.
xv.	Noise barriers shall be provided at appropriate locations so as to ensure that the noise levels do not exceed the prescribed standards. D.G. sets shall be provided with necessary acoustic enclosures as per Central Pollution Control Board norms.	Noted Compliance assured.
xvi.	Back up supply shall be based on natural Gas/cleaner fuel subject to their availability.	Noted
xvii.	The project proponent shall resort to solar energy at least for street lighting and water heating for Proposed Building Complex, gardens/park areas.	Noted. Possibilities for using solar energy will be explored during operation
xviii.	During maintenance, energy efficient electric light fittings & lamps- low power ballasts, low consumption high power luminaries, lux level limiters & timers for street lighting shall be provided.	Noted. Possibilities for using energy efficient equipments will be explored during operation
xix.	A report on the energy conservation measures confirming to energy conservation norms finalized by Bureau of	Buildings are designed as per National Building code 2005 provision for thermal comfort and roof insulation done with

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	Energy Efficiency should be prepared incorporating details about building materials & technology, "R" and "U" factors etc.	provision for better energy efficiency
xx.	Monitoring of AAQ as per NAAQS 2009, Monitoring of Ambient Noise Level & Analysis of Ground Water Samples, Monitoring of Stack Emissions from DG sets & Testing of Untreated & treated effluent samples of STPs should be conducted and report should be submitted on monthly basis to SPCB.	Being complied. Testing of Untreated & treated effluent & DG set etc. monitoring report will be submitted during operation. Monitoring is enclosed as Annexure -I
IV. Entire Life of the Project		
i.	All the conditions laid down in NOC & consent to operate issued by spcb should be strictly complied with during entire life cycle of the project.	Noted Being complied
ii.	Monitoring of Ambient Noise Level & Analysis of Ground Water Samples, Monitoring of Stack Emissions from DG Sets & Testing of Untreated & treated effluent samples of STPs should be conducted and reports should be submitted 'on monthly basis to SPCB.	Being complied Testing of Untreated & treated effluent & DG set etc. monitoring report will be submitted during operation. Monitoring is enclosed as Annexure -I
iii.	The project authorities shall ensure that the treated effluent and stack emissions from the unit are within the norms stipulated under the EPC rules or SPCB whichever is more stringent. In case of process disturbances/failure of pollution control equipment adopted by the unit, the respective unit shall be shut down and shall not be restarted until the control measures are rectified to achieve the desired efficiency.	Noted Compliance assured.
iv.	The overall noise levels in and around the project area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules 1989 viz. 75 DBA (day time) and 70 DBA (night time).	Noted Compliance assured.
v.	The project authorities shall provide requisite funds for both recurring and nonrecurring expenditure to implement the conditions stipulated by SEIAA, Jharkhand with the implementation schedule for all the conditions stipulated herein. The funds so provided shall not be diverted for any other purpose.	Noted Compliance assured.
vi.	Plantation along the side of the buildings & roads and in the open spaces shall be developed to act as sinks of air pollutants. The plantation of trees shall be completed in the	Compliance assured. Green belt development / plantation will be developed along with project construction & during operation and efforts will be made to

ADANI POWER (JHARKHAND) LIMITED

	construction stage. The plantations shall consist of mixture of available indigenous, fast growing and sturdy species of trees, shrubs. 15% of the total plot area shall be used for plantations.	develop more greenery in & around the plant with survival rate of more than 80%.
vii.	Whenever developer will hand over building to the society, the developer must mention in the agreement or sale deed that 15% green belt area of total plot area should mentioned & Environmental Conditions given by SEIAA, Jharkhand has to be complied.	Noted & agreed Compliance assured.
viii.	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, ZilaParishad/Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.	Complied.
ix.	The funds earmarked for the environmental protection measures shall not be diverted for other purposes.	Noted Compliance assured.
x.	In case of any changes in the scope of the project, the project shall require a fresh appraisal by the SEAC/SEIAA.	Noted & agreed
xi.	The SEAC/SEIAA, Jharkhand will have the right to amend the above conditions and add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provisions of the Environmental (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.	Noted & agreed
xii.	It shall be mandatory for the project management to submit six (06) monthly compliance report in respect of the stipulated prior environmental clearance terms and conditions in hard copies and soft copies to the regulatory authority concerned Regional Office of MoEF&CC at Ranchi and Jharkhand State Pollution Control Board (J.S.P.C.B.), Ranchi.	Six monthly compliance status reports are regularly submitted to MoEF&CC, SEIAA, CPCB & JSPCB. Previous compliance report was submitted in May'2019 for the periods of October'2018 to March'2019 vide our letter no. APL/APJL/EMD/EC/MoEF/175/05/19. Dated-27/05/2019.
xiii.	Any appeal against this Environmental Clearance shall lie with the National Green Tribunal (NGT), if preferred within a period of 30 days as prescribed under section 16 of the National Green Tribunal Act, 2010.	Noted

Report Issued to : HTG Engineering Pvt. Ltd.

ENVIRONMENTAL MONITORING REPORT

of

ADANI POWER (JHARKHAND) LTD.

2x800 MW Godda Thermal Power Project,

Village: Motia, Distt. - Godda, Jharkhand

for

April - 2019

Prepared by :

ecoMen

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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AAQ1/04/19

Date: 06.05.2019

TEST REPORT OF AMBIENT AIR**(Test Report Issued to: HTG Engineering Pvt. Ltd.)**

Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : As per IS: 5182
 Sample Collected By : Ecomen Team

Name of Location : Near Motia Village

Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(01-02).04.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	77	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	32	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	7.6	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	19.2	80
(04-05).04.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	69	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	26	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	8.2	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	17.4	80
(08-09).04.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	75	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	29	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	9.4	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	16.8	80

Note:BDL = Below Detection Limit

Standards:National Ambient Air Quality Monitoring (NAAQM).

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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AAQ2/04/19

Date: 06.05.2019

TEST REPORT OF AMBIENT AIR
(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : As per IS: 5182
 Sample Collected By : Ecomen Team

Name of Location : Near Motia Village

Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(11-12).04.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	84	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	33	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	8.2	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	21.4	80
(15-16).04.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	73	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	28	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	7.7	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	15.6	80
(18-19).04.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	75	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	29	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	9.2	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	18.4	80

Note:BDL = Below Detection Limit

Standards:National Ambient Air Quality Monitoring (NAAQM).


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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AAQ3/04/19

Date: 06.05.2019

TEST REPORT OF AMBIENT AIR

(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
Address of the Project : 2x800MW Godda Thermal Power Project,
Village: Motia, Distt. - Godda, Jharkhand
Sampling Method : As per IS: 5182
Sample Collected By : Ecomen Team

Name of Location: Near Motia Village					
Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(22-23).04.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	79	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	32	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	6.7	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	15.9	80
(25-26).04.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	74	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	29	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	8.4	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	22.5	80

Note:BDL = Below Detection Limit

Standards:National Ambient Air Quality Monitoring (NAAQM).

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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AAQ4/04/19

Date: 06.05.2019

TEST REPORT OF AMBIENT AIR

(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
Address of the Project : 2x800MW Godda Thermal Power Project,
Village: Motia, Distt. - Godda, Jharkhand
Sampling Method : As per IS: 5182
Sample Collected By : Ecomen Team

Name of Location : Near Motia Village

Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(29-30).04.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	71	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	29	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	7.6	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	17.2	80

Note:BDL = Below Detection Limit**Standards:**National Ambient Air Quality Monitoring (NAAQM).

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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AAQ5/04/19

Date: 06.05.2019

TEST REPORT OF AMBIENT AIR**(Test Report Issued to: HTG Engineering Pvt. Ltd.)**

Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : As per IS: 5182
 Sample Collected By : Ecomen Team

Name of Location: Near Mali Village

Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(01-02).04.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	69	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	25	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	9.6	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	21.4	80
(04-05).04.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	73	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	28	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	8.2	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	19.3	80
(08-09).04.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	70	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	26	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	10.2	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	21.5	80

Note:BDL = Below Detection Limit**Standards:**National Ambient Air Quality Monitoring (NAAQM).

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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AAQ6/04/19

Date: 06.05.2019

TEST REPORT OF AMBIENT AIR

(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : As per IS: 5182
 Sample Collected By : Ecomen Team

Name of Location: Near Mali Village

Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(11-12).04.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	76	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	29	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	8.8	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	17.6	80
(15-16).04.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	71	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	27	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	6.8	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	18.5	80
(18-19).04.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	78	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	34	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	9.4	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	21.2	80

Note:BDL = Below Detection Limit**Standards:**National Ambient Air Quality Monitoring (NAAQM).*Reeng***For Ecomen Laboratories Pvt. Ltd.**Ecomen Laboratories Pvt. Ltd.
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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AAQ7/04/19

Date: 06.05.2019

TEST REPORT OF AMBIENT AIR

(Test Report Issued to : HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : As per IS: 5182
 Sample Collected By : Ecomen Team

Name of Location: Near Mali Village

Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(22-23).04.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	83	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	35	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	10.2	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	23.6	80
(25-26).04.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	77	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	29	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	8.9	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	24.4	80

Note:BDL = Below Detection Limit**Standards:**National Ambient Air Quality Monitoring (NAAQM).*Reena***For Ecomen Laboratories Pvt. Ltd.**Ecomen Laboratories Pvt. Ltd.
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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO. ECO LAB/AAQ8/04/19

Date: 06.05.2019

TEST REPORT OF AMBIENT AIR

(Test Report Issued to : HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
Address of the Project : 2x800MW Godda Thermal Power Project,
Village: Motia, Distt. - Godda, Jharkhand
Sampling Method : As per IS: 5182
Sample Collected By : Ecomen Team

Name of Location: Near Mali Village					
Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(29-30).04.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	79	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	30	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	9.2	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	18.6	80

Note:BDL = Below Detection Limit**Standards:**National Ambient Air Quality Monitoring (NAAQM).

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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AAQ9/04/19

Date: 06.05.2019

TEST REPORT OF AMBIENT AIR

(Test Report Issued to : HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : As per IS: 5182
 Sample Collected By : Ecomen Team

Name of Location: Near Navabad Village					
Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(02-03),04.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	85	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	39	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	10.1	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	22.6	80
(05-06),04.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	76	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	29	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	9.2	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	22.4	80

Note:BDL = Below Detection Limit**Standards:**National Ambient Air Quality Monitoring (NAAQM).*Reeng***For Ecomen Laboratories Pvt. Ltd.**

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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AAQ10/04/19

Date: 06.05.2019

TEST REPORT OF AMBIENT AIR**(Test Report Issued to: HTG Engineering Pvt. Ltd.)**

Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : As per IS: 5182
 Sample Collected By : Ecomen Team

Name of Location: Near Navabad Village					
Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(09-10).04.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	79	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	31	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	7.8	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	22.4	80
(12-13).04.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	74	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	29	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	9.8	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	21.3	80

Note:BDL = Below Detection Limit**Standards:**National Ambient Air Quality Monitoring (NAAQM).*Recd***For Ecomen Laboratories Pvt. Ltd.**

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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AAQ11/04/19

Date: 06.05.2019

TEST REPORT OF AMBIENT AIR

(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : As per IS: 5182
 Sample Collected By : Ecomen Team

Name of Location: Near Navabad Village					
Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(16-17).04.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	87	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	36	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	9.4	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	22.2	80
(19-20).04.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	86	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	34	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	7.6	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	18.4	80

Note:BDL = Below Detection Limit**Standards:**National Ambient Air Quality Monitoring (NAAQM).*Reeng***For Ecomen Laboratories Pvt. Ltd.**Ecomen Laboratories Pvt. Ltd.
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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AAQ12/04/19

Date: 06.05.2019

TEST REPORT OF AMBIENT AIR

(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : As per IS: 5182
 Sample Collected By : Ecomen Team

Name of Location: Near Navabad Village					
Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(23-24).04.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	89	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	38	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	8.7	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	23.4	80
(26-27).04.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	91	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	39	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	9.6	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	21.2	80

Note:BDL = Below Detection Limit**Standards:**National Ambient Air Quality Monitoring (NAAQM).

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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AN/04/19

Date: 06.05.2019

TEST REPORT OF AMBIENT NOISE LEVEL

(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : **Adani Power (Jharkhand) Ltd.**
 Address of the Project : **2x800 MW Godda Thermal Power Project,**
Village: Motia, Distt. - Godda, Jharkhand
 Sample Collected By : **Ecomen Team**
 Date of Sampling : **25-26.04.2019**
 Instrument Used : **Noise Meter (HTC)**

Sl. No.	Locations	Day Time			Night Time		
		Time	Leq Value in dB(A)		Time	Leq Value in dB(A)	
			Max	Min		Max	Min
1.	Near Patwa Village	09.15 A.M	59.2	56.3	10:10 PM	49.7	47.5
2.	Near Motia Village	10.30 A.M	63.4	58.7	10:30 PM	53.1	50.6
3.	Near Mali Village	11.10 A.M	57.1	55.4	11.15 P.M	47.8	45.2
4.	Near Navabad Village	14.30 P.M	61.5	58.1	11.30 P.M	49.2	47.5
5.	Near HTG Residential Area	15:10 PM	67.3	63.6	11.45 P.M	46.3	44.7
6.	Near Adani Office	16:30 PM	71.4	68.2	12.10 A.M	57.1	55.4

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Noise (Ambient Standard)

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

Note:

- Day time is reckoned in between 6:00 AM and 10:00 PM.
- Night time is reckoned in between 10:00 PM and 6:00 AM.
- Silence zone is defined as area up to 100m around such premises as hospitals, educational institutions & courts. The silence zones are to be declared by a competent authority.
- Mixed categories of areas should be declared as one of the four above-mentioned Categories by the competent authority and the corresponding standard shall apply.

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FORMAT NO. ECO/QS/FORMAT/09 TEST REPORT NO: ECO LAB/GW/04/19
TEST REPORT ISSUED DATE: 02.05.2019

TEST REPORT OF GROUND WATER (Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
Address of the Project : 2x800 MW Godda Thermal Power Project,
Village: Motia, Distt. - Godda, Jharkhand
Sampling Method : APHA, 23rd Ed. 2017
Sample Collected by : Ecomen Team
Sample Quantity : As per requirement.
Date of Sampling : 26.04.2019
Date of Sample Receiving : 27.04.2019
Date of Analysis : 27.04.2019 to 02.05.2019
Source of Sample : Motia Village, Hand Pump (GW)

Sl. No.	TESTS	PROTOCOL	RESULT	Detection Range	INDIAN STANDARDS as per IS 10500:1991(Reaff:2012)	
					Desirable	Permissible
1.	Colour (Hazen unit)	APHA, 23 rd Ed. 2017, 3120 B	<5.0	5-100	5.00	15.0
2.	Odour	APHA, 23 rd Ed. 2017, 3150 B	Agreeable	Qualitative	Agreeable	Agreeable
3.	pH	APHA, 23 rd Ed. 2017, 4500H+ A+B	7.22	2.0-12	6.5-8.5	No Relax.
4.	Total Dissolved Solids as TDS (mg/l)	APHA, 23 rd Ed. 2017, 2540-C	363.0	5 - 5000	500	2000
5.	Alkalinity (mg/l)	APHA, 23 rd Ed. 2017, 2320 A+B	110.0	5-1500	200	600
6.	Total Hardness as CaCO ₃ (mg/l)	APHA, 23 rd Ed. 2017, 2340 A+C	164.0	5-1500	200.0	600.0
7.	Calcium as Ca (mg/l)	APHA, 23 rd Ed. 2017, 3500 Ca A+B	48.0	5 - 1000	75.0	200.0
8.	Magnesium as Mg (mg/l)	APHA, 23 rd Ed. 2017, 3500 Mg A+B	15.55	5-1000	30.0	100.0
9.	Copper as Cu (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.05-5	0.05	1.5
10.	Iron as Fe (mg/l)	APHA, 23 rd Ed. 2017, 3500 Fe B	0.24	0.02-50	0.3	No Relax.
11.	Manganese as Mn (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.1-5	0.10	0.30
12.	Chloride as Cl (mg/l)	APHA, 23 rd Ed. 2017, 4500 Cl A+B	24.0	5-1000	250.0	1000.0
13.	Sulfate as SO ₄ (mg/l)	APHA, 23 rd Ed. 2017, 4500-SO ₄ ²⁻ E	26.5	1.0-250	200.0	400.0
14.	Nitrate Nitrogen as NO ₃ (mg/l)	APHA, 23 rd Ed. 2017, 4500-NO ₃ ⁻ B	7.66	5.0-100	45.0	No Relax.
15.	Fluorides as F (mg/l)	APHA, 23 rd Ed. 2017, 4500-C	0.35	0.05-10	1.0	1.5
16.	Phenolic Compounds as C ₆ H ₅ OH (mg/l)	APHA, 23 rd Ed. 2017, 5530 A+C	BDL	1-10	0.001	0.002
17.	Mercury as Hg (mg/l)	APHA, 23 rd Ed. 2017, 3112 A+B	BDL	0.001-1	0.001	No Relax.
18.	Cadmium as Cd (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.002-2	0.003	No Relax.
19.	Arsenic as As (mg/l)	APHA, 23 rd Ed. 2017, 3114 C	BDL	0.01-2	0.01	0.05
20.	Lead as Pb (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.01-2	0.01	No Relax.
21.	Zinc as Zn (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	8.29	0.02-50	5.0	15
22.	Anionic Detergent (As MBAS)(mg/l) max	APHA 22nd EDN.:2012, 5540 A+C	BDL	0.01-5	0.2	3.0
23.	Chromium (Hexavalent) (mg/l)	APHA, 23 rd Ed. 2017, 3111A+B	BDL	0.05-20	0.05	No Relax.
24.	Mineral Oil 6 (mg/l)	IS 3025 (Part 29) Class -6 Infrared Partition method	BDL	0.01-10	0.5	No Relax.
25.	Free Residual Chlorine (mg/l)	APHA, 23 rd Ed. 2017, 4500-Cl B	BDL	0.5-10	0.20	1.0
26.	Boron as B (mg/l)	APHA, 23 rd Ed. 2017, 4500 B A+C	0.22	0.2 - 10	0.5	1.0
27.	Total coliform (MPN/100 ml)	APHA, 23 rd Ed. 2017, B+C	Absent	1.8	0.05	Absent
28.	E.coli (MPN/100 ml)	APHA, 23 rd Ed. 2017, B+E	Absent	1.8	Absent	Absent

Note: BDL - Below Detection Limit

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FORMAT NO. ECO/QS/FORMAT/09 TEST REPORT NO: ECO LAB/GW/04/19
TEST REPORT ISSUED DATE: 02.05.2019

TEST REPORT OF GROUND WATER (Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
Address of the Project : 2x800 MW Godda Thermal Power Project,
Village: Motia, Distt. - Godda, Jharkhand
Sampling Method : APHA, 23rd Ed. 2017
Sample Collected by : Ecomen Team
Sample Quantity : As per requirement.
Date of Sampling : 26.04.2019
Date of Sample Receiving : 27.04.2019
Date of Analysis : 27.04.2019 to 02.05.2019
Source of Sample : Navabad Village, Hand Pump (GW)

Sl. No.	TESTS	PROTOCOL	RESULT	Detection Range	INDIAN STANDARDS as per IS 10500:1991(Reaff:2012)	
					Desirable	Permissible
1.	Colour (Hazen unit)	APHA, 23 rd Ed. 2017, 2120 B	<5.0	5-100	5.00	15.0
2.	Odour	APHA, 23 rd Ed. 2017, 2150 B	Agreeable	Qualitative	Agreeable	Agreeable
3.	pH	APHA, 23 rd Ed. 2017, 4500H+ A+B	7.39	2.0 -12	6.5-8.5	No Relax.
4.	Total Dissolved Solids as TDS (mg/l)	APHA, 23 rd Ed. 2017, 2540-C	412.0	5 - 5000	500	2000
5.	Alkalinity (mg/l)	APHA, 23 rd Ed. 2017, 2520 A+ B	132.0	5-1500	200	600
6.	Total Hardness as CaCO ₃ (mg/l)	APHA, 23 rd Ed. 2017, 2340 A+C	196.0	5-1500	200.0	600.0
7.	Calcium as Ca (mg/l)	APHA, 23 rd Ed. 2017, 3500 Ca A+B	44.8	5 - 1000	75.0	200.0
8.	Magnesium as Mg (mg/l)	APHA, 23 rd Ed. 2017, 3500 Mg A+B	20.41	5-1000	30.0	100.0
9.	Copper as Cu (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.05-5	0.05	1.5
10.	Iron as Fe (mg/l)	APHA, 23 rd Ed. 2017, 3500 Fe B	0.21	0.02-50	0.3	No Relax.
11.	Manganese as Mn (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.1-5	0.10	0.30
12.	Chloride as Cl (mg/l)	APHA, 23 rd Ed. 2017, 4500 Cl A+B	39.2	5-1000	250.0	1000.0
13.	Sulfate as SO ₄ (mg/l)	APHA, 23 rd Ed. 2017, 4500-SO ₄ E	33.22	1.0 -250	200.0	400.0
14.	Nitrate Nitrogen as NO ₃ (mg/l)	APHA, 23 rd Ed. 2017, 4500-NO ₃ B	9.54	5.0 - 100	45.0	No Relax.
15.	Fluorides as F (mg/l)	APHA, 23 rd Ed. 2017, 4500-C	0.33	0.05-10	1.0	1.5
16.	Phenolic Compounds as C ₆ H ₅ OH (mg/l)	APHA, 23 rd Ed. 2017, 5530 A+C	BDL	1-10	0.001	0.002
17.	Mercury as Hg (mg/l)	APHA, 23 rd Ed. 2017, 3112 A+B	BDL	0.001-1	0.001	No Relax.
18.	Cadmium as Cd (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.002-2	0.003	No Relax.
19.	Arsenic as As (mg/l)	APHA, 23 rd Ed. 2017, 3114 C	BDL	0.01-2	0.01	0.05
20.	Lead as Pb (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.01-2	0.01	No Relax.
21.	Zinc as Zn (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	0.22	0.02-50	5.0	15
22.	Anionic Detergents (As MBAS)(mg/l) max	APHA 22nd EDN.:2012, 5540 A+C	BDL	0.01-5	0.2	1.0
23.	Chromium (Hexavalent) (mg/l)	APHA, 23 rd Ed. 2017, 3111A+B	BDL	0.05-20	0.05	No Relax.
24.	Mineral Oil 6 (mg/l)	IS 3025 (Part 39) Class -6 Infrared Partition Method	BDL	0.01-10	0.5	No Relax.
25.	Free Residual Chlorine (mg/l)	APHA, 23 rd Ed. 2017, 4506-Cl B	BDL	0.5-10	0.20	1.0
26.	Boron as B (mg/l)	APHA, 23 rd Ed. 2017, 4500 B A+C	0.20	0.2 - 10	0.5	1.0
27.	Total coliform (MPN/100 ml)	APHA, 23 rd Ed. 2017, B+C	Absent	1.8	0.05	Absent
28.	E.coli (MPN/100 ml)	APHA, 23 rd Ed. 2017, B+E	Absent	1.8	Absent	Absent

Note: BDL – Below Detection Limit

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FORMAT NO. ECO/QS/FORMAT/09 TEST REPORT NO: ECO LAB/GW/04/19
TEST REPORT ISSUED DATE: 02.05.2019

TEST REPORT OF GROUND WATER (Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
Address of the Project : 2x800 MW Godda Thermal Power Project,
Village: Motia, Distt. - Godda, Jharkhand
Sampling Method : APHA, 23rd Ed. 2017
Sample Collected by : Ecomen Team
Sample Quantity : As per requirement.
Date of Sampling : 26.04.2019
Date of Sample Receiving : 27.04.2019
Date of Analysis : 27.04.2019 to 02.05.2019
Source of Sample : Mali village, Hand Pump (GW)

Sl. No.	TESTS	PROTOCOL	RESULT	Detection Range	INDIAN STANDARDS as per IS 10500:1991(Reaff:2012)	
					Desirable	Permissible
1.	Colour (Hazen unit)	APHA, 23 rd Ed. 2017, 2120 B	<5.0	5-100	5.00	15.0
2.	Odour	APHA, 23 rd Ed. 2017, 2150 B	Agreeable	Qualitative	Agreeable	Agreeable
3.	pH	APHA, 23 rd Ed. 2017, 4500H+ A+B	7.15	2.0 -12	6.5-8.5	No Relax.
4.	Total Dissolved Solids as TDS (mg/l)	APHA, 23 rd Ed. 2017, 2540-C	342.0	5 - 5000	500	2000
5.	Alkalinity (mg/l)	APHA, 23 rd Ed. 2017, 2320 A+ B	144.0	5-1500	200	600
6.	Total Hardness as CaCO ₃ (mg/l)	APHA, 23 rd Ed. 2017, 2340 A+C	216.0	5-1500	200.0	600.0
7.	Calcium as Ca (mg/l)	APHA, 23 rd Ed. 2017, 3500 Ca A+B	60.8	5 - 1000	75.0	200.0
8.	Magnesium as Mg (mg/l)	APHA, 23 rd Ed. 2017, 3500 Mg A+B	15.50	5-1000	30.0	100.0
9.	Copper as Cu (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.05-5	0.05	1.5
10.	Iron as Fe (mg/l)	APHA, 23 rd Ed. 2017, 3500 Fe B	0.14	0.02-50	0.3	No Relax.
11.	Manganese as Mn (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.1-5	0.10	0.30
12.	Chloride as Cl (mg/l)	APHA, 23 rd Ed. 2017, 4500 Cl A+B	40.0	5-1000	250.0	1000.0
13.	Sulfate as SO ₄ (mg/l)	APHA, 23 rd Ed. 2017, 4500-SO ₄ ²⁻ E	32.62	1.0 -250	200.0	400.0
14.	Nitrate Nitrogen as NO ₃ (mg/l)	APHA, 23 rd Ed. 2017, 4500-NO ₃ ⁻ B	12.1	5.0 - 100	45.0	No Relax.
15.	Fluorides as F (mg/l)	APHA, 23 rd Ed. 2017, 4500-C	0.31	0.05-10	1.0	1.5
16.	Phenolic Compounds as C ₆ H ₅ OH (mg/l)	APHA, 23 rd Ed. 2017, 5530 A+C	BDL	1-10	0.001	0.002
17.	Mercury as Hg (mg/l)	APHA, 23 rd Ed. 2017, 3112 A+B	BDL	0.001-1	0.001	No Relax.
18.	Cadmium as Cd (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.002-2	0.003	No Relax.
19.	Arsenic as As (mg/l)	APHA, 23 rd Ed. 2017, 3114 C	BDL	0.01-2	0.01	0.05
20.	Lead as Pb (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.01-2	0.01	No Relax.
21.	Zinc as Zn (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	0.21	0.02-50	5.0	15
22.	Anionic Detergents (As MBAS)(mg/l) max	APHA 22nd EDN.:2012, 5540 A+C	BDL	0.01-5	0.2	1.0
23.	Chromium (Hexavalent) (mg/l)	APHA, 23 rd Ed. 2017, 3111A+B	BDL	0.05-20	0.05	No Relax.
24.	Mineral Oil 6 (mg/l)	IS 3025 (Part 39) Class -6 Infrared Partition Method	BDL	0.01-10	0.5	No Relax.
25.	Free Residual Chlorine (mg/l)	APHA, 23 rd Ed. 2017, 4500-Cl B	BDL	0.5-10	0.20	1.0
26.	Boron as B (mg/l)	APHA, 23 rd Ed. 2017, 4500 B A+C	0.25	0.2 - 10	0.5	1.0
27.	Total coliform (MPN/100 ml)	APHA, 23 rd Ed. 2017, B+C	Absent	1.8	0.05	Absent
28.	E.coli (MPN/100 ml)	APHA, 23 rd Ed. 2017, B+E	Absent	1.8	Absent	Absent

Note: BDL – Below Detection Limit

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FORMAT NO. ECO/QS/FORMAT/09 TEST REPORT NO: ECO LAB/GW/04/19
TEST REPORT ISSUED DATE: 02.05.2019

TEST REPORT OF GROUND WATER (Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
Address of the Project : 2x800 MW Godda Thermal Power Project,
Village: Motia, Distt. - Godda, Jharkhand
Sampling Method : APHA, 23rd Ed. 2017
Sample Collected by : Ecomen Team
Sample Quantity : As per requirement.
Date of Sampling : 26.04.2019
Date of Sample Receiving : 27.04.2019
Date of Analysis : 27.04.2019 to 02.05.2019
Source of Sample : Patwa Village, Hand Pump (GW)

Sl. No.	TESTS	PROTOCOL	RESULT	Detection Range	INDIAN STANDARDS as per IS 10500:1991(Reaff:2012)	
					Desirable	Permissible
1.	Colour (Hazen unit)	APHA, 23 rd Ed. 2017, 2120 B	<5.0	5-100	5.00	15.0
2.	Odour	APHA, 23 rd Ed. 2017, 2150 B	Agreeable	Qualitative	Agreeable	Agreeable
3.	pH	APHA, 23 rd Ed. 2017, 450011+ A+B	7.27	2.0 -12	6.5-8.5	No Relax.
4.	Total Dissolved Solids as TDS (mg/l)	APHA, 23 rd Ed. 2017, 2540-C	352.0	5 - 5000	500	2000
5.	Alkalinity (mg/l)	APHA, 23 rd Ed. 2017, 2320 A+B	142.0	5-1500	200	600
6.	Total Hardness as CaCO ₃ (mg/l)	APHA, 23 rd Ed. 2017, 2340 A+C	268.0	5-1500	200.0	600.0
7.	Calcium as Ca (mg/l)	APHA, 23 rd Ed. 2017, 3500 Ca A+B	72.0	5 - 1000	75.0	200.0
8.	Magnesium as Mg (mg/l)	APHA, 23 rd Ed. 2017, 3500 Mg A+B	23.32	5-1000	30.0	100.0
9.	Copper as Cu (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.05-5	0.05	1.5
10.	Iron as Fe (mg/l)	APHA, 23 rd Ed. 2017, 3500 Fe B	0.19	0.02-50	0.3	No Relax.
11.	Manganese as Mn (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.1-5	0.10	0.30
12.	Chloride as Cl (mg/l)	APHA, 23 rd Ed. 2017, 4500 Cl A+B	36.0	5-1000	250.0	1000.0
13.	Sulfate as SO ₄ (mg/l)	APHA, 23 rd Ed. 2017, 4500-SO ₄ ²⁻ E	39.11	1.0 -250	200.0	400.0
14.	Nitrate Nitrogen as NO ₃ (mg/l)	APHA, 23 rd Ed. 2017, 4500-NO ₃ ⁻ B	10.22	5.0 - 100	45.0	No Relax.
15.	Fluorides as F (mg/l)	APHA, 23 rd Ed. 2017, 4500-C	0.24	0.05-10	1.0	1.5
16.	Phenolic Compounds as C ₆ H ₅ OH (mg/l)	APHA, 23 rd Ed. 2017, 5530 A+C	BDL	1-10	0.001	0.002
17.	Mercury as Hg (mg/l)	APHA, 23 rd Ed. 2017, 3112 A+B	BDL	0.001-1	0.001	No Relax.
18.	Cadmium as Cd (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.002-2	0.003	No Relax.
19.	Arsenic as As (mg/l)	APHA, 23 rd Ed. 2017, 3114 C	BDL	0.01-2	0.01	0.05
20.	Lead as Pb (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.01-2	0.01	No Relax.
21.	Zinc as Zn (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	0.26	0.02-50	5.0	15
22.	Anionic Detergents (As MBAS)(mg/l) max.	APHA 22nd EDN.2012, 5540 A+C	BDL	0.01-5	0.2	1.0
23.	Chromium (Hexavalent) (mg/l)	APHA, 23 rd Ed. 2017, 3111A+B	BDL	0.05-20	0.05	No Relax.
24.	Mineral Oil 6 (mg/l)	IS 3025 (Part 39) Class-4 Infrared Partition Method	BDL	0.01-10	0.5	No Relax.
25.	Free Residual Chlorine (mg/l)	APHA, 23 rd Ed. 2017, 4500-Cl B	BDL	0.5-10	0.20	1.0
26.	Boron as B (mg/l)	APHA, 23 rd Ed. 2017, 4500 B A+C	0.21	0.2 - 10	0.5	1.0
27.	Total coliform (MPN/100 ml)	APHA, 23 rd Ed. 2017, B+C	Absent	1.8	0.05	Absent
28.	E.coli (MPN/100 ml)	APHA, 23 rd Ed. 2017, B+E	Absent	1.8	Absent	Absent

Note: BDL - Below Detection Limit

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Report Issued to : HTC Engineering Pvt. Ltd.

