# SIX MONTHLY COMPLIANCE REPORT OF

# **ENVIRONMENTAL CLEARANCE (EC)**

# 1320 (2 x 660) MW Thermal Power Plant

At

# KAWAI VILLAGE, ATRU TEHSIL BARAN DISTRICT RAJASTHAN

Submitted to:

Central Regional Office, Lucknow Ministry of Environment & Forests & Climate Change Central Pollution Control Board, New Delhi & Rajasthan State Pollution Control Board, Jaipur



Submitted By:

Environment Management Department Adani Power Rajasthan Limited Kawai Village, Atru Tehsil, Baran District, Rajasthan

PERIOD: OCTOBER-2020 to MARCH-2021

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## Introduction

Adani Power Rajasthan Ltd. (APRL), a wholly owned company of Adani Power Limited, has established 1320 MW (2x660 MW) Coal based Supercritical Thermal Power Plant at Kawai, Tehsil Atru, District Baran in Rajasthan.

Kawai Thermal Power Plant is located near village Kawai, Tehsil Atru, District Baran (Rajasthan). The power plant is based on supercritical, energy efficient & environment friendly technology.

APRL has obtained Environmental Clearances (EC) from Ministry of Environment & Forest & Climate change (MoEFCC) and has also obtained Consent to Establish (CTE) as well as Consent to Operate (CTO) from Rajasthan Pollution Control Board (RPCB). The plant is fully operational since December '2013. As the part of the compliance of statutory requirement environmental quality monitoring is being done inside the premises and also in nearby villages.

Ambient Air Quality Monitoring Stations has been established in consultation with Rajasthan State Pollution Control Board, three locations within the plant premises & three locations outside plant in different village based on meteorology of the site and consultation with State Pollution Control Board, Presently Environmental monitoring & analysis is being carried out by M/s Team Institute of Science & Technology, Jaipur, Rajasthan

Point wise compliance status of Environmental Clearance for 1320 (2x660) MW for coal based Supercritical Kawai Thermal Power Plant is furnished herewith.

## Compliance Status on Environmental Clearance 1320 (2×660) MW Coal Based Kawai Thermal Power Plant

vide letter No. J-13012/154/2008-IA.II (T) dated 04.05.2011 & its subsequent amendment dated 13.03.2014

Α	Specific Condition	Status
(i)	Vision document specifying prospective plan for the site shall be formulated and submitted to the Ministry within six months.	Complied. Vision document had already been submitted along with first EC Compliance report.
(ii)	In case source of fuel supply is to be changed at a later stage (now proposed on imported coal from South Africa) the project proponent shall intimate the Ministry well in advance along with necessary requisite documents for its concurrence for allowing the change. In such a case the necessity for re-conducting public hearing may be decided by the ministry in consultation with the Expert Appraisal Committee.	Complied MoEF&CC has amended the Environmental Clearance vide letter No. J- 13012/154/2008/IA.II (T) dated 13.03.2014 for Indigenous / Domestic Coal from Subsidiary companies of Coal India Limited in place of Imported Coal with some additional conditions. The compliance of the additional conditions is included in this compliance report.
(iii)	Wildlife conservation plan shall be prepared in consultation with the office of the Chief Wildlife Warden concerned for implementation. Status of implementation shall be submitted to the regional office of the ministry periodically.	A detail study of Wild life conservation plan has already done (Document no. EES/AG/001/259-Biological study) by consultant in consultation with forest department & conservation plan already submitted to the Chief Wild Life Warden, Jaipur for approval. The Report also submitted to the DFO Baran. A copy of the conservation plan was submitted to your office along with Six monthly compliance report
(iv)	Possibility for harnessing solar power within the premises of the plant particularly at available roof tops shall be examined and status of implementation shall be submitted.	<ul> <li>80 no. Solar light are installed near hostel/residential area in first phase of solar harnessing program.</li> <li>Solar panel are installed for street lights of residential complex.</li> <li>10KW capacity Solar Panel is installed at rooftop of Administrative Building to harness solar energy for its consumption.</li> </ul>
(v)	An equal area of grazing land proposed to be acquired for the project shall be identified and developed in consultation with the village Panchayat and the district administration before final acquisition of the said land.	Complied Development of waste land to grazing land in village Kunjed of Atru Tehsil is completed as per "Mukhyamantri Jal Swavlamban Abhiyan" (MJSA) as suggested by District Collector, Baran.

(vi)	Coal transportation to plant site shall be by	Being complied.
	rail. The project proponent shall take up the	Coal is being transported to power plant
	matter with the Railways and shall submit	through Rail only.
	action taken and implementation status to	
	the ministry from time to time.	
(vii)	Existing de-generated water bodies (if any) in	Development of existing degenerated water
	the study area shall be regenerated at the	body in village Antana of Atru tehsil is
	project proponent's expenses in consultation	completed as proposal approved by District
	with the state govt.	Collector, Baran under "Mukhyamantri Jal
		Swavlamban Abhiyan" (MJSA) vide letter no.
		2016/280-85 dated 09.02.2016.
		Existing seasonal water bodies within the
		study area is identified for regeneration
		under company's CSR programme by Adani
		Foundation and has been implemented in
		phased manner.
(viii)	Hydrogeology of the area shall be reviewed	Complied.
	annually from an institute / organization of	Hydrogeology of the area is being reviewed
	repute to assess impact of surface water and	regularly. Last hydrogeology reviewed done
	ground regime (especially around ash dyke).	in Year- 2020 by third party to assess the
	In case and deterioration is observed specific	surface & ground regime. (Especially around
	mitigation measures shall be undertaken and	ash dyke).
	reports / data of water quality monitored	Regular water quality monitoring is also
	regularly and maintained shall be submitted	being carried out by NABL accredited
	to the Regional Office of the Ministry.	Consultant. The water quality monitoring
		results is being submitted regularly along
		with Six Monthly Compliance reports.
(ix)	Source of water for meeting the requirement	Water allocation from Parvan River for 34
	outing lean season shall be specified and	MCM.
	Ministry within three months	rins qualitity is adequate to meet the plant's
()	No accurate water shall be extracted for use in	Compiled
(X)		Complied.
		softing up of power plant
(xi)	No water bodies (including patural drainage	No water body was distusted while setting
	system) in the area shall be disturbed due to	
	activities associated with the setting up /	
	operation of the nower plant	
(vii)	Minimum required water flow suggested by	APRI has no role in the distribution of water
	the Competent Authority of the State Govt	from Parvan irrination Project Water
	shall be maintained in the Channel / Rivers (as	Resource Department Govt of Raiasthan
	annlicable) even in lean season	will maintain the minimum required water
		flow during lean season.
(xiii)	Water requirement shall be restricted as per	Complied
	CEA norms and COC of 5.0 shall be adouted	It has been incorporated in the plant design
		and being maintained.

(xiv)	Regular monitoring of ground water level	Regular monitoring of ground water quality
	shall be carried out by establishing a network	including heavy metals is being carried out
	of existing wells and constructing new	in and around the plant area by MoEF&CC
	piezometers. Monitoring around the ash pond	accredited agency and NABL accredited
	area shall be carried out particularly for beavy	Environment Jahoratory of APRI
	motals (Ho, Cr. As, Pb) and records maintained	Please refer attached <b>Appeyure-I</b>
	and submitted to the Decised Office of this	These Discomptsis wells are established
	Allo submitted to the Regional Office of this	Three Plezonietric wens are established
	Ministry. The data so obtained should be	around the ash pond. Record are being
	compared with the baseline so as to ensure	maintained and attached as Annexure-II.
	that the ground water quality is not adversely	
	affected due to the project.	
(xv)	Monitoring surface water quality shall also be	Being Complied.
	regularly conducted and records maintained.	Regular monitoring for surface and ground
	The monitored data shall be submitted to the	water quality is being carried out including
	Ministry regularly. Further, monitoring points	heavy metals in & around the ash pond and
	shall be located between the plant and	nearby villagers. Monitoring report is
	drainage in the direction of flow of ground	enclosed as <b>Annexure I</b> .
	water and records maintained. Monitoring for	
	beauvy metals in around water shall be	
	undertakon	
(saui)	A well deciseed sale water baryostice shall be	Complied
(XVI)		Complied
	put in place before commissioning of the	Design for rain water narvesting scheme is
	plant. Central Ground Water Authority / Board	prepared by Hydro-geo Survey Consultant-
	shall be consulted for finalization of	Jaipur and the same is submitted to Regional
	appropriate rainwater harvesting technology	Office of CGWB. Jaipur, MoEF&CC regional
	/ design within a period of three months from	office, Lucknow and MoEF&CC New Delhi.
	the date of this clearance and detail shall be	Rain water harvesting pond already
	furnished. The design of rain water	constructed within the plant to store and
	harvesting shall comprise of rain water	reuses more than <b>1, 20,000 m3</b> of water.
	collection from the built up and open area in	
	the plant premises. Action plan and road map	
	for implementation shall be submitted to the	
	Ministry within six months.	
(xvii)	Additional soil for leveling of proposed site	The entire plant area was almost flat and
()	shall be generated within the sites (to the	having stony outcrop. There are no streams
	extent nossible) so that natural drainance	within the plant premises
	extend possible) so that hatoral oralinge	within the plant premises.
(	Drovision for installation of COD shall be	Space were provided for FCD is the cleat
(XVIII)	Provision for installation of FGD shall be	Space were provided for FGD in the plant
	provided for future use.	layout for future requirement.
		APRL is in process & progress to install FGD
		as per implementation schedule of CPCB
		directions vide letter No.: B- 33014/07/2017-
		18/IPC-II/TPP/152930, dated 11/12/2017.
		However, as per MoEF&CC's Notification
		date 31st March 2021, Kawai TPP is falling
		under Category "C" Non- retiring TPPs and

		the timelines for compliance of SO2
		emission is up to December 2024.
		Accordingly the work is under progress for
		compliance as per CPCB direction.
(xix)	The project proponent shall undertake	Being complied.
	measures and ensure that no fugitive fly ash	The crusher houses for coal are provided
	emission take place at any point of time	with Dust Extraction System & Ban Filter
		Dust Suppression System (DSS) and Water
		Sociakling System are provided in coal stock
		yard and ach dyko
()))	Stack of 275 m beight shall be jestalled and	Twip flup stack of 275 meter peactructed
(XX)	Stack of 275 in neight shall be installed and	Continue Stack of 275 Meter constructed.
	provided with continuous online monitoring	Continuous Emission Monitoring System
	equipments for SOX, NOX and PM2.5 & PM10.	Installed in both flues for SO <sub>2</sub> , NOX, and P/M.
	Exit velocity of flue gases shall not be less	The flue gas velocity is more than 22 m/sec.
	than 22 m/s. Mercury emissions from stack	Hg monitoring in stack is being carried out
	may also monitored on periodic basis.	by third party on quarterly basis. CEMS
		results attached as Annexure IA.
(xxi)	High Efficiency Electrostatic Precipitators	A high Efficiency Electrostatic Precipitators
	(ESPs) shall be installed to ensure that	has been provided to each boiler (ESPs) to
	particulate emission does not exceed 50	meet particulate emission less than
	mg/Nm3.	50mg/Nm3, ESP efficiency is being observed
		by our operation department. Details of
		monitoring results as carried out by
		MoEE&CC approved third party for our Unit-
		1 and 2 & also same is being submitted to
		Statutory body on regular basis. All stack
		monitoring socults are well within the
		accessible limit which is showing officianov
		of FSP
		Monitoring results are enclosed as
		Annexure- I.
(xxii)	Adequate dust extraction system such as	Being Complied.
	cyclones / bag filters and water spray system	Dust extraction system with ban filter in coal
	in dusty areas such as in coal bandling and	crusher house has been provided. Pneumatic
	ash bandling points transfer areas and other	ash handling system with han filters
	asir handling points, transfer areas and other	ash handing system with bag inters
		provided for ash handling, water sphirking
(		
(XXIII)	Utilization of 100% Fly Ash generated shall be	Ash utilization / implementation report being
	made from 4th year of operation. Status of	submitted to MoEF&CC, CPCB, SPCB as well
	implementation shall be reported to the	as CEA. Implementation status of fly ash
	Regional Office of the Ministry from time to	utilization is enclosed as Annexure-III
	time.	
(xxiv)	Fly ash shall be collected in dry form and	Being Complied
	storage facility (silos) shall be provided.	APRL has signed MoUs for ash utilization
	Unutilized fly ash shall be disposed off in the	with Mangalam Cement Ltd., J.K.Cement
	ash pond in the form of slurry form. Mercury	Ltd., Mangrol & Nimbahera, Birla Corporation

	and other heavy metals (As, Hg, Cr, Pb, etc.)	Ltd, Nuvoco Vistas Corp. Ltd., Shriram
	will be monitored in the bottom ash as also in	Cement Ltd, Wonder Cement Ltd apart that
	the effluents emanating in the existing ash	above parties we are also providing to ACC
	pond. No ash shall be disposed off in low lying	Ltd. Ambuja Cement, Birla Corporation Ltd.,
	area.	Nirma Ltd., India cement Itd., Heidelberg
		cement India Itd India Cements Itd
		Heidelberg compatilized in TSG Ashtech
		Movors Pyt 1 td. oto
		Novers Fvt. Ltd., etc.
		As, Po, Hg, Cr Fe, Cu, Zh, Co, and Ni in Hy ash.
		Analysis report is enclosed as <b>Annexure-I</b> .
(xxv)	Ash pond (if any) shall be lined with	Well design ash pond with LDPE lining has
	HDPE/LDPE lining or any other suitable	been established as per guidelines of
	impermeable media such that no leachate	MOEF/CEA/CPCB. Safety measure such as
	takes place at any point of time. Adequate	bund with toe wall and lining of side slope is
	safety measures shall also be implemented to	done to prevent any leachate.
	protect the ash dyke from getting breached.	
(xxvi)	Sulphur and ash contents in the imported	Complied
	coal to be used in the project shall not exceed	EC amended on 13.03.2014 for change in the
	0.6 % and 34 % respectively at any given time.	fuel quality & source.
	In case of variation of coal quality at any point	
	of time fresh reference shall be made to	
	Ministry for suitable amendments to	
	environmental clearance condition wherever	
	necessary.	
(xxvii)	Green Belt consisting of 3 tiers of plantations	Green belt / plantation is being developed.
	of native species around the plant of atleast	Our efforts are to develop more greenery in
	75 m width shall be raised (except in areas	and around the plant premises.
	not feasible). The density of trees shall not be	Full-fledged horticulture department is
	less than 2500 per Ha and rate of survival	established under the quidance of the
	atleast 80%	experienced borticulturist in consultation
		with the local forest department for the
		development of arean helt / plantation has
		been established About 105.470 tree
		been established. About 1,03,470 tiee
		90% survival rate.
( ····>		Please refer Annexure-IV
(XXVIII)	Uver and above the green belt, as carbon sink,	Social forestry with active participation of
	social forestry shall be carried out in close	che villagers and school children are being
	consultation with the Forests Department.	carried out in close consultation with Forest
	The project proponent shall accordingly	Department, Action plan regarding social
	identify blocks of land / degraded forests and	forestry and regeneration of degraded forest
	shall undertake regeneration of degraded	is under implementation.
	forests at a large scale. In pursuance to this	Planted 1200 Saplings along with the NH-90
	forests at a large scale. In pursuance to this the project proponent shall formulate time	Planted 1200 Saplings along with the NH-90 in association with forest department. About

