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 cooperation 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

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 -	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	Noted & agreed		
	on the issue of Environmental			
DART	Clearance till date. 3 - GENERAL CONDITIONS			
	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		

	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.	1
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.

	at least two local newspapers widely	EC advertisement has all		circulated
	circulated in the region, one of which	in below mentioned News	spapers	
	should in the vernacular language,		r <u>- </u>	
	informing that the project has been	Name of Newspaper	Dated	Pg. no.
	accorded Environmental Clearance and	Dainik Jagaran Godda,	11-9-2018	04
	copies of clearance letters are available	Bhagalpur		
	with the State Environment Impact	The Times of India, Ranchi	11-9-2018	03
	Assessment Authority, Jharkhand and the	Hindustan Devghar	11-9-2018	05
	same matter also be sent to Jharkhand	Prabhat Khabar Devghar	11-9-2018	05
	State Pollution Control Board (J.S.P.C.B.),			<u>. </u>
	Ranchi. The advertisement should be	Copy of EC advertiseme	ent has alr	eady been
	made within 10 days from the date of	submitted along with c	ompliance	report for
	receipt of the Clearance letter and a copy	the period of October 20°	18 to Marcl	า 2019
	of the same should be forwarded to the	·		
	Regional Office of this Ministry at Ranchi.			
xvi.	Risk assessment study along with Disaster	NOC from Fire depa	artment a	and other
	Management Plan (DMP) shall be	necessary clearances &	permission	s has been
	prepared. The mitigate measures for	taken.		
	disaster prevention and control shall be	Fire & Safety Plan & D	isaster M	anagement
	prepared and get approval from	Plan (DMP) has already t		
	competent authority. All other statutory	with compliance report		
	clearances/licenses/permissions from	October 2018 to March 2	019	•
	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.			
xvii.	Baseline Environmental Condition of	Being Complied.		
	Project area i.e. Monitoring of AAQ as per	Baseline Environmental	Monitoring	Report as
	NAAQS 2009, Monitoring of Ambient	per NAAQS 2009, for Ar	nbient Noi	se Level &
	Noise Level & Analysis of Ground Water	Analysis of Ground Wat	er Sample	s is being
	Samples should be conducted and report	submitted to SEIAA, Jh	arkhand o	n monthly
	should be submitted to State Environment		g along	•
	Impact Assessment Authority (SEIAA),	compliance report.		
	Jharkhand and Jharkhand State Pollution	Monthly Monitoring repo	rt is being	submitted
	Control Board (JSPCB), Ranchi prior to			
	start of construction activities.	Assessment Authority (S		
		Jharkhand State Pollu		
		(JSPCB), Ranchi and JSP(
		Environmental monitorin		
		as Annexure -I	J . 5 P G . C .	
II. Cons	struction Phase	1		
i.	It shall be ensured that the construction	Compliance assured		
	debris is properly stored on the site prior	,		
	to disposal. Such requirements shall be			
	made part of the contractor agreement.			
ii.	All the top soil excavated during	Being Followed		
	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.			
1	ן אווסוו טפ סטטענפט.			

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. Disposal of muck, including excavated material during excavated material during a shall be a shal	All the excavated soil is being reused within project premises. Suitable measures are being taken to manage
	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.	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

	soboduling of all major construction	
	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	Being followed.
	recommended for the project.	Ready-Mix concrete is used for concreting
xii.	Accumulation/stagnation of water shall be	Necessary drainage system has been created
	avoided ensuring vector control.	to avoid accumulation / stagnation of water.
	Regular supervision of the above and other	Being followed
xiii.	measures shall be in place all through the	
A111.	construction phase so as to avoid	
	disturbance to the surroundings.	
xiv.	Water during construction phase should	Being followed
	be preferred from Municipal supply.	WRD, Govt. of Jharkhand has granted water
		allocation from Liljhi River.
XV.	All directions of the Airport Authority,	Compliance assured.
	Director of Explosives and Fire	
	Department etc. shall be complied.	
xvi.	Unskilled construction labourers shall be	Being followed
	recruited from the local areas.	
xvii.	Provisions shall be made for the	Noted & Compliance assured
	integration of solar water heating system.	Provisions being kept.
xviii.	Provision of vermin-composting for the	Compliance assured
	biodegradable solid wastes generated	Will explore the feasibility for implementing
	from the proposed extension buildings as	vermin-composting and use of biomass in
	well as the large amount of biomass that	different areas.
	shall be available from the tree plantation	
	shall be made.	
xix.	Monitoring of ground water table and	Noted & Agreed
		Ground water monitoring is being carried out
	carried out. Construction of tube wells,	third party consultant, monitoring report is
	bore wells shall be strictly regulated.	enclosed as Annexure-I
XX.	Permeable (porous) paving in the parking	Permeable (porous) Paving in parking areas
	areas, and walkways should be used to	has been considered in design.
	control surface runoff by allowing storm	Ĭ
	water to infiltrate the soil and return to	
	ground water.	
xxi.	All intersections shall be designed and	Being followed
	developed as roundabouts.	
xxii.	All utility lines (electricity, telephone,	Being followed
	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	
L	(vvaca. / ac vvaca ge / in lea are to be laid diving	

1	the utility corridor.	
xxiii.	The road drainage shall be designed to	Being followed
	enable quick runoff of surface water and	In layout provision kept & designed for quick
	prevent water logging.	runoff.
xxiv.	Adequate provision shall be made to cater	Agreed & compliance assured.
	the parking needs. Parking spaces	Adequate parking space provision has been
	standards as given in "Manual on Norms	provided in the Residential Township layout.
	and Standards for Environmental	
	Clearance of Large Construction Projects"	
	issued by Ministry of Environment and	
	Forests, Government of India shall be	
VVV	adopted. Rest room facilities shall be provided for	Being followed.
XXV.	service population.	Adequate number of rest rooms are
		constructed for service population
xxvi.	Monitoring of AAQ as per NAAQS 2009,	Being Complied.
7,7,71	Monitoring of Ambient Noise Level &	Baseline Environmental Monitoring Report as
	Analysis of Ground Water Samples, should	per NAAQS 2009, for Ambient Noise Level &
	be conducted and report should be	Analysis of Ground Water Samples is being
	submitted on monthly basis to SEIAA,	submitted to SEIAA, Jharkhand on monthly
	Jharkhand & Jharkhand State Pollution	basis, also submitting along with EC
	Control Board (J.S .P.C.B.), Ranchi.	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 :-	Monitoring Report Accounts as Aumerate
i.	Water body falling within premises (if any)	There is no water body within premises of
	shall not be lined or no embankment shall	plant layout.
	be cemented. The water bodies, if any,	
1	shall be kept in natural conditions without	
	disturbing the ecological habitat.	
ii.	disturbing the ecological habitat. Improvement or rehabilitation of existing	There is no nalla within residential complex
ii.	disturbing the ecological habitat. Improvement or rehabilitation of existing nallas (if any) shall be carried out without	There is no nalla within residential complex premises.
	disturbing the ecological habitat. Improvement or rehabilitation of existing nallas (if any) shall be carried out without disturbing the ecological habitat.	•
III. Post	disturbing the ecological habitat. Improvement or rehabilitation of existing nallas (if any) shall be carried out without disturbing the ecological habitat. Construction/Operation Phase	premises.
	disturbing the ecological habitat. Improvement or rehabilitation of existing nallas (if any) shall be carried out without disturbing the ecological habitat. Construction/Operation Phase The environmental safeguards and	•
III. Post	disturbing the ecological habitat. Improvement or rehabilitation of existing nallas (if any) shall be carried out without disturbing the ecological habitat. Construction/Operation Phase The environmental safeguards and mitigation measures contained in the	premises.
III. Post	disturbing the ecological habitat. Improvement or rehabilitation of existing nallas (if any) shall be carried out without disturbing the ecological habitat. Construction/Operation Phase The environmental safeguards and	premises.
III. Post	disturbing the ecological habitat. Improvement or rehabilitation of existing nallas (if any) shall be carried out without disturbing the ecological habitat. Construction/Operation Phase The environmental safeguards and mitigation measures contained in the application shall be implemented in letter	premises.
III. Posi	disturbing the ecological habitat. Improvement or rehabilitation of existing nallas (if any) shall be carried out without disturbing the ecological habitat. Construction/Operation Phase The environmental safeguards and mitigation measures contained in the application shall be implemented in letter and spirit.	Compliance assured during Operation stage.
III. Posi	Improvement or rehabilitation of existing nallas (if any) shall be carried out without disturbing the ecological habitat. Construction/Operation Phase The environmental safeguards and mitigation measures contained in the application shall be implemented in letter and spirit. All the conditions, liabilities and legal provisions contained in the Environmental Clearance shall be equally applicable to	Compliance assured during Operation stage.
III. Posi	disturbing the ecological habitat. Improvement or rehabilitation of existing nallas (if any) shall be carried out without disturbing the ecological habitat. Construction/Operation Phase The environmental safeguards and mitigation measures contained in the application shall be implemented in letter and spirit. All the conditions, liabilities and legal provisions contained in the Environmental Clearance shall be equally applicable to the successor management of the project	Compliance assured during Operation stage.
III. Posi	disturbing the ecological habitat. Improvement or rehabilitation of existing nallas (if any) shall be carried out without disturbing the ecological habitat. Construction/Operation Phase The environmental safeguards and mitigation measures contained in the application shall be implemented in letter and spirit. 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	Compliance assured during Operation stage.
III. Posi	disturbing the ecological habitat. Improvement or rehabilitation of existing nallas (if any) shall be carried out without disturbing the ecological habitat. Construction/Operation Phase The environmental safeguards and mitigation measures contained in the application shall be implemented in letter and spirit. 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	Compliance assured during Operation stage.
III. Posi	disturbing the ecological habitat. Improvement or rehabilitation of existing nallas (if any) shall be carried out without disturbing the ecological habitat. Construction/Operation Phase The environmental safeguards and mitigation measures contained in the application shall be implemented in letter and spirit. 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	Compliance assured during Operation stage.
III. Posi	disturbing the ecological habitat. Improvement or rehabilitation of existing nallas (if any) shall be carried out without disturbing the ecological habitat. Construction/Operation Phase The environmental safeguards and mitigation measures contained in the application shall be implemented in letter and spirit. 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	Compliance assured during Operation stage.
III. Posi	disturbing the ecological habitat. Improvement or rehabilitation of existing nallas (if any) shall be carried out without disturbing the ecological habitat. Construction/Operation Phase The environmental safeguards and mitigation measures contained in the application shall be implemented in letter and spirit. 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	Compliance assured during Operation stage.

iii.	The storm water management plan shall be implemented in such a manner that the storm water is discharged though 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. Paramedical 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. Enti	re 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.

DART	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. C- SPECIFIC CONDITIONS	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
	Construction Phase	
i.	Project Proponent should obtain prior	Complied.
	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.	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

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

		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.	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. Duel 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, pretreatment 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 compo sting & 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.

	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

	Energy Efficiency should be prepared	provision for better energy efficiency
	incorporating details about building	provision for better energy enforcing
	materials & technology, "R" and "U" factors	
	etc.	
XX.	Monitoring of AAQ as per NAAQS 2009,	Being complied.
	Monitoring of Ambient Noise Level &	Testing of Untreated & treated effluent & DG
	Analysis of Ground Water Samples,	set etc. monitoring report will be submitted
	Monitoring of Stack Emissions from DG	during operation.
	sets & Testing of Untreated & treated	Monitoring is enclosed as Annexure –I
	effluent samples of STPs should be	
	conducted and report should be submitted	
	on monthly basis to SPCB.	
—	ntire Life of the Project	T
i.	All the conditions laid down in NOC & consent	
	to operate issued by spcb should be strictly	The state of the s
	complied with during entire life cycle of the	
::	project.	Deign 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.	World a cholosed as Allice 1
iii.	The project authorities shall ensure that the	Noted
	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.	
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).	
V.	The project authorities shall provide requisite	Noted
••	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.	
vi.	Plantation along the side of the buildings 8	
	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	during operation and efforts will be made to

	construction stand. The electricis shall	dayalaa masa asaaaasy ia Q asayad tha alaat
	construction stage. The plantations shall	develop more greenery in & around the plant with survival rate of more than 80%.
	consist of mixture of available indigenous, fast	With Survival rate of more than 80%.
	growing and sturdy species of trees, shrubs.	
	15% of the total plot area shall be used for	
	plantations.	Noted Occupied
vii.	Whenever developer will hand over building to	Noted & agreed
	the society, the developer must mention in the	Compliance assured.
	agreement or sale deed that 15% green belt	
	area of total plot area should mentioned &	
	Environmental Conditions given by SEIAA,	
L	Jharkhand has to be complied.	
viii.	A copy of the clearance letter shall be sent by	Complied.
	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.	
ix.	The funds earmarked for the environmental	Noted
	protection measures shall not be diverted for	Compliance assured.
	other purposes.	
X.	In case of any changes in the scope of the	Noted & agreed
	project, the project shall require a fresh	
	appraisal by the SEAC/SEIAA.	
xi.	The SEAC/SEIAA, Jharkhand will have the right	Noted & agreed
	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.	
xii.	It shall be mandatory for the project	Six monthly compliance status reports are
	management to submit six (06) monthly	regularly submitted to MoEF&CC, SEIAA,
	compliance report in respect of the stipulated	CPCB & JSPCB.
	prior environmental clearance terms and	
	conditions in hard copies and soft copies to	Previous compliance report was submitted in
	the regulatory authority concerned Regional	May'2019 for the periods of October'2018 to
	Office of MoEF&CC at Ranchi and Jharkhand	March'2019 vide our letter no. APL/APJL/
	State Pollution Control Board (J.S.P.C.B.),	EMD/EC/MoEF/175/05/19.
	Ranchi.	Dated-27/05/2019.
xiii.	Any appeal against this Environmental	Noted
AIII.	Clearance shall lie with the National Green	INOTEG
	Tribunal (NGT), if preferred within a period of	
	30 days as prescribed under section 16 of the	
	National Green Tribunal Act, 2010.	
	ivacional Green Tribunal ACL, 2010.	

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

: 2x800MWGoddaThermal 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/m³)	77	100
	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	32	60
	$SO_2(\mu g/m^3)$	IS:5182 (Part-2)	5-200(μg/m ³)	7.6	80
	NO _x (μg/m³)	IS:5182 (Part-6)	5-200(μg/m ³)	19.2	80
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	69	100
(04-05).04.2019	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m ³)	26	60
12.0.0-2000000	SO ₂ (μg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	8.2	80
	$NO_x(\mu g/m^3)$	1S: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/m³)	75	100
	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m³)	29	60
	SO ₂ (μg/m ³)	IS:5182 (Part-2)	5-200(µg/m³)	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).

Record

For Ecomen Laboratories Pvt. Ltd.

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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

: 2x800MWGoddaThermal Power Project,

Village: Motia, Distt. - Godda, Jharkhand

Sampling Method

: As per IS: 5182

Sample Collected By

: Ecomen Team

Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
	PM10 (µg/m3)	IS:5182(Part-23)	2-1000(μg/m³)	84	100
(11-12).04.2019	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m ³)	33	60
(11-12),04,2017	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/m³)	21.4	80
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	73	100
(15-16).04.2019	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m ³)	28	60
* CC (CO * * CC CO	SO ₂ (μg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	7.7	80
	$NO_x(\mu g/m^3)$	IS:5182 (Part-6)	5-200(µg/m³)	15.6	80
(18-19).04.2019	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	75	100
	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	29	60
	SO ₂ (μg/m ³)	IS:5182 (Part-2)	5-200(μg/m ³)	9.2	80
	$NO_x(\mu g/m^3)$	IS:5182 (Part-6)	5-200(µg/m ³)	18.4	80

Note: BDL = Below Detection Limit

Standards: National Ambient Air Quality Monitoring (NAAQM).

For Ecomen Laboratories Pvt. Ltd.

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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

:2x800MWGoddaThermal Power Project, Village: Motia,Distt. - Godda, Jharkhand

Sampling Method

: As per IS: 5182

Sample Collected By : Ecomen Team

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/m³)	79	100
	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	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/m³)	74	100
	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m ³)	29	60
	$SO_2(\mu g/m^3)$	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).

For Ecomen Laboratories Pvt. Ltd.

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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

:2x800MWGoddaThermal 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/m³)	71	100
	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	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).

For Ecomen Laboratories Pvt. Ltd.

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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 ([harkhand) Ltd.

Address of the Project

:2x800MWGoddaThermal Power Project, Village: Motia, Distt. - Godda, Jharkhand

Sampling Method

: As per IS: 5182

Sample Collected By

:Ecomen Team

Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	69	100
(01-02).04.2019	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	25	60
(01-02).04.2019	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/m³)	73	100
	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	28	60
	$SO_2(\mu g/m^3)$	IS:5182 (Part-2)	5-200(µg/m³)	8.2	80
	$NO_x(\mu g/m^3)$	IS:5182 (Part-6)	5-200(μg/m³)	19.3	80
(08-09).04.2019	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	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
	$NO_x(\mu g/m^3)$	IS:5182 (Part-6)	5-200(μg/m³)	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

:2x800MWGoddaThermal Power Project,

Village: Motia, Distt. - Godda, Jharkhand

Sampling Method

: As per IS: 5182

Sample Collected By

: Ecomen Team

Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	76	100
(11-12).04.2019	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	29	60
(11-12),04.2013	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
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	71	100
(15-16),04.2019	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m ³)	27	60
*****************	$SO_2(\mu g/m^3)$	IS:5182 (Part-2)	5-200(μg/m ³)	6.8	80
	$NO_x(\mu g/m^3)$	IS:5182 (Part-6)	5-200(µg/m³)	18.5	80
(18-19),04,2019	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	78	100
	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	34	60
	SO ₂ (μg/m ³)	IS:5182 (Part-2)	5-200(µg/m³)	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).

For 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

:2x800MWGoddaThermal Power Project,

Village: Motia, Distt. - Godda, Jharkhand

Sampling Method

: As per IS: 5182

Sample Collected By

: Ecomen Team

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/m³)	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/m³)	IS:5182 (Part-6)	5-200(μg/m³)	23.6	80
(25-26).04.2019	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(μg/m³)	77	100
	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	29	60
	SO ₂ (μg/m ³)	IS:5182 (Part-2)	5-200(μg/m ³)	8.9	80
	NO _x (μg/m³)	IS:5182 (Part-6)	5-200(μg/m³)	24.4	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/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

:2x800MWGoddaThermal Power Project,

Village: Motia, Distt. - Godda, Jharkhand

Sampling Method Sample Collected By : As per IS: 5182 : 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)	1S:5182(Part-23)	2-1000(μg/m³)	79	100
	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	30	60
	SO ₂ (μg/m ³)	IS:5182 (Part-2)	5-200(μg/m³)	9.2	80
	NO _x (μg/m³)	IS:5182 (Part-6)	5-200(μg/m ³)	18.6	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/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

:2x800MWGoddaThermal Power Project,

Village: Motia, Distt. - Godda, Jharkhand

Sampling Method

: As per IS: 5182

Sample Collected By

: Ecomen Team

Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	85	100
	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m ³)	39	60
(02-03),04,2019	SO ₂ (μg/m ³)	1S:5182 (Part-2)	5-200(μg/m ³)	10.1	80
	NO _x (μg/m³)	IS:5182 (Part-6)	5-200(µg/m³)	22.6	80
(05-06),04.2019	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(μg/m³)	76	100
	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	29	60
	SO ₂ (μg/m ³)	IS:5182 (Part-2)	5-200(μg/m³)	9.2	80
	NO _x (μg/m ³)	1S:5182 (Part-6)	5-200(μg/m³)	22.4	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/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

:2x800MWGoddaThermal Power Project,

Village: Motia, Distt. - Godda, Jharkhand

Sampling Method Sample Collected By : As per IS: 5182

: 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/m³)	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/m³)	7.8	80
	NO _x (μg/m³)	IS:5182 (Part-6)	5-200(μg/m ³)	22.4	80
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(μg/m³)	74	100
	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	29	60
(12-13).04.2019	SO ₂ (μg/m ³)	IS:5182 (Part-2)	5-200(μg/m³)	9.8	80
	NO _x (μg/m³)	1S:5182 (Part-6)	5-200(μg/m³)	21.3	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/AAQ11/04/19

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 : 2x800MWGoddaThermal Power Project,

Village: Motia, Distt. - Godda, Jharkhand

Sampling Method : As per IS: 5182 Sample Collected By : Ecomen Team

Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	87	100
	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	36	60
(16-17).04.2019	SO ₂ (μg/m ³)	IS:5182 (Part-2)	5-200(μg/m ³)	87	80
	NO _x (μg/m³)	IS:5182 (Part-6)	5-200(µg/m³)		80
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(μg/m³)	86	100
	PM _{2,5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	34	60
(19-20).04.2019	SO ₂ (μg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	7.6	80
	NO _x (μg/m³)	IS:5182 (Part-6)	5-200(µg/m³)	18.4	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/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 :2x800MWGoddaThermal 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 Tests Standards Method **Detection Range** Result Monitoring Conducted 2-1000(µg/m3) 89 PM10 (ug/m3) IS:5182(Part-23) 100 $2-100(\mu g/m^3)$ NAAOM Guideline 60 PM25 (µg/m3) 38 Volume-I by CPCB (23-24).04.2019 $5-200(\mu g/m^3)$ 8.7 80 $SO_2(\mu g/m^3)$ IS:5182 (Part-2) $5-200(\mu g/m^3)$ 23.4 80 $NO_x(\mu g/m^3)$ IS:5182 (Part-6) 2-1000(µg/m³) 91 100 PM₁₀ (µg/m³) IS:5182(Part-23) $2-100(\mu g/m^3)$ NAAQM Guideline $PM_{2.5} (\mu g/m^3)$ 39 60 Volume-I by CPCB (26-27).04.2019 5-200(µg/m³) 9.6 80 IS:5182 (Part-2) $SO_2(\mu g/m^3)$ 5-200(µg/m3) NO_x(µg/m³) IS:5182 (Part-6) 21.2 80

Note: BDL = Below Detection Limit

Standards: National Ambient Air Quality Monitoring (NAAQM).

Ecomen Laboratories Pvt. Ltd.