ENVIRONMENTAL MONITORING REPORT

of

ADANI POWER (JHARKHAND) LTD.

2x800 MW Godda Thermal Power Project.

Village: Motia, Distt. - Godda, Jharkhand

for

May - 2019

Prepared by :

ecoMen

(An Approved Laboratory by MoEF and CC)

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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AAQ1/05/19

Date: 06.06.2019

TEST REPORT OF AMBIENT AIR


(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : **Adani Power (Jharkhand) Ltd.**
 Address of the Project : **2x800MW Godda Thermal Power Project,**
Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : **As per IS: 5182**
 Sample Collected By : **Ecomen Team**

Name of Location : Near Motia Village

Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(02-03).05.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	79.0	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	29.0	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	8.2	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	21.6	80
(06-07).05.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	77.0	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	27.0	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	9.4	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	19.2	80
(09-10).05.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	73.0	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	26.0	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	6.4	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	17.8	80

Note:BDL = Below Detection Limit**Standards:**National Ambient Air Quality Monitoring (NAAQM).


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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: CO LAB/AAQ2/05/19

Date: 06.06.2019

TEST REPORT OF AMBIENT AIR

(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : As per IS: 5182
 Sample Collected By : Ecomen Team

Name of Location : Near Motia Village					
Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(13-14).05.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	77.0	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	30.0	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	10.1	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	23.6	80
(16-17).05.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	83.0	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	34.0	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	9.7	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	18.2	80
(20-21).05.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	77.0	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	28.0	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	7.9	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	19.6	80

Note:BDL = Below Detection Limit

Standards:National Ambient Air Quality Monitoring (NAAQM).


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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AAQ3/05/19

Date: 06.06.2019

TEST REPORT OF AMBIENT AIR

(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : As per IS: 5182
 Sample Collected By : Ecomen Team

Name of Location: Near Motia Village

Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(23-24).05.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	89.0	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	38.0	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	11.7	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	23.2	80
(27-28).05.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	71.0	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	26.0	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	7.6	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	17.2	80
(30-31).05.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	78.0	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	31.0	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	7.8	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	20.2	80

Note:BDL = Below Detection Limit**Standards:**National Ambient Air Quality Monitoring (NAAQM).

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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AAQ4/05/19

Date: 06.06.2019

TEST REPORT OF AMBIENT AIR

(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : As per IS: 5182
 Sample Collected By : Ecomen Team

Name of Location: Near Mali Village					
Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(02-03).05.2019	PM ₁₀ ($\mu\text{g}/\text{m}^3$)	IS:5182(Part-23)	2-1000($\mu\text{g}/\text{m}^3$)	74.0	100
	PM _{2.5} ($\mu\text{g}/\text{m}^3$)	NAAQM Guideline Volume-I by CPCB	2-100($\mu\text{g}/\text{m}^3$)	29.0	60
	SO ₂ ($\mu\text{g}/\text{m}^3$)	IS:5182 (Part-2)	5-200($\mu\text{g}/\text{m}^3$)	6.8	80
	NO _x ($\mu\text{g}/\text{m}^3$)	IS:5182 (Part-6)	5-200($\mu\text{g}/\text{m}^3$)	15.6	80
(06-07).05.2019	PM ₁₀ ($\mu\text{g}/\text{m}^3$)	IS:5182(Part-23)	2-1000($\mu\text{g}/\text{m}^3$)	66.0	100
	PM _{2.5} ($\mu\text{g}/\text{m}^3$)	NAAQM Guideline Volume-I by CPCB	2-100($\mu\text{g}/\text{m}^3$)	23.0	60
	SO ₂ ($\mu\text{g}/\text{m}^3$)	IS:5182 (Part-2)	5-200($\mu\text{g}/\text{m}^3$)	5.9	80
	NO _x ($\mu\text{g}/\text{m}^3$)	IS:5182 (Part-6)	5-200($\mu\text{g}/\text{m}^3$)	17.1	80
(09-10).05.2019	PM ₁₀ ($\mu\text{g}/\text{m}^3$)	IS:5182(Part-23)	2-1000($\mu\text{g}/\text{m}^3$)	69.0	100
	PM _{2.5} ($\mu\text{g}/\text{m}^3$)	NAAQM Guideline Volume-I by CPCB	2-100($\mu\text{g}/\text{m}^3$)	25.0	60
	SO ₂ ($\mu\text{g}/\text{m}^3$)	IS:5182 (Part-2)	5-200($\mu\text{g}/\text{m}^3$)	7.4	80
	NO _x ($\mu\text{g}/\text{m}^3$)	IS:5182 (Part-6)	5-200($\mu\text{g}/\text{m}^3$)	14.8	80

Note:BDL = Below Detection Limit

Standards:National Ambient Air Quality Monitoring (NAAQM).



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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AAQ5/05/19

Date: 06.06.2019

TEST REPORT OF AMBIENT AIR

(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : As per IS: 5182
 Sample Collected By : Ecomen Team

Name of Location: Near Mali Village

Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(13-14).05.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	72.0	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	28.0	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	5.8	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	16.2	80
(16-17).05.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	68.0	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	26.0	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	8.1	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	16.3	80
(20-21).05.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	75.0	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	31.0	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	5.4	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	14.9	80

Note:BDL = Below Detection Limit**Standards:**National Ambient Air Quality Monitoring (NAAQM).


For Ecomen Laboratories Pvt. Ltd.

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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AAQ6/05/19

Date: 06.06.2019

TEST REPORT OF AMBIENT AIR

(Test Report Issued to : HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : As per IS: 5182
 Sample Collected By : Ecomen Team

Name of Location: Near Mali Village					
Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(23-24).05.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	77.0	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	32.0	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	9.1	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	21.4	80
(27-28).05.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	66.0	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	22.0	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	6.8	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	17.4	80

Note:BDL = Below Detection Limit

Standards:National Ambient Air Quality Monitoring (NAAQM).


 For Ecomen Laboratories Pvt. Ltd.

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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AAQ7/05/19

Date: 06.06.2019

TEST REPORT OF AMBIENT AIR

(Test Report Issued to : HTG Engineering Pvt. Ltd.)

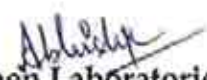
Name of the Project : Adani Power (Jharkhand) Ltd.
Address of the Project : 2x800MW Godda Thermal Power Project,
Village: Motia, Distt. - Godda, Jharkhand
Sampling Method : As per IS: 5182
Sample Collected By : Ecomen Team

Name of Location: Near Mali Village

Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(30-31).05.2019	PM ₁₀ ($\mu\text{g}/\text{m}^3$)	IS:5182(Part-23)	2-1000($\mu\text{g}/\text{m}^3$)	69.0	100
	PM _{2.5} ($\mu\text{g}/\text{m}^3$)	NAAQM Guideline Volume-I by CPCB	2-100($\mu\text{g}/\text{m}^3$)	24.0	60
	SO ₂ ($\mu\text{g}/\text{m}^3$)	IS:5182 (Part-2)	5-200($\mu\text{g}/\text{m}^3$)	7.2	80
	NO _x ($\mu\text{g}/\text{m}^3$)	IS:5182 (Part-6)	5-200($\mu\text{g}/\text{m}^3$)	19.3	80

Note:BDL = Below Detection Limit

Standards:National Ambient Air Quality Monitoring (NAAQM).


For Ecomen Laboratories Pvt. Ltd.

Ecomen Laboratories Pvt. Ltd.

Flat No.-8 2nd Floor, Arif Chamber-V

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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AAQ8/05/19

Date: 06.06.2019

TEST REPORT OF AMBIENT AIR

(Test Report Issued to : HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : As per IS: 5182
 Sample Collected By : Ecomen Team

Name of Location: Near Navabad Village

Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(01-02).05.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	75.0	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	34.0	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	9.7	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	25.2	80
(03-04).05.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	69.0	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	27.0	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	11.4	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	21.1	80

Note:BDL = Below Detection Limit**Standards:**National Ambient Air Quality Monitoring (NAAQM).

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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AAQ9/05/19

Date: 06.06.2019

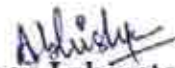
TEST REPORT OF AMBIENT AIR

(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : As per IS: 5182
 Sample Collected By : Ecomen Team

Name of Location: Near Navabad Village					
Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(07-08).05.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	83.0	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	37.0	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	9.2	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	20.6	80
(10-11).05.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	76.0	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	31.0	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	7.9	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	18.7	80

Note:BDL = Below Detection Limit**Standards:**National Ambient Air Quality Monitoring (NAAQM).


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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AAQ10/05/19

Date: 06.06.2019

TEST REPORT OF AMBIENT AIR

(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : As per IS: 5182
 Sample Collected By : Ecomen Team

Name of Location: Near Navabad Village

Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(14-15).05.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	79.0	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	34.0	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	7.9	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	23.1	80
(17-18).05.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	80.0	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	36.0	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	10.2	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	21.6	80

Note:BDL = Below Detection Limit

Standards:National Ambient Air Quality Monitoring (NAAQM).


 For Ecomen Laboratories Pvt. Ltd.

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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AAQ11/05/19

Date: 06.06.2019

TEST REPORT OF AMBIENT AIR

(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : As per IS: 5182
 Sample Collected By : Ecomen Team

Name of Location: Near Navabad Village					
Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(21-22).05.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	85.0	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	39.0	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	8.8	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	25.2	80
(24-25).05.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	73.0	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	29.0	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	10.4	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	22.2	80
(28-29).05.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	88.0	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	37.0	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	8.2	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	19.6	80

Note:BDL = Below Detection Limit

Standards:National Ambient Air Quality Monitoring (NAAQM).


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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AN/05/19

Date: 06.06.2019

TEST REPORT OF AMBIENT NOISE LEVEL

(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : **Adani Power (Jharkhand) Ltd.**
 Address of the Project : **2x800 MW Godda Thermal Power Project,**
Village: Motia, Distt. - Godda, Jharkhand
 Sample Collected By : **Ecomen Team**
 Date of Sampling : **23-24.05.2019**
 Instrument Used : **Noise Meter (HTC)**

Sl. No.	Locations	Day Time			Night Time		
		Time	Leq Value in dB(A)		Time	Leq Value in dB(A)	
			Max	Min		Max	Min
1.	Near Patwa Village	09.45 A.M	62.4	59.1	10:05 PM	47.9	44.6
2.	Near Motia Village	11.10 A.M	64.6	60.3	10:20 PM	51.2	48.7
3.	Near Mali Village	12.05 P.M	59.2	53.8	11.10 P.M	48.1	45.1
4.	Near Navabad Village	14.15 P.M	60.9	55.6	11.45 P.M	50.3	46.4
5.	Near HTG Residential Area	15:30 PM	65.1	59.4	12.05 A.M	47.1	45.2
6.	Near Adani Office	17:05 PM	73.6	67.9	12.40 A.M	55.6	53.8

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Noise (Ambient Standard)

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

Note:

- Day time is reckoned in between 6:00 AM and 10:00 PM.
- Night time is reckoned in between 10:00 PM and 6:00 AM
- Silence zone is defined as area up to 100m around such premises as hospitals, educational institutions & courts. The silence zones are to be declared by a competent authority.
- Mixed categories of areas should be declared as one of the four above-mentioned Categories by the competent authority and the corresponding standard shall apply.

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FORMAT NO. ECO/QS/FORMAT/09 TEST REPORT NO: ECO LAB/GW/05/19
 TEST REPORT ISSUE DATE: 03.06.2019

TEST REPORT OF GROUND WATER
 (Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800 MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : APHA, 23rd Ed. 2017
 Sample Collected by : Ecomen Team
 Sample Quantity : As per requirement.
 Date of Sampling : 24.05.2019
 Date of Sample Receiving : 25.05.2019
 Date of Analysis : 25.05.2019 to 31.05.2019
 Source of Sample : Motia Village, Hand Pump (GW)

Sl. No.	TESTS	PROTOCOL	RESULT	Detection Range	INDIAN STANDARDS as per IS 10500:1991(Reaff:2012)	
					Desirable	Permissible
1.	Colour (Hazen unit)	APHA, 23 rd Ed. 2017, 2120 B	<5.0	5-100	5.00	15.0
2.	Odour	APHA, 23 rd Ed. 2017, 2150 B	Agreeable	Qualitative	Agreeable	Agreeable
3.	pH	APHA, 23 rd Ed. 2017, 4500H+ A+B	7.14	2.0 -12	6.5-8.5	No Relax.
4.	Total Dissolved Solids as TDS (mg/l)	APHA, 23 rd Ed. 2017, 2540-C	324.0	5 - 5000	500	2000
5.	Alkalinity (mg/l)	APHA, 23 rd Ed. 2017, 2320 A+ B	116.0	5-1500	200	600
6.	Total Hardness as CaCO ₃ (mg/l)	APHA, 23 rd Ed. 2017, 2340 A+C	204.0	5-1500	200.0	600.0
7.	Calcium as Ca (mg/l)	APHA, 23 rd Ed. 2017, 3500 Ca A+B	48.0	5 - 1000	75.0	200.0
8.	Magnesium as Mg (mg/l)	APHA, 23 rd Ed. 2017, 3500 Mg A+B	20.41	5-1000	30.0	100.0
9.	Copper as Cu (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.05-5	0.05	1.5
10.	Iron as Fe (mg/l)	APHA, 23 rd Ed. 2017, 3500 Fe B	0.24	0.02-50	0.3	No Relax.
11.	Manganese as Mn (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.1-5	0.10	0.30
12.	Chloride as Cl (mg/l)	APHA, 23 rd Ed. 2017, 4500 Cl A+B	24.0	5-1000	250.0	1000.0
13.	Sulfate as SO ₄ (mg/l)	APHA, 23 rd Ed. 2017, 4500-SO ₄ E	36.0	1.0 -250	200.0	400.0
14.	Nitrate Nitrogen as NO ₃ (mg/l)	APHA, 23 rd Ed. 2017, 4500-NO ₃ B	9.0	5.0 - 100	45.0	No Relax.
15.	Fluorides as F (mg/l)	APHA, 23 rd Ed. 2017, 4500-C	0.22	0.05-10	1.0	1.5
16.	Phenolic Compounds as C ₆ H ₅ OH (mg/l)	APHA, 23 rd Ed. 2017, 5530 A+C	BDL	1-10	0.001	0.002
17.	Mercury as Hg (mg/l)	APHA, 23 rd Ed. 2017, 3112 A+B	BDL	0.001-1	0.001	No Relax.
18.	Cadmium as Cd (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.002-2	0.003	No Relax.
19.	Arsenic as As (mg/l)	APHA, 23 rd Ed. 2017, 3114 C	BDL	0.01-2	0.01	0.05
20.	Lead as Pb (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.01-2	0.01	No Relax.
21.	Zinc as Zn (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	0.16	0.02-50	5.0	15
22.	Anionic Detergents (As MBAS)(mg/l) max	APHA 22nd EDN:2012, 5540 A+C	BDL	0.01-5	0.2	1.0
23.	Chromium (Hexavalent) (mg/l)	APHA, 23 rd Ed. 2017, 3111A+B	BDL	0.05-20	0.05	No Relax.
24.	Mineral Oil 6 (mg/l)	IS 3025 (Part 39) Class -6 Infrared Partition Method	BDL	0.01-10	0.5	No Relax.
25.	Free Residual Chlorine (mg/l)	APHA, 23 rd Ed. 2017, 4500-Cl B	BDL	0.5-10	0.20	1.0
26.	Boron as B (mg/l)	APHA, 23 rd Ed. 2017, 4500 B A+C	0.21	0.2 - 10	0.5	1.0
27.	Total coliform (MPN/100 ml)	APHA, 23 rd Ed. 2017, 9221 B+C	Absent	1.8	0.05	Absent
28.	E.coli (MPN/100 ml)	APHA, 23 rd Ed. 2017, 9221 B+E	Absent	1.8	Absent	Absent

Note: BDL – Below Detection Limit

for Ecomen Laboratories Pvt. Ltd.

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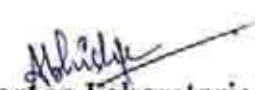
FORMAT NO. ECO/QS/FORMAT/09 TEST REPORT NO: ECO LAB/GW/05/19
TEST REPORT ISSUE DATE: 03.06.2019

TEST REPORT OF GROUND WATER
(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
Address of the Project : 2x800 MW Godda Thermal Power Project,
Village: Motia, Distt. - Godda, Jharkhand
Sampling Method : APHA, 23rd Ed. 2017
Sample Collected by : Ecomen Team
Sample Quantity : As per requirement.
Date of Sampling : 24.05.2019
Date of Sample Receiving : 25.05.2019
Date of Analysis : 25.05.2019 to 31.05.2019
Source of Sample : Navabad Village, Hand Pump (GW)

Sl. No.	TESTS	PROTOCOL	RESULT	Detection Range	INDIAN STANDARDS as per IS (10500:1991(Reaff:2012))	
					Desirable	Permissible
1.	Colour (Hazen unit)	APHA, 23 rd Ed. 2017, 2120 B	<5.0	5-100	5.00	15.0
2.	Odour	APHA, 23 rd Ed. 2017, 2150 B	Agreeable	Qualitative	Agreeable	Agreeable
3.	pH	APHA, 23 rd Ed. 2017, 4500H+ A+B	7.36	2.0-12	6.5-8.5	No Relax.
4.	Total Dissolved Solids as TDS (mg/l)	APHA, 23 rd Ed. 2017, 2540-C	478.0	5 - 5000	500	2000
5.	Alkalinity (mg/l)	APHA, 23 rd Ed. 2017, 2320 A+ B	132.0	5-1500	200	600
6.	Total Hardness as CaCO ₃ (mg/l)	APHA, 23 rd Ed. 2017, 2340 A+C	220.0	5-1500	200.0	600.0
7.	Calcium as Ca (mg/l)	APHA, 23 rd Ed. 2017, 3500 Ca A+B	51.2	5 - 1000	75.0	200.0
8.	Magnesium as Mg (mg/l)	APHA, 23 rd Ed. 2017, 3500 Mg A+B	22.35	5-1000	30.0	100.0
9.	Copper as Cu (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.05-5	0.05	1.5
10.	Iron as Fe (mg/l)	APHA, 23 rd Ed. 2017, 3500 Fe B	0.23	0.02-50	0.3	No Relax.
11.	Manganese as Mn (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.1-5	0.10	0.30
12.	Chloride as Cl (mg/l)	APHA, 23 rd Ed. 2017, 4500 Cl A+B	40.0	5-1000	250.0	1000.0
13.	Sulfate as SO ₄ (mg/l)	APHA, 23 rd Ed. 2017, 4500-SO ₄ ²⁻ E	32.75	1.0 -250	200.0	400.0
14.	Nitrate Nitrogen as NO ₃ (mg/l)	APHA, 23 rd Ed. 2017, 4500-NO ₃ ⁻ B	14.0	5.0 - 100	45.0	No Relax.
15.	Fluorides as F (mg/l)	APHA, 23 rd Ed. 2017, 4500-C	0.78	0.05-10	1.0	1.5
16.	Phenolic Compounds as C ₆ H ₅ OH (mg/l)	APHA, 23 rd Ed. 2017, 5530 A+C	BDL	1-10	0.001	0.002
17.	Mercury as Hg (mg/l)	APHA, 23 rd Ed. 2017, 3112 A+B	BDL	0.001-1	0.001	No Relax.
18.	Cadmium as Cd (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.002-2	0.003	No Relax.
19.	Arsenic as As (mg/l)	APHA, 23 rd Ed. 2017, 3114 C	BDL	0.01-2	0.01	0.05
20.	Lead as Pb (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.01-2	0.01	No Relax.
21.	Zinc as Zn (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	0.25	0.02-50	5.0	15
22.	Anionic Detergents (As MBAS)(mg/l) max	APHA 22nd EDN.:2012, 5540 A+C	BDL	0.01-5	0.2	1.0
23.	Chromium (Hexavalent) (mg/l)	APHA, 23 rd Ed. 2017, 3111A+B	BDL	0.05-20	0.05	No Relax.
24.	Mineral Oil 6 (mg/l)	IS 3025 (Part 39) Class -6 Infrared Partition Method	BDL	0.01-10	0.5	No Relax.
25.	Free Residual Chlorine (mg/l)	APHA, 23 rd Ed. 2017, 4500-Cl B	BDL	0.5-10	0.20	1.0
26.	Boron as B (mg/l)	APHA, 23 rd Ed. 2017, 4500 B A+C	0.32	0.2 - 10	0.5	1.0
27.	Total coliform (MPN/100 ml)	APHA, 23 rd Ed. 2017, 9221 B+C	Absent	1.8	0.05	Absent
28.	E.coli (MPN/100 ml)	APHA, 23 rd Ed. 2017, 9221 B+E	Absent	1.8	Absent	Absent

Note: BDL – Below Detection Limit


 for Ecomen Laboratories Pvt. Ltd.
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FORMAT NO. ECO/QS/FORMAT/09 TEST REPORT NO: ECO LAB/GW/05/19
TEST REPORT ISSUE DATE: 03.06.2019**TEST REPORT OF GROUND WATER**
(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800 MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : APHA, 23rd Ed. 2017
 Sample Collected by : Ecomen Team
 Sample Quantity : As per requirement.
 Date of Sampling : 24.05.2019
 Date of Sample Receiving : 25.05.2019
 Date of Analysis : 25.05.2019 to 31.05.2019
 Source of Sample : Mali Village Hand Pump (GW)

Sl. No.	TESTS	PROTOCOL	RESULT	Detection Range	INDIAN STANDARDS as per IS 10500:1991(Reaff:2012)	
					Desirable	Permissible
1.	Colour (Hazen unit)	APHA, 23 rd Ed. 2017, 2120 B	<5.0	5-100	5.00	15.0
2.	Odour	APHA, 23 rd Ed. 2017, 2150 B	Agreeable	Qualitative	Agreeable	Agreeable
3.	pH	APHA, 23 rd Ed. 2017, 4500H+ A+B	7.18	2.0-12	6.5-8.5	No Relax.
4.	Total Dissolved Solids as TDS (mg/l)	APHA, 23 rd Ed. 2017, 2540-C	380.0	5 - 5000	500	2000
5.	Alkalinity (mg/l)	APHA, 23 rd Ed. 2017, 2320 A+ B	128.0	5-1500	200	600
6.	Total Hardness as CaCO ₃ (mg/l)	APHA, 23 rd Ed. 2017, 2340 A+C	248.0	5-1500	200.0	600.0
7.	Calcium as Ca (mg/l)	APHA, 23 rd Ed. 2017, 3500 Ca A+B	52.8	5 - 1000	75.0	200.0
8.	Magnesium as Mg (mg/l)	APHA, 23 rd Ed. 2017, 3500 Mg A+B	28.18	5-1000	30.0	100.0
9.	Copper as Cu (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.05-5	0.05	1.5
10.	Iron as Fe (mg/l)	APHA, 23 rd Ed. 2017, 3500 Fe B	0.19	0.02-50	0.3	No Relax.
11.	Manganese as Mn (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.1-5	0.10	0.30
12.	Chloride as Cl (mg/l)	APHA, 23 rd Ed. 2017, 4500 Cl A+B	32.0	5-1000	250.0	1000.0
13.	Sulfate as SO ₄ (mg/l)	APHA, 23 rd Ed. 2017, 4500-SO ₄ ²⁻ E	36.0	1.0 -250	200.0	400.0
14.	Nitrate Nitrogen as NO ₃ (mg/l)	APHA, 23 rd Ed. 2017, 4500-NO ₃ ⁻ B	15.80	5.0 - 100	45.0	No Relax.
15.	Fluorides as F (mg/l)	APHA, 23 rd Ed. 2017, 4500-C	0.32	0.05-10	1.0	1.5
16.	Phenolic Compounds as CaH ₂ OH (mg/l)	APHA, 23 rd Ed. 2017, 5530 A+C	BDL	1-10	0.001	0.002
17.	Mercury as Hg (mg/l)	APHA, 23 rd Ed. 2017, 3112 A+B	BDL	0.001-1	0.001	No Relax.
18.	Cadmium as Cd (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.002-2	0.003	No Relax.
19.	Arsenic as As (mg/l)	APHA, 23 rd Ed. 2017, 3114 C	BDL	0.01-2	0.01	0.05
20.	Lead as Pb (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.01-2	0.01	No Relax.
21.	Zinc as Zn (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	0.25	0.02-50	5.0	15
22.	Anionic Detergents (As MBAS)(mg/l) max	APHA 22nd EDN.:2012, 5540 A+C	BDL	0.01-5	0.2	1.0
23.	Chromium (Hexavalent) (mg/l)	APHA, 23 rd Ed. 2017, 3111A+B	BDL	0.05-20	0.05	No Relax.
24.	Mineral Oil 6 (mg/l)	IS 3025 (Part 39) Class -6 Infrared Partition Method	BDL	0.01-10	0.5	No Relax.
25.	Free Residual Chlorine (mg/l)	APHA, 23 rd Ed. 2017, 4500-Cl B	BDL	0.5-10	0.20	1.0
26.	Boron as B (mg/l)	APHA, 23 rd Ed. 2017, 4500 B A+C	0.21	0.2 - 10	0.5	1.0
27.	Total coliform (MPN/100 ml)	APHA, 23 rd Ed. 2017, 9221 B+C	Absent	1.8	0.05	Absent
28.	E.coli (MPN/100 ml)	APHA, 23 rd Ed. 2017, 9221 B+E	Absent	1.8	Absent	Absent

Note: BDL – Below Detection Limit


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FORMAT NO. ECO/QS/FORMAT/09 TEST REPORT NO: ECO.LAB/GW/05/19
TEST REPORT ISSUE DATE: 03.06.2019**TEST REPORT OF GROUND WATER**
(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800 MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : APHA, 23rd Ed. 2017
 Sample Collected by : Ecomen Team
 Sample Quantity : As per requirement.
 Date of Sampling : 24.05.2019
 Date of Sample Receiving : 25.05.2019
 Date of Analysis : 25.05.2019 to 31.05.2019
 Source of Sample : Patwa Village Hand pump

Sl. No.	TESTS	PROTOCOL	RESULT	Detection Range	INDIAN STANDARDS as per IS 10500:1991(Reaff.2012)	
					Desirable	Permissible
1.	Colour (Hazeo unit)	APHA, 23 rd Ed. 2017, 2120 B	<5.0	5-100	5.00	15.0
2.	Odour	APHA, 23 rd Ed. 2017, 2150 B	Agreeable	Qualitative	Agreeable	Agreeable
3.	pH	APHA, 23 rd Ed. 2017, 4500H+ A+B	7.29	2.0-12	6.5-8.5	No Relax.
4.	Total Dissolved Solids as TDS (mg/l)	APHA, 23 rd Ed. 2017, 2540-C	462.0	5 - 5000	500	2000
5.	Alkalinity (mg/l)	APHA, 23 rd Ed. 2017, 2320 A+B	136.9	5-1500	200	600
6.	Total Hardness as CaCO ₃ (mg/l)	APHA, 23 rd Ed. 2017, 2340 A+C	184.0	5-1500	200.0	600.0
7.	Calcium as Ca (mg/l)	APHA, 23 rd Ed. 2017, 3500 Ca A+B	43.2	5 - 1000	75.0	200.0
8.	Magnesium as Mg (mg/l)	APHA, 23 rd Ed. 2017, 3500 Mg A+B	18.46	5-1000	30.0	100.0
9.	Copper as Cu (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.05-5	0.05	1.5
10.	Iron as Fe (mg/l)	APHA, 23 rd Ed. 2017, 3500 Fe B	0.22	0.02-50	0.3	No Relax.
11.	Manganese as Mn (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.1-5	0.10	0.30
12.	Chloride as Cl (mg/l)	APHA, 23 rd Ed. 2017, 4500 Cl A+B	34.0	5-1000	250.0	1000.0
13.	Sulfate as SO ₄ (mg/l)	APHA, 23 rd Ed. 2017, 4500-SO ₄ ²⁻ E	40.50	1.0 -250	200.0	400.0
14.	Nitrate Nitrogen as NO ₃ (mg/l)	APHA, 23 rd Ed. 2017, 4500-NO ₃ ⁻ B	10.28	5.0 - 100	45.0	No Relax.
15.	Fluorides as F (mg/l)	APHA, 23 rd Ed. 2017, 4500-C	0.37	0.05-10	1.0	1.5
16.	Phenolic Compounds as C ₆ H ₅ OH (mg/l)	APHA, 23 rd Ed. 2017, 5530 A+C	BDL	1-10	0.001	0.002
17.	Mercury as Hg (mg/l)	APHA, 23 rd Ed. 2017, 3112 A+B	BDL	0.001-1	0.001	No Relax.
18.	Cadmium as Cd (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.002-2	0.003	No Relax.
19.	Arsenic as As (mg/l)	APHA, 23 rd Ed. 2017, 3114 C	BDL	0.01-2	0.01	0.05
20.	Lead as Pb (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.01-2	0.01	No Relax.
21.	Zinc as Zn (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	0.24	0.02-50	5.0	15
22.	Anionic Detergents (As MBAS)(mg/l) max	APHA 22nd EdN.:2012, 5540 A+C	BDL	0.01-5	0.2	1.0
23.	Chromium (Hexavalent) (mg/l)	APHA, 23 rd Ed. 2017, 3111A+B	BDL	0.05-20	0.05	No Relax.
24.	Mineral Oil 6 (mg/l)	IS 3025 (Part 39) Class-6 Infrared Partition Method	BDL	0.01-10	0.5	No Relax.
25.	Free Residual Chlorine (mg/l)	APHA, 23 rd Ed. 2017, 4500-Cl B	BDL	0.5-10	0.20	1.0
26.	Boron as B (mg/l)	APHA, 23 rd Ed. 2017, 4500 B A+C	0.23	0.2 - 10	0.5	1.0
27.	Total coliform (MPN/100 ml)	APHA, 23 rd Ed. 2017, 9221 B+C	Absent	1.8	0.05	Absent
28.	E.coli (MPN/100 ml)	APHA, 23 rd Ed. 2017, 9221 B+E	Absent	1.8	Absent	Absent

Note: BDL – Below Detection Limit

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Report Issued to : HTG Engineering Pvt. Ltd.

ENVIRONMENTAL MONITORING REPORT

of

ADANI POWER (JHARKHAND) LTD.

2x800 MW Godda Thermal Power Project,

Village: Motia, Distt. - Godda, Jharkhand

for

June - 2019

Prepared by :

ecoMen

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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AAQ1/06/19

Date: 08.07.2019

TEST REPORT OF AMBIENT AIR


(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800 MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : As per IS: 5182
 Sample Collected By : Ecomen Team

Name of Location : Near Motia Village

Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(04-05).06.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	71.00	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	26.24	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	7.42	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	19.20	80
(06-07).06.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	75.00	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	29.00	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	10.10	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	22.40	80
(10-11).06.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	69.00	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	23.00	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	79.00	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	15.72	80

Note: BDL = Below Detection Limit**Standards:** National Ambient Air Quality Monitoring (NAAQM).


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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AAQ2/06/19

Date: 08.07.2019

TEST REPORT OF AMBIENT AIR


(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
Address of the Project : 2x800MW Godda Thermal Power Project,
Village: Motia, Distt. - Godda, Jharkhand
Sampling Method : As per IS: 5182
Sample Collected By : Ecomen Team

Name of Location : Near Motia Village					
Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(13-14).06.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	73.24	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	27.00	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	8.60	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	22.12	80
(17-18).06.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	70.00	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	23.00	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	6.90	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	21.40	80
(20-21).06.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	75.00	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	26.00	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	9.20	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	21.40	80

Note:BDL = Below Detection Limit

Standards: National Ambient Air Quality Monitoring (NAAQM).


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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AAQ3/06/19

Date: 08.07.2019

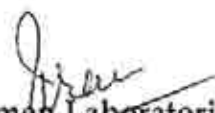
TEST REPORT OF AMBIENT AIR

(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : As per IS: 5182
 Sample Collected By : Ecomen Team

Name of Location: Near Motia Village					
Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(24-25).06.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	77.00	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	31.00	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	10.20	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	21.60	80
(27-28).06.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	68.00	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	22.00	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	8.32	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	19.12	80

Note: BDL = Below Detection Limit**Standards:** National Ambient Air Quality Monitoring (NAAQM).