	allocation and shall submit status of	500 trees are also planted in school campus
	implementation to the Ministry within six	& villages.
	months.	
(xxix)	Atleast three nearest village shall be adopted	Baldevpura, Kawai, Salpura, Khedli Gaddiyan
	and basic amenities like development of	and Nimoda are adopted for development of
	roads, drinking water supply, primary health	basic amenities in co-ordination with the
	centre, primary school etc. shall be developed	district administration. Beside 41 Schools. 2
	in co-ordination with the district	PHC. 1 CHC of surrounding Gram Panchavats
	administration	are adopted in association with district
		administration of Govt. of Raiasthan.
(xxx)	The project proponent shall also adequately	Being Complied
(////)	contribute in the development of the	Need based assessment study report have
	poighboring villages Special package with	hoop already submitted to MoEERCC
	implementation schedule for acquiding from	Decommondation made in the const ace
	astable driaking water supply in the pastby	Recommendation made in the report are
	potable officing water supply in the hearby	
		Please lefel Annexule V.
(		
(XXXI)	CSR schemes shall be undertaken based on	Based on the need-based assessment report
	need assessment in and around the villages	under the CSR, recommendations made in
	Within 5 km of the site and in constant	the USR report are being implemented by
	consultation with the village Panchayat and	Adani Foundation. Please refer <b>Annexure V.</b>
	the District Administration. As part of CSR	Main Focus has been given on Education,
	prior identification of local employable youth	Health, Alternative Livelihood and Rural
	and eventual employment in the project after	Infrastructure. Please refer <b>Annexure V.</b>
	imparting relevant training shall be also	
(	Undertaken.	
(xxxii)	It shall be ensured that an in-built monitoring	The implementation of CSR activities carried
	mechanism for the CSR schemes identified is	out by Adani Foundation. Implementation /
	in place and annual social audit shall be got	achievement of CSR activities are being
	done from the nearest government institute	submitted along with EC compliance on
	of repute in the region. The project proponent	regular basis.
	shall also submit the status of	Please refer <b>Annexure V.</b>
	implementation of the scheme from time to	
	time. The achievements should be put on	
	company's website.	
(xxxiii)	An amount of Rs 28.0 Crores shall be	Separate budget has been earmarked for
	earmarked as one time capital cost for CSR	CSR activities.
	programme as committed by the project	CSR activities are being carried out by Adani
	proponent. Subsequently a recurring	Foundation.
	expenditure of Rs 5.6 Crores per annum shall	CSR report and expenditures for period
	be earmarked as recurring expenditure for	April'2020 to March'2021 is enclosed as
	CSR activities. Details of the activities to be	Annexure V & VIII respectively.
	undertaken shall be submitted within six	
	month along with road map for	
	implementation.	

(xxxiv)	It shall be ensured that in-built monitoring	Being Complied.
	mechanism for the schemes identified is in	Social audit report is prepared by Indian
	place and annual social audit shall be got	Institute of Social Welfare and Business
	done from the nearest government institute	Management of University of Kolkata.
	of repute in the region. The project proponent	Audit report is submitted along with six
	shall also submit the status of	monthly compliance report.
	implementation.	
Additiona	al Specific Conditions	
(xxxv)	The Coal transportation by road shall be	Coal is being transported by Rail up to Plant
	through tarpaulin covered trucks for a	premises.
	maximum period of two years and hence	
	forth shall be only through mechanically	
	covered trucks.	
(xxxvi)	Avenue plantation of 2/3 rows all along the	2 Tier greenbelt as avenue plantation has
	road shall be carried out by project proponent	been developed up to 3KM distance along
	at its own expenses.	both side of nearest NH-90.
(xxxvii)	Periodic maintenance of the road shall be	We have maintaining the approach road
	done by the project proponent at its own	from plant main gate to the nearest highway
	expenses and shall also facilitate the traffic	(NH-90) and linked road to plant.
	control on the road.	
(xxxviii)	Sulphur and ash contents in the domestic	Being Complied
	coal to be used in the project shall not exceed	Half yearly & annual reports of Ash
	0.4% and 33% at any given time. In case of	Utilization & ash content in coal being
	variation of coal quality at any point of time,	submitted MoEF&CC and Central Electricity
	fresh reference shall be made to the ministry	Authority (CEA) since plant operation.
	for suitable amendments to environmental	Please refer attached Annexure-III.
	clearance condition wherever necessary.	
(xxxix)	A long term study of radio activity and heavy	Being Complied
	metals contents on coal to be used shall be	Test results of coal samples for radio activity
	carried out through a reputed institute.	and heavy metal report submitted along with
	Thereafter, mechanism for an in-built	previous compliance report.
	continuous monitoring for radio activity and	
	heavy metals in coal and fly ash (including	
	bottom ash) shall be put in place.	
(xl)	Harnessing solar power within the premises	Solar street-light near administrative
	of the plant particularly at available roof tops	building and along approach road has been
	shall be undertaken and status of	installed to harness solar power.
	implementation shall be submitted	
	periodically to the Regional Office of the	
	Ministry.	

	laws and regulations	Implemented.
	letter and other applicable environmental	Management System (IMS) is also
	the conditions stipulated in this clearance	EMS ISO 14001 implemented Integrated
	adherence to the policy and compliance with	Environmental Management System as per
	all levels of its hierarchy for ensuring	ISO 14001-2015.
	identify and designate responsible officers at	(Environmental Management System) as per
(XIV)	Laid Corporate Environmental Policy and	been developed to implement EMS
(		attached as Annexure-VII.
	the EC including in the amendment letter.	Please refer attached NABL certificate
	implementation of all the conditions given in	28/08/2019.
	Cell shall be responsible and accountable for	Number- TC-5235 issued on dated
	Head of the Organization. The Environmental	NABL accredited Laboratory. Certificate
	that the head of the Cell directly report to the	Officer, Chemist & Horticulturist. We have
	seniority and qualification. It shall be ensure	Manager & supported by Env. Engineer,
	officer of the company of appropriate	Environmental Management Cell headed by
(XIIV)	project site itself and shall be headed by an	We have already established an
	An Environmental Cell be created at the	Being Complied
	Belt around the plant boundary and grassing	Jatropha and Desi Badool. Slope of ash dyke
	around Ash Pond over and above the Green	seed broadcasting of species like Subabol,
(xliii)	Three tier green belt shall be developed all	Plantation all along ash dyke is taken up by
	Control Board.	
	close co-ordination with the State Pollution	
	Control Board and implementation done in	
	shall be ascertained by the State Pollution	
	institute of reputed and adequate clay lining	
	mine area shall be undertaken from an	as Annexure III.
	detailed study of soil characteristics of the	AULIUILY (CEA). Elv Ash generation & utilization is attached
	at any point of time. In case, the option of	UPUB, and SPUB & Central Electricity
	media such that no leachate shall take place	utilization is being submitted to MoEF&CC,
	without adequate lining of mine with suitable	Copy of annual data on fly ash generation &
	undertaken as an option for ash utilization	Notification'.
	purpose. No mine void filling will be	cement industries as per 'Fly Ash
(xlii)	Fly ash shall not be used for agriculture	The generated fly ash is being used by
		emission within the norms.
		provided to meet particulate matter
		sprinkling & Fog canon system have been
	agriculture land.	Such as Dust Extraction System (DES), Dust
	prevent impact on agriculture or non-	Adequate air pollution control measures
(xli)	Fugitive emissions shall be controlled to	Being Complied.

(i)	The treated effluents confirming to the prescribed standards only shall be re- circulated and reused within the plant. Arrangements shall be made that effluents and storm water do not get mixed.	ETP has been established (Capacity- 226 m3/hr. based on primary treatment) to treat effluents and treated water reuses within the premises. The concept of "Zero Discharge Condition" is implemented except during non-monsoon period. Separate drainage network is established for storm
()		water.
(11)	A sewage treatment plant shall be provided (as applicable) and the treated sewage shall be used for raising greenbelt / plantation.	Sewage Treatment Plant has been established inside the plant & treated domestic water is suitably reused within the plant premises in plantation / green belt development.
		Particular Capacity Total Technology Capacity
		STP120 KLD (10 x 2 KLD)140 Bioreactor
(iii)	Adequate safety measures shall be provided in the plant area to check / minimize spontaneous fires in coal yard, especially during summer season. Copy of these measures with full details along with location plant layout shall be submitted to the Ministry as well as to the Regional Office of the Ministry.	Adequate safety team has been established in plant site to take preventive control measures. Fire hydrant system for fire- fighting is provided in plant layout. Fire & Safety department made available with 3 no. of firefighting tanker equipped with all necessary control system.
(iv)	Storage facilities for auxiliary liquid fuel such as LDO and / HFO / LSHS shall be made in the plant area in consultation with Department of Explosives, Nagpur. Sulphur content in the liquid fuel will not exceed 0.5%. Disaster Management Plan shall be prepared to meet any eventuality in case of an accident taking place due to storage of oil.	The fuel LDO and HFO are properly stored in minimum risk area and as per the norms fixed by the Chief Controller of Explosives. A disaster management plan is prepared covering all the eventualities due to storage of oil. It is ensured that sulphur content is less than 0.5% in liquid fuel. Please refer explosive licence/ certificate is attached as <b>Annexure-IX</b> .
(v)	First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.	First Aid as well as OHC established with well-equipped Ambulance and qualified Doctor. Housekeeping and sanitation facilities are available for the drivers and contractual workers during construction.
(vi)	Noise levels emanating from turbines shall be so controlled such that the noise in the work zone shall be limited to 85 dB(A) from source. For people working in the high noise area, requisite personal protective equipment like earplugs / ear muffs etc. shall be provided.	Necessary action has been taken care to maintain noise levels in work zone area within 85 dB(A) from source during the plant operation. The personal protective equipment (PPE) are provided to workers & employees working in noisy areas. Noise

	Workers engaged in noisy area such as	level monitoring is carried out regularly.
	turbine area, air compressors etc. shall be	Periodic audiometric check-up is carried out.
	periodically examined to maintain	Occupational Health & Safety Management
	audiometric record and for treatment for any	System as per ISO 45001 as implemented.
	hearing loss including shifting to non-noisy /	
	less noisy area.	
(vii)	Regular monitoring of ambient air ground	Regular Environmental monitoring of SO2,
	level concentration of SO2, NOx, PM2.5 &	NOx, PM2.5 & PM10 and Hg is being carried
	PM10 and Hg shall be carried out in the	out by third party Env. Lab. The Ambient Air
	impact zone and records maintained. If at any	Quality Monitoring locations are established
	stage these levels are found to exceed the	in consultation with RPCB.
	prescribed limits, necessary control measures	Full fledge Environmental Lab for Air & Water
	shall be provided immediately. The location of	has been established. Monitoring reports
	the monitoring stations and frequency of	attached as <b>Annexure I</b> .
	monitoring shall be decided in consultation	
	with SPCB. Periodic reports shall be	
	submitted to the Regional Office of this	
	Ministry. The data shall also be put on the	
	website of the company.	
(viii)	Provision shall be made for the housing of	During construction, provision was made for
	construction labour (as applicable) within the	common facilities to labours as toilets, safe
	site with all necessary infrastructure and	drinking water, medical health care etc, who
	facilities such as fuel for cooking, mobile	were engaged for construction.
	toilets, mobile STP, safe drinking water.	
	medical health care, crèche, etc. The housing	
	may be in the form of temporary structure to	
	be removed after the completion of the	
	project.	
(ix)	The project proponent shall advertise in at	Complied
	least two local newspapers widely circulated	Advertised in local daily News Paper 'Dainik
	in the region around the project, one of which	Bhaskar and Rajasthan Patrika' on 10th May
	shall be in the vernacular language of the	2011 in Hindi.
	locality concerned within seven days from the	
	date of this clearance letter, informing that	
	the project has been accorded environmental	
	clearance and copies of clearance letter are	
	available with the State Pollution Control	
	Board / Committee and may also be seen at	
	website of the Ministry of Environment and	
	Forest at <u>http://envfor.nic.in</u>	
(x)	A copy of clearance letter shall be sent by the	Complied
	proponent to concerned Panchayat, Zila	Copy of clearance letter has been submitted
	Parisad / Municipal Corporation, urban local	to Kawai Village Panchayat and Zila
	Body and the Local NGO, if any, from whom	Parishad, Baran.
	suggestions / representations, if any, received	
	while processing the proposal. The clearance	

	letter shall also be put on the website of the	
	Company by the proponent.	
(xi)	An Environmental Cell comprising of at least	Being Complied.
	one expert in environmental science /	We have already established an
	engineering, occupational health and social	Environmental Management Cell headed by
	scientist, shall be created at the project site	Manger & supported by Env. Engineer
	itself and shall be headed by an officer of	Officer, Chemist & Horticulturist. Full fledge
	appropriate superiority and qualification. It	Environment Lab (Air & Water) has been
	shall be ensured that the head of the Cell	established.
	shall directly report to the head of the	Environmental Management System as per
	organization and he shall be held responsible	EMS ISO: 14001 implemented.
	for implementation of environmental	
	regulations and social impact improvement /	
	mitigation measures.	
(xii)	The proponent shall upload the status of	Six monthly Environmental Clearance
	compliance of the stipulated environmental	compliance status report is regularly
	clearance conditions, including results of	submitted to MoEF&CC, CPCB and SPCB.
	monitored data on their website and shall	The same is sent by email also.
	update the same periodically. It shall	Compliance status updated on company's
	simultaneously be sent to the Regional Office	website <u>www.adanipower.com</u>
	of CPCB and the SPCB. The criteria pollutant	
	levels namely; SPM, RSPM (PM2.5 & PM10),	
	SO2, NOx (ambient levels as well as stack	
	emissions) shall be displayed at a convenient	
	location near the main gate of the company	
	in the public domain.	
(xiii)	The environmental statement for each	Environment Statement had been submitted
	financial year ending 31st March in Form-V as	with vide letter no APRL/PK/
	is mandated to be submitted by the project	GOVT/RSPCB/00538, dated-26.09.2020
	proponent to the concerned State Pollution	
	Control Board as prescribed under the	
	Environmental (Protection) Rules, 1986, as	
	amended subsequently, shall also be put on	
	the website of the company along with the	
	status of compliance of environmental	
	clearance conditions and shall also be sent to	
	the respective Regional Offices of the	
	Ministry by e-mail.	
(xiv)	The project proponent shall submit six	Six monthly compliance on the
	monthly reports on the status of the	Environmental Clearance granted by MoEF is
	implementation of the stipulated	being submitted to MoEF, CPCB & RPCB
	environmental safeguards to the Ministry of	regularly.
	Environment and Forest, its Regional Office,	Compliance status updated on company's
	Central Pollution Control Board and State	website.
	Pollution Control Board. The project	Compliance report for the period of April-
	proponent shall upload the status of	2020 to Sep- 2020 had been submitted to