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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 MWGoddaThermal Power Project,

Village: Motia, Distt. - Godda, Jharkhand

Sample Collected By : Ecomen Team Date of Sampling : 25-26.04.2019

Instrument Used : Noise Meter (HTC)

Day Time				Night Time			
Locations	Time	Leq Value in dB(A)		100.00		Leq Value in dB(A)	
		Max	Min		Max	Min	
Near Patwa Village	09.15 A.M	59.2	56.3	10:10 PM	49.7	47.5	
Near Motia Village	10.30 A.M	63.4	58.7	10:30 PM	53.1	50.6	
Near Mali Village	11.10A.M	57.1	55.4	11.15P.M	47.8	45.2	
Near Navabad Village	14.30 P.M	61.5	58.1	11.30 P.M	49.2	47.5	
Near HTG Residential Area	15:10 PM	67.3	63.6	11.45P.M	46.3	44.7	
Near Adani Office	16:30 PM	71.4	68.2	12.10A.M	57.1	55.4	
	Near Patwa Village Near Motia Village Near Mali Village Near Navabad Village Near HTG Residential Area	Near Patwa Village 09.15 A.M Near Motia Village 10.30 A.M Near Mali Village 11.10A.M Near Navabad 14.30 P.M Village Near HTG Residential Area	Leq Vold B Max	Locations Time Leq Value in dB(A) Max Min Near Patwa Village 09.15 A.M 59.2 56.3 Near Motia Village 10.30 A.M 63.4 58.7 Near Mali Village 11.10A.M 57.1 55.4 Near Navabad Village 14.30 P.M 61.5 58.1 Near HTG Residential Area 15:10 PM 67.3 63.6	Leq Value in dB(A) Time Max Min	Locations Time Leq Value in dB(A) Time Max Min Max	

Reems

For Ecomen Laboratories Pvt. Ltd.

Ecomen Laboratories Pvt. Ltd.

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Noise (Ambient Standard) Flat No.-8 2nd Floor, Arif Chamber-V Sector-H, Aliganj, Lucknow-226024

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

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

: APHA, 23rd Ed. 2017

Sampling Method

: Ecomen Team

Sample Collected by Sample Quantity

: As per requirement.

Date of Sampling

: 26.04.2019

Date of Sample Receiving Date of Analysis : 27.04.2019 : 27.04.2019 to 02.05.2019

Source of Sample

: Motia Village, Hand Pump (GW)

St. No.	TESTS	ряотосог.	RESULT	Detection	INDIAN STANDARDS as per 18 10500:1991(Reaff:2012)	
				Range	Desirable	Permissible
1.	Colour (Hazen unit)	APRA, 23rd Ed. 2017, 2120 B	<5.0	5-106	5.00	15.6
2.	Odour	APHA, 23" Ed. 2017, 2150 B	Agreeable	Qualitative	Agreeable	Agreeable
3.	pH	APHA, IS* E4. 2017, 4500H+ A+H	7.22	2.0 -12	6585	No Relat.
4	Total Disselved Solids as TDS (mg/l)	APRA, 13" Ed. 2017, 2540-C	363.0	5 - 5000	500	2008
8.	Alkalinity (mg/l)	APRA, 23rd Ed. 2017, 2320 A+ B	110.0	5-1500	200	1900
6.	Total Hardness as CaCO ₃ (mg/l)	APHA, 23rd Ed. 2017, 2340 A+C	164,0	5-1500	200,0	400,0
7.	Calcium as Ce (mg/l)	APHA, 23" Ed. 2017, 3500 Ca A+B	40.0	5 - 1000	75.0	200.0
K.	Magnesium as Mg (mg/l)	APRA, 23" E4. 2017, 3500 Mg A+B	15.55	5-1000	30.0	100.0
9.	Copper as Cu (mg/l)	APRA, 23rd Ed. 2017, 3111 A+B	BDL.	0,05-5	0.05	1.5
10.	Iron as Fe (mg/l)	APHA, 23" Ed. 2017, 3500 Fe B	9,24	0.02-50	0.3	No Relax
II.	Manganese as Mn (mg/l)	APHA, 23" Ed. 2017, 3111 A+B	BDL	0.1-5	0.10	8.30
12.	Chloride as Cl (mg/l)	APHA, 23" E4. 2017, 4500 CLA+B	24.0	5-1000	250.0	1000.0
15.	Sulfate as SO ₄ (mgft)	APHA, 23 ^{rt} Ed. 2017, 4500-SO ₂ th E	26.5	L8-250	200.0	400.0
14.	Nitrate Nitragen as NO: (mg/l)	APRA, 23" Ed. 2017, 4596-NOV B	7.66	5.6 - 100	45.0	No Relax.
15.	Fluorides as F (mg/l)	APHA, 23" Ed. 2017, 4500-C	0.35	8.85-38	1.0	1.5
16.	Phenolic Compounds as C ₄ H ₂ OH (mg/l)	APHA, 23" Ed. 2017, 5538 A+C	BDL	1-10	0.001	8,862
17.	Mercury as Hg (mg/l)	APRA, 23° Ed. 2017, 3112 A+B	BDC	1.101.1	9.001	No Relax.
18.	Cadmium as Cd (mgf)	APHA, 23° Ed. 2017, 3111 A+B	BDL	8.862-3	8.903	No Relax
19.	Amenic as As (wg/l)	APHA, 23 ^{rt} Ed. 2017, 3114 C	RDL	8,01-2	0.01	6.15
20.	Lead as Pb (mg/l)	APRIA, 23" Ed. 2017, 3111 A+B	BDt.	0.01-2	0,81	No Relax
21.	Zinc as Za (mg/l)	APHA, 23° E4. 2017, 3111 A+B	9.29	9.62-50	5.0	15
21.	Anionic Detergrats (An MRAS)(mg/l) max	APHA 22ad EDN:2012, 5546 A+C	BDI,	8.61-5	62	3.8
23.	Chrumium (Hesavalent) (regil)	APRA, 23" E4. 2017, 3111A+B	BOL.	9.95-20	8.05	No Release
34.	Mineral Oil 6 (mg/l)	IS 3025 (Part 39) Class -6 Infrared Partition method	BOL	0.01-10	6.8	Ne Reles.
25.	Free Residual Chlorine (mg/l)	APHA, 23 ⁻⁴ Ed. 2017, 4500-Cl B	BDL	9.5-10	639	1.8
26.	Beron as B (mg/l)	APHA, 23rd Ed. 2017, 4500 B A+C	0.22	0,2-10	8.5	2.0
27.	Total coliform (MPN/100 ml)	APHA, 23 rd Ed. 2017, B+C	Absent	3.8	8,05	Absent
28.	Eculi (MPN/100 ml)	APHA, 23" Ed. 2017, B+E	Abrent	1.6	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/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 15 10500:1991(Reaff:2012)	
					Desirable	Permissible
1.	Colour (Hezen unit)	APIIA, 23 rd Ed. 2017, 2120 B	<5.0	5-100	5.00	15.0
2	Odour	APHA, 23" Ed. 2017, 2150 B	Agrenable	Qualitative	Agreeable	Agreeable
3,	pH	APHA, 23rd Ed. 2017, 4500H+ A+B	7,39	2.0 -12	6585	No Relex.
4.	Total Dissulved Solids as TDS (mg/l)	APHA, 23" Ed. 2017, 2540-C	412.0	5 - 5000	500	2000
8.	Alkalinity (mg/l)	APRA, 23" E4. 2017, 2326 A+ H	132.0	5-1500	200	600
6	Total Hardness on CaCO ₂ (mg/l)	APHA, 23 rd Ed. 2017, 2340 A+C	196.0	5-1500	200.0	600.0
7.	Calcium as Ca (ingf)	APHA, 23rd Ed. 2017, 3500 Ca A+B	44.8	5 - 1000	75.0	200.0
8.	Stagnesium as Mg (mg/l)	APHA, 23° Ed. 2017, 3500 Mg A+B	20.41	5-1000	30,0	106.0
9.	Copper as Cu (mg/l)	APIIA, 23° Ed. 2017, 3111 A+B	BDI,	0.05-5	0,05	1.5
16.	Iron as Fe (mg/l)	APHA, 23rd Ed. 2017, 3500 Fe B	0.21	0.02-50	6.3	No Beier.
H.	Manganese so Mri (mg/l)	APRA, 23° Ed. 2017, 3111 A+B	BDL.	0.1-5	0.10	0,30
12.	Chloride as Cl (mg/l)	APHA, 23rt Ed. 2017, 4500 CLA+B	39.2	5-1000	250.0	0,0001
13.	Suifate as SOs (mg/l)	APHA, 23" Ed. 2017, 4500-SO ₂ " E	33,22	1.0 - 250	200.0	400.0
14.	Nitrate Nitrogen as NO ₂ (mg/l)	APILA, 23rd Ed. 2017, 4500-NO ₂ : B	9.54	5.0 - 100	45.0	No Relat.
15.	Fluorides as F (mg/l)	APILA, 23 rd Ed. 2017, 4500-C	0.33	0.05-10	1.0	1.5
16.	Phenolic Compounds as CaBsOH (mg/l)	APHA, 23° Ed. 2017, 5530 A+C	BDL	1-10	0.001	0.002
17.	Marcury as Hg (mg/l)	APHA, 23" Ed. 2017, 3112 A+B	BOL	0.001-1	0.001	No Relax
18.	Cadmium as Cd (mg/l)	APHA, 23rd Ed. 2017, 3111 A+B	BDL	0.002-2	0.003	No Relax
19.	Arsenic as As (mgf)	APRA, 23rd Ed. 2017, 3114 C	BDL	9,01-2	0.01	8.05
20.	Lead as Ph (mg/l)	APHA, 23rd Ed. 2017, 3111 A+B	BUTL	0.91-2	0.01	Na Relas.
žt,	Zinc as Zn (mg/l)	APHA, 23rd 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	BIDL.	0.01-5	6.2	1.0
23.	Chromium (Hexavalent) (mg/l)	APHA, 23° Ed. 2017, 3111A+B	MDC	0.65-20	0.05	No Relax.
24.	Mineral Oil 6 (mg/t)	1S 3025 (Part 39) Class -6 Infrared Partition Method	HDL.	0.01-10	0.5	No Relex.
25.	Free Residual Chlorine (mg/l)	APHA, 2319 Kd. 2017, 4506-C3 B	BDI.	0.5-10	6.29	1.0
26.	Boron as B (mg/t)	APHA, 23 rd Ed. 2017, 4500 B A+C	9.20	62-10	, 1.5	1.6
27.	Total coliform (MPN/100 ml)	APRA, 23 rd Ed. 2017, B+C	Absent	1,8	0.05	Alwat
28.	E.coli (MPN/100 ml)	APHA, 23° E4, 2017, B+E	Absent	LB	Absest	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/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 : Adami 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 Nn.	TESTS	PROTOCOL	RESULT	Detection Range	INDIAN STANDARDS as per 10506;1991(Reaff:2012)	
					Desirable	Permissible
t.	Culour (Hazen unit)	APHA, 23" Ed. 2017, 2120 B	<5.0	5-100	5.00	15.0
2	Oilour	APHA, 23 rd Ed. 2017, 2150 H	Agreeable	Qualitative	Agreeable	Agreeable
3.	pH	APHA, 23° Ed. 2017, 4500H+ A+B	7.15	2.0-12	6,54.5	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 ₂ (mg/l)	APHA, 25° Ed. 2017, 2340 A+C	216.0	5-1500	200.0	600.0
7,	Calcium as Ca (mg/l)	APHA, 23" Ed. 2017, 3500 Ca A+B	60,8	5-1000	75.0	200,0
8.	Magnesium as Mg (mg/l)	APHA, 23rd Ed. 2017, 3500 Mg A+B	15.50	5-1000	30.0	100.0
9,	Copper as Cu (mg/l)	APHA, 23rd Ed. 2017, 3111 A+B	BDL	0.05-5	0.05	1,5
10.	tron as Fe (mg/l)	APHA, 23" Ed. 2017, 3500 Fe B	0.14	0.02-50	0.3	No Relax.
II.	Manganese as Ma (mg/l)	APHA, 23" Ed. 2017, 3111 A+B	BDL	0.1-5	0.19	0.30
12.	Chloride as Cl (mg/l)	APHA, 33rd Ed. 2017, 4500 Cl A+B	40.0	5-1000	250,0	1000,0
13.	Sulfate us SO ₄ (mg/l)	APHA, 23 rd Ed. 2017, 4500-SO ₂ ^b E	32.62	1.0 -250	200.0	400.0
14.	Nitrate Nitrogen as NOs (mg/l)	APHA, 23" Ed. 2017, 4500-NO ₅ " B	12.1	5.0 - 100	45.0	No Relax.
15.	Fluorides as F (mg/l)	APHA, 25" Ed. 2017, 4500-C	0.31	0.05-10	1.0	1.5
16.	Phenolic Compounds as CaHeOH (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" Ed. 2017, 3111 A+B	BDL	0.002-2	0.003	No Relax
19.	Arsenic as As (mg/l)	APHA, 23rd Ed. 2017, 3114 C	BDL.	0.01-2	0.01	0.05
26,	Lend as Ph (mg/l)	APHA, 23" Ed. 2017, 3111 A+B	BDL	0.01-2	10.0	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)(eng/l) max	APHA 22nd EDN.:2012, 5540 A+C	HDL	0.01-5	0.2	1.0
23.	Chromium (Hesavalent) (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 Inferred Partition Method	BDL.	0.01-10	0.5	No Relax.
25.	Free Residual Chlorine (mg4)	APHA, 23 rd Ed. 2017, 4506-CLB	BDL	0.5-10	0.20	1.0
26.	Boron as B (mg/l)	APHA, 23" Ed. 2017, 4500 B A+C	0.25	0.2-10	, 0.5	1.0
27.	Total coliform (MPN/100 ml)	APHA, 23" Ed. 2017, B+C	Absent	1.8	0.05	Absent
28.	E.call (MPN/100 ml)	APHA, 237 Ed. 2017, B+E	Absent	1.5	Absent	Absent

Note: BDL - Below Detection Limit

forEcomen Laboratories Pvt. Ltd

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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 : Adami 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)

51. No.	TESTS	PROTOCOL.	RESULT	Detection Range	ENDOMEST AND STREET AND SELECTION AND SELECT	
					Desirable	Permissible
I.	Cultur (Hazen unit)	APHA, 23" Ed. 2017, 2120 B	<5.0	5-190	5.00	15.0
2.	Odour	APHA, 23 rd Ed. 2017, 2150 B	Agreeable	Qualitative	Agreeable	Agreeable
1.	pH	AP25A, 23° Ed. 2017, 450010+ A+81	7.27	2.9-12	4545	No Rober.
4,	Tetal Dissolved Solids as TDS (mg/l)	AFHA, 23° Ed. 2017, 2546-C	352.0	5 - 5000	500	2000
5.	Alkalisity (mg/l)	APHA, 23rd Ed. 2017, 2320 Art II	142.0	5-1500	200	680
6.	Total Hardness as CaCO ₂ (mg/l)	APHA, 23 ^{rt} Ed. 2017, 2348 A+C	268,0	5-1500	200.0	600.0
1.	Calcium as Cr (mg/t)	APHA, 23th Ed. 2017, 3500 Ca A+B	72.0	5-1000	75.0	200.0
1.	Magnesium as Mg (mg/l)	APHA, 23° Ed. 2017, 3500 Mg A+B	23.32	5-1000	30,0	100.0
9.	Capper as Cu (mg/l)	APICA, 23" Ed. 2017, 3111 A+B	BDL	0.05-5	6.05	1.5
10.	Leve as Fe (mg/l)	APEA, 23" Ed. 2017, 3500 Fe B	0.19	0.02-50	0,3	No Refus.
11.	Manganene as Mn (mg/l)	APHA, 23" Ed. 2017, 3111 A+B	BDC.	0.1-5	0.10	0,30
12.	Chluride as Ci (mg/l)	APHA, 23" Ed. 2017, 4500 CLA+B	36.0	5-1000	250.0	1000,0
13.	Sulfate as SO ₂ (reg/l)	APRA, 23" Ed. 2017, 4506-5Oc2- E	39.11	1.0 -250	200.0	409.8
14.	Nitrate Nitrogen as NO ₂ (mg/l)	APHA, 23" Ed. 2017, 4500-NO ₅ ' B	10.22	5.0 - 100	45.0	No Retus.
15.	Fluorides as F (mg/l)	APHA, 23" Ed. 2017, 4500-C	0.24	0.05-10	1.0	1.5
16.	Phenolic Compounds as Cd4sOH (mg4)	APHA, 23rd Ed. 2017, 5530 A+C	BDL	1-10	0.001	8.002
17.	Mercury as Hg (mg/t)	APHA, 23rd Ed. 2017, 3112 A+B	HDL	6,061-1	0.001	No Retus.
18.	Cadmium as Cd (mpf)	APHA, 23° Ed. 2917, 3311 A+B	WDL	0.002-2	0.003	No Relat
19.	Arsenic as As (mg/l)	APRA, 23th Ed. 2017, 3114 C	BDL	9.91-2	0.01	0.05
20.	Lead as Pb (mgfl)	APHA, 23th Ed. 2017, 3111 A+B	BDL	0,01-2	6.61	No Refes.
21.	Zinc as Za (mg/l)	APHA, 23" Ed. 3017, 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	NOT.	0.01-5	0.1	1.0
23.	Chromium (Hexavalent) (mg/l)	APHA, 23th Ed. 2017, 3111A+B	BDL	0.05-26	0.05	No Relat.
24.	Mineral Oil 6 (mg/l)	15 3025 (Part 37) Class - Infrared Partition Method	BDL	0.01-10	0,5	No Relea.
25.	Free Residual Chlorine (mg/l)	APHA, 23 rd Ed. 2017, 4506-CLB	BDL	0.5-10	0.20	1.0
26.	Borun as B (mg/l)	APHA, 23 rd Ed. 2017, 4500 B A+C	0.21	0.7-10	- 4.5	1,0
27.	Total coliform (MPN/100 ml)	APHA, 23rd Ed. 2017, B+C	Absent	1.8	0.05	Absent
28.	E.coli (MPN/100 ml)	APHA, 23° Ed. 2017, B+E.	Absent	1.8	Alment	Absent

Note: BDL - Below Detection Limit

Record

forEcomen Laboratories Pvt. Ltd

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ENVIRONMENTAL MONITORING REPORT

OI

ADANI POWER (JHARKHAND) LTD.

2x800 MW Godda Thermal Power Project, Village: Motia, Distt. - Godda, Jharkhand

> *for* May - 2019

Prepared by:

ecoMen

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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

: 2x800MWGoddaThermal Power Project,

Village: Motia, Distt. - Godda, Jharkhand

Sampling Method

: As per IS: 5182

Sample Collected By

: Ecomen Team

		ne of Location : Ne	-		
Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(μg/m³)	79.0	100
(02-03).05.2019	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	29.0	60
	SO ₂ (μg/m³)	IS:5182 (Part-2)	5-200(μg/m ³)	8.2	80
	NO _x (μg/m ³)	IS:5182 (Part-6)	5-200(µg/m³)	21.6	80
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	77.0	100
(06-07).05.2019	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	27.0	60
***********	SO ₂ (μg/m ³)	IS:5182 (Part-2)	5-200(µg/m³)	9.4	80
	$NO_x(\mu g/m^3)$	IS:5182 (Part-6)	5-200(µg/m ³)	19.2	80
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	73.0	100
(09-10).05.2019	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/m³)	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 : Adami Power (Jharkhand) Ltd.

Address of the Project : 2x800MWGoddaThermal Power Project,

Village: Motia, Distt. - Godda, Jharkhand

Sampling Method : As per IS: 5182 Sample Collected By : Ecomen Team

Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards	
	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	77.0	100	
(13-14).05.2019	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-1 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	
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	83.0	100	
(16-17).05.2019	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	34.0	60	
,	SO ₂ (μg/m ³)	IS:5182 (Part-2)	5-200(µg/m³)	9.7	80	
	$NO_x(\mu g/m^3)$	IS:5182 (Part-6)	5-200(µg/m³)	18.2	80	
	PM ₁₀ (μg/m ³)	1S:5182(Part-23)	2-1000(µg/m³)	77.0	100	
(20-21).05.2019	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).

For Ecomen Laboratories Pvt. Ltd.

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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

: 2x800MWGoddaThermal Power Project,

Village: Motia, Distt. - Godda, Jharkhand

Sampling Method

: As per IS: 5182

Sample Collected By

: Ecomen Team

Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	89.0	100
(23-24).05,2019	$PM_{2.5}(\mu g/m^3)$	NAAQM Guideline Volume-I by CPCB	2-100(μg/m ³)	38.0	60
(23-24).03,2019	SO ₂ (μg/m ³)	IS:5182 (Part-2)	5-200(μg/m ³)	11.7	80
	$NO_x(\mu g/m^3)$	IS:5182 (Part-6)	5-200(µg/m ³)	23.2	80
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	71.0	100
(27-28).05.2019	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m ³)	26.0	60
No. 28600000000	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/m³)	17.2	80
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	78.0	100
(30-31).05.2019	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/m³)	7.8	80
	NO _x (μg/m³)	IS:5182 (Part-6)	5-200(µg/m ³)	20.2	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/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 : 2x800MWGoddaThermal Power Project,

Village: Motia, Distt. - Godda, Jharkhand

Sampling Method : As per IS: 5182 Sample Collected By : Ecomen Team

Date of Tests Monitoring Conducted		Method	Method Detection Range		Standards
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	74.0	100
(02-03).05.2019	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m ³)	29.0	60
	$SO_2(\mu g/m^3)$	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)	15.6	80
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	66.0	100
(06-07).05.2019	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m ³)	23.0	60
	SO ₂ (μg/m ³)	IS:5182 (Part-2)	182(Part-23) 2-1000(μg/m³) AQM Guideline μme-I by CPCB 2-100(μg/m³) 182 (Part-2) 5-200(μg/m³)	5.9	80
	$NO_s(\mu g/m^3)$	IS:5182 (Part-6)	5-200(µg/m ³)	17,1	80
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(μg/m³)	69.0	100
(09-10).05.2019	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m ³)	25.0	60
	SO ₂ (μg/m ³)	IS:5182 (Part-2)	5-200(μg/m ³)	7.4	80
	NO _x (μg/m³)	IS:5182 (Part-6)	5-200(µg/m³)	14.8	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/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 : 2x800MWGoddaThermal Power Project,

Village: Motia, Distt. - Godda, Jharkhand

Sampling Method : As per IS: 5182 Sample Collected By : Ecomen Team

Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards	
	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	72.0	100	
(13-14).05.2019	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m ³)	28.0	60	
(13-14),03,2019	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	
	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	68.0	100	
(16-17).05.2019	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m ³)	26.0	60	
AT. 3. 1.3.415 5. 0 1.0 1.1 1.1	SO ₂ (μg/m ³)	NAAQM Guideline 2-100(μg y/m³) IS:5182 (Part-2) 5-200(μg y/m³) IS:5182 (Part-6) 5-200(μg y/m³) IS:5182 (Part-23) 2-1000(μg y/m³) NAAQM Guideline y/m³) Volume-I by CPCB 2-100(μg y/m³) IS:5182 (Part-2) 5-200(μg y/m³) IS:5182 (Part-6) 5-200(μg y/m³) IS:5182 (Part-6) 5-200(μg y/m³) IS:5182 (Part-23) 2-1000(μg y/m³) IS:5182 (Part-23) 2-1000(μg y/m³) NAAQM Guideline 3-100(μg y/m³) NAAQ	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	
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	75.0	100	
(20-21).05.2019	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	31.0	60	
A-0 TO SECTION STATES	SO ₂ (μg/m ³)	IS:5182 (Part-2)	5-200(μg/m ³)	5.4	80	
	$NO_x(\mu g/m^3)$	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

: 2x800MWGoddaThermal Power Project,

Village: Motia, Distt. - Godda, Jharkhand

Sampling Method

: As per IS: 5182

Sample Collected By

: Ecomen Team

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/m³)	77.0	100	
	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	32.0	60	
	SO ₂ (μg/m ³)	IS:5182 (Part-2)	5-200(μg/m³)	9.1	80	
	NO _x (μg/m³)	IS:5182 (Part-6)	5-200(μg/m ³)	21.4	80	
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(μg/m³)	66.0	100	
	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	22.0	60	
(27-28).05.2019	SO ₂ (μg/m ³)	IS:5182 (Part-2)	5-200(μg/m³)	6.8	80	
	NO _x (μg/m³)	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 GoddaThermal Power Project,

Village: Motia, Distt. - Godda, Jharkhand

5-200(µg/m³)

 $5-200(\mu g/m^3)$

Sampling Method : As per IS: 5182 Sample Collected By : Ecomen Team

Name of Loca	tion: Near M	ali Village			
Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(μg/m³)	69.0	100
	PM _{2.5} (μg/m³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	24.0	60
(30-31).05.2019			E 200/11-/m3\		

Note:BDL = Below Detection Limit

 $SO_2(\mu g/m^3)$

 $NO_x(\mu g/m^3)$

Standards: National Ambient Air Quality Monitoring (NAAQM).