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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AAQ4/06/19

Date: 08.07.2019

TEST REPORT OF AMBIENT AIR

(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : As per IS: 5182
 Sample Collected By : Ecomen Team

Name of Location: Near Mali Village					
Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(03-04).06.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	71.00	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	27.00	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	7.60	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	19.20	80
(06-07).06.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	69.00	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	24.00	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	7.70	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	16.40	80
(10-11).06.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	77.00	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	28.00	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	10.20	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	21.40	80

Note:BDL = Below Detection Limit**Standards:**National Ambient Air Quality Monitoring (NAAQM).

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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AAQ5/06/19

Date: 08.07.2019

TEST REPORT OF AMBIENT AIR

(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : As per IS: 5182
 Sample Collected By : Ecomen Team

Name of Location: Near Mali Village					
Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(13-14).06.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	77.00	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	32.00	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	7.30	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	19.60	80
(17-18).06.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	67.00	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	24.00	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	6.90	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	18.60	80
(20-21).06.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	74.00	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	29.00	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	11.60	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	22.40	80

Note: BDL = Below Detection Limit**Standards:** National Ambient Air Quality Monitoring (NAAQM).


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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AAQ6/06/19

Date: 08.07.2019

TEST REPORT OF AMBIENT AIR
(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : As per IS: 5182
 Sample Collected By : Ecomen Team

Name of Location: Near Mali Village					
Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(24-25).06.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	81.00	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	35.00	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	7.60	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	23.20	80
(27-28).06.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	72.00	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	28.00	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	9.60	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	19.80	80

Note:BDL = Below Detection Limit**Standards:**National Ambient Air Quality Monitoring (NAAQM).

 For Ecomen Laboratories Pvt. Ltd.

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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AAQ7/06/19

Date: 08.07.2019

TEST REPORT OF AMBIENT AIR

(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
Address of the Project : 2x800MW Godda Thermal Power Project,
Village: Motia, Distt. - Godda, Jharkhand
Sampling Method : As per IS: 5182
Sample Collected By : Ecomen Team

Name of Location: Near Navabad Village					
Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(04-05).06.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	67.00	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	23.00	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	7.70	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	21.40	80
(07-08).06.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	72.00	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	29.00	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	6.60	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	18.20	80

Note: BDL = Below Detection Limit

Standards: National Ambient Air Quality Monitoring (NAAQM).


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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AAQ8/06/19

Date: 08.07.2019

TEST REPORT OF AMBIENT AIR

(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : As per IS: 5182
 Sample Collected By : Ecomen Team

Name of Location: Near Navabad Village					
Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(11-12).06.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	74.00	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	27.00	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	5.50	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	17.20	80
(14-15).06.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	66.00	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	21.00	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	7.40	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	15.20	80

Note:BDL = Below Detection Limit**Standards:**National Ambient Air Quality Monitoring (NAAQM).

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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AAQ9/06/19

Date: 08.07.2019

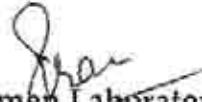
TEST REPORT OF AMBIENT AIR

(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : As per IS: 5182
 Sample Collected By : Ecomen Team

Name of Location: Near Navabad Village					
Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(18-19).06.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	77.00	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	31.00	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	9.70	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	24.20	80
(21-22).06.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	72.00	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	26.00	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	8.60	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	23.40	80

Note: BDL = Below Detection Limit**Standards:** National Ambient Air Quality Monitoring (NAAQM).


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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AAQ10/06/19

Date: 08.07.2019

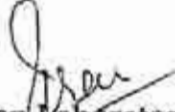
TEST REPORT OF AMBIENT AIR

(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : As per IS: 5182
 Sample Collected By : Ecomen Team

Name of Location: Near Navabad Village					
Date of Monitoring	Tests Conducted	Method -	Detection Range	Result	Standards
(25-26).06.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	76.00	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	33.00	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	6.40	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	22.80	80
(28-29).06.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	65.00	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	21.00	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	9.60	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	20.20	80

Note: BDL = Below Detection Limit**Standards:** National Ambient Air Quality Monitoring (NAAQM).


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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AN/06/19

Date: 08.07.2019

TEST REPORT OF AMBIENT NOISE LEVEL

(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800 MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sample Collected By : Ecomen Team
 Date of Sampling : 23-24.06.2019
 Instrument Used : Noise Meter (HTC)

Sl. No.	Locations	Day Time			Night Time		
		Time	Leq Value in dB(A)		Time	Leq Value in dB(A)	
			Max	Min		Max	Min
1.	Near Patwa Village	09.10 A.M	66.70	57.40	10:15 PM	49.4	45.3
2.	Near Motia Village	09.55 A.M	69.20	63.10	10:40 PM	53.7	47.1
3.	Near Mali Village	11.05 A.M	62.70	55.90	11.15 P.M	49.3	43.9
4.	Near Navabad Village	12.15 P.M	64.30	57.10	11.35 P.M	53.6	48.1
5.	Near HTG Residential Area	13:30 PM	68.70	63.20	12.15 A.M	51.2	46.7
6.	Near Adani Office	15:05 PM	71.20	65.70	12.45 A.M	61.7	58.3

For Ecomen Laboratories Pvt. Ltd.

Noise (Ambient Standard)Ecomen Laboratories Pvt. Ltd.
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Area Code	Category of area	Limit in dB (A) Leq	
		Day Time	Night Time
A	Industrial Area	75	70
B	Commercial Area	65	55
C	Residential Area	55	45
D	Silence Zone	50	40

Note:

- Day time is reckoned in between 6:00 AM and 10:00 PM.
- Night time is reckoned in between 10:00 PM and 6:00 AM
- Silence zone is defined as area up to 100m around such premises as hospitals, educational institutions & courts. The silence zones are to be declared by a competent authority.
- Mixed categories of areas should be declared as one of the four above-mentioned Categories by the competent authority and the corresponding standard shall apply.

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FORMAT NO. ECO/QS/FORMAT/09 TEST REPORT NO: ECO LAB/GW/06/19

TEST REPORT ISSUE DATE: 08.07.2019

TEST REPORT OF GROUND WATER (Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
Address of the Project : 2x800 MW Godda Thermal Power Project,
Village: Motia, Distt. - Godda, Jharkhand
Sampling Method : APHA, 23rd Ed. 2017
Sample Collected by : Ecomen Team
Sample Quantity : As per requirement.
Date of Sampling : 27.06.2019
Date of Sample Receiving : 28.06.2019
Date of Analysis : 28.06.2019 to 05.07.2019
Source of Sample : Motia Village, Hand Pump (GW)

Sl. No.	TESTS	PROTOCOL	RESULT	Detection Range	INDIAN STANDARDS as per IS 10500:1991(Recstf:2012)	
					Desirable	Permissible
1.	Colour (Hazen unit)	APHA, 23 rd Ed. 2017, 2120 B	<5.0	5-100	5.00	15.0
2.	Odour	APHA, 23 rd Ed. 2017, 2150 B	Agreeable	Qualitative	Agreeable	Agreeable
3.	pH	APHA, 23 rd Ed. 2017, 4500H+ A+B	7.29	7.0-12	6.5-8.5	No Relax.
4.	Total Dissolved Solids as TDS (mg/l)	APHA, 23 rd Ed. 2017, 2540-C	368.0	5-5000	500	2000
5.	Alkalinity (mg/l)	APHA, 23 rd Ed. 2017, 2320 A+B	128.0	5-1500	200	600
6.	Total Hardness as CaCO ₃ (mg/l)	APHA, 23 rd Ed. 2017, 2340 A+C	232.0	5-1500	200.0	600.0
7.	Calcium as Ca (mg/l)	APHA, 23 rd Ed. 2017, 3500 Ca A+B	54.0	5-1000	75.0	200.0
8.	Magnesium as Mg (mg/l)	APHA, 23 rd Ed. 2017, 3500 Mg A+B	23.4	5-1000	30.0	100.0
9.	Copper as Cu (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.05-5	0.05	1.5
10.	Iron as Fe (mg/l)	APHA, 23 rd Ed. 2017, 3500 Fe B	0.22	0.02-50	0.3	No Relax.
11.	Manganese as Mn (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.1-5	0.10	0.30
12.	Chloride as Cl (mg/l)	APHA, 23 rd Ed. 2017, 4500 Cl A+B	31.08	5-1000	250.0	1000.0
13.	Sulfate as SO ₄ (mg/l)	APHA, 23 rd Ed. 2017, 4500-SO ₄ ²⁻ E	40.0	1.0-250	200.0	400.0
14.	Nitrate Nitrogen as NO ₃ (mg/l)	APHA, 23 rd Ed. 2017, 4500-NO ₃ ⁻ B	9.04	5.0-100	45.0	No Relax.
15.	Fluorides as F (mg/l)	APHA, 23 rd Ed. 2017, 4500-C	0.22	0.05-10	1.0	1.5
16.	Phenolic Compounds as C ₆ H ₅ OH (mg/l)	APHA, 23 rd Ed. 2017, 5530 A+C	BDL	1-10	0.001	0.002
17.	Mercury as Hg (mg/l)	APHA, 23 rd Ed. 2017, 3112 A+B	BDL	0.001-1	0.001	No Relax.
18.	Cadmium as Cd (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.002-2	0.003	No Relax.
19.	Arsenic as As (mg/l)	APHA, 23 rd Ed. 2017, 3114 C	BDL	0.01-2	0.01	0.05
20.	Lead as Pb (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.01-2	0.01	No Relax.
21.	Zinc as Zn (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	0.14	0.02-50	5.0	15
22.	Anionic Detergents (As MBAS)(mg/l) max	APHA 22nd EDN.:2012, 5540 A+C	BDL	0.01-5	0.2	1.0
23.	Chromium (Hexavalent) (mg/l)	APHA, 23 rd Ed. 2017, 3111A+B	BDL	0.05-20	0.05	No Relax.
24.	Mineral Oil 6 (mg/l)	IS 3025 (Part 39) Class -6 Infrared Partition Method	BDL	0.01-10	0.5	No Relax.
25.	Free Residual Chlorine (mg/l)	APHA, 23 rd Ed. 2017, 4500-Cl B	BDL	0.5-10	0.20	1.0
26.	Boron as B (mg/l)	APHA, 23 rd Ed. 2017, 4500 B A+C	0.24	0.2-10	0.5	1.0
27.	Total coliform (MPN/100 ml)	APHA, 23 rd Ed. 2017, 9221 B+C	Absent	1.8	0.05	Absent
28.	E.coli (MPN/100 ml)	APHA, 23 rd Ed. 2017, 9221 B+E	Absent	1.8	Absent	Absent

Note: BDL - Below Detection Limit

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FORMAT NO. ECO/QS/FORMAT/09 TEST REPORT NO: ECO LAB/GW/06/19
TEST REPORT ISSUE DATE: 08.07.2019

TEST REPORT OF GROUND WATER (Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
Address of the Project : 2x800 MW Godda Thermal Power Project,
Village: Motia, Distt. - Godda, Jharkhand
Sampling Method : APHA, 23rd Ed. 2017
Sample Collected by : Ecomen Team
Sample Quantity : As per requirement.
Date of Sampling : 27.06.2019
Date of Sample Receiving : 28.06.2019
Date of Analysis : 28.06.2019 to 05.07.2019
Source of Sample : Navabad Village, Hand Pump (GW)

Sl. No.	TESTS	PROTOCOL	RESULT	Detection Range	INDIAN STANDARDS as per IS 10500:1991(Reaff:2012)	
					Desirable	Permissible
1.	Colour (Hazen unit)	APHA, 23 rd Ed. 2017, 2120 B	<5.0	5-100	5.00	15.0
2.	Odour	APHA, 23 rd Ed. 2017, 2150 B	Agreeable	Qualitative	Agreeable	Agreeable
3.	pH	APHA, 23 rd Ed. 2017, 4500H+ A+B	7.44	2.0-12	6.5-8.5	No Relax.
4.	Total Dissolved Solids as TDS (mg/l)	APHA, 23 rd Ed. 2017, 2540-C	476.0	5 - 5000	500	2000
5.	Alkalinity (mg/l)	APHA, 23 rd Ed. 2017, 2320 A+ B	132.0	5-1500	200	600
6.	Total Hardness as CaCO ₃ (mg/l)	APHA, 23 rd Ed. 2017, 2340 A+C	207.0	5-1500	200.0	600.0
7.	Calcium as Ca (mg/l)	APHA, 23 rd Ed. 2017, 3500 Ca A+B	48.0	5 - 1000	75.0	200.0
8.	Magnesium as Mg (mg/l)	APHA, 23 rd Ed. 2017, 3500 Mg A+B	21.06	5-1000	30.0	100.0
9.	Copper as Cu (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.05-5	0.05	1.5
10.	Iron as Fe (mg/l)	APHA, 23 rd Ed. 2017, 3500 Fe B	0.26	0.02-50	0.3	No Relax.
11.	Manganese as Mn (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.1-5	0.10	0.30
12.	Chloride as Cl (mg/l)	APHA, 23 rd Ed. 2017, 4500 Cl A+B	37.60	5-1000	250.0	1000.0
13.	Sulfate as SO ₄ (mg/l)	APHA, 23 rd Ed. 2017, 4500-SO ₄ ²⁻ E	36.94	1.0-250	200.0	400.0
14.	Nitrate Nitrogen as NO ₃ (mg/l)	APHA, 23 rd Ed. 2017, 4500-NO ₃ ⁻ B	12.08	5.0 - 100	45.0	No Relax.
15.	Fluorides as F (mg/l)	APHA, 23 rd Ed. 2017, 4500-C	0.25	0.05-10	1.0	1.5
16.	Phenolic Compounds as C ₆ H ₅ OH (mg/l)	APHA, 23 rd Ed. 2017, 5530 A+C	BDL	1-10	0.001	0.002
17.	Mercury as Hg (mg/l)	APHA, 23 rd Ed. 2017, 3112 A+B	BDL	0.001-1	0.001	No Relax.
18.	Cadmium as Cd (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.002-2	0.003	No Relax.
19.	Arsenic as As (mg/l)	APHA, 23 rd Ed. 2017, 3114 C	BDL	0.01-2	0.01	0.05
20.	Lead as Pb (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.01-2	0.01	No Relax.
21.	Zinc as Zn (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	0.24	0.02-50	5.0	15
22.	Anionic Detergents (As MBAS)(mg/l) max	APHA 22nd EDN.:2012, 5540 A+C	BDL	0.01-5	0.2	1.0
23.	Chromium (Hexavalent) (mg/l)	APHA, 23 rd Ed. 2017, 3111A+B	BDL	0.05-20	0.05	No Relax.
24.	Mineral Oil 6 (mg/l)	IS 3025 (Part 39) Class -6 Infrared Partition Method	BDL	0.01-10	0.5	No Relax.
25.	Free Residual Chlorine (mg/l)	APHA, 23 rd Ed. 2017, 4500-Cl B	BDL	0.5-10	0.20	1.0
26.	Boron as B (mg/l)	APHA, 23 rd Ed. 2017, 4500 B A+C	0.32	0.2 - 10	0.5	1.0
27.	Total coliform (MPN/100 ml)	APHA, 23 rd Ed. 2017, 9221 B+C	Absent	1.8	0.05	Absent
28.	E.coli (MPN/100 ml)	APHA, 23 rd Ed. 2017, 9221 B+E	Absent	1.8	Absent	Absent

Note: BDL - Below Detection Limit


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FORMAT NO. ECO/QS/FORMAT/09 TEST REPORT NO: ECO LAB/GW/06/19
TEST REPORT ISSUE DATE: 08.07.2019

TEST REPORT OF GROUND WATER (Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
Address of the Project : 2x800 MW Godda Thermal Power Project,
Village: Motia, Distt. - Godda, Jharkhand
Sampling Method : APHA, 23rd Ed. 2017
Sample Collected by : Ecomen Team
Sample Quantity : As per requirement.
Date of Sampling : 27.06.2019
Date of Sample Receiving : 28.06.2019
Date of Analysis : 28.06.2019 to 05.07.2019
Source of Sample : Mali Village Hand Pump (GW)

Sl. No.	TESTS	PROTOCOL	RESULT	Detection Range	INDIAN STANDARDS as per IS 10500:1991(Reaff:2012)	
					Desirable	Permissible
1.	Colour (Hazen unit)	APHA, 23 rd Ed. 2017, 2120 B	<5.0	5-100	5.00	15.0
2.	Odour	APHA, 23 rd Ed. 2017, 2150 B	Agreeable	Qualitative	Agreeable	Agreeable
3.	pH	APHA, 23 rd Ed. 2017, 4500H+ A+B	7.48	2.0-12	6.5-8.5	No Relax.
4.	Total Dissolved Solids as TDS (mg/l)	APHA, 23 rd Ed. 2017, 2540-C	392.0	5 - 5000	500	2000
5.	Alkalinity (mg/l)	APHA, 23 rd Ed. 2017, 2320 A+ B	136.0	5-1500	200	600
6.	Total Hardness as CaCO ₃ (mg/l)	APHA, 23 rd Ed. 2017, 2340 A+C	254.2	5-1500	200.0	600.0
7.	Calcium as Ca (mg/l)	APHA, 23 rd Ed. 2017, 3500 Ca A+B	58.0	5 - 1000	75.0	200.0
8.	Magnesium as Mg (mg/l)	APHA, 23 rd Ed. 2017, 3500 Mg A+B	30.20	5-1000	30.0	100.0
9.	Copper as Cu (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.05-5	0.05	1.5
10.	Iron as Fe (mg/l)	APHA, 23 rd Ed. 2017, 3500 Fe B	0.26	0.02-50	0.3	No Relax.
11.	Manganese as Mn (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.1-5	0.10	0.30
12.	Chloride as Cl (mg/l)	APHA, 23 rd Ed. 2017, 4500 Cl A+B	37.8	5-1000	250.0	1000.0
13.	Sulfate as SO ₄ (mg/l)	APHA, 23 rd Ed. 2017, 4500-SO ₄ ²⁻ E	36.18	1.0 -250	200.0	400.0
14.	Nitrate Nitrogen as NO ₃ (mg/l)	APHA, 23 rd Ed. 2017, 4500-NO ₃ ⁻ B	14.22	5.0 - 100	45.0	No Relax.
15.	Fluorides as F (mg/l)	APHA, 23 rd Ed. 2017, 4800-C	0.32	0.05-10	1.0	1.5
16.	Phenolic Compounds as C ₆ H ₅ OH (mg/l)	APHA, 23 rd Ed. 2017, 5530 A+C	BDL	1-10	0.001	0.002
17.	Mercury as Hg (mg/l)	APHA, 23 rd Ed. 2017, 3112 A+B	BDL	0.001-1	0.001	No Relax.
18.	Cadmium as Cd (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.002-2	0.003	No Relax.
19.	Arsenic as As (mg/l)	APHA, 23 rd Ed. 2017, 3114 C	BDL	0.01-2	0.01	0.05
20.	Lead as Pb (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.01-2	0.01	No Relax.
21.	Zinc as Zn (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	0.21	0.02-50	5.0	15
22.	Anionic Detergents (As MBAS)(mg/l) max	APHA 22nd EDN:2012, 5540 A+C	BDL	0.01-5	0.2	1.0
23.	Chromium (Hexavalent) (mg/l)	APHA, 23 rd Ed. 2017, 3111A+B	BDL	0.05-20	0.05	No Relax.
24.	Mineral Oil 6 (mg/l)	IS 3025 (Part 39) Class-6 Infrared Partition Method	BDL	0.01-10	0.5	No Relax.
25.	Free Residual Chlorine (mg/l)	APHA, 23 rd Ed. 2017, 4500-Cl B	BDL	0.5-10	0.20	1.0
26.	Boron as B (mg/l)	APHA, 23 rd Ed. 2017, 4500 B A+C	0.28	0.2 - 10	0.5	1.0
27.	Total coliform (MPN/100 ml)	APHA, 23 rd Ed. 2017, 9221 B+C	Absent	1.8	0.05	Absent
28.	E.coli (MPN/100 ml)	APHA, 23 rd Ed. 2017, 9221 B+E	Absent	1.8	Absent	Absent

Note: BDL – Below Detection Limit

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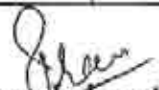
FORMAT NO. ECO/QS/FORMAT/09 TEST REPORT NO: ECO LAB/GW/06/19
TEST REPORT ISSUE DATE: 08.07.2019

TEST REPORT OF GROUND WATER (Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
Address of the Project : 2x800 MW Godda Thermal Power Project,
Village: Motia, Distt. - Godda, Jharkhand
Sampling Method : APHA, 23rd Ed. 2017
Sample Collected by : Ecomen Team
Sample Quantity : As per requirement.
Date of Sampling : 27.06.2019
Date of Sample Receiving : 28.06.2019
Date of Analysis : 28.06.2019 to 05.07.2019
Source of Sample : Patwa Village Hand pump

Sl No.	TESTS	PROTOCOL	RESULT	Detection Range	INDIAN STANDARDS as per IS 10500:1991(Reaff:2012)	
					Desirable	Permissible
1.	Colour (Hazen unit)	APHA, 23 rd Ed. 2017, 2120 B	<5.0	5-100	5.00	15.0
2.	Odour	APHA, 23 rd Ed. 2017, 2150 B	Agreeable	Qualitative	Agreeable	Agreeable
3.	pH	APHA, 23 rd Ed. 2017, 4500H+ A+B	7.24	2.0-12	6.5-8.5	No Relax.
4.	Total Dissolved Solids as TDS (mg/l)	APHA, 23 rd Ed. 2017, 2540-C	488.0	5-5000	500	2000
5.	Alkalinity (mg/l)	APHA, 23 rd Ed. 2017, 2320 A+B	152.0	5-1500	200	600
6.	Total Hardness as CaCO ₃ (mg/l)	APHA, 23 rd Ed. 2017, 2340 A+C	224.0	5-1500	200.0	600.0
7.	Calcium as Ca (mg/l)	APHA, 23 rd Ed. 2017, 3500 Ca A+B	52.0	5-1000	75.0	200.0
8.	Magnesium as Mg (mg/l)	APHA, 23 rd Ed. 2017, 3500 Mg A+B	22.80	5-1000	30.0	100.0
9.	Copper as Cu (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.05-5	0.05	1.5
10.	Iron as Fe (mg/l)	APHA, 23 rd Ed. 2017, 3500 Fe B	0.24	0.02-50	0.3	No Relax.
11.	Manganese as Mn (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.1-5	0.10	0.30
12.	Chloride as Cl (mg/l)	APHA, 23 rd Ed. 2017, 4500 Cl A+B	41.20	5-1000	250.0	1000.0
13.	Sulfate as SO ₄ (mg/l)	APHA, 23 rd Ed. 2017, 4500-SO ₄ ²⁻ E	48.0	1.0-250	200.0	400.0
14.	Nitrate Nitrogen as NO ₃ (mg/l)	APHA, 23 rd Ed. 2017, 4500-NO ₃ ⁻ B	10.40	5.0-100	45.0	No Relax.
15.	Fluorides as F (mg/l)	APHA, 23 rd Ed. 2017, 4500-C	0.28	0.05-10	1.0	1.5
16.	Phenolic Compounds as C ₆ H ₅ OH (mg/l)	APHA, 23 rd Ed. 2017, 5530 A+C	BDL	1-10	0.001	0.002
17.	Mercury as Hg (mg/l)	APHA, 23 rd Ed. 2017, 3112 A+B	BDL	0.001-1	0.001	No Relax.
18.	Cadmium as Cd (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.002-2	0.003	No Relax.
19.	Arsenic as As (mg/l)	APHA, 23 rd Ed. 2017, 3114 C	BDL	0.01-2	0.01	0.05
20.	Lead as Pb (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.01-2	0.01	No Relax.
21.	Zinc as Zn (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	0.26	0.02-50	5.0	15
22.	Anionic Detergents (As MBAS)(mg/l) max	APHA 22nd EDN:2012, 5540 A+C	BDL	0.01-5	0.2	1.0
23.	Chromium (Hexavalent) (mg/l)	APHA, 23 rd Ed. 2017, 3111A+B	BDL	0.05-20	0.05	No Relax.
24.	Mineral Oil 6 (mg/l)	IS 3025 (Part 39) Class -6 Infrared Partition Method	BDL	0.01-10	0.5	No Relax.
25.	Free Residual Chlorine (mg/l)	APHA, 23 rd Ed. 2017, 4500-Cl B	BDL	0.5-10	0.20	1.0
26.	Boron as B (mg/l)	APHA, 23 rd Ed. 2017, 4500 B A+C	0.28	0.2-10	0.5	1.0
27.	Total coliform (MPN/100 ml)	APHA, 23 rd Ed. 2017, 9221 B+C	Absent	1.8	0.05	Absent
28.	E.coli (MPN/100 ml)	APHA, 23 rd Ed. 2017, 9221 B+E	Absent	1.8	Absent	Absent

Note: BDL – Below Detection Limit


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FORMAT NO. ECO/QS/FORMAT/08

TEST REPORT NO: ECO LAB/Soil/06/19


TEST REPORT ISSUE DATE: 08.07.2019

TEST REPORT OF SOIL

Name of the Project : **Adani Power (Jharkhand) Ltd.**
Address of the Project : **2x800 MW Godda Thermal Power Project,
Village: Motia, Distt. - Godda, Jharkhand**

Sample Collected by : **Mr.R.K Panday**
Date of Sampling : **27.06.2019**
Date of Sample Receiving : **28.06.2019**
Date of Analysis : **28.06.2019 to 05.07.2019**
Source of Sample : **Project site**

Sl.No.	Tests Conducted	Results
1	Magnesium as Mg (%)	0.58
2	Calcium as Ca (%)	0.95
3	Manganese as Mn (mg/kg)	5.8
4	Boron as B(mg/kg)	2.4
5	Copper as Cu(mg/kg)	BDL
6	Sulphur as S (%)	0.072
7	Chloride as Cl (%)	0.044
8	Zinc as Zn (mg/kg)	13.8
9	Nitrogen as N (%)	1.02
10	Phosphorous as P (%)	0.088
11	Potassium as K (%)	0.021
12	Iron as Fe (%)	0.042
13	Molybdenum as Mo(mg/kg)	BDL


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FORMAT NO. ECO/QS/FORMAT/08

TEST REPORT NO: ECO LAB/Soil/06/19

TEST REPORT ISSUE DATE: 08.07.2019

TEST REPORT OF SOIL

Name of the Project : Adani Power (Jharkhand) Ltd.
Address of the Project : 2x800 MW Godda Thermal Power Project,
Village: Motia, Distt. - Godda, Jharkhand
Sample Collected by : Mr.R.K Panday
Date of Sampling : 27.06.2019
Date of Sample Receiving : 28.06.2019
Date of Analysis : 28.06.2019 to 05.07.2019
Source of Sample : Mali village

Sl.No.	Tests Conducted	Results
1	Magnesium as Mg (%)	0.62
2	Calcium as Ca (%)	1.10
3	Manganese as Mn(mg/kg)	5.02
4	Boron as B(mg/kg)	1.40
5	Copper as Cu(mg/kg)	BDL
6	Sulphur as S (%)	0.064
7	Chloride as Cl (%)	0.052
8	Zinc as Zn (mg/kg)	7.36
9	Nitrogen as N (%)	1.32
10	Phosphorous as P (%)	0.086
11	Potassium as K (%)	0.04
12	Iron as Fe (%)	0.024
13	Molybdenum as Mo(mg/kg)	BDL


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FORMAT NO. ECO/QS/FORMAT/08

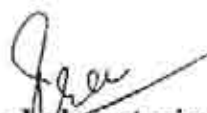
TEST REPORT NO: ECO LAB/Soil/06/19

TEST REPORT ISSUE DATE: 08.07.2019

TEST REPORT OF SOIL

Name of the Project : Adani Power (Jharkhand) Ltd.
Address of the Project : 2x800 MW Godda Thermal Power Project,
Village: Motia, Distt. - Godda, Jharkhand
Sample Collected by : Mr.R.K Panday
Date of Sampling : 27.06.2019
Date of Sample Receiving : 28.06.2019
Date of Analysis : 28.06.2019 to 05.07.2019
Source of Sample : Motiya village

Sl.No.	Tests Conducted	Results
1	Magnesium as Mg (%)	0.88
2	Calcium as Ca (%)	1.47
3	Manganese as Mn(mg/kg)	6.02
4	Boron as B(mg/kg)	2.40
5	Copper as Cu(mg/kg)	BDL
6	Sulphur as S (%)	0.040
7	Chloride as Cl (%)	0.030
8	Zinc as Zn (mg/kg)	10.72
9	Nitrogen as N (%)	1.18
10	Phosphorous as P (%)	0.079
11	Potassium as K (%)	0.034
12	Iron as Fe (%)	0.042
13	Molybdenum as Mo(mg/kg)	BDL


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Report Issued to : HTG Engineering Pvt. Ltd.

ENVIRONMENTAL MONITORING REPORT

of

ADANI POWER (JHARKHAND) LTD.

2x800 MW Godda Thermal Power Project,

Village: Motia, Distt. - Godda, Jharkhand

for

July - 2019

Prepared by :

ecoMen

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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AAQ1/07/19

Date: 08.08.2019

TEST REPORT OF AMBIENT AIR

(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : As per IS: 5182
 Sample Collected By : Ecomen Team

Name of Location : Near Motia Village

Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(01-02).07.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	67	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	23	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	6.6	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	17.1	80
(04-05).07.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	71	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	26	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	8.4	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	21.6	80
(08-09).07.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	63	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	21	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	7.2	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	16.5	80

Note:BDL = Below Detection Limit

Standards:National Ambient Air Quality Monitoring (NAAQM).

Ravi
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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AAQ2/07/19

Date: 08.08.2019

TEST REPORT OF AMBIENT AIR

(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : As per IS: 5182
 Sample Collected By : Ecomen Team

Name of Location : Near Motia Village					
Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(11-12).07.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	66	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	17	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	5.9	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	19.3	80
(15-16).07.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	63	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	21	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	9.6	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	17.2	80
(18-19).07.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	71	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	24	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	7.6	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	16.4	80

Note:BDL = Below Detection Limit

Standards:National Ambient Air Quality Monitoring (NAAQM).

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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AAQ3/07/19

Date: 08.08.2019

TEST REPORT OF AMBIENT AIR

(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : As per IS: 5182
 Sample Collected By : Ecomen Team

Name of Location: Near Motiaya Village					
Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(22-23).07.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	68	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	19	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	8.4	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	14.9	80
(25-26).07.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	65	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	17	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	6.6	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	19.4	80
(29-30).07.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	69	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	22	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	7.6	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	18.2	80

Note:BDL = Below Detection Limit**Standards:**National Ambient Air Quality Monitoring (NAAQM).

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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AAQ4/07/19

Date: 08.07.2019

TEST REPORT OF AMBIENT AIR

(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
Address of the Project : 2x800MW Godda Thermal Power Project,
Village: Motia, Distt. - Godda, Jharkhand
Sampling Method : As per IS: 5182
Sample Collected By : Ecomen Team

Name of Location: Near Mali Village

Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(01-02).07.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	63	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	20	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	7.7	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	16.8	80
(04-05).07.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	69	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	23	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	6.4	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	14.6	80
(08-09).07.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	71	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	25	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	9.2	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	21.1	80

Note:BDL = Below Detection Limit

Standards:National Ambient Air Quality Monitoring (NAAQM).

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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AAQ5/07/19

Date: 08.08.2019

TEST REPORT OF AMBIENT AIR

(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : As per IS: 5182
 Sample Collected By : Ecomen Team

Name of Location: Near Mali Village					
Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(11-12).07.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	68	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	25	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	8.4	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	19.1	80
(15-16).07.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	62	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	18	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	5.6	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	14.2	80

Note:BDL = Below Detection Limit

Standards:National Ambient Air Quality Monitoring (NAAQM).

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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AAQ6/07/19

Date: 08.08.2019

TEST REPORT OF AMBIENT AIR

(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800MW Godda Thermal Power Project,
 Village: Motia, Distt.- Godda, Jharkhand
 Sampling Method : As per IS: 5182
 Sample Collected By : Ecomen Team

Name of Location: Near Mali Village

Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(18-19).07.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	66	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	19	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	8.7	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	19.4	80
(22-23).07.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	63	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	17	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	5.9	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	16.6	80

Note:BDL = Below Detection Limit**Standards:**National Ambient Air Quality Monitoring (NAAQM).