	compliance of the environmental of the	your good office vide letter no.:
	environmental clearance conditions on their	APL/APRL/EMD/EC/MoEF/188/11/20 dated
	website and update the same periodically and	20.11.2020
	simultaneously send the same by e-mail to	
	the Regional Office, Ministry of Environment	
	and Forest.	
(xv)	Regional Office of the Ministry of	Noted
	Environment & Forest will monitor the	Compliance assured
	implementation of the stipulated conditions.	
	A complete set of documents including	
	Environmental Impact Assessment Report	
	and Environmental Management Plan along	
	with additional information submitted from	
	time to time shall be forwarded to the	
	Regional Office for their use during	
	monitoring. Project proponent will up-load	
	the compliance status in their website and	
	up-date the same from time to time at least	
	six monthly basis. Criteria pollutants levels	
	including NOx (from stack & ambient air) shall	
	be displayed at the main gate of the power	
	plant.	
(xvi)	Separate funds shall be allocated for	Being Followed.
	implementation of environmental protection	Separate fund has already been allocated
	measures along with item-wise break-up.	and being utilize for Environmental
	These cost shall be included as part of the	Protection.
	project cost. The funds earmarked for the	Environment protection measures (EMP &
	environment protection measures shall not	CER) Expenditure for the (Oct- 2020 to
	be diverted for other purposes and year wire	
1		March' 2021) is enclosed as Annexure-VIII
	expenditure should be reported to the	March' 2021) is enclosed as <b>Annexure-VIII</b>
	expenditure should be reported to the Ministry.	March' 2021) is enclosed as <b>Annexure-VIII</b>
(xvii)	expenditure should be reported to the Ministry. The project authorities shall inform the	March' 2021) is enclosed as <b>Annexure-VIII</b> Complied
(xvii)	expenditure should be reported to the Ministry. The project authorities shall inform the Regional Office as well as the Ministry	March' 2021) is enclosed as <b>Annexure-VIII</b> Complied
(xvii)	expenditure should be reported to the Ministry. The project authorities shall inform the Regional Office as well as the Ministry regarding the date of financial closure and	March' 2021) is enclosed as <b>Annexure-VIII</b> Complied
(xvii)	expenditure should be reported to the Ministry. The project authorities shall inform the Regional Office as well as the Ministry regarding the date of financial closure and final approval of the project by the concerned	March' 2021) is enclosed as <b>Annexure-VIII</b> Complied
(xvii)	expenditure should be reported to the Ministry. The project authorities shall inform the Regional Office as well as the Ministry regarding the date of financial closure and final approval of the project by the concerned authorities and the dates of start of land	March' 2021) is enclosed as <b>Annexure-VIII</b> Complied
(xvii)	expenditure should be reported to the Ministry. The project authorities shall inform the Regional Office as well as the Ministry regarding the date of financial closure and final approval of the project by the concerned authorities and the dates of start of land development work and commissioning of	March' 2021) is enclosed as <b>Annexure-VIII</b> Complied
(xvii)	expenditure should be reported to the Ministry. The project authorities shall inform the Regional Office as well as the Ministry regarding the date of financial closure and final approval of the project by the concerned authorities and the dates of start of land development work and commissioning of plant.	March' 2021) is enclosed as <b>Annexure-VIII</b> Complied
(xvii) (xviii)	expenditure should be reported to the Ministry. The project authorities shall inform the Regional Office as well as the Ministry regarding the date of financial closure and final approval of the project by the concerned authorities and the dates of start of land development work and commissioning of plant. Full cooperation shall be extended to the	March' 2021) is enclosed as <b>Annexure-VIII</b> Complied Noted,
(xvii) (xviii)	expenditure should be reported to the Ministry. The project authorities shall inform the Regional Office as well as the Ministry regarding the date of financial closure and final approval of the project by the concerned authorities and the dates of start of land development work and commissioning of plant. Full cooperation shall be extended to the Scientists / Officers from the Ministry /	March' 2021) is enclosed as <b>Annexure-VIII</b> Complied Noted, Full co-operation shall be extended.
(xvii) (xviii)	expenditure should be reported to the Ministry. The project authorities shall inform the Regional Office as well as the Ministry regarding the date of financial closure and final approval of the project by the concerned authorities and the dates of start of land development work and commissioning of plant. Full cooperation shall be extended to the Scientists / Officers from the Ministry / Regional Office of the Ministry at Rajasthan /	March' 2021) is enclosed as <b>Annexure-VIII</b> Complied Noted, Full co-operation shall be extended.
(xvii) (xviii)	expenditure should be reported to the Ministry. The project authorities shall inform the Regional Office as well as the Ministry regarding the date of financial closure and final approval of the project by the concerned authorities and the dates of start of land development work and commissioning of plant. Full cooperation shall be extended to the Scientists / Officers from the Ministry / Regional Office of the Ministry at Rajasthan / CPCB / SPCB who would be monitoring the	March' 2021) is enclosed as <b>Annexure-VIII</b> Complied Noted, Full co-operation shall be extended.

# Six Monthly Environmental Monitoring Report

on

# AMBIENT AIR QUALITY,

## WATER QUALITY, SOIL QUALITY AND NOISE LEVEL

For

adani

# **ADANI POWER RAJASTHAN LIMITED**

(2x660 MW- SUPERCRITICAL THERMAL POWER STATION)

Near Salpura Railway Station, Tehsil Atru,

District Baran (Rajasthan)

**PREPARED BY:** 



(A UNIT OF TEAM Institute of Science & Technology Pvt. Ltd.) G1-584, RIICO INDUSTRIAL AREA, SITAPURA, TONK ROAD, JAIPUR - 302022, RAJASTHAN

Approved by Ministry of Environment & Forest (Govt.of India) And Rajasthan State Pollution Control Board Accredited by National Accreditation Board for Testing & Calibration Laboratories Certified by ISO 9001: 2008

PERIOD: October 2020 to March 2021

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#### **1 EXECUTIVE SUMMARY**

ADANI group has constructed 2 units of 660 MW Supercritical Thermal Power Station at Village, Kawai in Tehsil, Atru of District Baran (Rajasthan). The plant is designed to generate 2x660MW electricity. The site is located Near Salpura Railway Station in district Baran (Rajasthan). The plant is well connected by Road and Rail network with different part of Rajasthan and adjoining states, at present both units are in operation.

M/s Adani Power Rajasthan limited has awarded environmental monitoring job work to

**M/s Team Institute of Science and Technology (Unit - Team Test House)** vide Service Order No 5700188748 dated 15/02/2018 for Sampling/Monitoring and Testing of Environmental parameters on quarterly basis.

The samples for determination of quality of Ambient Air analysis, Ground Water, Soil, Source Emission, Noise, etc. are collected from Site and analyzed at **Team Test House** ,Jaipur.

The overall results for Third and Fourth quarter are found to be satisfactory. The plant was performing well during the monitoring and environmental parameters in each segment like Ambient Air, Emission Air, Soil, Water, and Noise are found to be within the desired limits.

Authorized Signatory

### 2 BRIEF DESCRIPTION OF ADANI POWER AND KAWAI THERMAL POWER STATION

#### 2.1 ADANI THERMAL POWER STATION

Adani, a conglomerate with a formidable presence in multiple businesses across the globe, has entered the power sector to harbinger a 'Power Full' India, by generating 20,000 MW of power by 2020. Comprehension of the criticality in meeting the power requirement and its crucial role in ensuring the energy security of India, spurs us to build India's largest and one of the world top 5 single location thermal power plant in Mundra.

Adani Power Limited has commissioned the first supercritical 660 MW unit in the country. Mundra is also the WORLD'S FIRST supercritical technology project to have received 'CLEAN DEVELOPMENT MECHANISM (CDM) Project' certification from United Nations Framework Convention on Climate Change (UNFCCC).

#### 2.2 KAWAI THERMAL POWER STATION

Adani Enterprises Limited (AEL) have signed MoU with Energy Department, Government of Rajasthan on 20th March, 2008 for developing a Thermal Power Project of 1320 MW capacity near Kawai, District Baran, Rajasthan. For this purpose Adani Enterprises Limited (AEL) has registered Adani Power Rajasthan Limited (APRL), as a subsidiary company to Adani Power Limited (APL). The site is approximately 120 km from Kota and 40 Kms from Baran.

The plant is covered in around 350 Ha. area. The possession of 350 Ha has been already given to APRL by Govt. of Rajasthan. The coal and water requirement of the plant is 5.6 MTPA and 34 MCM respectively.

Both imported and domestic coal is being used. Water is drawn through a dedicated pipeline from the PARWAN River located at a distance of about 15 km from plant.

State	Rajasthan
District	Baran
Villages	Kawai
Land type	Barren and Stony Waste Land
Geographical Co-ordinates	24º 46' 14.62" N & 76º 44' 28.60" E.



Location Map

Date	Temp	(Deg C)	Relative Humidity (%)		Rainfall
	Min	Max	Min	Max	Total
1/10/2020	25.1	37.5	31.1	73.1	0
2/10/2020	26.6	38.0	24.0	38.0	0
3/10/2020	26.1	37.6	21.2	64.2	0
4/10/2020	23.2	37	21.1	64.5	0
5/10/2020	21.6	37.4	15.0	71.4	0
6/10/2020	22.1	37.6	19.0	63.4	0
7/10/2020	23	37.1	20.0	62.6	0
8/10/2020	23.0	37.0	21.1	58	0
9/10/2020	23.0	36.5	21.0	59.2	0
10/10/2020	23.3	37.4	20.1	60.4	0
11/10/2020	23.0	36.6	22.1	61.4	0
12/10/2020	23.1	37.4	20.1	57.2	0
13/10/2020	24.1	38.2	28.0	59.6	0
14/10/2020	26.2	35.6	41.4	84.1	6
15/10/2020	27.0	35.6	41.4	77.0	0
16/10/2020	26.2	35.3	43.0	84.1	0
17/10/2020	26.1	36.4	40.2	71.3	0
18/10/2020	27.0	37.3	40.2	68.3	0
19/10/2020	26.1	35.5	34.1	68.6	0
20/10/2020	25.1	35.5	34.1	57.3	0
21/10/2020	25.1	37.3	20.1	57.3	0
22/10/2020	23.2	37.1	23.0	50.0	0
23/10/2020	22.2	36.2	25.5	74.5	0
24/10/2020	22.3	36.5	22.1	61.1	0
25/10/2020	22.3	36.4	21.3	53.1	0
26/10/2020	22.2	36.4	21.3	53.6	0
27/10/2020	22.3	35.3	20	53.1	0
28/10/2020	21	34.5	20	53.6	0
29/10/2020	19.2	34.6	21.4	62.1	0
30/10/2020	21.2	32.5	21.3	53.3	0
31/10/2020	21.4	33.4	13.2	46.3	0
Max	27	38.2	43	84.1	06
Min	19.2	32.5	13.2	38	

## METEROLOGICAL DATA AVERAGE DAILY METEROLOGICAL DATA OF October -2020



Date	Te	mp	Relative Humidity		Rainfall
	Min	Max	Min	Max	Total
1/11/2020	18.4	32.1	18.2	55.3	0
2/11/2020	16.3	32.2	14.6	32.2	0
3/11/2020	17.3	32.2	14	52.1	0
4/11/2020	16.3	32.3	14	63.3	0
5/11/2020	16.2	33.4	16.2	55.2	0
6/11/2020	18.4	33.4	17.1	52	0
7/11/2020	18.2	34.1	18.2	57	0
8/11/2020	18.1	33.3	19	59	0
9/11/2020	17.5	32.1	20.3	58.6	0
10/11/2020	16.1	29.5	24	67.6	0
11/11/2020	17	30.2	30	68.1	0
12/11/2020	19	31.6	32	60.2	0
13/11/2020	21	31.4	40.1	65.3	0
14/11/2020	19.1	32.3	39	73.2	0
15/11/2020	22.5	33.3	39.1	70	0
16/11/2020	22	31.3	44	84.5	0
17/11/2020	20	29.5	51.6	91.4	0
18/11/2020	20	30.4	56.1	97.3	1
19/11/2020	19	29.3	48.5	97.6	0
20/11/2020	18.3	27.3	34	87	0
21/11/2020	15	27.3	29	82.4	0
22/11/2020	12.3	27.5	24	78.1	0
23/11/2020	14.2	28.3	27.2	73	0
24/11/2020	15.4	30.2	27	65.5	0
25/11/2020	16.1	31.5	30.1	64.4	0
26/11/2020	17.2	30.2	27	69.1	0
27/11/2020	17.2	28	37.1	69.1	0
28/11/2020	15	27.3	27.1	73.5	0
29/11/2020	14	29.1	29.1	76.1	0
30/11/2020	15	28.5	31	76.3	0
Max	22.5	34.1	56.1	97.6	
Min	12.3	27.3	14	32.2	1

AVERAGE DAILY METEROLOGICAL DATA OF NOVEMBER -2019



Date	ate (Deg C)		Relative (	Rainfall (mm)	
	Min	Max	Min	Max	Total
1/12/2020	14.1	30.3	27.2	84.1	0
2/12/2020	14.1	28.3	14.1	28.3	0
3/12/2020	14.2	31.3	26.4	74.2	0
4/12/2020	15.2	32.3	25	76.5	0
5/12/2020	16.1	33	24.2	71.2	0
6/12/2020	16.2	33.1	26.1	33.1	0
7/12/2020	16.2	31.6	33.2	83.1	0
8/12/2020	17	32.6	30.5	82.3	0
9/12/2020	17.3	32	28.3	74	0
10/12/2020	16.2	32	28	77.3	0
11/12/2020	19	23.1	53.1	92.1	1
12/12/2020	19	26.5	60.1	94	0
13/12/2020	19	25.2	68.1	95.3	0.5
14/12/2020	17.1	23.5	50	91.4	0
15/12/2020	15.1	21	63	79.5	0
16/12/2020	14.2	23.3	53	81.3	0
17/12/2020	11.5	22.2	42.1	83.2	0
18/12/2020	9.3	22	28.1	85.4	0
19/12/2020	9	25.5	25.4	82.6	0
20/12/2020	10.1	26.4	24.3	84.2	0
21/12/2020	10.1	27.2	22.1	81.1	0
22/12/2020	12	28.2	28	79.4	0
23/12/2020	13	28.3	27.2	76.3	0
24/12/2020	13.2	27.4	30.3	76.3	0
25/12/2020	14.1	26.3	31.2	73.1	0
26/12/2020	11.6	28	32	78.2	0
27/12/2020	14	28.3	35	82.3	0
28/12/2020	11.2	22.2	23	69.5	0
29/12/2020	9.3	21.5	23	65.5	0
30/12/2020	10	22.2	25.2	63	0
31/12/2020	7.2	20.2	32.2	72.3	0
Max	19	33.1	68.1	95.3	
Min	7.2	20.2	14.1	28.3	1.5