IS:5182 (Part-2)

IS:5182 (Part-6)

For Ecomen Laboratories Pvt. Ltd.

7.2

19.3

80

80

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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 : Adami Power (Jharkhand) Ltd.

Address of the Project : 2x800MWGoddaThermal Power Project,

Village: Motia, Distt. - Godda, Jharkhand

Sampling Method : As per IS: 5182 Sample Collected By : Ecomen Team

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/m³)	75.0	100	
	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	34.0	60	
	SO ₂ (μg/m ³)	IS:5182 (Part-2)	5-200(μg/m³)	9.7	80	
	NO _x (μg/m³)	IS:5182 (Part-6)	5-200(μg/m³)	25.2	80	
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(μg/m³)	69.0	100	
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	27.0	60	
(03-04).05.2019	SO ₂ (μg/m ³)	IS:5182 (Part-2)	5-200(μg/m³)	11.4	80	
	NO _s (μg/m³)	IS:5182 (Part-6)	5-200(μg/m³)	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

: 2x800MWGoddaThermal Power Project,

Village: Motia, Distt. - Godda, Jharkhand

Sampling Method

: As per IS: 5182

Sample Collected By

: Ecomen Team

Date of Monitoring	Method Detection Pange		Result	Standards	
(07-08).05.2019	PM ₁₀ (μg/m³)	IS:5182(Part-23)	2-1000(µg/m³)	83.0	100
	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	37.0	60
	SO ₂ (μg/m ³)	IS:5182 (Part-2)	5-200(μg/m³)	9.2	80
	NO _x (μg/m ³)	IS:5182 (Part-6)	5-200(μg/m³)	20.6	80
	PM ₁₀ (μg/m³)	IS:5182(Part-23)	2-1000(μg/m³) 76.0		100
	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	31.0	60
(10-11).05,2019	SO ₂ (μg/m³)	IS:5182 (Part-2)	5-200(μg/m³)	7.9	80
	NO _x (μg/m³)	IS:5182 (Part-6)	5-200(μg/m³)	18.7	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/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 : 2x800MWGoddaThermal Power Project,

Village: Motia, Distt. - Godda, Jharkhand

Sampling Method : As per IS: 5182 Sample Collected By : Ecomen Team

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/m³)	79.0	100
	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	34.0	60
	SO ₂ (μg/m³)	1S:5182 (Part-2)	5-200(μg/m³)	7.9	80
	NO _x (μg/m³)	IS:5182 (Part-6)	5-200(μg/m ³)	23.1	80
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(μg/m³) 80.0		100
	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	36.0	60
(17-18).05.2019	SO ₂ (μg/m³)	IS:5182 (Part-2)	5-200(μg/m³)	10.2	80
	NO _x (μg/m³)	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 : 2x800MWGoddaThermal Power Project,

Village: Motia, Distt. - Godda, Jharkhand

Sampling Method : As per IS: 5182 Sample Collected By : Ecomen Team

Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards	
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(μg/m³)	85.0	100	
(21 22) 05 2010	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	39.0	60	
(21-22).05.2019	SO ₂ (μg/m ³)	IS:5182 (Part-2)	5-200(μg/m ³)	8.8	80	
	NO _x (μg/m³)	IS:5182 (Part-6)	5-200(μg/m ³)	25.2	80	
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(μg/m³)	73.0	100	
	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	29.0	60	
(24-25).05.2019	SO ₂ (μg/m ³)	IS:5182 (Part-2)	5-200(μg/m ³)	10.4	80	
	NO _x (μg/m³)	IS:5182 (Part-6)	5-200(µg/m³)	22.2	80	
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(μg/m³)	88.0	100	
	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	37.0	60	
(28-29).05.2019	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/m³)	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 MWGoddaThermal Power Project,

Village: Motia, Distt. - Godda, Jharkhand

Sample Collected By : Ecomen Team Date of Sampling : 23-24.05.2019

Instrument Used : Noise Meter (HTC)

SI.		Day	Time		Night Time		
No.	Locations	Lime		alue in (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	12.05P.M	59.2	53.8	11.10P.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	12.05A.M	47.1	45.2
6.	Near Adani Office	17:05 PM	73.6	67.9	12.40A.M	55.6	53.8

For Ecomen Laboratories Pvt. Ltd.

Ecomen Laboratories Pvt. Ltd.

Noise (Ambient Standard)

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Area Code	Category of area	Limit in dB	(A) Leq
		Day Time	Night Time
A	Industrial Area	75	70
В	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)

INDIAN STANDARDS as per IS 10500:1991(Reaff:2012) TESTS Detection St. No. PROTOCOL. RESULT Range Desirable Permissible APHA, 23rd Ed. 2017, 2120 B <5.0 5,100 5.00 15.0 Colour (Hazen unit) Agreeable APHA, 23" Ed. 2017, 2150 B Qualitative Agreeable 2. Odeur Agreeable 7.14 2.0-12 APHA, 23rd Ed. 2017, 4500FF+ A+B 6.5-8.5 No Relax. 30 pH APHA, 23rd Ed. 2017, 2540-C 324.0 Total Dissolved Solids as TDS (mg/l) 5 - 5000 500 2000 4, APHA, 23rt Ed. 2017, 2320 A+ B 116.0 5. Alkalinity (mg/l) APHA, 23rd Ed. 2017, 2340 A+C 204.0 5-1500 200.0 600.0 6 Total Hardness as CaCO₂ (mg/l) 48.0 APHA, 23rd Ed. 2017, 3500 Ca A+B 5 - 1000200.0 7. Calcium as Ca (mg/l) 75.0 20.41 APHA. 23" Ed. 2017, 3500 Mg A+B **\$1000** 30.0 100.0 R. Magnesium as Mg (mg/l) Copper as Cu (mg/l) BIN 9. APITA, 23td Ed. 2017, 3111 A+B 0.05-5 0.05 1.5 0.24 APHA, 2314 Ed. 2017, 3500 Fe H 0.02-50 0.3 Nu Reiax. 10 Iron as Fe (mg/l) BDL APHA, 23rd Ed. 2017, 3111 A+B 0.1.5 0.10 0.30 11. Manganese as Mn (mg/l) 24.0 1000.0 12, Chloride as Cl (mg/l) APRIA, 23rd Ed. 2017, 4500 Cl A+B 5-1000 250.0 APILA, 23rd Ed. 2017, 4500-SQ2 E 36.0 1.0 -250 11. Sulfate as SO4 (mg/l) 200.0 400.0 9.0 APILA, 23rd Ed. 2017, 4500-NOS B 5.0 - 100 45.0 No Relex 14 Nitrate Nitrogen as NOs (mg/l) 0.22 APHA, 23" Ed. 2017, 4500-C 0.05-10 1.0 1.5 15. Fluorides as F (mg/l) BDI APHA, 23rd Ed. 2017, 5530 A+C 1-10 0.001 0.002 16. Phenolic Compounds as CallsOH (mg/l) BDL 17 Mercury as Hg (mg/l) APHA, 23" Ed. 2017, 3112 A+B 0.001-1 0.001 No Relax. RDI. APHA, 23rd Ed. 2017, 3111 A+B 0.002-2 0.003 No Relax 18 Cudmium as Cd (mg/l) APHA, 23rd Ed. 2017, 3114 C BDL 0.01-2 0.01 0.05 19 Arsenic as As (mg/l) BDL APHA, 23rd Ed. 2017, 3111 A+B 8.01-2 0.01 20. Lead as Pb (mg/l) No Relax 9,16 APHA, 23rd Ed. 2017, 3111 A+B 0.62,58 50 Zinc as Zn (mg/l) 15 BDL Anionic Detergents APHA 22nd EDN::2012, 5540 A+C 0.01-5 0.2 1.0 22. (As MBAS)(mg/l) max APHA, 23" Ed. 2017, 3111A+B BDL Chromium (Hexavalent) (mg/l) 0.05.20 0.05 No Relax. 23 15 3025 (Part 39) Class -6 Infrared Partition BDI 0.01-10 No Relax 0.5 24 Mineral Oil 6 (mg/l) Method BDL. APHA, 23rd Ed. 2017, 4500-CI B 0.5-10 0.20 1.0 25 Free Residual Chlorine (mg/t) 0.21 0.2 - 10Boron as B (mg/l) APHA, 23rd Ed. 2017, 4500 B A+C 0.5 1.0 26 APHA, 23rd Ed. 2017, 9221 B+C Absent 1.8 0.05 Absent 27 Total coliform (MPN/100 ml) Absent APHA, 23" Ed. 2017, 9221 B+E. 1.8 Absenti E.coll (MPN/100 ml) Absent 28

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.)

Nameof the Project : Adami Power ([harkhand) 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)

SI. No.	TESTS	PROTOCOL	RESULT	Detection Range	INDIAN STAND. 10500:1991(F	
					Desirable	Permissible
312	Colour (Hazen unit)	APHA, 23" 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.	plt	APHA, 23rd Ed. 2017, 4500H+ A+B	7.36	2.0 -12	6,5-8,5	No Relex.
4.	Total Dissolved Solids as TDS (mg/l)	APHA, 23 ^{rt} 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 ₂ (mg/l)	APHA, 23rd 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 Relex
11.	Manganese as Ma (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, 23rd Ed. 2017, 4500 Cl A+B	40.0	5-1000	250.0	1000.0
13.	Sulfate as SO ₄ (mg/l)	APHA, 2374 Ed. 2017, 4500-SO/2 E	32.75	1.0 -250	200.0	400.0
14.	Nitrate Nitrogen us NO ₃ (mg/l)	APHA, 23rd Ed. 2017, 4500-NO ₃ : B	14.0	5.0 - 100	45.0	No Reiax
15.	Fluorides as F (mg/l)	APHA, 23rd Ed. 2017, 4500-C	0.28	0.05-10	1.0	1.5
16.	Phenolic Compounds as CallsOH (mg/l)	APHA, 23 ⁻² Ed. 2017, 5530 A+C	BDL	1-10	100.0	0.002
17.	Mercury as Hg (mg/l)	APHA, 23rd Ed. 2017, 3112 A+B	BDL	0.001-1	0.001	No Reiax
18.	Cadmium as Cd (mg/l)	APHA, 23rd Ed. 2017, 3111 A+B	BDL.	0.002-2	0.003	No Relax
19.	Arsenic as As (mg/l)	APHA, 23rd Ed. 2017, 3114 C	BDL	0.01-2	10.0	0.05
20.	Lead as Pb (mgA)	APHA, 23° Ed. 2017, 3111 A+B	BDL	0.01-2	0.01	No Relax
21.	Zine as Zn (mg/l)	APHA, 23rd Ed. 2017, 3111 A+B	0.25	0.02-50	5.0	15
22.	Anionic Detergents (As MBAS)(mgA) max	APHA 22nd EDN::2012, 5540 A+C	BDL	0.01-5	0.2	t.0
23.	Chromium (Hexavalent) (mg/l)	APIIA, 23" Ed. 2017, 3111A+B	BDL,	0.05-20	0.05	No Relax
24.	Mineral Oil 6 (mg/l)	1S 3025 (Part 39) Class -6 Infrared Partition Method	BDL	0.01-10	9.5	No Relax
25.	Free Residual Chlorine (mg/l)	APHA, 23 ^{r4} Ed. 2017, 4500-CI B	BDL.	0.5-10	0.20	1.0
26.	Seron as B (mg/l)	APHA, 23 ^{rs} 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.coll (MPN/100 ml)	APHA, 23rd 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)

Si. No.	TESTS	PROTOCOL	RESULT	Detection Range	INDIAN STAND. 10500:1991(5	
					Desirable	Permissible
1.	Colour (Hazen unit)	APHA, 23rd Ed. 2017, 2120 B	<5.0	5-100	5.00	15,0
2.	Odour	APHA, 23" Ed. 2017, 2150 B	Agreeable	Qualitative	Agreeable	Agreeable
3.	рП	APHA, 23" 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, 23rd 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 ₂ (mg/l)	APHA, 23rd Ed. 2017, 2340 A+C	248.0	5-1500	200.0	600.0
7.	Calcium as Ca (mg/l)	APHA, 23rd Ed. 2017. 3500 Ca A+B	52.8	5-1000	75.0	200.0
8.	Magnesium as Mg (mg/l)	APIIA, 23° Ed. 2017, 3500 Mg A+B	28.18	5-1000	30.0	100.0
9.	Copper as Cu (mg/l)	APHA, 23° Ed. 2017, 3111 A+8	BDL	0.05-5	0.05	1.5
10.	tron as Fe (mg/l)	APHA, 23rd Ed. 2017, 3500 Fe B	0.19	0.02-50	0.3	No Relax.
11.	Manganese as Mn (mg/l)	APHA, 23rd Ed. 2017, 3111 A+B	BDI.	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, 23rd Ed. 2017, 4500-SO ₄ 2-E	36.0	1.0 -250	200,0	400.0
14.	Nitrate Nitrogen as NO ₂ (mg/l)	APHA, 23rd Ed. 2017, 4500-NO; B	15.80	5.0 - 100	45.0	No Relax.
15.	Fluorides as F (mg/t)	APHA, 23" Ed. 2017, 4500-C	0.32	0.05-10	1.0	1.5
16.	Phenelic Compounds as CsH3OH (mg/l)	APHA, 23" Ed. 2017, 5530 A+C	BDL.	1-10	0.001	0.002
17.	Mercury as Hg (mg/l)	APHA, 23" Ed. 2017, 3112 A+B	BDL.	1-100.0	0.001	No Relax.
18.	Cadmium as Cd (mg/l)	APHA, 23rd Ed. 2017, 3111 A+B	RDI.	0.002-2	0.003	No Relax
19,	Arsenic as As (mg/l)	APHA, 23" Ed. 2017, 3114 C	BD1,	0.01-2	0.01	0.05
20.	Lead as Pb (mg/l)	APHA, 23" 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, \$\$40 A+C	BDI.	0.01-5	0.2	1.0
23.	Chromium (Hexavalent) (mg/l)	APHA, 23'S Ed. 2017, 3111A+B	BDL	0.05-20	0.05	No Relax
24.	Mineral Oil 6 (mg/l)	15 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	0.21	0.2-10	0.5	1.0
27.	Total coliform (MPN/100 mt)	APHA, 23 rd Ed. 2017, 9221 B+C	Absent	1.8	0.05	Absent
28.	E.coll (MPN/100 ml)	APHA, 23" Ed. 2017, 9221 B+E	Absent	1.5	Absent	Absent

Note: BDL - Below Detection Limit

for Ecomen Laboratories P.vt. 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 Adami 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 STAND. 10500:1991(1	
					Desirable	Permissible
1.	Colour (Hazee unit)	APHA, 23 rd Ed. 2017, 2120 H	<5.0	5-100	5.00	15.0
2.	Odour	APIIA, 23 ¹⁴ Ed. 2017, 2150 B	Agreeable	Qualitative	Agreeable	Agreeable
3.	pH	APHA, 23° Ed. 2017, 4500H+ A+B	7,29	2.0 -12	6.5-8.5	No Relax
4.	Total Dissolved Solids us TDS (mg/l)	APHA, 23 rd Ed. 2017, 2540-C	462.0	5 - 5000	500	2000
5.	Alkalinity (neg/l)	APHA, 23rd Ed. 2017, 2320 A+ B	136.0	5-1500	200	600
6.	Total Hardness as CaCO ₂ (mg/l)	APRA, 23 rd Ed. 2017, 2340 A+C	184.0	5-1500	200.0	600.0
7.	Calcium as Ca (mg/l)	APHA, 23" Ed. 2017, 3500 Ca A+B	43.2	5-1000	75.0	200.0
8.	Magnesium as Mg (mg/l)	APHA, 23" Ed. 2017, 3500 Mg A+B	18.46	5-1000	30.0	100.0
9.	Copper as Cu (mg/l)	APHA, 23rd 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
u.	Manganese as Mn (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	BDL.	0.1-5	0.10	0.30
12.	Chloride as CI (mg/l)	APHA, 23 rd Ed. 2017, 4500 Cl A+B	34.0	5-1000	250,0	1000,0
13.	Solfate as SO ₊ (mg/l)	APHA, 23 ⁻⁴ 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, 23rd Ed. 2017, 4500-NO ₅ 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 ₄ H ₃ OH (mg/l)	APHA, 23rd Ed. 2017, 5530 A+C	BDL	1-10	0.001	0,002
17.	Mercury as Hg (mg/l)	APHA, 23" Ed. 2017, 3112 A+B	BDL	0.001-1	0.001	No Relax
18.	Cadmium as Cd (mg/l)	APHA, 23rd 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	BDI,	0.01-2	0.01	0.05
20.	Lead as Pb (mg/l)	APHA, 23rd Ed. 2017, 3111 A+B	BDL	0.01-2	0.01	No Relax.
21.	Zinc as Zn (mg/l)	APHA, 23° Ed. 2017, 3111 A+B	0.24	0.02-50	5.0	15
22.	Anionic Detergents (As MBASKing/I) mex	APHA 22nd EDN.:2012, 5540 A+C	BDL	0.01-5	0.2	1.0
23.	Cbromium (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-C1 B	BDL.	0.5-10	0.20	1.0
26,	Seres as II (mg/l)	APHA, 23" 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, 23rd Ed. 2017, 9221 B+E	Absent	1.8	Absent	Absent

Note: BDL - Below Detection Limit

for Ecomen Laboratories Pvt. Ltd.

Fiat No.-8 2nd Floor, Arif Chamber-V Sector-H, Aliganj, Luckdow-726024 Ph.-2746282, Fax: 2742726 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 MWGoddaThermal Power Project,

Village: Motia, Distt. - Godda, Jharkhand

Sampling Method

: As per IS: 5182

Sample Collected By

: Ecomen Team

	Nar	ne of Location : Ne	ear Motia Village		
Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	71.00	100
(04-05).06.2019	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	26.24	60
	SO ₂ (μg/m ³)	IS:5182 (Part-2)	5-200(μg/m³)	7.42	80
	NO _x (μg/m ³)	IS:5182 (Part-6)	5-200(μg/m ³)	19.20	80
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	75.00	100
(06-07).06.2019	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/m³)	IS:5182 (Part-6)	5-200(μg/m ³)	22.40	80
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	69.00	100
(10-11).06.2019	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m ³)	23.00	60
	$SO_2(\mu g/m^3)$	1S:5182 (Part-2)	5-200(μg/m ³)	79.00	80
	$NO_x(\mu g/m^3)$	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 GoddaThermal Power Project,

Village: Motia, Distt. - Godda, Jharkhand

Sampling Method Sample Collected By : As per IS: 5182 : Ecomen Team

Name of Location: Near Motia Village

Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	73.24	100
(13-14).06.2019	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	27.00	60
(15-14).00.2015	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
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	70.00	100
(17-18).06.2019	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	23.00	60
	SO ₂ (μg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	6.90	80
	$NO_x(\mu g/m^3)$	1S:5182 (Part-6)	5-200(μg/m³)	21.40	80
(20-21).06.2019	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	75.00	100
	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-1 by CPCB	2-100(μg/m³)	26.00	60
	$SO_2(\mu g/m^3)$	IS:5182 (Part-2)	5-200(µg/m ³)	9.20	80
	$NO_x(\mu g/m^3)$	IS:5182 (Part-6)	5-200(μg/m ³)	21.40	80

Note: BDL = Below Detection Limit

Standards: National Ambient Air Quality Monitoring (NAAQM).

For Ecomen Laboratories Pvt. Ltd.

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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 (Tharkhand) Ltd.

Address of the Project

: 2x800MWGoddaThermal Power Project,

Village: Motia, Distt. - Godda, Jharkhand

Sampling Method

: As per IS: 5182

Sample Collected By

: Ecomen Team

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/m³)	77.00	100
	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	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
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	68.00	100
(27-28).06.2019	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m³)	22.00	60
	$SO_2(\mu g/m^3)$	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

: 2x800MWGoddaThermal Power Project,

Village: Motia, Distt. - Godda, Jharkhand

Sampling Method

: As per IS: 5182

Sample Collected By

: Ecomen Team

Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	71.00	100
(03-04).06.2019	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	27.00	60
(00 01),001,001	SO ₂ (μg/m ³)	IS:5182 (Part-2)	5-200(µg/m³)	7.60	80
	NO _x (μg/m³)	IS:5182 (Part-6)	5-200(µg/m ³)	19.20	80
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	69.00	100
(06-07).06.2019	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m ³)	24.00	60
9) (SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	7.70	80
	$NO_x(\mu g/m^3)$	IS:5182 (Part-6)	5-200(μg/m ³)	16.40	80
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	77.00	100
(10-11).06.2019	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	28.00	60
	SO ₂ (μg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	10.20	80
	$NO_x(\mu g/m^3)$	IS:5182 (Part-6)	5-200(µg/m ³)	21.40	80

Note: BDL = Below Detection Limit

Standards: National Ambient Air Quality Monitoring (NAAQM).