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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AAQ7/07/19

Date: 08.08.2019

TEST REPORT OF AMBIENT AIR

(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : As per IS: 5182
 Sample Collected By : Ecomen Team

Name of Location: Near Navabad Village					
Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(25-26).07.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	71	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	24	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	7.6	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	19.2	80
(29-30).07.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	68	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	22	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	9.4	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	17.6	80

Note:BDL = Below Detection Limit**Standards:**National Ambient Air Quality Monitoring (NAAQM).

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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AAQ8/07/19

Date: 08.08.2019

TEST REPORT OF AMBIENT AIR

(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : As per IS: 5182
 Sample Collected By : Ecomen Team

Name of Location: Near Navabad Village					
Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(01-02).07.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	69	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	24	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	8.2	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	21.1	80
(04-05).07.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	74	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	23	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	7.6	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	21.4	80

Note:BDL = Below Detection Limit

Standards:National Ambient Air Quality Monitoring (NAAQM).

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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AAQ9/07/19

Date: 08.08.2019

TEST REPORT OF AMBIENT AIR

(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : As per IS: 5182
 Sample Collected By : Ecomen Team

Name of Location: Near Navabad Village					
Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(08-09).07.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	66	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	19	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	7.6	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	20.8	80
(11-12).07.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	69	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	22	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	5.9	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	16.4	80

Note:BDL = Below Detection Limit**Standards:**National Ambient Air Quality Monitoring (NAAQM).

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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AAQ10/07/19

Date: 08.08.2019

TEST REPORT OF AMBIENT AIR

(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : As per IS: 5182
 Sample Collected By : Ecomen Team

Name of Location: Near Navabad Village

Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(15-16).07.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	69	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	23	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	7.6	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	17.4	80
(18-19).07.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	64	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	19	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	6.3	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	17.5	80

Note:BDL = Below Detection Limit

Standards:National Ambient Air Quality Monitoring (NAAQM).

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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AAQ11/07/19

Date: 08.08.2019

TEST REPORT OF AMBIENT AIR

(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : As per IS: 5182
 Sample Collected By : Ecomen Team

Name of Location: Near Navabad Village					
Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(22-23).07.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	61	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	17	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	7.4	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	14.9	80
(25-26).07.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	66	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	20	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	5.9	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	19.6	80
(29-30).07.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	71	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	24	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	8.6	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	16.8	80

Note:BDL = Below Detection Limit

Standards:National Ambient Air Quality Monitoring (NAAQM).

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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AN/07/19

Date: 08.08.2019

TEST REPORT OF AMBIENT NOISE LEVEL

(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800 MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sample Collected By : Ecomen Team
 Date of Sampling : 25-26.07.2019
 Instrument Used : Noise Meter (HTC)

Sl. No.	Locations	Day Time			Night Time		
		Time	Leq Value in dB(A)		Time	Leq Value in dB(A)	
			Max	Min		Max	Min
1.	Near Patwa Village	09.05 A.M	64.2	55.5	10:10 PM	47.4	42.6
2.	Near Motia Village	09.45 A.M	66.6	61.7	10:25 PM	52.6	46.2
3.	Near Mali Village	11.15 A.M	60.2	53.5	11.30 P.M	47.8	43.6
4.	Near Navabad Village	12.10 P.M	62.5	58.3	11.45 P.M	52.6	47.2
5.	Near HTG Residential Area	13:20 PM	66.3	62.6	12.10 A.M	49.2	44.7
6.	Near Adani Office	15:25 PM	73.6	67.4	12.55 A.M	60.4	56.5

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Noise (Ambient Standard)

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

Note:

1. Day time is reckoned in between 6:00 AM and 10:00 PM.
2. Night time is reckoned in between 10:00 PM and 6:00 AM.
3. Silence zone is defined as area up to 100m around such premises as hospitals, educational institutions & courts. The silence zones are to be declared by a competent authority.
4. Mixed categories of areas should be declared as one of the four above-mentioned categories by the competent authority and the corresponding standard shall apply.

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FORMAT NO. ECO/QS/FORMAT/09 TEST REPORT NO: ECO LAB/GW/07/19
TEST REPORT ISSUE DATE: 03.08.2019

TEST REPORT OF GROUND WATER (Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project	: Adani Power (Jharkhand) Ltd.
Address of the Project	: 2x800 MW Godda Thermal Power Project, Village: Motia, Distt. - Godda, Jharkhand
Sampling Method	: APHA, 23 rd Ed. 2017
Sample Collected by	: Ecomen Team
Sample Quantity	: As per requirement.
Date of Sampling	: 25.07.2019
Date of Sample Receiving	: 27.07.2019
Date of Analysis	: 27.07.2019 to 03.08.2019
Source of Sample	: Motia Village, Hand Pump (GW)

Sl. No.	TESTS	PROTOCOL	RESULT	Detection Range	INDIAN STANDARDS as per IS 10500:1991 (Reaff:2012)	
					Desirable	Permissible
1.	Colour (Hazen unit)	APHA, 23 rd Ed. 2017, 2129 B	<5.0	5-100	5.00	15.0
2.	Odour	APHA, 23 rd Ed. 2017, 2150 B	Agreeable	Qualitative	Agreeable	Agreeable
3.	pH	APHA, 23 rd Ed. 2017, 4500H+ A+B	7.33	2.0 -12	6.5-8.5	No Relax.
4.	Total Dissolved Solids as TDS (mg/l)	APHA, 23 rd Ed. 2017, 2540-C	361.0	5-5000	500	2000
5.	Alkalinity (mg/l)	APHA, 23 rd Ed. 2017, 2320 A+ B	126.0	5-1500	200	600
6.	Total Hardness as CaCO ₃ (mg/l)	APHA, 23 rd Ed. 2017, 2340 A+C	224.0	5-1500	200.0	600.0
7.	Calcium as Ca (mg/l)	APHA, 23 rd Ed. 2017, 3500 Ca A+B	57.6	5-1000	75.0	200.0
8.	Magnesium as Mg (mg/l)	APHA, 23 rd Ed. 2017, 3500 Mg A+B	19.44	5-1000	30.0	100.0
9.	Copper as Cu (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.05-5	0.05	1.5
10.	Iron as Fe (mg/l)	APHA, 23 rd Ed. 2017, 3500 Fe B	0.19	0.02-50	0.3	No Relax.
11.	Manganese as Mn (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.1-5	0.10	0.30
12.	Chloride as Cl (mg/l)	APHA, 23 rd Ed. 2017, 4500 Cl A+B	27.56	5-1000	250.0	1000.0
13.	Sulfate as SO ₄ (mg/l)	APHA, 23 rd Ed. 2017, 4500-SO ₄ E	36.85	1.0-250	200.0	400.0
14.	Nitrate Nitrogen as NO ₃ (mg/l)	APHA, 23 rd Ed. 2017, 4500-NO ₃ B	8.55	5.0-100	45.0	No Relax.
15.	Fluorides as F (mg/l)	APHA, 23 rd Ed. 2017, 4500-C	0.24	0.05-10	1.0	1.5
16.	Phenolic Compounds as C ₆ H ₅ OH (mg/l)	APHA, 23 rd Ed. 2017, 5530 A+C	BDL	1-10	0.001	0.002
17.	Mercury as Hg (mg/l)	APHA, 23 rd Ed. 2017, 3112 A+B	BDL	0.001-1	0.001	No Relax.
18.	Cadmium as Cd (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.002-2	0.003	No Relax.
19.	Arsenic as As (mg/l)	APHA, 23 rd Ed. 2017, 3114 C	BDL	0.01-2	0.01	0.05
20.	Lead as Pb (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.01-2	0.01	No Relax.
21.	Zinc as Zn (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	0.17	0.02-50	5.0	15
22.	Anionic Detergents (As MBAS) (mg/l) max	APHA 22nd EDN-2012, 5540 A+C	BDL	0.01-5	0.2	1.0
23.	Chromium (Hexavalent) (mg/l)	APHA, 23 rd Ed. 2017, 3111A+B	BDL	0.05-20	0.05	No Relax.
24.	Mineral Oil 6 (mg/l)	IS 3025 (Part 39) Class -6 Infrared Partition Method	BDL	0.01-10	0.5	No Relax.
25.	Free Residual Chlorine (mg/l)	APHA, 23 rd Ed. 2017, 4500-Cl B	BDL	0.5-10	2.0	1.0
26.	Boron as B (mg/l)	APHA, 23 rd Ed. 2017, 4500 B A+C	0.22	0.2-10	0.5	1.0
27.	Total coliform (MPN/100 ml)	APHA, 23 rd Ed. 2017, 9221 B+C	Absent	1.8	0.05	Absent
28.	E. coli (MPN/100 ml)	APHA, 23 rd Ed. 2017, 9221 B+E	Absent	1.8	Absent	Absent

Note: BDL -- Below Detection Limit

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FORMAT NO. ECO/QS/FORMAT/09 TEST REPORT NO: ECO LAB/GW/07/19
TEST REPORT ISSUE DATE: 03.08.2019

TEST REPORT OF GROUND WATER (Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project	: Adani Power (Jharkhand) Ltd.
Address of the Project	: 2x800 MW Godda Thermal Power Project, Village: Motia, Distt. - Godda, Jharkhand
Sampling Method	: APHA, 23 rd Ed. 2017
Sample Collected by	: Ecomen Team
Sample Quantity	: As per requirement.
Date of Sampling	: 25.07.2019
Date of Sample Receiving	: 27.07.2019
Date of Analysis	: 27.07.2019 to 03.08.2019
Source of Sample	: Navabad Village, Hand Pump (GW)

Sl. No.	TESTS	PROTOCOL	RESULT	Detection Range	INDIAN STANDARDS as per IS (650:1991)(Reaff:2012)	
					Desirable	Permissible
1.	Colour (Hazen unit)	APHA, 23 rd Ed. 2017, 2120 B	<5.0	5-100	5.00	15.0
2.	Odour	APHA, 23 rd Ed. 2017, 1150 B	Agreeable	Qualitative	Agreeable	Agreeable
3.	pH	APHA, 23 rd Ed. 2017, 4500H+ A+B	7.37	2.0-12	6.5-8.5	No Relax.
4.	Total Dissolved Solids as TDS (mg/l)	APHA, 23 rd Ed. 2017, 2540-C	485.0	5-5000	500	2000
5.	Alkalinity (mg/l)	APHA, 23 rd Ed. 2017, 1320 A+B	140.0	5-1500	200	600
6.	Total Hardness as CaCO ₃ (mg/l)	APHA, 23 rd Ed. 2017, 2340 A+C	212.0	5-1500	200.0	600.0
7.	Calcium as Ca (mg/l)	APHA, 23 rd Ed. 2017, 3500 Ca A+B	54.4	5-1000	75.0	200.0
8.	Magnesium as Mg (mg/l)	APHA, 23 rd Ed. 2017, 3500 Mg A+B	18.46	5-1000	30.0	100.0
9.	Copper as Cu (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.05-5	0.05	1.5
10.	Iron as Fe (mg/l)	APHA, 23 rd Ed. 2017, 3500 Fe B	0.23	0.02-50	0.3	No Relax.
11.	Manganese as Mn (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.1-5	0.10	0.30
12.	Chloride as Cl (mg/l)	APHA, 23 rd Ed. 2017, 4500 Cl A+B	34.59	5-1000	250.0	1000.0
13.	Sulfate as SO ₄ (mg/l)	APHA, 23 rd Ed. 2017, 4500-SO ₄ E	38.01	1.0-250	200.0	400.0
14.	Nitrate Nitrogen as NO ₃ (mg/l)	APHA, 23 rd Ed. 2017, 4500-NO ₃ B	10.02	5.0-100	45.0	No Relax.
15.	Fluorides as F (mg/l)	APHA, 23 rd Ed. 2017, 4500-C	0.22	0.05-10	1.0	1.5
16.	Phenolic Compounds as C ₆ H ₅ OH (mg/l)	APHA, 23 rd Ed. 2017, 8530 A+C	BDL	1-10	0.001	0.002
17.	Mercury as Hg (mg/l)	APHA, 23 rd Ed. 2017, 3112 A+B	BDL	0.001-1	0.001	No Relax.
18.	Cadmium as Cd (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.002-2	0.003	No Relax.
19.	Arsenic as As (mg/l)	APHA, 23 rd Ed. 2017, 3114 C	BDL	0.01-2	0.01	0.05
20.	Lead as Pb (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.01-2	0.01	No Relax.
21.	Zinc as Zn (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	0.20	0.02-50	5.0	15
22.	Anionic Detergents (As MBAS)(mg/l) max	APHA 22nd EdN.:2012, 5540 A+C	BDL	0.01-5	0.2	1.0
23.	Chromium (Hexavalent) (mg/l)	APHA, 23 rd Ed. 2017, 3111A+B	BDL	0.05-20	0.05	No Relax.
24.	Mineral Oil 6 (mg/l)	IS:3035 (Part:39) Class-6 Infrared Partition Method	BDL	0.01-10	0.5	No Relax.
25.	Free Residual Chlorine (mg/l)	APHA, 23 rd Ed. 2017, 4500-Cl B	BDL	0.5-10	0.20	1.0
26.	Boron as B (mg/l)	APHA, 23 rd Ed. 2017, 4500 B A+C	0.26	0.2-10	0.5	1.0
27.	Total coliform (MPN/100 ml)	APHA, 23 rd Ed. 2017, 9221 B+C	Absent	1.8	1.05	Absent
28.	Fecal (MPN/100 ml)	APHA, 23 rd Ed. 2017, 9221 B+E	Absent	1.8	Absent	Absent

Note: BDL – Below Detection Limit

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FORMAT NO. ECO/QS/FORMAT/09 TEST REPORT NO: ECO LAB/GW/07/19
TEST REPORT ISSUE DATE: 03.08.2019

TEST REPORT OF GROUND WATER (Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
Address of the Project : 2x800 MW Godda Thermal Power Project,
Village: Motia, Distt. - Godda, Jharkhand
Sampling Method : APHA, 23rd Ed. 2017
Sample Collected by : Ecomen Team
Sample Quantity : As per requirement.
Date of Sampling : 25.07.2019
Date of Sample Receiving : 27.07.2019
Date of Analysis : 27.07.2019 to 03.08.2019
Source of Sample : Mali Village Hand Pump (GW)

Sl. No.	TESTS	PROTOCOL	RESULT	Detection Range	INDIAN STANDARDS as per IS 10500:1991(Reaff:2012)	
					Desirable	Permissible
1.	Colour (Hazen unit)	APHA, 23 rd Ed. 2017, 2120 B	<5.0	5-100	5.00	15.0
2.	Odour	APHA, 23 rd Ed. 2017, 3150 B	Agreeable	Qualitative	Agreeable	Agreeable
3.	pH	APHA, 23 rd Ed. 2017, 4500H+ A+B	7.53	2.0-12	6.5-8.5	No Relax.
4.	Total Dissolved Solids as TDS (mg/l)	APHA, 23 rd Ed. 2017, 2540-C	410.0	5-5000	200	2000
5.	Alkalinity (mg/l)	APHA, 23 rd Ed. 2017, 2320 A+B	128.0	5-1500	200	600
6.	Total Hardness as CaCO ₃ (mg/l)	APHA, 23 rd Ed. 2017, 2340 A+C	240.0	5-1500	200.0	600.0
7.	Calcium as Ca (mg/l)	APHA, 23 rd Ed. 2017, 3500 Ca A+B	62.4	5-1000	75.0	200.0
8.	Magnesium as Mg (mg/l)	APHA, 23 rd Ed. 2017, 3500 Mg A+B	20.41	5-1000	30.0	100.0
9.	Copper as Cu (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.05-5	0.05	1.5
10.	Iron as Fe (mg/l)	APHA, 23 rd Ed. 2017, 3500 Fe B	0.24	0.02-50	0.3	No Relax.
11.	Manganese as Mn (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.1-5	0.10	0.30
12.	Chloride as Cl (mg/l)	APHA, 23 rd Ed. 2017, 4500 Cl A+B	39.5	5-1000	250.0	1000.0
13.	Sulfate as SO ₄ (mg/l)	APHA, 23 rd Ed. 2017, 4500-SO ₄ E	34.5	1.0-250	200.0	400.0
14.	Nitrate Nitrogen as NO ₃ (mg/l)	APHA, 23 rd Ed. 2017, 4500-NO ₃ B	12.48	5.0-100	45.0	No Relax.
15.	Fluorides as F (mg/l)	APHA, 23 rd Ed. 2017, 4500-C	0.34	0.05-10	1.0	1.5
16.	Phenolic Compounds as C ₆ H ₅ OH (mg/l)	APHA, 23 rd Ed. 2017, 5530 A+C	BDL	1-10	0.001	0.002
17.	Mercury as Hg (mg/l)	APHA, 23 rd Ed. 2017, 3112 A+B	BDL	0.001-1	0.001	No Relax.
18.	Cadmium as Cd (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.002-2	0.003	No Relax.
19.	Arsenic as As (mg/l)	APHA, 23 rd Ed. 2017, 3114 C	BDL	0.01-2	0.01	0.05
20.	Lead as Pb (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.01-2	0.01	No Relax.
21.	Zinc as Zn (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	0.25	0.02-50	5.0	15
22.	Anionic Detergents (As MBAS) (mg/l) max	APHA 22nd EDN:2012, 5540 A+C	BDL	0.01-5	0.2	1.0
23.	Chromium (Hexavalent) (mg/l)	APHA, 23 rd Ed. 2017, 3111A+B	BDL	0.05-20	0.05	No Relax.
24.	Mineral Oil (mg/l)	IS 3025 (Part 39) Class -6 Infrared Partition Method	BDL	0.01-10	0.3	No Relax.
25.	Free Residual Chlorine (mg/l)	APHA, 23 rd Ed. 2017, 4500-Cl B	BDL	0.5-10	0.20	1.0
26.	Boron as B (mg/l)	APHA, 23 rd Ed. 2017, 4500 B A+C	0.24	0.2-10	0.5	1.0
27.	Total coliform (MPN/100 ml)	APHA, 23 rd Ed. 2017, 9221 B+C	Absent	1.8	0.05	Absent
28.	Fecal (MPN/100 ml)	APHA, 23 rd Ed. 2017, 9221 B+E	Absent	1.8	Absent	Absent

Note: BDL - Below Detection Limit

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Report Issued to : HTG Engineering Pvt, Ltd.

ENVIRONMENTAL MONITORING REPORT

of

ADANI POWER (JHARKHAND) LTD.

2x800 MW Godda Thermal Power Project,

Village: Motia, Distt. - Godda, Jharkhand

for

August - 2019

Prepared by :

ecoMen

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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AAQ1/08/19

Date: 08.09.2019

TEST REPORT OF AMBIENT AIR

(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : **Adani Power (Jharkhand) Ltd.**
 Address of the Project : **2x800MW Godda Thermal Power Project,**
Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : **As per IS: 5182**
 Sample Collected By : **Ecomen Team**

Name of Location : Near Motia Village

Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(01-02).08.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	61	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	18	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	5.6	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	15.7	80
(05-06).08.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	65	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	21	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	7.2	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	18.5	80
(08-09).08.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	57	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	16	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	5.9	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	17.1	80

Note:BDL = Below Detection Limit

Standards:National Ambient Air Quality Monitoring (NAAQM).

For Ecomen Laboratories Pvt. Ltd.

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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AAQI/08/19

Date: 08.09.2019

TEST REPORT OF AMBIENT AIR


(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : As per IS: 5182
 Sample Collected By : Ecomen Team

Name of Location : Near Motia Village					
Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(12-13).08.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	66	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	17	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	5.9	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	19.3	80
(16-17).08.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	63	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	21	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	9.6	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	17.2	80
(19-20).08.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	71	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	24	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	7.6	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	16.4	80

Note:BDL = Below Detection Limit

Standards:National Ambient Air Quality Monitoring (NAAQM).


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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AAQ1/08/19


Date: 08.09.2019

TEST REPORT OF AMBIENT AIR

(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : As per IS: 5182
 Sample Collected By : Ecomen Team

Name of Location: Near Motiaya Village					
Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(22-23).08.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	68	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	19	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	8.4	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	14.9	80
(26-27).08.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	65	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	17	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	6.6	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	19.4	80
(29-30).08.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	69	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	22	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	7.6	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	18.2	80

Note:BDL = Below Detection Limit**Standards:**National Ambient Air Quality Monitoring (NAAQM).


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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AAQ1/08/19

Date: 08.09.2019

TEST REPORT OF AMBIENT AIR


(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : As per IS: 5182
 Sample Collected By : Ecomen Team

Name of Location: Near Mali Village					
Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(01-02).08.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	63	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	20	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	7.7	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	16.8	80
(05-06).08.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	69	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	23	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	6.4	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	14.6	80
(08-09).08.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	71	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	25	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	9.2	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	21.1	80

Note:BDL = Below Detection Limit

Standards:National Ambient Air Quality Monitoring (NAAQM).


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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AAQ1/08/19

Date: 08.09.2019

TEST REPORT OF AMBIENT AIR

(Test Report Issued to: HTG Engineering Pvt. Ltd.)


Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : As per IS: 5182
 Sample Collected By : Ecomen Team

Name of Location: Near Mali Village

Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(12-13).08.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	68	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	25	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	8.4	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	19.1	80
(16-17).08.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	62	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	18	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	5.6	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	14.2	80

Note:BDL = Below Detection Limit

Standards:National Ambient Air Quality Monitoring (NAAQM).



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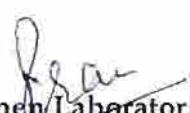
Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : As per IS: 5182
 Sample Collected By : Ecomen Team

Name of Location: Near Mali Village

Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(19-20).08.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	66	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	19	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	8.7	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	19.4	80
(22-23).08.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	63	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	17	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	5.9	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	16.6	80

Note:BDL = Below Detection Limit

Standards:National Ambient Air Quality Monitoring (NAAQM).


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Date: 08.09.2019

TEST REPORT OF AMBIENT AIR


(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : As per IS: 5182
 Sample Collected By : Ecomen Team

Name of Location: Near Navabad Village					
Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(26-27).08.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	71	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	24	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	7.6	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	19.2	80
(29-30).08.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	68	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	22	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	9.4	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	17.6	80

Note:BDL = Below Detection Limit

Standards:National Ambient Air Quality Monitoring (NAAQM).


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 Address of the Project : 2x800MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : As per IS: 5182
 Sample Collected By : Ecomen Team

Name of Location: Near Navabad Village					
Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(01-02).08.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	69	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	24	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	8.2	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	21.1	80
(05-06).08.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	74	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	23	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	7.6	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	21.4	80

Note:BDL = Below Detection Limit**Standards:**National Ambient Air Quality Monitoring (NAAQM).


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 Address of the Project : 2x800MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : As per IS: 5182
 Sample Collected By : Ecomen Team

Name of Location: Near Navabad Village					
Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(08-09).08.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	66	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-1 by CPCB	2-100(µg/m ³)	19	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	7.6	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	20.8	80
(12-13).08.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	69	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-1 by CPCB	2-100(µg/m ³)	22	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	5.9	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	16.4	80

Note:BDL = Below Detection Limit**Standards:**National Ambient Air Quality Monitoring (NAAQM).


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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AAQ1/08/19

Date: 08.09.2019

TEST REPORT OF AMBIENT AIR

(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : As per IS: 5182
 Sample Collected By : Ecomen Team

Name of Location: Near Navabad Village

Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(16-17).08.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	69	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	23	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	7.6	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	17.4	80
(19-20).08.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	64	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	19	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	6.3	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	17.5	80

Note:BDL = Below Detection Limit

Standards:National Ambient Air Quality Monitoring (NAAQM).



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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AAQ1/08/19

Date: 08.09.2019

TEST REPORT OF AMBIENT AIR


(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : As per IS: 5182
 Sample Collected By : Ecomen Team

Name of Location: Near Navabad Village					
Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(22-23).08.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	61	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	17	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	7.4	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	14.9	80
(26-27).08.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	66	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	20	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	5.9	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	19.6	80
(29-30).08.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	71	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	24	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	8.6	80
	NO _x (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	16.8	80

Note:BDL = Below Detection Limit

Standards:National Ambient Air Quality Monitoring (NAAQM).


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FORMAT NO. ECO/QS/FORMAT/15

TEST REPORT NO: ECO LAB/AN/08/19

Date: 08.09.2019

TEST REPORT OF AMBIENT NOISE LEVEL

(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
Address of the Project : 2x800 MW Godda Thermal Power Project,
Village: Motia, Distt. - Godda, Jharkhand
Sample Collected By : Ecomen Team
Date of Sampling : 26-27.08.2019
Instrument Used : Noise Meter (HTC)

Sl. No.	Locations	Day Time			Night Time		
		Time	Leq Value in dB(A)		Time	Leq Value in dB(A)	
			Max	Min		Max	Min
1.	Near Patwa Village	09.00 A.M	65.6	59.3	10:05 PM	48.4	44.2
2.	Near Motia Village	09.35 A.M	63.8	59.7	10:15 PM	51.6	46.8
3.	Near Mali Village	11.20A.M	58.6	54.2	11.20P.M	45.8	41.6
4.	Near Navabad Village	12.00 P.M	65.1	60.4	11.35 P.M	50.6	47.1
5.	Near HTG Residential Area	13:10 PM	63.3	58.9	12.05A.M	48.3	43.7
6.	Near Adani Office	15:15 PM	71.8	68.5	12.50A.M	62.4	57.1

For Ecomen Laboratories Pvt. Ltd.

Ecomen Laboratories Pvt. Ltd.

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Noise (Ambient Standard)

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

Note:

- Day time is reckoned in between 6:00 AM and 10:00 PM.
- Night time is reckoned in between 10:00 PM and 6:00 AM
- Silence zone is defined as area up to 100m around such premises as hospitals, educational institutions & courts. The silence zones are to be declared by a competent authority.
- Mixed categories of areas should be declared as one of the four above-mentioned Categories by the competent authority and the corresponding standard shall apply.

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FORMAT NO. ECO/QS/FORMAT/09 TEST REPORT NO: ECO LAB/GW/08/19

TEST REPORT ISSUE DATE: 07.09.2019

TEST REPORT OF GROUND WATER

(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
Address of the Project : 2x800 MW Godda Thermal Power Project,
Village: Motia, Distt. - Godda, Jharkhand
Sampling Method : APHA, 23rd Ed, 2017
Sample Collected by : Ecomen Team
Sample Quantity : As per requirement.
Date of Sampling : 28.08.2019
Date of Sample Receiving : 30.08.2019
Date of Analysis : 30.08.2019 to 06.09.2019
Source of Sample : Motia Village, Hand Pump (GW)

Sl. No.	TESTS	PROTOCOL	RESULT	Detection Range	INDIAN STANDARDS as per IS 10500:1991(Recd:2012)	
					Desirable	Permissible
1.	Colour (Hazen unit)	APHA, 23 rd Ed. 2017, 2120 B	<5.0	5-100	5.00	15.0
2.	Odour	APHA, 23 rd Ed. 2017, 2150 B	Agreeable	Qualitative	Agreeable	Agreeable
3.	pH	APHA, 23 rd Ed. 2017, 4500H+ A+B	7.20	2.0-12	6.5-8.5	No Relax.
4.	Total Dissolved Solids as TDS (mg/l)	APHA, 23 rd Ed. 2017, 2540-C	382.0	5-5000	500	2000
5.	Alkalinity (mg/l)	APHA, 23 rd Ed. 2017, 2320 A+B	132.0	5-1500	200	600
6.	Total Hardness as CaCO ₃ (mg/l)	APHA, 23 rd Ed. 2017, 2340 A+C	246.4	5-1500	200.0	600.0
7.	Calcium as Ca (mg/l)	APHA, 23 rd Ed. 2017, 3500 Ca A+B	56.8	5-1000	75.0	200.0
8.	Magnesium as Mg (mg/l)	APHA, 23 rd Ed. 2017, 3900 Mg A+B	25.20	5-1000	30.0	100.0
9.	Copper as Cu (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.05-5	0.05	1.5
10.	Iron as Fe (mg/l)	APHA, 23 rd Ed. 2017, 3500 Fe B	0.26	0.02-50	0.3	No Relax.
11.	Manganese as Mn (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.1-5	0.10	0.30
12.	Chloride as Cl (mg/l)	APHA, 23 rd Ed. 2017, 4500 Cl A+B	34.0	5-1000	250.0	1000.0
13.	Sulfate as SO ₄ (mg/l)	APHA, 23 rd Ed. 2017, 4500-SO ₄ E	44.0	1.0-250	200.0	400.0
14.	Nitrate Nitrogen as NO ₃ (mg/l)	APHA, 23 rd Ed. 2017, 4500-NO ₃ B	10.08	5.0-100	45.0	No Relax.
15.	Fluorides as F (mg/l)	APHA, 23 rd Ed. 2017, 4500-C	0.28	0.05-10	1.0	1.5
16.	Phenolic Compounds as C ₆ H ₅ OH (mg/l)	APHA, 23 rd Ed. 2017, 5530 A+C	BDL	1-10	0.001	0.002
17.	Mercury as Hg (mg/l)	APHA, 23 rd Ed. 2017, 3112 A+B	BDL	0.001-1	0.001	No Relax.
18.	Cadmium as Cd (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.002-2	0.003	No Relax.
19.	Arsenic as As (mg/l)	APHA, 23 rd Ed. 2017, 3114 C	BDL	0.01-2	0.01	0.05
20.	Lead as Pb (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.01-2	0.01	No Relax.
21.	Zinc as Zn (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	0.16	0.02-50	5.0	15
22.	Anionic Detergents (As MBAS)(mg/l) max	APHA 22nd Edn:2012, 5540 A+C	BDL	0.01-5	0.2	1.0
23.	Chromium (Hexavalent) (mg/l)	APHA, 23 rd Ed. 2017, 3111A+B	BDL	0.05-20	0.05	No Relax.
24.	Mineral Oil 6 (mg/l)	IS 3025 (Part 39) Class -6 Infrared Partition method	BDL	0.01-10	0.5	No Relax.
25.	Free Residual Chlorine (mg/l)	APHA, 23 rd Ed. 2017, 4500-Cl B	BDL	0.5-10	0.20	1.0
26.	Boron as B (mg/l)	APHA, 23 rd Ed. 2017, 4500 B A+C	0.22	0.2-10	0.5	1.0
27.	Total coliform (MPN/100 ml)	APHA, 23 rd Ed. 2017, 9221 B+C	Absent	1.8	0.05	Absent
28.	E.coli (MPN/100 ml)	APHA, 23 rd Ed. 2017, 9221 B+E	Absent	1.8	Absent	Absent

Note: BDL - Below Detection Limit

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FORMAT NO. ECO/QS/FORMAT/09 TEST REPORT NO: ECO LAB/GW/08/19
TEST REPORT ISSUE DATE: 07.09.2019

TEST REPORT OF GROUND WATER
(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
Address of the Project : 2x800 MW Godda Thermal Power Project,
Village: Motia, Distt. - Godda, Jharkhand
Sampling Method : APHA, 23rd Ed. 2017
Sample Collected by : Ecomen Team
Sample Quantity : As per requirement.
Date of Sampling : 28.08.2019
Date of Sample Receiving : 30.08.2019
Date of Analysis : 30.08.2019 to 06.09.2019
Source of Sample : Navabad Village, Hand Pump (GW)

Sl. No.	TESTS	PROTOCOL	RESULT	Detection Range	INDIAN STANDARDS as per IS-10500:1991(Recft.2012)	
					Desirable	Permissible
1.	Colour (Hazen unit)	APHA, 23 rd Ed. 2017, 2120 B	<5.0	5-100	5.00	15.0
2.	Odour	APHA, 23 rd Ed. 2017, 2150 B	Agreeable	Qualitative	Agreeable	Agreeable
3.	pH	APHA, 23 rd Ed. 2017, 4500H+ A+B	7.40	2.0-12	6.5-8.5	No Relax.
4.	Total Dissolved Solids as TDS (mg/l)	APHA, 23 rd Ed. 2017, 2540-C	442.0	5-5000	500	2000
5.	Alkalinity (mg/l)	APHA, 23 rd Ed. 2017, 2520 A+B	136.0	5-1500	200	600
6.	Total Hardness as CaCO ₃ (mg/l)	APHA, 23 rd Ed. 2017, 2340 A+C	216.0	5-1500	200.0	600.0
7.	Calcium as Ca (mg/l)	APHA, 23 rd Ed. 2017, 3500 Ca A+B	47.40	5-1000	75.0	200.0
8.	Magnesium as Mg (mg/l)	APHA, 23 rd Ed. 2017, 3500 Mg A+B	23.60	5-1000	50.0	100.0
9.	Copper as Cu (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.05-5	0.05	1.5
10.	Iron as Fe (mg/l)	APHA, 23 rd Ed. 2017, 3500 Fe B	0.25	0.02-50	0.3	No Relax.
11.	Manganese as Mn (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.1-5	0.10	0.30
12.	Chloride as Cl (mg/l)	APHA, 23 rd Ed. 2017, 4500 Cl A+B	31.66	5-1000	250.0	1000.0
13.	Sulfate as SO ₄ (mg/l)	APHA, 23 rd Ed. 2017, 4500-SO ₄ ²⁻ E	27.88	1.0-250	200.0	400.0
14.	Nitrate Nitrogen as NO ₃ (mg/l)	APHA, 23 rd Ed. 2017, 4500-NO ₃ ⁻ B	9.5	5.0-100	45.0	No Relax.
15.	Fluorides as F (mg/l)	APHA, 23 rd Ed. 2017, 4500-C	0.19	0.05-10	1.0	1.5
16.	Phenolic Compounds as C ₆ H ₅ OH (mg/l)	APHA, 23 rd Ed. 2017, 5530 A+C	BDL	1-10	0.001	0.002
17.	Mercury as Hg (mg/l)	APHA, 23 rd Ed. 2017, 3112 A+B	BDL	0.001-1	0.001	No Relax.
18.	Cadmium as Cd (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.002-2	0.005	No Relax.
19.	Arsenic as As (mg/l)	APHA, 23 rd Ed. 2017, 3114 C	BDL	0.01-2	0.01	0.05
20.	Lead as Pb (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.01-2	0.01	No Relax.
21.	Zinc as Zn (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	0.20	0.02-50	5.0	15
22.	Anionic Detergents (As MBAS)(mg/l) max	APHA 22nd EDN.:2011, 5540 A+C	BDL	0.01-5	0.2	1.0
23.	Chromium (Hexavalent) (mg/l)	APHA, 23 rd Ed. 2017, 3111A+B	BDL	0.05-20	0.05	No Relax.
24.	Mineral Oil 5 (mg/l)	IS 3025 (Part 39) Class -6 Infrared Partition Method	BDL	0.01-10	0.5	No Relax.
25.	Free Residual Chlorine (mg/l)	APHA, 23 rd Ed. 2017, 4500-C1 B	BDL	0.5-10	0.20	1.0
26.	Boron as B (mg/l)	APHA, 23 rd Ed. 2017, 4500 B A+C	0.27	0.2-10	0.5	1.0
27.	Total coliform (MPN/100 ml)	APHA, 23 rd Ed. 2017, 9221 B+C	Absent	1.8	0.05	Absent
28.	E.coli (MPN/100 ml)	APHA, 23 rd Ed. 2017, 9221 B+E	Absent	1.8	Absent	Absent

Note: BDL – Below Detection Limit

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for Ecomen Laboratories Pvt. Ltd.