## AVERAGE DAILY METEROLOGICAL DATA OF DECEMBER -2020



Date	Temp (Deg C)		Relative (%	Rainfall (mm)	
	Min	Max	Min	Max	Total
1/1/2021	11.5	28	45	78.1	0
2/1/2021	17.2	28.3	17.2	28.3	0
3/1/2021	18.2	29.4	49.1	90.1	0
4/1/2021	18	25.6	58.1	90	0.5
5/1/2021	17.3	29.2	45.1	87.4	0
6/1/2021	18.4	26.5	59.2	26.5	0
7/1/2021	17.1	25.3	65.4	93.4	0
8/1/2021	17	26.6	61	97.2	5
9/1/2021	17	24.3	77.4	97.5	0
10/1/2021	18	21.5	84	97.4	0
11/1/2021	17.1	23.5	65	97.3	0
12/1/2021	11.1	24.5	24.5	95.2	0
13/1/2021	9	24.5	24.5	89.2	0
14/1/2021	10.3	27.5	24.4	88.4	0
15/1/2021	10.1	27.6	22.2	79	0
16/1/2021	12	29	26.3	77.4	0
17/1/2021	15.3	29.3	39.2	76.3	0
18/1/2021	16	31.1	41	86.2	0
19/1/2021	13.3	26	48.2	96.3	0
20/1/2021	12.1	27.5	39.3	97.3	0
21/1/2021	10	27.5	39.3	97.3	0
22/1/2021	12	29.4	23.2	76.3	0
23/1/2021	15	27.5	41.2	70.4	0
24/1/2021	13	25.2	36	90.1	0
25/1/2021	11.2	22.3	31.5	91	0
26/1/2021	9	22.5	29.1	90.5	0
27/1/2021	8.1	23.4	25.3	86	0
28/1/2021	9	23.4	27.2	81.3	0
29/1/2021	9	24.2	30.2	87.1	0
30/1/2021	7.6	26	22.2	87.4	0
31/1/2021	9	28	17	78.3	0
Max.	18.4	31.1	84	97.5	
Min.	7.6	21.5	17	26.5	5.5

AVERAGE DAILY METEROLOGICAL DATA OF JANUARY -2021



Date	Te (De	Temp (Deg C)		Relative Humidity (%)		
	Min	Max	Min	Max	Total	
1/2/2021	11.3	29.1	19.2	66.2	0	
2/2/2021	12	32.4	20.1	71	0	
3/2/2021	16.1	31.4	24	63.4	0	
4/2/2021	17.1	29.5	25.3	65.4	0	
5/2/2021	16.3	27.1	25.1	81.2	0	
6/2/2021	14	25.6	32	85.3	0	
7/2/2021	10.2	26.4	25.2	81.6	0	
8/2/2021	11	28.3	25.2	79.1	0	
9/2/2021	11.1	30.6	24.2	82.1	0	
10/2/2021	15	31	22	70.3	0	
11/2/2021	13	31.3	16.3	70.3	0	
12/2/2021	13	32.1	18.3	67	0	
13/2/2021	15	32.1	21.3	63.5	0	
14/2/2021	16	32.3	25	70.2	0	
15/2/2021	16.2	33	20.5	75.1	0	
16/2/2021	19.1	31.5	23.3	60.1	0	
17/2/2021	15.5	31.6	25.5	86.3	0	
18/2/2021	16.1	31.6	18	78	0	
19/2/2021	16.2	31	19.5	70	0	
20/2/2021	15	31	17	67.5	0	
21/2/2021	14	32.3	16.1	74	0	
22/2/2021	14.3	33.3	17.1	65.1	0	
23/2/2021	15.4	34.5	16.1	60.3	0	
24/2/2021	17	35.2	15.1	55.6	0	
25/2/2021	19.1	33.5	23.3	54.5	0	
26/2/2021	18	35.2	18.2	62	0	
27/2/2021	20.1	35.4	28.2	57	0	
28/2/2021	23.1	34.3	22	52.2	0	
Max	20.1	35.4	32	86.3		
Min	10.2	25.6	15.1	54.5	0	

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## AVERAGE DAILY METEROLOGICAL DATA OF MARCH- 2021

Date	Te (De	emp eg C)	Relative Humidity (%)		Rainfall (mm)
	Min	Max	Min	Max	Total
1/3/2021	19.3	34.1	19.2	57.4	0
2/3/2021	19.2	28.1	19.2	28.1	0
3/3/2021	16.1	35	14.1	59.5	0
4/3/2021	18	37.2	9.3	55	0
5/3/2021	19	35.1	13.2	51.3	0
6/3/2021	18	36.4	14.1	36.4	0
7/3/2021	21.1	37.6	18.1	39.6	0
8/3/2021	21.6	38.1	14	41.3	0
9/3/2021	21.1	36.5	17	45.2	0
10/3/2021	21.1	36.6	15	44	0
11/3/2021	22.1	37.5	19.1	49.4	0
12/3/2021	20.2	29.4	41	80.3	7.5
13/3/2021	17.1	32.5	31	91.5	0
14/3/2021	19	35.5	19	70.1	0
15/3/2021	20.2	37	18	54	0
16/3/2021	23.3	37.1	17	57.1	0.5
17/3/2021	23.2	38.5	14	46.3	0
18/3/2021	25.4	37.3	19.1	40.4	0
19/3/2021	24	37.3	18	55.4	0
20/3/2021	20	36.3	21	67.3	0
21/3/2021	21.2	37.2	18.1	59.1	0
22/3/2021	23.2	38.6	15.5	44.4	0
23/3/2021	23	38.6	13.2	51.6	0
24/3/2021	22.2	36.4	17.3	54.1	0
25/3/2021	22.6	35.4	13.1	45.1	0
26/3/2021	19.2	36.2	16.1	37.3	0
27/3/2021	21.1	39.2	13.2	37.5	0
28/3/2021	24.1	41.1	11.5	32.2	0
29/3/2021	24.1	41.4	10.4	28	0
30/3/2021	27	41.4	11.1	29	0
31/3/2021	26.2	39.5	9.2	17.5	0
Max	27	41.4	41	91.5	
Min	16.1	28.1	9.2	17.5	8.0



## 4 AMBIENT AIR QUALITY

Air quality monitoring is carried out to assess the extent of pollution, ensure compliance with national legislation, evaluate control options, and provide data for air quality modeling. There are a number of different methods to measure any given pollutant, varying in complexity, reliability, and detail of data.

The locations for monitoring stations depend on the purpose of the monitoring. Most monitoring networks are designed with human health objectives in mind, and monitoring stations are therefore established in population center.

The measurements were conducted during the period of October 2020 to March 2021.

The air samples were analyzed as per the standard methods specified by Central Pollution Control Board (CPCB) and IS: 5182. The techniques used for ambient air quality monitoring are given in table as below:

#### TABLE 3.1 TECHNICAL PROTOCOLS USED FOR AMBIENT AIR QUALITY MONITORING.

S. No.	Parameter	Protocol Followed
1	Particulate Matter, $PM_{10,}$ µg/m <sup>3</sup>	IS: 5182 (P-23)
2	Particulate Matter, PM <sub>2.5,</sub> µg/m <sup>3</sup>	CPCB Guidelines (Gravimetric Method)
3	Nitrogen Dioxide (NO <sub>2</sub> ), µg/m <sup>3</sup>	IS: 5182 (P-6)
4	Sulphur Dioxide (SO <sub>2</sub> ), µg/m³	IS: 5182 (P-2)
5	Carbon Monoxide, µg/m³	IS: 5182 (P-10)
6	Ammonia, µg/m³	CPCB Guidelines
7	Ozone, µg/m³	APHA 1977, Part819
8	Lead, µg/m³	IS: 5182 (P-22)
9	Arsenic, ng/m³	IS: 5182 (P-22)
10	Nickel, ng/m³	IS: 5182 (P-22)
11	Benzene, µg/m³	IS: 5182 (P-11)
12	Benzo-alfa-pyrene, ng/m <sup>3</sup>	CPCB Guidelines
13	Mercury (Hg), ng/m³	APHA 2012 : 3112 B

## 4.1 AMBIENT AIR QUALITY RESULTS

The detailed on-site monitoring results of PM10,PM2.5, SOx, NOx and Hg are presented in table as given below:

## TABLE 3.2: AMBIENT AIR QUALITY MONITORING RESULTS

	Quarter IV (Jan 2021 to Mar 2021)								
S. No.	Parameter	West of Stack (Near Coal Handling Plant)	South East of Stack (Near CT 2)	North East of Stack (Near Reservoir)	Sidni (Near Labour Colony)	Kawai Village	Mukundpura	NAAQ Standard	
1	Particulate Matter, PM <sub>10,</sub> µg/m <sup>3</sup>	78.15	73.02	75.44	67.22	73.19	65.07	100	
2	Particulate Matter, $PM_{2.5}$ , $\mu g/m^3$	37.48	24.09	35.79	30.45	26.97	28.6	60	
3	Nitrogen Dioxide (NO₂), μg/m³	18.8	17.86	16.7	18.09	15.43	14.39	80	
4	Sulphur Dioxide (SO <sub>2</sub> ), µg/m <sup>3</sup>	10.4	12.63	9.68	14.42	11.63	10.1	80	
5	Carbon Monoxide, μg/m <sup>3</sup>	390	280	360	320	320	270	4000	
6	Ammonia, μg/m³	BDL (<10.0)	BDL (<10.0)	BDL (<10.0)	BDL (<10.0)	BDL (<10.0)	BDL (<10.0)	400	
7	Ozone, μg/m³	31.2	19.6	29.5	15.2	14.3	14.3	100	
8	Lead, µg/m³	0.23	0.12	0.27	0.21	0.19	0.25	1.0	
9	Arsenic, ng/m <sup>3</sup>	BDL (<2.0)	BDL (<2.0)	BDL (<2.0)	BDL (<2.0)	BDL (<2.0)	BDL (<2.0)	6.0	
10	Nickel, ng/m <sup>3</sup>	5.6	6.7	6.0	7.1	6.5	5.3	20	
11	Benzene, μg/m <sup>3</sup>	BDL ( <1.0)	BDL ( <1.0)	BDL ( <1.0)	BDL ( <1.0)	BDL ( <1.0)	BDL ( <1.0)	5.0	
12	Benzo-alfa-pyrene, ng/m <sup>3</sup>	BDL (<0.5)	BDL (<0.5)	BDL (<0.5)	BDL (<0.5)	BDL (<0.5)	BDL (<0.5)	1.0	
13	Mercury (Hg), ng/m <sup>3</sup>	ND	ND	ND	ND	ND	ND	-	

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## 5 AMBIENT NOISE LEVEL

The measurements are done using the sound level meter with data logger. The results of the same are provided as below. [Note: (i) The value is the Leq of ten readings taken in Day time and Night time.]

- 1. Day time shall mean from **6:00 am to 10:00 pm**
- 2. Night time shall mean from **10:00 pm to 6:00 am**.

## TABLE 5.1: NOISE MONITORING RESULTS [INDUSTRIAL AREA]

Quarter IV (Jan 2021 to Mar 2021)						
LocationDay Time Leq in dB(A)Night Time Leq in dB(A)						
West of Stack (Near Coal Handling Plant)	60.3	52.1				
South East of Stack (Near CT 2)	58.1	52.8				
North East of Stack (Near Reservoir)	58.5	48.1				

## TABLE 5.2: NOISE MONITORING RESULTS [RESIDENTIAL AREA]

Quarter IV (Jan 2021 to Mar 2021)					
Location	Day Time Leq in dB(A)	Night Time Leq in dB(A)			
Sidni (Near Labour Colony)	50.5	37.8			
Kawai Village	49.3	37.9			
Mukhandpura	48.7	40.5			

## TABLE 5.3: NOISE MONITORING RESULTS [DG Set]

Quarter IV (Jan 2021 to Mar 2021)				
Parameter	DG Set-I	DG Set-II	DG Set-III	
Noise level (dB(A) (inside the acoustic enclosure Room)	100.1	100.9	99.8	
Noise level 0.5m away from outside the engine room, (db) (Outside the acoustic enclosure)	72.1	73.5	72.2	
Insertion Loss	28.0	27.4	27.6	

Emission measurements are required to identify and quantify a wide range of pollutants in Stack Emissions. The measurements were conducted during the period of October 2020 to March 2021.

The parameters covered in the monitoring are depict below:

## TABLE 6.1 TECHNICAL PROTOCOLS USED FOR STACK EMISSION MONITORING

S. No	Parameter	Units	Method of Test
1	Particulate Matter (PM)	mg/ Nm³	IS 11255 (P-1)
2	Sulphur dioxide (SO <sub>2</sub> )	mg/ Nm³	IS 11255 (P-2)
3	Oxide of nitrogen ( $NO_x$ ),	mg/ Nm³	IS:11255 (P-7)
4	Carbon monoxide (CO)	%	IS:13270-1992
5	Mercury as particulate (Hgp)	µg/m³	USEPA-29

## TABLE 6.2: STACK MONITORING RESULTS

S No	Parameter	Unit	Quarter IV (Jan 2021 to Mar 2021)		
5. 10			Unit-l	Unit-II	
1	Exit Gas Velocity	m/sec	24.85	26.1	
2	Flow Rate	Nm³/hr	3086867.55	3250392.31	
3	Particulate Matter (PM)	mg/Nm³	33.38	17.26	
4	Sulphur dioxide (SO <sub>2</sub> )	mg/Nm³	630	605	
5	Oxide of nitrogen (as NO <sub>x</sub> ) at 15 % $O_2$	mg/Nm³	255	243	
6	Mercury as particulate (Hgp)	µg/m3	BDL(<0.001)	BDL (<0.001)	

## TABLE 6.3: DG STACK MONITORING RESULTS

Parameter	Unit	Quarter IV (Jan 2021 to Mar 2021)		
		DG Set-I	DG Set-II	DG Set-III
Particulate Matter (PM)	mg/Nm³	44.67	48.66	36.74
Oxide of Nitrogen (NOx) at 15% $O_2$	ppmv	355	396	362
Carbon monoxide (CO)	mg/Nm³	129	102	95
NMHC as C at 15% O <sub>2</sub>	mg/Nm³	35	33	47
#### 7 WATER QUALITY RESUTS [GROUND/ SURFACE]

A number of parameters have been monitored in ground water and surface water at nearby villages of plant site.