For Ecomen Laboratories Pvt. Ltd.

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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.

 $2-100(\mu g/m^3)$

 $5-200(\mu g/m^3)$

 $5-200(\mu g/m^3)$

Address of the Project

: 2x800MWGoddaThermal Power Project,

Village: Motia, Distt. - Godda, Jharkhand

Sampling Method Sample Collected By : As per IS: 5182

: Ecomen Team

Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	77.00	100
(13-14).06.2019	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m ³)	32.00	60
(15-17).00.2015	SO ₂ (μg/m ³)	IS:5182 (Part-2)	5-200(μg/m ³)	7.30	80
	NO _x (μg/m³)	IS:5182 (Part-6)	5-200(µg/m ³)	19.60	80
	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	67.00	100
(17-18).06.2019	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m ³)	24.00	60
W-W-S-POS-S-S-S-S-S-S-S-S-S-S-S-S-S-S-S-S-S	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
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	74.00	100
	PMac(ug/m³)	NAAQM Guideline	2-100(ug/m³)	29.00	60

Note: BDL = Below Detection Limit

(20-21).06.2019

PM2.5 (µg/m3)

 $SO_2(\mu g/m^3)$

 $NO_x(\mu g/m^3)$

Standards: National Ambient Air Quality Monitoring (NAAQM).

Volume-I by CPCB

IS:5182 (Part-2)

IS:5182 (Part-6)

For Ecomen Laboratories Pvt. Ltd.

29.00

11,60

22.40

60

80

80

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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

: 2x800MWGoddaThermal Power Project,

Village: Motia, Distt. - Godda, Jharkhand

Sampling Method

: As per IS: 5182

Sample Collected By

: Ecomen Team

Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(μg/m³)	81.00	100
	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	35.00	60
(24-25).06.2019	SO ₂ (μg/m ³)	IS:5182 (Part-2)	5-200(μg/m³)	7.60	80
	NO _x (μg/m³)	IS:5182 (Part-6)	5-200(μg/m³)	23.20	80
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(μg/m³)	72.00	100
	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	28.00	60
(27-28).06.2019	SO ₂ (μg/m ³)	IS:5182 (Part-2)	5-200(µg/m³)	9.60	80
	NO _x (μg/m³)	IS:5182 (Part-6)	5-200(μg/m³)	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

: 2x800MWGoddaThermal Power Project, Village: Motia, Distt. - Godda, Jharkhand

Sampling Method Sample Collected By : As per IS: 5182

: Ecomen Team

Name of Location:	Near	Navabad	Village
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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/m³)	67.00	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	23.00	60
	SO ₂ (μg/m ³)	IS:5182 (Part-2)	5-200(μg/m³)	7.70	80
	NO _x (μg/m³)	IS:5182 (Part-6)	5-200(μg/m³)	21.40	80
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(μg/m³)	72.00	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	29.00	60
(07-08).06.2019	SO ₂ (μg/m ³)	IS:5182 (Part-2)	5-200(μg/m³)	6.60	80
	NO _x (μg/m³)	IS:5182 (Part-6)	5-200(μg/m³)	18.20	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/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

: 2x800MWGoddaThermal Power Project,

Village: Motia, Distt. - Godda, Jharkhand

Sampling Method Sample Collected By : As per IS: 5182

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/m³)	74.00	100
	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	27.00	60
	SO ₂ (μg/m ³)	IS:5182 (Part-2)	5-200(μg/m³)	5.50	80
	NO _x (μg/m³)	IS:5182 (Part-6)	5-200(μg/m ³)	17.20	80
a	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(μg/m³)	66.00	100
	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m ³)	21.00	60
(14-15).06.2019	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).

For Ecomen Laboratories Pvt. Ltd.

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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

: 2x800MWGoddaThermal Power Project,

Village: Motia, Distt. - Godda, Jharkhand

Sampling Method

: As per IS: 5182

Sample Collected By

: Ecomen Team

Name of L	ocation: N	ear Nav	abad Vi	llage
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Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(μg/m³)	77.00	100
	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	31.00	60
(18-19).06.2019	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(μg/m ³)	9.70	80
	NO _x (μg/m³)	IS:5182 (Part-6)	5-200(μg/m ³)	24.20	80
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(μg/m³)	72.00	100
	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	26.00	60
(21-22).06.2019	SO ₂ (μg/m ³)	IS:5182 (Part-2)	5-200(μg/m ³)	8.60	80
	NO _x (μg/m³)	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

: 2x800MWGoddaThermal Power Project,

Village: Motia, Distt. - Godda, Jharkhand

Sampling Method

: As per IS: 5182

Sample Collected By

: Ecomen Team

Date of Monitoring	Tests Conducted	Method ~	Detection Range	Result	Standards
	PM ₁₀ (μg/m³)	IS:5182(Part-23)	2-1000(µg/m³)	76.00	100
me act oc 2010	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	33.00	60
(25-26).06.2019	SO ₂ (μg/m ³)	IS:5182 (Part-2)	5-200(μg/m ³)	6.40	80
	NO _x (μg/m³)	IS:5182 (Part-6)	5-200(μg/m ³)	22.80	80
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(μg/m³)	65.00	100
/20 20) 05 2010	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	21.00	60
(28-29).06.2019	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(μg/m ³)	9.60	80
	NO _x (μg/m³)	IS:5182 (Part-6)	5-200(μg/m³)	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 : 23-24.06.2019

Date of Sampling Instrument Used

: Noise Meter (HTC)

SI.		Day	y Time		Ni	ght Time	9
No.	Locations	Time	A CONTRACTOR OF THE CONTRACTOR	alue in (A)	Time	100 miles	alue in (A)
			Max	Min		Max Mi	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	11.05A.M	62.70	55.90	11.15P.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	12.15A.M	51.2	46.7
6.	Near Adani Office	15:05 PM	71.20	65.70	12.45A.M	61.7	58.3

For Ecomen Laboratories Pvt. Ltd.

Noise (Ambient Standard)

Economic Laboratories Pvt. Ltd. Flux NJ -2 2nd Floor, Arif Chamber-V News-H. Atlyanj, Lunknew-225024

Area Code	Category of area	Limit in dB	(A) Leq
		Day Time	Night Time
A	Industrial Area	75	70
В	Commercial Area	65	55
C	Residential Area	55	45
D	Silence Zone	50	40
D	Sherice 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 (Tharkhand) 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 Sample Quantity : Ecomen Team : As per requirement.

Date of Sampling Date of Sample Receiving : 27.06.2019 : 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	INDIAN STANDARDS as per IS 10500:1991(Restf:2012)	
		1	1 0	Range	Desirable	Permissible
I.	Colour (Hazen unit)	APIIA, 23rd 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, 23rd 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, 23rd Ed. 2017, 2540-C	368.0	5-5000	500	2000
5.	Alkalinity (mg/l)	APHA, 23rd Ed. 2017, 2320 A+ B	128.0	5-1500	200	600
6.	Total Hardness as CaCOs (mg/l)	APHA, 23 rd E4, 2017, 2340 A+C	232.0	5-1500	200.0	600,0
7.	Calcium as Ca (mg/l)	APHA, 23rd Ed. 2017, 3500 Ca A+B	54.0	5-1000	75.0	290.0
8.	Magnesium as Mg (mg/l)	APHA, 23rd Ed. 2017, 3500 Mg A+B	23,4	5-1000	30.0	100.0
9.	Copper as Cu (mg/l)	APHA, 23rd Ed. 2017, 3111 A+B	BDL.	0.05-5	0.05	1.5
10.	Irog 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" Ed. 2017, 3111 A+B	BDL.	0.1-5	0.10	0.30
12.	Chloride as Cl (mg/l)	APRA, 23" Ed. 2017, 4500 Cl A+B	31.08	5-1000	250.0	1000,0
13.	Sulfate as SO ₄ (mg/l)	APHA, 23rd Ed. 2017, 4500-SO ₂ b-E	40.0	1.0 -250	200.0	400.0
14.	Nitrate Nitrogen as NOs (mg/l)	APHA, 23" Ed. 2017, 4500-NO ₂ " B	9.04	5.0 - 100	45.0	No Retax
15.	Fluorides as P (mg/l)	APHA, 23" Ed. 2017, 4500-C	0.22	0.05-10	1.0	1.5
16,	Phenolic Compounds as CallsOH (mg/l)	APHA, 23" Ed. 2017, 5530 A+C	BDL	1-10	0.001	0.002
17.	Mercury as Hg (mg/l)	APHA, 23" Ed. 2017, 3112 A+B	BDL	0.001-1	100.0	No Relax
18.	Cadmium as Cd (mg/l)	APHA, 23" Ed. 2017, 3111 A+B	BDL	0.002-2	0.003	No Relax
19.	Arsenic as As (mg/l)	APHA, 23rd Ed. 2017, 3114 C	BDL	0.01-2	0.01	0.05
20,	Lead as Pb (mg/l)	APHA, 23rd Ed. 2017, 3111 A+B	BDL	0.01-2	0.01	No Relaz
21,	Zinc us Za (mg/l)	APHA, 23rd 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)	APRA, 23 rd Ed. 2017, 3111A+B	BDL	0.05-20	0.05	No Relux
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)	APRIA, 23rd Ed. 2017, 4500-C1 B	BDL	0.5-10	0.20	1.0
26.	Boron as B (mg/l)	APHA, 23rd 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	Alisent
28.	E.coli (MPN/100 ml)	APHA, 23° E4, 2017, 9221 B+E	Absent	1.8 /	Absolt	Absent

Note: BDL - Below Detection Limit

for Ecomen Laboratories Pyt Ltd.

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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 (Tharkhand) 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 Sample Quantity : Ecomen Team : As per requirement.

Date of Sampling

: 27.06.2019

Date of Sample Receiving Date of Analysis : 28.06.2019

Source of Sample

: 28.06.2019 to 05.07.2019 : Navabad Village, Hand Pumo (GW)

SL No.	TESTS PROTOCOL	PROTOCOL	RESULT	Detection Range	INDIAN STANDARDS as per IS 10500:1991(ResII:2012)	
				Desirable	Permissible	
1.	Colour (Haren unit)	APHA, 23rd Ed. 2017, 2120 B	<5.0	5-100	5.00	15.0
2.	Odeur	APHA, 23rd Ed. 2017, 2150 B	Agreeable	Qualitative	Agrecable	Agreeable
3,	pH	APHA, 23rd 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, 23rd Ed. 2017, 2320 A+ B	132.0	5-1500	200	600
6.	Total Hardness as CaCO ₂ (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, 23rd Ed. 2017, 3500 Mg A+B	21.06	5-1000	36.0	100.0
9.	Copper as Cu (mg/l)	APHA, 23rd Ed. 2017, 3111 A+B	BDL	0.05-5	0.05	1.5
10.	Iron as Fe (mg/l)	APHA, 23rd Ed. 2017, 3500 Fe B	0.26	0.02-50	0.3	No Relax.
11.	Manganese as Mo (mg/l)	APHA, 23" Ed. 2017, 3111 A+B	BDL	0.1-5	0.10	0,30
12.	Chloride as Cl (mg/l)	APHA, 23rd Ed. 2017, 4500 Cl A+B	37.60	5-1000	250.0	1000.0
13.	Sulfate as SO ₄ (mg/l)	APHA, 23™ Ed. 2017, 4500-SO ₆ ™ E	36,94	1.0 -250	200.0	400.0
14.	Nitrate Nitrogen as NO ₂ (mg/l)	APHA, 23rd Ed. 2017, 4500-NO ₂ . 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 CellsOH (mg/l)	APHA, 23rt Ed. 2017, 5539 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, 23rd Ed. 2017, 3114 C	BDL	0.01-2	0.01	0.05
20.	Lead as Pb (mg/l)	APHA, 23* Ed. 2017, 3111 A+B	BDL	0.01-2	0.01	No Relax.
21.	Zinc as Za (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 (itexavalent) (mg/l)	APHA, 23 rd Ed. 2017, 3111A+B	BDL.	0.05-20	0.05	No Relax.
24.	Mineral Oil 6 (mg/l)	15 3025 (Part 39) Class -6 Infrared Partition Method	BDL	0.01-10	0.5	No Relax.
25.	Free Residual Chlorine (mg/l)	APHA, 23 ^{rs} Ed. 2017, 4500-CTB	BDL	0.5-10	0,20	1.0
26,	Boron as B (mg/l)	APHA, 23rd Ed. 2017, 4500 II A+C	0.32	0.2 - 10	0,5	1.0
27.	Total coliform (MPN/100 mt)	APHA, 23 rd E4. 2017, 9221 B+C	Absent	1.8	0.05	Absent
28.	E_coll (MPN/100 ml)	APHA, 23" 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/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 : APHA, 23rd Ed. 2017

Sampling Method

: Ecomen Team

Sample Collected by

: As per requirement.

Sample Quantity Date of Sampling

: 27.06.2019

Date of Sample Receiving

: 28.06.2019

Date of Analysis Source of Sample : 28.06.2019 to 05.07.2019 : 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" Ed. 2617, 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, 23rd Ed. 2017, 4500H+ A+B	7,48	2.0 -12	6.5-8.5	No Relaz.
4.	Total Dissolved Selids as TDS (mg/l)	APHA, 23rd Ed. 2017, 2540-C	392.0	5 - 5000	500	2000
5.	Alkalinity (mg/l)	APHA, 23rd Ed. 2017, 2320 A+ B	136.0	5-1566	200	690
6.	Total Hardness as CaCO ₂ (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, 3590 Mg A+B	30,20	5-1000	30.0	100,0
9,	Copper as Cu (mg/l)	APHA, 23" Ed. 2017, 3111 A+B	BDL	0.05-5	0.05	1.5
10.	Iron as Fe (mg/l)	APHA, 23" Ed. 2017, 3500 Fe B	0.26	0.02-50	0.3	No Reinx.
11.	Manganese as Ms (mg/l)	APHA, 23* Ed. 2017, 3111 A+B	BDL	0.1-5	0.10	0.30
12.	Chloride as CI (mg/l)	APHA, 23" Ed. 2017, 4500 CT A+B	37.8	5-1000	250.0	1000.0
13.	Sulfate as SO ₄ (mg/l)	APHA, 23 rd Ed. 2017, 4500-SO ₂ ² E	36.18	1.0 -250	200.0	400.0
140	Nitrate Nitrogen as NOs (mg/l)	APHA, 23rd Ed. 2017, 4800-NO ₅ : B	14.22	5.0 - 100	45.0	No Relax
15.	Floorides as F (mg/l)	APHA, 23 rd Ed. 2017, 4500-C	0.32	0.05-10	1.0	1.5
16.	Phenolic Compounds as CaH2OH (mg/l)	APHA, 23rd Ed. 2017, 5530 A+C	BDL	1-10	0.001	0.092
17.	Mercury as Hg (mg/l)	APHA, 23rd Ed. 2017, 3112 A+B	BDL	0.001-1	0.001	No Retax.
18.	Cadmium as Cd (mg/l)	APRA, 23" 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** Ed. 2017, 3111 A+B	BDL	0.01-2	10.0	No Relax
21.	Zinc as Zo (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+B	0.21	0.02-50	5.0	15
22.	Anionic Detergents (As MHAS)(mg/l) max	APHA 12nd EDN.:2012, 5540 A+C	BDL	0.01-5	0.2	1.0
23,	Chromium (Hezavalent) (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, 23rd Ed. 2017, 4500-CI B	BDL	0.5-10	0,20	1.0
26.	Boron as B (mg/l)	APHA, 23rd Ed. 2017, 4590 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.colf (MPN/100 mi)	APHA, 23 rd Ed. 2017, 9221 B+E	Absent	1.8	Absent	Absent

Note: BDL - Below Detection Limit

for Ecomen Laboratories Pvt. Ltd. Ecomen Laboratories Pvt. Ltd.

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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 Sample Quantity : Ecomen Team : As per requirement.

Date of Sampling Date of Sample Receiving

: 27.06.2019 : 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(Res#:2012)	
					Desirable	Permissible
1.	Colour (Hazen unit)	APHA, 23rt Ed. 2017, 2120 B	<5.0	5-100	5.00	15.0
2.	Odour	APHA, 23 rd Ed. 2017, 2150 B	Agreeable	Qualitative	Agreesble	Agreeable
3.	рН	APHA, 23" Ed. 2017, 4500H+ A+B	7.24	2.0-12	6585	No Relax
4.	Total Dissolved Solids as TDS (mg/l)	APHA, 23rd Ed. 2017, 2540-C	488.0	5 - 5000	500	2000
5.	Alkalinity (mg/l)	APHA, 23rd Ed. 2017, 2320 A+ B	152.0	5-1500	200	600
6.	Total Hardness as CaCO ₂ (mg/l)	APHA, 23" Ed. 2017, 2340 A+C	224.0	5-1500	200,0	608.0
7.	Calcium as Ca (mg/l)	APHA, 23rd 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" Ed. 2017, 3111 A+B	BDL	0.05-5	0.05	1.5
10,	Iron an Fe (mg/l)	APHA, 23 ⁻⁶ Ed. 2017, 3500 Fe B	0.24	0.02-50	0.3	No Relax.
11.	Manganese as Mu (mg/l)	APHA, 23" E4. 2017, 3111 A+B	BDL	0.1-5	0,10	0.30
12.	Chloride as Cl (mg/l)	APHA, 23rd Ed. 2017, 4500 CLA+B	41,20	5-1000	250.0	1000.0
13.	Sulfate as SO4 (mg/l)	APHA, 23rd Ed. 2017, 4500-SOc2 E	48.0	1.0 -250	200.0	400.0
14.	Nitrate Nitrogen as NO ₂ (mg/l)	APHA, 23rd Ed. 2017, 4500-NO ₂ r B	10.40	5.0 - 100	45.0	No Relaz.
15.	Fluorides as F (mg/l)	APHA, 23 rd E4. 2017, 4500-C	0.28	0.05-10	1.0	1.5
16,	Phenolic Compounds as C ₄ H ₅ OH (mg/l)	APHA, 23" Ed. 2017, 5530 A+C	BDL	1-10	0.001	0.002
17,	Mercury as Hg (mg/l)	APHA, 23* Ed. 2017, 3112 A+B	BDL	0.001-1	0.001	No Relat.
18.	Cadmium as Cd (mg/l)	APHA, 23" Ed. 2017, 3111 A+B	BDL	0.002-2	0.063	No Reizz
19.	Arsenic as As (mg/l)	APHA, 23rd 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 Za (mg/l)	APHA, 23" E4. 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) (org/l)	APHA, 23rd Ed. 2017, 3111A+B	BDL	0.05-20	0.05	No Reiax.
24.	Mineral Oil 6 (mg/l)	IS 3025 (Part 39) Class -6 Infrared Partition Method	RDL	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" Ed. 2017, 4500 B A+C	0.28	0.2 - 10	0.5	1.0
27.	Total coliform (MPN/100 ml)	APHA, 23rd Ed. 2017, 9221 8+C	Absent	1.8	0.05	Absent
28.	E.coll (MPN/100 ml)	APHA, 23rd 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/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 : 27.06.2019

Date of Sampling 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	Cupper as Cu(mg/kg)	BDL
6	Sulphur as S (%)	0.072
7	Chloride as CI (%)	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

for Ecomen Laboratories Pvt. Ltd. Ecomen Laboratories Pvt. Ltd.

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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 : 28.06.2019

Date of Sample Receiving Date of Analysis

: 28.06.2019 to 05.07.2019

Source of Sample

: Mali village

Sl.No.	Tests Conducted	Results
1	Magniseum 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	Cupper 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

for Ecomen Laboratories Pvt. Ltd.

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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	Cupper 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

for Ecomen Laboratories Pvt. Ltd.

Ecomen Laboratories Pvt. Ltd. Flat No.-8 2nd Floor, Arif Chember-V Sector-H, Aliganj, Lucknow-226024 Ph.-2746382, Fix:2745726

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:

eco/Men

Ecomen Laboratories Pvt. Ltd.
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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

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: Adani Power (Jharkhand) Ltd.

Address of the Project

: 2x800MWGodda Thermal Power Project,

Village: Motia, Distt. - Godda, Iharkhand

Sampling Method

: As per IS: 5182

Sample Collected By

: Ecomen Team

	Nan	ne of Location : Ne	ear 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/m³)	67	100
	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	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/m³)	8.4	80
	$NO_x(\mu g/m^3)$	IS:5182 (Part-6)	5-200(µg/m³)	21,6	80
(08-09).07.2019	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	63	100
	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m³)	21	60
	SO ₂ (μg/m ³)	IS:5182 (Part-2)	5-200(μg/m³)	7.2	80
	$NO_x(\mu g/m^3)$	IS:5182 (Part-6)	5-200(µg/m ³)	16.5	80

Note: BDL = Below Detection Limit

Standards: National Ambient Air Quality Monitoring (NAAQM).

For Ecomen Laboratories Pvt. Ltd.

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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

Date of Monitoring	Tests Conducted	Method Detection Range		Result	Standards
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	66	100
(11-12).07.2019	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³) 17		60
(11-12).01.2012	SO ₂ (μg/m ³)	IS:5182 (Part-2)	5-200(µg/m³)	5.9	80
	$NO_x(\mu g/m^3)$	IS:5182 (Part-6)	5-200(μg/m ³)	19.3	80
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	63	100
(15-16).07.2019	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m³)	21	50
The second control of	SO ₂ (μg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	9.6	30
	$NO_x(\mu g/m^3)$	IS:5182 (Part-6)	5-200(µg/m ³)	17.2	80
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	71	100
(18-19).07.2019	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m³)	24	60
The second of th	$SO_2(\mu g/m^3)$	IS:5182 (Part-2)	5-200(µg/m ³)	7.6	80
	$NO_x(\mu g/m^3)$	IS:5182 (Part-6)	5-200(µg/m³)	16.4	80

Note: BDL = Below Detection Limit

Standards: National Ambient Air Quality Monitoring (NAAQM).