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FORMAT NO. ECO/QS/FORMAT/09 TEST REPORT NO: ECO LAB/GW/08/19
TEST REPORT ISSUE DATE: 07.09.2019

TEST REPORT OF GROUND WATER (Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
Address of the Project : 2x800 MW Godda Thermal Power Project,
Village: Motia, Distt. - Godda, Jharkhand
Sampling Method : APHA, 23rd Ed. 2017
Sample Collected by : Ecomen Team
Sample Quantity : As per requirement.
Date of Sampling : 28.08.2019
Date of Sample Receiving : 30.08.2019
Date of Analysis : 30.08.2019 to 06.09.2019
Source of Sample : Mali Village Hand Pump (GW)

Sl. No.	TESTS	PROTOCOL	RESULT	Detection Range	INDIAN STANDARDS as per IS 10500:1991(Reaff:2012)	
					Desirable	Permissible
1.	Colour (Hazen unit)	APHA, 23 rd Ed. 2017, 2120 B	<5.0	5-100	5.00	15.0
2.	Odour	APHA, 23 rd Ed. 2017, 2150 B	Agreeable	Qualitative	Agreeable	Agreeable
3.	pH	APHA, 23 rd Ed. 2017, 4500H+ A+B	7.43	7.0-12	6.5-8.5	No Relax.
4.	Total Dissolved Solids as TDS (mg/l)	APHA, 23 rd Ed. 2017, 2540-C	412.0	5-5000	500	2000
5.	Alkalinity (mg/l)	APHA, 23 rd Ed. 2017, 2320 A+B	148.0	5-1500	200	600
6.	Total Hardness as CaCO ₃ (mg/l)	APHA, 23 rd Ed. 2017, 2340 A+C	248.0	5-1500	200.0	600.0
7.	Calcium as Ca (mg/l)	APHA, 23 rd Ed. 2017, 3500 Ca A+B	89.2	5-1000	75.0	200.0
8.	Magnesium as Mg (mg/l)	APHA, 23 rd Ed. 2017, 3500 Mg A+B	24.3	5-1000	30.0	100.0
9.	Copper as Cu (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.05-5	0.05	1.5
10.	Iron as Fe (mg/l)	APHA, 23 rd Ed. 2017, 3500 Fe B	0.33	0.02-50	0.3	No Relax.
11.	Manganese as Mn (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.1-5	0.10	0.30
12.	Chloride as Cl (mg/l)	APHA, 23 rd Ed. 2017, 4500 Cl A+B	34.0	5-1000	250.0	1000.0
13.	Sulfate as SO ₄ (mg/l)	APHA, 23 rd Ed. 2017, 4500-SO ₄ ²⁻ E	32.0	1.0-250	200.0	400.0
14.	Nitrate Nitrogen as NO ₃ (mg/l)	APHA, 23 rd Ed. 2017, 4500-NO ₃ B	11.2	5.0-100	45.0	No Relax.
15.	Fluorides as F (mg/l)	APHA, 23 rd Ed. 2017, 4800-C	0.29	0.05-10	1.0	1.5
16.	Phenolic Compounds as C ₆ H ₅ OH (mg/l)	APHA, 23 rd Ed. 2017, 5530 A+C	BDL	1-10	0.001	0.002
17.	Mercury as Hg (mg/l)	APHA, 23 rd Ed. 2017, 3112 A+B	BDL	0.001-1	0.001	No Relax.
18.	Cadmium as Cd (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.002-2	0.002	No Relax.
19.	Arsenic as As (mg/l)	APHA, 23 rd Ed. 2017, 3114 C	BDL	0.01-2	0.01	0.05
20.	Lead as Pb (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.01-2	0.01	No Relax.
21.	Zinc as Zn (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	0.18	0.02-50	5.0	15
22.	Anionic Detergents (As MBAS) (mg/l) max	APHA 22nd EDN-2012, 5540 A+C	BDL	0.03-5	0.2	1.0
23.	Chromium (Hexavalent) (mg/l)	APHA, 23 rd Ed. 2017, 3111A+B	BDL	0.05-20	0.05	No Relax.
24.	Mineral Oil 6 (mg/l)	IS 3025 (Part 39) Class -6 Infrared Partition Method	BDL	0.01-10	0.5	No Relax.
25.	Free Residual Chlorine (mg/l)	APHA, 23 rd Ed. 2017, 4500-Cl B	BDL	0.5-10	0.20	1.0
26.	Boron as B (mg/l)	APHA, 23 rd Ed. 2017, 4500 B A+C	0.26	0.2-10	0.5	1.0
27.	Total coliform (MPN/100 ml)	APHA, 23 rd Ed. 2017, 9221 B+C	Absent	1.8	0.05	Absent
28.	E.coli (MPN/100 ml)	APHA, 23 rd Ed. 2017, 9221 B+E	Absent	1.8	Absent	Absent

Note: BDL – Below Detection Limit

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FORMAT NO. ECO/QS/FORMAT/09 TEST REPORT NO: ECO LAB/GW/08/19

TEST REPORT ISSUE DATE: 07.09.2019

TEST REPORT OF GROUND WATER

(Test Report Issued to: HTG Engineering Pvt. Ltd.)

Name of the Project : Adani Power (Jharkhand) Ltd.
 Address of the Project : 2x800 MW Godda Thermal Power Project,
 Village: Motia, Distt. - Godda, Jharkhand
 Sampling Method : APHA, 23rd Ed. 2017
 Sample Collected by : Ecomen Team
 Sample Quantity : As per requirement.
 Date of Sampling : 28.08.2019
 Date of Sample Receiving : 30.08.2019
 Date of Analysis : 30.08.2019 to 06.09.2019
 Source of Sample : Parwa Village Hand pump

Sl. No.	TESTS	PROTOCOL	RESULT	Detection Range	INDIAN STANDARDS as per IS 10500:1991(Reaff:2012)	
					Desirable	Permissible
1.	Colour (Hazen unit)	APHA, 23 rd Ed. 2017, 2120 B	<5.0	5-100	5.00	15.0
2.	Odour	APHA, 23 rd Ed. 2017, 2150 B	Agreeable	Qualitative	Agreeable	Agreeable
3.	pH	APHA, 23 rd Ed. 2017, 4500H+ A+B	7.29	2.0-12	6.5-8.5	No Relax.
4.	Total Dissolved Solids as TDS (mg/l)	APHA, 23 rd Ed. 2017, 2540-C	515.0	5-5000	500	2000
5.	Alkalinity (mg/l)	APHA, 23 rd Ed. 2017, 2320 A+D	172.0	5-1500	200	600
6.	Total Hardness as CaCO ₃ (mg/l)	APHA, 23 rd Ed. 2017, 2340 A+C	208.0	5-1500	200.0	600.0
7.	Calcium as Ca (mg/l)	APHA, 23 rd Ed. 2017, 3500 Ca A+B	64.0	5-1000	75.0	200.0
8.	Magnesium as Mg (mg/l)	APHA, 23 rd Ed. 2017, 3500 Mg A+B	11.60	5-1000	30.0	100.0
9.	Copper as Cu (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.05-5	0.05	1.5
10.	Iron as Fe (mg/l)	APHA, 23 rd Ed. 2017, 3500 Fe B	0.20	0.02-50	0.3	No Relax.
11.	Manganese as Mn (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.1-5	0.10	0.30
12.	Chloride as Cl (mg/l)	APHA, 23 rd Ed. 2017, 4500 Cl A+B	38.0	5-1000	250.0	1000.0
13.	Sulfate as SO ₄ (mg/l)	APHA, 23 rd Ed. 2017, 4500-SO ₄ ²⁻ E	42.2	1.0-250	200.0	400.0
14.	Nitrate Nitrogen as NO ₃ (mg/l)	APHA, 23 rd Ed. 2017, 4500-NO ₃ ⁻ B	15.01	5.0-100	45.0	No Relax.
15.	Fluorides as F (mg/l)	APHA, 23 rd Ed. 2017, 4500-C	0.23	0.05-10	1.0	1.5
16.	Phenolic Compounds as C ₆ H ₅ OH (mg/l)	APHA, 23 rd Ed. 2017, 5530 A+C	BDL	1-10	0.001	0.002
17.	Mercury as Hg (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.001-1	0.001	No Relax.
18.	Cadmium as Cd (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.002-2	0.003	No Relax.
19.	Arsenic as As (mg/l)	APHA, 23 rd Ed. 2017, 3114 C	BDL	0.01-2	0.01	0.05
20.	Lead as Pb (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL	0.01-2	0.01	No Relax.
21.	Zinc as Zn (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	0.71	0.02-50	5.0	15
22.	Anionic Detergents (As MBAS)(mg/l) max	APHA 22nd EDN:2012, 5540 A+C	BDL	0.01-5	0.2	1.0
23.	Chromium (Hexavalent) (mg/l)	APHA, 23 rd Ed. 2017, 3111A+B	BDL	0.05-20	0.05	No Relax.
24.	Mineral Oil 6 (mg/l)	IS 3025 (Part 39) Class -6 Infrared Partition Method	BDL	0.01-10	0.5	No Relax.
25.	Free Residual Chlorine (mg/l)	APHA, 23 rd Ed. 2017, 4500-Cl B	BDL	0.5-10	0.20	1.0
26.	Boron as B (mg/l)	APHA, 23 rd Ed. 2017, 4500 B A+C	0.22	0.2-10	0.5	1.0
27.	Total coliform (MPN/100 ml)	APHA, 23 rd Ed. 2017, 9221 B+C	Absent	1.8	0.05	Absent
28.	E.coli (MPN/100 ml)	APHA, 23 rd Ed. 2017, 9221 B+E	Absent	1.8	Absent	Absent

Note: BDL – Below Detection Limit


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CERTIFICATE OF ANALYSIS

Report Number: GGMP/634/01

Reporting Date: 16.09.2019

Adani Power Jharkhand Ltd.

2 x 800 MW Godda Thermal Power Project,
Village: Motia, Dist: Godda, Jharkhand

Kind Attention :-
Contact No. :-
Mail ID :-

SAMPLE DETAILS

Lab ID	: Lab/634/01	Sampling Start Date	: 09.09.2019
Sample Drawn By	: Chandan Kumar	Sampling End Date	: 10.09.2019
Sample Type	: Ambient Air	Sample Receipt Date	: 11.09.2019
Sample Description	: Near Motia Village	Analysis Start-End Date	: 11.09.2019 to 15.09.2019
Env. Cond.-Sampling	: Ambient Temperature	Total Sampling hours	: 24
Env. Cond. -Sample Receipt	: Satisfactory	Env. Cond. -Testing	: 25±5°C

Sr. No.	Parameters	Results	Unit	Test Method	NAAQ Standards
1	Particulate Matter (PM ₁₀)	44.3	µg/m ³	IS 5182 (Pt 23): RA 2012	100
2	Particulate Matter (PM _{2.5})	16.3	µg/m ³	GGMP/SOP/AA/60	60
3	Sulphur Dioxide (SO ₂)	6.6	µg/m ³	IS 5182 (Pt 02): RA 2009	80
4	Nitrogen Dioxide (NO ₂)	17.2	µg/m ³	IS 5182 (Pt 06) : 2006	80

* Indicates these parameters are not covered under NABL Scope
NS= Not Specified, BQL=Below Quantification Limit, QL= Quantification Limit



Analyzed By

Ramsukh Gargama, Lab Chemist





Authorized Signatory

Pratiksha Raval, Lab Manager

Terms & Conditions :

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Page 1 of 1

CERTIFICATE OF ANALYSIS

Report Number: GGMP/634/02

Reporting Date: 16.09.2019

Adani Power Jharkhand Ltd.

2 × 800 MW Godda Thermal Power Project,
Village: Motia, Dist: Godda, Jharkhand

Kind Attention :-
Contact No. :-
Mail ID :-

SAMPLE DETAILS

Lab ID	: Lab/634/02	Sampling Start Date	: 09.09.2019
Sample Drawn By	: Chandan Kumar	Sampling End Date	: 10.09.2019
Sample Type	: Ambient Air	Sample Receipt Date	: 11.09.2019
Sample Description	: Near Mali Village	Analysis Start-End Date	: 11.09.2019 to 15.09.2019
Env. Cond.-Sampling	: Ambient Temperature	Total Sampling hours	: 24
Env. Cond. -Sample Receipt	: Satisfactory	Env. Cond. -Testing	: 25±5°C

Sr. No.	Parameters	Results	Unit	Test Method	NAAQ Standards
1	Particulate Matter (PM ₁₀)	46.1	µg/m ³	IS 5182 (Pt 23): RA 2012	100
2	Particulate Matter (PM _{2.5})	14.8	µg/m ³	GGMPL/SOP/AA/60	60
3	Sulphur Dioxide (SO ₂)	6.4	µg/m ³	IS 5182 (Pt 02): RA 2009	80
4	Nitrogen Dioxide (NO ₂)	16.9	µg/m ³	IS 5182 (Pt 06) : 2006	80

* Indicates these parameters are not covered under NABL Scope
NS= Not Specified, BQL=Below Quantification Limit, QL= Quantification Limit


Analyzed By

Ramsukh Gargama, Lab Chemist




Authorized Signatory

Pratiksha Raval, Lab Manager

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CERTIFICATE OF ANALYSIS

Report Number: GGMP/634/03

Reporting Date: 16.09.2019

Adani Power Jharkhand Ltd.

2 x 800 MW Godda Thermal Power Project,
Village: Motia, Dist: Godda, Jharkhand

Kind Attention :-
Contact No. :-
Mail ID :-

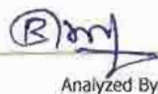
SAMPLE DETAILS

Lab ID	: Lab/634/03	Sampling Start Date	: 09.09.2019
Sample Drawn By	: Chandan Kumar	Sampling End Date	: 10.09.2019
Sample Type	: Ambient Air	Sample Receipt Date	: 11.09.2019
Sample Description	: Near Nayabad Village	Analysis Start-End Date	: 11.09.2019 to 15.09.2019
Env. Cond.-Sampling	: Ambient Temperature	Total Sampling hours	: 24
Env. Cond. -Sample Receipt	: Satisfactory	Env. Cond. -Testing	: 25±5°C

Sr. No.	Parameters	Results	Unit	Test Method	NAAQ Standards
1	Particulate Matter (PM ₁₀)	51.4	µg/m ³	IS 5182 (Pt 23): RA 2012	100
2	Particulate Matter (PM _{2.5})	17.6	µg/m ³	GGMPL/SOP/AA/60	60
3	Sulphur Dioxide (SO ₂)	6.4	µg/m ³	IS 5182 (Pt 02): RA 2009	80
4	Nitrogen Dioxide (NO ₂)	17.7	µg/m ³	IS 5182 (Pt 06) : 2006	80

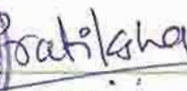
* Indicates these parameters are not covered under NABL Scope

NS= Not Specified, BQL=Below Quantification Limit, QL= Quantification Limit


Analyzed By

Ramsukh Gargama, Lab Chemist




Authorized Signatory

Pratiksha Raval, Lab Manager

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CERTIFICATE OF ANALYSIS

Report Number: GGMP/643/01

Reporting Date: 19.09.2019

Adani Power Jharkhand Ltd.

2 × 800 MW Godda Thermal Power Project,
Village: Motia, Dist: Godda, Jharkhand


Kind Attention :-
Contact No. :-
Mail ID :-

SAMPLE DETAILS

Lab ID	: Lab/643/01	Sampling Start Date	: 12.09.2019
Sample Drawn By	: Chandan Kumar	Sampling End Date	: 13.09.2019
Sample Type	: Ambient Air	Sample Receipt Date	: 14.09.2019
Sample Description	: Near Motia Village	Analysis Start-End Date	: 14.09.2019 to 18.09.2019
Env. Cond.-Sampling	: Ambient Temperature	Total Sampling hours	: 24
Env. Cond. -Sample Receipt	: Satisfactory	Env. Cond. -Testing	: 25±5°C

Sr. No.	Parameters	Results	Unit	Test Method	NAAQ Standards
1	Particulate Matter (PM ₁₀)	56.4	µg/m ³	IS 5182 (Pt 23): RA 2012	100
2	Particulate Matter (PM _{2.5})	19.0	µg/m ³	GGMP/SOP/AA/60	60
3	Sulphur Dioxide (SO ₂)	5.7	µg/m ³	IS 5182 (Pt 02): RA 2009	80
4	Nitrogen Dioxide (NO ₂)	16.5	µg/m ³	IS 5182 (Pt 06) : 2006	80

* Indicates these parameters are not covered under NABL Scope
NS= Not Specified, BQL=Below Quantification Limit, QL= Quantification Limit


Analyzed By

Ramsukh Gargama, Lab Chemist




Authorized Signatory

Pratiksha Raval, Lab Manager

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Report can not be used as an evidence anywhere without prior permission.

Sample will be retained (wherever applicable) only for 15 days from the date of sampling.

Total liability of our institution is limited to the Invoiced amount.

Endorsement of products is neither inferred nor implied.

Any dispute arising out of this test report is subject to Ahmedabad Jurisdiction

CERTIFICATE OF ANALYSIS

Report Number: GGMP/643/02

Reporting Date: 19.09.2019

Adani Power Jharkhand Ltd.

2 × 800 MW Godda Thermal Power Project,
Village: Motia, Dist: Godda, Jharkhand

Kind Attention :-
Contact No. :-
Mail ID :-

SAMPLE DETAILS

Lab ID	: Lab/643/02	Sampling Start Date	: 12.09.2019
Sample Drawn By	: Chandan Kumar	Sampling End Date	: 13.09.2019
Sample Type	: Ambient Air	Sample Receipt Date	: 14.09.2019
Sample Description	: Near Mall Village	Analysis Start-End Date	: 14.09.2019 to 18.09.2019
Env. Cond.-Sampling	: Ambient Temperature	Total Sampling hours	: 24
Env. Cond. -Sample Receipt	: Satisfactory	Env. Cond. -Testing	: 25±0.5 C

Sr. No.	Parameters	Results	Unit	Test Method	NAAQ Standards
1	Particulate Matter (PM ₁₀)	58.6	µg/m ³	IS 5182 (Pt 23): RA 2012	100
2	Particulate Matter (PM _{2.5})	19.0	µg/m ³	GGMP/SOP/AA/60	60
3	Sulphur Dioxide (SO ₂)	6.6	µg/m ³	IS 5182 (Pt 02): RA 2009	80
4	Nitrogen Dioxide (NO ₂)	18.4	µg/m ³	IS 5182 (Pt 06) : 2006	80

* Indicates these parameters are not covered under NABL Scope

NS= Not Specified, BQL=Below Quantification Limit, QL= Quantification Limit



Analyzed By

Ramsukh Gargama, Lab Chemist




Authorized Signatory

Pratiksha Raval, Lab Manager

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Page 1 of 1

CERTIFICATE OF ANALYSIS

Report Number: GGML/643/03

Reporting Date: 19.09.2019

Adani Power Jharkhand Ltd.

2 x 800 MW Godda Thermal Power Project,
Village: Motia, Dist: Godda, Jharkhand

Kind Attention :-
Contact No. :-
Mail ID :-

SAMPLE DETAILS

Lab ID	: Lab/643/03	Sampling Start Date	: 12.09.2019
Sample Drawn By	: Chandan Kumar	Sampling End Date	: 13.09.2019
Sample Type	: Ambient Air	Sample Receipt Date	: 14.09.2019
Sample Description	: Near Nayabad Village	Analysis Start-End Date	: 14.09.2019 to 18.09.2019
Env. Cond.-Sampling	: Ambient Temperature	Total Sampling hours	: 24
Env. Cond. -Sample Receipt	: Satisfactory	Env. Cond. -Testing	: 25±5°C

Sr. No.	Parameters	Results	Unit	Test Method	NAAQ Standards
1	Particulate Matter (PM ₁₀)	57.4	µg/m ³	IS 5182 (Pt 23): RA 2012	100
2	Particulate Matter (PM _{2.5})	17.4	µg/m ³	GGMPL/SOP/AA/60	60
3	Sulphur Dioxide (SO ₂)	7.6	µg/m ³	IS 5182 (Pt 02): RA 2009	80
4	Nitrogen Dioxide (NO ₂)	19.2	µg/m ³	IS 5182 (Pt 06) : 2006	80

* Indicates these parameters are not covered under NABL Scope

NS= Not Specified, BQL=Below Quantification Limit, QL= Quantification Limit


Analyzed By

Ramsukh Gargama, Lab Chemist




Authorized Signatory

Pratiksha Raval, Lab Manager

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CERTIFICATE OF ANALYSIS

Report Number: GGMP/653/01

Reporting Date: 23.09.2019

Adani Power Jharkhand Ltd.

2 x 800 MW Godda Thermal Power Project,
Village: Motia, Dist: Godda, Jharkhand

Kind Attention :-
Contact No. :-
Mail ID :-

SAMPLE DETAILS

Lab ID	: Lab/653/01	Sampling Start Date	: 16.09.2019
Sample Drawn By	: Chandan Kumar	Sampling End Date	: 17.09.2019
Sample Type	: Ambient Air	Sample Receipt Date	: 18.09.2019
Sample Description	: Near Motia Village	Analysis Start-End Date	: 18.09.2019 to 22.09.2019
Env. Cond.-Sampling	: Ambient Temperature	Total Sampling hours	: 24
Env. Cond. -Sample Receipt	: Satisfactory	Env. Cond. -Testing	: 25±5°C

Sr. No.	Parameters	Results	Unit	Test Method	NAAQ Standards
1	Particulate Matter (PM ₁₀)	59.0	µg/m ³	IS 5182 (Pt 23): RA 2012	100
2	Particulate Matter (PM _{2.5})	18.0	µg/m ³	GGMP/SOP/AA/60	60
3	Sulphur Dioxide (SO ₂)	6.2	µg/m ³	IS 5182 (Pt 02): RA 2009	80
4	Nitrogen Dioxide (NO ₂)	15.6	µg/m ³	IS 5182 (Pt 06) : 2006	80
5	Mercury (Hg)	BQL(QL=0.02)	µg/m ³	317 B James Edition	NS

* Indicates these parameters are not covered under NABL Scope

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Analyzed By

Ramsukh Gargama, Lab Chemist




Authorized Signatory

Pratiksha Raval, Lab Manager

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Page 1 of 1

CERTIFICATE OF ANALYSIS

Report Number: GGMP/653/02

Reporting Date: 23.09.2019

Adani Power Jharkhand Ltd.

2 x 800 MW Godda Thermal Power Project,
Village: Motia, Dist: Godda, Jharkhand

Kind Attention :-
Contact No. :-
Mail ID :-

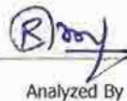
SAMPLE DETAILS

Lab ID	: Lab/653/02	Sampling Start Date	: 16.09.2019
Sample Drawn By	: Chandan Kumar	Sampling End Date	: 17.09.2019
Sample Type	: Ambient Air	Sample Receipt Date	: 18.09.2019
Sample Description	: Near Mali Village	Analysis Start-End Date	: 18.09.2019 to 22.09.2019
Env. Cond.-Sampling	: Ambient Temperature	Total Sampling hours	: 24
Env. Cond. -Sample Receipt	: Satisfactory	Env. Cond. -Testing	: 25±5°C

Sr. No.	Parameters	Results	Unit	Test Method	NAAQ Standards
1	Particulate Matter (PM ₁₀)	63.0	µg/m ³	IS 5182 (Pt 23): RA 2012	100
2	Particulate Matter (PM _{2.5})	18.8	µg/m ³	GGMP/SOP/AA/60	60
3	Sulphur Dioxide (SO ₂)	5.6	µg/m ³	IS 5182 (Pt 02): RA 2009	80
4	Nitrogen Dioxide (NO ₂)	16.2	µg/m ³	IS 5182 (Pt 06) : 2006	80
5	Mercury (Hg)	BQL(QL=0.02)	µg/m ³	317 B James Edition	NS

* Indicates these parameters are not covered under NABL Scope

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Analyzed By

Ramsukh Gargama, Lab Chemist




Authorized Signatory

Pratiksha Raval, Lab Manager

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CERTIFICATE OF ANALYSIS

Report Number: GGMP/653/03

Reporting Date: 23.09.2019

Adani Power Jharkhand Ltd.

2 x 800 MW Godda Thermal Power Project,
Village: Motia, Dist: Godda, Jharkhand

Kind Attention :-
Contact No. :-
Mail ID :-

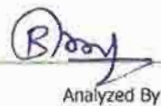
SAMPLE DETAILS

Lab ID	: Lab/653/03	Sampling Start Date	: 16.09.2019
Sample Drawn By	: Chandan Kumar	Sampling End Date	: 17.09.2019
Sample Type	: Ambient Air	Sample Receipt Date	: 18.09.2019
Sample Description	: Near Navabad Village	Analysis Start-End Date	: 18.09.2019 to 22.09.2019
Env. Cond.-Sampling	: Ambient Temperature	Total Sampling hours	: 24
Env. Cond. -Sample Receipt	: Satisfactory	Env. Cond. -Testing	: 25°C

Sr. No.	Parameters	Results	Unit	Test Method	NAAQ Standards
1	Particulate Matter (PM ₁₀)	64.8	µg/m ³	IS 5182 (Pt 23): RA 2012	100
2	Particulate Matter (PM _{2.5})	18.1	µg/m ³	GGMP/SOP/AA/60	60
3	Sulphur Dioxide (SO ₂)	5.6	µg/m ³	IS 5182 (Pt 02): RA 2009	80
4	Nitrogen Dioxide (NO ₂)	17.2	µg/m ³	IS 5182 (Pt 06) : 2006	80
5	Mercury (Hg)	BQL(QL=0.02)	µg/m ³	317 B James Edition	NS

* Indicates these parameters are not covered under NABL Scope

NS= Not Specified, BQL=Below Quantification Limit, QL= Quantification Limit


Analyzed By

Ramsukh Gargama, Lab Chemist




Authorized Signatory

Pratiksha Raval, Lab Manager

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CERTIFICATE OF ANALYSIS

Report Number : GGMP/653/04

Reporting Date: 23.09.2019

Adani Power Jharkhand Ltd.

2 × 800 MW Godda Thermal Power Project,
Village: Motia, Dist: Godda, Jharkhand

Kind Attention :-

Contact No. :-

Mail ID :-

SAMPLE DETAILS

Lab ID	: Lab/653/04 to Lab/653/05	Sampling Date	: 16.09.2019
Location	: Nr. Patwa Village	Sample Description	: Noise Monitoring
Sampling Instrument	: Sound Level Meter	Ldn	: -
Lmax (Day)	: -	Lmax (Night)	: -
Lmin (Day)	: -	Lmin (Night)	: -
Leq (Day)	: 46.2	Leq (Night)	: 42.1

Lab ID	Location	Time	Unit	Test Method	Max	Min	Norms
Lab/653/04	Nr. Patwa Village	Day Time	dB (A) Leq	IS 9989: RA (2001)	57.5	50.4	75
Lab/653/05	Nr. Patwa Village	Night Time	dB (A) Leq	IS 9989: RA (2001)	49.7	45.5	70

* Indicates these parameters are not covered under NABL Scope
NS= Not Specified, BQL=Below Quantification Limit, QL= Quantification Limit

Chandan Kumar

Analyzed By

Chandan Kumar, Field Technician



Pratiksha

Authorized Signatory

Pratiksha Raval, Lab Manager

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CERTIFICATE OF ANALYSIS

Report Number : GGMP/653/05

Reporting Date: 23.09.2019

Adani Power Jharkhand Ltd.

2 × 800 MW Godda Thermal Power Project,
Village: Motia, Dist: Godda, Jharkhand

Kind Attention : -

Contact No. : -

Mail ID : -

SAMPLE DETAILS

Lab ID	: Lab/653/06 to Lab/653/07	Sampling Date	: 16.09.2019
Location	: Nr. Motia Village	Sample Description	: Noise Monitoring
Sampling Instrument	: Sound Level Meter	Ldn	: -
Lmax (Day)	: -	Lmax (Night)	: -
Lmin (Day)	: -	Lmin (Night)	: -
Leq (Day)	: 47.9	Leq (Night)	: 43.5

Lab ID	Location	Time	Unit	Test Method	Max	Min	Norms
Lab/653/06	Nr. Motia Village	Day Time	dB (A) Leq	IS 9989: RA (2001)	59.1	52.2	75
Lab/653/07	Nr. Motia Village	Night Time	dB (A) Leq	IS 9989: RA (2001)	51.3	46.3	70

* Indicates these parameters are not covered under NABL Scope

NS= Not Specified, BQL=Below Quantification Limit, QL= Quantification Limit

Chandan Kumar

Analyzed By

Chandan Kumar, Field Technician



Pratiksha

Authorized Signatory

Pratiksha Raval, Lab Manager

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CERTIFICATE OF ANALYSIS

Report Number : GGMPL/653/06

Reporting Date: 23.09.2019

Adani Power Jharkhand Ltd.