The measurements were conducted during the period of January 2021 to March 2021. The parameters covered in the monitoring are depict below:

#### TABLE 7.1.1: RESULTS OF GROUND WATER MONITORING

S. No.	Parameter	Near Labour Colony SE (Piezometer)	Salpura Village	Kawai Village	Phoolbaroda Village	Nimoda Village	Sidni Village	Baldevpura Village
1	рН (at 25 °C)	6.81	6.86	7.51	7.49	6.71	7.21	6.84
2	Colour, Hazen	<5	<5	<5	<5	<5	<5	<5
3	Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	Turbidity, NTU	9.68	<0.1	< 0.1	< 0.1	<0.1	< 0.1	< 0.1
5	Total Dissolved Solids, mg/l	818	688	286	480	1005	693	133
6	Electrical Conductivity, µS/cm	1117	1128	440	837	1378	1111	181.5
7	Total Hardness (as CaCO <sub>3</sub> ), mg/l	432	360	176	310	550	300	84
8	Calcium (as Ca), mg/l	123.2	112	46.4	116	140	84	24
9	Magnesium (as Mg), mg/l	30.13	19.44	14.58	4.86	48.6	21.87	5.83
10	Chlorides (as Cl <sup>-</sup> ), mg/l	115.45	151.66	45.01	48.92	136.98	146.76	14.68
11	Sulphate (as SO4), mg/l	391.25	118.75	32.25	52.5	493.75	173.75	9.88
12	lron (as Fe), mg/l	BDL (< 0.01)	BDL (<0.01)	BDL (< 0.01)	BDL (< 0.01)	BDL (< 0.01)	BDL (< 0.01)	BDL (< 0.01)
13	Total Chromium ( as Cr), mg/l	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)

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14	Arsenic ( as As), mg/l	BDL(<0.001)						
15	Lead (as Pb), mg/l	BDL(<0.01)	0.01	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)
16	Silica (as SiO2) mg/l	10.0	15.0	20.95	25.71	8.81	16.90	8.09
17	Mercury ,mg/l	BDL (< 0.001)	BDL (< 0.001)					
18	Appearance	Not Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
19	Appearance after Filtration	Agreeable						
20	Methyl orange Alkalinity as CaCO3 mg/l	59.4	247.5	150.48	297	118.8	198	102.96
21	P- Alkalinity mg/l	ND						
22	Non-Carbonate Hardness (as CaCO3 mg/l	372.6	112.5	25.52	13	431.2	102	ND
23	E coli MPN/100ml	ND						
24	Total coliform, MPN/100ml	ND						

#### 7.2 SURFACE WATER:

#### TABLE 7.2.1: RESULTS OF SURFACE WATER MONITORING

	Quarter IV (Jan 2021 to Mar 2021)								
S. No.	Parameter	Barlan Pond	Kawai Pond	Parvan River					
1	рН (at 25 °C)	9.14	6.98	7.99					
2	Colour, Hazen	150	750	<5					
3	Odour	Agreeable	Not Agreeable	Agreeable					
4	Turbidity, NTU	<0.1	3.08	3.74					
5	Total Dissolved Solids, mg/l	567	1138.5	213					
6	Electrical Conductivity, µS/cm	856	1719	330					
7	Total Hardness (as CaCO <sub>3</sub> ), mg/l	72	320	136					
8	Calcium (as Ca), mg/l	11.2	52	32					
9	Magnesium (as Mg), mg/l	10.69	46.17	13.61					
10	Chlorides (as Cl <sup>-</sup> ), mg/l	277.87	386.48	19.57					
11	Sulphate (as SO <sub>4</sub> ), mg/l	19.75	76.25	19.75					
12	Iron (as Fe), mg/l	0.38	0.58	BDL (< 0.01)					
13	Total Chromium ( as Cr), mg/l	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)					
14	Arsenic ( as As), mg/l	BDL(<0.001)	BDL(<0.001)	BDL(<0.001)					
15	Lead (as Pb), mg/l	BDL(<0.01)	BDL(<0.01)	BDL(<0.01)					
16	Silica (as SiO2) mg/l	BDL (<1.0)	20.48	20.0					

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17	Mercury ,mg/l	BDL (< 0.001)	BDL (< 0.001)	BDL (< 0.001)
18	Appearance	Not Agreeable	Not Agreeable	Agreeable
19	Appearance after Filtration	Agreeable	Not Agreeable	Agreeable
20	Methyl orange Alkalinity as CaCO3 mg/l	209.88	247.5	138.6
21	P- Alkalinity mg/l	51.48	ND	ND
22	Non-Carbonate Hardness (as CaCO3 mg/l	ND	72.5	ND
23	E coli MPN/100ml	ND	ND	ND
24	Total coliform, MPN/100ml	ND	ND	ND

#### 8 STP WATER

The measurements were conducted during the period of January 2021 to March 2021. The parameters covered in the monitoring are depict below:

#### TABLE 8.1: RESULTS OF STP WATER

	Quarter IV										
S. No.	Parameter	45 KLD New	10 KLD STP Near Service Building)	10 KLD STP Plant Canteen	45 KLD STP near Adani Vidhayala (Old)	120 KLD STP in Plant Premises	60 KLD New	10KLD III Guest House	10KLD 3 BHK	60KLD STP in Township (Old)	10KLD Hospital
1	pH (at 25 <sup>°</sup> C)	7.01	7.13	7.14	7.01	6.97	7.04	7.08	7.05	7.24	7.06
2	Total Suspended Solid (TSS) mg/l	79	38	32	25	70	36	63	26	70	14
3	Nitrate Nitrogen mg/l	6.12	8.32	7.74	6.59	6.59	7.15	5.82	7.52	5.88	5.56
4	Ammonical Nitrogen (as NH₃-N) mg/l	20.16	1.68	14.28	15.4	17.08	15.4	9.8	10.08	18.2	8.96
5	Biochemical Oxygen Demand (BOD) mg/l	28.89	7	9.5	9.33	25	8	28	11	26	5.5
6	Chemical Oxygen Demand (COD) mg/l	144	57.6	48	64	128	51.2	118.4	73.6	102.4	25.6
7	Total Kjeldahl Nitrogen mg/l	47.6	6.16	37.24	38.64	46.76	37.8	17.08	17.92	41.16	16.8
8	Oil & Grease mg/l	5	5	3	5	4	5	4	4	6	4
9	Free Available Chlorine mg/l	BDL (<0.1)	0.1	0.1	BDL (<0.1)	0.1	BDL (<0.1)	BDL (<0.1)	BDL (<0.1)	BDL (<0.1)	BDL (<0.1)
10	Bioassay Test	90% Survival of Fish after 96 hours in 100% effluent	100% Survival of Fish after 96 hours in 100% effluent	100% Survival of Fish after 96 hours in 100% effluent	100% Survival of Fish after 96 hours in 100% effluent	90% Survival of Fish after 96 hours in 100% effluent	100% Survival of Fish after 96 hours in 100% effluent	100% Survival of Fish after 96 hours in 100% effluent	100% Survival of Fish after 96 hours in 100% effluent	90% Survival of Fish after 96 hours in 100% effluent	100% Survival of Fish after 96 hours in 100% effluent

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### 9 ETP WATER

The measurements were conducted during the period of January 2021 to March 2021. The parameters covered in the monitoring are depict below:

#### TABLE 9.1: RESULTS OF ETP OUTLET

S. No.	Parameter	Unit	Quarter IV (Jan.2021 to Mar.2021)
1	рН	-	7.15
2	Total Suspended Solids (TSS)	mg/l	22
3	Outlet Temperature	٥C	24
4	Chemical Oxygen Demand (COD), mg/l	mg/l	44.8
5	Copper (as Cu), mg/l	mg/l	0.01
6	Iron (as Fe) mg/I	mg/l	0.07
7	Zinc (as Zn) mg/l	mg/l	0.11
8	Phosphate (as P), mg/l	mg/l	BDL(<0.1)
9	Oil & Grease, mg/l	mg/l	6
10	Sulphide	mg/l	BDL (<0.1)
11	Free Available Chlorine	mg/l	BDL (<0.1)

#### **10 ASH RECOVERY WATER**

The measurements were conducted during the period of January 2021 to March 2021. The parameters covered in the monitoring are depict below:

			Quarter IV			
S. No.	Parameter	Units	Ash Recovery Pump House 1	Ash Recovery Pump House 2		
1	Lead (as Pb)	mg/l	0.07	BDL		
2	Arsenic (as As)	mg/l	BDL	BDL		
3	Total Chromium (as Cr)	mg/l	BDL	BDL		
4	Cadmium (as Cd)	mg/l	BDL	BDL		
5	Mercury (as Hg)	mg/l	BDL	BDL		

#### TABLE 10.1: RESULTS OF ASH RECOVERY WATER Sample

#### 11 FLY ASH [SILO]

The measurements were conducted during the period of January 2021 to March 2021. The parameters covered in the monitoring are depict below:

TABLE 11.	1: RESULTS	OF FLY /	ASH SAMPLE	(Unit I)
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S. No.	Parameter	Unit	Quarter IV
1	Arsenic (As)	mg/kg	BDL
2	Mercury (Hg)	mg/kg	BDL
3	Lead as Pb	mg/kg	5.96
4	Total Chromium as Cr	mg/kg	7.56

TABLE 11.2: RES	ULTS OF F	FLY ASH S	SAMPLE	(Unit II)
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S. No.	Parameter	Unit	Quarter IV
1	Arsenic (As)	mg/kg	BDL
2	Mercury (Hg)	mg/kg	BDL
3	Lead as Pb	mg/kg	11.58
4	Total Chromium as Cr	mg/kg	17.81

### 12 SOIL

The measurements were conducted during the period of January 2021 to March 2021. The parameters covered in the monitoring are depict below:

		Quarter-IV				
S. No.	Parameter	Nimoda Village	Kawai Village	Phulbaroda Village		
1	Boron [mg/kg]	BDL	BDL	BDL		
2	Calcium as CaO [%]	1.96	2.72	2.19		
3	Magnesium as MgO [%]	0.65	1.49	0.78		
4	Potassium as K2O [%]	0.46	1.10	0.34		
5	Iron as Fe [%]	3.19	3.64	5.65		
6	Manganese as Mn [mg/kg]	1018.24	564.29	908.57		
7	Phosphorus [%]	0.0026	0.0011	0.029		

#### TABLE 12.1: RESULTS OF SOIL MONITORING



CONTINOUS EMISSION MONITORING RESULTS (Oct-2020)					
Station: Stack Attac	Station: Stack Attached to Boiler 1 & 2				
Report type: Mean &	3 Daily				
Time Base: 24 Hour	•				
Date	UNIT 1	Unit 2			
	PM (ma/Nm <sup>3)</sup>				
01/10/2020	34.13	40.18			
02/10/2020	29.69	40.92			
03/10/2020	40.31	38.79			
04/10/2020	36.64	40.09			
05/10/2020	38.28	39.75			
06/10/2020	37.19	39.36			
07/10/2020	39.44	38.81			
08/10/2020	41.28	40.02			
09/10/2020	43.10	39.89			
10/10/2020	40.72	39.3			
11/10/2020	41.83	40.69			
12/10/2020	37.70	40.11			
13/10/2020	38.51	39.99			
14/10/2020	32.58	39.22			
15/10/2020	36.28	39.12			
16/10/2020	42.10	40.51			
17/10/2020	37.12	39.95			
18/10/2020	40.00	40.18			
19/10/2020	39.50	40.44			
20/10/2020	41.58	40.01			
21/10/2020	42.43	40.09			
22/10/2020	40.32	40.78			
23/10/2020	37.74	40.01			
24/10/2020	42.56	40.66			
25/10/2020	30.92	40.08			
26/10/2020	34.03	38.98			
27/10/2020	38.15	40.1			
28/10/2020	38.27	38.81			
29/10/2020	32.59	40.27			
30/10/2020	31.32	40.04			
31/10/2020	33.25	40.31			
Min	29.69	38.79			
Max	43.10	40.92			
AVG	37.65	39.91			

CONTINOUS EMISSION MONITORING RESULTS (Nov-2020)				
Station: Stack Attach	ed to Boiler 1 & 2			
Report type: Mean &	Daily			
Time Base: 24 Hour				
Date	UNIT 1	Unit 2		
	PM (mg/Nm <sup>3)</sup>			
01/11/2020	39.51	40.47		
02/11/2020	39.50	40.73		
03/11/2020	36.68	41.11		
04/11/2020	38.69	41.20		
05/11/2020	40.67	42.02		
06/11/2020	36.44	41.78		
07/11/2020	31.62	41.4		
08/11/2020	29.03	41.33		
09/11/2020	27.07	41.62		
10/11/2020	24.50	41.66		
11/11/2020	24.40	42.10		
12/11/2020	28.41	41.96		
13/11/2020	29.9	41.91		
14/11/2020	25.41	41.80		
15/11/2020	25.52	42.37		
16/11/2020	24.31	41.92		
17/11/2020	23.34	41.69		
18/11/2020	28.42	42.05		
19/11/2020	28.68	42.04		
20/11/2020	26.75	41.34		
21/11/2020	30.12	42.14		
22/11/2020	32.21	41.41		
23/11/2020	34.75	41.68		
24/11/2020	31.27	41.51		
25/11/2020	34.1	41.44		
26/11/2020	29.09	40.89		
27/11/2020	32.66	39.86		
28/11/2020	35.83	41.06		
29/11/2020	37.41	41.63		
30/11/2020	35.21	40.47		
Min	23.34	39.86		
Max	40.67	42.37		
AVG	31.42	41.46		