Keens

For Ecomen Laboratories Pvt. Ltd. Ecomen Laboratories Pvt. Ltd. Flat No.-8 2nd Floor, Artt Chamber-V Sector-H. Aliganj, Lucknow-226024 Fh. -2746282, Fus. 2745726



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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

2x800MWGodda Thermal Power Project,

Village: Motia, Distt. - Godda, Jharkhand

Sampling Method

: As per IS: 5182

Sample Collected By

: Ecomen Team

Date of Monitoring	Tests Method Detection Range		Result	Standards	
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	68	100
(22-23).07.2019	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	19	60
(22-25).07.2017	$SO_2(\mu g/m^3)$	IS:5182 (Part-2)	5-200(μg/m ³)	8.4	30
	NO _v (μg/m ³)	IS:5182 (Part-6)	5-200(µg/m³)	14.9 .	80
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	65	100
(25-26).07.2019	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	17	60
	SO ₂ (μg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	6.6	80
•	$NO_x(\mu g/m^3)$	IS:5182 (Part-6)	5-200(μg/m ³)	19.4	30
(29-30).07.2019	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	69	100
W. 1	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/m³)	7.6	80
	NO _s (µg/m³)	IS:5182 (Part-6)	5-200(ug/m³)	18.2	30

Note: BDL = Below Detection Limit

Standards: National Ambient Air Quality Monitoring (NAAQM).

Reung.

For Ecomen Laboratories Pvt. Ltd. Ecomen Laboratories Pvt. Ltd. Fiat No.-8 2nd Floor, Arif Chamber-V Sector-H. Aliganj, Lucknow-226024 71-2746282, Fax: 2745726



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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. .

5-200(µg/m³)

 $5-200(\mu g/m^3)$

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

Date of Monitoring	Tests Conducted	Method Detection Range		Result	Standards
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	63	100
(01-02),07,2019	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	20	60
01-02/10/12015	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)	line CB 2-100(μg/m³) 20 5-200(μg/m³) 7.7 5-200(μg/m³) 16.8 0 2-1000(μg/m³) 69 line CB 2-100(μg/m³) 23 5-200(μg/m³) 6.4 5-200(μg/m³) 14.6	16.8	80
(04-05).07.2019	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	69	100
	PM _{2,3} (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/m³)	6.4	80
*	NO _s (µg/m ³)	IS:5182 (Part-6)	-23) 2-1000(μg/m³) ideline CPCB 2-100(μg/m³) t-2) 5-200(μg/m³) t-6) 5-200(μg/m³) -23) 2-1000(μg/m³) ideline CPCB 2-100(μg/m³) t-2) 5-200(μg/m³) t-2) 5-200(μg/m³) t-6) 5-200(μg/m³) t-6) 5-200(μg/m³) ideline 2-100(μg/m³)	14.6	80
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	71	100
(08-09).07.2019	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m³)	25	60
	200		Transport of the		4.40

Note: BDL = Below Detection Limit

 $SO_2(\mu g/m^3)$

 $NO_x(\mu g/m^3)$

Standards: National Ambient Air Quality Monitoring (NAAQM).

IS:5182 (Part-2)

IS:5182 (Part-6)

For Ecomen Laboratories Pvt. Ltd.
Ecomen Laboratories Pvt. Ltd.
Flat No.-8 2nd Floor, Arii Chamber-V
Sector-H. Aliganj, Lucknow-225024
Pb.-2746282, Fax:2745726

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Flat No. 8, 2nd Floor, Arif Chamber-V, Sector H, Aliganj, Lucknow - 228 024 Phone No.: (91-522) 2746282, 2745726 Telefax No.: (91 - 522) 2745726

É-mail: ravi.bhargava@gmail.com, Website: www.ecomen.in, CIN - U74210UP1989PTC010601, GSTIN : 09AAACE6076H1ZI

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, Iharkhand

Sampling Method Sample Collected By

: As per IS: 5182

: Ecomen Team

Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(μg/m³)	68	100
	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	25	60
(11-12).07.2019	SO ₂ (µg/m³)	IS:5182 (Part-2)	5-200(μg/m ³)	8.4	80
	NO _x (μg/m³)	IS:5182 (Part-6)	5-200(μg/m³)	19.1	80
	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/m³)	18	60
(15-16).07.2019	SO ₂ (μg/m³)	IS:5182 (Part-2)	5-200(µg/m³)	5.6	80
	NO _x (μg/m³)	IS:5182 (Part-6)	5-200(μg/m³)	14.2	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, Artif L hamber-V Sector-H. Aliganj, Lucknow-226024 Ph.-2746282, Fax:2745726



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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

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/m³)	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 _s (μg/m³)	1S:5182 (Part-6)	5-200(ug/m ³)	19.4	80
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(μg/m³)	63	100
	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	17	60
(22-23).07.2019	SO ₂ (μg/m³)	IS:5182 (Part-2)	5-200(μg/m³)	5.9	80
2.	NO _x (μg/m³)	IS:5182 (Part-6)	5-200(μg/m³)	16.6	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/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 (Tharkhand) 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

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/m³)	71	100
	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	24	60
	SO ₂ (μg/m³)	IS:5182 (Part-2)	5-200(µg/m³)	7.6	80
	NO _x (μg/m³)	IS:5182 (Part-6)	5-200(μg/m³) 19.2	19.2	80
	PM ₁₀ (μg/m³)	IS:5182(Part-23)	2-1000(μg/m³)	68	100
	PM _{2.3} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	22	60
(29-30).07.2019	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(μg/m³)	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).

For Ecomen Laboratories Pvt. Ltd.
Ecomen Laboratories Pvt. Ltd.
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FORMAT NO. ECO/QS/FORMAT/15

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

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

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/m³)	69	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³) 24		60
	SO ₂ (μg/m ³)	IS:5182 (Part-2)	5-200(µg/m³)	8.2	80
	NO _x (μg/m³)	IS:5182 (Part-6)	5-200(µg/m³)	200(μg/m³) 21.1	80
	PM ₁₀ (μg/m ³)	1S:5182(Part-23)	2-1000(μg/m³)	74	100
/0./ 0.F) 0.T 3.0.1.0	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	23	60
(04-05).07.2019	SO ₂ (μg/m ³)	1S:5182 (Part-2)	5-200(µg/m ³)	7.6	80
	NO _x (μg/m³)	IS:5182 (Part-6)	5-200(μg/m³)	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

Date of Monitoring	Tests Conducted	Method Detection Range		Result	Standards
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(μg/m³)	66	100
(08-09).07.2019	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	19	60
	SO ₂ (μg/m ³)	IS:5182 (Part-2)	5-200(µg/m³)	7.6	30
	NO _x (μg/m³)	IS:5182 (Part-6)	5-200(ug/m³)	20.8	80
	PM ₁₀ (μg/m ¹)	(S:5182(Part-23)	2-1000(μg/m³)	69	100
21.1 (0) 00 00 00 00	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	22	60
(11-12).07.2019	SO ₂ (μg/m ³)	IS:5182 (Part-2)	5-200(µg/m³)	5.9	80
	NO _x (μg/m³)	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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Ecomen Laboratories Pvt. Ltd. Ecomen Laboratories Pvt. Ltd. Flat No.-8 2nd Floor, Arti Chamber-V Secon-H, Aligani, Lucknow-226024 Ph.-2746282, Fax:2743726



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E-mail: ravi.bhargava@gmail.com, Website: www.ecomen.in, CIN - U74210UP1989PTC010601, GSTIN: 09AAACE6076H1ZI

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, Tharkhand

Sampling Method

: As per IS: 5182

Sample Collected By

: Ecomen Team

Date of Monitoring	Tests Conducted	Method	lethod Detection Range Result		Standards
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(μg/m³)	69	100
(15-16).07.2019	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/m³)	IS:5182 (Part-6)	5-200(μg/m³) 12	17.4	80
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(μg/m ²)	64	100
	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m ³)	19	60
(18-19).07.2019	3O ₂ (μg/m³)	1S:5182 (Part-2)	5-200(μg/m ³)	6.3	80
	NO _x (μg/m³)	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 GoddaThermal Power Project, Village: Motia, Distt. - Godda, Jharkhand

Sampling Method Sample Collected By : As per IS: 5182

: Ecomen Team

Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards	
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(μg/m ³)	61	100	
(32 33) 6 2 3616	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	17 '	60	
(22-23).07.2019	SO ₂ (µg/m³)	IS:5182 (Part-2)	5-200(µg/m³)	7.4	80	
78	NO _x (μg/m³)	IS:5182 (Part-6)	5-200(µg/m³)	14.9	80	
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m²)	66	100	
	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	20	60	
(25-26).07.2019	SO ₂ (μg/m³)	IS:5182 (Part-2)	5-200(µg/m³)	5.9	80	
	NO _x (μg/m³)	IS:5182 (Part-6)	5-200(μg/m³) 2-1000(μg/m³) 2-100(μg/m³)	19.6	80	
(29-30).07.2019	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(μg/m³)	71	100	
	PM25 (µg/m³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m ³)	24	50	
	5O ₂ (μg/m ²)	IS:5182 (Part-2)	5-200(µg/m³)	8.6	30	
90	NO.(μg/m³)	iS:5182 (Part-6)	5-200(µg/m³)	16.8	30	

Note: BDL = Below Direction Lituit
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)

SI.		Day	Time		Nis	th Time	
No.	Locations	tions Time Leq Value 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	11.15A.M	60.2	53.5	11.30P.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	12.10A.M	49.2	44.7
6.	Near Adani Office	15:25 PM	73.6	67.4	12.55A.M	60.4	56.5

Reeva

For Ecomen Laboratories Pvt. Ltd.

Ecomen Laboratoric Pvt. Ltd.

Noise (Ambient Standard at No. 5 2nd Floor, Act Chamber-V ector-H. Aligani, Lucknow-226024

Ph.-2746282, Fax:2745726

Area Code	Category of area	Limit in dB (A) Leq				
		Day Time	Night Time			
A,	Industrial Area	75	70			
3	Commercial Area	65	55			
C	F sidential Area	55	45 .			
D	Minus Zone	30	-40			

Minte

- Lay limit a recknowd in between 6:00 AM and 10:00 PM.
- 2. Night firms is recke and in between 10:00 PM and 6:00 AM
- 3. Sit nee zone is defined as area up to 100m around such premises as hospitals, control 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-mentional 4. Calmedia by the computent withortly and the corresponding standard close willy.



Flat No. 8, 2nd Floor, Arif Chamber-V, Sector H, Aliganj, Lucknow - 226 024 Phone No.: (91-522) 2746282, 2745726 Telefax No.: (91 - 522) 2745726

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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 APHA, 23rd Ed. 2017

Sampling Method

Ecomen Team

Sample Collected by Sample Quantity

: As per requirement.

Date of Sampling

: 25.07.2019

Date of Sample Receiving Date of Analysis : 27.07.2019 : 27.07.2019 to 03.08.2019

Source of Sample

: Motia Village, Hand Pump (GW)

St. No.	TESTS	PROTOCOL	RESULT	Detection	INDIAN STAND 18500-15910	
			, and a	Range	Desirable	Permissible
1.	Colour (Hazen unit)	APHA, 23" Ed. 2017, 2120 B	<5.0	5-100	5.00	15.0
2,	Odeur	APHA, 23" Ed. 1017, 2150 B	Agreeable	Qualitative	Agreeable	Agreesble
3,	pH	APHA, 23" Ed. 2017, 4500H+ A+B	7.33	2.0 -12	6.5-8.5	No Reina.
4.	Total Dissolved Solids as TDS (mg/l)	APHA, 23 rd Ed. 1017, 2540-C	361.0	5 - 5000	.590	2000
5,	Alkalinity (mg/l)	APHA, 23" Ed. 2017, 2320 A+ B	136.0	5-1500	200	600
6.	Total Bardens as CaCO ₂ (mgA)	APHA, 23" Ed. 2017, 2340 A+C	224.0	5-1500	200.8	500.0
7.	Calcinm to Ca (mg/l)	APHA, 23" Ed. 2017, 3500 Cx A+B	57.6	5-1000	75,6	200.0
Х.	Magnesium as Mg (mg/l)	APHA, 23rd Ed. 1017, 3500 Mg A+B	19.44	5-1000	30.0	100.0
9.	Copper as Cu (mg/l)	APHA, 23** Ed. 2017, 3111 A+B	BDL	0.05-5	0.03	1.5
10,	tron as Fe (mg/l)	APHA, 23" Ed. 2017, 3500 Fe 8	0.19	8,02-50	0.3	Na Relax.
11.	Manganese as Mit (mg/l)	APHA, 23rd Ed. 2017, 5111 A+B	BOL	0.1-5	0,10	0.30
12.	Chloride as Čl (mg/l)	APHA, 23rt Ed. 1017, 4598 CLA+B	27.56	5-1000	₹50.0	1000.0
13,	Sulfate as SO ₄ (mg/l)	APHA. 23" Ed. 2017, 4500-50, E	36.85	1.0 -250	200.0	400.0
14.	Nitrate Nitrogen as NO ₂ (mg/l)	APHA, 23" Ed. 2017, 4596-NO ₂ " H	8.55	5.0 - 100	15,0	No Reinz.
15.	Finorides as F (mg/l)	APHA, 23" Ed. 2017, 4500-C	0.24	0.05-10	1.0	1.5
16.	Phenolic Compounds as CsHsOH (mg/l)	APHA, 23" Ed. 2017, 5530 A+C	RDL	1-10	0.001	0.002
17.	Mercury as Hg (mg/l)	APHA. 23" Ed. 2017, 3112 A+B	BDL	0.001-1	9.901	No Relax.
18.	Cadmium us Cd (prg4)	APHA, 23" Ed. 2017, 3111 A+B	BDI.	0.002-2	2,093	No Relax
19.	Amenic as As (wg/l)	APHA, 23rd Ed. 2017, 3114 C	BDL	0.01-2	0.01	0.05
20.	Lond in Ph (mg/l)	APHA, 23rd Ed. 2017, 3111 A+B	BDL	0.01-2	0.01	Ne Relax.
11.	Zine as Zu (mg/l)	APIEA, 23" 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	BOL	0.01-5	0.2	1.0
23.	Chromium (Hexavsient) (mg/l)	APHA, 23 ⁴⁴ Ed. 2017, 3311A+9	301	9,95-20	0.66	No Relax.
54.	Mineral Off 6 (mg/l)	15:3025 (Part 39) Class -6 Infrared Partition Method	IIDL.	9.01-10	• 7,5	No Relax.
15.	Free Renduni Calorine (mgd)	APHA, 23 rd Ed. 2017. 4500-C1 B	UDI.	9.5-10	2.26	1.0
7.6.	Secon as B (regit)	APHA, 23* Ed. 2017, 4500 B A+C	0.22	U.2-10	11.5	1.0
17,	Total conform (MPN/100 mi)	APHA, 23rt Ed. 2017, 9221 B+C	Absent	1,8	0.55	Absent
:8.	E.coli (MPN/100 mi)	APHA, 23" #4, 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 ([harkhand) Ltd.

Address of the Project

: 2x800 MW Godda Thermal Power Project.

Village: Motia, Distt. - Godda, Jharkhand : APHA, 23rd Ed. 2017

Sampling Method

: Ecomen Team

Sample Collected by Sample Quantity

: As per requirement.

Date of Sampling Date of Sample Receiving : 25.07.2019

Date of Analysis

: 27.07.2019

: 27.07.2019 to 03.08.2019

Source of Sample : Navabad Village, Hand Pump (GW)

S1. No.	TESTS	PROTOCOL	RESULT	Detection Range	INDIAN STAND. 10500:1991(F	
					Desirable	Permissible
Je	Colour (Hazea unit)	APHA, 23 rd Ed. 2017, 2120 B	<5.0	5-100	5.00	15.0
2.	Odear	APHA, 23rd Ed. 2017, 1150 B	Agrecable	Qualitative	Agreeable	Agroeable
A	pH	APHA, 23" 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, 2546-C	485.0	5 - 5000	500	2000
5.	Alkalinity (mg/l)	APHA, 23rd Ed. 2017, 1320 A+ 8	140.0	5-1500	200	600
5.	Total Hardness as CaCO ₂ (mg/l)	APHA, 23" Ed. 2017. 2340 A+C	212.0	5-1380	300.0	660,0
7.	Calcium as Ca (mg/l)	APHA, 23rd Ed. 2017, 3500 Ca A+B	54.4	5+1000	75.0	200,0
S.	Magnesium as Mg (mg/l)	APHA, 23rd Ed. 2017, 3500 Mg A+B	18.46	5-1000	. 30.6	190,0
.94	Copper as Cu (mg/l)	APHA, 23rd Ed. 2017, 3111 A+B	ant.	0.05-5	0.05	1.5
10.	(ron as Fe (mg/l)	APHA, 23rd Ed. 2017, 3500 Fe B	0.23	0.02-50	0.3	No Relux.
H.	Manganese as Mn (mg/l)	APHA, 23 rd Ed. 2017, 3111 A+8	8DL	0.1-5	0.10	0.30
22	Chloride as Cl (mg/l)	APNA, 23" Ed. 2017. 4500 CLA+B	34,59	5-1000	150.0	1000.0
13,	Snifete as SO _e (ingit)	APHA, 23° Ed. 2017, 4500-SQ-2 E	38.01	t.0 -250	200.0	400.0
14.	Nitrate Nitrogen as NO ₂ (mg/l)	APHA, 23 ^{rt} Ed. 2017, 4500-NO ₅ ^{rt} B	10.92	5.0 - 100	45.0	No Reinz.
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 CallsOH (arg/i)	APHA, 23 rd Ed. 2017, \$530 A+C	BDt.	1-10	5.001	0.002
17.	Mercury as Hg (mg/l)	APHA, 23 rd Ed. 2017, 3112 A+8	BDL	0.001-1	0.001	No Relax.
18.	Codmism as Cd (mgll)	APHA, 23° Ed. 2017, 3111 A+B	BDL	0,002-2	9,903	No Relax
19.	Arsenic as As (mg/l)	APHA, 23" Ed. 2017, 3114 C	BOL	0.01-2	9.91	0.05
70.	Lead as Pb (mg/l)	APHA, 23 ^{rt} Ed. 2017, 3111 A+B	BDL	0.01-2	3.01	No Relax
21.	Zine as Zn (mg/l)	APHA, 23rd Ed. 2017, 3111 A+B	0.20	0.02-50	5,0	15
22,	Anionic Deterposts (As MBAS)(my/l) max	APHA 22nd EDN::2012, 5546 A+C	BDL	0.01-5	0.2	1.0
23.	Chromium (Heravalent) (mg/l)	APHA, 23 rd Ed, 2017, 3111A+B	BDL	0.05-20	9,05	No Relax.
14.	Mineral Oil 6 (mg/l)	3015 (Part 39) Class -6 Infrared Partition Method	BOL	0.01-10	V.5	No Reinz.
25.	Free Residual Chlorine (seg/l)	APHA, 23" Ed. 1017, 4500-CLB	BDL	0.5-10	6.19	1.0
54.	Surpe as B (mg/l)	PHA, 23" Ed. 3017, 4500 B A+C	0.26	0.2 - 10	5. 9.5	1.0
274	Total entitions (MPN/100 ml)	APHA, 15° Ed. 2017. 9221 B+C	Alment	3,8	145	Absent
18.	E. = # (MPN/100 ml)	APHA, 23° 5d. 2017, 9221 B-E	Absent	1,8	Africat	Atisent

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, Iharkhand

Sampling Method

: APHA, 23rd Ed. 2017

Sample Collected by

: Ecomen Team

Sample Quantity Date of Sampling : As per requirement.

Date of Sample Receiving

: 25.07.2019 : 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 STAND 10500:1991()	
					Desirable	Permissible
L	Colour (Hazen unit)	APHA, 23rd Ed. 2017, 2120 B	<5.0	5-100	5.00	15.0
2	Odoer	APHA, 23" Ed. 2017, 2150 8	Agrecable	Qualitative	Agreeable	Agreeable
3	pH	APHA_23" Ed. 1017, 4500H+ A+B	7.53	2.0 -12	6.5-8.5	No Relax
4,	Total Dissolved Solids us TDS (mg/l)	APHA, 23rd Ed. 2017, 2540-C	410.0	5 - 5000	209	2000
5.	Alkalinity (mg/l)	APHA, 23" Ed. 2017, 2329 A+ B	128.0	5-1500	200	600
6.	Total Hardness as CaCO ₂ (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, 23rt Ed. 1017, 3509 Ca A+B	62.4	5-1000	75.0	290.0
	Magnesium as Mg (mg/l)	APHA, 23" Ed. 2017, 3500 Mg A+B	20.41	5-1000	30,0	100.0
4.	Copper as Cu (mg/l)	APHA, 23 rd Ed. 3017, 3111 A+B	BDL	0.05-5	0.05	1,5
176	Tron as Fr (mg/l)	APHA, 23" Ed. 2017, 3500 Fe B	9.24	0.02-50	0.3	No Relax.
U.	Manganese as No (mgT)	APIEA, 23" Ed. 2017, 3111 A+B	BDL	0.1-5	0.10	0.30
12,	Chloride as Cl (mg/l)	APHA, 23** Ed. 2017, 4500 Ct A+B	39.5	5-1000	130.0	1,000,0
55c:	Sulfate as SO ₄ (mg/l)	APHA, 23 ⁻⁶ Ed. 2017, 4500-SO ₄ ²⁻ E	34.5	1.0 -250	300.0	400.0
14.	Nitrate Nitragea as NOs (mg/l)	APHA, 23rd Ed. 2017, 4500-NO ₂ t B	12,48	5.0 - 100	\$5.0	No Relax.
35.	Fluorides as F (mg/l)	APHA, 23" Ed. 2017, 4509-C	0.34	0.05-19	1.0.	1.5
16.	Phenoise Compounds as C4HeOH (mg/l)	APHA, 23rd Ed. 1017, 5530 A+C	BDL	1-10	60001	0.002
17.	Mercury as Hg (mg/l)	APHA, 23" Ed. 2017. 3112 A+B	BDL	0.001-1	100.0	No Relax.
28.	Cedmium as Cd (mg/l)	APHA, 23" Ed. 1017, 3111 A+B	BD1.	0.002-2	0.003	No Relax
19.	Arsenic as As (mg/l)	APHA, 23th Ed. 2017, 3114 C	BDL	9.01-2	0.01	0.05
30.	Lead as Ph (mg/l)	APHA, 23" Ed. 2017, 3111 A+8	BDL	0.01-2	0.01	No Relax.
31.	Zinc as Zn (mg1)	APHA, 23" Ed. 2017, 3111 A+9	0.25	0.92-50	50	15
12.	Amunic Detergents [As MBASVenell max	APHA 32nd EDN:2012, 5540 A+C	BOL	0.01-5	0.2	1.0
13.	Chromium / Mesuvalent) (mgf)	APHA, 25" Ed. 2017, 3111A+B	BDL	11,05-20	0.05	No Retux.
24,	Mineral Oil (crass)	15 3025 (Part 39) Class -6 Infrared Partition Method	BDL	0.01-10	10.3	No Refax.
25,	Free Resident Citarine (mg/l)	APHA, 23" Ed. 2017, 4500-CI B	BDI.	0.5-10	0.26	1.0
28a	Borne as (1 (mgl))	APHA, 23" Ed. 2017, 4500 B A+C	0.24	0.2-10	4.5	1.0
22	Tural patientes (MPN/100 mi)	APHA, 23** Ed. 2017, 9221 8+C	Absent	1.8	11.15	Allocat
1.	Ecel (MPN/I/R at)	APHA, 23th Ed. 2017, 9221 B+E	Absent	1.5	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

Ecomen Laboratories Pvt. Ltd. Flat Nos. 5-8, 2nd Floor, Arif Chamber-V. Sector-H. Aliganj, Lucknow 226 024 (U.P.) Phone No.: (91-522) 2746282; Fax No.: (91-522) 2745726

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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 : 2x800MWGoddaThermal Power Project,

Village: Motia, Distt. - Godda, Jharkhand

Sampling Method : As per IS: 5182 Sample Collected By : Ecomen Team

	Nar	ne of Location : Ne	ear Motia Village		
Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(01-02).08.2019	PM ₁₆ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	61	100
	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	18	60
	SO ₂ (µg/m ³)	1S:5182 (Part-2)	5-200(µg/m³)	5.6	80
	NO _s (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m ³)	15.7	80
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	65	100
(05-06),08.2019	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
300	$NO_x(\mu g/m^3)$	IS:5182 (Part-6)	5-200(µg/m³)	18.5	80
(08-09),08.2019	PM ₁₆ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	57	100
	PM _{2.5} (μg/m ³)	NA AQM Guideline Volume-I by CPCB	2-100(µg/m³)	16	60
	SO ₂ (μg/m³)	IS:5182 (Part-2)	5-200(µg/m ³)	5.9	80
i i	$NO_x(\mu g/m^3)$	IS:5182 (Part-6)	5-200(µg/m ³)	17.1	80

Note:BDL = Below Detection Limit

Standards: National Ambient Air Quality Monitoring (NAAQM).