2 × 800 MW Godda Thermal Power Project,
Village: Motia, Dist: Godda, Jharkhand

Kind Attention :-

Contact No. :-

Mail ID :-

SAMPLE DETAILS

Lab ID	: Lab/653/08 to Lab/653/09	Sampling Date	: 16.09.2019
Location	: Nr. Mali Village	Sample Description	: Noise Monitoring
Sampling Instrument	: Sound Level Meter	Ldn	: -
Lmax (Day)	: -	Lmax (Night)	: -
Lmin (Day)	: -	Lmin (Night)	: -
Leq (Day)	: 45.0	Leq (Night)	: 40.3

Lab ID	Location	Time	Unit	Test Method	Max	Min	Norms
Lab/653/08	Nr.Mali Village	Day Time	dB (A) Leq	IS 9989: RA (2001)	55.5	51.7	75
Lab/653/09	Nr.Mali Village	Night Time	dB (A) Leq	IS 9989: RA (2001)	47.6	44.5	70

* Indicates these parameters are not covered under NABL Scope

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Chandan Kumar
Analyzed By

Chandan Kumar, Field Technician



Pratiksha
Authorized Signatory

Pratiksha Raval, Lab Manager

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CERTIFICATE OF ANALYSIS

Report Number : GGMPL/653/07

Reporting Date: 23.09.2019.

Adani Power Jharkhand Ltd.

2 × 800 MW Godda Thermal Power Project,
Village: Motia, Dist: Godda, Jharkhand

Kind Attention :-

Contact No. :-

Mail ID :-

SAMPLE DETAILS

Lab ID	: Lab/653/10 to Lab/653/11	Sampling Date	: 16.09.2019
Location	: Nr. Navabad Village	Sample Description	: Noise Monitoring
Sampling Instrument	: Sound Level Meter	Ldn	: -
Lmax (Day)	: -	Lmax (Night)	: -
Lmin (Day)	: -	Lmin (Night)	: -
Leq (Day)	: 46.8	Leq (Night)	: 38.9

Lab ID	Location	Time	Unit	Test Method	Max	Min	Norms
Lab/653/10	Nr. Navabad Village	Day Time	dB (A) Leq	IS 9989: RA (2001)	57.7	52.4	75
Lab/653/11	Nr. Navabad Village	Night Time	dB (A) Leq	IS 9989: RA (2001)	46.5	42.3	70

* Indicates these parameters are not covered under NABL Scope

NS= Not Specified, BQL=Below Quantification Limit, QL= Quantification Limit

Chandran Kumar
Analyzed By

Chandan Kumar, Field Technician



Pratiksha
Authorized Signatory

Pratiksha Raval, Lab Manager

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CERTIFICATE OF ANALYSIS

Report Number : GGMPL/653/08

Reporting Date: 23.09.2019

Adani Power Jharkhand Ltd.

2 x 800 MW Godda Thermal Power Project,
Village: Motia, Dist: Godda, Jharkhand

Kind Attention :-

Contact No. :-

Mail ID :-

SAMPLE DETAILS

Lab ID	: Lab/653/12 to Lab/653/13	Sampling Date	: 16.09.2019
Location	: Nr. HTG Residential Area	Sample Description	: Noise Monitoring
Sampling Instrument	: Sound Level Meter	Ldn	: -
Lmax (Day)	: -	Lmax (Night)	: -
Lmin (Day)	: -	Lmin (Night)	: -
Leq (Day)	: 54.1	Leq (Night)	: 41.3

Lab ID	Location	Time	Unit	Test Method	Max	Min	Norms
Lab/653/12	Nr. HTG Residential Area	Day Time	dB (A) Leq	IS 9989: RA (2001)	65.2	59.1	75
Lab/653/13	Nr. HTG Residential Area	Night Time	dB (A) Leq	IS 9989: RA (2001)	48.3	46.1	70

* Indicates these parameters are not covered under NABL Scope

NS= Not Specified, BQL=Below Quantification Limit, QL= Quantification Limit

Chandan Kumar

Analyzed By

Chandan Kumar, Field Technician



Pratiksha

Authorized Signatory

Pratiksha Raval, Lab Manager

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CERTIFICATE OF ANALYSIS

Report Number : GGMP/653/09

Reporting Date: 23.09.2019

Adani Power Jharkhand Ltd.

2 x 800 MW Godda Thermal Power Project,
Village: Motia, Dist: Godda, Jharkhand

Kind Attention :-

Contact No. :-

Mail ID :-

SAMPLE DETAILS

Lab ID	: Lab/653/14 to Lab/653/15	Sampling Date	: 16.09.2019
Location	: Nr. Adani Office	Sample Description	: Noise Monitoring
Sampling Instrument	: Sound Level Meter	Ldn	: -
Lmax (Day)	: -	Lmax (Night)	: -
Lmin (Day)	: -	Lmin (Night)	: -
Leq (Day)	: 56.6	Leq (Night)	: 47.3

Lab ID	Location	Time	Unit	Test Method	Max	Min	Norms
Lab/653/14	Nr. Adani Office	Day Time	dB (A) Leq	IS 9989: RA (2001)	68.1	59.7	75
Lab/653/15	Nr. Adani Office	Night Time	dB (A) Leq	IS 9989: RA (2001)	55.5	48.5	70

* Indicates these parameters are not covered under NABL Scope

NS= Not Specified, BQL=Below Quantification Limit, QL= Quantification Limit

Chandana Kumar

Analyzed By

Chandana Kumar, Field Technician



Pratiksha Raval

Authorized Signatory

Pratiksha Raval, Lab Manager

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CERTIFICATE OF ANALYSIS

Report Number: : GGMPL/653/10

Reporting Date: 26.09.2019

Adani Power Jharkhand Ltd.

2 x 800 MW Godda Thermal Power Project,
Village: Motia, Dist: Godda, Jharkhand

Kind Attention : :-
Contact No. : :-
Mail ID : :-

SAMPLE DETAILS

Lab ID	: Lab/653/16	Sampling Date	: 16.09.2019
Sample Drawn By	: Chandan Kumar	Sample Receipt Date	: 17.09.2019
Sample Type	: Ground Water	Analysis Start Date	: 18.09.2019
Sample Description	: Motia Village, Hand Pump	Analysis End Date	: 25.09.2019
Sample Quantity	: 2L	Sampling Method	: IS 3025/APHA
Sample Condition	: Satisfactory	Packing	: Sealed

Sr. No.	Parameters	Results	Unit	Test Method	AL	PL
1	Colour	BQL(QL=1)	Hazen	IS 3025 (Pt 04): RA 2017	5	15
2	Odour	Agreeable	...	IS 3025 (Pt 05): RA 2006	Agreeable	Agreeable
3	pH @ 25 °C	7.24	...	IS 3025 (Pt 11): RA 2006	6.5 to 8.5	No Relaxation
4	Temperature °C	28	°C	APHA 23rd Edn 2017 2550 B	-	-
5	Taste	Agreeable	...	IS 3025 (Pt 08): RA 2006	Agreeable	Agreeable
6	Turbidity	BQL(QL=0.1)	NTU	APHA 23rd Edn 2017 2130 B	1	5
7	Total Dissolved Solids @ 180 °C	326	mg/L	APHA 23rd Edn 2017 2540 C	500	2000
8	Total Hardness as CaCO ₃	188	mg/L	APHA 23rd Edn 2017 2340 C	200	600
9	Alkalinity as CaCO ₃	100	mg/L	APHA 23rd Edn 2017 2320 B	200	600
10	Calcium as Ca	44.8	mg/L	APHA 23rd Edn 2017 3500 Ca B	75	200
11	Chloride	12	mg/L	IS 3025 (Pt 32): RA 2007	250	1000
12	Sulphate	23.4	mg/L	APHA 23rd Edn 2017 4500 SO ₄ E	200	400

* Indicates these parameters are not covered under NABL Scope

NS= Not Specified, BQL=Below Quantification Limit, QL= Quantification Limit, AL = Acceptable Limit, PL = Permissible Limit


Analyzed By

Ramsukh Gargama, Lab Chemist




Authorized Signatory

Pratiksha Raval, Lab Manager

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CERTIFICATE OF ANALYSIS

Report Number: : GGMP/653/10

Reporting Date: 26.09.2019

Adani Power Jharkhand Ltd.

2 x 800 MW Godda Thermal Power Project,
Village: Motia, Dist: Godda, Jharkhand

Kind Attention : :-
Contact No. : :-
Mail ID : :-


SAMPLE DETAILS

Lab ID	: Lab/653/16	Sampling Date	: 16.09.2019
Sample Drawn By	: Chandan Kumar	Sample Receipt Date	: 17.09.2019
Sample Type	: Ground Water	Analysis Start Date	: 18.09.2019
Sample Description	: Motia Village, Hand Pump	Analysis End Date	: 25.09.2019
Sample Quantity	: 2L	Sampling Method	: IS 3025/APHA
Sample Condition	: Satisfactory	Packing	: Sealed

Sr. No.	Parameters	Results	Unit	Test Method	AL	PL
13	Nitrate	9.5	mg/L	IS 3025 (Pt 34): RA 2017	45	No Relaxation
14	Iron	0.21	mg/L	APHA 23rd Edn 2017 3500 Fe B	0.3	No Relaxation
15	Fluoride	BQL(QL=1)	mg/L	APHA 23rd Edn 2017 4500 F D	1	1.5
16	Hexavalent Chromium as Cr ⁶⁺	BQL(QL=0.01)	mg/L	APHA 23rd Edn 2017 3500 Cr B	-	-
17	Phenolic Compounds*	BQL(QL=0.001)	mg/L	IS 3025 (Pt 43): RA 2003	0.001	0.002
18	Residual Chlorine	BQL(QL=0.05)	mg/L	APHA 23rd Edn 2017 4500 Cl B	0.2	1
19	Cyanide*	BQL(QL=0.01)	mg/L	APHA 23rd Edn 2017 4500 CN C ,E	0.05	No Relaxation
20	Aluminum (Al)	BQL(QL=0.001)	mg/L	IS 3025 (Pt 55): RA 2009	0.03	0.2
21	Arsenic (As)	BQL(QL=0.01)	mg/L	APHA 23rd Edn 2017 3111 B	0.01	0.05
22	Boron (B)	0.25	mg/L	APHA 23rd Edn 2017 4500 B C	0.5	1
23	Cadmium (Cd)	BQL(QL=0.001)	mg/L	APHA 23rd Edn 2017 3111 B	0.003	No Relaxation
24	Copper (Cu)	BQL(QL=0.01)	mg/L	APHA 23rd Edn 2017 3111 B	0.05*	1.5

* Indicates these parameters are not covered under NABL Scope

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Analyzed By

Ramsukh Gargama, Lab Chemist




Authorized Signatory

Pratiksha Raval, Lab Manager

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Sample will be retained (wherever applicable) only for 15 days from the date of sampling.

Total liability of our institution is limited to the invoiced amount.

Endorsement of products is neither inferred nor implied.

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CERTIFICATE OF ANALYSIS

Report Number: : GGMPL/653/10

Reporting Date: 26.09.2019

Adani Power Jharkhand Ltd.

2 x 800 MW Godda Thermal Power Project,
Village: Motia, Dist: Godda, Jharkhand

Kind Attention : :-
Contact No. : :-
Mail ID : :-

SAMPLE DETAILS

Lab ID	: Lab/653/16	Sampling Date	: 16.09.2019
Sample Drawn By	: Chandan Kumar	Sample Receipt Date	: 17.09.2019
Sample Type	: Ground Water	Analysis Start Date	: 18.09.2019
Sample Description	: Motia Village, Hand Pump	Analysis End Date	: 25.09.2019
Sample Quantity	: 2L	Sampling Method	: IS 3025/APHA
Sample Condition	: Satisfactory	Packing	: Sealed

Sr. No.	Parameters	Results	Unit	Test Method	AL	PL
25	Lead (Pb)	BQL(QL=0.01)	mg/L	APHA 23rd Edn 2017 3111 B	0.01	No Relaxation
26	Manganese (Mg)	BQL(QL=0.05)	mg/L	APHA 23rd Edn 2017 3111 B	0.1	0.3
27	Mercury (Hg)	BQL(QL=0.001)	mg/L	APHA 23rd Edn 2017 3112 B	0.001	No Relaxation
28	Selenium (Se)	BQL(QL=0.001)	mg/L	IS 3025 (Pt 56): 2003	0.01	No Relaxation
29	Zinc (Zn)	0.23	mg/L	APHA 23rd Edn 2017 3111 B	5	15
30	Detergent	BQL(QL=0.05)	mg/L	Annex K of IS 13428	0.2	1
31	Magnesium (Mg)	18.5	mg/L	APHA 23rd Edn 2017 3500 Mg B	30	100
32	E.Coli (MPN/100 ml)	Absent	MPN/100ml	IS 1622-1981: RA 2009	Absent	Absent
33	Total Coliform	Absent	MPN/100 mL	IS 1622: RA 2009	-	Absent

* Indicates these parameters are not covered under NABL Scope

NS= Not Specified, BQL=Below Quantification Limit, QL= Quantification Limit, AL = Acceptable Limit, PL = Permissible Limit


Analyzed By

Ramsukh Gargama, Lab Chemist




Authorized Signatory

Pratiksha Raval, Lab Manager

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CERTIFICATE OF ANALYSIS

Report Number: : GGMP/653/10

Reporting Date: 26.09.2019

Adani Power Jharkhand Ltd.

2 x 800 MW Godda Thermal Power Project,
Village: Motia, Dist: Godda, Jharkhand

Kind Attention :-

Contact No. :-

Mail ID :-

SAMPLE DETAILS

Lab ID	: Lab/653/16	Sampling Date	: 16.09.2019
Sample Drawn By	: Chandan Kumar	Sample Receipt Date	: 17.09.2019
Sample Type	: Ground Water	Analysis Start Date	: 18.09.2019
Sample Description	: Motia Village, Hand Pump	Analysis End Date	: 25.09.2019
Sample Quantity	: 2L	Sampling Method	: IS 3025/APHA
Sample Condition	: Satisfactory	Packing	: Sealed

Sr. No.	Parameters	Results	Unit	Test Method	AL	PL
1	Colour*	BQL(QL=1)	Hazen	IS 3025 (Pt 04): RA 2017	5	15
2	Odour*	Agreeable	...	IS 3025 (Pt 05): RA 2006	Agreeable	Agreeable
3	pH @ 25 °C	7.24	...	IS 3025 (Pt 11): RA 2006	6.5 to 8.5	No Relaxation
4	Temperature °C	28	°C	APHA 23rd Edn 2017 2550 B	-	-
5	Taste*	Agreeable	...	IS 3025 (Pt 08): RA 2006	Agreeable	Agreeable
6	Turbidity	BQL(QL=0.1)	NTU	APHA 23rd Edn 2017 2130 B	1	5
7	Total Dissolved Solids @ 180 °C	326	mg/L	APHA 23rd Edn 2017 2540 C	500	2000
8	Total Hardness as CaCO ₃	188	mg/L	APHA 23rd Edn 2017 2340 C	200	600
9	Alkalinity as CaCO ₃	100	mg/L	APHA 23rd Edn 2017 2320 B	200	600
10	Calcium as Ca	44.8	mg/L	APHA 23rd Edn 2017 3500 Ca B	75	200
11	Chloride	12	mg/L	IS 3025 (Pt 32): RA 2007	250	1000
12	Sulphate	23.4	mg/L	APHA 23rd Edn 2017 4500 SO ₄ E	200	400

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Analyzed By

Ramsukh Gargama, Lab Chemist




Authorized Signatory

Pratiksha Raval, Lab Manager

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CERTIFICATE OF ANALYSIS

Report Number: : GGMP/653/10

Reporting Date: 26.09.2019

Adani Power Jharkhand Ltd.

2 x 800 MW Godda Thermal Power Project,
Village: Motia, Dist: Godda, Jharkhand

Kind Attention : :-
Contact No. : :-
Mail ID : :-

SAMPLE DETAILS

Lab ID	: Lab/653/16	Sampling Date	: 16.09.2019
Sample Drawn By	: Chandan Kumar	Sample Receipt Date	: 17.09.2019
Sample Type	: Ground Water	Analysis Start Date	: 18.09.2019
Sample Description	: Motia Village, Hand Pump	Analysis End Date	: 25.09.2019
Sample Quantity	: 2L	Sampling Method	: IS 3025/APHA
Sample Condition	: Satisfactory	Packing	: Sealed

Sr. No.	Parameters	Results	Unit	Test Method	AL	PL
13	Nitrate	9.5	mg/L	IS 3025 (Pt 34): RA 2017	45	No Relaxation
14	Iron	0.21	mg/L	APHA 23rd Edn 2017 3500 Fe B	0.3	No Relaxation
15	Fluoride	BQL(QL=1)	mg/L	APHA 23rd Edn 2017 4500 F D	1	1.5
16	Hexavalent Chromium as Cr ⁶⁺	BQL(QL=0.01)	mg/L	APHA 23rd Edn 2017 3500 Cr B	-	-
17	Phenolic Compounds*	BQL(QL=0.001)	mg/L	IS 3025 (Pt 43): RA 2003	0.001	0.002
18	Residual Chlorine	BQL(QL=0.05)	mg/L	APHA 23rd Edn 2017 4500 Cl B	0.2	1
19	Cyanide*	BQL(QL=0.01)	mg/L	APHA 23rd Edn 2017 4500 CN C ,E	0.05	No Relaxation
20	Aluminum (Al)	BQL(QL=0.001)	mg/L	IS 3025 (Pt 55): RA 2009	0.03	0.2
21	Arsenic (As)	BQL(QL=0.01)	mg/L	APHA 23rd Edn 2017 3111 B	0.01	0.05
22	Boron (B)	0.25	mg/L	APHA 23rd Edn 2017 4500 B C	0.5	1
23	Cadmium (Cd)	BQL(QL=0.001)	mg/L	APHA 23rd Edn 2017 3111 B	0.003	No Relaxation
24	Copper (Cu)	BQL(QL=0.01)	mg/L	APHA 23rd Edn 2017 3111 B	0.05	1.5

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Analyzed By

Ramsukh Gargama, Lab Chemist




Authorized Signatory

Pratiksha Raval, Lab Manager

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Page 2 of 3

CERTIFICATE OF ANALYSIS

Report Number: : GGMP/653/10

Reporting Date: 26.09.2019

Adani Power Jharkhand Ltd.

2 × 800 MW Godda Thermal Power Project,
Village: Motia, Dist: Godda, Jharkhand

Kind Attention : :-

Contact No. : :-

Mail ID : :-

SAMPLE DETAILS

Lab ID	: Lab/653/16	Sampling Date	: 16.09.2019
Sample Drawn By	: Chandan Kumar	Sample Receipt Date	: 17.09.2019
Sample Type	: Ground Water	Analysis Start Date	: 18.09.2019
Sample Description	: Motia Village, Hand Pump	Analysis End Date	: 25.09.2019
Sample Quantity	: 2L	Sampling Method	: IS 3025/APHA
Sample Condition	: Satisfactory	Packing	: Sealed

Sr. No.	Parameters	Results	Unit	Test Method	AL	PL
25	Lead (Pb)	BQL(QL=0.01)	mg/L	APHA 23rd Edn 2017 3111 B	0.01	No Relaxation
26	Manganese (Mg)	BQL(QL=0.05)	mg/L	APHA 23rd Edn 2017 3111 B	0.1	0.3
27	Mercury (Hg)	BQL(QL=0.001)	mg/L	APHA 23rd Edn 2017 3112 B	0.001	No Relaxation
28	Selenium (Se)	BQL(QL=0.001)	mg/L	IS 3025 (Pt 56): 2003	0.01	No Relaxation
29	Zinc (Zn)	0.23	mg/L	APHA 23rd Edn 2017 3111 B	5	15
30	Detergent	BQL(QL=0.05)	mg/L	Annex K of IS 13428	0.2	1
31	Magnesium (Mg)	18.5	mg/L	APHA 23rd Edn 2017 3500 Mg B	30	100
32	E.Coli (MPN/100 ml)	Absent	MPN/100ml	IS 1622-1981: RA 2009	Absent	Absent
33	Total Coliform	Absent	MPN/100 mL	IS 1622: RA 2009		Absent

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Analyzed By

Ramsukh Gargama, Lab Chemist




Authorized Signatory

Ratiksha Raval, Lab Manager

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Page 3 of 3

CERTIFICATE OF ANALYSIS

Report Number: : GGMPL/653/12

Reporting Date: 26.09.2019

Adani Power Jharkhand Ltd.

2 x 800 MW Godda Thermal Power Project,
Village: Motia, Dist: Godda, Jharkhand

Kind Attention : :-
Contact No. : :-
Mail ID : :-

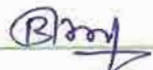
SAMPLE DETAILS

Lab ID	: Lab/653/18	Sampling Date	: 16.09.2019
Sample Drawn By	: Chandan Kumar	Sample Receipt Date	: 17.09.2019
Sample Type	: Ground Water	Analysis Start Date	: 18.09.2019
Sample Description	: Navabad Village, Hand Pump	Analysis End Date	: 25.09.2019
Sample Quantity	: 2L	Sampling Method	: IS 3025/APHA
Sample Condition	: Satisfactory	Packing	: Sealed

Sr. No.	Parameters	Results	Unit	Test Method	AL	PL
1	Colour	BQL(QL=1)	Hazen	IS 3025 (Pt 04): RA 2017	5	15
2	Odour	Agreeable	...	IS 3025 (Pt 05): RA 2006	Agreeable	Agreeable
3	pH @ 25 °C	7.52	...	IS 3025 (Pt 11): RA 2006	6.5 to 8.5	No Relaxation
4	Temperature °C	28	°C	APHA 23rd Edn 2017 2550 B	-	-
5	Taste	Agreeable	...	IS 3025 (Pt 08): RA 2006	Agreeable	Agreeable
6	Turbidity	BQL(QL=0.1)	NTU	APHA 23rd Edn 2017 2130 B	1	5
7	Total Dissolved Solids @ 180 °C	458	mg/L	APHA 23rd Edn 2017 2540 C	500	2000
8	Total Hardness as CaCO ₃	204	mg/L	APHA 23rd Edn 2017 2340 C	200	600
9	Alkalinity as CaCO ₃	128	mg/L	APHA 23rd Edn 2017 2320 B	200	600
10	Calcium as Ca	48	mg/L	APHA 23rd Edn 2017 3500 Ca B	75	200
11	Chloride	50	mg/L	IS 3025 (Pt 32): RA 2007	250	1000
12	Sulphate	37.5	mg/L	APHA 23rd Edn 2017 4500 SO ₄ E	200	400

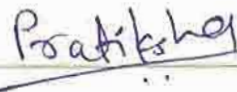
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Analyzed By

Ramsukh Gargama, Lab Chemist




Authorized Signatory

Pratiksha Raval, Lab Manager

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Page 1 of 3

CERTIFICATE OF ANALYSIS

Report Number: : GGMP/653/12

Reporting Date: 26.09.2019

Adani Power Jharkhand Ltd.

2 x 800 MW Godda Thermal Power Project,
Village: Motia, Dist: Godda, Jharkhand

Kind Attention : :-
Contact No. : :-
Mail ID : :-

SAMPLE DETAILS

Lab ID	: Lab/653/18	Sampling Date	: 16.09.2019
Sample Drawn By	: Chandan Kumar	Sample Receipt Date	: 17.09.2019
Sample Type	: Ground Water	Analysis Start Date	: 18.09.2019
Sample Description	: Navabad Village, Hand Pump	Analysis End Date	: 25.09.2019
Sample Quantity	: 2L	Sampling Method	: IS 3025/APHA
Sample Condition	: Satisfactory	Packing	: Sealed

Sr. No.	Parameters	Results	Unit	Test Method	AL	PL
13	Nitrate	10.6	mg/L	IS 3025 (Pt 34): RA 2017	45	No Relaxation
14	Iron	0.28	mg/L	APHA 23rd Edn 2017 3500 Fe B	0.3	No Relaxation
15	Fluoride	BQL(QL=1)	mg/L	APHA 23rd Edn 2017 4500 F D	1	1.5
16	Hexavalent Chromium as Cr ⁶⁺	BQL(QL=0.01)	mg/L	APHA 23rd Edn 2017 3500 Cr B	-	-
17	Phenolic Compounds*	BQL(QL=0.001)	mg/L	IS 3025 (Pt 43): RA 2003	0.001	0.002
18	Residual Chlorine	BQL(QL=0.05)	mg/L	APHA 23rd Edn 2017 4500 Cl B	0.2	1
19	Cyanide*	BQL(QL=0.01)	mg/L	APHA 23rd Edn 2017 4500 CN C ,E	0.05	No Relaxation
20	Aluminum (Al)*	BQL(QL=0.001)	mg/L	IS 3025 (Pt 55): RA 2009	0.03	0.2
21	Arsenic (As)	BQL(QL=0.01)	mg/L	APHA 23rd Edn 2017 3111 B	0.01	0.05
22	Boron (B)	0.23	mg/L	APHA 23rd Edn 2017 4500 B C	0.5	1
23	Cadmium (Cd)	BQL(QL=0.001)	mg/L	APHA 23rd Edn 2017 3111 B	0.003	No Relaxation
24	Copper (Cu)	BQL(QL=0.01)	mg/L	APHA 23rd Edn 2017 3111 B	0.05	1.5

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Analyzed By

Ramsukh Gargama, Lab Chemist




Authorized Signatory

Pratiksha Raval, Lab Manager

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Page 2 of 3

CERTIFICATE OF ANALYSIS

Report Number: : GGMP/653/12

Reporting Date: 26.09.2019

Adani Power Jharkhand Ltd.

2 x 800 MW Godda Thermal Power Project,
Village: Motia, Dist: Godda, Jharkhand

Kind Attention : :-
Contact No. : :-
Mail ID : :-

SAMPLE DETAILS

Lab ID	: Lab/653/18	Sampling Date	: 16.09.2019
Sample Drawn By	: Chandan Kumar	Sample Receipt Date	: 17.09.2019
Sample Type	: Ground Water	Analysis Start Date	: 18.09.2019
Sample Description	: Navabad Village, Hand Pump	Analysis End Date	: 25.09.2019
Sample Quantity	: 2L	Sampling Method	: IS 3025/APHA
Sample Condition	: Satisfactory	Packing	: Sealed

Sr. No.	Parameters	Results	Unit	Test Method	AL	PL
25	Lead (Pb)	BQL(QL=0.01)	mg/L	APHA 23rd Edn 2017 3111 B	0.01	No Relaxation
26	Manganese (Mg)	BQL(QL=0.05)	mg/L	APHA 23rd Edn 2017 3111 B	0.1	0.3
27	Mercury (Hg)	BQL(QL=0.001)	mg/L	APHA 23rd Edn 2017 3112 B	0.001	No Relaxation
28	Selenium (Se)	BQL(QL=0.001)	mg/L	IS 3025 (Pt 56): 2003	0.01	No Relaxation
29	Zinc (Zn)	0.25	mg/L	APHA 23rd Edn 2017 3111 B	5	15
30	Detergent	BQL(QL=0.05)	mg/L	Annex K of IS 13428	0.2	1
31	Magnesium (Mg)	20.4	mg/L	APHA 23rd Edn 2017 3500 Mg B	30	100
32	E.Coli (MPN/100 ml)	Absent	MPN/100ml	IS 1622-1981: RA 2009	Absent	Absent
33	Total Coliform	Absent	MPN/100 mL	IS 1622: RA 2009	-	Absent


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Analyzed By

Ramsukh Gargama, Lab Chemist




Authorized Signatory

Pratiksha Raval, Lab Manager

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CERTIFICATE OF ANALYSIS

Report Number: : GGMP/653/13

Reporting Date: 26.09.2019

Adani Power Jharkhand Ltd.

2 x 800 MW Godda Thermal Power Project,
Village: Motia, Dist: Godda, Jharkhand

Kind Attention : :-
Contact No. : :-
Mail ID : :-

SAMPLE DETAILS

Lab ID	: Lab/653/19	Sampling Date	: 16.09.2019
Sample Drawn By	: Chandan Kumar	Sample Receipt Date	: 17.09.2019
Sample Type	: Ground Water	Analysis Start Date	: 18.09.2019
Sample Description	: Navabad Village, Hand Pump	Analysis End Date	: 25.09.2019
Sample Quantity	: 2L	Sampling Method	: IS 3025/APHA
Sample Condition	: Satisfactory	Packing	: Sealed

Sr. No.	Parameters	Results	Unit	Test Method	AL	PL
1	Colour'	BQL(QL=1)	Hazen	IS 3025 (Pt 04): RA 2017	5	15
2	Odour'	Agreeable	...	IS 3025 (Pt 05): RA 2006	Agreeable	Agreeable
3	pH @ 25 °C	7.36	...	IS 3025 (Pt 11): RA 2006	6.5 to 8.5	No Relaxation
4	Temperature °C	29	°C	APHA 23rd Edn 2017 2550 B	-	-
5	Taste'	Agreeable	...	IS 3025 (Pt 08): RA 2006	Agreeable	Agreeable
6	Turbidity	BQL(QL=0.1)	NTU	APHA 23rd Edn 2017 2130 B	1	5
7	Total Dissolved Solids @ 180 °C	340	mg/L	APHA 23rd Edn 2017 2540 C	500	2000
8	Total Hardness as CaCO ₃	196	mg/L	APHA 23rd Edn 2017 2340 C	200	600
9	Alkalinity as CaCO ₃	108	mg/L	APHA 23rd Edn 2017 2320 B	200	600
10	Calcium as Ca	46.4	mg/L	APHA 23rd Edn 2017 3500 Ca B	75	200
11	Chloride	26	mg/L	IS 3025 (Pt 32): RA 2007	250	1000
12	Sulphate	28.3	mg/L	APHA 23rd Edn 2017 4500 SO ₄ E	200	400

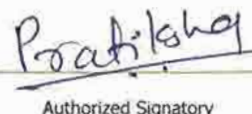
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Analyzed By

Ramsukh Gargama, Lab Chemist




Authorized Signatory

Pratiksha Raval, Lab Manager

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CERTIFICATE OF ANALYSIS

Report Number: : GGMPL/653/13

Reporting Date: 26.09.2019

Adani Power Jharkhand Ltd.

2 x 800 MW Godda Thermal Power Project,
Village: Motia, Dist: Godda, Jharkhand

Kind Attention : :-
Contact No. : :-
Mail ID : :-

SAMPLE DETAILS

Lab ID	: Lab/653/19	Sampling Date	: 16.09.2019
Sample Drawn By	: Chandan Kumar	Sample Receipt Date	: 17.09.2019
Sample Type	: Ground Water	Analysis Start Date	: 18.09.2019
Sample Description	: Navabad Village, Hand Pump	Analysis End Date	: 25.09.2019
Sample Quantity	: 2L	Sampling Method	: IS 3025/APHA
Sample Condition	: Satisfactory	Packing	: Sealed

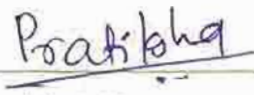
Sr. No.	Parameters	Results	Unit	Test Method	AL	PL
13	Nitrate	11.0	mg/L	IS 3025 (Pt 34): RA 2017	45	No Relaxation
14	Iron	0.21	mg/L	APHA 23rd Edn 2017 3500 Fe B	0.3	No Relaxation
15	Fluoride	BQL(QL=1)	mg/L	APHA 23rd Edn 2017 4500 F D	1	1.5
16	Hexavalent Chromium as Cr ⁶⁺	BQL(QL=0.01)	mg/L	APHA 23rd Edn 2017 3500 Cr B	-	-
17	Phenolic Compounds [*]	BQL(QL=0.001)	mg/L	IS 3025 (Pt 43): RA 2003	0.001	0.002
18	Residual Chlorine	BQL(QL=0.05)	mg/L	APHA 23rd Edn 2017 4500 Cl B	0.2	1
19	Cyanide [*]	BQL(QL=0.01)	mg/L	APHA 23rd Edn 2017 4500 CN C ,E	0.05	No Relaxation
20	Aluminum (Al) [*]	BQL(QL=0.001)	mg/L	IS 3025 (Pt 55): RA 2009	0.03	0.2
21	Arsenic (As)	BQL(QL=0.01)	mg/L	APHA 23rd Edn 2017 3111 B	0.01	0.05
22	Boron (B)	0.19	mg/L	APHA 23rd Edn 2017 4500 B C	0.5	1
23	Cadmium (Cd)	BQL(QL=0.001)	mg/L	APHA 23rd Edn 2017 3111 B	0.003	No Relaxation
24	Copper (Cu)	BQL(QL=0.01)	mg/L	APHA 23rd Edn 2017 3111 B	0.05	1.5

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Analyzed By

Ramsukh Gargama, Lab Chemist


Authorized Signatory

Pratiksha Raval, Lab Manager

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Sample will be retained (wherever applicable) only for 15 days from the date of sampling.