CONTINOUS EMISSION MONITORING RESULTS (Dec-2020)			
Station: Stack Attach	ed to Boiler 1 & 2		
Report type: Mean & I	Daily		
Time Base: 24 Hour			
Date	UNIT 1	Unit 2	
	PM (ma/Nm <sup>3)</sup>		
01/06/2020	14.17	29.13	
01/12/2020	35.91	41.51	
02/12/2020	33.77	41.26	
03/12/2020	35.7	42.08	
04/12/2020	36.11	41.65	
05/12/2020	33.12	42.1	
06/12/2020	34.74	42.04	
07/12/2020	35.53	42.17	
08/12/2020	37.18	41.74	
09/12/2020	37.09	41.67	
10/12/2020	37.15	42.02	
11/12/2020	32.42	42.17	
12/12/2020	33.71	42.56	
13/12/2020	32.63	42.67	
14/12/2020	33.01	42.16	
15/12/2020	32.49	42.21	
16/12/2020	34.8	42.16	
17/12/2020	35.5	42.04	
18/12/2020	35.52	42.06	
19/12/2020	36.59	42.08	
20/12/2020	34.68	42.12	
21/12/2020	37.48	41.73	
22/12/2020	36.65	41.55	
23/12/2020	38.67	41.73	
24/12/2020	37.14	41.76	
25/12/2020	36.12	41.3	
26/12/2020	36.90	41.89	
27/12/2020	34.71	41.36	
28/12/2020	35.97	41.82	
29/12/2020	37.16	41.96	
30/12/2020	36.75	42.05	
31/12/2020	37.09	41.66	
Min	32.42	41.26	
Max	38.67	42.67	
AVG	35.56	41.91	

CONTINOUS EMISSION MONITORING RESULTS (Jan-2021)					
Station: Stack Attached to Boiler 1 & 2					
Report type: Mean & Daily	,				
Time Base: 24 Hour					
Date (DD/MM/YY)	UNIT 1	Unit 2			
	PM (ma/Nm <sup>3)</sup>				
2021-01-01 00:00:00	37.02	40.52			
2021-01-02 00:00:00	38.58	40.9			
2021-01-03 00:00:00	37.02	40.91			
2021-01-04 00:00:00	34.5	39.85			
2021-01-05 00:00:00	34.6	38.48			
2021-01-06 00:00:00	33.11	34.82			
2021-01-07 00:00:00	36.92	35.27			
2021-01-08 00:00:00	34.09	35.82			
2021-01-09 00:00:00	34.72	28.61			
2021-01-10 00:00:00	32.79	SD			
2021-01-11 00:00:00	38.25	SD			
2021-01-12 00:00:00	38.21	SD			
2021-01-13 00:00:00	38.09	SD			
2021-01-14 00:00:00	37.74	26.04			
2021-01-15 00:00:00	37.70	38.34			
2021-01-16 00:00:00	37.22	38.54			
2021-01-17 00:00:00	37.94	35.41			
2021-01-18 00:00:00	35.48	34.74			
2021-01-19 00:00:00	30.09	34.54			
2021-01-20 00:00:00	33.57	35.46			
2021-01-21 00:00:00	33.8	34.12			
2021-01-22 00:00:00	34.88	34.31			
2021-01-23 00:00:00	32.09	33.26			
2021-01-24 00:00:00	27.69	35.15			
2021-01-25 00:00:00	27.94	36.9			
2021-01-26 00:00:00	31.29	38.44			
2021-01-27 00:00:00	34.14	38.48			
2021-01-28 00:00:00	37.05	38.29			
2021-01-29 00:00:00	33.46	38.41			
2021-01-30 00:00:00	36.07	38.47			
2021-01-31 00:00:00	36.49	38.4			
Min	27.69	26.04			
Max	38.58	40.91			
AVG	34.92	36.39			

CONTINOUS EMISSION MONITORING RESULTS (Feb-2021)					
Station: Stack Attached to Boiler 1 & 2					
Report type: Mean & Daily					
Time Base: 24 Hour					
Date (DD/MM/YY)	UNIT 1	Unit 2			
	PM (mg/Nm <sup>3)</sup>				
2021-02-01 00:00:00	36.62	38.59			
2021-02-02 00:00:00	38.54	36.4			
2021-02-03 00:00:00	38.9	34.78			
2021-02-04 00:00:00	37.69	34.06			
2021-02-05 00:00:00	37.45	38.51			
2021-02-06 00:00:00	35.01	38.55			
2021-02-07 00:00:00	30.55	38.53			
2021-02-08 00:00:00	36.89	38.64			
2021-02-09 00:00:00	37.94	35.2			
2021-02-10 00:00:00	38.88	34.41			
2021-02-11 00:00:00	40.53	33.12			
2021-02-12 00:00:00	42.31	32.53			
2021-02-13 00:00:00	41.94	32.99			
2021-02-14 00:00:00	41.3	33.39			
2021-02-15 00:00:00	35.79	33.49			
2021-02-16 00:00:00	36.45	29.41			
2021-02-17 00:00:00	38.2	34.76			
2021-02-18 00:00:00	41.15	33.77			
2021-02-19 00:00:00	40.64	32.83			
2021-02-20 00:00:00	43.47	31.64			
2021-02-21 00:00:00	40.19	32.02			
2021-02-22 00:00:00	35.1	28.56			
2021-02-23 00:00:00	35.84	30.23			
2021-02-24 00:00:00	39.74	29.01			
2021-02-25 00:00:00	38.25	29.22			
2021-02-26 00:00:00	38.87	28.94			
2021-02-27 00:00:00	36.85	32.23			
2021-02-28 00:00:00	36.41	30.14			
Min	30.55	28.56			
Max	43.47	38.64			
AVG	38.27	33.43			

CONTINOUS EMISSION MONITORING RESULTS (Mar-2021)			
Station: Stack Attached to	Roiler 1 & 2		
Booost type: Mooo & Daily	Boller 102		
Time Report Cype. Mean & Daily			
Date (DD/MM/YY)	UNIT 1	Unit 2	
	PM (mg/Nm <sup>3)</sup>	1	
2021-03-01 00:00:00	39.23	29.08	
2021-03-02 00:00:00	39.73	29.2	
2021-03-03 00:00:00	SD	28.6	
2021-03-04 00:00:00	SD	28.12	
2021-03-05 00:00:00	SD	27.95	
2021-03-06 00:00:00	SD	28.23	
2021-03-07 00:00:00	SD	28.19	
2021-03-08 00:00:00	SD	28.42	
2021-03-09 00:00:00	SD	28.24	
2021-03-10 00:00:00	SD	28.48	
2021-03-11 00:00:00	SD	29.34	
2021-03-12 00:00:00	SD	34.03	
2021-03-13 00:00:00	SD	35.29	
2021-03-14 00:00:00	SD	37.21	
2021-03-15 00:00:00	SD	38.83	
2021-03-16 00:00:00	SD	39.51	
2021-03-17 00:00:00	SD	39.12	
2021-03-18 00:00:00	SD	39.69	
2021-03-19 00:00:00	SD	38.01	
2021-03-20 00:00:00	SD	37.62	
2021-03-21 00:00:00	SD	39.59	
2021-03-22 00:00:00	SD	38.8	
2021-03-23 00:00:00	SD	37.6	
2021-03-24 00:00:00	16.65	39.49	
2021-03-25 00:00:00	10.1	38.22	
2021-03-26 00:00:00	17.49	36.99	
2021-03-27 00:00:00	26.64	36.93	
2021-03-28 00:00:00	30.33	39.88	
2021-03-29 00:00:00	25.66	39.39	
2021-03-30 00:00:00	27.37	39.18	
2021-03-31 00:00:00	31.4	40.07	
Min	10.10	27.95	
Max	39.73	40.07	
AVG	26.46	34.82	

### Adani Power Rajasthan Limited

Annexure – II

#### **GROUND WATER LEVEL MONITORING RESULTS**

#### LOCATION: Piezometric Wells Along With Ash Pond

		Ground Water Table (BGL)				
S. No.	Month & Year	Location : 1	Location : 2	Location : 3		
1.	October 2020	3.5 Meter	12.0 Meter	2.5 Meter		
2.	November 2020	5.5 Meter	15.0 Meter	7.0 Meter		
3.	December 2020	8.0 Meter	18.0 Meter	10.0 Meter		
4.	January 2021	11.0 Meter	22.0 Meter	13.0 Meter		
5.	February 2021	18.0 Meter	26.0 Meter	16.0 Meter		
6.	March 2021	20.0 Meter	29.0 Meter	19.0 Meter		

Location 1: South of Ash Pond (Nr. Labor Colony)

Location 2: East of Ash Pond (Nr. Ash Recovery Pump House)

Location 3: West of Ash Pond (Nr. Nimoda Railway Crossing)

Annexure-III

	Ash Generation, Utilization and Disposal Details (MT/Month)									
			ASH UTILIZATION			'ke		sh	cilo )	
S. No.	Month	Total Ash Generation	For Brick Construction	For Cement Manufacturing	Reclamation of Low Lying area	DWG	Dispoal In Ash Dy	Total Ash Utilization	Percentage of A utilization	Balance in Ash S (Cumulative #
7	Oct-20	149054.68	47141	132051	0	0	17141.29	179191.87	120.22	646.17
8	Nov-20	135781.47	35585	113032	8300	0	22811.29	156917.28	115.57	584.07
9	Dec-20	134739.15	30415	112042	7600	0	22231.96	150057.12	111.37	646.17
10	Jan-21	144064.41	43340	121182	0	1275	23338.43	165796.84	115.09	1049.08
11	Feb-21	133866.17	53130	114226	60	3870	19142.86	171285.85	127.95	1090.67
12	Mar-21	114650.40	65865	94803	0	1395	19490.59	162063.22	141.35	1447.28
	Total	812156.27	275476.00	687336.18	15960.00	6540.00	124156.42	985312.18	121.32%	1447.28

#### Adani Power Rajasthan Limited 2 x 660 MW Kawai Thermal Power Station

Balance in Silo-1447.28 MT

Adani Power Rajasthan Limited

Annex III

### ASH PERCENTAGE IN COAL

### (From October 2020 TO December 2020)

Month	Coal Consumption (MT)	Ash % in Coal
October-2020	494936.00	30.12 %
November-2020	459649.02	29.54 %
December-2020	476295.68	28.29 %
Quarterl	29.32 %	

#### ADANI POWER RAJASTHAN LIMITED

Annex III

### ASH PERCENTAGE IN COAL

(From January'2021 to March'2021)

Month	Coal Consumption (in MT)	Ash Content in Coal (in %)
January- 2021	4,54,057	31.73
February- 2021	4,44,505	30.12
March-2021	3,52,641	32.51
Quarterly Average (%)	••••	31.38

MT: Metric Tone

### Adani Power Rajasthan Limited

Annexure IV

#### Greenbelt Details:

Green be	lt Area developed (ha)	No. of Trees Pla	anted	No. of Shrubs Planted	
	105.50	1,05,470		1,70,000	
	PLANTED SPE	PLANT PR	EMISES		
Sr. No.	Scientific	Name		Common Name	
Tress					
1.	Azadirachta indica		Neem		
2.	Bauhinia blakeana		Kachnar		
3.	Callistemon viminalis		Pink Bott	le brush	
4.	Casuarina equisetifolia		Saru/Cas	uarina	
5.	Delonix regia		Gulmoha	F	
6.	Phoenix dactylifera		Date Palr	n	
7.	Punica granatum		Pomegra	nate	
8.	Emblica officinalis		Aamla		
9.	Eucalyptus hybrid		Eucalypt	S	
10.	Mangifera indica		Aam/ Ma	ngo	
11.	Polyalthia longifolia		Ashok/ Fa	alse Ashok	
12.	Psidium guajava		Guava		
13.	Syzygium cumini		Jamun		
14.	Washingtonia filifera		Washingt	onia Palm	
15.	Wodyetia bifurcata		Palm		
16.	Cassia seamia		Cassia		
17.	Albizzia leebeck		Siris		
18.	Pongamia pinnata		Karanj		
19.	Cordia longifolia		Lasoora		
20.	Aegle Marmelos		Bel		
21.	Dalbergia sissoo		Shisham		
22.	Ficus religiosa		Peepal		
23.	Cassia renigera		Cassia		
24.	Parkinsonia sp.		Parkinsor	าเล	
25.	Cassia pinnata		Amaltas		
26.	Alstonia scholaris		Satparni		
27.	Citrus nobilis		kinnow		
28.	Tectona grandis		Teak		
29.	Olea europaea		Olive		
Shrubs	· · ·		•		
30.	Allamanda		Yellow Bell		
31.	Bougainvillea spectabilis		Bougainvillea/ Booganbel		
32.	Clerodendrum inerme		Wild Jasmine		
33.	Cycas circinalis		Cycas		
34.	Euphorbia milii		Christ Thorn		
35.	Ficus panda		Fig Tree		
36.	Hymenocallis caroliniana		Spider Lily		
37.	Ixora hybrida		Ixora		
38.	Jasminum molle		Jui		
39.	Jatropha curcas		Ratanjyot,		
40.	Nerium indicum		Kaner		
41.	Nerium odoratum		Kaner		
42.	Plumeria alba		Champa		
43.	Tecoma		Yellow Tr	umpetbush	
44.	Ziziphus mauritiana		Ber/Bor/I	ndian plum	



# **Overview of Kawai Site**



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In vicinity of Adani Power Rajasthan Ltd. We reach and spreading benefits to 28 villages, 14 Gram Panchayats, 32 Schools, 2 CHC, 2 PHC, 45 Aanganwadi centres., 12,294 household, 61,671 population.

All 28 Villages are divided in to 4 cluster for better reach and execution of our programs.

#### Cluster details:



## CSR @ Kawai...



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# Education...

- Preparation for digital coaching for JNVST; G-suit training conducted by Head office.
- JNV coaching classes starts on 17<sup>th</sup> December 2020 and ongoing till selection test as tentative date is 15<sup>th</sup> May 2021.
- Total 11 village level coaching centers running and cover 76 students from 15 vicinity Govt. schools. 2
- On SMILE online platform Education department using our impressive UTTHAN content as available on YouTube.
- 187 Eye glasses distributed to screened students of vicinity schools. Total 2033 students tested during Eye camp. >
- Distribute 1400 Mask to students of class 9th to 12th of 7 Govt. schools as prepared under EVP.
- Mask provide under "NO MASK NO ENTRY" initiative of Government of Rajasthan. ۶
- Support to Sports tournaments: Total 805 players and 65 teams participated in 2 Cricket and 1 Kabbadi tournament. ×
- Kawai, Sindhani & Baldevpura village were organized tournaments for local youth.
- Material distribution (Floor mat, White board, Celling fan etc.) in govt. school started total 13 school covered from × cluster 1 and 4.
- Students furniture received at store and shall be distribute as per Covid-19 guidelines.
- With support of APRL sanitization carried out and remove Bee hive at Govt. Girls hostel Atru.

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### Education...