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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.

5-200(µg/m3)

Address of the Project

: 2x800MW GoddaThermal Power Project,

Village: Motia, Distt. - Godda, Jharkhand

Sampling Method

: As per 15: 5182

Sample Collected By

: Ecomen Team

Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(μg/m³)	66	100
(12-13).08.2019	PM _{2.3} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m³)	17	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m³)	5.9	80
	NO _s (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m³)	19.3	80
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	63	100
(16-17).08.2019	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m ³)	21	60
2	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(µg/m ³)	9.6	80
	NO ₃ (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/m³)	71	100
	PM _{2,3} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m ³)	24	60
	$SO_2(\mu g/m^3)$	IS:5182 (Part-2)	5-200(µg/m ³)	7.6	80

Note:BDL = Below Detection Limit

 $NO_x(\mu g/m^3)$

Standards: National Ambient Air Quality Monitoring (NAAQM).

IS:5182 (Part-6)

For Ecomen Laboratories Pvt. Ltd.

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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 GoddaThermal Power Project,

Village: Motia, Distt. - Godda, Jharkhand

Sampling Method : As per IS: 5182 Sample Collected By : Ecomen Team

Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	68	100
(22-23).08.2019	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	19	60
	SO ₂ (µg/m ²)	1S:5182 (Part-2)	5-200(µg/m ³)	8.4	80
	$NO_x(\mu g/m^3)$	IS:5182 (Part-6)	5-200(µg/m ³)	14.9	80
	PM ₁₀ (μg/m ³)	1S:5182(Part-23)	2-1000(µg/m³)	65	100
(26-27).08.2019	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/m³)	IS:5182 (Part-6)	5-200(µg/m ³)	19.4	80
.03	PM ₁₀ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	69	100
(29-30).08.2019	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/m³)	7.6	80
	NO _x (μg/m³)	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

Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	63	100
(01-02).08.2019	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	20	60
	$SO_2(\mu g/m^3)$	IS:5182 (Part-2)	5-200(µg/m³)	7.7	80
	NO _s (µg/m ³)	IS:5182 (Part-6)	5-200(µg/m³)	16.8	80
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	69	100
(05-06).08.2019	PM _{2,5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	23	60
	SO ₂ (μg/m ³)	IS:5182 (Part-2)	5-200(µg/m³)	6.4	80
	$NO_x(\mu g/m^3)$	IS:5182 (Part-6)	5-200(µg/m ³)	14.6	80
19	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m ³)	71	100
(08-09).08.2019	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m³)	25	60
	$SO_2(\mu g/m^3)$	IS:5182 (Part-2)	5-200(µg/m³)	9.2	80
	$NO_x(\mu g/m^3)$	IS:5182 (Part-6)	5-200(µg/m³)	21.1	80

Note:BDL = Below Detection Limit

Standards: National Ambient Air Quality Monitoring (NAAQM).

For Ecomen Laboratories Pyt. Ltd.

Ecomen Unbefatories Pvt, Ltd. Flat No.-3 2nd Floot, Arti Chamber-V Sector-H. Aligani, Lucknow-226024

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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 GoddaThermal Power Project,

Village: Motia, Distt. - Godda, Jharkhand

Sampling Method

: As per IS: 5182

Sample Collected By

: Ecomen Team

Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(μg/m ³)	68	100
(12-13).08.2019	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	25	60
	SO ₂ (μg/m ²)	IS:5182 (Part-2)	5-200(μg/m ²)	8.4	80
	NO _s (μg/m³)	IS:5182 (Part-6)	5-200(µg/m³)	19.1	80
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(μg/m³)	62	100
(16-17),08.2019	PM _{2.5} (μg/m³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	18	60
	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(μg/m³)	5.6	80
	NO _s (μg/m ³)	IS:5182 (Part-6)	5-200(μg/m³)	14.2	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, And Chamber-V Sector-H. Aligani, Luctumw-226024 Ph. 2740282, Fax. 2743726



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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 (Iharkhand) 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

Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(μg/m³)	66	100
(19-20).08.2019	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/m³)	8.7	80
	NO _x (μg/m³)	IS:5182 (Part-6)	5-200(μg/m ³)	19.4	80
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(μg/m³)	63	100
(22-23).08.2019	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	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).

For Ecomen Laboratories Pvt. Ltd.

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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 (Iharkhand) Ltd.

Address of the Project

: 2x800MW GoddaThermal Power Project,

Village: Motia, Distt. - Godda, Jharkhand

Sampling Method

: As per IS: 5182

Sample Collected By

: Ecomen Team

Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
	PM ₁₀ (μg/m ²)	IS:5182(Part-23)	2-1000(μg/m³)	71	100
(26-27).08.2019	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	24	60
	SO ₂ (μg/m ³)	1S:5182 (Part-2)	5-200(μg/m ³)	7.6	80
	NO _s (μg/m³)	IS:5182 (Part-6)	5-200(μg/m ³)	19.2	80
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(μg/m³)	68	100
(29-30).08.2019	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	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/m³)	17.6	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/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

Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
(01-02).08.2019	PM ₁₀ (µg/m³)	IS:5182(Part-23)	2-1000(µg/m³)	69	100
	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	24	60
	SO ₂ (μg/m ³)	IS:5182 (Part-2)	5-200(μg/m³)	8.2	80
	NO _x (μg/m³)	IS:5182 (Part-6)	5-200(μg/m³)	21.1	80
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(μg/m³)	74	100
(05-06).08.2019	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	23	60
	SO ₂ (μg/m³)	IS:5182 (Part-2)	5-200(µg/m³)	7.6	80
	NO _s (μg/m³)	IS:5182 (Part-6)	5-200(μg/m ³)	21.4	80

Note:BDL = Below Detection Limit

Standards: National Ambient Air Quality Monitoring (NAAQM).

For Ecomen Laboratories Pvt. Ltd.

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E-mail: revi.bhargava@gmail.com. Website: www.ecomen.in. CIN - U74210UP1989PTC010601, GSTIN : 09AAACE6076H1ZI

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 ([harkhand) Ltd.

Address of the Project

: 2x800MW GoddaThermal Power Project,

Village: Motia, Distt. - Godda, Jharkhand

Sampling Method

: As per IS: 5182

Sample Collected By

: Ecomen Team

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/m³)	66	100
	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	19	60
	SO ₂ (μg/m ³)	1S:5182 (Part-2)	5-200(μg/m ³)	7.6	80
	NO _s (μg/m³)	IS:5182 (Part-6)	5-200(μg/m³)	20.8	80
	PM ₁₆ (µg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	69	100
(12-13).08.2019	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	22	60
	SO ₂ (μg/m ³)	IS:5182 (Part-2)	5-200(μg/m³)	5.9	80
	NO _s (μg/m³)	1S: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 GoddaThermal Power Project,

Village: Motia, Distt. - Godda, Jharkhand

Sampling Method

: As per IS: 5182

Sample Collected By

: Ecomen Team

Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	69	100
// I= 00 2010	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(µg/m³)	23	60
(16-17).08.2019	SO ₂ (μg/m ²)	IS:5182 (Part-2)	5-200(μg/m³)	7.6	80
	NO _x (μg/m³)	IS:5182 (Part-6)	5-200(µg/m³)	17.4	80
	PM ₁₆ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	64	100
/10 DAY 80 DATA	PM _{2.5} (μg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	19	60
(19-20).08.2019	SO ₂ (µg/m ³)	IS:5182 (Part-2)	5-200(μg/m ³)	6.3	80
	NO _s (μg/m³)	IS:5182 (Part-6)	5-200(µg/m³)	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. 11d.)

Name of the Project

: Adani Power ([harkhand) 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

Date of Monitoring	Tests Conducted	Method	Detection Range	Result	Standards
77	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	61	100
	PM2 s (µg/m³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m ³)	17	60
(22-23).08.2019	SO ₂ (μg/m³)	IS:5182 (Part-2)	5-200(µg/m³)	7.4	80
	NO _x (µg/m³)	IS:5182 (Part-6)	5-200(μg/m ³)	14.9	80
	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(μg/m³)	66	100
2.83	PM _{2.5} (µg/m ³)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m ³)	20	60
(26-27).08.2019	SO ₂ (µg/m ³)	(S:5182 (Part-2)	5-200(μg/m ³)	5.9	80
	NO _x (µg/m³)	IS:5182 (Part-6)	5-200(μg/m³)	19.6	80
(29-30).08.2019	PM ₁₀ (μg/m ³)	IS:5182(Part-23)	2-1000(µg/m³)	71	100
	PM _{2.5} (μg/m ⁵)	NAAQM Guideline Volume-I by CPCB	2-100(μg/m³)	24	60
	SO ₂ (μg/m ³)	IS:5182 (Part-2)	5-200(µg/m³)	8.6	80
	NO _x (μg/m³)	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)

CI		Day	Time		Ni	ght Time	1
Sl. No.	Locations	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.

Noise (Ambient Standard Flat No.-n 2nd Floor, Arts Chamber-V Sector-II, Aligani, Lucknew-226024 Ph-2740282, Fax:2745726

Area Code	Category of area	Limit in dB (A) Leq		
		Day Time	Night Time	
A	Industrial Area	75	70	
В	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 Date of Sampling As per requirement.

Date of Sample Receiving

: 28.08.2019 : 30.08.2019

Date of Analysis

: 30.08.2019 to 06.09.2019

Source of Sample : Motia Village, Hand Pump (GW)

SL No. TESTS		PROTUCOL	RESULT	Detection	INDIAN STAND 10500:1991(
50//0		10000000	(CME02)	Range	Desirable	Permissible
4.	Colour (Hazen unit)	APHA, 23 rd Ed. 2017, 2120 B	<5.0	5-100	5.00	15.0
2.	Odour	APHA, 23° Ed. 2017, 2150 B	Agreeuble	Qualitative	Agrecable	Agrecable
3.	pH	APHA, 23° Ed. 2617, 4500[]+ A+II	7,20	2.0 -12	6.5-8,5	No Relux
4.	Total Dissolved Solids as TDS (mg/l)	APHA, 25° Fd. 2017, 2540-C	382.0	5 - 5000	500	2000
8.	Atkalinity (mg/l)	APHA, 23 rd Ed. 2017, 2320 A+B	132.0	3-1500	200	600
6.	Tutal Hardness as CaCO ₂ (mg/l)	APHA, 23° Ed. 2017, 2340 A+C	246.4	5-1500	200,0	600.0
7,	Calcium as Ca (mg/l)	APHA, 23" Ed. 2017, 3500 Ca A+II	56.8	5-1000	75.0	200.0
B.	Magnesium as Mg (mg/l)	APHA, 23" Ed. 2017. 3300 Mg A+H	25,29	5-1000	39.0	100.0
9,	Capper as Cu (mg/l)	APHA, 23" E4. 2017, 3111 A+8	BDL	0.05-5	0.05	1.5
10.	Iron as Fe (reg/l)	APHA, 23" Ed. 2017, 3500 Fc B	0.26	0.02-50	0.3	No Relea
11.	Manganese as Mr. (mg/l)	APHA, 23rd Ed. 2017, 3111 A+B	BD1	0.1.5	0.18	0.30
12.	Chloride as Cl (mg/l)	APHA, 23rd Ed. 2017, 4500 CI A+B	34.0	5-1000	250.0	1000.0
13.	Sulfate as SO, (mg/l)	APHA, 25° E4. 2017, 4500-50,2° E	44.0	1.0 -250	200.0	400.0
14.	Nitrate Nitrogen as NOs (mg/l)	APFIA, 25th Ed. 2017, 4500-NO ₃ B	APFIA, 23rd Ed. 2017, 4500-NO ₂ B 10.08 5.0 - 100		45.0	No Relaa.
15.	Fluorides as F (mg/l)	APHA, 23rd Ed. 2017, 4500-C	0.28	0.05-10	1.0	1.5
16.	Phenolic Compounds as CalloOH (mg/l)	APHA, 23rd Ed. 2017, 5530 A+C	BDL	1-10	100.0	0.002
17.	Mercury as fig (mg/l)	APRA, 23° Ed. 2017, 3112 A+B	BDI.	0.001-1	0.001	No Relas.
18.	Cadmium as Cd (mg/l)	APHA, 23° Ed. 2017, 3111 A+B	BDL	0.002-2	0.693	No Retax
19.	Arsenic as As (mg/l)	APHA, 23° Ed. 2017, 3114 C	BDL	0.01-2	0.01.	0.05
20.	Lead as Pb (mg/l)	APHA, 23rd Ed. 2017, 3111 A+II	BDL	0.01-2	0.01	No Relax.
21.	Zioc as Za (mg/l)	APHA, 23" Ed. 2017, 3111 A+B	0.36	0,02-50	5.0	15
22.	Anianie Desergents (As MBAS)(mg/l) mas	APHA 22nd EDN:2012, 5540 A+C	BDL	0.01-5	0.2	1.0
23.	Chromium (Hexavalent) (mg/l)	APHA, 23" 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	DDL.	0.01-10	0.5	No Relas.
25.	Free Residual Chlorine (mg/l)	APIIA, 23 rd Ed. 2017. 4500-C1 B	BDL	0.5-10	0.10	1.0
26.	Boron as B (mg/l)	APHA, 23" Ed. 2017, 4500 B A+C	0.22	0.2 - 10	0.5	1.0
27,	Total coliform (MPN/100 ml)	APHA, 23 ⁻⁴ Ed. 2017, 9221 B+C	Absent	1.8	0.05	Absent
28.	E.colf (MPN/100 mt)	APHA, 23° Ed. 2017, 9221 B+E	Absent	1.8	Absent	Absent

Note: BDL - Below Detection Limit

for Ecomen Laboratories Pvt. Ltd.

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E-mail: ravi.bhargava@gmail.com, Website: www.ecomen.in, CIN - U74218UP1989PTC010601, GSTIN : 09AAACE6076H1ZI

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 Sample Collected by : APHA, 23rd Ed. 2017 : Ecomen Team

Sample Quantity

: As per requirement.

Date of Sampling Date of Sample Receiving : 28.08.2019 : 30.08.2019

Date of Analysis

± 30.08.2019 to 06.09.2019

Source of Sample

: Navabad Village, Hand Pump (GW)

St. No.	TESTS	PROTOCOL.	RESULT	Detection Range	INDIAN STANDARDS as per IS 10500:1991(Reaff:2012)	
					Desirable	Permissible
1.	Colour (Hazen unit)	APIIA, 23° Ed. 2017, 2120 B	<5.0 5-100		5.00	35.0
2.	Odour	APHA, 23° Ed. 2017, 2150 B	Agreeable	Qualitative	Agreeable	Agreeable
3.	рН	APHA, 23 rd Ed. 2017, 4500H+ A+B	7.46	2.0 -12	6.5-8.5	No Relax
4.	Total Dissolved Solids as TDS (mg/l)	APHA, 234 Ed. 2017, 2540-C	442.0	5 - 5000	500	2000
5.	Allorlinity (mg/l)	APHA, 23rd Ed. 2017, 2320 A+ B	136.0	5-1500	200	600
6.	Total Hardness as CaCO ₅ (mg/l)	APHA, 23° Ed. 2017, 2340 A+C	216.0	5-1500	200,8	600.0
7.	Calcium as Ca (sug/l)	APHA, 23 rd Ed. 2017, 3500 Cn A+B	47,40	5-1900	75.0	200.0
A.	Magnesium as Mg (mg/l)	APHA, 23" E4. 2017, 3500 Mg A+H	23,60	5-1000	50.0	100.0
9.	Copper as Cu (mg/l)	APHA, 23° Ed. 2017, 3111 A+8	BOL	0.05-5	V.05	1,5
10.	tron as Fe (mg/l)	APHA, 23° Ed. 2017, 3560 Fe B	0.25	0.92-50	0.3	No Relax
11.	Manganese as Mn (mg/l)	APHA, 23" Ed. 2017, 3111 A+B	BDL	0.1-5	0.10	0.30
12.	Chloride as Cl (mg/l)	APHA, 23" Ed. 2017, 4500 Ct A+B	31.66	5-1000	280,0	1000.0
13.	Sulfate as SO ₂ (mg/l)	APHA, 23 rd Ed. 2017, 4500-SO ₂ ² E	27,88	1.0 -250	200.0	400.0
14.	Nitrate Nitrogen as NOs (mg/l)	APRA, 23rd Ed. 2017, 4500 NO. B	9.5	5.0 - 100	45.0	No Relax
15.	Fluorides as F (mg/l)	APHA, 23° Ed. 2017, 4500-C	0.19	0.05-10	1.0	1.5
16.	Phenolic Compounds as CaHaOH (mg/l)	APHA, 23 ^{r3} Ed. 2017, 5530 A4C	RDF	I+30	0.001	0.002
17.	Mercury as Hg (mg/l)	APHA, 23 rd Ed. 2017, 3112 A+B	BDL	9,001-1	6.001	No Relax.
18.	Cadmium us Cd (mg/t)	APHA, 23rd Ed. 2017, 3111 A+B	BDL	0.002-2	0,003	No Retax
19.	Arsenic as As (mg/l)	APHA, 23 rd Ed. 2017, 3114 €	BDL	0.01-2	0.01	0.05
20;	Lend us Pb (mg/l)	APHA, 23° Ed. 2017, 3111 A+B	8DL	0.01-2	0.01	No Relax
21.	Zine as Za (mg/l)	APILA, 23rd Ed. 2017, 3111 A+B	0.20	0.02-50	5,0	15
22.	Aniunic Detergents (As MBAS)(mg/l) max	APHA 22md EDN:2011, 5540 A+C	801.	0.01-5	0.2	1.0
23.	Chromium (Hexavalent) (uig/l)	APHA, 23" Ed. 2017, 3111A+B	BDL	0.05-20	9.05	No Relax
24.	Mineral Oit 6 (mg/l)	15 3025 (Part 39) Class -6 Infrared Partition Method	BDL	0.01-10	0.5	No Relas.
25.	Free Residual Chlorine (mg/t)	APICA, 23 rd Ed. 2017, 4500-C1 B	BDL	0.5-10	0.20	1.0
26.	Boron as B (neg/l)	APIIA, 23 rd Ed. 2017, 4500 B A+C	0,27	0.2 - 10	0.5	1.0
27,	Total coliform (MPN/100 mt)	APHA, 23 rd Ed. 2017, 9221 B+C	Absent	1.8	0.05	Absent
28.	E.colf (MPN/100 mt)	APILA, 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/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

: 2x809 MW Godda Thermal Power Project, Village: Motio, Distt. - Godda, Jharkhand

: Ecomen Team

Sampling Method

: APHA, 23rd Ed. 2017

Sample Collected by Sample Quantity

: As per requirement,

Date of Sampling Date of Sample Receiving

: 28.08.2019 30.08.2019

Date of Analysis

7 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 10580;199((Reaff:2012)	
					Desirable	Permissible
I,	Colour (Hazen unit)	APHA, 23° Ed. 2017, 2120 B	<5,0	5-100	5.00	15.0
2.	Odeur	APHA, 23 rd Ed. 2017, 2150 B	Agreeable	Qualitative	Agrreable	Agreeable
3.	pil	APHA, 23rd Ed. 2017, 4500H+ A+B	7.43	2.0 -12	6.5-8.5	No Relax
4.	Total Dissalved Solids as TDS (mg/l)	APHA, 23 rd Ed. 2017. 2540-C	412.0	5 - 5000	500	2000
5.	Alkalinity (mg/l)	APHA, 23rd Ed. 2017, 2020 A+18	148.0	5-1500	200	600
6.	Total Hardenss as CaCO:(mg/l)	APIIA, 23" Ed. 2017. 2340 A+C	248.0	5-1500	200.0	600.0
7,	Calcium as Ca (sugft)	APILA, 23rd Ed. 2017, 3500 Cat A+B	59.2	5-1000	75.0	200.0
8.	Magnesium us Mg (mg/l)	APHA, 23 rd Ed. 2017, 3500 Mg A+B	24.3	5-1900	30.0	109.0
9.	Copper us Cu (mg/l)	APRA, 23" Ed. 2017, 3111 A+B	BDL	0,05-3	0.05	1,5
10.	Iron as Fe (neg/l)	APSIA, 23" Ed. 2017, 3500 Fc B	0,23	0.02-50	0.3	No Relax.
11.	Manganese as Mn (mg/l)	APHA, 23rd Ed. 2017, 3111 A+B	BDL	0.1-8	0.10	0.30
12	Chloride at Cl (mg/l)	APHA, 23 rd Ed. 2017, 4500 C1 A+B	34.0	5/1000	250.0	1000,0
13,	Sulfate as SO ₄ (neg/l)	APHA, 23 rd E4, 2017, 4500-SO, ¹ E	32.0	1.0 -250	200,0	460.0
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.	Finarides as F (mg/l)	APHA, 23° Ed. 2017, 4800-C	0.29	0.05-10	1.0	1,5
16.	Phenolic Compounds as CaH-OH (mg/l)	APHA, 23° Ed. 2017, 8830 A+C	got.	1.16	100,0	8.002
17.	Mercury as Hg (nig/l)	APRA, 23 rd Ed. 2017. J112 A+B	BDL	0.001-1	0.001	No Relax.
15.	Cadmium as Cd (mg/l)	APIEA, 23 rd Ed. 2017, 3111 A+B	BOL	0,002-2	0.003	No Rulas
19.	Arsenic as As (mg/l)	APHA, 25th Ed. 2017, 3114 C	BDL	0.01-2	0.01	0.05
20.	Lead as Ph (mg/l)	APRA, 23" Ed. 2017, 3111 A+8	BDL	8,01-2	0,01	No Relax
21.	Zinc as Zn (mg/l)	APHA, 23" Ed. 2017, 3111 A+II	0.18	0.02-50	5,0	15
22	Anionic Detergents (As MBAS)(mg/l) max	APHA 22nd EDN:2011, 8540 A+C	BD1	0.03-5	0.2	1.0
23.	Chromium (Hexavalent) (mg/l)	APHA, 23 ^{rs} Ed. 2017, 3111A+B	BDL	0.05-20	0.05	No Relax
24.	Mineral Oil 6 (mg/l)	18 3025 (Part 39) Class -6 Infrared Partition Method	BDL	0.01-10	0.5	No Relax.
25.	Free Residual Chlorine (mg/l)	APIRA, 23 rd Ed. 2017, 4500-C1 B	BDL	0.5-10	0.20	1.0
26.	Boron as B (mg/l)	APRA, 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" Ed. 2017, 9221 B+C	Absent	1.8	0.05	Absent
28.	E.coll (MPN/100 mt)	APILA, 23 rd Ed. 2017, 9221 B+E	Absent	1.5	Absent	Absent