Total liability of our institution is limited to the invoiced amount.

Endorsement of products is neither inferred nor implied.

Any dispute arising out of this test report is subject to Ahmedabad Jurisdiction

CERTIFICATE OF ANALYSIS

Report Number: : GGMP/653/13

Reporting Date: 26.09.2019

Adani Power Jharkhand Ltd.

2 × 800 MW Godda Thermal Power Project,
Village: Motia, Dist: Godda, Jharkhand

Kind Attention : :-
Contact No. : :-
Mail ID : :-

SAMPLE DETAILS

Lab ID	: Lab/653/19	Sampling Date	: 16.09.2019
Sample Drawn By	: Chandan Kumar	Sample Receipt Date	: 17.09.2019
Sample Type	: Ground Water	Analysis Start Date	: 18.09.2019
Sample Description	: Navabad Village, Hand Pump	Analysis End Date	: 25.09.2019
Sample Quantity	: 2L	Sampling Method	: IS 3025/APHA
Sample Condition	: Satisfactory	Packing	: Sealed

Sr. No.	Parameters	Results	Unit	Test Method	AL	PL
25	Lead (Pb)	BQL(QL=0.01)	mg/L	APHA 23rd Edn 2017 3111 B	0.01	No Relaxation
26	Manganese (Mg)	BQL(QL=0.05)	mg/L	APHA 23rd Edn 2017 3111 B	0.1	0.3
27	Mercury (Hg)	BQL(QL=0.001)	mg/L	APHA 23rd Edn 2017 3112 B	0.001	No Relaxation
28	Selenium (Se)	BQL(QL=0.001)	mg/L	IS 3025 (Pt 56): 2003	0.01	No Relaxation
29	Zinc (Zn)	0.23	mg/L	APHA 23rd Edn 2017 3111 B	5	15
30	Detergent [*]	BQL(QL=0.05)	mg/L	Annex K of IS 13428	0.2	1
31	Magnesium (Mg)	19.4	mg/L	APHA 23rd Edn 2017 3500 Mg B	30	100
32	E.Coli (MPN/100 ml)	Absent	MPN/100ml	IS 1622-1981: RA 2009	Absent	Absent
33	Total Coliform [*]	Absent	MPN/100 mL	IS 1622: RA 2009	-	Absent

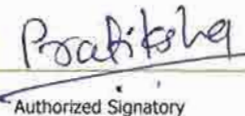
* Indicates these parameters are not covered under NABL Scope

NS= Not Specified, BQL=Below Quantification Limit, QL= Quantification Limit, AL = Acceptable Limit, PL = Permissible Limit


Analyzed By

Ramsukh Gargama, Lab Chemist




Authorized Signatory

Pratiksha Raval, Lab Manager

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CERTIFICATE OF ANALYSIS

Report Number: GGMP/679/01

Reporting Date: 26.09.2019

Adani Power Jharkhand Ltd.

2 x 800 MW Godda Thermal Power Project,
Village: Motia, Dist: Godda, Jharkhand

Kind Attention :-
Contact No. :-
Mail ID :-

SAMPLE DETAILS

Lab ID	: Lab/679/01	Sampling Start Date	: 19.09.2019
Sample Drawn By	: Chandan Kumar	Sampling End Date	: 20.09.2019
Sample Type	: Ambient Air	Sample Receipt Date	: 21.09.2019
Sample Description	: Near Motia Village	Analysis Start-End Date	: 21.09.2019 to 25.09.2019
Env. Cond.-Sampling	: Ambient Temperature	Total Sampling hours	: 24
Env. Cond. -Sample Receipt	: Satisfactory	Env. Cond. -Testing	: 25±5°C

Sr. No.	Parameters	Results	Unit	Test Method	NAAQ Standards
1	Particulate Matter (PM ₁₀)	56.3	µg/m ³	IS 5182 (Pt 23): RA 2012	100
2	Particulate Matter (PM _{2.5})	16.0	µg/m ³	GGMP/SOP/AA/60	60
3	Sulphur Dioxide (SO ₂)	7.1	µg/m ³	IS 5182 (Pt 02): RA 2009	80
4	Nitrogen Dioxide (NO ₂)	17.9	µg/m ³	IS 5182 (Pt 06) : 2006	80

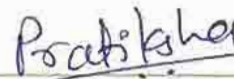
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Analyzed By

Ramsukh Gargama, Lab Chemist

Authorized Signatory

Pratiksha Raval, Lab Manager

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Page 1 of 1

CERTIFICATE OF ANALYSIS

Report Number: GGMP/679/02

Reporting Date: 26.09.2019

Adani Power Jharkhand Ltd.

2 x 800 MW Godda Thermal Power Project,
Village: Motia, Dist: Godda, Jharkhand

Kind Attention :-
Contact No. :-
Mail ID :-

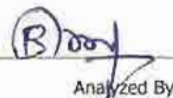
SAMPLE DETAILS

Lab ID	: Lab/679/02	Sampling Start Date	: 19.09.2019
Sample Drawn By	: Chandan Kumar	Sampling End Date	: 20.09.2019
Sample Type	: Ambient Air	Sample Receipt Date	: 21.09.2019
Sample Description	: Near Mail Village	Analysis Start-End Date	: 21.09.2019 to 25.09.2019
Env. Cond.-Sampling	: Ambient Temperature	Total Sampling hours	: 24
Env. Cond. -Sample Receipt	: Satisfactory	Env. Cond. -Testing	: 25±5°C

Sr. No.	Parameters	Results	Unit	Test Method	NAAQ Standards
1	Particulate Matter (PM ₁₀)	57.4	µg/m ³	IS 5182 (Pt 23): RA 2012	100
2	Particulate Matter (PM _{2.5})	22.0	µg/m ³	GGMP/SOP/AA/60	60
3	Sulphur Dioxide (SO ₂)	7.1	µg/m ³	IS 5182 (Pt 02): RA 2009	80
4	Nitrogen Dioxide (NO ₂)	19.8	µg/m ³	IS 5182 (Pt 06) : 2006	80

* Indicates these parameters are not covered under NABL Scope

NS= Not Specified, BQL=Below Quantification Limit, QL= Quantification Limit


Analyzed By

Ransukh Gargama, Lab Chemist




Authorized Signatory

Pratiksha Raval, Lab Manager

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CERTIFICATE OF ANALYSIS

Report Number: GGMP/679/03

Reporting Date: 26.09.2019

Adani Power Jharkhand Ltd.

2 × 800 MW Godda Thermal Power Project,
Village: Motia, Dist: Godda, Jharkhand

Kind Attention :-
Contact No. :-
Mail ID :-

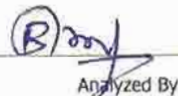
SAMPLE DETAILS

Lab ID	: Lab/679/03	Sampling Start Date	: 19.09.2019
Sample Drawn By	: Chandan Kumar	Sampling End Date	: 20.09.2019
Sample Type	: Ambient Air	Sample Receipt Date	: 21.09.2019
Sample Description	: Near Nayabad Village	Analysis Start-End Date	: 21.09.2019 to 25.09.2019
Env. Cond.-Sampling	: Ambient Temperature	Total Sampling hours	: 24
Env. Cond. -Sample Receipt	: Satisfactory	Env. Cond. -Testing	: 25±5°C

Sr. No.	Parameters	Results	Unit	Test Method	NAAQ Standards
1	Particulate Matter (PM ₁₀)	59.2	µg/m ³	IS 5182 (Pt 23): RA 2012	100
2	Particulate Matter (PM _{2.5})	20.0	µg/m ³	GGMPL/SOP/AA/60	60
3	Sulphur Dioxide (SO ₂)	5.7	µg/m ³	IS 5182 (Pt 02): RA 2009	80
4	Nitrogen Dioxide (NO ₂)	17.8	µg/m ³	IS 5182 (Pt 06) : 2006	80


* Indicates these parameters are not covered under NABL Scope

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Analyzed By

Ramsukh Gargama, Lab Chemist




Authorized Signatory

Pratiksha Raval, Lab Manager

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Page 1 of 1

CERTIFICATE OF ANALYSIS

Report Number: GGMP/700/01

Reporting Date: 30.09.2019

Adani Power Jharkhand Ltd.

2 × 800 MW Godda Thermal Power Project,
Village: Motia, Dist: Godda, Jharkhand

Kind Attention :-
Contact No. :-
Mail ID :-

SAMPLE DETAILS

Lab ID	: Lab/700/01	Sampling Start Date	: 23.09.2019
Sample Drawn By	: Chandan Kumar	Sampling End Date	: 24.09.2019
Sample Type	: Ambient Air	Sample Receipt Date	: 25.09.2019
Sample Description	: Near Motia Village	Analysis Start-End Date	: 25.09.2019 to 29.09.2019
Env. Cond.-Sampling	: Ambient Temperature	Total Sampling hours	: 24
Env. Cond. -Sample Receipt	: Satisfactory	Env. Cond. -Testing	: 25±5°C

Sr. No.	Parameters	Results	Unit	Test Method	NAAQ Standards
1	Particulate Matter (PM ₁₀)	42.3	µg/m ³	IS 5182 (Pt 23): RA 2012	100
2	Particulate Matter (PM _{2.5})	15.1	µg/m ³	GGMP/SOP/AA/60	60
3	Sulphur Dioxide (SO ₂)	5.6	µg/m ³	IS 5182 (Pt 02): RA 2009	80
4	Nitrogen Dioxide (NO ₂)	18.2	µg/m ³	IS 5182 (Pt 06) : 2006	80

* Indicates these parameters are not covered under NABL Scope
NS= Not Specified, BQL=Below Quantification Limit, QL= Quantification Limit


Analyzed By

Ramsukh Gargama, Lab Chemist




Authorized Signatory

Pratiksha Raval, Lab Manager

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CERTIFICATE OF ANALYSIS

Report Number: GGMP/700/02

Reporting Date: 30.09.2019

Adani Power Jharkhand Ltd.

2 × 800 MW Godda Thermal Power Project,
Village: Motia, Dist: Godda, Jharkhand

Kind Attention :-
Contact No. :-
Mail ID :-

SAMPLE DETAILS

Lab ID	: Lab/700/02	Sampling Start Date	: 23.09.2019
Sample Drawn By	: Chandan Kumar	Sampling End Date	: 24.09.2019
Sample Type	: Ambient Air	Sample Receipt Date	: 25.09.2019
Sample Description	: Near Mali Village	Analysis Start-End Date	: 25.09.2019 to 29.09.2019
Env. Cond.-Sampling	: Ambient Temperature	Total Sampling hours	: 24
Env. Cond. -Sample Receipt	: Satisfactory	Env. Cond. -Testing	: 25±5°C

Sr. No.	Parameters	Results	Unit	Test Method	NAAQ Standards
1	Particulate Matter (PM ₁₀)	47.4	µg/m ³	IS 5182 (Pt 23): RA 2012	100
2	Particulate Matter (PM _{2.5})	15.4	µg/m ³	GGMP/SOP/AA/60	60
3	Sulphur Dioxide (SO ₂)	5.4	µg/m ³	IS 5182 (Pt 02): RA 2009	80
4	Nitrogen Dioxide (NO ₂)	17.6	µg/m ³	IS 5182 (Pt 06) : 2006	80

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Analyzed By

Ramsukh Gargama, Lab Chemist




Authorized Signatory

Pratiksha Raval, Lab Manager

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Page 1 of 1

CERTIFICATE OF ANALYSIS

Report Number: GGMP/700/03

Reporting Date: 30.09.2019

Adani Power Jharkhand Ltd.

2 x 800 MW Godda Thermal Power Project,
Village: Motia, Dist: Godda, Jharkhand

Kind Attention :-
Contact No. :-
Mail ID :-


SAMPLE DETAILS

Lab ID	: Lab/700/03	Sampling Start Date	: 23.09.2019
Sample Drawn By	: Chandan Kumar	Sampling End Date	: 24.09.2019
Sample Type	: Ambient Air	Sample Receipt Date	: 25.09.2019
Sample Description	: Near Nayabad Village	Analysis Start-End Date	: 25.09.2019 to 29.09.2019
Env. Cond.-Sampling	: Ambient Temperature	Total Sampling hours	: 24
Env. Cond. -Sample Receipt	: Satisfactory	Env. Cond. -Testing	: 25±5°C

Sr. No.	Parameters	Results	Unit	Test Method	NAAQ Standards
1	Particulate Matter (PM ₁₀)	48.3	µg/m ³	IS 5182 (Pt 23): RA 2012	100
2	Particulate Matter (PM _{2.5})	16.2	µg/m ³	GGMP/SOP/AA/60	60
3	Sulphur Dioxide (SO ₂)	6.2	µg/m ³	IS 5182 (Pt 02): RA 2009	80
4	Nitrogen Dioxide (NO ₂)	15.6	µg/m ³	IS 5182 (Pt 06) : 2006	80

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Analyzed By

Ramsukh Gargama, Lab Chemist




Authorized Signatory

Pratiksha Raval, Lab Manager

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Page 1 of 1

CERTIFICATE OF ANALYSIS

Report Number: GGMP/713/01

Reporting Date: 04.10.2019

Adani Power Jharkhand Ltd.

2 × 800 MW Godda Thermal Power Project,
Village: Motia, Dist: Godda, Jharkhand

Kind Attention :-
Contact No. :-
Mail ID :-

SAMPLE DETAILS

Lab ID	: Lab/713/01	Sampling Start Date	: 26.09.2019
Sample Drawn By	: Chandan Kumar	Sampling End Date	: 27.09.2019
Sample Type	: Ambient Air	Sample Receipt Date	: 28.09.2019
Sample Description	: Near Motia Village	Analysis Start-End Date	: 28.09.2019 to 03.10.2019
Env. Cond.-Sampling	: Ambient Temperature	Total Sampling hours	: 24
Env. Cond. -Sample Receipt	: Satisfactory	Env. Cond. -Testing	: 25±5°C


Sr. No.	Parameters	Results	Unit	Test Method	NAAQ Standards
1	Particulate Matter (PM ₁₀)	52.0	µg/m ³	IS 5182 (Pt 23): RA 2012	100
2	Particulate Matter (PM _{2.5})	17.3	µg/m ³	GGMP/SOP/AA/60	60
3	Sulphur Dioxide (SO ₂)	5.6	µg/m ³	IS 5182 (Pt 02): RA 2009	80
4	Nitrogen Dioxide (NO ₂)	14.4	µg/m ³	IS 5182 (Pt 06) : 2006	80

* Indicates these parameters are not covered under NABL Scope
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Analyzed By

Ramsukh Gargama, Lab Chemist




Authorized Signatory

Pratiksha Raval, Lab Manager

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Page 1 of 1

CERTIFICATE OF ANALYSIS

Report Number: GGMP/713/02

Reporting Date: 04.10.2019

Adani Power Jharkhand Ltd.

2 × 800 MW Godda Thermal Power Project,
Village: Motia, Dist: Godda, Jharkhand


Kind Attention :-
Contact No. :-
Mail ID :-

SAMPLE DETAILS

Lab ID	: Lab/713/02	Sampling Start Date	: 26.09.2019
Sample Drawn By	: Chandan Kumar	Sampling End Date	: 27.09.2019
Sample Type	: Ambient Air	Sample Receipt Date	: 28.09.2019
Sample Description	: Near Mail Village	Analysis Start-End Date	: 28.09.2019 to 03.10.2019
Env. Cond.-Sampling	: Ambient Temperature	Total Sampling hours	: 24
Env. Cond. -Sample Receipt	: Satisfactory	Env. Cond. -Testing	: 25±5°C

Sr. No.	Parameters	Results	Unit	Test Method	NAAQ Standards
1	Particulate Matter (PM ₁₀)	51.0	µg/m ³	IS 5182 (Pt 23); RA 2012	100
2	Particulate Matter (PM _{2.5})	15.6	µg/m ³	GGMP/SOP/AA/60	60
3	Sulphur Dioxide (SO ₂)	5.2	µg/m ³	IS 5182 (Pt 02); RA 2009	80
4	Nitrogen Dioxide (NO ₂)	14.1	µg/m ³	IS 5182 (Pt 06) : 2006	80

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Analyzed By

Ramsukh Gargama, Lab Chemist




Authorized Signatory

Pratiksha Raval, Lab Manager

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CERTIFICATE OF ANALYSIS

Report Number: GGMP/713/03

Reporting Date: 04.10.2019

Adani Power Jharkhand Ltd.

2 × 800 MW Godda Thermal Power Project,
Village: Motia, Dist: Godda, Jharkhand

Kind Attention :-
Contact No. :-
Mail ID :-

SAMPLE DETAILS

Lab ID	: Lab/713/03	Sampling Start Date	: 26.09.2019
Sample Drawn By	: Chandan Kumar	Sampling End Date	: 27.09.2019
Sample Type	: Ambient Air	Sample Receipt Date	: 28.09.2019
Sample Description	: Near Nayabad Village	Analysis Start-End Date	: 28.09.2019 to 03.10.2019
Env. Cond.-Sampling	: Ambient Temperature	Total Sampling hours	: 24
Env. Cond. -Sample Receipt	: Satisfactory	Env. Cond. -Testing	: 25±5°C

Sr. No.	Parameters	Results	Unit	Test Method	NAAQ Standards
1	Particulate Matter (PM ₁₀)	56.7	µg/m ³	IS 5182 (Pt 23): RA 2012	100
2	Particulate Matter (PM _{2.5})	16.6	µg/m ³	GGMPL/SOP/AA/60	60
3	Sulphur Dioxide (SO ₂)	5.2	µg/m ³	IS 5182 (Pt 02): RA 2009	80
4	Nitrogen Dioxide (NO ₂)	13.1	µg/m ³	IS 5182 (Pt 06) : 2006	80

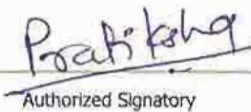
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Analyzed By

Ramsukh Gargama, Lab Chemist




Authorized Signatory

Pratiksha Raval, Lab Manager

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Page 1 of 1

CERTIFICATE OF ANALYSIS

Report Number: GGMP/732/01

Reporting Date: 07.10.2019

Adani Power Jharkhand Ltd.

2 x 800 MW Godda Thermal Power Project,
Village: Motia, Dist: Godda, Jharkhand

Kind Attention :-
Contact No. :-
Mail ID :-

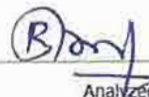
SAMPLE DETAILS

Lab ID	: Lab/732/01	Sampling Start Date	: 30.09.2019
Sample Drawn By	: Chandan Kumar	Sampling End Date	: 01.10.2019
Sample Type	: Ambient Air	Sample Receipt Date	: 07.10.2019
Sample Description	: Near Motia Village	Analysis Start-End Date	: 02.10.2019 to 06.10.2019
Env. Cond.-Sampling	: Ambient Temperature	Total Sampling hours	: 24
Env. Cond. -Sample Receipt	: Satisfactory	Env. Cond. -Testing	: 25±5°C

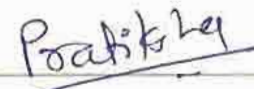
Sr. No.	Parameters	Results	Unit	Test Method	NAAQ Standards
1	Particulate Matter (PM ₁₀)	48.0	µg/m ³	IS 5182 (Pt 23): RA 2012	100
2	Particulate Matter (PM _{2.5})	13.0	µg/m ³	GGMP/SOP/AA/60	60
3	Sulphur Dioxide (SO ₂)	5.6	µg/m ³	IS 5182 (Pt 02): RA 2009	80
4	Nitrogen Dioxide (NO ₂)	13.2	µg/m ³	IS 5182 (Pt 06) : 2006	80

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NS= Not Specified, BQL=Below Quantification Limit, QL= Quantification Limit


Analyzed By
Ramsukh Gargama, Lab Chemist




Authorized Signatory
Pratiksha Raval, Lab Manager

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Page 1 of 1

CERTIFICATE OF ANALYSIS

Report Number: GGMP/732/02

Reporting Date: 07.10.2019

Adani Power Jharkhand Ltd.

2 x 800 MW Godda Thermal Power Project,
Village: Motia, Dist: Godda, Jharkhand


Kind Attention :-
Contact No. :-
Mail ID :-

SAMPLE DETAILS

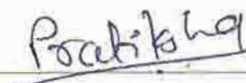
Lab ID	: Lab/732/02	Sampling Start Date	: 30.09.2019
Sample Drawn By	: Chandan Kumar	Sampling End Date	: 01.10.2019
Sample Type	: Ambient Air	Sample Receipt Date	: 02.10.2019
Sample Description	: Near Mali Village	Analysis Start-End Date	: 02.10.2019 to 06.10.2019
Env. Cond. -Sampling	: Ambient Temperature	Total Sampling hours	: 24
Env. Cond. -Sample Receipt	: Satisfactory	Env. Cond. -Testing	: 25±5°C

Sr. No.	Parameters	Results	Unit	Test Method	NAAQ Standards
1	Particulate Matter (PM ₁₀)	46.0	µg/m ³	IS 5182 (Pt 23): RA 2012	100
2	Particulate Matter (PM _{2.5})	14.9	µg/m ³	GGMP/SOP/AA/60	60
3	Sulphur Dioxide (SO ₂)	6.2	µg/m ³	IS 5182 (Pt 02): RA 2009	80
4	Nitrogen Dioxide (NO ₂)	12.1	µg/m ³	IS 5182 (Pt 06) : 2006	80

* Indicates these parameters are not covered under NABL Scope
NS= Not Specified, BQL=Below Quantification Limit, QL= Quantification Limit.


Analyzed By
Ramsukh Gargama, Lab Chemist




Authorized Signatory
Pratiksha Raval, Lab Manager

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CERTIFICATE OF ANALYSIS

Report Number: GGMP/732/03

Reporting Date: 07.10.2019

Adani Power Jharkhand Ltd.

2 × 800 MW Godda Thermal Power Project,
Village: Motia, Dist: Godda, Jharkhand

Kind Attention :-
Contact No. :-
Mail ID :-

SAMPLE DETAILS

Lab ID	: Lab/732/03	Sampling Start Date	: 30.09.2019
Sample Drawn By	: Chandan Kumar	Sampling End Date	: 01.10.2019
Sample Type	: Ambient Air	Sample Receipt Date	: 02.10.2019
Sample Description	: Near Nayabad Village	Analysis Start-End Date	: 02.10.2019 to 06.10.2019
Env. Cond.-Sampling	: Ambient Temperature	Total Sampling hours	: 24
Env. Cond.-Sample Receipt	: Satisfactory	Env. Cond.-Testing	: 25±5°C

Sr. No.	Parameters	Results	Unit	Test Method	NAAQ Standards
1	Particulate Matter (PM ₁₀)	42.0	µg/m ³	IS 5182 (Pt 23): RA 2012	100
2	Particulate Matter (PM _{2.5})	13.5	µg/m ³	GGMP/SOP/AA/60	60
3	Sulphur Dioxide (SO ₂)	5.2	µg/m ³	IS 5182 (Pt 02): RA 2009	80
4	Nitrogen Dioxide (NO ₂)	14.1	µg/m ³	IS 5182 (Pt 06) : 2006	80

* Indicates these parameters are not covered under NABL Scope
NS= Not Specified, BQL=Below Quantification Limit, QL= Quantification Limit


Analyzed By

Ramsukh Gargama, Lab Chemist




Authorized Signatory

Pratiksha Raval, Lab Manager

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HALF YEARLY CSR REPORT

(April 2019 TO September 2019)

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HALF YEARLY CSR REPORT (APRIL 2019 TO SEPTMEBER 2019)

1. 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 Millennium Development Goals. 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. This year at Godda site, three new projects have been taken up viz. Gyanodaya to facilitate new learning pedagogy in govt. schools through e-learning classes, Swacchagrah to promote culture of cleanliness in society through encouraging behavior change among school students, and an unprecedented Order from District Education department students to women’s group of Saksham Sewing trainees for supply of uniforms for 1.51 lakh govt. school students.

In this financial year Adani’s CSR intervention extends to Godda and Sahebganj districts of Jharkhand state covering 192 villages of Core, Periphery, Railway Siding and Pipeline area. Apart from benefitting and engaging communities from our intervention areas, many of CSR activities were conducted in Godda town too for establishing Adani Foundation as a brand among the intellectuals of the society. Total population of Godda district is 13.13 lakhs, out of which population of our intervention villages is 45000 approximately. We have been able to benefit 2.87 lakhs people directly and 5.85 lakhs people indirectly across the stretch of 91 kms. ranged from Godda district to Sahebganj district passing through more than hundreds of project affected villages by organizing various community development activities in Education, Community Health, Suposhan, Sustainable Livelihood and Rural Infrastructure Development verticals.

The robust team of Adani Foundation at Jharkhand comprises of dedicated professionals including Unit CSR Head, Project Officers, and a deputy manager-CSR from Adani Power (Jharkhand) Limited and a medical team comprises of a doctor and four para medicos.

The progress of CSR projects/interventions from April, 2019 to September, 2019 is described in detail as under:

2. HIGHLIGHTS OF CSR ACTIVITIES

A. Education & Rural Sports

➤ Ensuring Quality Education for Community

Adani foundation strives to enhance the quality of education in its intervention villages through following initiatives directly benefitting over 50000 students and their families in the year 2019-20.

- ❖ **Competitive Classes and Coaching for the Poor Students viz.**
 - **Apna School** is running successfully in 6 location of TPP area providing education to 399 students.
 - **Under Gyan Jyoti (Group - 30) programme** total 90 students were enrolled. New Enrolment of class 8th students was also done. 18 students passed the test exam out of total 56 students. All 28 class 10th students passed the exam out of which 20 students' ranked 1st division, 8 Students ranked 2nd division, & 2 students secured 3rd division marks.

➤ Capacity Building Programmes

- ❖ **Felicitation programme for students and teachers:**
 - **Shiksha Gaurav Samman:** 30 best performer teachers were rewarded by District Administration and Gyan Jyoti program teachers were also awarded by District Education Officer.
 - **Athletics:** Senior children of Gyan Jyoti Kendra were trained in kabaddi by trainer. Athletics competition was organized in TPP-Gyan Jyoti Kendra, Motia for Physical and mental development of students.
 - **Essay competition** was organized in TPP-Gyan Jyoti Kendra, Motia among students.
 - **Extra-Curricular activity** has also been started for intellectual development of children such as Kabaddi, Quiz and Speech competition.
 - **Health Hygiene and Sanitation:** Educating rural students about better health and Hygiene with participation of 400 rural students. Swachhata programme was also conducted in Kauribaihar, Motia, Sondiha school of TPP.
 - **Gyanodaya Project:** Gyanodaya project is operational in 166 schools providing e-learning classes benefitting 47000 students.

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- **Education sponsorship programme:** Adani Foundation provides 100% education support for one ward each from 300 Project Affected Families to reduce dropout by focusing on quality education and thereby regular attendance of students.
- **Ekal Vidyalaya Initiative:** Providing educational services in areas of Godda, Podaiyahat and Boarijor for 120 schools for drop out children residing in tribal area streamlining to formal education system
- **Swachhagrah project:** 92 School Visit, pre-test and interaction with Dal Members

Supporting Sports Events

- **Sports Kit Distribution:** Cricket kits were distributed to 3 cricket teams in Pathargama block.
- **Football Tournament** was organized at Mahagama block of Pipeline area and Kairajori village in Jitpur with participation of 11 teams and 3 Football Tournaments were organized in pipeline village with participation of 64 teams and 960 players.

B. Community Health

Five Mobile Health Care Units have together catered to primary health care needs of 25059 patients this year from core, periphery, railway siding and pipe line area villages covering over 150 locations.

- ❖ **Mobile Health Care unit in core villages** The MHCU provides its services to 9 locations and 13 villages per week benefitting total 4946 patients including 2501 male, 1710 female & 735 children.
- ❖ **AF supported Help age's Mobile Health Care Unit** covers 16 locations and 26 villages per week benefitting total 8379 patients including 2697 male, 3023 female and 2659 children.
- ❖ **Mobile Health Care Unit in Mines villages:** The MHCU provides its services to 6 locations and 12 villages per week benefitting total 3982 patients including 766 male, 745 female & 1055 children.
- ❖ **Wockhardt Foundation operated MHCU for Pipeline Villages in Godda** The MHCU provides its services per week benefitting total 10598 patients including 3389 male, 4659 female & 5590 children.
- ❖ **Wockhardt Foundation operated MHCU for Pipeline Villages in Sahebganj** The MHCU provides its services per week benefitting total 10171 patients including 3312 male, 4228 female & 2643 children.
- ❖ **Mega Health Camp** has been held at 2 blocks covering 8 villages benefitting 300 plus patients.
- ❖ **Labourers Health Check-ups for Gate Pass:** CSR Medical Team conducts health check-up of all labourers at TPP to be safe from health hazards. It includes height,

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weight, colour blindness, BP, Blood Group, Sugar, Eye check-up. Total 2418 labourers were checked since April 2019.

- ❖ **Health Awareness:** With collaboration of Medical Team of Adani Foundation and Helpage India, health awareness is raised among school children, teachers and community. Community health awareness programme during Medical camp in rural areas helps aware rural dwellers about their better health and safety from diseases.
- ❖ **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.
- ❖ **Spectacle Distribution** 54 eye patients have been provided spectacles this year.

➤ Suposhan Program

- ❖ **SuPoshan:** 299 numbers of children (0 to 5 years) have seen improvement to healthy status while Anemia has reduced. 187 numbers of adolescent girls of 10 to 19 years and women in reproductive age group have become healthy from anemic state.

Awareness Programmes

- ❖ **Swachhagrah Programme:** Swachhagrah program was launched in Godda on 11th August 2018 with 92 government schools of Godda and Poraiyahat blocks. It aims to engage children as change agents to bring about behavioral and attitudinal change in sanitation executed through Swachhagraha dals and Preraks in schools. It comprises of total 92 Swachhagraha School, total 92 Swachhagraha Prerak, total 92 Swachhagraha Dal, total 1840 Swachhagrahis and 92 total School visit.
- ❖ **Awareness program:** Various awareness events like celebration of national nutrition week, global hand wash day, etc. were conducted during the period spreading the message to over 1500 people.

Seasonal Assistance/Community Involvement

- ❖ **Assistance in Health, Marriage and Death:** Poor people are supported financially in events like marriage, death and illness as emergency support. During the period, total 83 beneficiaries have been supported to the tune of Rs. 804600.
- ❖ **Environment Protection and Water conservation:** AF encourages practice of protecting and conserving the environment. Saplings of 1000 mango and banana plants were distributed in our Pipeline Area block (Pathagrama & Mahagama).
- ❖ **Support to Natural Hazard affected families:** Distribution of tarpaulin to rescue 40 households affected from flood.
- ❖ **World Environment Day** was observed by organizing week long events and competition.

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C. Sustainable Livelihood

- ❖ **Tailoring training:** Enrollment of total 439 members has been done for tailoring training.
- ❖ **Uniform Production Order:** Inauguration of Uniform Production Hub was done by Hon'ble CM on 4th March 2019. 11 Production cum Training centers is operating successfully.
- ❖ **Computer training center:** Enrollment of 162 trainees in 5th batch is done in computer training center.
- ❖ **Piggery Farming:** 4 Farmers were supported with 4 piglets each for raising income.
- ❖ **Vermi compost unit** was installed which produced 20 ton vermicompost out of which 10 MT vermicompost was sold.
- ❖ **Adani Skill Development Centre** Adani Skill Development Centre- ASDC, Godda was inaugurated by Executive Director AF- Education and Skills on 27th September 2018. Seven trades with enrolment of over 210 trainees have commenced training.
- ❖ **Saksham Training Centres:** Total 541 trainees have been trained at ten Saksham training and two computer Training centers operational under the "Saksham program.
- ❖ **OJT & Placement of GDA Trainees:** General Duty Assistant (GDA) Trainees were selected by Nightingales- A Group Company of Mahindra & Mahindra for Bed Side Patient Attendant job at Bengaluru. Out of 13 girls who were selected, three girls have joined at Bengaluru at package of Rs. 2, 00,000 per annum.
- ❖ **Phulo Jhano Dress Production Stitching Center:** 1500 women are engaged in working with total 225 machines for dress production. Production of 135936 uniforms for 33984 students has been completed by members of Phoolo Jhano Saksham Aajeevika Sakhi Mandal and sum of Rs. 1366956 has been paid.
- ❖ **Horticulture plant distribution:** 5000 saplings was distributed in core, railway siding and pipeline villages as well as public offices and 2000 Mango plants was supplied to Divisional Forest Office, Pakur.
- ❖ **Financial Support** for Volunteers and Project Affected Families of Jitpur mines was continued this year to support 370 PAF.
- ❖ **Honorarium payment of Rs.1, 65,201** Honorarium has been paid for village volunteers assisting to PAFs.
- ❖ **Monitoring** of 12 Self Help Groups is going on under livelihood programme.