JNV classes @ Dilodhathi



Mask distribution @ Phoolbaroda

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JNV weekly assessment @ Atru



Mask distribution @ Aanganwadi





Sports tournament @ Baldevpura





Material handover ceremony

# Adani Vidyalaya Kawai...

#### Study on virtual platform:

- Online classes and exams conducted for AVK students.
- Virtual Parent Teacher Meeting organized for discussing about students performance.
- Visit of CEO (Adani Power) Sh. Anil Sardana & other delegates at AVK. They appreciated to art and craft skills and interacted through online classes.  $\diamond$
- Result Declaration in a very innovative way to motivate the students by celebrating this day as Convocation Ceremony.

#### Event celebration and extracurricular activities @ AVK:

- GANDHI JAYANTI- Students guised themselves as Mahatma Gandhi and made beautiful drawings on his valuable teachings. ÷
- Various festivals celebrated at AVK like- Diwali, Holi, New year, Xmas, Republic day, Makar sakranti, Basant panchmi etc.,
- Students involve with their art & craft activity and teachers decorated school with particular festive theme.  $\diamond$
- Students made various projects on Winter season and its helped children to learn about cycle of seasons..
- On 23rd January 2021, students of classes from 1 to 3 showcased their artistic skills at a poster making competition on road safety guidelines.  $\diamond$

#### Training and skill enhancement workshop for teachers: 5

- A workshop based on memory games was organized for the teachers. ÷
- A training session was organized by Head Education to provide knowledge about school management system.
- A parenting workshop was conducted for sensitize the teachers about inculcating the values of Love, Compassion, Positivity in the children.
- Quality management training session held to achieve quality education goals through planning, monitoring, assuring and improving.

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# Adani Vidyalaya, Kawai...

**Community Health...** 

- > Provided Door step medical service in CSR working villages-
- Total 15938 patients benefited. (Males- 6750, Females -5757, Children- 3431).
- Multispecialty health Camp Organized in 4 Village in association with Gram panchayat and HelpAge India. Total 1717 × patients benefited. (Dhara- 405, Dilodhathi- 512, Haniheda- 330, Kawai- 470)
- 5 Specialized doctors service provided in the camp:- Gynaecology, Skin, Eye, Paediatrics & General health.
- We also introduce testing facilities such as- Malaria test, Blood sugar test, Haemoglobin test, Urine test and ≻ pregnancy test etc.
- In consideration of Covid-19 scenario organized School health camp for periodical check-up of students- Total 2617 students benefited from 22 Govt. school.
- Hand Wash Day celebrated on 15<sup>th</sup> October at Dadwara village. explained the importance of washing hands and also ≻ explained that how to wash hand step by step.
- > 56 Awareness sessions organized on Covid-19 pandemic;- During the awareness sessions doctor shared to our beneficiary regarding protective measure such as wash your hand properly by the soap, wear mask, do not go outside, restrict large gathering during pandemic situation and Vaccination awareness.
- Blood sugar testing has been done for 119 patients during October to March 21.
- 20 patients were referred to govt. hospitals for their further treatments during such treatment observation.

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## Community Health...

Awareness session @ Dilodhathi



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Health camp @ Kawai

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#### Case Study

• Mr. Gobari Lal 69 year old. He lives in Chhotya Village with his wife .He has no any Children. They fulfil their daily needs by old age Pension Scheme. He is fully depended on MHU project for Primary Health treatment.

Health check-up @ Schools

- Mr. Gobari Lal is regular Beneficiary from last Three year. He is suffering from Asthma from last three year.
- Three year back his treatment was going on from Private Clinic at Atru but he did not to go Atru continuously due to long distance and high cost of treatment. He was very sad because his health was worse day by day and he has no money to take continuously treatment from private hospital.
- Three Year Back he Know about our free of cost treatment at village level. He was very sad and his health was worse day by day.
- He came to MHU site and told all problems to our MHU team. Doctor diagnosed him after checking his reports and prescribed medicines Salbutamol Tab and Inhaler regularly. MHU Doctor suggested him to take regular treatment from MHU. Now his Health condition is very well.
- Adani CSR Team taking regular follow-up her treatment.



Awareness session @ Aton

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#### Testimonial

I am Very Thankful to HelpAge Team because they take care of me like a family.

I am very thankful to Adani Foundation also for provide batter treatment at village level. I hope this facility will going on continuously.



# **Community Health...**

#### Case Study

- Mrs. Kasturi Bai is 85 years old. She lives in Sodalhedi Village. She has 5 sons and a daughter and Her sons are farmer . Her family is fully depended on MHU project for Primary Health treatment.
- Mrs. .Kasturi Bai is regular Beneficiary from last Four year. She is suffering from Sugar, Hypertension and general illness.
- Four year back her treatment was going on from CHC Kawai but she did not go to Kawai continuously due to distance and there was no proper public transport facility from Sodalhedi village. Her health was worse day by day.
- Four years back She knew about our free of cost treatment at village level. She was very happy to knows this. She came to MHU site and told all problems to our MHU team. Doctor diagnosed her after checking her reports. MHU Doctor prescribed medicine Glimepiride 1 mg, metformin 500 mg, and Amlodipine 5 Mg tablets regularly. MHU Team together suggested her to take regular treatment from MHU.
- Now she is very happy and her Health condition is very well.

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# Sustainable Livelihood...

#### PASHUDHAN PROJECT:

- \* 513 Cattle covered through Artificial insemination and 92 new calf born from October to March, 2021.
- O3 Female calves born thru Sex sorted semen on pilot project.
- Cattle health treatment camp organized at Nimoda & Haniheda village and total 591 cattle treated.
- Cattle Fodder seed and feed supplementary distribution to 150 farmers. ÷

#### KRUSHI KOSHAL:

- For better yield hybrid vegetable seed distributed to 25 vicinity farmers.
- Visit of technical expert from BAIF Udaipur for create awareness among farmers for better care and treatment of plants. ۰.
- Total 42 Wadi visited from 18 villages and advice for better care. \$
- Fruiting started in mango and pomegranate as plants distributed earlier. ۰.

#### INSTITUTION BUILIDING:

- Group formation in 12 villages total 20 village facilitator selected.
- Two days training conducted for village facilitator on improved agriculture, Microfinance and dairy based livelihoods
- Expert from BAIF and Aajivika mission participated as a resource parson and total 35 village facilitator and active women participated in training.

### I am Very Thankful to Adani Foundation for provide a batter

Testimonial

treatment and give a chance to live a batter life. I am Very Happy with MHCU

Project. Because we got a batter treatment at village level. I am totally satisfied from this service.







### Sustainable Livelihood...

Community Infrastructure ...

> Construction of Barla water tank: completed.

- \* Benefit reach to 838 people of Barla village.
- Inauguration and handover to community- The Bituminous road NH 90 to Seendhani village.
  - Benefit reach to 2405 people of 5 villages (Seendhani, Amapura, Bamapura, Lolaheri, Hanihera, census 2011).

Institution building training @ Chatrpura

> Open Gymnasium at Kunjer:

**BAIF** Technical expert visit

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- Equipment installed and hand over to Grampanchayat for take care.
- Local youth and Children utilizing installed Gym facility at Grazing land Kunjer.





Well grown fodder for cattle



Seed distribution to Farmers

#### Institution building training @ Dadwara



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### Community Infrastructure ...











Adani Skill Development Center...

New batches started in outreach:- 168 admission

auguration and handover of Seendhani Road

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- 5 Digital literacy batch started at Atru and Kawai with 91 trainee.
- 2 Beauty & wellness batch started at Baran and Kawai with 30 trainee. ۰.
- 3 Self Employed Tailor batch started at Baran and Kawai with 46 trainee. \$
- 1 trainee take admission in online mode for Interview preparation skill course and got employment at Fino payment bank.
- Mobilization and awareness activity conducted for Skill development courses at various locations like- Village, Schools, Hostel etc. ≻
- Provide an opportunity & counselling to trainee for job and 16 candidate apply in Fino Payment Bank after interview 1 candidate ≻ selected for Baran with 1.60 CTC.
- 2 virtual meetings held with Commissioner of college education Rajasthan and discussed about skill enhancement in Rajasthan. ≻
- Meetings with all Govt. colleges of Baran & Jaisalmer and discussion about implement Adani skill development courses in colleges. Þ
- Fire & Safety awareness session conducted at SAKSHAM center. >
- Organize Certificate distribution ceremony and meeting for placement & discuss about self employment strategy at local level. Þ
- CEO-Adani Power Sh. Anil Sardana sir, & COO-Adani Power Sh. Jaydeb nanda sir visited to ASDC center and appreciate the efforts. ×
- One DL trainee placed at DDUGKY as computer trainer and earning monthly salary Rs. 7500/-. ≻
- Our SAKSHAM trainees received one more order from Adani power Rajasthan limited for stitching of 1500 Mask. >
- Festival of Colors celebrated at center. Trainees enjoy the Holi and to wishes each other.

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### Adani Skill Development Center...













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VC with Commissioner



Meeting @ Baran Collage







Certificate distribution



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# Adani Skill Development Center...

(Success story)

- Rohit Gupta is of 22 year of old residents of Baran city. He has completed B.Com and plan studies further. Rohit belongs to lower middle class family and he is elder from two sister. His father runs a Mess in coaching institute at Kota.
- As entry of Covid-19 in area the situation worse, family income is closed from last 8 months due to . lockdown. As elder son Rohit feel the parents pain and searching for job. But in covid-19 scenario there is no vacancy found. During this he reach to Adani skill development centre through social media platform. SAKSHAM team guide him, than he take admission in online course of Interview preparation skill.
- SAKSHAM team regular in touch with Rohit and during course we provide a job opportunity in Fino payment bank for Baran location. He attend and got selected with CTC of 1.60 lac. Now he is employed and supporting family for livelihood in this pandemic situation.
- · Rohit said its great support from ASDC; I will complete my studies and dream to build career in financial sector. Rohit's family showing gratitude towards Adani skill development centre for providing such opportunity.













# Adani Skill Development Center...

#### (Success story)

- Ms. Ranu Bairwa is 20 year old girl she is under graduate and lived in vicinity of APRL at Haniheda village. Ranu comes from poor socio-economic background so always trying to do something for earn some money and support to family. With this aspect she travel daily 20 KM for attend Digital literacy class and searching for jobs in near town. 20KM journey is more difficult because in the area Public transport facility is very poor.
- Ranu have 4 siblings 2 brother and 2 sister. During mobilization she heard about SAKSHAM and . take all discussion and detail about courses and get ready for admission in Digital Literacy course.
- SAKSHAM team regular in touch with Ranu & during discussion we found her struggle of transportation and family status. But she is stay motivated and dedicated towards classes and learning. She spent more time at centre and supporting to trainer after the classes. After completing the course she attend the interview and selected as computer trainer at DDUGKY centre Kawai. At first she is getting Rs. 7500/- month.
- Ranu and her family very happy and expressing gratitude towards ASDC for provide such wonderful platform and support during course of time.

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# SaHAJ...

- > The project SaHAJ (Sanitation and Health Awareness Joint-venture) derived and it's a next step of Suposhan.
- The SaHAJ program will spread awareness and livelihood among vicinity women with support & Awareness for use  $\geq$ of sanitary pad and its Disposal.
- The project inauguration on dated 12th January, 2021 with divine hand of Sh. Anil Sardana (CEO- Adani Power).
- This project impacting to life of more than 10,008 women- (Adolescent Girls: 3111 & Reproductive age group ≻ women: - 6897) as identified during Suposhan.
- > To making sanitary pad we formed and trained a group of 05 women, all these women belongs to deprived section and very needy for livelihood.
- > Parallel we provide livelihood exposure to Sanginis and other needy women of nearby villages through marketing and selling of these Sanitary pads in nearby area.
- Awareness fair organized on Menstrual hygiene and usages of sanitary pads. Total 971 women participated in 20  $\geq$ camp on various locations of surrounding villages.
- Sanitary pad distribution work starts in 3 villages, Kawai, Khedli Gaddiyan and Phoolbadoda.















### SaHAJ...









CEO Sir discussing about program







Awareness fair @ Kunjer



Awareness fair @ Dhara

Awareness fair @ Haniheda

adani Foundation

# Employee Volunteer Program...



Goodness

The Adani Foundation has taken up the initiative with motive of "SHAYOG" & "SATKARMA". The Employee volunteer program spread huge benefits and support to surrounding community. The people of APRL feel satisfaction and bonding with vicinity deprived section and take participation to transform the life.

- The1400 Mask and soap distributed to Govt. schools for class 9<sup>th</sup> to 12<sup>th</sup> class under Employee volunteer program and support to Government initiative NO MASK NO ENTRY.
- 70 Mask distributed to Old age home Atru and spread awareness about Covid-19. ×
- 35 Mask distributed to Aanganwadi center Solahedi and spread awareness about Covid-19. ×
- sanitization carried out and remove Bee hive at Govt. Girls hostel Atru. Þ
- One more order of 1500 mask stitching placed to ASDC trainee by APRL under Employee volunteer program. ×
- Shanti Urja club members visited to Adani skill development center and motivates to trainees for better work and ensure for more Þ support from APRL side.









Mask distribution

Remove Bee hive @ Girls hostel Atru

Remuneration handover to trainees

Shanti Urja club visits to ASDC

adani Foundation

# Media Coverage...



Growth

Goodness

adani

adani

Growth

Goodness

Media Coverage...



adani Foundation



Date: 26.09.2020

To, The Member Secretary Rajasthan State Pollution Control Board, 4, Institutional Area, Jhalana Doongri, Jaipur – 302004

Subject: Submission of Environmental Statement for the Financial Year 2019-20.

Ref : Consent to Operate Order No. 2019 - 2020/HDF/2773 dated 09.08.2019.

Dear Sir,

With reference to above subject, kindly find enclosed herewith Environmental Statement for financial year ending 2019-20, along with Form-V prescribed under Rule 14 of the Environment (Protection) Rules 1986, in respect of Kawai Thermal Power Station.

Kindly acknowledge the same.

Thanking You,

For Adani Power Rajasthan Ltd.