Note: BDL - Below Detection Limit

cent for Ecomen Laboratories.Pvt. Ltd. Ecomen Laboratoric / Per Flat No -8 2nd Fluor, Arit Chamber-V Sector-H. Aligan Lucknow-220024 Ph. 2746282, Pax:2745726



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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 Date of Analysis : 30.08.2019

Source of Sample

: 30.08.2019 to 06.09.2019

: Patwa Village Hand pump

SL No.	TESTS	TESTS PROTOCOL		Detection Range	INDIAN STANDARDS as per 18 10500:1991(Restfi:2012)	
					Destrable	Permissible
1	Colour (Hazen unit)	APHA, 23° Ed. 2017, 2120 B	<5.0	3-100	5.00	15.0
2:	Odour	APHA, 23" Ed. 2017, 2150 B	Agreeable	Qualitative	Agrocable	Agrounble
3.	gift	APHA, 23" Ed. 2017, 4500H+ A+B	7,29	2,0-12	6.5-9.5	No Relax.
4.	Total Dissolved Solids as TDS (mg/l)	APHA, 23° Ed. 2017, 2540-C	515.0	5 - 5000	500	2000
5,	Alkalinity (mg/l)	APHA, 23rd Ed. 2017, 2320 A+ B	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	696.0
7.	Calcium as Ca (nug/l)	APHA, 23rd Ed. 2017, 3500 Ca A+B	64.0	5-1000	75.0	200.0
8,	Magnesium as Mg (mg/l)	APHA, 237 Ed. 2017, 3500 Mg A+B	11.60	5-1000	30.0	100.0
9.	Copper us Cu (mg/l)	APHA, 25° Ed. 2017, 3111 A+B	RDL.	0.05-5	0.05	1.5
10,	Fron as Fe (mg/l)	APHA, 23rd Ed. 2017, 3500 Fe B	0.20	0.02-50	0.3	No Relat.
11,	Manganese as Ma (mg/l)	APHA, 23° Ed. 2017, 3111 A+B	BDL	0.1-5	0.10	0.30
12.	Chloride us Cl (mg/l) .	APHA, 23" Ed. 2017, 4590 C1A+II	38.0	5-1000	250.0	1000.0
13.	Sulfate as SO ₄ (sog/l)	APHA, 23° Ed. 2017, 4560-SQ,2 E	42.2	1.0 250	200,0	400,6
14.	Nitrate Nitrogen as NO ₃ (mg/l)	APHA, 23rd Ed. 2017, 4500-NO; II	15.01	5,0 - 100	45.0	No Reins.
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 CcHrOH (mg/l)	APHA, 23" Ed. 2017, 5530 A+C	BDL	1-10	0.001	0.002
17.	Mercury as Hg (mg/l)	APRA, 22" Ed. 2017, 3112 A+B	BDL	0.001-1	0,001	No Retus.
18.	Cadmium as Cd (mg/l)	APRA, 23° Ed. 2017, 3111 A+B	BDL	0.002-2	0.003	No Relax
19.	Acrenic as As (mg/l)	APHA, 25° Ed. 2017, 3114 C	BDL,	0.01-2	0,61	0,05
20.	Lesed as Pb (mg/l)	APHA, 23" Ed. 2017, 3111 A+B	BDL	0.01-2	0.01	No Retax.
23.	Ziwe as Zn (mg/l)	APHA, 23° 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	BUJ.	0.01-5	6.2	1.0
23.	Chromium (Hexavalent) (mg/l)	APHA, 23rd Ed. 2017, 3111A+B	BD1.	0.05-20	0.05	No Relax.
24.	Mineral Oil 6 (org.1)	15 3025 (Part 39) Class -6 Infrared Partition Method	BDL	0.01-10	0.5	No Relax.
25.	Free Residual Chlorine (mg/l)	APHA, 23° Ed. 2017, 4500-CI B	BDL	0.5-10	9.29	1,0
26.	Boron as B (mg/l)	APHA, 23 rd E4, 2017, 4500 B A+C	0.22	n,2 10	0.5	1,0
27.	Total coliform (MPN/100 ml)	APILA, 23rd Ed. 2017, 9221 B+C	Absent	1.8	0.05	Absent
28.	E.coli (MPN/100 mit	APHA, 25° Ed. 2017, 9221 B+E	Absent	1.8	Absent	Absent

Note: BDL - Below Detection Limit

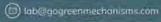
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Doyal Estate, National Highway No. 8, Opp APMC Market Gate- 1. Jetalpur, District-Ahmédiabad-382426. Gujarat, INDIA







CERTIFICATE OF ANALYSIS

Report Number: GGMPL/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 2.0 Contact No. Mail ID

SAMPLE DETAILS

tab ID : Lab/634/01 Sample Drawn By : Chandan Kumar Sample Type : Ambient Air Sample Description : Near Motia Village : Ambient Temperature

Env. Cond.-Sampling Env. Cond. -Sample Receipt : Satisfactory Sampling Start Date : 09.09.2019 Sampling End Date : 10.09.2019

Sample Receipt Date : 11.09.2019 Analysis Start-End Date : 11.09.2019 to 15.09.2019

Total Sampling hours : 24 Env. Cond. -Testing : 25±5°C

Sr. No.	Parameters	Results	Unit	Test Method	NAAQ Standards	
1	Particulate Matter (PM ₁₀)	44.3	µg/m³	IS 5182 (Pt 23): RA 2012	100	
2	Particulate Matter (PM _{2.5})	16.3	μg/m³	GGMPL/SOP/AA/60	60	
3	Sulphur Dioxide (SO ₂)	6.6	μg/m³	IS 5182 (Pt 02): RA 2009	80	
4	Nitrogen Dioxide (NO ₂)	17.2	µg/m³	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

uthorized Signatory ratiksha Raval, Lab Manager

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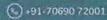
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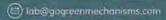
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Hend Office & Lab

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CERTIFICATE OF ANALYSIS

Report Number: GGMPL/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 2-

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 : 11.09.2019 : Ambient Air Sample Receipt Date Sample Description : Near Mali Village : 11.09.2019 to 15.09.2019 Analysis Start-End Date

Env. Cond.-Sampling : Ambient Temperature : 24 Total Sampling hours 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/m³	IS 5182 (Pt 23): RA 2012	100
2	Particulate Matter (PM _{2.5})	14.8	µg/m³	GGMPL/SOP/AA/60	60
3	Sulphur Dioxide (SO ₂)	6.4	μg/m³	IS 5182 (Pt 02): RA 2009	80
4	Nitrogen Dioxide (NO ₂)	16.9	µg/m³	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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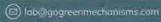
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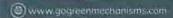
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CERTIFICATE OF ANALYSIS

Reporting Date: 16.09.2019 Report Number: GGMPL/634/03

Adani Power Jharkhand Ltd.

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

Kind Attention Contact No. Mail ID

SAMPLE DETAILS

: 09.09.2019 Sampling Start Date Lab ID : Lab/634/03 : 10.09.2019 Sample Drawn By : Chandan Kumar Sampling End Date : 11.09.2019 Sample Type : Ambient Air Sample Receipt Date

: Near Nayabad Village : 11.09.2019 to 15.09.2019 Sample Description Analysis Start-End Date : 24 Total Sampling hours Env. Cond.-Sampling : Ambient Temperature

: 25±5°C Env. Cond. -Testing Env. Cond. -Sample Receipt : Satisfactory

Sr. No.	Parameters	Results	Unit	Test Method	NAAQ Standards
1	Particulate Matter (PM ₁₀)	51.4	μg/m³	IS 5182 (Pt 23): RA 2012	100
2	Particulate Matter (PM _{2.5})	17.6	μg/m³	GGMPL/SOP/AA/60	60
3	Sulphur Dioxide (SO ₂)	6.4	µg/m³	IS 5182 (Pt 02): RA 2009	80
4	Nitrogen Dioxide (NO ₂)	17.7	µg/m³	IS 5182 (Pt 06): 2006	80

Analyzed By

Ramsukh Gargama, Lab Chemist

Authorized Signatory ratiksha Raval, Lab Manager

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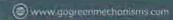
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CERTIFICATE OF ANALYSIS

Report Number: GGMPL/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

Sampling Start Date Lab ID : Lab/643/01 : 12.09.2019 Sample Drawn By : 13.09.2019 : Chandan Kumar Sampling End Date 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/m³	IS 5182 (Pt 23); RA 2012	100
2	Particulate Matter (PM _{2.5})	19.0	μg/m³	GGMPL/SOP/AA/60	60
3	Sulphur Dioxide (SO ₂)	5.7	µg/m³	IS 5182 (Pt 02): RA 2009	80
4	Nitrogen Dioxide (NO ₂)	16.5	µg/m³	15 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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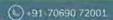
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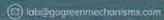
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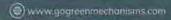
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Dayol Estate, National Highway No. 8, Opp APMC Market Gate 1, Jetalpur, District-Ahmedabad-382426. Gujarat, INDIA







CERTIFICATE OF ANALYSIS

Report Number: GGMPL/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 Sampling End Date : 13.09.2019 : Chandan Kumar : Ambient Air : 14.09.2019 Sample Type Sample Receipt Date

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 : 25± C Env. Cond. -Sample Receipt : Satisfactory Env. Cond. -Testing

Sr. No. 1 2	Parameters	Results	Unit	Test Method	NAAQ Standards
	Particulate Matter (PM ₁₀)	58.6	μg/m³	IS 5182 (Pt 23): RA 2012	100
	Particulate Matter (PM _{2.5})	19.0	μg/m³	GGMPL/SOP/AA/60	60
3	Sulphur Dioxide (SO ₂)	6.6	µg/m³	IS 5182 (Pt 02): RA 2009	80
4	Nitrogen Dioxide (NO ₂)	18.4	μg/m³	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



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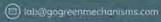
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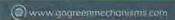
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CERTIFICATE OF ANALYSIS

Report Number: GGMPL/643/03 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 5-

SAMPLE DETAILS

: 12.09.2019 Lab ID : Lab/643/03 Sampling Start Date : 13.09.2019 Sample Drawn By : Chandan Kumar Sampling End Date Sample Type : Ambient Air Sample Receipt Date : 14.09.2019

Sample Description : Near Nayabad Village : 14.09.2019 to 18.09.2019 Analysis Start-End Date

Env. Cond.-Sampling : Ambient Temperature Total Sampling hours : 24 Env. Cond. -Sample Receipt : 25±5°C : Satisfactory Env. Cond. -Testing

Sr. No.	Parameters	Results	Unit	Test Method	NAAQ Standards
1	Particulate Matter (PM ₁₀)	57.4	µg/m³	IS 5182 (Pt 23): RA 2012	100
2	Particulate Matter (PM _{2.5})	17.4	μg/m³	GGMPL/SOP/AA/60	60
3	Sulphur Dioxide (SO ₂)	7.6	μg/m³	IS 5182 (Pt 02); RA 2009	80
4	Nitrogen Dioxide (NO ₂)	19.2	µg/m³	IS 5182 (Pt 06): 2006	80

Ramsukh Gargama, Lab Chemist

Authorized Signatory

ratiksha Raval, Lab Manager

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Report Number: GGMPL/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 : 17.09.2019 Sample Drawn By : Chandan Kumar Sampling End Date Sample Type : Ambient Air Sample Receipt Date : 18.09.2019

Sample Description : Near Motia Village : 18.09.2019 to 22.09.2019 Analysis Start-End Date 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/m³	IS 5182 (Pt 23): RA 2012	100	
2	Particulate Matter (PM _{2,5})	18.0	μg/m³	GGMPL/SOP/AA/60	60	
3	Sulphur Dioxide (SO ₂)	6.2	µg/m³	IS 5182 (Pt 02): RA 2009	80	
4	Nitrogen Dioxide (NO ₂)	15.6	µg/m³	IS 5182 (Pt 06): 2006	80	
5	Mercury (Hg)	BQL(QL=0.02)	µg/m³	317 B James Edition	NS	

Analyzed By Ramsukh Gargama, Lab Chemist

Authorized Signatory Pratiksha Raval, Lab Manager

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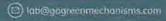
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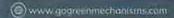
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CERTIFICATE OF ANALYSIS

Report Number: GGMPL/653/02

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/653/02 Sample Drawn By : Chandan Kumar Sample Type : Ambient Air : Near Mali Village Sample Description Env. Cond.-Sampling : Ambient Temperature

Env. Cond. -Sample Receipt : Satisfactory Sampling Start Date : 16.09.2019 Sampling End Date : 17.09.2019

: 18.09.2019 Sample Receipt Date : 18.09.2019 to 22.09.2019 Analysis Start-End Date

Total Sampling hours : 24 Env. Cond. -Testing

: 25±5°C

Sr. No.	Parameters	Results	Unit	Test Method	NAAQ Standards
1	Particulate Matter (PM ₁₀)	63.0	µg/m³	IS 5182 (Pt 23): RA 2012	100
2	Particulate Matter (PM _{2.5})	18.8	µg/m³	GGMPL/SOP/AA/60	60
3	Sulphur Dioxide (SO ₂)	5.6	µg/m³	IS 5182 (Pt 02): RA 2009	80
4	Nitrogen Dioxide (NO ₂)	16.2	µg/m³	IS 5182 (Pt 06) : 2006	80
5	Mercury (Hg)	BQL(QL=0.02)	µg/m³	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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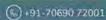
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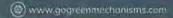


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Env. Cond. -Testing



Reporting Date: 23.09.2019

CERTIFICATE OF ANALYSIS

Report Number: GGMPL/653/03

Adani Power Jharkhand Ltd.

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

Kind Attention Contact No. Mail ID 20

SAMPLE DETAILS

Env. Cond. -Sample Receipt

: 16.09.2019 Lab ID : Lab/653/03 Sampling Start Date Sample Drawn By : Chandan Kumar Sampling End Date : 17.09.2019 Sample Receipt Date : 18.09.2019 Sample Type : Ambient Air

: 18.09.2019 to 22.09.2019 : Near Navabad Village Analysis Start-End Date Sample Description : 24 Total Sampling hours Env. Cond.-Sampling : Ambient Temperature : 25 °C

: Satisfactory

Sr. No.	Parameters	Results	Unit	Test Method	NAAQ Standards
1	Particulate Matter (PM ₁₀)	64.8	µg/m³	IS 5182 (Pt 23): RA 2012	100
2	Particulate Matter (PM _{2.5})	18.1	µg/m³	GGMPL/SOP/AA/60	60
3	Sulphur Dioxide (SO ₂)	5.6	μg/m³	IS 5182 (Pt 02); RA 2009	80
4	Nitrogen Dioxide (NO ₂)	17.2	μg/m³	IS 5182 (Pt 06): 2006	80
5	Mercury (Hg)	BQL(QL=0.02)	μg/m³	317 B James Edition	NS

Analyzed By

Ramsukh Gargama, Lab Chemist



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CERTIFICATE OF ANALYSIS

Report Number : GGMPL/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 Sample Description : Noise Monitoring : Nr. Patwa Village Sampling Instrument : Sound Level Meter

Lmax (Day) Lmax (Night) 2 -. -Lmin (Night) Lmin (Day) 2 -: -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

Analyzed By

Chandan Kumar, Field Technician

Authorized Signatory

Pratiksha Raval, Lab Manager

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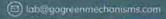
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: Lab/653/06 to Lab/653/07





CERTIFICATE OF ANALYSIS

Reporting Date: 23.09.2019

Adani Power Jharkhand Ltd.

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

Report Number : GGMPL/653/05

Kind Attention :-Contact No. :-Mail ID

SAMPLE DETAILS

Lab ID

Location : Nr. Motia Village Sampling Instrument : Sound Level Meter

Lmax (Day) Lmin (Day) : -Leq (Day) : 47.9 Sampling Date : 16.09.2019 . Sample Description : Noise Monitoring

Ldn Lmax (Night) : -

Lmin (Night) : -: 43.5 Leq (Night)

Lab ID	Location	Time	Unit	Test Method	Max	Min	Norms
Lab/653/06	Nr. Motia Village	Day Time	dB (A) Leq	1S 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

Analyzed By

Chandan Kumar, Field Technician



Authorized Signatory

atiksha Raval, Lab Manager

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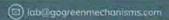
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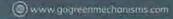
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CERTIFICATE OF ANALYSIS

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 Location : Lab/653/08 to Lab/653/09

Sampling Date

: 16.09.2019

: Nr. Mall Village

Sample Description

: Noise Monitoring

Sampling Instrument

: Sound Level Meter

Lmax (Day)

Lmax (Night)

: -

Lmin (Day) Leq (Day)

. . : 45.0

Lmin (Night) 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, Field Technician

tiksha Raval, Lab Manager

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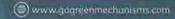
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CERTIFICATE OF ANALYSIS

Report Number : GGMPL/653/07 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/653/10 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

Location	Time	Unit	Test Method	Max	Min	Norms
Nr. Navabad Village	Day Time	dB (A) Leq	IS 9989: RA (2001)	57.7	52.4	75
Nr. Navabad Village	Night Time	dB (A) Leq	IS 9989: RA (2001)	46.5	42.3	70
	Nr. Navabad Village	Nr. Navabad Village Day Time	Nr. Navabad Village Day Time dB (A) Leq	Nr. Navabad Village Day Time dB (A) Leq 15 9989: RA (2001)	Nr. Navabad Village Day Time dB (A) Leq IS 9989: RA (2001) 57.7	Nr. Navabad Village Day Time dB (A) Leq IS 9989: RA (2001) 57.7 52.4

Indicates these parameters are not covered under NABL Scope

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

Analyzed By Chandan Kumar, Field Technician Authorized Signatory

Pratiksha Raval, Lab Manager

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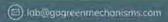
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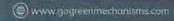
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CERTIFICATE OF ANALYSIS

Report Number : GGMPL/653/08

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 Location

Sampling Instrument

Lmax (Day)

Lmin (Day)

Leq (Day)

: Lab/653/12 to Lab/653/13 : Nr. HTG Residential Area

: Sound Level Meter

1 -

: 54.1

Sampling Date

: 16.09.2019 Sample Description : Noise Monitoring

Lmax (Night) Lmin (Night) 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, Field Technician



atiksha Raval, Lab Manager

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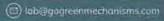
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CERTIFICATE OF ANALYSIS

Report Number : GGMPL/653/09 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/653/14 to Lab/653/15 : 16.09.2019 Sampling Date Location : Nr. Adani Office Sample Description : Noise Monitoring Sampling Instrument : Sound Level Meter 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. Adam 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

Chandan Kumar, Field Technician



Authorized Signatory

Pratiksha Raval, Lab Manager

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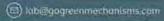
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CERTIFICATE OF ANALYSIS

Reporting Date: 26.09.2019 Report Number: : GGMPL/653/10

Adani Power Jharkhand Ltd.

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

Kind Attention ::-Contact No. Mail ID 2:

SAMPLE DETAILS

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

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	m:	IS 3025 (Pt 05): RA 2006	Agreeable	Agreeable
3	pH @ 25 ℃	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	- ,	(7)
5	Taste'	Agreeable	Vie.	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	326	mg/L	APHA 23rd Edn 2017 2540 C	500	2000
8	Total Hardness as CaCO ₁	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

Analysed By

Ramsukh Gargama, Lab Chemist



Authorized Signatory

Pratiksha Raval, Lab Manager

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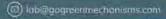
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Dayal Estate, National Highway No. 8. Opp APMC Market Gate-1. Jetaipur, District-Ahmedobad 382426. Gujarat, INDIA







CERTIFICATE OF ANALYSIS

Report Number: : GGMPL/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. 15 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 ⁵⁺	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

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

Ramsukh Gargama, Lab Chemist

Authorized Signatory

ratiksha Raval, Lab Manager

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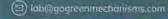
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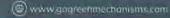
Page 2 of 3



Dayal Estate, National Highway No. 8, Opp APMIC Market Gate-1, Jétalpur, District-Ahmedabad-382426. Gujarat, INDIA







26.09.2019

CERTIFICATE OF ANALYSIS

Report Number: : GGMPL/653/10 Reporting Date:

Adani Power Jharkhand Ltd.