Awards and Honours

- ❖ **Certificate distribution to Digital Literacy trainees:** Merit certificate was given to Digital Literacy trainees.

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- ❖ **Phoolo Jhano Group** received “Assocham India Women Empowerment” award on 7th June'19 in Ranchi for its successful initiative of linking 1100 skilled women to livelihood opportunity. The award was presented by Hon'ble Minister of Urban Development Jharkhand- Shri C.P. Singh.

D. Rural/Community Infrastructure Development

❖ **Water Conservation, Ground water recharge**

1. Deepening work of 37 Ponds in 26 villages of TPP area
2. Construction of stairs at pond to increase access to water for miscellaneous.

❖ **Drinking Water Facility**

1. **Renovation of Community Well:** Renovation of 12 community well at Sondiha, Nayabad and Jhirli village for providing drinking water.
2. **Renovation of Well** at three village of Thakurgangti Block
3. **Handpump Repairing:** 63 Hand pump repaired in TPP area for providing drinking water.
4. **Deep bore well:** 4 Deep bore well was installed for drinking water facility
5. **Installation of Submersible, water tank and RO Plant** at Sahibganj DC office, Ram Temple in satichouki Kuthari village, Sahibganj for providing safe and clean drinking water.
6. **Installation of 2 hand Pump Bore well** at Mahgama Panchayat of Mahgama Block

❖ **Educational infrastructure Development**

1. Renovation of Gyanodaya Class Room in Pipe line areas for quality learning.
2. Renovation of School at Baksara village
3. Construction of 06 Class room is going on at Motia High School

❖ **Other Village development structures**

- Construction of 30 Seating place (Chabutra) has been done at in 15 villages of our TPP area
- Renovation of 7 Hanuman Temple and one Kali temple and Shiv Parvati temple at TPP area
- Renovation of 6 Community Hall for Community Programs
- Construction of 9 Bathrooms & Soakpit at Niyamatchak village of pipeline area.
- Renovation work at Govt. guest house, at Sarkanda

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- Renovation of Boundary wall of Upgraded High School, Sondiha
- Construction of Gate at Godda College, Godda
- Construction of Memorial Structure at Sondiha Village
- Construction of stage at Sondiha village
- Construction of Pathway at DFO residence Godda
- Renovation work at SP office, Godda
- Beautification Work at Govt. office Dumka
- Renovation of Bhim Rao Ambedkar Statue at Badhouna village
- Construction of drain in 4 villages Gangta, Nayabad, Sondiha and Motia.
- Renovation of Main Gate of Godda College.
- Construction of 2 PCC Road at Sondiha village

3. DETAILED DESCRIPTION OF CSR ACTIVITIES

A. Education & Rural Sports

➤ Providing Quality Education in Society

1. **'Apna School' initiative to provide coaching classes for students:** This initiative was initiated in tribal village viz. Nayabad, Gangta and Petbi to provide coaching classes to the students up till 5th standard. The total number of students getting benefit is 399. The local teachers from the community have been engaged in the teaching. This initiative has led to improvement in learning and education of children. This coaching class is also useful to interact with the community. The initiative has mainly been taken in area where literacy is below 50% among Santhal and Yadav Community.

SI.No	Location	Standard	No. of Student
1.	Petbi	I to V	64
2	Nayabad I	I to V	19
3	Nayabad II	I to V	36
4	Gangta I	I to V	23
5	Gangta II	I to V	21
6	Baliakita	I to V	60
Total			223

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- 2. Adani Gyan Jyoti Yojna (Group 30):** - Education plays a vital role in development of society economically, socially and financially, it also help to them strengthen, so Adani Gyan Jyoti Yojna was initiated in Motia Village. 30 students each of 8th, 9th & 10th standard study at the centre for their concept building. The programme has been launched with objective of improvement in results of poor & meritorious students in matriculation board exams.

Sl. No	Location	Standard	No. of Student
1.	Motia	8 th	30
2.	Motia	9 th	35
3.	Motia	10 th	30
Total			95

- 3. Adani Gyan Jyoti Kendra:** Total 95 number of students benefitted from Adani Gyan Jyoti Kendra during FY 2018-19. Admission test was conducted for new session of class 8th and class 10th board students. Out of total 56 students of class 8th, 18 students were selected for next session while, all 30 students who appeared in 10th board exams got succeeded. Out of which 20 students got 1st division, 8 Students got 2nd division, & 2 students got 3rd division marks.

Class 8 th (Student)					
Appeared	Selected	%			
56	18	32.14			
Class 10 th (Student)		Passing %	1 st Div	2 nd Div	3 rd Div
Appeared	Passed				
30	30	100	20	8	2

- 4. Gyanodaya Project:** Adani Foundation in partnership with District Administration and Eckovation Solutions Pvt. Ltd. launched Gyanodaya project in August 2018 to promote e-learning through Smart Classes. Gyanodaya project covers 157 govt. schools of Godda district covering 200 villages in 9 blocks reaching out to 18000 students of 50 schools and total 65000 students from 137 schools for students of 8th to 12th standard. Multiple benefits of digital learning have been observed in the transformation of around 65,000 children such as - digital skills, decision making capabilities, visual learning, cultural awareness, improved academic performance and creativity. A significant reduction in dependency on tuition classes has been

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observed all across the blocks which has increased the faith of students and parents likewise on government schools. The Super 100 Program of Adani Foundation in collaboration with District Administration provided residential preparatory classes to selected meritorious students from various schools for preparation of exams which resulted in increase in performance of Super 100 Boys and Super 100 Girls. Out of 84 boys, 81.09 % got 1st division, and 10.71 % got 2nd division. Similarly, out of 93 girls, 90.32 % got 1st division and 8.6 % got 2nd division. Godda district stands at **5th** and **4th** **position** in the state as compared to **21st** **position** in the last year in 9th and 8th board exams respectively.

- 5. Teacher orientation programme:** Adani foundation organized teacher orientation program on Gyanodaya program and Gyanodaya reporting structure with participation of total 145 teachers. Under input support a) Boards were installed in 75 Schools b) Equipment were distributed in 163 schools. IIT-JEE class is also running in 6 Schools namely: 1- +2H.S Godda

2- Godda College

3- Mahila College

4- Jawahar Navodaya Vidhyalaya Lalmatiya

5- Pathargama Inter College

6- Kendriya Vidhyalay Godda

- 6. Ekal Vidyalaya Initiative:** Adani supported Ekal Vidyalaya aims for integrated and holistic development of rural India and to take education to unreach of the rural & tribal children. Adani supported, Shree Sankar Shewa Shamiti, Jharkhand run Ekal Vidyalaya have commenced classes in 120 schools in far reached tribal villages of Sunderpahari and Poraiyahat blocks benefitting over 3000 students.

- 7. Education Sponsorship program** to provide 100% education support for one ward each from 300 Project Affected Families of Jitpur mines to reduce dropout by focusing on quality education and thereby regular attendance of students.

SN	Village	Enrolled (2018-19)	Shifted to new school (2019-20)	Total No. of Wards
1	Dahubera	29	20	29
2	Pakeri	14	0	14

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3	Dan agora	23	0	23
4	Dumarpalam	34	0	34
5	Jitpur	80	0	80
6	Kairajori	27	0	27
7	Paharpur	74	0	74
8	Sunder Pahari & others	19	0	19
Total		300	20	300

➤ Capacity Building Programmes

- 1. Shiksha Gaurav Samman:** 30 best performer teachers were rewarded by District Administration and Gyan Jyoti program teachers were also awarded by District Education Officer. On the occasion of Teachers Day, Adani Foundation and District Administration appreciated the work of 185 teachers of Gyanodaya.
- 2. Athletics:** Senior children of Gyan Jyoti Kendra were trained in kabaddi by trainer. Athletics competition was organized in TPP-Gyan Jyoti Kendra, Motia for Physical and mental development of students.
- 3. Gyanodaya Project:** Gyanodaya project is operational in 166 schools providing e-learning classes benefitting 47000 students. Teachers were trained and branding boards were installed in 84 schools. Godda district secured 4th, 14th, 16th and 22nd position in 8th, 10th, 12th (Science) & 12th (Arts) board results respectively. The passing percentage has significantly improved to 90.58%, 67%, 45%, 65.42% in 8th, 10th, 12th (Science) & 12th (Arts) respectively.
- 4. Ekal Vidyalaya Initiative:** Providing educational services in areas of Godda, Podaiyahat and Boarijor for 120 schools for drop out children residing in tribal area streamlining to formal education system. Training of Teachers (ToT) was organized for 90 teachers at TPP-Sunderpahari.

➤ Supporting Sports Events

- 1. Sports Kit Distribution:** Cricket kits were distributed to three cricket teams in Pathargama block block as part of the rural youth engagement program. It helped them in regular practice and a means of recreation. The distribution of kit help youth in more engaged in constructive activity.
- 2. Football Tournament** was organized at Maniyamore football ground for two selected pipeline affected village namely Maniyamore and Karnu of Mahagama

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Block and Kairajori village of Sunderpahari block in Jitpur Mines area with participation of total 11 teams from 10 villages' viz. Sunderpahari, Amjora, Paharpur, Rampur, Kairajori, Dahubeha, Dandagora, Jiyajori who took part with combined audience size of 2000.

Sports Events: Football Tournament				
SN	Sport Name	No of Villages/ locations	No. of Participants	Average Audience Size
1	Football Tournament	2	13 teams	2000

B. Community Health Programme

➤ Mobile Health Care Unit (MHCU)

In the current mid-financial year (April-Sep 2019), five Mobile Health Care Units have together catered to 25059 patients so far from the Core, Periphery, Railway line and Pipeline villages. Adani Foundation runs its own MHCU in core and mines area villages while it has partnered with Helpage India and Wockhardt Foundation to extend primary medical services in Periphery and Pipeline villages respectively. All of these five MMUs provide services in the villages as per schedule through a team of a Doctor, a Pharmacist, an ANM, and a Social Protection Officer. AF supported mobile medical facilities goes a long way to ensure access of poor people to quality primary health care services at their doorstep.

- 1. Mobile Health Care Unit in Core villages:** Adani operated Mobile Health Care Unit in have conducted 418 halts in 2019-20 at 9 locations covering 13 villages per week. During the customer satisfaction survey it was found that villagers are satisfied with the MHCU and they recognize that the expenditure on primary health has reduced drastically. Total 4946 patients including 2501 male, female 1710 & 735 children have been served in this year.

Patients treated by Adani Operated MHCU in FY 2019-20					
SN	Month	Males	Females	Children	Total
1	April	346	272	129	747
2	May	344	317	129	790
3	June	265	191	68	524
4	July	165	194	77	436
5	August	445	382	184	1011
6	September	936	354	148	1438
Gross Total		2501	1710	735	4946

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2. **Mobile Health Care Unit in Mines villages:** Mines MHCU delivered its services at five locations covering twelve villages where patients are diagnosed by doctor and provided free medicines are being provided to the patients. The MHCU conducts full quick para and also refers the patients to nearest hospital if required. Total 2566 patients including 766 males, 745 females, and 1055 children were served in this year.

Patients treated by Mines MHCU in FY 2019-20					
SN	Month	Males	Females	Children	Total
1	April	206	159	280	645
2	May	206	159	280	645
3	June	127	173	235	535
4	July	143	144	144	431
5	August	34	55	64	153
6	September	50	55	52	157
Gross Total		766	745	1055	2566

3. **Helpage India operated MHCU for Periphery Villages:** Helpage India operated MHCU delivered medical services in 30 periphery villages coming under buffer zone 1 and railway siding villages of Adani Power Plant. Total 322 halts have been conducted covering 26 locations benefitting total 8379 patients including 2697 male, 3023 female and 2659 children.

Patients treated by Helpage India MHCU in FY 2019-20					
SN	Month	Males	Females	Children	Total
1	April	456	563	437	1456
2	May	441	454	429	1324
3	June	389	388	323	1100
4	July	460	517	636	1613
5	August	469	492	408	1369
6	September	482	609	426	1517
Gross Total		2697	3023	2659	8379

4. **Wockhardt Foundation operated MHCU for Pipeline Villages in Godda:** Adani supported Wockhardt Foundation MHCU team commenced its operation for pipeline area villages of Godda district since October '18. Total 10598 patients including 3389 males, 4659 females and 2553 children were treated since April 19 covering over 40 villages from 5 blocks.

Patients treated by Wockhardt Foundation (Godda) MHCU in FY 2019-20					
SN	Month	Males	Females	Children	Total

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1	April	503	756	417	1676
2	May	479	718	337	1531
3	June	457	612	321	1390
4	July	457	612	321	1390
5	August	749	931	613	2293
6	September	744	1030	544	2318
Gross Total		3389	4659	2553	10598

5. **Wockhardt Foundation operated MHCU for Pipeline Villages in Sahebganj:** Adani supported Wockhardt Foundation MHCU team commenced its operation for pipeline area villages of Godda district since 21st September '18. Total 10171 patients including 3312 males, 4228 females and 2643 children were treated this year covering over 35 villages from 4 blocks.

Patients treated by Wockhardt Foundation (Sahebganj) MHCU in FY 2019-20					
SN	Month	Males	Females	Children	Total
1	April	359	562	470	1379
2	May	569	776	378	1723
3	June	500	622	347	1469
4	July	500	622	347	1469
5	August	757	797	465	2019
6	September	627	849	636	2112
Gross Total		3312	4228	2643	10171

6. **Spectacle Distribution:** 54 eye patients have been provided spectacles covering two block; Pathargama and Borio. Spectacles have been distributed to beneficiaries who were prescribed power by doctor during eye check-up in specialized medical camps. Poor people who cannot afford to buy spectacles and continue to neglect their eye-sight problem are supported by Adani Foundation through this initiative.

➤ **Suposhan Program**

- ❖ **Support Program for Sustained Health and Nutrition (SuPoshan):** SuPoshan Program is operational in 12 villages covering 17 Anganwadi centers at Godda site. 15 numbers of Sanginis are providing services to target beneficiaries in respective villages. 299 numbers of children (0 to 5 years) have seen improvement to healthy status while Anemia has also reduced. 187 numbers of adolescent girls of 10 to 19 years and women in reproductive age group have become healthy.

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In third year (2019-20) of implementation at Godda, Suposhan project has reached out to over 5000 direct beneficiaries. The program has been able to achieve set goals by administering program inputs with target groups such as regular focused group discussions, awareness events, family counseling on topics to bring about change in behavior pattern within the community and raise awareness on various related issues like feeding practices for newborn, introduction of complementary feeding, pregnancy care, health and hygiene, facts and myths related to menstruation cycle, diet and care during sickness, effective methods and habits of cooking, etc. Activities like Hb screening, promoting IFA tablet to anemic girls and women, check-up by pediatrician and MHCU doctor, immunization in VHND, vegetable seeds support too contributed to bring about improvement in health status of malnourished children, girls and women.

- ❖ **Poshan Abhiyaan** was organized to increase awareness on importance of nutrition among adolescent girls, pregnant and lactating women and community members. It comprised of activities a) Suposhan rally, b) Discussion on low-cost nutritious diets for infants and young children, c) Experience sharing by mothers, d) Awareness Campaign for Adolescent Girls, e) Focussed Group Discussion to bring about actionable change within communities and especially the parents, f) Meeting of School Management Committee, g) Poshan Patra Activity initiated in Anganwadi center.
- ❖ **Menstrual Hygiene Day Celebration:** Menstrual Hygiene Day was celebrated on 29th May by Sanginis with participation of Adolescent girls of Petbi, Baksara, Baliakitta, and Rangania villages. Information was shared on occurrence, physiology, significance, normal course of menstruation, facts and myths, Common symptoms & remedial steps and Menstruation Hygiene Management (MHM).
- ❖ **World Breastfeeding Week:** World Breastfeeding Week was observed to empower parents and encourage breastfeeding to improve the health of infants and children on 2nd, 3rd and 5th August 2019 at Jitpur, Motia and Basantpur villages respectively. Self Help Group office bearers, ICDS workers, 150 pregnant, lactating and WRA were the participants. Activities like Quiz competition on IYCF, discussion on low-cost nutritious diets for infants and young children, experience sharing by mothers and FGDs was done to bring about actionable change within communities.
- ❖ **Hand wash Day:** Global Hand wash day was organized in TPP, Godda to raise awareness among school children, and community about practice of sanitation: Children shared this knowledge with their family members & sensitized the people around their household to practice hygiene & sanitation as a daily habit in order to protect themselves from infectious and contagious diseases.

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Awareness Programmes

- Swachhagrah Programme:** Swachhagrah program was launched in Godda on 11th August 2018 with 92 government schools of Godda and Poraiyahat blocks. The project has received considerable recognition and appreciation from various stakeholder viz. District Education department, School teachers, students, parents and state level bodies. In the short span of 10 months, Preraks have been prepared amongst teachers as well as students while 90 Swachhagraha dal comprising over 1800 Swachhagrahis are in action at these schools. Events like Hand Washing, Creation of Soap Bank, Map your school, Litter Graph, etc. have been conducted in schools to raise awareness among children and encourage them to be messengers and promoters of culture of cleanliness.
- Awareness Events:** Various awareness events like celebration of national nutrition week, world environment day etc. were conducted during the year spreading the message to over 3000 people. Street plays, various competitions were organized under SuPoshan which play an effective role in spreading the message for care of pregnant lady, signs of malnutrition, right food and care for malnourished child and importance of hygiene/ sanitation and timely vaccination for good health of child and family to masses as it easily draws attention of public and conveys messages through songs and acts in local language. Village meeting with participation of key stakeholders and activities to stimulate thinking among participants were also conducted in this year on topics such as significance of nutrition and its constituents in regular diet, vitality and method of hand washing, pregnancy care and its impact on newborn health, etc.

SN	Event Name	Date/Duration	Villages Covered	Audience Size
1	National Nutrition Week	Sep '19	Motia, Patwa. Ranitikar	550
4	World Environment Day	5 th June '19	Motia	400
Total				950

➤ Medical Services

- Health Awareness:** with collaborative efforts of Adani Foundation & Helpage India in Peripheral & 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. School children and community persons have become more vocal with active approach towards curbing diseases and sharing of such valuable information among community.

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- 2. Health Check-up Facility for Laborers:** CSR Medical Team provides regularly Health Check-up Facility for Laborers at Project area. The new employees are done their health check-up by our Medical team effectively and sincerely for better result and safe from coming hazards. Major check-up includes parameters: height, weight, colour blindness, BP, Blood Group, Sugar, Eye check-up. Total 2418 Labours checked during this month.
- 3. 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.
- 4. Collaboration with Chief Minister's Critical illness Scheme:** Ambulance support has been provided for the patients under this scheme, as a result of this support over half a century poor patients suffering from critical illness for treatment got benefitted. The facility has been provided to patients' upto Deoghar, Ranchi and Patna.
- 5. 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 like Bhagalpur, Deoghar, Ranchi, and Patna & Other nearby hospitals.

➤ Seasonal Assistance

- 1. Environment Protection and Water conservation:** AF encourages practice of protecting and conserving the environment. Saplings of 1000 mango and banana plants were distributed in our Pipeline Area block (Pathagrama & Mahagama).
- 2. Support to Natural Hazard affected families:** Distribution of tarpaulin to rescue 40 households affected from flood.
- 3. Team Participation in cultural event:** Sreemad Bhagwad katha is a week-long cultural event which is celebrated by Hindu community across the state. This event was celebrated at Chilera of Pathargama block led by Shyam Mandal, village level leader with support of Adani Foundation to such community level event by ensuring team participation.

➤ Welfare Support

- 1. Relief Materials to Fire affected Families:** Fire affected Families were provided Relief Materials in Navadih village of Poraiyahat on eve of 10th April '19. Adani team supported eight families with relief materials comprising utensils, clothes, tarpaulin, etc. on 12th April '19.
- 2. Assistance in Health, Marriage and Death:** Poor people are supported financially in events like marriage, death and illness as emergency support. During the period,

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total 83 beneficiaries have been supported to the tune of Rs. 804600. The persons to whom we have assisted were from the project affected villages.

SN	Support Cause	No. of beneficiaries	Supported Amount
1	Health Support	18	95500
2	Marriage Support	21	79000
3	Death Support	21	78000
4	Education Support	1	5000
5	Social Occasion Support	22	547100
Total		83	804600

- 3. Systematic Voter's Education and Electoral Participation (SVEEP)** was launched by Election Commission of India to inform, educate, motivate and facilitate voters and in turn make Indian democracy more participative and meaningful. The Adani Foundation also became a part of this glory and gave its best support in Community Mobilization. Numerous awareness programs were performed by the Cultural Program and Sports Activity.

C. 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. Seven trades viz. Welder, Fitter, Mason and Bar bender, General Duty assistant, Hospitality, Electrical, and industrial Sewing Machine Operator have been started at the centre with enrolment of over 210 trainees. The centre shall run trainings under 11 trades when operational in full capacity.
- 2. Saksham Training centers-** This year two batches (Batch V and VI) have commenced training and two batches have completed training (Batch IV and V) at Saksham Training Centres. Eight Sewing & Garment Making and two Computer Learning Centers under the "Saksham program" are operational in Motia, Rangania, Nayabad, Patwa, Sondiha, Basantpur, Sarba, Bahuriya and Dumariya village. A total of 601 trainees have been enrolled in training this year in these centers. The details of the centers are as follows:

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Enrolment details of Trainees at Saksham Sewing Centres						
S. N.	Centre Name/Village	No. of Trainees enrolled in Batch V	No of Batches	No. of Trainees enrolled in Batch VI	No of Batches	Total Trainees benefitted in FY 2019-20
1	Motia	36	3	25	2	61
2	Basantpur	40	4	29	3	69
3	Sondiha	30	3	30	3	60
4	Rangania	20	2	20	2	40
5	Dumariya	35	3	35	4	70
6	Bahuriya	25	2	30	3	55
7	Sarba	21	2	21	2	42
8	BahadurChak	21	2	21	2	42
Total		228		211		439
Enrolment details of Trainees at Saksham Computer Centres						
9	Rangania	25	2	25	2	50
10	Motia	60	3	52	3	112
Total		85		77		162

3. **Govt. Order for Uniform Stitching to Phoolo Jhano Saksham Aajeevika Sakhi Mandal:** District Administration has entrusted our Saksham Sewing trainees with the responsibility of stitching and delivering two pairs of uniform for 151,000 for govt. school students from standards 1st to Xth for academic session 2019-20. This is a big step towards making over 1500 trained women economically independent and has brought ray of hope in their lives. Adani Foundation has set up a mass production centre with 225 Industrial Sewing Machines at all over sewing training centers to support these women to fulfill their commitment with District Education Development. Over 1500 women are engaged at 11 Uniform Production cum Training Centres led by Phoolo Jhano Saksham Aajeevika Sakhi Mandal. These women have collectively **earned over Rs 14, 02,674 in FY 2019-20** through this initiative of Adani Foundation by stitching over 1, 35,936 uniforms for 33,984 students.

Phoolo Jhano Group has been awarded "**Assocham India Women Empowerment award**" on 7th June'19 in Ranchi by **Hon'ble Minister of Urban Development Jharkhand- Shri C.P. Singh** for its successful initiative of linking **1100 skilled women to livelihood opportunity**. Whole ASDC team was honored with the award including Lead Sewing Trainer of ASDC- Mrs Mira Madhwa along with Skills Head- Mr. Jatin Trivedi, Unit CSR Head- Mr. Subodh Singh.

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- ❖ **Development of Vermicomposting units in the TPP area:** This year 100 farmers have been supported to take up vermicomposting unit development with aim to promote organic farming practices and providing alternative livelihood option to the community. Krishi Vigyan Kendra, (KVK) Godda and other technical experts are the knowledge partner for this initiative to provide technical know-how and other on-farm trainings to beneficiary group of the farmers. In the first cycle, demonstration plot developed by a farmer of Motia village has given produce of 20 ton out which farmer has sold 20 MT vermicompost at the average rate of Rs 7000. While he has attained order for another 30 MT from local and nearby markets. He is setting another cycle of vermicompost production.
- ❖ **Piggery Farming:** Two farmers from Paharpur village of Jitpur Mines were supported this year on pilot basis for piggery farming. Support was provided in form of 4 piglets per farmer and piggery shade which costed around 40000 per farmer. Cost of feeding the piglets at the rate of Rs. 2000 per month for 14 months i.e. Rs. 28000 is borne by farmer. Marketing of grown up pigs has been linked with Krishi Vigyan Kendra (KVK). It has been estimated that 8 live birth piglets will be born per season and each pig of average weight of 150 kg is sold at the rate of Rs. 200 per kg i.e. Rs. 30000 per pig x 8 pigs i.e. **Rs. 2,40,000 income per year is estimated per beneficiary.**
- ❖ **OJT & Placement of GDA Trainees:** General Duty Assistant (GDA) Trainees were selected by Nightingales- A Group Company of Mahindra & Mahindra for Bed Side Patient Attendant job at Bengaluru. Out of 13 girls who were selected, three girls have joined at Bengaluru at package of Rs. 2, 00,000 per annum.
- ❖ **Horticulture plant distribution:** 5000 saplings was distributed in core, railway siding and pipeline villages as well as public offices and 2000 Mango plants was supplied to Divisional Forest Office, Pakur with aim to promote horticulture and orchard development in the area.
- ❖ **Financial Support for Volunteers and Project Affected Families:** This year Jitpur mines has continued to support 370 families project affected families at the rate Rs. 1440/- per month towards livelihood engagement. Also, Rs.1, 65,201 Monthly Honorarium payments for Volunteer was continues this year. These volunteers help the Adani team for field mobilization and also help to maintain positivity in the Project affected Villages.

D. Rural Infrastructure Development

Water Conservation, Ground water recharge

1. Deepening work of Ponds: Total Deepening work of 37 Ponds has been completed in 26 villages with aim to increase in water storage capacity of ponds as well as increasing in ground water level. More than 650 acre of agricultural land from 7 villages is depending on these ponds for irrigation purpose, but due to lack of storage capacity the pond can provide irrigation to only 100-150 acre of agriculture land. These ponds are excavated for enhancing their water storage capacity by deepening the ponds.

It is expected that the pond deepening work will enhance the crop intensity and irrigation area in more than 1050 acre of agricultural land with net increase in storage capacity by **1,01,590 cubic meters**. Apart from agriculture, other alternative livelihoods option have increased in our area such as livestock development, pisciculture etc. In addition to this the work will also boost in ground water level in the wells and bore wells in the area. As availability and increase in water storage, we could also introduce the scientific methods of agriculture like SRI methods in paddy and other crops.

Details of Pond deepening and cleaning work:

Sr No	Name of Pond	Village
Pond Deepening in FY 2019-20		
1	Kanchan Pond	Petvi
2	Godam Pond	Gaighat
3	Sondiha Pond	Sondiha
4	Basantpur Pond	Basantpur
5	Dhibri Pond	Baliyakitta
6	Mandal Pond	Baksara
7	Nayabad Pond	Nayabad
8	Shivpur Pond	Kauribahiyar
9	Joraprakhar pond	Godda
10	Gangta Pond	Nayabad
11	Bharta Pond	Nayabad
12	Gangti Pond	Ranganiya
13	Khera Pond	Ranganiya
14	Patangiya Pond	Petbi Santhali
15	Chamra manshi pond	Sondhiya
16	Tar Pond	Sondhiya

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17	Baghuniya Pond	Rampur
18	Dumariya Pond	Dumariya
19	Sukha Mathu Pond	Baxara
20	Lobandha Pond	Sikatia
21	Pond	Petbi Kouribihar
22	Ghogra pond	Belbarna
23	Rajkachari Pond	Godda
24	Godhi Pond	Gangta
25	Shivpur Pond	Godda
26	Lohyanagar Pond	Godda

E. Drinking Water Facility

1. Drinking water facility in villages - Borewell etc.: 4 deep borewell were installed for drinking water facility at common places of the area like educational institutes, common community structures etc. The work will facilitate the community during the summer season and all of the year.

2. Safe Drinking water- Installation of RO System at Godda and Sahebganj for providing safe and clean drinking water to the people. RO machine have been installed at Sahibganj DC office and Ram Temple in satichouki Kuthari village, Sahibganj for providing safe and clean drinking water

3. Renovation of Handpumps: Hand pumps are primary source for drinking water and other domestic need in the TPP area, Adani Foundation have been taken up the hand pumps maintenance and repairing work in the area with this work, we are ensuring 100% functionality of the hand pumps in the area. This year we have renovated and repaired 63 hand pumps in the villages.

Details of hand pump repairing:

SN	Village/Block	No. of Hand pump Repaired
1	Mahgama	9
2	Pathargama	6
3	Godda	27
4	Sunderpahari	13
5	Samda/Thakurgangti	4
6	Ratanpur/Thakurgangti	4
Total		63

F. Educational infrastructure Development

1. **Renovation of 2 School is** going on at Baksara village and **Gyanodaya Class Room** in Pipe line areas for quality learning of students.
2. **Construction of 06 Class room** is going on at High School, Motia to provide infrastructure for students to learn in a proper proximity. Also it is helpful to create a better educational environment in the campus.
3. **Construction of Main Gate of 3 College/School:** We have taken up the construction of main gate at 3 colleges /school at Godda College, Godda, Vidyapati Bhawan, Godda and SM College, Poriyahat. There are more than 2500 students are studying Godda college, Godda is only college in Godda district for Higher Education and running on unpaid education policy, the provisions are beneficial in a large scale for the girls/boys studying in the college and school.
4. **Renovation of boundary wall at 2 schools:** construction of boundary wall at 2 schools has been done at Middle school, Basantpur and Middle school Sondiha. After construction of the boundary wall it is beneficial for more than 500 students those who are studying in the school. Also it will helpful to create a better educational environment in the campus.
5. **Construction of Pathway** at DFO residence, Godda; **Beautification Work** at Govt. Office , Dumka; **Renovation of Ambedkar Statue** at Badhouna Village and **Renovation work of SDPO office** has been carried out to provide a better & more organized environment with better workspace. Another major reason to renovate is to improve health standards and safety for the officials. With aim to provide better infrastructures we have taken up construction of Car & Bike Parking, Seating Place, Renovation of canteen building & some basic construction work at Govt. Office & Residence. There are more than 300 employees working in Govt. office, the provisions are beneficial in a large scale for the govt. employees working there.

G. Other Village development structures

- **Construction of 30 Seating Place in TPP villages:** Construction of 30 Seating place (Chabutra) has been done at in 16 villages of our TPP area. Normally village not having common places in the village for seating purpose for elders and senior citizens. This is being used by the common people in the village for seating purpose.
- **Renovation of 6 Community Hall for Community Programs.** Promotion of cultural activity and local events at village level for community. It helps share peace and harmony among community. As we committed to provide better community structures to the village, we have renovated a community hall & Satsang Bhawan at

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Sondiha village. This hall is being used for Sewing training center as well as common community purpose.

- **Construction of 9 Bathrooms & Soakpit** has been done at Niyamatchak village of pipeline area. As we are working towards creating awareness for cleanliness and hygiene by our program named "SWACCHAGRIH" with aim to aware and engage people in creating cleanliness culture. Some time ago people had not toilets facility in their village and they were using open places for toilet which invites unhygienic condition and diseases among the people. We have constructed 9 community bathrooms & soakpit for common use.
- **Construction of 2 PCC Road:** Construction of 2 PCC Road at Sondiha village is done to provide rural connectivity, linkages to market and availment of basic services. The work has been benefitted to more than 5000 villagers from 6 villages.
- **Renovation and construction of community structures:** We have taken up the renovation of community structures like Temples/Puja Sthal etc. People of our area having big faith for these temples and other places. So many people are visiting daily for religious purpose at the temple.
- **Construction of Drain at 4 villages:** As we are working towards creating awareness for cleanliness and hygiene by our program named "SWACCHAGRIH" with aim to aware and engage people in creating cleanliness culture. In addition to this we have constructed drain in 4 villages Gangta, Nayabad, Sondiha and Motia. It will be beneficial to more than 900 households of the villages.