Authorized Signatory

Cc: The Regional Officer Rajasthan State Pollution Control Board SPL-2A, Road No.6, Indraprasth Industrial Area, Kota-324005 (Rajasthan)

Encl : As above

Adani Power Rajasthan Ltd NH 90, Atru Road Village Kawai, Tehsii Atru Baran 325 219 Rajasthan, India CIN U40104GJ2008PLC052743 Tel +91744-27-78600

info@adani.com www.adanipower.com Registered Office: "Adani corporate House," Shantigram, Near Vaishno Devi Circle, S. G. Highway, Khodiyar, Ahmedabad - 382 421, Gujarat, India

Registered Office: Adani House, Nr Mithakhali Circle, Navrangpura, Ahmedabad 380 009, Gujrat, India

# ENVIRONMENT STATEMENT FOR FINANCIAL YEAR

### <u>2019 – 2020</u>



## ADANI POWER RAJASTHAN LIMITED

Village: Kawai, Taluka: Atru

Baran, Rajasthan

#### **ENVIRONMENTAL STATEMENT**

#### FORM V

#### (See Rule 14) Environmental Statement for the financial year (April 2019 to March 2020)

From:

Adani Power Rajasthan Ltd. Village: Kawai, Taluka: Atru District: Baran, Rajasthan – 325 219

To:

**The Member Secretary,** Rajasthan State Pollution Control Board, 4, Institutional Area, Jhalana Doongri, Jaipur – 302 004

#### <u> PART - A</u>

i) Name and address of the owner / occupier of the industry Operation or Process

- Name : Mr. Arindam Chatterjee (Station Head)
- Address : NH-90, Atru Road, Village Kawai, Tehsil Atru, Distt. Baran 325219 (Rajasthan)
- ii) Industry category
   Primary-(STC Code)- Secondary-(STC Code) : Primary (Large Scale)
- iii) Production capacity-Units : 1320 MW (2 x 660MW) Power Generation
- iv) Year of establishment : Unit#1 Commissioned on 28<sup>th</sup> May 2013 Unit#2 Commissioned on 31<sup>st</sup> December 2013 (Consent to operate is valid up to 29.02.2024).
- v) Date of the last environmental statement submitted: **23.09.2019**

#### PART B

Water and Raw Material Consumption:

1.	Wate	Water consumption <b>m<sup>3</sup>/d</b>				
	a)	Process	: 936			
	b)	Cooling	: 54980			
	c)	Domestic	: 663			

	Process water consumption per unit of product output		
Name of	During the previous financial year	During the current financial year	
Products	(2018-19)	(2019-20)	
	(1)	(2)	
Power	2.54 KL/MWh	2.56 KL/MWh	

2. Raw Material Consumption

Name of Raw	Name of	Consumption of raw material per unit of output	
Materials*	Products	During the previous	During the current
		financial year (2018-19)	financial year (2019-20)
(1) Coal	Power	570 gm/Kwhr	561 gm/Kwhr
(2) Fuel Oil	Power	0.08 ml/Kwhr	0.07 ml/kwhr

\*Industry may use codes if disclosing details of raw materials would violate contractual obligations, otherwise all industries have to name the raw material used.

#### PART C

#### Pollution discharged to environment / unit of output:

(Parameter as specified in the consent issued)

Sr	. No.	Pollution	Quantity of pollutants discharged (mass/day)	Concentration of pollutants in discharges (mass/volume)	Percentage of variation from prescribed standards with reasons
	(a)	Water	Nil	NA	NA
(t	ე)	Air (Particulate Matter in mg/NM <sup>3</sup> )	Unit#1 : 2.11 TPD Unit#2 : 2.06 TPD	Unit#1 : 36.13 Unit#2 : 34.09	Within Limit specified in CTO

• Water- No discharge of waste water.

 ${\bf Note}\text{-}$  100% effluent is treated and recycled back. Hence, there is no discharge of effluent in the environment.

#### PART - D

#### Hazardous Wastes:

(As specified under Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016).

Sr. No.	Hazardous Wastes	Total Quantity (Kg)		
		During the previous	During the current	
		financial year (2018-19)	financial year (2019-20)	
a)	From Process	• 7.58 KL (Generated)	• 17.84 KL (Generated)	
	<ul> <li>Used/Spent Oil</li> </ul>	• 8.72 KL (Sold Out)	• 12.22 KL (Sold Out)	
		• 1.89 KL (Balance)	• 7.51 KL (Balance)	
	<ul> <li>Discarded</li> </ul>	<ul> <li>42 Nos. (Generated)</li> </ul>	• 99 Nos. (Generated)	
	Containers	• 42 (Sold Out)	• 60 (Sold Out)	
		• 30 Nos. (Balance)	• 69 Nos. (Balance)	
b)	From pollution control facilities	NA	NA	

### <u> PART – E</u>

#### Solid Wastes:

Sr.	Solid Wastes	Total Quantity (Tons)	
100.		During the previous financial year (2018-19)	During the current financial year (2019-20)
a)	From Process (Bottom Ash)	O (Laying in Ash Pond)	O (Laying in Ash Pond)
b)	From pollution control facilities (Ash from ESP)	1027316 (Dispose to Cement & Brick Plant)	1330649 (Dispose to Cement & Brick Plant)
C)	Quantity recycled or re- utilized within the unit recycled or re-utilized	466558 (In reclamation of low laying area)	213831 (In reclamation of low laying area within Plant premises)
### <u> PART – F</u>

Please specify the characteristics (in terms of concentration and quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.

- Hazardous waste (Used/Spent oil) is sold to authorized vender. (Please Refer Part D for Hazardous waste generation and disposal)
- Fly Ash utilized by following Industries
  - Birla Corporation Ltd.
  - Heidelberg Cement India Ltd.
  - J.K.Cement Ltd, Nimbahera
  - Mangalam Cement Ltd.
  - Nuvoco Vistas Corp. Ltd.
  - Wonder Cement Ltd.
  - Shri Ram Cement Works
  - J.K.Cement Ltd. (Mangrol)
  - The India Cements Limited
  - ACC Limited
  - Ambuja Cement Ltd.
  - The India Cement Ltd.
  - Tsg Ashtech Movers Pvt. Ltd.

## <u> PART – G</u>

Impact of the pollution control measures taken on conservation of natural resources and consequently on the cost of production.

- Kawai Thermal Power Station of M/s Adani Power Rajasthan Limited is based on super critical technology of power generation, which is cost effective and reduce the consumption of both natural resourced raw materials, Water & Coal.
- The stack emissions from the plant are controlled by Electro Static Precipitator (ESP).
- Chimney of 275m height is constructed.
- Other pollution control equipments like Dust Extraction System & Dust Suppression System are installed at various material transfer points to control the fugitive emissions.
- Real time monitoring system for both EQMS & CEMS installed as per the direction of CPCB/RSPCB issued, under Air & Water Act.
- Remote calibration completed in Each Gaseous OCEMS
- Utilization of rain water collected during monsoon in Rain Water Harvesting Pond

<u> PART – H</u>

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

- Installation of Flue Gas Desulphurization (FGD) unit to reduce  $SO_2$  emission as per CPCB direction.
- Installation of Flow monitoring device at both flue cane of Unit-1 & 2.
- Installation of upgraded Electronic Data Display Board for Real time data display in Public domain.

#### <u> PART - I</u>

#### Miscellaneous

Any other particulars in respect of Environmental Protection and abatement of pollution.

- 1. 102857 trees planted up to financial year 2019-20 with 90% survival.
- 2. Ambient air quality monitoring by RDS & Fine Particulate Sampler is carried out at 3 locations within plant premises as per CPCB guidelines.
- 3. Continuous Ambient Air Quality Monitoring carried out at 3 locations within the plant premises.
- 4. Continuous Emission Monitoring System is installed and under operation at 80m height in both the flue cane of 275m Chimney.
- 5. Ambient noise levels is being monitored at 10 identified locations within the plant premises.
- 6. EMS as per ISO 14001:2015 is implemented at Kawai Thermal Power Station and certified by TUV NORD CERT GmbH
- 7. Good housekeeping is maintained in and around the plant area. 5S initiative is taken up at Kawai Thermal Power Station.
- 8. Harness of solar energy is introduced by installation of Solar Street Light.
- 9. CTO compliance report is being submitted to RSPCB on quarterly basis.
- 10. Six monthly EC Compliance report is being submitted to RSPCB/MoEFCC on regular basis.
- 11. 5S Implementation for waste minimization
- 12. Integrated Management System has implemented.
- 13. Energy Management System has implemented.
- 14. MoEFCC, RSPCB approved third Party Environment Monitoring is being carried out at quarterly basis.

#### Authorized Signatory (Adani Power Rajasthan Ltd.)







National Accreditation Board for Testing and Calibration Laboratories

(A Constituent Board of Quality Council of India)



# **CERTIFICATE OF ACCREDITATION**

# ENVIRONMENTAL LABORATORY, ADANI POWER RAJASTHAN LIMITED

has been assessed and accredited in accordance with the standard

# **ISO/IEC 17025:2017**

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

for its facilities at

VILLAGE: KAWAI, ATRU, BARAN, RAJASTHAN, INDIA

in the field of

# TESTING

Certificate Number: TC-5235

Issue Date: 28/08/2019

Valid Until:

27/08/2021

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

Signed for and on behalf of NABL



N. Venkateswaran Chief Executive Officer

## Annexure-IX

Expenditure for Environmental Protection & CSR		
(Fig. in Rs. Lacs)		
Sr. No.	Particular	Expenditure from (Oct-20 to Mar-21)
1.	Rural Development/CER/CSR Activities (Education, community health, Sustainable Livelihood, Rural Infrastructure etc.)	51.81
2.	Green belt Development (Horticulture)	56.83
3.	Legal, Consent fees	40.09
4.	Third party monitoring, Services and Equipment & Instruments maintenance, Communication cost.	70.49
5.	Insurance, training and external environmental Management (IMS)	0.51
6.	Cost involved in emission treatment and disposal (AHP, ETP, CHP etc.)	104.30
Total		324.03



(For more information regarding status,fees and other details please visit our website: http://peso.gov.in)

সংক্ষ XV (प्रथम अनुसूची: का अनुच्छेद 6 देखिए) FORM XV (see Article 6 of the First Schedule)

अधिष्ठापनों में पेट्रोलियम के स्यात और भंडारकरण के लिए अनुजप्ति LICENCE TO IMPORT AND STORE PETROLEUM IN AN INSTALLATION

अन्रप्ति सं. (Licence No.) : P/HQ/RJ/15/2337(P295058)



M/s. M/s Adani Power Rajasthan Limited.,, Kawai Thermal Power Project Near Salpura Railway S, Kawai, Kawai, Taluka, Arry District: BARAN, State: Rajasthan, PIN: 325219 को केवल इसमें यथा विनिर्दिष्टु वर्ग और मात्राओं में पेट्रोलियम 7075.00 KL आयात करने के लिए और उसकी, नीचे वर्णित और अनुमोदित नक्शा संख्या P/HQ/RJ/15/2337(P295058) तारीख 04/12/2012 जो कि इससे उपाबद हैं, में दिखाए गए स्थान पर भण्डारकरण के लिए पेट्रोलियम अधिनियम, 1934 के उपबंधों या उसके अधीन बनाए गए नियमों तथा इस अनुजम्दित को अतिरिक्त शर्तों के अधीन रहते हुए, यह अनुजम्दित अनुदत्त की जाती हैं।

Licence is hereby granted to M/s. M/s Adani Power Rajasthe Limited.,, Kawai Thermal Power Project Near Salpura Railway S, Kawai, Kawai, Taluka: Atru, District: BARAN, State: Rajasthan, PIN: 3257 valid only for the importation and storage of 7075.00 KL Petroleum of the class and guantities as herein specified and storage thereof in the place tescribed below and shown on the approved plan No P/HQ/RJ/15/2337(P295058) dated 04/12/2012 attached hereto subject to the provisions of the Petr Jeum Act, 1934 and the rule made thereunder and to the further conditions of this Licence.

यह अनुज़प्ति 31st day of December 2019 तक प्रवृत रहेगी । The Licence shall remain in force till the 31st day of Decembre # 2019

भेट्रोलियम का विवरण /Description of P pleum	त्रा (किलोलीटरो मे) /Quantity licenced in KL
वर्ग क प्रपूंज पेट्रोलियम /Petroleum (ass A in bulk वर्ग क प्रपुंज पेट्रोलियम से भिन्त) (concern Class A, otherwise than in bulk वर्ग ख प्रपूंज पेट्रोलियम /Petrole (class B in bulk वर्ग ख प्रपुंज पेट्रोलियम से भिर्ने) (class C in bulk वर्ग ग प्रपूंज पेट्रोलियम से (concern) (class C in bulk वर्ग ग प्रपूंज पेट्रोलियम से (concern) (class C in bulk	NIL NIL 75.00 KL NIL 7000.00 KL NIL
गुल्ल, क्षमता /Total Capacity	7075.00 KL

#### December 4, 2012

1). Amendment dated - 16/04/20/19

# अनुज्ञप्त परिसरों का विवरण और अवस्थान DESCRIPTION AND LOCATION OF THE LICENSED PREMISES

अनुज़प्त परिसर जिसकी 1 कि समाएं अन्य विशिष्टयां संलग्न अनुमोदित नक्शी में दिखाई गई हैं Plot No: Plot No. 504, Khasara No. 1337, Survey No. 1337, NA, Village-Kawai, T taluka: Atru, District: BARAN, State: Rajasthan, PIN: 325219 स्थान पर अवस्थित है तथा उसमें निम्नलिखित 1 Above Ground tank(s) for CLASS C सम्मिलित हैं | Ground tank(s) for CLASS 3, 4 Above Ground tank(s) for CLASS C सम्मिलित हैं | The licensed premises the layout, boundaries and other particulars of which are shown in the attached approved plan are situated at Plot No: Plot No. 504, Khasara No. 1337, NA, Village-Kawai, Teh-Atru, Taluka: Atru, District: BARAN, State: Rajasthan, PIN: 325219 का consists of 504, Khasara No. 1337, NA, Village-Kawai, Teh-Atru, Taluka: Atru, District: BARAN, State: Rajasthan, PIN: 325219 and consists of 1 Above Ground

### अनुजप्ति संख्या-(Licence No.) P/HQ/RJ/15/2337 (P295058)

#### नवीनीकरण के पृष्ठांजना के लिए स्थान SPACE FOR ENDORSEMENT OF RENEWALS



यदि अनुजन्ति परिसर इसमें उपाबद विवरण और शर्तों के अनुरुप नहीं पाए जाते है और जिन नियमों ओ के के अधीन यह अनुजन्ति मंजूर की गई है उनमे से किसी का उल्लंघन होने की दशा में यह अनुजन्ति रद की जा सकती है और अनुजन्तिधारी प्रथम अपाक के लिए साधारण कारावास से, जो एक मास तक हो सकता है, या जुर्माने से, जो एक हजार रुपये तक हो सकता है, या दोनों से, और प्रत्येक पश्चात रते जापराध के लिए साधारण कारावास से जो तीन मास तक हो सकता है, या जुर्माने से, जो पांच हजार रुपये तक हो सकता है, या दोनों से, वण्डनीय होगा

This licence is liable to be cancelled if the licensed premises are not found conforming to the description given on the approved plan attached hereto and contravention of any of the rules and conditions under which this licence is granted and the holder of this licence is also punishable for the first offence with simple imprisonment which may be extend to one month, or with fine which may extend to one thousand rupees, or with both and for every subsequent offence with simple imprisonment which may extend to three months, or with fine which may extend to five thousand rupees or with both.

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