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

Kind Attention ::-Contact No. 1.10 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 Sampling Method : IS 3025/APHA Sample Condition : Satisfactory Packing ; Sealed

r. 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 Relaxatio
28	Selenium (Se)	BQL(QL=0.001)	mg/L	IS 3025 (Pt 56): 2003	0.01	No Relaxatio
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

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

Analyzed By

Ramsukh Gargama, Lab Chemist



Authorized Signatory

Pratiksha Raval, Lab Manager

Terms & Conditions:

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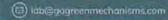
Page 3 of 3

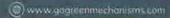
^{*} Indicates these parameters are not covered under NABL Scope



Dayal Estate: National Highway No. B. Opp APMC Market Gate-1. Jetalpur, District Ahmedabad-382426, Gujarat, INDIA

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CERTIFICATE OF ANALYSIS

Report Number: : GGMPL/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 5 %

SAMPLE DETAILS

Lab ID Sample Drawn By Sample Type Sample Description Sample Quantity

Sample Condition

: Lab/653/16 : Chandan Kumar

: Ground Water

: Motia Village, Hand Pump

: Satisfactory

Sampling Date

Sample Receipt Date Analysis Start Date

Analysis End Date Sampling Method

Packing

: 16.09.2019 : 17.09.2019

: 18.09.2019

: 25.09.2019 : IS 3025/APHA

: 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	944	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		13
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

Ramsukh Gargama, Lab Chemist

Authorized Signatory

ratiksha Raval, Lab Manager

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Report Number: : GGMPL/653/10

Reporting Date:

: 16.09.2019

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 220

SAMPLE DETAILS

Lab ID Sample Drawn By Sample Type Sample Description Sample Quantity

Sample Condition

: Lab/653/16

: Chandan Kumar : Ground Water : Motia Village, Hand Pump

: 2L : Satisfactory Sampling Date

Sample Receipt Date : 17.09.2019 Analysis Start Date : 18.09.2019

Analysis End Date : 25.09.2019 Sampling Method : IS 3025/APHA

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	i	1.5
16	Hexavalent Chromium as Cr ⁸⁺	BQL(QL=0.01)	mg/L	APHA 23rd Edn 2017 3500 Cr B	- 4	- 3
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 CI 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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Ramsukh Gargama, Lab Chemist

Authorized Signatory

Pratiksha Raval, Lab Manager

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Report Number: : GGMPL/653/10

Reporting, Date:

: 16.09.2019

: 17.09.2019

: 18.09.2019

: 25.09.2019

26.09.2019

Adani Power Jharkhand Ltd.

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

Kind Attention : :-Contact No. : 15 Mail ID 100

SAMPLE DETAILS

Lab ID Sample Drawn By Sample Type Sample Description Sample Quantity

Sample Condition

: Lab/653/16

: Chandan Kumar : Ground Water

: Motia Village, Hand Pump

: ZL : Satisfactory Sampling Date

Sample Receipt Date Analysis Start Date

Analysis End Date Sampling Method

: IS 3025/APHA

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 Relaxatio
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 Relaxatio
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

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

Ramsukh Gargama, Lab Chemist



Authorized Signatory

atiksha Raval, Lab Manager

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Page 3 of 3

^{*} Indicates these parameters are not covered under NABL Scope

Report Number: : GGMPL/653/12

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. 0.056 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

Analysis End Date

: 25.09.2019

Sample Quantity

: Navabad Village, Hand Pump

Sampling Method

: IS 3025/APHA

Sample Condition

: 2L : Satisfactory

Packing

: Sealed

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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 Relaxatio
4	Temperature°C	28	°C	APHA 23rd Edn 2017 2550 B	- 4	
5	Taste"	Agreeable		IS 3025 (Pt 08): RA 2006	Agreeable	Agreeable
6	Turbidity	BQL(QL=0.1)	NTU	APHA 23rd Edn 2017 2130 B	ă.	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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Ramsukh Gargama, Lab Chemist



Authorized Signatory

Pratiksha Raval, Lab Manager

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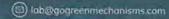
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CERTIFICATE OF ANALYSIS

Reporting Date:

26.09.2019

Adani Power Jharkhand Ltd.

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

Report Number: : GGMPL/653/12

Kind Attention ::-Contact No. : 13 Mail ID .

SAMPLE DETAILS

Lab ID Sample Drawn By Sample Type Sample Description Sample Quantity

Sample Condition

: Lab/653/18

: Chandan Kumar

: Ground Water : Navabad Village, Hand Pump

: 2L : Satisfactory Sampling Date

Sample Receipt Date

: 16.09.2019 : 17.09.2019

: 18.09.2019

Analysis Start Date Analysis End Date : 25.09.2019 Sampling Method

: IS 3025/APHA

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	1:1	1.0
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 CI 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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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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Page 2 of 3



Report Number: : GGMPL/653/12

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 Sample Drawn By Sample Type Sample Description Sample Quantity

Sample Condition

: Lab/653/18

: Chandan Kumar : Ground Water

: Navabad Village, Hand Pump

: 2L : Satisfactory Sampling Date

Sample Receipt Date : 17.09.2019 Analysis Start Date : 18.09.2019

Analysis End Date Sampling Method

Packing

: 25.09.2019 : IS 3025/APHA

: 16.09.2019

: Sealed

5r. 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

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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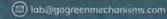
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^{*} Indicates these parameters are not covered under NABL Scope



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CERTIFICATE OF ANALYSIS

Reporting Date:

26.09.2019

Adani Power Jharkhand Ltd.

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

Report Number: : GGMPL/653/13

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

SAMPLE DETAILS

Lab ID Sample Drawn By Sample Type

Sample Description

Sample Quantity Sample Condition : Lab/653/19

: Chandan Kumar : Ground Water

: Navabad Village, Hand Pump : 2L

: Satisfactory

Sampling Date

Sample Receipt Date Analysis Start Date

Analysis End Date Sampling Method

Packing

: 25.09.2019 : IS 3025/APHA

: 16.09.2019

: 17.09.2019

: 18.09.2019

: 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	in i	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	4.	-
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 OC	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

^{*} 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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Page 1 of 3



Report Number: : GGMPL/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. : 3-Mail ID

SAMPLE DETAILS

Lab ID Sample Drawn By Sample Type Sample Description : Lab/653/19

: Chandan Kumar

: Ground Water : Navabad Village, Hand Pump

: 2L

Sample Quantity Sample Condition : Satisfactory Sampling Date : 16.09.2019

Sample Receipt Date : 17.09.2019 Analysis Start Date : 18.09.2019

Analysis End Date : 25.09.2019 Sampling Method : IS 3025/APHA

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 CLB	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 (AI)	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

^{*} 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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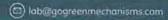
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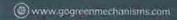
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CERTIFICATE OF ANALYSIS

Report Number: : GGMPL/653/13

Reporting Date:

: 16.09.2019

: 17.09.2019

: 18.09.2019

26.09.2019

Adani Power Jharkhand Ltd.

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

Kind Attention : :-Contact No. 2.35 Mail ID : :-

SAMPLE DETAILS

Lab ID Sample Drawn By Sample Type Sample Description Sample Quantity

Sample Condition

: Lab/653/19 : Chandan Kumar

: Satisfactory

: Ground Water

: Navabad Village, Hand Pump ; 2L

Sampling Date

Sample Receipt Date Analysis Start Date

Analysis End Date : 25.09.2019 Sampling Method : IS 3025/APHA

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	15 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

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

Analyzed By

Ramsukh Gargama, Lab Chemist

Authorized Signatory

Pratiksha Raval, Lab Manager

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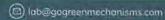
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^{*} Indicates these parameters are not covered under NABL Scope



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CERTIFICATE OF ANALYSIS

Report Number: GGMPL/679/01

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.

SAMPLE DETAILS

Lab ID Sample Drawn By Sample Type

Sample Description : Near Motia Village Env. Cond.-Sampling : Ambient Temperature

Env. Cond. -Sample Receipt

: Lab/679/01

: Chandan Kumar : Ambient Air

: Satisfactory

Sampling Start Date

: 19.09.2019 Sampling End Date : 20.09.2019 Sample Receipt Date : 21.09.2019

Analysis Start-End Date Total Sampling hours

: 24

: 21.09.2019 to 25.09.2019

Env. Cond. -Testing : 25±5°C

	Parameters	Results	Unit	Test Method	NAAQ Standards
.Parti	iculate Matter (PM ₁₀)	56.3	µg/m³	IS 5182 (Pt 23): RA 2012	100
Parti	iculate Matter (PM _{2.5})	16.0	µg/m³	GGMPL/SOP/AA/60	60
Sulpl	hur Dioxide (SO ₂)	7.1	μg/m³	IS 5182 (Pt 02): RA 2009	80
Nitro	ogen Dioxide (NO ₂)	17.9	µg/m³	IS 5182 (Pt 06) : 2006	80
IVIU	ogen bloxide (NO2)	17.9	hā/m.	15 5182 (Pt 06) : 2006	

 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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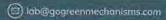
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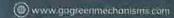
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CERTIFICATE OF ANALYSIS

Report Number: GGMPL/679/02 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/679/02 Sampling Start Date : 19.09.2019 Sample Drawn By : Chandan Kumar Sampling End Date : 20.09.2019 Sample Type . Ambient Air : 21.09.2019 Sample Receipt Date

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/m³	IS 5182 (Pt 23): RA 2012	100
2	Particulate Matter (PM _{2.5})	22.0	µg/m³	GGMPL/SOP/AA/60	60
3	Sulphur Dioxide (SO ₂)	7.1	µg/m³	IS 5182 (Pt 02): RA 2009	, 80
4	Nitrogen Diaxide (NO ₂)	19.8	μg/m³	IS 5182 (Pt 06): 2006	80

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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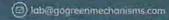
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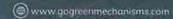
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^{*} Indicates these parameters are not covered under NABL Scope



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CERTIFICATE OF ANALYSIS

Report Number: GGMPL/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. : -

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
ì	Particulate Matter (PM ₁₀)	59.2	μg/m³	IS 5182 (Pt 23): RA 2012	100
2	Particulate Matter (PM _{2.5})	20.0	μg/m³	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/m³	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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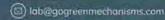
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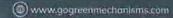
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CERTIFICATE OF ANALYSIS

Report Number: GGMPL/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. MaiLID

SAMPLE DETAILS

Lab ID

Sample Type

Sample Drawn By

Sample Description

Env. Cond.-Sampling Env. Cond. -Sample Receipt : Lab/700/01

: Chandan Kumar

: Ambient Air : Near Motia Village

: Ambient Temperature : Satisfactory

Sampling Start Date

: 23.09.2019 Sampling End Date : 24.09.2019

: 25.09.2019 Sample Receipt Date

Analysis Start-End Date : 25.09.2019 to 29.09.2019 Total Sampling hours : 24

Env. Cond. -Testing : 25±5°C

Sr. No.	Parameters	Results	Unit	Test Method	NAAQ Standards
1	Particulate Matter (PM ₁₀)	42.3	μg/m³	15 5182 (Pt 23): RA 2012	100
2	Particulate Matter (PM _{2.5})	15.1	μg/m³	GGMPL/SOP/AA/60	60
3	Sulphur Dioxide (SO ₂)	5.6	μg/m³	IS 5182 (Pt 02): RA 2009	80
4	Nitrogen Dioxide (NO ₂)	18.2	µg/m³	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 Number: GGMPL/700/02

Reporting Date: 30.09.2019

: 25.09.2019 to 29.09.2019

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 Sample Drawn By : Chandan Kumar Sample Type : Ambient Air Sample Description : Near Mali Village

Env. Cond.-Sampling : Ambient Temperature Env. Cond. -Sample Receipt : Satisfactory

Sampling Start Date : 23.09.2019 Sampling End Date : 24.09.2019 : 25.09.2019 Sample Receipt Date

Total Sampling hours : 24 Env. Cond. -Testing : 25±5°C

Analysis Start-End Date

Sr. No.	Parameters	Results	Unit	Test Method		NAAQ Standards	
1	Particulate Matter (PM ₁₀)	47.4	µg/m³	IS 5182 (Pt 23): RA 2012		100	
2	Particulate Matter (PM _{2.5})	15.4	µg/m³.	GGMPL/SOP/AA/60		60	
3	Sulphur Dioxide (SO ₂)	5.4	μg/m³	IS 5182 (Pt 02): RA 2009		80	100
4	Nitrogen Dioxide (NO ₂)	17.6	µg/m³	IS 5182 (Pt 06) : 2006	191-	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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CERTIFICATE OF ANALYSIS

Report Number: GGMPL/700/03

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

Sample Drawn By Sample Type Sample Description

Env. Cond.-Sampling Env. Cond. -Sample Receipt : Lab/700/03

: Satisfactory

: Chandan Kumar : Ambient Air

: Near Nayabad Village : Ambient Temperature Sampling Start Date

: 23.09.2019 : 24.09.2019

Sampling End Date Sample Receipt Date : 25.09.2019

Analysis Start-End Date Total Sampling hours : 24

: 25.09.2019 to 29.09.2019

Env. Cond. -Testing

: 25±5°C

Sr. No.	Parameters	Results	Unit	Test Method	NAAQ Standards
1	Particulate Matter (PM ₁₀)	48.3	µg/m³	IS 5182 (Pt 23): RA 2012	100
2	Particulate Matter (PM _{2.5})	16.2	μg/m³	GGMPL/SOP/AA/50	60
3	Sulphur Dioxide (SO ₂)	6.2	µg/m³	IS 5182 (Pt 02): RA 2009	80
4	Nitrogen Dioxide (NO ₂)	15.6	µg/m³	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 Number: GGMPL/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.

SAMPLE DETAILS

Lab ID

Sample Drawn By

Sample Type

Sample Description Env. Cond.-Sampling Env. Cond. -Sample Receipt : Lab/713/01

: Chandan Kumar

: Ambient Air : Near Motia Village

: Ambient Temperature : Satisfactory

Sampling Start Date

: 26.09.2019

Sampling End Date Sample Receipt Date

: 27.09.2019 : 28.09.2019

Analysis Start-End Date

: 28.09.2019 to 03.10.2019

Total Sampling hours

: 24

Env. Cond. -Testing

: 25±5°C

Sr. No.	Parameters	Results	Unit	Test Method	NAAQ Standards
1	Particulate Matter (PM ₁₀)	52.0	μg/m³	IS 5182 (Pt 23): RA 2012	100
2	Particulate Matter (PM _{2.5})	17.3	μg/m ³	GGMPL/SOP/AA/60	4 60
3	Sulphur Dioxide (SO ₂)	5.6	μg/m³	15 5182 (Pt 02): RA 2009	80
4	Nitrogen Dioxide (NO ₂)	14,4	µg/m³	IS 5182 (Pt 06) : 2006	80

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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^{*} Indicates these parameters are not covered under NABL Scope



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CERTIFICATE OF ANALYSIS

Report Number: GGMPL/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 0.2 Contact No.

Mail ID

SAMPLE DETAILS

Lab ID Sample Drawn By Sample Type Sample Description

Env. Cond.-Sampling Env. Cond. -Sample Receipt : Lab/713/02

: Chandan Kumar : Ambient Air

: Near Mall Village : Ambient Temperature

: Satisfactory

Sampling Start Date Sampling End Date

: 27.09.2019 : 28.09.2019 Sample Receipt Date

: 26.09.2019

Analysis Start-End Date : 28.09.2019 to 03.10.2019 Total Sampling hours : 24

Env. Cond. -Testing : 25±5°C

Sr. No.	Parameters	Results	Unit	Test Method		NAAQ Standards
1	Particulate Matter (PM ₁₀)	51.0	μg/m³	IS 5182 (Pt 23): RA 2012		100
2	Particulate Matter (PM _{2.5})	15.6	μg/m³	GGMPL/SOP/AA/60		60
3	Sulphur Dioxide (SO ₂)	5.2	μg/m³	IS 5182 (Pt 02): RA 2009	1	80
4	Nitrogen Dioxide (NO ₂)	14.1	µg/m³	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 Chem

Authorized Signatory

Pratiksha Raval, Lab Manager

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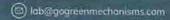
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Dayal Estate, National Highway No. 8, Opp APMC Market Gate-1, Jetalpur, District-Ahmedabad-382426,

(C) +91-70690 72001





Reporting Date: 04.10.2019

CERTIFICATE OF ANALYSIS

Report Number: GGMPL/713/03

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 Sample Drawn By : Chandan Kumar Sample Type : Ambient Air Sample Description : Near Navabad Village

Env. Cond.-Sampling Env. Cond. -Sample Receipt

: Ambient Temperature : Satisfactory

Sampling Start Date : 26.09,2019

Sampling End Date : 27.09.2019 Sample Receipt Date : 28.09.2019

Analysis Start-End Date : 28.09.2019 to 03.10.2019 Total Sampling hours : 24

Env. Cond. -Testing

: 25±5°C

sr. No.	Parameters	Results	Unit	Test Method	NAAQ Standards
1	Particulate Matter (PM ₁₀)	56.7	µg/m³	IS 5182 (Pt 23): RA 2012	100
2	Particulate Matter (PM _{2,5})	16.6	μg/m³	GGMPL/SOP/AA/60	60
3	Sulphur Dioxide (SO ₂)	5.2	μg/m³	IS 5182 (Pt 02): RA 2009	80
4	Nitrogen Dioxide (NO ₂)	13.1	µg/m³	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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Sample will be retained (wherever applicable) only for 15 days from the date of sampling.

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Report Number: GGMPL/732/01

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 Sample Drawn By Sample Type

: Chandan Kumar : Ambient Air Sample Description Env. Cond.-Sampling

Env. Cond. -Sample Receipt

: Lab/732/01

: Satisfactory

: Near Motia Village : Ambient Temperature

Sampling Start Date : 30.09.2019 Sampling End Date : 01.10.2019

Sample Receipt Date

: 02.10.2019 : 02.10.2019 to 06.10.2019

Analysis Start-End Date Total Sampling hours Env. Cond. -Testing

: 24 : 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/m³	GGMPL/SOP/AA/60	60
3	Sulphur Dioxide (SO ₂)	5.6	μg/m³	IS 5182 (Pt 02): RA 2009	80
4	Nitrogen Dioxide (NO ₂)	13.2	µg/m³	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

Ramsukh Gargama, Lab Chemist



Authorized Signatory

Pratiksha Raval, Lab Manager

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Report Number: GGMPL/732/02

Reporting Date: 07.10.2019

Adani Power Jharkhand Ltd.

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

Kind Attention 1634 Contact No. Mail ID

SAMPLE DETAILS

Lab ID : Lab/732/02 Sample Drawn By : Chandan Kumar Sample Type : Ambient Air Sample Description : Near Mall Village Env. Cond.-Sampling : Ambient Temperature Env. Cond. -Sample Receipt : Satisfactory

Sampling Start Date : 30.09.2019 Sampling End Date : 01.10.2019 Sample Receipt Date : 02.10.2019 Analysis Start-End Date : 02.10.2019 to 06.10.2019

: 24 Total Sampling hours Env. Cond. -Testing : 25±5°C

Parameters	Results	Unit	Test Method	NAAQ Standards	
ulate Matter (PM ₁₀)	46.0	µg/m³	IS 5182 (Pt 23): RA 2012	100	
ulate Matter (PM _{2.5})	14.9	µg/m³	GGMPL/SOP/AA/60	60	
ur Dioxide (SO ₂)	6.2	µg/m³	IS 5182 (Pt 02): RA 2009	80	
en Dioxide (NO ₂)	12.1	μg/m³	IS 5182 (Pt 06) ; 2006	80	
	ulate Matter (PM ₁₀) ulate Matter (PM _{2.5}) ur Dioxide (SO ₂)	ulate Matter (PM ₁₀) 46.0 ulate Matter (PM _{2.5}) 14.9 ur Dioxide (SO ₂) 6.2	ulate Matter (PM ₁₀) 46.0 μg/m³ ulate Matter (PM _{2.5}) 14.9 μg/m³ ur Dioxide (SO ₂) 6.2 μg/m³	ulate Matter (PM ₁₀) 46.0 μg/m³ IS 5182 (Pt 23): RA 2012 ulate Matter (PM _{2.9}) 14.9 μg/m³ GGMPL/SOP/AA/60 ur Dioxide (SO ₂) 6.2 μg/m³ IS 5182 (Pt 02): RA 2009	ulate Matter (PM ₁₀) 46.0 μg/m³ IS 5182 (Pt 23): RA 2012 100 ulate Matter (PM _{2.5}) 14.9 μg/m³ GGMPL/SOP/AA/60 60 ur Dioxide (SO ₂) 6.2 μg/m³ IS 5182 (Pt 02): RA 2009 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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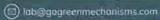
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Dayal Estate, National Highway No. B. Opp APMC Market Gate-1_ Jetalpur, District-Ahmedabad-382426. Gujarat, INDIA

(191 70690 72001



CERTIFICATE OF ANALYSIS

Report Number: GGMPL/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

Analysis Start-End Date

: 02.10.2019 to 06.10.2019

: Near Nayabad Village : Ambient Temperature

Total Sampling hours

: 24

Env. Cond.-Sampling 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/m³	IS 5182 (Pt 23): RA 2012		100
2	Particulate Matter (PM _{2.5})	13.5	µg/m³	GGMPL/SOP/AA/60		60
3	Sulphur Dioxide (SO ₂)	5.2	μg/m³	IS 5182 (Pt 02): RA 2009	30	80
4	Nitrogen Dioxide (NO ₂)	14.1	µg/m³	IS 5182 (Pt 06): 2006		80

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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Adani Power (Jharkhand) Limited

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 elearning classes benefitting 47000 students.

- 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,

- 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: Swacchagrah 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 Swachhagarha School, total 92 Swachhagraha Prerak, total 92 Swachhagraha Dal, total 1840 Swachhagarahis 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.

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.
- Sakhsam 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.

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
- o Renovation of 7 Hanuman Temple and one Kali temple and Shiv Parvati temple at TPP area
- o Renovation of 6 Community Hall for Community Programs
- Construction of 9 Bathrooms & Soakpit at Niyamatchak village of pipeline area.
- o Renovation work at Govt. guest house, at Sarkanda

- Renovation of Boundary wall of Upgraded High School, Sondiha
- o Construction of Gate at Godda College, Godda
- o Construction of Memorial Structure at Sondiha Village
- o Construction of stage at Sondiha village
- o Construction of Pathway at DFO residence Godda
- o Renovation work at SP office. Godda
- o Beautification Work at Govt. office Dumka
- o Renovation of Bhim Rao Ambedkar Statue at Badhouna village
- o Construction of drain in 4 villages Gangta, Nayabad, Sondiha and Motia.
- o Renovation of Main Gate of Godda College.
- o 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	l to V	64
2	Nayabad I	l to V	19
3	Nayabad II	l to V	36
4	Gangta I	l to V	23
5	Gangta II	l to V	21
6	Baliakita	l to V	60
	Total	223	

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.

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

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, 8 2 students got 3rd division marks.

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

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

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 elearning 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

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					
SI	Sport Name	No of Villages/ locations	No. of Participants	Average Audienc e 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.

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					

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

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.

F	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.

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.

Awareness Programmes

- 1. Swachhagrah Programme: Swacchagrah 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 Swacchagraha dal comprising over 1800 Swacchagrahis 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.
- 2. 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
Tota	ol .			950

Medical Services

1. 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.

- 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,

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

- 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:

	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.

- ❖ 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			

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	Lohiyanagar 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		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 O6 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

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.